Activity Report 2016

Section Dissemination

<p style="text-align:center">**ABS Project-Team**</p>

8. Dissemination

8.1. Promoting scientific activities

8.1.1. Scientific Events Organisation

8.1.1.1. General Chair, Scientific Chair

Frédéric Cazals, together with C. Robert (IBPC, CNRS Paris) and J. Cortés (LAAS, CNRS Toulouse) organized the *energy landscapes* workshop, an international gathering devoted to all topics revolving around energy landscapes, as encountered in physics, chemistry, biochemistry, biology, applied mathematics, and computer science. See details at https://eland2016.inria.fr/.

8.1.2. Scientific Events Selection

8.1.2.1. Member of the Conference Program Committees

– Frédéric Cazals was member of the following program committees:

- Symposium On Geometry Processing
- Shape Modeling International: 2016
- Symposium on Solid and Physical Modeling
- Intelligent Systems for Molecular Biology (ISMB), PC member of Protein Interactions & Molecular Networks
- International Conference on Pattern Recognition in Bioinformatics

8.1.3. Journal

8.1.3.1. Reviewer - Reviewing Activities

– Frédéric Cazals reviewed papers for the following journals:

- The International Journal of Computational Geometry and Applications
- Bioinformatics
- The Journal of Immunology

8.1.4. Invited Talks and Presentations

– Frédéric Cazals gave the following invited talks:

- *Energy landscapes: sampling, analysis*, Congrès de la Société Française de Biophysique – Structural biology meets biophysics, Obernai. December 2016.
- *Modeling energy landscapes of biomolecular systems*, Ecole Normale Supérieure de Cachan. September 2016.
- *Novel structural parameters of Ig-Ag complexes yield a quantitative description of interaction specificity and binding affinity*, Structural Aspects of Infectious Disease, Cambridge, UK, August 2016.
- *Energy landscapes: sampling, analysis, and comparison*, Energy Landscapes Workshop, Porquerolles. July 2016.
- *Improved understanding of protein dynamics via energy landscape sampling, analysis, and comparison*, TSRC on protein dynamics. Les Houches, March 2016.

– Romain Tetley gave the following invited talk:

- *A bootstrap method for detecting structurally conserved motifs*, Energy Landscapes Workshop, Porquerolles. July 2016.

– Poster presentations:

- Dorian Mazauric presented the following poster:
  Unveiling Contacts within Macro-molecular Assemblies by solving Minimum Weight Connectivity Inference Problems, Congrès de la Société Française de Biophysique – Structural biology meets biophysics, Obernai. December 2016.

- Augustin Chevallier presented the following poster:
  Towards free energy calculations for biomolecules: generic Wang-Landau algorithm with automatic parameters selection, Congrès de la Société Française de Biophysique – Structural biology meets biophysics, Obernai. December 2016.

- Dorian Mazauric presented the following poster:
  Mass Transportation Problems with Connectivity Constraints and Energy Landscape Comparison, Energy Landscapes Workshop, Porquerolles. July 2016.

8.1.5. Leadership within the Scientific Community

– FrédéricCazals:

- 2010-.... Member of the steering committee of the *GDR Bioinformatique Moleculaire*, for the *Structure and macro-molecular interactions* theme.

8.1.6. Scientific Expertise

– Frédéric Cazals acted as expert for the *Italian Research and University Evaluation Agency (ANVUR)*.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master: Frédéric Cazals (Inria ABS) and S. Oudot (Inria Saclay), *Foundations of Geometric Methods in Data Analysis*, Data Sciences Program, Department of Applied Mathematics, Ecole Centrale Paris. (http://www-sop.inria.fr/abs/teaching/centrale-FGMDA/centrale-FGMDA.html)

Master: Frédéric Cazals and Dorian Mazauric (Inria ABS), *Algorithmic problems in computational structural biology*, 24h, Master of Science in Computational Biology from the University of Nice Sophia Antipolis, France, see http://cbb.unice.fr.

8.2.2. Supervision

PhD thesis, defended, December 2016. Simon Marillet, *Modeling the antibody response: from the structure of immunoglobulins - antigen complexes to the clonal complexity of heavy chain repertoires*, University of Nice Sophia Antipolis. The thesis is co-advised by Frédéric Cazals and Pierre Boudinot (INRA Jouy-en-Josas).

PhD thesis, ongoing. Romain Tetley, *Structural alignments: beyond the rigid case*, University of Nice Sophia Antipolis. Under the supervision of Frédéric Cazals.

PhD thesis, ongoing. Augustin Chevallier, *Sampling biomolecular systems*, University of Nice Sophia Antipolis. Under the supervision of Frédéric Cazals.

Postdoctoral research of Rémi Watrigant, 2016 - 2018. Projet de Recherche Exploratoire (Inria). *Improving inference algorithms for macromolecular structure determination*. Under the supervision of Dorian Mazauric and Frédéric Havet (Inria COATI project-team).

8.2.3. Juries

– Frédéric Cazals:

- Huaxiong Ding, University of Lyon, December 2016. Committee member. *Combining 2D facial Texture and 3D face morphology for estimating people soft biometrics: gender, facial expression.* Advisors: Liming Chen and Jean-Marie Morvan.

8.3. Popularization

8.3.1. Dissemination of scientific culture

Participant: Dorian Mazauric, member of the group of Médiation et Animation des MAthématiques, des Sciences et Techniques Informatiques et des Communications (MASTIC), Inria Sophia Antipolis - Méditerranée.

8.3.1.1. Publications and ressources.

- 2016. *Graphes et Algorithmes – Jeux grandeur nature*. Dorian Mazauric, en collaboration avec Laurent Giauffret, Direction des Services Départementaux de l'Éducation Nationale (DSDEN) des Alpes-Maritimes. [https://hal.inria.fr/hal-01366804]

- 2016. *Graphes et Algorithmes - Diffusion de l'information scientifique.* Dorian Mazauric. [https://hal.inria.fr/hal-01383665]

- 2016. *Information et communication : la Théorie des Graphes*. Jean-Claude Bermond et Dorian Mazauric. Fondation la main à la pâte. To appear.

8.3.1.2. Fête de la Science en PACA.

- 22-23/10/2016. Village des sciences et de l'innovation au Palais des Congrès d'Antibes Juan-les-Pins. Fête de la Science 2016. *a) La magie des graphes et du binaire. b) Algorithmes grandeur nature. c) Pas besoin de réfléchir, les ordinateurs calculent tellement vite ? Théorie des graphes et algorithmique pour les réseaux.* [https://www.inria.fr/centre/sophia/agenda/fete-de-la-science-2016]

- 10-12/10/2016. Fête de la Science au collège Yves Montand, Vinon-sur-Verdon. Institut Esope 21. *a) La magie des graphes et du binaire. b) Algorithmes grandeur nature. c) Pas besoin de réfléchir, les ordinateurs calculent tellement vite ? Théorie des graphes et algorithmique pour les réseaux.* [https://www.inria.fr/centre/sophia/agenda/fete-de-la-science-2016]

8.3.1.3. Stage MathC2+ à Inria Sophia Antipolis - Méditerranée.

- 15-16/06/2016. Activité pour une quarantaine de lycéens des Alpes-Maritimes (accueillis à Inria Sophia Antipolis - Méditerranée durant 4 jours). *Algorithmes grandeur nature pour le calcul d'un arbre couvrant de poids minimum (application pour la conception d'un réseau électrique).* Présentation aux lycéens du stage. *Pas besoin de réfléchir, les ordinateurs calculent tellement vite ? Théorie des graphes et algorithmique pour les réseaux.* [http://www.inria.fr/centre/sophia/actualites/mathc2-40-lyceens-des-alpes-maritimes-en-immersion-au-coeur-d-un-centre-de-recherche] [https://youtu.be/rLj5I1Gu1uI]

8.3.1.4. Interventions à l'ÉSPÉ de l'Académie de Nice.

- 8-15/03/2016. Organisation d'un atelier à l'École Supérieure du Professorat et de l'Éducation (ÉSPÉ) de l'Académie de Nice (site de Stéphen Liégeard) en collaboration avec l'Inspection Académique (avec Laurent Giauffret). Animation, avec des étudiants de l'ÉSPÉ, pour 360 élèves de CM1 et de CM2. *La magie des graphes et du binaire, algorithmes et jeux (réseaux de tri).* [http://www.inria.fr/actualite/agenda/semaine-des-mathematiques-au-mois-de-mars?utm_content=buffer4b539&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer] [http://www2.ac-nice.fr/DSDEN06/cid101665/des-chercheurs-de-retour-a-l-ecole.html]

8.3.1.5. Formations pour les enseignants en collaboration avec la DSDEN des Alpes-Maritimes.

- 15-19/09/2016. Préparation avec Laurent Giauffret d'une formation pour 17 enseignants de cycle 3 (cours moyen d'enseignement élémentaire). *a) Présentation d'Inria et du dispositif ASTEP.b) Graphes et Algorithmes : théorie et mise en pratique avec des jeux.c) Présentation de Thymio et mise en avant des possibilités offertes.d) Présentation du logiciel Scratch par le Maître Assistant Informatique de circonscription.*

8.3.1.6. Conférences dans des lycées dans le cadre du dispositif régional "Science Culture".

- 26/01/2016. Conférence au lycée Amiral de Grasse (classes de seconde). *a) Pas besoin de réfléchir, les ordinateurs calculent tellement vite ? Théorie des graphes et algorithmique pour les réseaux. b) La magie des graphes et du binaire.*

- 21/01/2016. Conférence au lycée Amiral de Grasse (classes de terminale). *a) Pas besoin de réfléchir, les ordinateurs calculent tellement vite ? Théorie des graphes et algorithmique pour les réseaux. b) La magie des graphes et du binaire.*

8.3.1.7. Conférences dans des collèges des Alpes-Maritimes.

- 05/12/2016. Conférence au collège Jules Verne de Cagnes-sur-Mer (deux classe de sixième) (avec Rémi Watrigant). *La magie des graphes et du binaire.*

8.3.1.8. Conférences dans des écoles primaires des Alpes-Maritimes dans le cadre d'ASTEP.

- 22/03/2016. Conférence à l'école élémentaire de La Tournière, Antibes (classe de CE2). *La magie des graphes et du binaire, algorithmes et jeux (algorithmes grandeur nature pour trier, jeux combinatoires...).*

- 18/03/2016. Conférence à l'école élémentaire Langevin 2, Vallauris (classe de CP). *La magie des graphes et du binaire, algorithmes et jeux (algorithmes grandeur nature pour trier, jeux combinatoires...).*

8.3.1.9. Autres présentations.

- 05/01/2016. Présentation à des lycéens d'Australie et de Nouvelle-Zélande (classes de secondes) à Inria Sophia Antipolis - Méditerranée. *La magie des graphes et du binaire.*

<p style="text-align:center">**ACUMES Project-Team**</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- P. Goatin was member of the scientific committee of *"PED2016 - Conference on Pedestrian and Evacuation Dynamics"*, Hefei (China), October 2016.
- P. Goatin is member of the the scientific committee of the annual seminar CEA-GAMNI *"Numerical fluid-mechanics"*.
- A. Habbal was member of the scientific committee of the *CARI 2016 Colloque Africain sur la Recherche en Informatique et Mathematiques Appliquees*, Tunis (Tunisia) 10-14 October 2016.

9.1.1.2. Member of the Organizing Committees

- P. Goatin organized the Workshop *"TRAM3 Terminus"*, Sophia Antipolis (France), January 2016.
- R. Duvigneau was co-organizer of the mini-symposium "Surrogate Models for Efficient Robust Optimization and Data Assimilation in Computational Mechanics", part of SIAM Conference on Uncertainty Quantification, Lausanne, April 2016.

9.1.2. Journal

9.1.2.1. Reviewer - Reviewing Activities

- J.-A. Désidéri has made reviews for the *International Journal of Information Technology & Decision Making*, and *Comptes Rendus de l'Académie des Sciences*,
- R. Duvigneau is a reviewer for the following international journals : Computers & Fluids, International Journal for Numerical Methods in Fluids, Computer Methods for Applied Mechanical Engineering, Computer Aided Geometric Design, Applied Mathematics & Mechanics, Engineering Optimization.
- P. Goatin is reviewers for the following international journals: Acta Applicandæ Mathematicæ ; African Journal of Mathematics and Computer Science Research; Algorithms; Annales de l'Institut Henri Poincaré (C) Analyse Non Linéaire; Applied Mathematics and Computation; Computer-aided Civil and Infrastructure Engineering; Discrete and Continuous Dynamical Systems; European Journal of Operational Research; IEEE Transactions on Automatic Control; IEEE Transactions on Intelligent Transportation Systems; International Journal of Dynamical Systems and Differential Equations; Journal of Computational Physics; Journal of Flow, Turbulence and Combustion; Mathematical Models and Methods in Applied Sciences; Mathematics of Computation; Networks and Heterogeneous Media; New Journal of Physics; Nonlinear Analysis Ser. B: Real World Applications; SIAM Journal of Mathematical Analysis; SIAM Journal of Applied Mathematics; SIAM Journal of Numerical Analysis; SIAM Journal on Scientific Computing.
- A. Habbal is reviewer for the following international journals: Applied Mathematics (AM), Scientific Research Publishing ; Journal of Structural and Multidisciplinary Optimization ; Journal of Math. Model. Nat. Phenom. ; International Journal of Mechanical Sciences ; Modern Applied Science ; Asian Journal of Control ; Applied Mathematics and Computation ; Computer Methods in Applied Mechanics and Engineering ; Bulletin of Mathematical Biology ; Journal of Pure and Applied Functional Analysis ; AMS reviews.

9.1.3. Invited Talks

- J.-A. Désidéri: ONERA Palaison, April 2016.
  Invited talk: *"Multiple Gradient Descent Algorithm for Multiobjective Optimization"*,

- R. Duvigneau: Ecole Navale, Brest, January 2016.
  Invited talk: *"The Sensitivity Equation Method for optimization, fast estimation of neighboring solutions and uncertainty propagation".*

- R. Duvigneau: Ecole des Mines Paris-Tech, Sophia-Antipolis, June 2016.
  Invited talk: *"Optimization of complex fluid systems using a statistical learning strategy".*

- P. Goatin: EU-US Frontiers of Engineering Symposium, Helsinki (Finland), October 2016.
  Session: "The road to future urban mobility".
  Invited talk: *"Traffic management by macroscopic models".*

- P. Goatin: SIMAI 2016 - XIII Congress of the Italian Society of Industrial and Applied Mathematics, Milano (Italy), September 2016.
  Mini-symposium: "Analysis and numerics for the modeling through conservation laws".
  Invited talk: *"A Riemann Solver at junctions preserving priorities".*
  Mini-symposium: "Mean-field models in pedestrian dynamics".
  Invited talk: *"Non-local macroscopic models of traffic flow".*

- P. Goatin: 11th Meeting on Nonlinear Hyperbolic PDEs and Applications, Trieste (Italy), June 2016.
  Invited talk: *"Conservation laws with local constraints arising in traffic modeling".*

- P. Goatin: SIAM Conference on Uncertainty Quantification, Lausanne (Switzerland), April 2016.
  Mini-symposium: "Data-driven methods for uncertainty quantification".
  Invited talk: *"Parametric uncertainty in macroscopic traffic flow models calibration from GPS data".*

- P. Goatin: Workshop "Analysis and control on networks: trends and perspectives", Padova (Italy), March 2016.
  Invited talk: *"Optimization based control of networks of discretized PDEs: Application to road traffic management".*

- P. Goatin: ANR HJNet 5th Meeting, Tours (France), January 2016.
  Invited talk: *"Conservation laws with local and unilateral flux constraints".*

- A. Habbal: IX NPU-UTC Sino-French Seminar on Virtual Prototyping for Design and Fabrication, 11-15 April 2016.
  Invited talk: *"Pareto optimality and game equilibria, two approaches to solve multiobjective optimization".*

- A. Habbal: Lorentz Center workshop SAMCO: Surrogate-Assisted Multi-Criteria Optimization, February 29 - March 4, 2016.
  Invited senior participant: *"Many objectives and selection algorithms".*

9.1.4. Scientific Expertise

J.-A. Désidéri has been a consultant for ONERA (since 2007) at DMFN-Châtillon (Dept. of Numerical Fluid Mechanics) and DAAP-Meudon (Dept. of Applied Aerodynamics), and also directs a thesis at DADS-Châtillon (Dept. of Aeroelasticity and Structural Dynamics).

9.1.5. Research Administration

- P. Goatin is member of BCP ("Bureau du Comité des Projets") at Inria Sophia Antipolis Méditer-ranée.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: Advanced Optimization, 40.5 hrs, M2, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (J.-A. Désidéri, R. Duvigneau).

Master: Conservation laws and finite volume scheme, 30 hrs, M2, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (P. Goatin).

Master: Multidisciplinary Optimization, 22.5 hrs, joint *Institut Supérieur de l'Aéronautique et de l'Espace* (ISAE Supaéro, "Complex Systems") and M2 (Mathematics), Toulouse (J.-A. Désidéri, R. Duvigneau).

Licence: Summer Project in Mathematical Modeling, 36 hrs, L3, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (A. Habbal).

Master: Numerical Methods for Partial Differential Equations, 66 hrs, M1, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (A. Habbal and R. Duvigneau).

Master: Concurrent design in building structures, M2 Students Project, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (A. Habbal).

9.2.2. Supervision

PhD in progress : Cédric Durantin, *Meta-modelling for the optimization of nanophotonic devices*, October 2014. Supervisors : J.-A. Désidéri and A. Glière (CEA LETI).

PhD in progress : Quentin Mercier, *Multicriterion optimization under uncertainties : the stochastic multiple gradient approach. Application to aerelasticity*, October 2015. Supervisors : J.-A. Désidéri and F. Poirion.

PhD in progress : Maroua Mokni, *Development, analysis and numerical evaluation of MGDA*, October 2013. Supervisors : J.-A. Désidéri and M. Ayadi (LAMSIN-ENIT, Tunisia).

PhD in progress : Sosina Mengistu-Gashaw (EURECOM), *Mobility and connectivity modelling of 2-wheels traffic for ITS applications* , March 2015. Supervisors: P. Goatin and J. Härri (EURECOM).

PhD in progress: Boutheina Yahyaoui, *Validation of mecano-chemo-biological models for cell sheet wound closure*, Jan 2013, Supervisors: A. Habbal, Mekki Ayadi (LAMSIN, ENIT, Tunis)

PhD in progress: Rabeb Chamekh, *Game strategies for thermo-elasticity*, Jan 2015, Supervisors: A. Habbal, Moez Kallel (LAMSIN, ENIT, Tunis)

PhD in progress: Kelthoum Chahour, *Modeling and optimal design of coronary angioplastic stents*, Nov 2015, Supervisors: A. Habbal, Rajae Aboulaich (LERMA, EMI, Rabat)

PhD in progress: A. Azaouzi, *isogeometric analysis methods for hyperbolic systems*, ENIT (Tunisia) / University of Nice - Sophia Antipolis, Oct. 2013, supervisors: R. Duvigneau and M. Moakher (ENIT).

PhD in progress: M. Sacher, *advanced methods for numerical optimization of yacht performance*, Ecole Navale , Oct. 2014, supervisors: R. Duvigneau, O. Le Maitre (LIMSI), F. Hauville and J.-A. Astolfi (Ecole Navale).

PhD in progress: C. Fiorini, *Sensitivity equation method for hyperbolic systems*, Univ. Versailles, Oct. 2014, supervisors: R. Duvigneau, C. Chalons (Univ. Versailles).

PhD in progress : Nicolas Laurent-Brouty (ENPC), *Macroscopic traffic flow models for pollution estimation and control*, September 2016. Supervisor: P. Goatin.

PhD in progress : Emanuele Marrone (Université de Nice Sophia Antipolis), *Conservation laws with non- local flux*, October 2016. Supervisor: P. Goatin .

PhD in progress : Nikodem Dymski (Maria Curie Sklodowska University & Université de Nice Sophia Antipolis), *Conservation laws in the modeling of collective phenomena*, October 2016. Supervisors: P. Goatin and M.D. Rosini (UMCS).

9.2.3. Juries

- P. Goatin was member of the committee of C. Perrin's PhD thesis *"Modèles hétérogènes en mécanique des fluides : phénomènes de congestion, écoulements granulaires et mouvement collectif"*, Université de Grenoble, July 8th, 2016.

- P. Goatin was referee of R. Sainct's PhD thesis *"Etude des instabilités dans les modèles de trafic"*, Université Paris-Est, September 22th, 2016.

- P. Goatin was member of the committee of M. Campanella's PhD thesis *"Microscopic modelling of walking behaviour"*, Delft University of Technology, November 21st, 2016.

- R. Duvigneau was member of the committee of Kevin Kasper's PhD thesis *"Apprentissage d'estimateurs sans modèle avec peu de mesures - Application à la mécanique des fluides"*, ENS Cachan, October 12th, 2016.

AIRSEA Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

E. Blayo, A. Vidard and E. Cosme organized the 6th French national symposium on data assimilation (Grenoble, November 30 - December 2, 2016).

L. Debreu has organized the international workshop "DRAKKAR" on global ocean modelling with the NEMO system (January 2016).

F. Lemarié was the convener of a session « Recent Developments in Numerical Earth System Modeling » during the 2016 European Geosciences Union General Assembly in Vienna (http://meetingorganizer.copernicus.org/EGU2016/session/21050).

C.Prieur was a member of the organizing committee of the Journées MAS 2016, Grenoble http://www.sciencesconf.org/browse/conference/?confid3D2486

10.1.2. Scientific events selection

10.1.2.1. Member of the conference program committees

L. Debreu was a member of the program committee of the International Conference on Computational Science (ICCS 2016), Paris, December 2016.

C.Prieur is a member of the program committee of the International Conference on Sensitivity Analysis of Model Output (SAMO 2016), La Réunion http://samo2016.univ-reunion.fr/

10.1.3. Journal

10.1.3.1. Reviewer - Reviewing activities

E. Blayo: reviewer for Mathematics and Computers in Simulation, Ocean Modelling.

L. Debreu: reviewer for Ocean Modelling, Ocean Dynamics, Geophysical Model Development.

F. Lemarié: reviewer for Ocean Modeling, Dynamics of Atmospheres and Oceans, Geoscientific Model Development, SIAM Journal on Scientific Computing

10.1.4. Leadership within the scientific community

E. Blayo is the chair of the CNRS-INSU research program LEFE-MANU on mathematical and numerical methods for ocean and atmosphere http://www.insu.cnrs.fr/co/lefe.

L. Debreu is the coordinator of the national group COMODO (Numerical Models in Oceanography).

C. Prieur chairs GdR MASCOT NUM, in which are also involved M. Nodet, E. Blayo, C. Helbert, E. Arnaud, L. Viry, S. Nanty, L. Gilquin. http://www.gdr-mascotnum.fr/doku.php.

10.1.5. Scientific expertise

F. Lemarié is a member of the CROCO (https://www.croco-ocean.org/) scientific committee in charge of the « numerical methods » topic.

10.1.6. Research administration

E. Blayo is a deputy director of the Jean Kuntzmann Lab.

L. Debreu is a member of the scientific evaluation committee of the French Research Institute for Development (IRD).

E.Arnaud is a member of the executive committee of IXXI (complex system institute) http://www.ixxi.fr.

C.Prieur is an elected member of the National Council of Universities (CNU).

C.Prieur is a member of the Scientific Council of the Mathematical Society of France (SMF).

C.Prieur is a member of the Committee of Statistical Mathematics Group of the French Statistical Society (SFdS).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence: E. Blayo, Mathématiques pour l'ingénieur, 52h, L1, University of Grenoble

License : E. Arnaud, Mathématiques pour l'inge´nieur, 57h, L1, University Grenoble Alpes, France.

License : E. Arnaud, Diplôme d'accès à la license, 15h, L1, University Grenoble Alpes, France.

Licence : M. Nodet, outils mathématiques pour l'ingénieur, 100h, L1, Univ. Grenoble Alpes, France

Master : E. Arnaud, Tutorat d'apprentis MIAGE, 28h, M2, University Grenoble Alpes, France.

Master : E. Arnaud, Projet de programmation en traitement d'images, 16h, M1, University Grenoble Alpes, France.

Master : E. Arnaud, Computer Vision, 9h, M2, University Grenoble Alpes, France.

Master : M. Nodet, partial differential equation, 20h, M1, Univ. Grenoble Alpes, France.

Master : M. Nodet, inverse methods and data assimilation, 30h, M2, Univ. Grenoble Alpes, France.

Master: E. Blayo, Méthode des éléments finis, 47h, M1, University of Grenoble.

Master: E. Blayo, Partial Differential Equations and numerical methods, 43h, M1, ENSIMAG and University of Grenoble.

Doctorat: E. Blayo, M. Nodet, A. Vidard, Introduction to data assimilation, 20h, University of Grenoble.

Doctorat : L. Debreu, Formation doctorale nationale Modélisation numérique de l'océan et de l'atmosphère, 21-25 novembre 2016, Paris, France. With T. Dubos (LMD/Ecole Polytechnique, Paris), G. Roullet (Brest University), F. Hourdin (LMD/CNRS, Paris).

E-learning

SPOC : E. Arnaud, M. Nodet, E. Blayo, A. Vidard , 10 weeks, moodle platform http://tinyurl.com/uga-mat207, University Grenoble Alpes , L1 , 150 students

Pedagogical resources : all documents for problem-based learning including videos http://tinyurl.com/youtube-mat207.

10.2.2. Supervision

PhD : Nelson Feyeux, Application du transport optimal pour l'assimilation de données images, December 2016, A. Vidard, M. Nodet.

PhD : Mehdi-Pierre Daou, Développement d'une méthodologie de couplage multimodèles avec changements de dimension - Validation sur un cas-test réaliste, Université Grenoble Alpes, 27 septembre 2016, E. Blayo & A. Rousseau, see [1].

PhD : Laurent Gilquin, Echantillonage Monte Carlo et quasi-Monte Carlo pour l'estimation des indices de Sobol'. Application à un modèle transport-urbanisme, Université Grenoble Alpes, 17 octobre 2016, C. Prieur and E. Arnaud, see [2].

PhD in progress : Thomas Capelle, Calibration of LUTI models, octobre 2013, P. Sturm (EPI STEEP), A.Vidard.

PhD in progress : Rémi Pellrej, Assimilation de données pour les modèles couplés, octobre 2014, A. Vidard, F. Lemarié.

PhD in progress: Charles Pelletier, Etude mathématique et numérique de la formulation du couplage océan-atmosphère dans les modèles de climat. December 2014, E. Blayo, F. Lemarié and P. Braconnot.

PhD in progress : Patricia Tencaliec, Approches stochastiques pour la gestion des risques environnementaux extrêmes, October 2013, Clémentine Prieur, Anne-Catherine Favre (LTHE).

PhD in progress : Reda El Amri, Analyse d'incertitudes et de robustesse pour les modèles à entrées et sorties fonctionnelles, April 2016, Clémentine Prieur, Céline Helbert (Centrale Lyon), funded by IFPEN, int the OQUAIDO chair program.

Internship : Damien Garino, Suivi de formes non rigides dans les images, M2, University Grenoble Alpes, 6 months, E. Arnaud and A. Vidard.

10.2.3. Juries

E. Blayo:

- 1 July 2016 - HDR thesis of Yann Michel, University of Toulouse (referee),
- 5 July 2016 - PhD thesis of François Mercier, University of Versailles-Saint Quentin (examiner),
- 9 November 2016 - PhD thesis of Vladimir Groza, University of Nice (referee),
- 5 December 2016 - PhD thesis of Cyrille Mosbeux, University of Grenoble (president).

L. Debreu – PhD thesis of Charles Colavolpe, University of Toulouse (referee),

L. Debreu – PhD thesis of Amandine Declerck, University of Toulon (referee),

A. Vidard – PhD thesis of Rachida El Ouaranis, Institut national polytechnique de Toulouse / Université Hassan 2 de Casablanca (referee),

F.-X. Le Dimet – HDR thesis of Philippe Moireau, Paris-Saclay,

F. Lemarié: 30 mars 2016 - PhD thesis of Véra Oerder, Université Pierre et Marie Curie, Paris 6 (examiner),

E. Anaud: juries of M2 thesis and M2 Miage apprentices,

Clémentine Prieur took part to recruiting CR2 for Inria Grenoble Alpes (2014,2015,2016).

10.3. Popularization

E. Blayo gave several outreach talks, in particular for middle school and high school students, and for more general audiences.

Ch. Kazantsev and E. Blayo participate in the creation of "La Grange des maths" in Varces (south of Grenoble). See http://www.la-grange-des-maths.fr/.

Since 2010, Ch. Kazantsev is the Director of the IREM of Grenoble http://www-irem.ujf-grenoble. fr/irem/accueil/. The Institute is under rapid development now, joining about 50 teachers of primary and secondary schools of the Grenoble region and 15 university professors. They work together 16 times a year on the development of the teaching strategy for the educational community. In addition to this, IREM is the editor of two journals: "Grand N" destined to primary schools teachers and "Petit x" – to the secondary schools.

M. Nodet and E. Arnaud co-organises a year-round weekly math club in two secondary schools, where pupils research open mathematical problems.

M. Nodet is a member of "les Emulateurs", a group of Grenoble Univ. professors meeting once a month around the subjects of innovative pedagogy and its applications to universities.

M. Nodet takes part in a maths club "Math en Jeans" involving two secondary schools around Grenoble.

M. Nodet takes part in training modelling in mathematics to secondary school maths teachers through the regional "Maison pour la Science" and is also in charge of an IREM group about building interdisciplinary projects for secondary school classes.

Podcast Interstices Clémentine Prieur's interview https://interstices.info/jcms/p_86521/mieux-modeliser-le-climat-grace-aux-statistiques

ALICE Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

Sylvain Lefebvre is program co-chair for SMI 2017.

9.1.1.2. Member of the Organizing Committees

Bruno Lévy was conference co-chair of GMP 2016.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Bruno Lévy was member of the program committee of ACM/EG Symposium on Geometry Processing, Pacific Graphic, Shape Modeling International

9.1.2.2. Member of the Conference Program Committees

Sylvain Lefebvre was member of the SIGGRAPH 2016 program committee, and is a member of the EUROGRAPHICS 2017 program committee.

9.1.2.3. Reviewer

- Jonas Martinez: Eurographics'16 Short papers.
- N. Ray: SIGGRAPH, SIGGRAPH ASIA, eurographics

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Sylvain Lefebvre is associate editor for ACM TOG. Bruno Lévy is associate editor of ACM Transactions on Graphics, The Visual Computer and Graphical Models

9.1.3.2. Reviewer - Reviewing Activities

- D. Sokolov: Computer Graphics Forum, The Visual Computer
- N. Ray: ACM TOG, TVCG, Electronics Letters
- Dobrina Boltcheva : International Journal of Discrete & Computational Geometry
- Jonas Martinez: Computers & Graphics journal.
- Laurent Alonso: Graphs and Combinatorics, Discrete Applied Mathematics, ACM Translation of Algorithms, ESA 2016, LATIN 2016

9.1.4. Invited Talks

- Dmitry Sokolov: "Towards hexahedral meshes" Numerical geometry, grid generation and scientific computing NUMGRID 2016, Moscow
- Sylvain Lefebvre: Computer Graphics lab of Aachen, led by Pr. Leif Kobbelt
- Sylvain Lefebvre: IST Austria, visiting Pr. Bernt Bickel
- Sylvain Lefebvre: invited at CNR Imati (Genova, Italy) for a week to present his work and collaborate on a joint survey paper submitted to EUROGRAPHICS 2017.

9.1.5. Scientific Expertise

Bruno Lévy evaluated projects for the ANR, for the European Research Council.

9.1.6. Research Administration

Samuel Hornus was moderator of the CDT (Commission for Technological Development) of Inria nancy.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Enseignant, titre du cours, nombre d'heures en équivalent TD, niveau (L1, L2, L3), université, pays

Licence : Cédric Zanni, Informatique 1, 20h ETD, L3, École des Mines de Nancy, France

License: Dobrina Boltcheva, Licence Pro ISN, Computer Graphics 20h, Image Processing 20h, IUT Saint-Dié-des-Vosges

License: Dobrina Boltcheva, 2A DUT INFO, Advanced Java Programming 100h, IUT Saint-Dié-des-Vosges

License: Dobrina Boltcheva, 1A DUT INFO, Programming 60h, IUT Saint-Dié-des-Vosges

Licence : Dmitry Sokolov, Informatique graphique, 55h ETD, L1, Université de Lorraine, France

Licence : Dmitry Sokolov, Programmation Avancée, 40h ETD, L2, Université de Lorraine, France

Licence : Dmitry Sokolov, Logique, 20h ETD, L3, Université de Lorraine, France

Licence : Dmitry Sokolov, Introduction à la robotique mobile, 30h ETD, L2, Université de Lorraine, France

License : Samuel Hornus, Mathématiques Appliquées pour l'Informatique, 32 h ETD, L3, Télécom Nancy

Master : N. Ray, communication, 10h equivalent TD, M1, Universitée de Lorraine, France

Master :Cédric Zanni, Software Engineering, 19h ETD, M1, École des Mines de Nancy, France

Master :Cédric Zanni, Operating System, 14h ETD, M1, École des Mines de Nancy, France

Master :Cédric Zanni, Modèles et simulations d'instrument de musique, 9h ETD, M1, École des Mines de Nancy, France

Master :Dmitry Sokolov, Optimisation Combinatoire, 30h ETD, M1, Université de Lorraine, France

Master :Dmitry Sokolov, Infographie, 30h ETD, M1, Université de Lorraine, France

Master :Dmitry Sokolov, Algorithmique et programmation, 45h ETD, M1, Université de Lorraine, France

Master :Dmitry Sokolov, Algorithmique et Programmation Avancée, 60h ETD, M2, Université de Lorraine,France

Master, Sylvain Lefebvre, Programmation pour le jeux vidéo, 30h ETD, Ecole des Mines de Nancy, France.

Master, Sylvain Lefebvre, Introduction au parallélisme et au graphisme, 9h ETD, ENSG Nancy, France.

Master, Sylvain Lefebvre, Introduction à la fabrication additive, 9h ETD, ENSEM Nancy, France.

Master, Sylvain Lefebvre, Synthèse procédurale pour le design, 9h ETD, ENSAD, Nancy, France.

E-learning

Pedagogical resources tinyRender: Dmitry Sokolov, Computer graphics course. Short series of lectures on what is under the hood of OpenGL/DirectX. The course is already adopted in several universities throughout the world, and is now included in the distribution of Bullet physics library. Microsoft includes its C# port in the distribution of Xamarin Workbooks .

9.2.2. Supervision

HdR : Dmitry Sokolov, *Modélisation géométrique*, Université de Lorraine, 10 juin 2016

PhD thesis submitted, defense 01/02/2017 : Jean Hergel, *Modeling under Fabrication Constraints*, Oct. 2013, supervised by Sylvain Lefebvre

PhD thesis submitted, defense 03/02/2017 : Jérémie Dumas, *By-example shape synthesis for Fabrication*, Sept. 2013, supervised by Sylvain Lefebvre

PhD in progress : Maxence Reberol, *Finite elements for non-conformal mixed hexahedral-tetrahedral meshes*, Janvier 2015, co-supervised by Bruno Lévy and Sylvain Lefebvre

9.2.3. *Juries*

Dobrina Boltcheva was a member of the recruitment committee for an associate professor position (maître de conférence) at the University of Poitiers (MCF 27 - XLIM/IRIAF).

Sylvain Lefebvre was a member of the CR2 recruitment jury for Inria Nancy Grand-Est. He was reviewer ('rapporteur') for the PhD defense of Hugo Loi (Université de Grenoble).

9.3. Popularization

Sylvain Lefebvre participated in the 2016 science festival (stand and general public conference), and gave a presentation in front of an industrial public in an event organized by Fondation Charles Hermite.

<h1 style="text-align:center; color:red">ALPAGE Project-Team</h1>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Selection

9.1.1.1. Member of the Conference Program Committees or Reviewer

- Marie Candito was a reviewer or member of the program committee for the following events: NAACL 2016, CONLL 2016, RECITAL 2016, COLING 2016

- Benoît Crabbé was a reviewer or member of the program committee for the following events: NAACL 2016, ACL 2016, COLING 2016, EMNLP 2016, CONLL 2016.

- Maximin Coavoux was a sub-reviewer or member of the program committee for the following events: ACL 2016, EMNLP 2016.

- Héctor Martínez Alonso was a reviewer or member of the program committee for the following events: ACL 2016, COLING 2016, CONLL 2016, EMNLP 2016, EACL 2017, NAACL 2016 , MWE 2016 and WNUT 2016.

- Laurent Romary was a member of the program committee for the following events: CMLC-4, Digital Humanities and Iconography, The case of alpine mural painting, Datech 2016, CILA 2016, TOTh (Terminology & Ontology: Theories and applications), LDL-2016, LG-LP 2016, ISA-12

- Benoît Sagot was a member of the program committe for the following events: NAACL 2016, EACL 2017, EMNLP 2016, ACL 2016

- Djamé Seddah was a reviewer or member of the program committee for the following events: ACL 2016, COLING 2016, EMNLP 2016, CONLL 2016, TLT 2016, LAW 2016, TALN 2016 and others workshops.

- Éric Villemonte de La Clergerie was a reviewer or member of the program committee for the following events: COLING'16 (tracks Parsing, and "Resources, Software and Tools"), LREC'16, NAACL'16, DiscoNLP'16, Toth'16

9.1.2. Journal

9.1.2.1. Member of the Editorial Boards

- Laurent Romary is co-editor of the overlay Journal of Data Mining and Digital Humanities and for the DH Commons journal

- Laurent Romary is member of the advisory board of the Journal of the Text Encoding Initiative (jTEI)

9.1.2.2. Reviewer - Reviewing Activities

- Héctor Martínez Alonso was a reviewer for the Artificial Intelligence journal

- Laurent Romary was a reviewer for the jTEI journal

- Benoît Sagot was a reviewer for the following journals: Journal of Language Modelling, Language Resources and Evaluation, Northern European Journal of Language

- Djamé Seddah was a reviewer for the following journals: Asian Languages and Information Processing, Language Ressources and Evaluation

9.1.3. Invited Talks

- Marie Candito gave a talk on 24/03/2016 at the "3ème journée TAL et IA ", Paris

- Marie Candito gave a talk on 27/10/2016 at the DIGICOSME Labex, LIMSI, Orsay

- Héctor Martínez Alonso gave an invited talk on 05/04/2016 at PARSEME/ENeL workshop on MWE e-lexicons, Skopje (Republic of Macedonia)

- Héctor Martínez Alonso gave an invited talk on 01/06/2016 at Darmstadt Technical University (Germany).

- Marie Puren gave an invited talk on 26/10/2016 for theDARIAH's Humanities At Scale Winter School at Charles University in Prague.

- Marie Puren gave an invited talk on 22/11/2016 during the colloquim "DHNord" at the "Maison Européenne des Sciences de l'Homme et de la Société" in Lille.

- Charles Riondet gave an invited talk on 26/10/2016 at the DARIAH's Humanities at Scale Winter School, Charles University, in Prag (Czech Republic)

- Laurent Romary gave a speech at Ready to Reach Out, Conference on Digitization of Cultural Heritage (NL EU presidency) "Data and Dissertations", Amsterdam, The Netherlands on 29/06/2016

- Laurent Romary gave a keynote at ETD 2016 "Data and Dissertations", Lille, France on 11/07/2016 [50]

- Laurent Romary gave a keynote at Language Technologies and & Digital Humanities 2016 on 30/09/2016 in Ljubljana, Slovenia [51]

- Benoît Sagot was an invited panelist during the AnaMorphoSys conference on 20-22/06/2016 in Lyon

- Benoît Sagot gave an invited talk at the EPHE workshop on Digital Humanities on 12/10/2016 in Paris

- Djamé Seddah gave a keynote talk at the workshop "Data Driven Approach to Networks and Language" (Lyon)

- Djamé Seddah gave a keynote talk at the workshop "Challenges for Data-driven Natural Language Analysis beyond Standard Data (Lyon)

- Djamé Seddah gave a invited talk in Dusseldorf (Formal Linguistic Departement) on deep syntax based graph-parsing

- Djamé Seddah gave a invited talk in Lyon (ENS seminar series) on morpho-syntactic analysis in challenging environments

- Djamé Seddah gave a invited talk at the 1st NLP Paris Meetup on graph parsing for French

- Éric Villemonte de La Clergerie gave an invited talk at the meeting on "Information, Me´dias et Informatique" (IRISA Rennes, 15/03/2016)

- Éric Villemonte de La Clergerie gave an invited tutorial at the COST Parseme meeting (Dubrovnik, 27/09/2016)

- Éric Villemonte de La Clergerie gave an invited talk at the AIM-WEST & PARSEME-FR Workshop (IMAG Grenoble, 4/10/2016)

- Éric Villemonte de La Clergerie gave an invited talk at the NLP meetup (Paris, 23/11/2016)

9.1.4. Leadership within the Scientific Community

9.1.4.1. Involvement in international initiatives

- Alpage is involved in the ISO subcommittee TC 37/SC 4 on "Language Resource Management". Éric Villemonte de La Clergerie has participated in various ISO meetings as an expert, in particular on morpho-syntactic annotations (MAF), feature structures (FSR & new FSD), and syntactic annotations (SynAF) [55]. Within the same subcommittee, Laurent Romary is the convenor of the working group on lexical resources (WG4).

- Laurent Romary is chairman of ISO committee TC 37 "Terminology and other language and content resources"

- Laurent Romary chairs the Board of Directors of the European Research Infrastructure Consortium DARIAH established by the European Commission to coordinate Digital Humanities infrastructure activities in Europe.
- Laurent Romary is member of the TEI Archiving, Publishing, and Access Service (TAPAS) project advisory board
- Laurent Romary is member of the International Advisory board of the Belgrade Center for Digital Humanities

9.1.4.2. Involvement in national initiatives

- Alpage has many responsabilities wihtin the LabEx EFL. Until February 2015, Benoît Sagot is deputy head of this research strand; Marie Candito is deputy head of the research strand on computational semantics; Benoît Crabbé is deputy head of the research strand on experimental grammar; all three are therefore deputy members of the Scientific and Governing Boards of the LabEx; Laurence Danlos is a member of the Scientific Board of the LabEx EFL, representing Alpage;
- Laurent Romary is the leader of the scientific committe of the EquipEx Ortolang, of which Benoît Sagot is also a member.
- Laurent Romary is chairman of the scientific council of ABES (Agence Bibliographique de l'Enseignement Supérieur)
- Laurent Romary is also member of several scientific committee or advisory board: Labex 'Les passes dans le présent' (PasP), OpenAIRE 2020, OpenEdition (UMS Cleo)
- Laurent Romary is the Inria scientific advisor for Scientific and Technical Information, in charge in particular of the Open Access strategy.

9.1.4.3. Other activities for the scientific community

- Laurence Danlos is member of the Permanent Committee of the TALN conference (CPerm) organised by ATALA.

9.1.5. Scientific Expertise

- Marie Candito was member of the committee for the "prix de thèse ATALA"
- Benoît Crabbé was reviewer for a ERC starting grant
- Laurent Romary was project reviewer for Fonds National Suisse, Switzerland
- Laurent Romary was project reviewer for the Canada Foundation for Innovation, Canada
- Laurent Romary was project reviewer for LabEx PATRIMA, Switzerland
- Laurent Romary has advised the European Patent Office for the specification of their model for representing the non patent literature, based on the TEI (Text Encoding Initiative) guidelines.
- Laurent Romary has been a referee for the selection of a professor at the University of Cologne, Germany
- Laurent Romary has part of the selection committee for a professorship at the Université de Lorraine, France
- Benoît Sagot was project reviewer for the ANR
- Benoît Sagot was an elected board member of the French NLP society (ATALA) until July 2016
- Benoît Sagot was a member of the HCERES evaluation committee for the UMR ATILF (december 2016)
- Djamé Seddah was a reviewer for the Luxemrbourg research funding agency.
- Djamé Seddah was an external reviewer for a Machine Learning PhD thesis (University of Barcelona, sup: Xavier Carreras)

- Éric Villemonte de La Clergerie has participated to several AFNOR meetings in relation with ISO TC37SC4 "Language Resource Management". He was also a member of the French delegation at the annual ISO TC37 meeting (Copenhagen, June 2016)
- Éric Villemonte de La Clergerie was one of the animators of the working group of the GFII on Knowledge Technologies, and was also involved in the discussions of the GFII about the "regulation of algorithms"

9.1.6. Research Administration

9.1.6.1. University duties

- Lucie Barque was until june 2016 deputy director of the Linguistic department at Université Paris Nord
- Marie Candito is deputy director of the UFR of Linguistics.
- Maximin Coavoux is a student member of the Administrative board of the UFR of Linguistics of University Paris Diderot.
- Benoît Crabbé is a member of the Administrative board of the UFR of Linguistics of University Paris Diderot.
- Laurence Danlos is the chair of the Scientific Committee of the Linguistics UFR of University Paris Diderot.
- Laurence Danlos is the deputy chair of the Doctoral School for Linguistic Sciences (École Doctorale de Sciences du Langage).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Lucie Barque, Phonétique, 22,5 heures en équivalent TD, niveau L2, Université Paris 13, France

Licence: Lucie Barque, Dictionnaires électroniques, 22,5 heures en équivalent TD, niveau L2, Université Paris 13, France

Licence: Lucie Barque, Corpus électroniques, 22,5 heures en équivalent TD, niveau L2, Université Paris 13, France

Licence: Lucie Barque, Syntaxe et sémantique, 22,5 heures en équivalent TD, niveau L3, Université Paris 13, France

Licence: Lucie Barque, Pragmatique et Énonciation, 11 heures en équivalent TD, niveau L3, Université Paris 13, France

Licence: Timothée Bernard, TD d'Algorithmique, 24 heures en équivalent TD, niveau L3, Université Paris 7 Diderot, France

Licence: Marie Candito, Linguistique de corpus, 28 heures en équivalent TD, niveau L3, Université Paris Diderot, France

Licence: Marie Candito, Probabilités et statistiques pour le TAL, 28 heures en équivalent TD, niveau L3, Université Paris Diderot, France

Licence: Maximin Coavoux, Programmation 2, 28 heures en équivalent TD, niveau L3, Université Paris Diderot, France

Licence: Benoît Crabbé, Introduction à la programmation, 24 heures en équivalent TD, niveau L3, Université Paris Diderot, France.

Licence: Laurence Danlos, Introduction au TAL, 32 heures en équivalent TD, niveau L3, Université Paris-Diderot, France

Master: Lucie Barque, Ressources lexicales pour le TAL, 24 heures en équivalent TD, niveau M2, Université Paris 13, France

Master: Lucie Barque, La langue et son enseignement, 18 heures en équivalent TD, niveau M1, Université Paris 13, France

Master: Lucie Barque, Problématiques de la néologie, 36 heures en équivalent TD, niveau M2, Université Paris 13, France

Master: Timothée Bernard, Phonétique (TD), 12 heures en équivalent TD, niveau M1, Université Paris Diderot, France

Master: Timothée Bernard, Langages formels (TD), 24 heures en équivalent TD, niveau M1, Université Paris Diderot, France

Master: Marie Candito, Analyse sémantique automatique du langage naturel, 14 heures en équivalent TD, niveau M2, Université Paris Diderot, France

Master: Marie Candito, Traduction automatique, 51 heures en équivalent TD, niveau M1, Université Paris Diderot, France

Master: Marie Candito, Apprentissage automatique pour le TAL, 60 heures en équivalent TD, niveau M1, Université Paris Diderot, France

Master: Maximin Coavoux, Approches probabilistes du TAL (TD), 24 heures en équivalent TD, niveau M1, Université Paris Diderot, France

Master: Benoît Crabbé, Linguistique empirique et expérimentale, 24 heures en équivalent TD, niveau M2, Université Paris Diderot, France.

Master: Laurence Danlos, Discours: Analyse et génération de textes, 32 heures en équivalent TD, niveau M2, Université Paris-Diderot, France

Master: Laurent Romary, Basic encoding and annotation of textual sources in TEI, 24 hours, Master of Library and Information Science, Fach Hochschule Potsdam, Germany

Continuous training: Laurent Romary, Codage de document scientifique en XML TEI, 16 hours, INIST-CNRS, France

9.2.2. Supervision

PhD in progress: Timothée Bernard, "Analyse discursive et factualité", started in September 2015, supervised by Laurence Danlos (superviser) and Philippe de Groote (co-superviser)

PhD in progress: Raphael Salmon, "Implémentation d'un système de génération à base de contraintes", Université Paris-Diderot, started in October 2013, supervised by Laurence Danlos (superviser) and Alain Kaeser (tutor in the company Yseop)

PhD in progress: Marianne Djemaa, "Création semi-automatique d'un FrameNet du français", started in October 2012, supervised by Marie Candito

PhD: Corentin Ribeyre, "Vers la syntaxe profonde pour l'interface syntaxe-sémantique", started in November 2012, supervised by Laurence Danlos (superviser), Djamé Seddah (co-superviser) and Éric Villemonte de La Clergerie (co-superviser), defended on January 27, 2016

PhD in progress: Maximin Coavoux, "Représentations continues pour l'analyse syntaxique et sémantique automatique", started in September 2015, supervised by Benoît Crabbé.

PhD in progress: Loïc Grobol, "Reconnaissance automatique de chaînes de coréférences en français par combinaison d'apprentissage automatique et de connaissances linguistiques", started in October 2016, supervised by Isabelle Tellier (supervisor), Marco Dinarelli (co-supervisor), and Éric Villemonte de La Clergerie (co-supervisor)

PhD in progress: Axel Herold, "Automatic identification and modeling of etymons in retro-digitized dictionaries", started in November 2016, supervised by Laurent Romary

PhD in progress: Jack T. Bowers, "Technology, description and theory in language documentation: creating a comprehensive body of multi-media resources for Mixtepec-Mixtec using standards, ontology and Cognitive Linguistics", started in November 2016, supervised by Laurent Romary

PhD in progress: Mohamed Khemakhem, "Structuration automatique de dictionnaires à partir de modèles lexicaux standardisés", started in September 2016, supervised by Laurent Romary

9.2.3. *Juries*

Laurence Danlos was an examinator in the PhD defense committee of Aleksandre Maskharashvili. Title: Discourse Modeling with Abstract Categorial Grammars. University: Université de Lorraine. PhD supervisor: P. de Groote, Sylvain Pogodalla. Defense date: 1st December 2016.

Laurent Romary was a reviewer (*rapporteur*) in the PhD defense committee of Sirine Boukedi Troudi. Title: Outils d'analyse des structures non-têtes. University: Université de Sfax. PhD supervisor: Kais Haddar. Defense date: 11 May 2016.

Laurent Romary was a reviewer (*rapporteur*) in the PhD defense committee of Daouda Sawadogo. Title: Architectures logicielles et mécanismes pour la gestion adaptative et consolidée de ressources numériques dans une application interactive scénarisée. University: Université de La Rochelle. PhD supervisor: Pascal Estraillier and Ronan Champagnat. Defense date: 28 June 2016.

Djamé Seddah and Éric Villemonte de La Clergerie was a member in the PhD defense committee of Corentin Ribeyre as co-supervisor, together with Laurence Danlos (as PhD director). Title: Méthodes d'Analyse Supervisée pour l'Interface Syntaxe-Sémantique. University: Université Paris-Diderot.Defense date: 27 January 2016.

Éric Villemonte de La Clergerie was a member in the PhD defense committee of Julie Belião. Title: How prosody and syntax are mapping: A study of synchronization and congruence. University: Université Paris Ouest. Defense date: 5 December 2016

9.3. Popularization

- Interview of Laurent Romary on new scientific publication models for APS news, American Physical Society (http://www.aps.org/publications/apsnews/201602/arxiv.cfm).

- Laurent Romary and Marie Puren have given an interview on 24/11/2016 on the European project Parthenos for the Inria website (https://www.inria.fr/centre/paris/actualites/epi-alpage-historiens-et-informaticiens-reunis-dans-le-projet-europeen-parthenos).

- Timothée Bernard has welcomed two high school students at Alpage during 4 days, in the framework of the "Science Académie" of the "Paris-Montagne" association.

ALPINES Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- SIAM Conference on Parallel Processing and Scientific Computing 2016 http://www.siam.org/meetings/pp16/, Paris. Co-chairs L. Grigori and R. Vuduc. The team Alpines as well as other members of Inria Paris and UPMC, were in charge of the local organization of this conference. There were a record number of 500 participants, 88 minisymposia sessions and 44 contributed talks.
- Frederic Hecht: Organizing the 8th FreeFem++ days (December 2016, Paris)

10.1.1.2. Member of the Organizing Committees

- Laura Grigori: Member of Program Committee of IEEE International Parallel and Distributed Processing Symposium, IPDPS 2016.
- Laura Grigori: Member of Program Committee of HiPC 2016, IEEE Int'l Conference on High Performance Computing.
- Laura Grigori: Member of Program Committee of IEEE Cluster 2016.
- Laura Grigori: Member of Organizing Committee of 5th SIAM Workshop on Combinatorial Scientific Computing (CSC) 2016.

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

10.1.2.1.1. Laura Grigori

- March 2014 – current. Member of the editorial board for the SIAM book series Software, Environments and Tools. See http://bookstore.siam.org/software-environments-and-tools/.
- June 2013 – current. Area editor for Parallel Computing Journal, Elsevier
- January 2016 – current. Associate Editor, SIAM Journal on Scientific Computing.
- January 2016 – current. Editorial board, Numerical linear algebra with applications Journal, Wiley.

10.1.2.1.2. Frédéric Nataf

- 2014 – current. Associate Editor, Journal of Numerical Mathematics, de Gruyter.

10.1.3. Invited Talks

- Laura Grigori: Invited plenary speaker, Fifth IMA Conference on Numerical Linear Algebra and Optimization, Birmingham, (http://www.ima.org.uk/conferences/conferences_calendar/5th_ima_conference_on_numerical_linear_algebra_and_optimisation.cfm.html, September 7-9, 2016.
- Frederic Hecht: tutorial with FreeFem++, CEMRACS 2016 CIRM, Luminy, Marseille, july 18-22, 2016.
- Frederic Hecht: Graduate Course: An introduction to scientific computing using free software FreeFem++ , The Fields Institute for Research in Mathematical Sciences , Toronto, Canada , 7-17 March . 2016.
- Frederic Nataf: tutorial on Domain Decomposition Methods, CEMRACS 2016 CIRM, Luminy, Marseille, july 18-22, 2016.

- Frederic Nataf: Invited plenary speaker, Franco-Scottish Seminar 2016: Linear Algebra and Parallel Computing at the Heart of Scientific Computing. 21 September 2016.

10.1.4. Leadership within the Scientific Community

- Laura Grigori: Chair of the SIAM SIAG on Supercomputing (SIAM special interest group on supercomputing), January 2016 - December 2017. Nominated by a Committee and elected by the members of this SIAG.
- Laura Grigori: Member of the PRACE (Partnership for Advanced Computing in Europe, http://www.prace-ri.eu/) Scientific Steering Committee, September 2016 - current.
- Laura Grigori: Steering committee member, Challenge 7: Information and communication society, ANR (Comité de Pilotage , Défi 7), since November 2016.

10.1.5. Scientific Expertise

- Laura Grigori: November 2015 - current, expert to the Scientific Commission of IFPEN (French Petroleum Institute). Evaluation of research programs, PhD theses, work representing a total of 5 days per year.
- Xavier Claeys: Member of the hiring committee for the position of maître de conférence 26 MCF 4346 at Université Claude Bernard Lyon 1, Spring 2016

10.1.6. Research Administration

10.1.6.1. Xavier Claeys

- Correspondent of the Association pour les Mathématiques en Interactions avec les Entreprises et la Société (AMIES) for Laboratoire Jacques-Louis Lions

10.1.6.2. Laura Grigori

- Member of the Director Committee (Comité Directeur) of GIS Geosciences franciliennes, since November 2015.
- Member (nominated by Inria) of the Scientific Committee of the Mathematics Department of UPMC

10.1.6.3. Frédéric Hecht

- Assistant Director of Fédération de Recherche en Mathématiques de Paris Centre, Fédération de Recherche en Mathématiques de Paris Centre, Since 2010

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

10.2.1.1. Xavier Claeys

- Academic year 2015-2016, total number of course hours: 192 hrs
    - Licence 1: Calculus, 12hrs, UPMC
    - Licence 2: Orientation and Professional Insertion, 40 hrs, UPMC
    - Master 1: Basic computing, 72 hrs of practical works in C++, UPMC
    - Master 1: Scientific computing, 44 hrs of lectures, UPMC
    - Master 2: Solving PDEs by using finite element methods, 18 hrs of practical works in C++, UPMC

10.2.1.2. Laura Grigori

- Spring 2016, UC Berkeley: Co-teaching a class with J. Demmel on Communication Avoiding Algorithms https://who.rocq.inria.fr/Laura.Grigori/TeachingDocs/CS-294_Spr2016/CS-294_CA_Spr2016.html. The class is available for mathematics students as a *Hot Topics Course in Mathematics*, and for Computer Science students as a *Special Topics* class. It was mainly designed for graduate students.

- 4-hour lecture at the XVII Jacques-Louis Lions Spanish-French School on Numerical Simulation in Physics and Engineering, June 2016, Gijon, Spain.

10.2.1.3. Frédéric Hecht

- Academic year 2015-2016, total number of course hours: 192 hrs
  - Master 1: Initiation au C++, 24hrs, M1, Université Pierre-et-Marie Curie Paris 6, France
  - Master 2: Des EDP à leur résolution par la méthode des éléments finis (MEF), 24hrs, M2, Université Pierre-et-Marie Curie Paris 6, France
  - Master 2: Numerical methods for fluid mechanics, 10hrs, M2, Université Pierre-et-Marie Curie Paris 6, France
  - Master 2: Calcul scientifique 3 / projet industriel FreeFem++, 28hrs, M2, Université Pierre-et-Marie Curie Paris 6, France
  - Master 2: Ingénierie 1 / Logiciel pour la simulation (FreeFem++), 21hrs, M2, Université Pierre-et-Marie Curie Paris 6, France
  - Master 2: Ingénierie 2 / Projet collaboratif, 21hrs, M2, Université Pierre-et-Marie Curie Paris 6, France
- CEMRACS 2016 : Calcul scientifique à haute performance, 3h course on Tutorial with FreeFem++. The slides are available on F. Hecht website, and videos can be found here https://www.youtube. com/watch?v=NQy2kZQGBbg.

10.2.1.4. Frédéric Nataf

- CEMRACS 2016 : Calcul scientifique à haute performance, 3h course on Domain decomposition methods The slides are available on F. Nataf's website, videos can be found here https://www. youtube.com/watch?time_continue=10672&v=t-rgIFcN6w4.
- Spring 2016: Course on *Domain Decomposition Methods*, Master 2nd year Mathematics & Applications, University Pierre and Marie Curie
- Winter 2016: Course on *Domain Decomposition Methods*, Master 2nd year, Mathematics & Applications, ENSTA and UVSQ

10.2.2. Supervision

- PhD in progress: Alan Ayala, since October 2015 (funded by NLAFET H2020 project), co-advisors Xavier Claeys and Laura Grigori.
- PhD in progress : Sebastien Cayrols, since October 2013 (funded by Maison de la simulation), adivsor Laura Grigori.
- PhD in progress: Hussam Al Daas, since February 2015 (funded by contract with Total), advisor Laura Grigori.
- PhD in progress: Olivier Tissot, since October 2015 (funded by NLAFET H2020 project), advisor Laura Grigori.
- PhD in progress: Pierre Marchand, since October 2016 (funded by ANR NonLocalDD project), advisors Xavier Claeys et Frédéric Nataf.
- PhD in progress: Zakariae Jorti, since February 2016 (funded by IFPen), advisor Laura Grigori.
- PhD : Ryadh Haferssas, defended december 2016 (funded by Ecole Doctorale, UPMC), advisor F. Nataf
- PhD : Mireille El-HAddad, defended december 2016(t UPMC), advisors F. Hecht and T. Sayah.
- HDR: X. CLAEYS, Boundary integral equations of time harmonic wave scattering at complex structures, Accreditation to supervise research, (UPMC Paris 6), February 2016.

10.3. Popularization

- 2 Conferences on being a mathematicien: **Applied Mathematics, Research...**, in the high school Viollet le Duc - Villiers-Saint-Frédéric, France for 200 high school students in 11th and 12th grade, april 2016.
- Part of the teaching duty of Xavier Claeys (around 70 hours total) has been dedicated to "orientation and insertion professionnelle". This has consisted in familiarizing young students (2nd year bachelor) with potential curricula, professionnal activities and networks related to mathematics.

AMIB Project-Team

7. Dissemination

7.1. Promoting Scientific Activities

7.1.1. Scientific Events Selection

7.1.1.1. Member of the Conference Program Committees

- Yann Ponty: RECOMB'17, BICOB'17, SeqBio'16, ECCB'16, BioVis'16, ISMB'16, and BICOB'16

7.1.1.2. Reviewer

For international conferences:

- Yann Ponty: MFCS'16

7.1.2. Journal

7.1.2.1. Member of the Editorial Boards

M. Régnier is an editor of PeerJ Computer Science.

7.1.2.2. Reviewer - Reviewing Activities

M. Régnier and Y. Ponty reviewed manuscripts for a large selection of journals in Mathematics, Computer Science and Bioinformatics: Discrete Mathematics and Theoretical Computer Science, Theoretical Computer Science, Bioinformatics, BMC Bioinformatics, Journal of Mathematical Biology, IEEE/ACM Transactions on Computational Biology and Bioinformatics, Journal of Discrete Algorithms, Algorithms for Molecular Biology, PLOS One, Journal of Theoretical Biology, RNA, Nucleic Acids Research...

7.1.3. Invited Talks

Mireille Regnier was an invited speaker of the *Advanced Algorithms on Strings* workshop in the honor of Alberto Apostolico.

Yann Ponty gave invited talks at the *Journées Combinatoires Franco-Vancouvéroises* (Vancouver, Canada), the college of life sciences (Wuhan University, China), and multiple seminars (C3BI@Pasteur, LIGM, LAMSADE, 2x Bioinfo@LIX/LRI...)

7.1.4. Leadership within the Scientific Community

Yann Ponty is the scientific animator of the *macromolecular structure and interactions axis* of the CNRS *Molecular Bioinformatics* workgroup (GdR BIM).

M. Régnier is a member of DIGITEO progam Committee and SDV working group in Saclay area.

7.1.5. Scientific Expertise

Yann Ponty acted as an external expert for the French *Agence Nationale de la Recherche* (ANR, JCJC program), and for the Canadian *Sciences and Engineering Research Council* (NSERC/CRSNG, Discovery grant program);

Yann Ponty acted as an external reviewer for the evaluation of the assistant professor position of Jing Qin at University of Southern Denmark, towards her promotion as an associate professor;

M. Régnier is a member of DIGITEO progam Committee and SDV working group in Saclay area.

7.1.6. Research Administration

Since 2016, M. Regnier acts as the head of LIX (CNRS/Ecole Polytechnique);

Until Sept. 2016, Yann Ponty was an elected member of the *comité national du CNRS*, and took part in the evaluation of CNRS research scientists and structures at a national level in Computer Science (Section 6) and Life Science interfaces (CID 51);

Yann Ponty is an elected member of the *conseil de laboratoire* of LIX.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

We have and we will go on having trained a group of good multi-disciplinary students both at the Master and PhD level. Being part of this community as a serious training group is obviously an asset. Our project is also very much involved in two major student programs in France: the Master AMI2B at Paris-Saclay (previously BIBS (Bioinformatique et Biostatistique) at Université Paris-Sud/École Polytechnique) and the parcours d'Approfondissement en Bioinformatique at École Polytechnique.

At Ecole Polytechnique, M. Régnier is in charge of M1 and M2. Most team members are teaching in this master program.

Beyond the plateau de Saclay, Yann Ponty taught 12h at the M2 level for University Pierre et Marie Curie in the BIM Master program.

7.2.2. Supervision

HDR

L. Mouchard *Contributions algorithmiques à l'analyse des séquences génomiques* : J.-M. Steyaert

PhD

Vladimir Reinharz, *Algorithmic properties of evolved structured RNAs*, McGill University (Montréal, Canada), July 2016, supervised by J. Waldispühl (CS Dept, McGill Univ.) and Yann Ponty

PhD in progress

Alice Héliou, *Identification et caractérisation d'ARN circulaires dans des séquences NGS*, Ecole Polytechnique, Encadrant(e|s): Mireille Régnier and Hubert Becker

Wei Wang, *Homology based approaches for predicting 3D structure of RNA molecules*, Univ. Paris XI, Encadrant(e|s): Alain Denise and Yann Ponty;

Amélie Héliou, *Game theory and conformation sampling for multi-scale and multi-body macromolecule docking*, Ecole Polytechnique, Encadrant(e|s): Johanne Cohen;

Afaf Saaidi, *Differential analysis of RNA SHAPE probing data*, Ecole Polytechnique, Encadrants: Yann Ponty and Mireille Régnier.

Antoine Soulé, *Evolutionary study of RNA-RNA interactions in yeast* , Ecole Polytechnique, Encadrants: Jean-Marc Steyaert and J. Waldispuhl (U. McGill, Canada);

Jorgelindo Moreira da Veiga, *Caractérisation dynamique et optimisation des flux métaboliques* , Ecole Polytechnique, Encadrants: L. Schwartz (AP-HP)Sabine Peres (U. Paris-Sud)

7.2.3. Juries

HDR

S. Bérard *Histoires évolutives et autres comptes* : M. Régnier

M. Magnin *Contributions à l'élaboration de connaissances qualitatives en bio-informatique* : M. Régnier

PhD

Manuel Lafond, Comparative Genomics, Université de Montréal, Canada, August 2016

Karen Druart, Computational Structural Biology, Ecole Polytechnique, December 2016

7.3. Popularization

Afaf Saaidi participated to the *Ma thèse en trois minute* contest, and won the best poster award at the *Journées de l'école doctoral Interfaces* of Paris Saclay University.

ANGE Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

B. Di Martino, C. Guichard, A. Mangeney, Y. Penel and J. Sainte-Marie organised the workshop "Complex rheology for granular flows: challenges and deadlocks" that took place at IPGP on October 14th and that gathered 25 researchers.

M. Parisot organise's the Working group (GdT) of the Ange team.

Moreover, L. Boittin co-organise's the Junior Seminar at Inria–Paris.

10.1.2. Journal

10.1.2.1. Reviewer - Reviewing Activities

Member	Journal
E. Audusse	Advanced Water Resources, ESAIM:ProcS., SMAI Journal of Computational Mathematics
E. Godlewski	Computers and Fluids
C. Guichard	Numerische Mathematik, Mathematics and Computers in Simulation, Annali di Matematica Pura ed Applicata
B. Haspot	Analysis of PDE, JDE, JMAA, M3AS, ARMA, Siam Analysis, Mathematische Annalen, CMS, JFA, Acta Applicandae Mathematicae
A. Mangeney	J. Fluid Mech., J. Geophys. Res., Numeric. Analyt. Methods Geomech., Earth Surf. Processes and Landforms
M. Parisot	Continuum Mechanics and Thermodynamics, Hydrological Processes
Y. Penel	Hydrological Processes
J. Salomon	SIAM Journal on Numerical Analysis, M2AN, SIAM Journal of Scientific Computing
J. Sainte-Marie	M2AN, Nonlinearity, IJNMF, Applied mathematical modellling, Journal of Hydraulic Research, Computers and Fluids, European Journal of Applied Math, Numerische Mathematik

10.1.3. Invited Talks

Conference	Location	Month	Members involved
European Geosciences Union	Vienna (Austria)	April	A. Mangeney
Peril flood	Paris	May	M. Parisot
CANUM	Obernai	May	D. Kazerani
ECMI	Santiago de Compostela (Spain)	June	C. Guichard
CECAM	Lyon	June	A. Mangeney
Martian gullies and Earth analogues	London (UK)	June	A. Mangeney
Scientific computing and modelling	Amiens	June	J. Sainte-Marie
Asymptotic Behavior of systems of PDE	Lille	June	D. Kazerani
AIMS	Orlando (US)	July	N. Aissiouene
EGU FORM-OSE training school	Azores (Spain)	July	A. Mangeney
HYP	Aachen (Germany)	August	Y. Penel
Modelling of coastal hydrodynamics	Vannes	September	E. Audusse, J. Sainte-Marie
GDR Renewable marine energies	Nantes	October	J. Salomon
GDR Transnat	Roscoff	November	E. Audusse
Liquid-vapor interfaces in fluid flows	Paris	December	D. Kazerani

Seminars	Date	Member
IMUS (Sevilla, Spain)	February	Y. Penel
EDANYA (Málaga, Spain)	April	N. Aissiouene
Paris (LJLL)	May	M. Parisot
GIS HED[2]	June	D. Kazerani
Luminy (CEMRACS)	August	E. Audusse
Lille	September	M. Parisot

10.1.4. Leadership within the Scientific Community

Organisation	People	Duty
AMIES	E. Godlewski	Member of board
CFEM	E. Godlewski	Director
Comité d'Orientation Pour les Risques Naturels Majeurs du Ministère de l'Environnement	A. Mangeney	Member
EGRIN	E. Audusse	Correspondent (Paris 13)
	B. di Martino	Correspondent (Corse)
	N. Goutal	Correspondent (EDF)
	C. Guichard	Correspondent (UPMC)
	A. Mangeney	Member of board
	M. Parisot	Correspondent (ANGE)
	J. Sainte-Marie	Scientific head
HCERES	A. Mangeney	Expert
LJLL	E. Godlewski	Deputy director
Research commission of UPMC	D. Kazerani	Member
SMAI	Y. Penel	Member of board

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master's degree (M2) E. Godlewski and J. Sainte-Marie, Hyperbolic models for complex flows and energy applications, 25 hours (lectures), Univ. Pierre et Marie Curie Paris 6

Master's degree (M2) E. Godlewski, Numerical methods for nonstationary PDEs, 18 hours (example and programming classes), Univ. Pierre et Marie Curie Paris 6

Master's degree (M2) C. Guichard, Numerical methods for nonstationary PDEs, 6 hours (programming classes), Univ. Pierre et Marie Curie Paris 6

Master's degree (M2) H. Martin and J. Sainte-Marie, Numerical methods in fluid mechanics, 52 hours (lectures and programming classes), Univ. Paris Diderot Paris 7, IPGP

Master's degree (M2) B. Haspot, Linear partial differential equations, 15 hours (lectures), Univ. Paris Dauphine

Master's degree (M2) B. Di Martino, Mathematical modelling, 21 hours (lectures, example and programming classes), Univ. Corse

Master's degree (M2) J. Salomon, Scientific computing and numerical analysis, 30 hours (lectures, example and programming classes), Univ. Paris Dauphine

Engineering school (2nd year) E. Audusse, Hyperbolic systems, 30 hours (lectures and example classes), Univ. Paris 13

Engineering school (2nd year) E. Audusse, Finite difference method for PDEs, 30 hours (lectures and programming classes), Univ. Paris 13

Master's degree (M1) C. Guichard, Basis of numerical methods, 68 hours (programming classes), Univ. Pierre et Marie Curie Paris 6

Master's degree (M1) H. Martin and J. Sainte-Marie, Models in geosciences, 40 hours (lectures and programming classes), Univ. Paris Diderot Paris 7, IPGP

Master's degree (M1) B. Di Martino, Numerical methods, 27 hours (lectures and programming classes), Univ. Corse

Master's degree (M1) B. Di Martino, Mathematics, 33 hours (lectures, example and programming classes), Univ. Corse

Master's degree (M1) B. Haspot, Functional analysis, 85 hours (lectures and example classes), Univ. Paris Dauphine

Master's degree (M1) E. Godlewski, Numerical methods, 24 hours (lectures), Univ. Pierre et Marie Curie Paris 6

Engineering school (1st year) E. Audusse, Numerical analysis for differential equations, 30 hours (example classes), Univ. Paris 13

Bachelor's degree (L3) C. Guichard, Numerical linear algebra, 76.5 hours (example and programming classes), Univ. Pierre et Marie Curie Paris 6

Bachelor's degree (L3) M. Parisot, Hilbert analysis, 30 hours (lectures and example classes), Univ. Pierre et Marie Curie Paris 6

Bachelor's degree (L3) B. Di Martino, Numerical methods, 18 hours (lectures and programming classes), Univ. Corse

Bachelor's degree (L2) E. Audusse, Scientific computing, 36 hours (lectures), Univ. Paris 13

Bachelor's degree (L2) Y. Penel, Integration in 2 and 3 dimensions, 12 hours (lectures), Univ. Pierre et Marie Curie Paris 6

Bachelor's degree (L1) F. Wahl, Linear algebra, 54 hours (example classes), Univ. Pierre et Marie Curie Paris 6

Bachelor's degree (L1) F. Wahl, Analysis and algebra for sciences, 38.5 hours (example classes), Univ. Pierre et Marie Curie Paris 6

Bachelor's degree (L1] E. Nayir, Mathematics, 72 hours (example classes), Univ. Pierre et Marie Curie Paris 6

Bachelor's degree (L1) E. Godlewski and E. Nayir, Linear algebra, 48 hours (lectures and example classes), Univ. Pierre et Marie Curie Paris 6

Bachelor's degree (L1) L. Boittin, Calculus, 28 hours (example classes), Univ. Pierre et Marie Curie Paris 6

Some members are responsible of educational pathways:

- E. Audusse is the deputy director of the "Applied Mathematics and Scientific Computing" program of the SupGalilee engineering school.
- E. Godlewski is the head of the "Mathematics for Industry" M.Sc. program of Univ. Pierre et Marie Curie Paris 6.
- C. Guichard is the associated head of the "Mathematics and Programming" B. program of Univ. Pierre et Marie Curie Paris 6.
- A. Mangeney is the head of the "Telluric Natural Hazards" M. Sc. specialty of IPGP.

10.2.2. Supervision

PostDoc in progress El Hadji Kone, *Numerical modelling of shallow two-phase flows*, Institut de Physique du Globe (Univ. Paris 7), supervised by A. Mangeney, from 2016

PostDoc in progress Pierre-Olivier Lamarre, *Optimization of the hydrodynamic regime in a raceway and lagrangian trajectories of algae*, supervised by J. Sainte-Marie and N. Aïssiouene (in collaboration with O. Bernard, BIOCORE)

PhD Nora Aïssiouene, *Derivation and analysis of a non-hydrostatic Shallow water type model*, Univ. Pierre et Marie Curie Paris 6 (Inria grant), supervised by E. Godlewski and J. Sainte-Marie, defended on Dec. 16

PhD Dena Kazerani, *Simulation et modélisation de problèmes à frontière libre*, Univ. Pierre et Marie Curie Paris 6, supervised by N. Seguin (in collaboration with P. Frey and C. Audiard), defended on Nov. 16

PhD Clément Mifsud, *Analyse et approximation des systèmes de Friedrichs : application à la modélisation de l'élastoplasticité*, Univ. Pierre et Marie Curie Paris 6, supervised by N. Seguin (in collaboration with J.-F. Babadjian and B. Després), defended on Nov. 16

PhD Amandine Sergeant-Boy, *Detection and characterisation of seismic sources generated by glaciers: numerical modelling and analysis of seismic waves*, Institut de Physique du Globe (Univ. Paris 7), supervised by A. Mangeney (in collaboration with J.-P. Montagner, E. Stutzmann and O. Castelnau), defended on Nov. 16

PhD in progress Léa Boittin, *Modelling, analysis and efficient numerical resolution for erosion processes*, Univ. Pierre et Marie Curie Paris 6 (Inria grant), supervised by E. Audusse, M. Parisot and J. Sainte-Marie, from Jan. 16

PhD in progress Vincent Bachelet, *Granular flows and generated acoustic waves: a laboratory investigation*, Institut de Physique du Globe (Univ. Paris 7), supervised by A. Mangeney (in collaboration with J. De Rosny and R. Toussaint), from 2015

PhD in progress Do Minh Hieu, *Analyse mathématique et schémas volumes finis pour la simulation des écoulements quasi-géostrophiques à bas nombre de Froude*, Univ. Paris 13, supervised by E. Audusse and Y. Penel (in collaboration with S. Dellacherie and P. Omnes), from 2014

PhD in progress Virginie Durand, *Spatio-temporal measurement, analysis and simulation of gravitational flows and seismic signals*, Institut de Physique du Globe (Univ. Paris 7), supervised by A. Mangeney, from 2016

PhD in progress Julian Kühnert, *Simulation of high frequency seismic waves*, Institut de Physique du Globe (Univ. Paris 7), supervised by A. Mangeney, from 2016

PhD in progress Hugo Martin, *Simulation of the coupling between seismic waves and granular flows*, Institut de Physique du Globe (Univ. Paris 7), supervised by A. Mangeney (in collaboration with Y. Maday), from 2016

PhD in progress Hélène Miallot, *Numerical modelling of landquakes*, Institut de Physique du Globe (Univ. Paris 7), supervised by A. Mangeney (in collaboration with Y. Capdeville), from 2015

PhD in progress Ethem Nayir, *Approximation multi-vitesse des équations de Navier-Stokes hydrostatiques: Analyse mathématique et simulations numériques*, Univ. Pierre et Marie Curie Paris 6, supervised by E. Audusse, Y. Penel and J. Sainte-Marie, from 2014

PhD in progress Nourelhouda Omrane, *Mathematical analysis and control of free-surface flows in variable domains*, Univ. Corse, supervised by B. Di Martino, from 2016

PhD in progress Pierrick Quémar, *3D numerical simulations of environmental hydrolics: application to Telemac*, Univ. Paris 13, supervised by E. Audusse and N. Goutal (in collaboration with A. Decoene, O. Lafitte, A. Leroy and C. Tuân Phan), from 2016

PhD in progress Sebastian Reyes-Riffo, *Mathematical methods for recovering marine energies*, Univ. Paris Dauphine, supervised by J. Salomon, from 2016

PhD in progress Fabien Wahl, *Modelling and analysis of interactions between free surface flows and floating objects*, Univ. Pierre et Marie Curie Paris 6, supervised by C. Guichard, E. Godlewski, M. Parisot and J. Sainte-Marie, from 2015

M2 internship Marie Zehgdoudi, *Étude des flux de lave émis au Piton de la Fournaise à partir d'enregistrements sismiques*, IPGP, supervised by A. Mangeney, Summer 2016

L3 internship Albin Grataloup, *Perturbation theory applied to the shallow water equations*, Ecole Normale Supérieure de Lyon, supervised by E. Audusse and Y. Penel, Summer 2016

We also mention that N. Goutal and M. Parisot supervised a student during the 2016 session of CEMRACS during the summer.

10.2.3. Juries

Feb., PhD A. Mangeney (president): Antoine Frère (CEA, *Modélisation des tsunamis génér{es par écoulement gravitaire : application dans le golfe de Gascogne*)

Feb., PhD A. Mangeney (referee): Véronique Dansereau (Univ. Grenoble, *A Maxwell-Elasto-Brittle model for the drift of ice*)

July, PhD E. Godlewski: Khalil Haddaoui (Univ. Pierre et Marie Curie Paris 6, *Méthodes numériques de haute précision et calcul scientifique pour le couplage de modèles hyperboliques*)

Sept., PhD E. Godlewski (referee): Asma Toumi (Univ. Toulouse, *Méthode numérique asynchrone pour la modélisation de phénomènes multi-échelles*)

Oct., PhD E. Godlewski (referee): Hippolyte Lochon (Univ. Marseille, *Modélisation et simulation d'écoulements transitoires eau-vapeur en approche bi-fluide*)

Oct., PhD B. Di Martino (referee): Ralph Lteif (Univ. Chambéry, *Modélisation et analyse mathématique de modèles en océanographie*)

Nov., PhD J. Sainte-Marie (referee): Amina Nouhou-Bako (Univ. Orléans, *Modélisation numérique de l'érosion diffuse des sols. Interaction gouttes-ruissellement*)

Nov., PhD E. Godlewski and J. Sainte-Marie: Dena Kazerani (Univ. Pierre et Marie Curie Paris 6, *Études mathématiques de fluides à frontières libres en dynamique incompressible*)

Nov., PhD A. Mangeney: Amandine Sergeant-Boy (Univ. Paris 7, *Detection and characterisation of seismic sources generated by glaciers: numerical modelling and analysis of seismic waves*)

Nov., PhD A. Mangeney: Sébastien Lherminier (Univ. Lyon 1, *Dynamique des avalanches invariantes d'échelle*)

Dec., PhD E. Godlewski, A. Mangeney and J. Sainte-Marie: Nora Aïssiouene (Univ. Pierre et Marie Curie Paris 6, *A numerical method for a dispersive shallow water system*)

Dec., HdR J. Sainte-Marie: Carine Lucas (Univ. Orléans, *Analyse mathématique et numérique de quelques modèles d'érosion*)

M. Parisot participated to the intermediate evaluation of Cécile Taing's PhD thesis (Univ. Pierre et Marie Curie Paris 6). A. Mangeney was a member of the jury evaluating M2 internships at IPGP.

10.3. Popularization

March E. Audusse intervened in a middle school on the occasion of the French week of Maths. J. Salomon went to a high school at Limay.

May N. Aïssiouene, E. Audusse, E. Godlewski (organiser), Y. Penel and F. Wahl ran a stand on the occasion of the "salon de la culture et des jeux mathématiques".

July M. Parisot gave a vulgarisation talk at Inria ("demi-heure de la science").

October E. Audusse intervened in a high school on the occasion of Savantes Banlieues.

November E. Nayir, Y. Penel and F. Wahl ran a stand during the ONISEP exhibition.

December E. Godlewski managed a group of middle school students at the Jacques-Louis Lions lab.

December F. Wahl helped the organisation at the "Math. Employment" show.

A. Sergeant-Boy, A. Mangeney, E. Stutzmann, J.-P. Montagner, F. Walter, L. Moretti, and O. Castelnau wrote an article entitled "La sismologie pour ausculter les pertes des glaciers des calottes polaires, lors du vêlage d'icebergs" in the CNRS–INSU newspaper (Apr.).

A. Mangeney is coaching high-school students from disadvantaged areas to manage scientific projects.

<p align="center" style="color:red">**ANJA Team**</p>

7. Dissemination

7.1. Promoting Scientific Activities

7.1.1. Scientific Events Organisation

7.1.1.1. Member of the Organizing Committees

Bayesian workshop : Bayesian statistics applied to archaeology - May 2016 Nantes
Anne Philippe and Marie-Anne Vibet were main organizers.

7.1.2. Journal

Anne Philippe is an Associated editor of Computational Statistics and Data analysis
Jacques Lévy Véhel is associate editor of the journal « Fractals »

7.1.3. Invited Talks

Anne Philippe and Marie-Anne Vibet were invited to the Ibercrono conference, Barcelone Spain, October 2016
Anne Philippe was invited to ArcheoFoss, Cagliari Italy October 2016
Yue Huang gave a talk at the invited session of advanced SAR technologies at IEEE International Geoscience and Remote Sensing Symposium, Beijing Chine, 2016

7.1.4. Research Administration

Anne Philippe is a member of commits national du CNRS

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

- Marie-Anne Vibet: Introduction to SAS software, Master 2 Ingénierie Mathématique, January and November 2016 (12hrs)
- Anne Philippe : Statistical inference, Master 1 Ingénierie Mathématique, Automne 2016 (24hrs)
- Anne Philippe : Bayesian statistics, Master 2 Ingénierie Mathématique, Automne 2016 (36hrs)

7.2.2. Supervision

- PhD in progress: Vytauté Pilipauskaité, supervised by Anne Philippe and Donatas Surgailis
- PhD in progress: Caroline Robet, supervised by Anne Philippe and Jacques Lévy-Véhel

7.2.3. Juries

Anne Philippe was in the jury of PhD theses :
- President of jury for Kaniav Canary
- Reporter and member of jury for Lilliam Urrego, Le Quyen Thieu

ANTIQUE Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

Jérôme Feret is a member of the editorial board of the Frontiers in Genetics journal and the Open Journal of Modeling and Simulation.

9.1.1.2. Member of the Organizing Committees

Jérôme Feret organized the 40th of Abstract Interpretation at POPL2017 January 21, 2017, Paris, France (co-organizer).

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Xavier Rival was chair of Static Analysis Symposium SAS 2016, Edinburgh.

Jérôme Feret co-chaired the fifteenth Conference on Computational Methods in Systems Biology - CMSB 2017, September 27–29, 2017, Darmstadt, Germany.

9.1.2.2. Member of the Conference Program Committees

Vincent Danos served on the PC of Computational Methods in Systems Biology, CMSB'16, Cambridge and Complexis'17.

Xavier Rival served on the PC of the 26th European Symposium on Programming (ESOP 2017).

Cezara Drăgoi served on the PC of

- 28th International Conference on Computer-Aided Verification (ERC), CAV 2016,
- 37th INTERNATIONAL CONFERENCE ON APPLICATIONS AND THEORY OF PETRI NETS AND CONCURRENCY, ACSD 2016,
- 23rd International Conference on Tools and Algorithms for the Construction and Analysis of Systems, TACAS 2017,
- 18th International Conference on Verification, Model Checking, and Abstract Interpretation, VM-CAI 2017,
- ACM SIGPLAN Symposium on Programming Language Design & Implementation, PLDI 2017.

Jérôme Feret served on the PC of

- the 8th International Conference on Bioinformatics, Biocomputational Systems and Biotechnologies - BIOTECHNO 2016,
- the 26th International Symposium on Logic-Based Program Synthesis and transformation - LOPSTR 2016,
- the 23rd Static Analysis Symposium Sept 8-10 2016, Edinburgh,
- 7th International Workshop on Static Analysis and Systems Biology - SASB 2016,
- 14th International Conference on Computational Methods in Systems Biology - CMSB 2016 Sept 21-23 2016, Cambridge, UK,
- Fourth International Conference on Tools and Methods for Program Analysis - TMPA 2017 March 3–4, 2017, Moscow, Russia, JOBIM 2017 July 2-6 2017, Lille, France.

9.1.2.3. Reviewer

Vincent Danos was a reviewer for the 19th International Conference on Foundations of Software Science and Computation Structures (FoSSaCS) 2017, the 26th European Symposium on Programming (ESOP 2017) 2017, LMCS, MSCS.

Cezara Drăgoi was a reviewer for 19th International Conference on Foundations of Software Science and Computation Structures (FoSSaCS) 2017, the 27th International Conference on Concurrency Theory CONCUR 2016, and the 26th European Symposium on Programming (ESOP 2017) 2017.

Xavier Rival was a reviewer for 23rd International Conference on Tools and Algorithms for the Construction and Analysis of Systems, TACAS 2017 and ACM SIGPLAN Symposium on Programming Language Design & Implementation, PLDI 2017.

Jérôme Feret was a reviewer for the 17th International Conference on Verification, Model Checking, and Abstract Interpretation, VMCAI 2016, the 27th International Conference on Concurrency Theory CONCUR 2016, the 43rd International Colloquium on Automata, Languages and Programming 2016, the 31st ACM/IEEE Symposium on Logic in Computer Science, LICS 2016.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Jérôme Feret is a member of the editorial board of the Frontiers in Genetics journal and the Open Journal of Modeling and Simulation .

9.1.3.2. Reviewer - Reviewing Activities

Xavier Rival was a reviewer for ACM Transactions on Programming Languages and Systems TOPLAS.

Jerome Feret was a reviewer for Theoretical Computer Science 2016.

9.1.4. Invited Talks

Jérôme Feret gave "An overview of the Astrée/AstréeA analyzer. " at Journées scientifiques Inria Rennes, 20-22 june 2016 and at the workshop « Verified Trustworthy Software Systems » Imperial College, 6-7 April 2016.

Vincent Danos talked about 'Residence: Simons Institute Program Logical Structures and Computations" at CONCUR 2016, Quebec, Aug 25-2 and at Berkeley, Aug 17-Dec 16. He also gave invited talks at SysMod SIG 2016, ISMB, Orlando, Jul 9, Xenobiology 2, XB2, May 24-26, Berlin, IPM Formal Methods Day, Teheran, Jan 10.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence :

- Xavier Rival, "Semantics and Application to Verification",20h, Undergraduate course (L3), at Ecole Normale Supérieure
- Xavier Rival, "Introduction to Static Analysis", 8h, Course at Ecole des Mines de Paris, L3
- Cezara Drăgoi, "Programation concurrente et distribuée", Ecole Politechnique, L2
- Cezara Drăgoi, "Les principes des langages de programmation", Ecole Politechnique, L1
- Jérôme Feret, and Cezara Drăgoi, Mathematics, 40h, L1, FDV Bachelor program (Frontiers in Life Sciences (FdV)), Université Paris-Descartes, France.

Master :

- Vincent, Disruptive technologies and public policies, MSc Public affairs, Sciences Po, France.

- Xavier Rival, Protocol Safety and Verification, Master Course (M2) in the Advanced Communication Networks Master (12h hours), at Polytechnique and Ecole Nationale Supérieure des Telecoms
- Xavier Rival, "Verification" Lab Course at Ecole Polytechnique (M1, 20h)
- Vindent Danos and Jérôme Feret (with Jean Krivine), Computational Biology, 24h, M1. Interdisciplinary Approaches to Life Science (AIV), Master Program, Université Paris-Descartes, France.
- Cezara Drăgoi, Jérôme Feret, Antoine Miné, and Xavier Rival, Abstract Interpretation: application to verification and static analysis, 72h ETD, M2. Parisian Master of Research in Computer Science (MPRI). École normale supérieure. France.

Doctorat : Jérôme Feret, "Interprétation abstraite de modèles de voies de signalisation intracellulaire ", Lectures (3 hours) in the summer school "Modélisation Formelle de Réseaux de Régulation Biologique", Porquerolles, June 2016 France.

9.2.2. Juries

Jérôme Feret was a member of the recruitment committee for an assistant professor in Paris-Diderot University 2016.

Vincent Danos was examiner and reviewer for the HDR of Sylvain Soliman (Ecole Polytechnique, 7th of December 2016).

AOSTE Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

Eric Madelaine is General Chair of the 11th International Symposium on Theoretical Aspects of Software Engineering (TASE'17), and Steering Committee Chair of the International Symposium on Formal Aspects of Components Systems (FACS 2017)

Liliana Cucu-Grosjen and Rob Davis are Steering Committee members of 3 conferences (RTSS, RTAS and RTNS) and 2 workshops (RTSOPS and WMC)

Julien Deantoni was chair of the 4th GEMOC workshop, held in conjunction with the 19th ACM/IEEE International Conference on Model Driven Engineering Languages and Systems

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Robert de Simone will be PC Chair for the forthcoming EMSoft 2017 conference edition.
Frédéric Mallet will be PC Chair for the forthcoming TASE 2017 conference edition.

9.1.2.2. Member of the Conference Program Committees

Robert de Simone: EmSoft 2016, FDL 2016.
Dumitru Potop-Butucaru: RTNS 2016, ACSD 2016
Yves Sorel: DASIP 2016, EMSOFT 2016
Julien Deantoni: MODELS 2016, CAL 2016, GEMOC 2016, EXE 2016 DSD 2016, MOMO 2016.
Liliana Cucu-Grosjean: RTAS2016, SIES 2016, RTNS2016
Frédéric Mallet: DATE 2016, DSD 2016, ERTS 2016, ICTERI 2016.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Yves Sorel: DASIP 2016, EMSOFT 2016

9.1.4. Invited Talks

Robert de Simone was invited Keynote Speaker at the international conference MeMoCode 2016 in Kanpur (India)

9.1.5. Leadership within the Scientific Community

Eric Madelaine and Frédéric Mallet are Council Members of the International Joint Laboratory of Trustworthy Software, Ministery of Education, China.

9.1.6. Scientific Expertise

Yves Sorel: Steering Committees of System Design and Development Tools Group of Systematic Paris-Region Cluster, and of Technologies and Tools Program of SystemX Institute for Technological Research (IRT)

9.1.7. Research Administration

Robert de Simone is Scientific Correspondant for the Inria/Safran collaboration programme, and (starting 2017) Deputy Director of the EDSTIC Doctoral School of Université Côte d'Azur.
Liliana Cucu-Grosjean is elected member of Inria Evaluation Commission.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: Robert de Simone, Models of Computation for Networks-on-Chips (MoCs for NoCs), 36h, M2 Internationbal, UNS.

Master: Robert de Simone, Functional and Temporal Correctness, 36h, M1 Internationbal, UNS.

Master: Yves Sorel, Optimization of distributed real-time embedded systems, 36H, M2, University of Paris Sud

Master: Yves Sorel, Correct by construction design of reactive systems, 18H, M2, ESIEE Engineering School, Noisy-Le-Grand

Master : Julien Deantoni, Systèmes embarqués et Ambient, 10h, M2, Polytech'Nice, France.

Master : Julien Deantoni, Langage C++, 88h, M1,Polytech'Nice, France.

Master : Julien Deantoni, Finite State Machines, 24h, M1,Polytech'Nice, France.

Master : Julien Deantoni, Internship Management, 20h, M2, Polytech'Nice, France.

Master: Dumitru Potop Butucaru, Une approche synchrone des systèmes embarqués temps réel,12h, M1, EPITA Paris

Master: Dumitru Potop Butucaru and Thomas Carle, L'approche synchrone de la construction des systèmes embarqués temps réel, 12h, M2, Polytech Paris UPMC.

Licence: Laurent George, Java and Shell programming 48h, L1, IUT RT UPEC, France

Master: Laurent George, Distributed Real-Time Systems, 24h, M2, UPEC, France

Licence : Marie-Agnes Peraldi-Frati, Algorithms and programming 60h,L1, UNS Institute of technology.

Licence : Marie-Agnes Peraldi-Frati, System and Networks administration 80h, L2, UNS Institute of technology .

Licence : Marie-Agnes Peraldi-Frati, Web Programming 50 h, L2, UNS Institute of technology.

Licence: Frédéric Mallet, Conception Orientée Objet, 45h, L3, UNS.

Licence: Frédéric Mallet, Programmation Orientée Objet, 45h, L3, UNS.

Master: Frédéric Mallet, Programmation Avancée et Design Patterns, 45h, M1, UNS.

Master: Frédéric Mallet, Vérification temporelle et fonctionnelle, 24h, M1, UNS.

Master: Frédéric Mallet, Model-Driven Engineering, 24h, M1, UNS.

Master: Liliana Cucu, Distributed Databases and Statistics in Computer Science, 64h, U. Dunarea de Jos, Romania (Invited Professor)

Master: Dumitru Potop Butucaru, Une approche synchrone des systèmes embarqués temps réel,12h, M1, EPITA Paris

9.2.2. Supervision

PhD: Matias Vara-Larsen, *Toward a formal and hierarchical timed model for concurrent heterogeneous model*, UNS, defended April 2016, supervised by Frédéric Mallet, co-supervised by Julien Deantoni.

PhD in progress: Ameni Khecharem, *High-Level modeling of hierarchical power management policies in SoCs*, UNS, defended May 2016, supervised by Robert de Simone.

PhD in progress: Emilien Kofman, *Conception Haut Niveau Low Power d'objets mobiles communicants*, UNS, started Oct 2013, supervised by Robert de Simone, co-supervised by François Verdier (UMR CNRS/UNS LEAT).

PhD in progress: Amin Oueslati, *Modélisation conjointe d'applications et d'architectures parallèles embarqués en pratique*, UNS, started Jan 2014, supervised by Robert de Simone

PhD in progress: Yuanrui Zhang, ECNU-SEI/China, started Sep 2015, co-supervised by Frederic Mallet (joint supervision with Pr. Chen Yixiang(ECNU).

PhD in prgress: Hui (Vincent) Zhao, UNS, started February 2016, supervised by Frédéric Mallet, co-supervised by Ludovic Apvrille (Telecom ParisTech)

PhD in progress: Dongdong An, ECNU-SEI/China, started November 2016, co-supervised by R. de Simone, supervised by Jing Liu (ECNU).

PhD in progress: Cristian Maxim, *End to end constraints using probabilistic approaches*, UPMC, started on March 2014, supervised by Liliana Cucu

PhD in progress: Walid Talaboulma, *Probabilistic timing analysis in presence of dependences*, UPMC, started on November 2015, co-supervised by Liliana Cucu and Adriana Gogonel

PhD in progress: Salah Edinne Saidi, *Distributed real-time scheduling for the co-simulation of several control models*, University of UMPC-Paris-Sorbonne, started December 2014, co-supervised by Nicolas Pernet (IFPEN) and Yves Sorel.

PhD in progress: Keryan Didier, *Formal certification of real-time implementations*, Université Pierre et Marie Curie/EDITE, started November 2015, supervised by Dumitru Potop Butucaru.

PhD: Oleksandra Kulankhina, *A framework for rigorous development of distributed components: formalisation and tools*, UNS, defended October 2016, supervised by Eric Madelaine, co-supervised by Ludovic Henrio (UMR CNRS/UNS I3S).

PhD in progress: Salah Edinne Saidi, *Distributed real-time scheduling for the co-simulation of several control models*, University of UMPC-Paris-Sorbonne, started December 2014, co-supervised by Nicolas Pernet (IFPEN) and Yves Sorel.

PhD in progress: Keryan Didier, *Formal certification of real-time implementations*, Université Pierre et Marie Curie/EDITE, started November 2015, supervised by Dumitru Potop Butucaru.

PhD: Oleksandra Kulankhina, *A framework for rigorous development of distributed components: formalisation and tools*, UNS, defended October 2016, supervised by Eric Madelaine, co-supervised by Ludovic Henrio (UMR CNRS/UNS I3S).

PhD: Vincent Kherbache, *Ordonnancement des migrations à chaud de machines virtuelles*, UNS, defended December 2016, supervised by Eric Madelaine, co-supervised by Fabien Hermenier (UMR CNRS/UNS I3S).

9.2.3. *Juries*

Robert de Simone: reviewer for the HDR of Xavier Thirioux (ENSIIEHT, Sept. 2016)

Dumitru Potop Butucaru: PhD reviewer for Pierre Guillou - Ecole des Mines de Paris. Nov. 2016

Julien Deantoni: PhD reviewer for Florent Latombe (ENSIIEHT)

Liliana Cucu-Grosjean: PhD reviewer for Guillaume Phavorin (ENSMA Poitiers, September 2016)

Liliana Cucu-Grosjean: PhD jury member for Abhilash Thekkilakattil (University of Ma̋lardalen, May 2016)

9.3. Popularization

Liliana Cucu-Grosjean has supervised the video production of a popularization video regarding the outcomes of the PROXIMA project. The video has been made available on Inria channels and all PROXIMA partners.

APICS Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

- L. Baratchart gave a talk at the Shanks workshop "Mathematical methods for inverse magnetization problems arising in geosciences", organized at Vanderbilt University (Nashville, USA), March 2016, a talk at "SEAM", organized by the AMS at USF (Tampa, USA), a talk at "AppOpt" organized by ICIMAF in Havana (Cuba) http://gama.uc3m.es/claroline1811/courses/APPOPT16/document/index.html and a talk at ' SIGMA'2016 (Signal-Image-Géométrie-Modélisation-Approximation). http://programme-scientifique.weebly.com/1506.html, organized by the SMAI at CIRM (Luminy, France).

- S. Chevillard gave a talk at the Shanks workshop "Mathematical methods for inverse magnetization problems arising in geosciences", organized at Vanderbilt University (Nashville, USA), March 2016.

- B. Hanzon gave a presentation at the CDC 2016 pre-workshop on "realization theory and its role in system identification" (joint work with M. Olivi and R. Peeters) https://sites.google.com/site/mihalypetreczky/workshop-cdc-2016, Las-Vegas, USA, December 11.

- J. Leblond presented a communication at the above-mentioned Shanks Workshop, at the conference PICOF 2016 (Problèmes Inverses, Contrôle, Optimisation de Formes, Autrans, France, June 1-3 2016, http://picof.sciencesconf.org/), and at the seminar Mécanique, Modélisation Mathématique et Numérique, LMNO, Univ. Caen, France, December 5, 2016.

- M. Olivi gave a talk at the conference SIGMA'2016 (Signal-Image-Géométrie-Modélisation-Approximation). http://programme-scientifique.weebly.com/1506.html, Marseille, France, October 30-November 4.

- F. Seyfert presented a communication at the 22nd International Symposium on Mathematical Theory of Netowrks and Systems https://sites.google.com/a/umn.edu/mtns-2016/, USA, Mineapolis, July 12-15, 2016.

- K. Mavreas presented a communication at the Conference Advances in Lunar Magnetism: from Paleomagnetism to Dynamos, Cargèse, France, June 1-3, 2016, http://maglune.cerege.fr/?page_id=416. Together with C. Papageorgakis, they participated to the Semaine d'Étude Mathématiques-Informatique Entreprises, Grenoble, France, October 24-28, 2016. Grenoble.

- C. Papageorgakis presented a communication at the Conference PICOF 2016 and at the Science Day in BESA company, Munich, Germany, December 15, 2016.

- D. Ponomarev presented a communication at the above-mentioned Shanks Workshop and a poster at the Conference PICOF 2016.

- D. Martinez Martinez gave a seminar at the department ELEC of the Vrije Unininversiteit of Brussels (sept. 18) and at the Universidad Polit´ecnica de Cartagena, ETSI (December 14). He gave a talk at the 2016 IEEE International Conference on Antenna Measurements & Applications, Syracuse (NY), USA, October 23-27.

8.1.1. Scientific Events Organisation

8.1.1.1. Member of the Organizing Committees

K. Mavreas and C. Papageorgakis were among the PhD students in charge of the PhD students Seminar within the Research Center.

J. Leblond was one of the co-organizers of the 3rd "Journée Mathématiques et Parité", IHP, Paris, July 8, 2016, http://postes.smai.emath.fr/apres/parite/journee2016/.

8.1.2. Scientific Events Selection

8.1.2.1. Member of the Conference Program Committees

L. Baratchart was a member of the program committee of "Mathematical Theory of Network and Systems" (MTNS) 2016, Minneapolis, Minnesota, USA.

J. Leblond was a member of the Scientific Committee of the Conference PICOF 2016.

8.1.3. Journal

8.1.3.1. Member of the Editorial Boards

L. Baratchart is sitting on the Editorial Board of the journals *Constructive Methods and Function Theory* and *Complex Analysis and Operator Theory*.

8.1.3.2. Reviewer - Reviewing Activities

L. Baratchart served as a reviewer for several journals (Annales Inst. Fourier, SIMA, Numerical Algorithms, Journal of Approx. Theory, Complex Variables and Elliptic Equations, ...)

J. Leblond was a reviewer for the journal *Multidimensional Systems and Signal Processing, Czechoslovak Mathematical Journal*.

M. Olivi was a reviewer for the journals *Automatica* and *IEEE Transactions on Automatic Control* and for the IEEE Conference on Decision and Control.

F. Seyfert was a reviewer for the journal *IEEE Microwave Theory and Techniques*.

8.1.4. Invited Talks

L. Baratchart was an invited speaker at the "25-th Summer Meeting in Mathematical Analysis", organized by the Russian Academy of Sciences at the Euler Institute (St-Petersburg, Russia) http://gauss40.pdmi.ras.ru/ma25/, an invited speaker at the workshop "New Trends in Approximation Theory" organized by the CSM at the Fields Institute (Toronto, Canada) http://www.fields.utoronto.ca/activities/16-17/approximation, an invited speaker at the conference "Quasilinear equations, Inverse Problems and their Applications" organized by EAIP, RFBR,MIPT and Ecole Polytechnique at the Moscow Institute of Physics and Technology (Dolgoprundy, Russia) http://www.cmap.polytechnique.fr/~novikov/miptip16/, and an invited speaker at the "Complex Analysis Day" in Marne-la-Vallée.

S. Chevillard was invited to give a talk at the Fifth Approximation Days, International conference on constructive complex approximation, http://math.univ-lille1.fr/~bbecker/ja2016/, Lille, France, May 20, 2016.

J. Leblond was a plenary speaker at the Conference WiS&E 2016 (Waves in Sciences and Engineering), http://qro.cinvestav.mx/index.php/wise2016, Queretaro, Mexico, August 22-26, 2016, and an invited speaker at the Workshop SIGMA'2016 (Signal, Image, Geometry, Modelling, Approximation), https://www.ceremade.dauphine.fr/~peyre/sigma2016/, Luminy, France, October 31 - November 4, 2016.

F. Seyfert was invited to give a talk at the Workshop on Mathematical Aspects of Network Synthesis http://www-control.eng.cam.ac.uk/Main/Workshop8, Cambridge, UK, September 21-22, 2016.

8.1.5. Scientific Expertise

L. Baratchart is a member of the Mathematical panel of experts of ANR.

8.1.6. Research Administration

S. Chevillard was representative at the "comité de centre" and at the "comité des projets" (Research Center Inria-Sophia) until September 2016.

J. Leblond is an elected member of the "Conseil Scientifique" and of the "Commission Administrative Paritaire" of Inria. Until May, she was in charge of the mission "Conseil et soutien aux chercheurs" within the Research Center. She is also a member of the "Conseil Académique" of the Univ. Côte d'Azur (UCA).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Colles: S. Chevillard is giving "Colles" at Centre International de Valbonne (CIV) (2 hours per week).

8.2.2. Supervision

PhD: D. Ponomarev, *Some inverse problems with partial data*, Université Nice Sophia Antipolis, defended on June 14, 2016 (advisors: J. Leblond, L. Baratchart).

PhD: M. Caenepeel, *The development of models for the design of RF/microwave filters*, Vrije Universiteit Brussel (VUB), defended on October 19, 2016 (advisors: Y. Rolain, M. Olivi, F. Seyfert).

PhD in progress: C. Papageorgakis, *Conductivity model estimation*, since October 2014 (advisors: J. Leblond, M. Clerc, B. Lanfer).

PhD in progress: K. Mavreas, *Inverse source problems in planetary sciences: dipole localization in Moon rocks from sparse magnetic data*, since October 2015 (advisors: S. Chevillard, J. Leblond).

PhD in progress: D. Martinez Martinez, *Méthodologie et Outils de Synthèse pour des Fonctions de Filtrage Chargées par des Impédances complexes*, since October 2015, advisors: L. Baratchart and F. Seyfert.

PhD in progress: G. Bose, Filter Design to Match Antennas, since December 2016, advisors: F. Ferrero and F. Seyfert.

PhD in progress: S. Fueyo, Cycles limites et stabilité dans les circuits,since October 2016, advisors: L. Baratchart and J.B. Pomet.

8.2.3. Juries

L. Baratchart sat on the PhD defense committee of d'Alexey Agaltsov (Ecole Polytechnique, http://www.adum.fr/script/detailSout.pl?mat=65164&site=PSaclay) and on the committee for the defense of *Habilitation à diriger des recherches* of E. Abakumov (Université Paris-Est, Marne-la-Vallée, http://umr-math.univ-mlv.fr/evenements/soutenances/?type=101).

J. Leblond was a member of the "Jury d'admissibilité du concours CR" of the Inria Research Center and of the "Comités de Sélection" for professors at UNSA (Polytech Nice) and at the University Paris-Sud Orsay (March-May 2016). She was a reviewer for the PhD thesis of Silviu Ioan Filip, Univ. Lyon, December 2016.

F. Seyfert was a member of the PhD jury of Adam Cooman at the ELEC. department of the VUB (Bruxelles, Belgium). The PhD's title is "Distorsion Analysis of Analog Electronic Circtuits Using Modulated Signals".

8.3. Popularization

- M. Olivi is responsible for Scientific Mediation and president of the Committee MASTIC (Commission d'Animation et de Médiation Scientifique) https://project.inria.fr/mastic/. She animated two half-day workshop sessions "activités débranchées" at "l'ESPE de Nice" for primary school students (March 08 & 15), 200 students each session). She participates to the event "la fête de la science" in Nice (October 13) for scholars and in Antibes (October 22 & 23, 6200 people). She gave a talk "180'" at the "Journées Scientifiques Inria" in Rennes.

- K. Mavreas and C. Papageorgakis actively participated to events organized by the Committee MASTIC (Fête de la Science, ...).

ARAMIS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Member of the Conference Program Committees

O. Colliot was a member of program committee of the Workshop on Patch-based Techniques in Medical Imaging (Patch-MI) held in conjunction with the MICCAI conference.

S. Durrleman was on the advisory panel of MICCAI Workshop on Spectral and Shape Analysis in Medical Imaging (SESAMI)

F. De Vico Fallani was member of the program committee of the Satellite on Brain networks, International Conference on Network Science (NetSci), Seoul, South Korea, 2016

F. De Vico Fallani was member of the program committee of 5th International Workshop on Complex Networks and their Applications, Milan, Italy, 2016

10.1.1.2. Reviewer

O. Colliot acted as a reviewer for the annual meeting of the Organization for Human Brain Mapping (OHBM).

S. Durrleman acted as a reviewer for Computer Vision and Pattern Recognition (CVPR), International Conference on Computer Vision (ICCV), and Workshop on Biomedical Image Registration (WBIR).

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

O. Colliot is a member of the Editorial Board of Medical Image Analysis (Elsevier).

S. Durrleman is associate editor of IEEE Transactions on Medical Imaging (TMI)

10.1.2.2. Reviewer - Reviewing Activities

O. Colliot acted as a reviewer for NeuroImage, NeuroImage: Clinical, IEEE Trans Medical Imaging, Medical Image Analysis and Neurobiology of Aging.

S. Durrleman acted as a reviewer for NeuroImage, IEEE Trans Medical Imaging, Medical Image Analysis, Frontiers in Neuroimaging, International Journal of Computer Assisted Radiology and Surgery (IJCARS), Advances in Data Analysis and Classification, among others.

A. Bertrand acted as a reviewer for Neurobiology og Aging, Frontiers in Neuroscience, American Journal of Neuroradiology, Journal of Neuroradiology.

F. De Vico Fallani acted as a reviewer for Brain, Cerebral Cortex, IEEE TBME/TNRSE, Human Brain Mapping, Neuroimage, Plos Computational Biology, J Neurosci Meth, Sci Rep, Brain Connectivity.

10.1.3. Invited Talks

S. Durrleman gave an invited lecture at the International Colloquium "Evolution du cerveau et des capacités cognitives des Hominidés fossiles depuis Sahelanthropus tchadensis, il y a sept millions d'années jusqu'à l'Homme moderne" in Tautavel.

F. De Vico Fallani gave an invited talk at the Workshop on Complex networks, Lipari, Italy, 2016

F. De Vico Fallani gave an invited talk Meeting on Dynamics and synchronization on complex networks, Tarragona, Spain, 2016

F. De Vico Fallani gave an invited talk Workshop on Dynamic networks, Institut Systèmes Complexes, Toulouse, France, 2016

F. De Vico Fallani gave an invited talk Satellite on Brain networks, International Conference on Network Science (NetSci), Seoul, South Korea, 2016

10.1.4. Scientific Expertise

S. Durrleman has served in the "Commission de développement technologique" (CDT) of the Inria Paris center.

S. Durrleman has led a working group on neuroinformatics at the ICM (Brain and Spine Institute).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: Olivier Colliot coordinates the module "Méthodes d'imagerie médicale" of the Master 2 in Computer Science of Université Pierre et Marie Curie.

Master: Olivier Colliot, Master in Computer Science, 4.5 hours (eqTD), Université Pierre et Marie Curie

Master: Stanley Durrleman, Master in Computer Science, 9 hours (eqTD), Université Pierre et Marie Curie

Master: Marie Chupin, Master in Computer Science, 3 hours (eqTD), Université Pierre et Marie Curie

Master: Fabrizio De Vico Fallani, Master in "Méthodologies et applications en imagerie médicale", 3 hours (eqTD), Université Pierre et Marie Curie

Master: Damien Galanaud, Master in Medical Physics, 4 hours, Université Paris-Sud

Engineering school: Olivier Colliot, 3 hours (eqTD), Mines ParisTech

Medical school: Didier Dormont is the Director of the University Diploma (DIU) "Diagnostic and Therapeutic Neuroradiology", Université Pierre et Marie Curie

Medical school: Anne Bertrand gives lectures in Neuroimaging of degenerative diseases and normal aging for residents in Radiology and Neurology, for Radiology technicians, for License students in Orthophony, and in various "University Diploma" medical programs (Neurogeriatrics, Neuro-radiology, Alzheimer's Disease and related disorders, Neurovascular Imaging, Emergency-Stroke, Neuroresuscitation), for a total of 50 hours a year.

Medical school: Didier Dormont, Courses for Medical Students, Université Pierre et Marie Curie

Medical school: Dominique Hasboun, Courses for Medical Students, Université Pierre et Marie Curie

Medical school: Damien Galanaud, Courses for Medical Students, Université Pierre et Marie Curie

Medical school: Anne Bertrand, Courses for Medical Students, Université Pierre et Marie Curie

Medical school: Didier Dormont organizes and participates in the practical teaching of Neuroradiology for Medical Students in the Department of Diagnostic Neuroradiology of Pitié Salpêtrière University Hospital

Medical school: Didier Dormont organizes and participates in the practical teaching of Neuroradiology for Radiology Specializing Residents in the Department of Diagnostic Neuroradiology of Pitié Salpêtrière University Hospital

Medical school: Didier Dormont, Courses to the university diplomas (DU) : "Maladie d'Alzheimer", and "Imagerie Vasculaire non Invasive"

Medical school: Damien Galanaud, courses to the University Diploma (DIU) "Diagnostic and Therapeutic Neuroradiology", Université Pierre et Marie Curie

Paramedical studies: Dominique Hasboun, Psychomotricity, 50 hours, Université Pierre et Marie Curie

10.2.2. Supervision

PhD in progress : Catalina Obando-Forero, "Graph models of cortical plasticity in temporal brain networks", Inria, started in 2015, advisor: Fabrizio De Vico Fallani

PhD in progress : Jeremy Guillon, "Méthode d'analyse multimodale de connectivités neuronales basée sur la théorie des réseaux complexes multicouches", EDITE Université Pierre et Marie Curie, started in 2015, advisors: Fabrizio De Vico Fallani and Mario Chavez

PhD Cifre in progress : Fanny Grosselin, "Fouille des données EEG et suivi longitudinal grande échelle pour le diagnostic et la prédiction du niveau de stress chez l'homme", EDITE Université Pierre et Marie Curie, started in 2016, advisors: Fabrizio De Vico Fallani and Mario Chavez,

PhD in progress : Junhao Wen, "Cortical morphometry for discovering new biomarkers of neurodegenerative diseases", Université Pierre et Marie Curie, Started in 2015, advisors: Olivier Colliot and Stanley Durrleman

PhD in progress : Jorge Samper-Gonzalez, "Learning from heterogeneous data for prediction of Alzheimer's disease", Université Pierre et Marie Curie, Started in 2015, advisors: Olivier Colliot and Theodoros Evgeniou

PhD in progress : Alexandre Routier, "Multimodal neuroimaging for characterization of primary progressive aphasias", Université Pierre et Marie Curie, Started in 2015, advisors: Marc Teichmann, Olivier Colliot and Marie-Odile Habert

PhD in progress: Jean-Baptiste Schiratti, "Méthodes et algorithmes pour l'analyse statistique de données anatomiques longitudinales – application à la caractérisation des phases pré-symptomatiques des maladies neurodégénératives", Ecole Polytechnique, Started in 2013, advisors: S. Allassonnière and S. Durrleman

PhD in progress: Barbara Gris, "Approche modulaire des méthodes de grandes déformations pour l'appariement de formes", Ecole Normale Supérieure de Cachan, Started 2013, advisors: A. Trouvé and S. Durrleman

PhD in progress: Pascal Lu, "Machine learning from multimodal genetic and neuroimaging data for personalized medicine", Université Pierre et Marie Curie, Started 2016, advisor: O. Colliot

PhD in progress: Wen Wei, "Learning brain alterations in multiple sclerosis from multimodal neuroimaging data", Université de Nice Sophia-Antipolis, Started 2016, advisors: N. Ayache, O. Colliot and S. Durrleman

PhD in progress: Alexandre Bône, "Learning methods for the spatiotemporal analysis of longitudinal image data : application to the diagnosis, prognosis and monitoring of Alzheimer's disease", started 2016, advisors: O. Colliot and S. Durrleman

PhD in progress: Manon Ansart, "Automatic recommendation systems built on the statistical exploitation of longitudinal medical data sets", started 2016, advisors: D. Dormont and S. Durrleman

PhD in progress: Maxime Louis, "Learning spatiotemporal trajectories of iconic-geometric data sets", started 2016, advisors: S. Durrleman

PhD in progress: Igor Koval, "Construction of disease progression models from multimodal longitudinal data", started 2016, advisors: S. Allassonnière and S. Durrleman

PhD in progress: Lou Albessard, "Etude de la co-variation morphologique entre le crâne et le cerveau dans le genre Homo", started 2015, advisors: D. Grimaud-Hervé and S. Durrleman

Master 2: Alexandre Morin, Master in Neuroscience, Université Pierre et Marie Curie, Oct 2015-Aug 2016, advisor: Olivier Colliot

Master 2: Thomas Jacquemont, Master in Neuroscience, Université Pierre et Marie Curie, Oct 2015-Aug 2016, advisor: Olivier Colliot

Master 2: Martina Sundqvist, Master in Cognitive Science, Ecole Normale Supérieure, Oct 2015-Aug 2016, advisors: Olivier Colliot and Marc Teichmann

Master 2: Enrico Valenti, Master in Psychiatry, Université Sapienza, Rome, Italy, Sep 2016-Dec 2016, advisor: Fabrizio De Vico Fallani

Master 2: Carlos Tor Diez, Master in BioMedical Engineering, ParisTech Universite Paris Descartes, Mar-Sept 2016, advisor: Marie Chupin

Internship: Ayoub Louati, Tunisia Polytechnic School, Mar-Sept 2016, advisor: Marie Chupin

10.2.3. Juries

Fabrizio De Vico Fallani participated, as referee, to the PhD committee of Aziz Adebimpe (Université Picardie), 2016 (supervisors: Fabrice Wallois and Ardalan Aarabi).

Mario Chavez participated, as referee, to the PhD committee of Aziz Adebimpe (Université Picardie), 2016 (supervisors: Fabrice Wallois and Ardalan Aarabi).

Olivier Colliot participated, as referee, to the PhD committee of Mehdi Hadj-Hamou (Inria Sophia), 2016 (supervisors: Xavier Pennec and Nicholas Ayache).

Olivier Colliot participated, as examiner, to the PhD committee of Bishesh Kanal (Inria Sophia), 2016 (supervisors: Xavier Pennec and Nicholas Ayache).

Olivier Colliot participated, as examiner, to the PhD committee of Baptiste Morel (Telecom Paris-Tech), 2016 (supervisors: Isabelle Bloch and Catherine Adamsbaum).

Olivier Colliot participated, as examiner, to the PhD committee of Romain Colle (Université Paris-Sud), 2016 (supervisor: Emmanuelle Corruble).

10.3. Popularization

With the precious help of the communication department of the Inria Paris Center, ARAMIS prepared and presented games on brain data analysis, presented at the "Salon Culture et Jeux Mathématiques" and at the "Fête de la Science".

ARIC Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

Nathalie Revol, with Javier Hormigo and Stuart Oberman, were general chairs of the Arith 23 conference, Santa Clara, California, USA.

9.1.1.2. Member of the Organizing Committees

Nathalie Revol was the organizer of the SWIM 2016: Summer Workshop on Interval Methods, gathering above 35 participants in Lyon, June 2016.

Bruno Salvy was a co-organizer of the meeting Alea'16 gathering about 80 participants in Luminy, March 2016.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Jean-Michel Muller belongs to the 3-member board of the steering committee of the Arith series of conferences.

9.1.2.2. Member of the Conference Program Committees

Nathalie Revol was a member of the program committees of REC'16 and SCAN 2016.

Bruno Salvy was a member of the program committee of AofA'16, Krakow, Poland.

Damien Stehlé was member of the program committees of Asiacrypt'16, Eurocrypt'17, SCN'16, ANTS'16, PKC'16 and PQCrypto'16.

Benoît Libert was member of the program committees of PKC'16, Africacrypt'16, ACM-CCS 2016, Eurocrypt'17.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Jean-Michel Muller is a member of the editorial board of the *IEEE Transactions on Computers.* He is a member of the board of foundation editors of the *Journal for Universal Computer Science*.

Nathalie Revol is a member of the editorial board of the journal *Reliable Computing*.

Bruno Salvy is a member of the editorial boards of the *Journal of Symbolic Computation*, of the *Journal of Algebra* (section Computational Algebra) and of the collection *Texts and Monographs in Symbolic Computation* (Springer).

Gilles Villard is a member of the editorial board of the *Journal of Symbolic Computation*.

9.1.4. Invited Talks

Damien Stehlé gave an invited talk at the YACC conference (Porquerolles, June), on the Learning With Errors Problem. He gave an invited talk at the HEAT workshop (Paris, July) on lattice reduction.

Jean-Michel Muller gave an invited talk at a minisymposium on reproducible research at the CANUM conference (Obernai, May).

Claude-Pierre Jeannerod and Clément Pernet gave invited talks at RAIM (Rencontres Arithmétique de l'Informatique Mathématique; Banyuls-sur-mer, June).

Nathalie Revol gave an invited talk at a minisymposium on numerical reproducibility for high-performance computing at SIAM Parallel Processing (Paris, April).

9.1.5. *Leadership within the Scientific Community*

Damien Stehlé is a member of the steering committee of the PQCrypto conference series. He is also a member of the steering committee of the Cryptography and Coding French research grouping (C2).

Paola Boito and Claude-Pierre Jeannerod are members of the scientific committee of JNCF (Journées Nationales de Calcul Formel).

Nathalie Revol is the chair of the IEEE 1788 group for the standardization of interval arithmetic: the work now addresses the set-based model and its implementation using simple IEEE-754 formats (IEEE P1788.1).

9.1.6. *Scientific Expertise*

Jean-Michel Muller is a member of the Scientific Council of CERFACS (Toulouse). He was a member of the Scientific Council of the "La Recherche" prize for 2015.

Jean-Michel Muller is a member of the steering committee of the "Defi 7" (information sciences) of the French Agence Nationale de la Recherche (ANR).

Bruno Salvy was a member of the recruitment committees for University Professors in Bordeaux (computer science) and in Toulouse (Mathematics).

Damien Stehlé is a member of the 2016 Gilles Kahn PhD award committees for 2016.

Claude-Pierre Jeannerod was a member of the recruitment committee for postdocs and sabbaticals at Inria Grenoble Rhône-Alpes.

9.1.7. *Research Administration*

Guillaume Hanrot is director of the LIP laboratory (Laboratoire de l'Informatique du Parallélisme).

Jean-Michel Muller is co-director of the Groupement de Recherche (GDR) *Informatique Mathématique* of CNRS.

9.2. Teaching - Supervision - Juries

9.2.1. *Teaching*

Master: Claude-Pierre Jeannerod, Nathalie Revol, *Algorithmique numérique et fiabilité des calculs en arithmétique flottante* (24h), M2 ISFA (Institut de Science Financière et d'Assurances), Université Claude Bernard Lyon 1.

Master: Vincent Lefèvre, *Arithmétique des ordinateurs* (12h), M2 ISFA (Institut de Science Financière et d'Assurances), Université Claude Bernard Lyon 1.

Master: Fabien Laguillaumie, Cryptography, Error Correcting Codes, 150h, Université Claude Bernard Lyon 1.

Master: Damien Stehlé, Cryptography, 12h, ENS de Lyon.

Master: Benoît Libert, Computer science and privacy, 12h, ENS de Lyon; Cryptography, 12h, ENS de Lyon.

Professional teaching: Nathalie Revol, *Contrôler et améliorer la qualité numérique d'un code de calcul industriel* (2h30), Collège de Polytechnique.

Master: Bruno Salvy, Calcul Formel (9h), MPRI.

Master: Bruno Salvy, Mathématiques expérimentales (44h), École polytechnique.

Master: Bruno Salvy, Logique et complexité (32h), École polytechnique.

9.2.2. Supervision

- PhD: Serge Torres, *Tools for the design of reliable and efficient function evaluation libraries*, École normale supérieure de Lyon; defended on September 22, 2016; co-supervised by Nicolas Brisebarre and Jean-Michel Muller.

- PhD: Vincent Neiger, *Bases of relations in one or several variables: fast algorithms and applications*, École normale supérieure de Lyon; defended on November 30, 2016; co-supervised by Claude-Pierre Jeannerod and Gilles Villard (together with Éric Schost (U. Waterloo, Canada)).

- PhD: Silviu-Ioan Filip, *Robust tools for weighted Chebyshev approximation and applications to digital filter design*, École normale supérieure de Lyon; defended on December 7, 2016; co-supervised by Nicolas Brisebarre and Guillaume Hanrot.

- PhD in progress: Marie Paindavoine, *Méthodes de calculs sur des données chiffrées*, since October 2013 (Orange Labs - UCBL), co-supervised by Fabien Laguillaumie (together with Sébastien Canard).

- PhD in progress : Antoine Plet, *Contribution à l'analyse d'algorithmes en arithmétique virgule flottante*, since September 2014, co-supervised by Nicolas Louvet and Jean-Michel Muller.

- PhD in progress : Valentina Popescu, *Vers des bibliothèques multi-précision certifiées et performantes*, since September 2014, co-supervised by Mioara Joldes (LAAS) and Jean-Michel Muller

- PhD in progress: Louis Dumont, *Algorithmique efficace pour les diagonales, applications en combinatoire, physique et théorie des nombres*, since September 2013, co-supervised by Alin Bostan (SpecFun team) and Bruno Salvy.

- PhD in progress: Stephen Melczer, *Effective analytic combinatorics in one and several variables*, since September 2014, co-supervised by George Labahn (U. Waterloo, Canada) and Bruno Salvy.

- PhD in progress: Fabrice Mouhartem, *Privacy-preserving protocols from lattices and bilinear maps*, since September 2015, supervised by Benoît Libert.

- PhD in progress: Chen Qiang, *Applications of Malleability in Cryptography*, since September 2016, co-supervised by Benoît Libert, Adeline Langlois (IRISA) and Pierre-Alain Fouque (IRISA).

- PhD in progress: Weiqiang Wen, *Hard problems on lattices*, since September 2015, supervised by Damien Stehlé.

- PhD in progress: Alice Pellet–Mary, *Cryptographic obfuscation*, since September 2016, supervised by Damien Stehlé.

- PhD in progress: Florent Bréhard, *Outils pour un calcul certifié. Applications aux systèmes dynamiques et à la théorie du contrôle*, since September 2016, co-supervised by Nicolas Brisebarre, Mioara Joldeş (LAAS, Toulouse) and Damien Pous (LIP).

9.2.3. Juries

Paola Boito was an external reviewer for the PhD thesis of Bahar Arslan (University of Manchester, UK). She was also in the PhD committee of Louis Dumont (LIX, École polytechnique).

Claude-Pierre Jeannerod was in the PhD committee of Alexandre Temperville (CRIStAL, U. Lille 1).

Fabien Laguillaumie was a reviewer for the Habilitation thesis of Abderrahmane Nitaj (LMNO, U. Caen) and for the PhD thesis of Mario Cornejo-Ramirez (LIENS, UPSL).

Jean-Michel Muller was a reviewer for the PhD thesis of Arjun Suresh (U. Rennes). He was in the Habilitation committee of Claude Michel (U. Nice Sophia Antipolis).

Nathalie Revol was in the PhD committee of Rafife Nheili (U. Perpignan Via Domitia).

Bruno Salvy was a reviewer for the PhD thesis of Thibaut Verron (LIP6, UPMC) and for the HdR of Loïck Lhôte (Greyc, U. Caen). He was also in the PhD committees of Wenjie Fang (LIAFA, U. Paris-Diderot) and Louis Dumont (LIX, École polytechnique).

Damien Stehlé was a reviewer for the PhD thesis of Hansol Ryu (SNU, South Korea). He was in the PhD committee of Thijs Laarhoven (TU Eindhoven, The Netherlands) and in the Habilitation committee of Hoeteck Wee (DI, CNRS).

9.3. Popularization

Claude-Pierre Jeannerod gave an invited talk at *Journés Nationales de l'APMEP* (Lyon, October 2016), on the theme of algorithms for computer arithmetic.

Paolo Montuschi (Politecnico di Torino) and Jean-Michel Muller wrote a short paper on Computer Arithmetic for Computer Magazine [51].

Nathalie Revol is a member of the steering committee of the MMI: Maison des Mathématiques et de l'Informatique, and in particular she was involved in the creation of the *Magimatique* exhibition. She presented some magic tricks during *Forum des Associations de Lyon 7e* and during the Science Fair, and she helped a class of high-school pupils (2nd) of Lycée Juliette Récamier (Lyon) to prepare a show for other pupils. She belonged to the selection committee for the MathInfoLy summer school for high-school pupils (around 90 french-speaking pupils). As an incentive for high-school pupils, and especially girls, to choose scientific careers, she gave talks at Lycée Lucie Aubrac (Ceyzériat), Lycée Xavier Bichat (Nantua) and Mondial des Métiers (in January and February 2016). She presented computer science for primary school pupils (CM2, École Guilloux, St-Genis-Laval: 12 lectures and hands-on of 1h30 in 2015-2016, for each of the 2 classes). She presented this work during the *Journées Passeurs de Science Informatique* of SIF in June 2016 and during the workshop *Robots pour l'éducation*. She also presented this work at a TEDxINSA talk and for IESF (Ingénieurs et Scientifiques de France). She took part in a training session for teachers, sponsored by Google, in September 2016. She co-organized two days on "Info Sans Ordinateur" gathering researchers interested in unplugged activities. With Jérôme Germoni and Natacha Portier, she co-organized a day *Filles & Maths* in May 2016 and a day *Filles & Info* in November 2016, each gathering about 100 high-school girls of 1e S. She is one of the editors of Interstices: https://interstices.info. She taught how to disseminate (computer) science for PhD students in a 20h module of *Insertion Professionnelle*.

Damien Stehlé will give a talk at the CNRS 'Colloque Sociétal Sécurité Informatique' (December 2016), on Fully Homomorphic Encryption.

AROMATH Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. Member of the Organizing Committees

Laurent Busé was the main organizor of the BIRS-CMO conference "*Computational Algebra and Geometric Modeling*" that took place at Oaxaca, Mexico, August 7-12 2016. He also co-organized with A. Dimca (Univ. Nice) a mini-workshop "*commutative algebra and applications*" that took place at the laboratory of mathematics of the university of Nice, September 22-23. He also co-organized a *week of studies maths-industry* (SEME) that took place at the CRI-SAM January 25-29.

Evelyne Hubert was part of the organizing committee of the collaborative research workshop *Women in Shape: Modeling Boundaries of Objects in 2- and 3-Dimensions* that took place June 6-12 at the Nesin Mathematics Village in Turkey.

8.1.2. Scientific Events Selection

8.1.2.1. Reviewer

Laurent Busé, Evelyne Hubert and Bernard Mourrain reviewed submissions for the conference ISSAC'16.

8.1.3. *Journal*

8.1.3.1. Member of the Editorial Boards

Bernard Mourrain is associate editor of the Journal of Symbolic Computation (since 2007) and of the SIAM Journal on Applied Algebra and Geometry (since 2016).

Ioannis Emiris is associate editor of the Journal of Symbolic Computation (since 2003) and of Mathematics in Computer Science (since 2016).

Evelyne Hubert is associate editor of the Journal of Symbolic Computation (since 2007) and became a reviewer for Mathematical Reviews (MathSciNet) this year.

8.1.3.2. Reviewer - Reviewing Activities

Laurent Busé wrote reviews for the following international journals: Journal of Symbolic Computation, Journal of Algebra, Computer Aided Geometric Design, Mathematical and Computational Applications, Graphical Models, Linear Algebra and its Applications, SIAM Journal on Applied Algebra and Geometry, Transactions on Graphics, the Quarterly Journal of Mathematics and Math. Zeitschrift. He also wrote reviews for the ISSAC 2016 and the Eurographics 2017 international conferences.

Evelyne Hubert reviewed for the journal *Mathematics of Computation*, the *Journal of Symbolic Computation*, the *Journal of Pure & Applied Algebra*, the journal *Mathematics in Computer Science*, and Springer book series *Texts and Monographs in Symbolic Computation*,

Bernard Mourrain reviewed for the journal *Advances in Computational Mathematics*, the *Journal of Algebra and Applications*, the journal *Collectanea Mathematica*, the journal *Computer Aided Design*, the journal *Computer Aided Geometric Design*, the journal *Foundations of Computational Mathematics*, the *Journal of Pure and Applied Algebra*, the journal *SIAM Journal on Optimization*, the *Transactions on Mathematical Softwares*.

8.1.4. Invited Talks

Laurent Busé was invited to give a talk at the Inria project-team ARIC seminar, May 26, at the conference "Computational Algebra, Algebraic Geometry and Applications", in honor of Alicia Dickenstein, that took place at Buenos Aires, Argentina, August 1-3 2016, at the *H2020 day* organized at the CRI-SAM to give a testimony on the writing of the successful MCA-ITN proposal ARCADES.

Ioannis Emiris gave an invited talk at ACM International Symposium on Symbolic & Algebraic Computation, Waterloo, Canada, July 2016.

Evelyne Hubert was invited to give a talk at the *Computational Mathematics Colloquium* at University of Waterloo, Canada (January 2016); at the workshop on *Théorie Effective des Invariants*, at the Insitut de Mathématiques de Marseille (June 2016); at the workshop on *Symmetry, Invariants, Reduction* in RWTH Aachen University (September 2016); at the BIRS-CMO conference *Sparse Interpolation, Rational Approximation and Exponential Analysis* in Oaxaca, Mexico (November 2016). She was also invited (and supported) to partitipate to the American Institute of Mathematics workshop *Algebraic Vision* in San Jose, California (May 2016); and the BIRS-CMO conference *Computational Algebra and Geometric Modeling* in Oaxaca, Mexico (August 2016); and to the CIRM conference *Multivariate Approximation and Interpolation with Applications* where she presented a poster (September 2016).

Bernard Mourrain was invited to give a talk at the MFO workshop *Mathematical Foundations of Isogeometric Analysis* Oberwolfach, Germany (February 2016), at the conference "Computational Algebra, Algebraic Geometry and Applications", in honor of Alicia Dickenstein, that took place at Buenos Aires, Argentina, August 1-3 2016, at the BIRS-CMO conference *Computational Algebra and Geometric Modeling* in Oaxaca, Mexico (August 2016), at the CIRM conference *Multivariate Approximation and Interpolation with Applications* Marseille, France (September 2016), at the BIRS-CMO conference *Sparse Interpolation, Rational Approximation and Exponential Analysis* in Oaxaca, Mexico (November 2016).

8.1.5. Leadership within the Scientific Community

Evelyne Hubert, in collaboration with Géraldine Morin, lead a collaborative research group at the workshop *Women in Shape: Modeling Boundaries of Objects in 2- and 3-Dimensions*.

8.1.6. Scientific Expertise

Bernard Mourrain was member of the committee of the HCERES for the evaluation of IRMAR, University of Rennes.

Evelyne Hubert was a member of the admissibility jury for the *Chargé de Recherche* position in CRI-Rennes Bretagne Atlantique.

Laurent Busé was a member of the CRI-SAM committee "Actions Marquantes", March 25. He is also a board member of the (national) labex AMIES (CRI-SAM representative) and a member of the steering committee of the MSI, *Maison de la Modélisation, de la Simulation et des Interactions* of the University Côte d'Azur.

8.1.7. Research Administration

Evelyne Hubert is an elected member of the Inria national *Commission d'Evaluation*.

Laurent Busé is an elected member of the CPRH (Commission Permanente de Ressources Humaines) of the math laboratory of the university of Nice. He was also appointed Inria representative at the "Academic Council" and the "Research Commission" of the university of Nice.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence : Ioannis Emiris, Discrete Math, 53, L1, NKU Athens, Greece.

Licence : Ioannis Emiris, Soft development for algorithmic problems, 53, L3, NKU Athens, Greece

Master : Laurent Busé, Curves and Surfaces, 66h ETD, M1, EPU of the university of Nice-Sophia Antipolis.

Master : Laurent Busé, Geometric Modeling, 27h ETD, M2, EPU of the university of Nice-Sophia Antipolis.

8.2.2. Supervision

PhD in progress: Elisa Berrini, Parametric modeling for ship hull deformation and optimization. CIFRE with MyCFD, started in January 2014, supervised by Bernard Mourrain.

PhD in progress: Ahmed Blidia, New geometric models for the design and computation of complex shapes. ARCADES Marie Skłodowska-Curie ITN, started in September 2016, supervised by Bernard Mourrain.

PhD in progress: Jouhayna Harmouch, Low rank structured matrix decomposition and completion. Cotutelle Univ. Liban, started in November 2015, cosupervised by Houssam Khalil and Bernard Mourrain.

PhD in progress: Anna Karasoulou, Exploiting structure in polynomial systems. Excellence awards (Greece), started in November 2011, supervised by Ioannis Emiris.

PhD in progress: Ioannis Psarros, Geometric approximation algorithms. Thales network (Greece), started in May 2015, supervised by Ioannis Emiris.

PhD in progress: Evangelos Bartzos, Modeling motion. ARCADES Marie Skłodowska-Curie ITN, started in May 2016, supervised by Ioannis Emiris.

PhD in progress: Evangelos Anagnostopoulos, Geometric algorithms for massive datasets. Started in May 2016, supervised by Ioannis Emiris.

PhD in progress: Clement Laroche, Change of representation in CAGD. ARCADES Marie Skłodowska-Curie ITN, started in Nov. 2016, supervised by Ioannis Emiris.

PhD in progress: Alvaro-Javier Fuentes-Suarez, Skeleton-based modeling of smooth shapes. ARCADES Marie Skłodowska-Curie ITN, started in October 2016, supervised by Evelyne Hubert.

Master in Computer Science: Paul Görlach, University of Bonn. Rotational invariants of ternary quartics. CRI-SAM tranverse action AROMATH-ATHENA. August-December 2016, supervised by Evelyne Hubert.

PhD in progress: Fatmanur Yildirim, Distances between points, rational Bézier curves and surfaces by means of matrix-based implicit representations. ARCADES Marie Skłodowska-Curie ITN, started in October 2016, supervised by Laurent Busé.

8.2.3. Juries

Evelyne Hubert was a referee for the PhD of Louis Dumont entitled *Algorithmes rapides pour le calcul symbolique de certaines intégrales de contour à paramètre*, Université Paris-Saclay, École Polytechnique, Inria Saclay Île-de-France.

Bernard Mourrain was a referee for the PhD of Emil Horobet, entitled *Tensors of low rank*, Univ. of Technology, Eindhoven, Netherland.

Laurent Busé was a referee for the PhD of Thibaut Verron entitled *Régularisation du calcul de bases de Gröbner pour des systèmes avec poids et déterminantiels, et application en imagerie médicale*, Université Pierre et Marie Curie, Paris, France, September 26.

ASAP Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

George Giakkoupis was the General Chair of the 35th ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC 2016), Chicago, IL, USA, Jul 2016.

9.1.2. Scientific Events Selection

9.1.2.1. Member of Conference Program Committees

Pierre-Louis Roman served in the program committee of the 6th IEEE International Symposium on Cloud and Service Computing (SC2), Nadi, Fiji, Dec 2016.

Francois Taiani served in the program committee of the:

17th ACM/IFIP/USENIX International Conference on Middleware (Middleware), Trento, Italy, Dec 2016.

15th Workshop on Adaptive and Reflective Middleware (ARM'16), Trento, Italy, Dec 2016.

4th workshop on Distributed Cloud Computing (DCC), Chicago, USA, Jul 2016

International Workshop on Assurance in Distributed Systems and Networks (ADSN 2016), Nara, Japan, Jun 2016.

IEEE International Conference on Cloud Engineering 2016 (IC2E 2016), Berlin, Germany, Apr 2016.

David Bromberg served in the program committee of the:

17th ACM/IFIP/USENIX International Conference on Middleware (Middleware), Trento, Italy, Dec 2016.

IEEE International Conference on Cloud Engineering 2016 (IC2E 2016), Berlin, Germany, Apr 2016.

Davide Frey served in the program committee of the

11th ACM International Conference on Distributed and Event-Based Systems (DEBS 2017), Barcelona, Spain, Jun 2017.

17th ACM/IFIP/USENIX International Conference on Middleware (Middleware), Trento, Italy, Dec 2016.

George Giakkoupis served in the program committee of the:

17th International Conference on Distributed Computing and Networking (ICDCN 2017), Singapore, Jan 2016.

3rd ACM-W Europe Celebration of Women in Computing (womENcourage 2016), Linz, Austria, Sep 2016.

31st IEEE International Parallel & Distributed Processing Symposium (IPDPS 2017), Orlando, FL, USA, May 2017.

9.1.3. Journal

9.1.3.1. Member of Editorial Boards

Anne-Marie Kermarrec is an associate editor of IEEE Internet Computing.

Anne-Marie Kermarrec is an associate editor of the Springer Computing Journal.

9.1.4. Invited Talks

Michel Raynal, A Look at Basics of Distributed Computing, Keynote Talk in the 36th International Conference on Distributed Computing Systems (ICDCS 2016), Nara, Japan, June 2016.

Pierre-Louis Roman, Bringing secure Bitcoin transactions to your smartphone, Technicolor, Rennes, Nov 24 2016.

Francois Taiani, Being prepared in a sparse world: The case of KNN graph construction, Invited Seminar of the Département Informatique et télécommunications (DIT) of ENS Rennes, Sep 2016.

Francois Taiani, Being prepared in a sparse world: The case of KNN graph construction, Invited Seminar of the Inria Project Team TAO, Inria Saclay, May 2016.

David Bromberg, Towards microservices architecture to transcode videos in the large at low costs, Invited seminar of the computer science department of UFG - Instituto de Informatica, Goiâna, Brasil, Jun 2016.

George Giakkoupis, Randomized adversary models. CMO-BIRS Workshop on Complexity and Analysis of Distributed Algorithms, Oaxaca, Mexico, Dec 1 2016.

George Giakkoupis, Amplifiers and suppressors for the Moran process on undirected graphs. ART-Oberseminar, University of Hamburg, Germany, Nov 8 2016.

George Giakkoupis, Amplifiers and suppressors of evolutionary dynamics on undirected graphs. Workshop on Random Processes in Discrete Structures, University of Warwick, UK, Aug 31 2016.

George Giakkoupis, Recent advances in randomized rumor spreading. Nexus of Information and Computation Theories, Distributed Computation and Communication Theme, The Henri Poincare Institute (IHP), Paris, France, Feb 1 2016.

Davide Frey gave an Invited (Keynote) talk at the W-PSDS workshop co-located with SRDS 2016 in Budapest, Hungary, on Sep 26, 2016.

Davide Frey gave an Invited talk at the SG-2 meeting of the BDVA Summit in Valencia, Spain, on Dec 1, 2016.

9.1.5. Leadership within the Scientific Community

Anne-Marie Kermarrec has been a member of the Academia Europea since 2013.

Anne-Marie Kermarrec is a member of the scientific committee of the Société Informatique de France.

George Giakkoupis was a member of the Steering Committee of the 35th ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC 2016), Chicago, IL, USA, Jul 2016.

Francois Taiani has been a member of the Steering Committee of IFIP WG 6.1 International Conference on Distributed Applications and Interoperable Systems (DAIS) since 2013.

Francois Taiani has been a member of the Steering Committee of the ACM/IFIP/USENIX International Conference on Middleware (Middleware) since 2014.

Francois Taiani served on the hiring committee for the position of Maître de Conférence a the University of Perpignan – Via Domitia in 2016.

9.1.6. Research Administration

David Bromberg is member of the scientific committee of the Media & Networks competitiveness cluster.

David Bromberg is scientific correspondent for ICT Digital in Rennes.

Davide Frey is "correspondant scientifique Europe" at the DPEI for Inria Rennes.

Davide Frey is an associate member of the COST-GTRI of Inria.

Anne-Marie Kermarrec has been a member of the ERC panel for Consolidator Grants since 2013.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Olivier Ruas, Initiation au Génie Logiciel (GEN), 40, L2, Univ. Rennes I (ISTIC), France

Licence : Olivier Ruas, Algorithmique Fonctionnelle (APF), 24, L1, Univ. Rennes I (ISTIC), France

Engineering School : Simon Bouget, SYS1 (Introduction aux Systèmes d'exploitation), 6 HEQTD (3x 2 heures de TP), ESIR1 (L3), Univ. Rennes I (ESIR), France

Master : Simon Bouget, TLC (Techniques Logicielles pour le Cloud computing), 18 HEQTD (7x 2 heures de TP + 2x 2 heures de TD), M2 Génie Logiciel Alternance, Univ. Rennes I (ISTIC), France

Engineering School: Francois Taiani, Synchronization and Parallel Programming, 34h, 2nd year of Engineering School (M1), ESIR / Univ. Rennes I, France.

Engineering School: Francois Taiani, Distributed Systems, 24h, 3rd year of Engineering School (M2), ESIR / Univ. Rennes I, France.

Engineering School: Francois Taiani, Parallel Algorithms for Big Data, 24h, 3rd year of Engineering School (M2), ESIR / Univ. Rennes I, France.

Engineering School: Francois Taiani, Introduction to Operating Systems, 24h, 1st year of Engineering School (L3), ESIR / Univ. Rennes I, France.

Master: Francois Taiani, Programming Technologies for the Cloud, 14h, M2, Univ. Rennes I, France.

Engineering School: David Bromberg, tools and programming languages for the Web, 48h, 2nd year of Engineering School (M1), ESIR / Univ. Rennes I, France.

Engineering School: David Bromberg, Distributed software architecture, 24h, 2nd year of Engineering School (M1), ESIR / Univ. Rennes I, France.

Engineering School: David Bromberg, Network security, 48h, 2nd year of Engineering School (M1), ESIR / Univ. Rennes I, France.

Engineering School: David Bromberg, Cloud for the Internet of Things, 24h, 3rd year of Engineering School (M2), ESIR / Univ. Rennes I, France.

Master: Davide Frey, Scalable Distributed Systems, 10 hours, M1, EIT/ICT Labs Master School, Univ. Rennes I, France.

9.2.2. Supervision

PhD: Antoine Rault, User privacy in collaborative filtering systems [13], Univ. Rennes I, Jun 23, 2016, Anne-Marie Kermarrec and Davide Frey.

PhD: Fabien Andre, Exploiting Modern Hardware for Large Scale Nearest Neighbor Search [52], [0] Nov 25 2016, Anne-Marie Kermarrec (and Nicolas Le Scouarnec–Technicolor).

PhD: Nupur Mittal, Data, Learning & Privacy in Recommendation Systems [11], Nov 25, 2016, George Giakkoupis and Anne-Marie Kermarrec.

PhD: Javier Olivares, Scaling Out-of-Core K-Nearest Neighbors Computation on Single Machines [12], Dec 19 2016, Anne-Marie Kermarrec.

PhD in progress : Pierre-Louis Roman, Epidemic Distributed Convergence for Decentralized Social Networking, Oct 2014, Francois Taiani and Davide Frey.

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[0]The thesis was not yet available at HAL at the time when this report was submitted.

PhD in progress : Stéphane Delbruel, Towards a Decentralized Embryomorphic Storage System, Oct 2013, Francois Taiani and Davide Frey (since Oct 2014).

PhD in progress : Resmi Ariyattu Chandrasekharannair, Towards Decentralized Federations for Plug-based Decentralized Social Networks, Dec 2013, Francois Taiani.

PhD in progress : Olivier Ruas, Dynamic Learning and Recommendations in Very Large Distributed Computing Infrastructures, Oct 2015, Anne-Marie Kermarrec and Francois Taiani.

PhD in progress: Simon Bouget, EMILIO: Emergent Middleware for Extra-Large-Scale Self Adaptation, Sep 2014, Francois Taiani and David Bromberg (since Sep 2015).

PhD in progress: Adrien Luxey, Towards New Solutions to Build Large Scale Distributed Applications in the Cloud, Oct 2016, David Bromberg.

9.2.3. Juries

Francois Taiani was an internal examiner of the PhD of Jackie Bourgeois. Interactive Demand Shifting in the Context of Domestic Micro-Generation. Open University (UK) / Univ. Rennes I, Jun 30 2016.

Francois Taiani was the chair of the PhD panel of Anca Iordache. Performance-Cost Trade-Offs in Heterogeneous Clouds. Univ. Rennes I, Sep 9 2016.

Francois Taiani was a reviewer of the PhD of Milan Kabac. A Design-Driven Methodology for the Development of Large-Scale Orchestrating Applications. Univ. Bordeaux, rapporteur, Sep 26 2016.

Francois Taiani was a reviewer of the PhD of Thomas Hartmann. Enabling Model-Driven Live Analytics For Cyber-Physical Systems: The Case of Smart Grids. Univ. of Luxembourg (Luxembourg), Nov 8 2016.

Francois Taiani was a reviewer of the PhD of Lucas Perrone. Vers des protocoles de tolérance aux fautes Byzantines efficaces et robustes. Univ. Grenoble Alpes, Dec 8 2016.

Francois Taiani was the chair a of the PhD panel of Javier Olivares. Scaling out-of-core K-Nearest Neighbors Computation on Single Machines. Univ. Rennes I, Dec 19 2016.

Francois Taiani was a reviewer of the HDR of Fabien Huet. From HPC to Big Data : Models and Tools for Large Scale Middleware. Université of Nice, Sophia Antipolis, Feb 12 2016.

Francois Taiani was the chair of the HDR panel of Erwan Le Merrer. Structuring Overlays for Distributed Computing: From Edge-Devices to the Clouds. Univ. Rennes I, Nov 23 2016.

George Giakkoupis was a member of the PhD committee of Maryam Helmi. The Space Complexity of Distributed Tasks in the Shared Memory Model. University of Calgary, Jun 7 2016.

George Giakkoupis was a member of the PhD committee member of Scott Roche. Robust Local Algorithms for Communication and Stability in Distributed Networks. Northeastern University, Nov 14 2016.

George Giakkoupis was an external reviewer of the PhD dissertation of Emanuele Natale. On the Computational Power of Simple Dynamics. Sapienza University of Rome, Dec 15 2016.

ASCLEPIOS Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- **X. Pennec** organized a workshop on the Geometry of shapes Workshop (Math in the Mine) from June 26 to July 2, 2016, at la Minière de Vallauria, Alpes Maritimes, FR.

9.1.1.2. Member of the Organizing Committees

- **M. Sermesant** was a co-chair of the MICCAI 2016 Workshop Statistical Atlases and Computational Models of the Heart (STACOM 2016), which was held in Athens, Greece, on October 17, 2016. He also co-organised the Cardiac Imaging Research Day at the French Radiologists Conference.

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

- **X. Pennec** was a member of the program committee of RFIA RFP 2016 (Reconnaissance de Formes et Perception) (Clermont-Ferrand, FR), the 2nd Int. W. on Differential Geometry in Computer Vision Diff-CVML'16, Las Vegas, USA), and of the Workshop on Biomedical Image Registration (WBIR 2016, Las-Vegas, USA).
- **H. Delingette** was program committee member of the conference on Medical Image Computing and Computer Assisted Intervention (MICCAI 2016), the MICCAI 2016 workshop on Simulation and Synthesis of Medical Imaging (SASHIMI'16), and the Eurographics conference on Visual Computing for Biology and Medicine (VCBM'16).

9.1.2.2. Reviewer

- **H. Delingette** was a reviewer for the International Symposium on Biomedical Imaging (ISBI'16), the international conference on computer-aided interventions (IPCAI'16), the conference on Medical Image Computing and Computer Assisted Intervention (MICCAI 2016), the European Conference on Computer Vision (ECCV 2016), the International Conference on Computer Vision and Pattern Recognition (CVPR 2016).
- **M. Sermesant** was a reviewer for the MICCAI 2016 conference.
- **X. Pennec** was a reviewer for the conference on Medical Image Computing and Computer Assisted Intervention (MICCAI 2016), the European Conference on Computer Vision (ECCV 2016) and the int. Workshop on Representation, analysis and recognition of shape and motion FroM Imaging data (RFMI 2016).

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- **N. Ayache** is the co-founder and the Co-Editor in Chief with J. Duncan (Professor at Yale) of *Medical Image Analysis*[0]. This scientific journal was created in 1996 and is published by Elsevier.
- **N. Ayache** is a member of the editorial board of the following journals: *Medical Image Technology* (Japanese journal) and *Journal of Computer Assisted Surgery* (Wiley).
- **H. Delingette** is a member of the editorial board of the journal *Medical Image Analysis* (Elsevier).
- **I. Strobant** is editorial coordinator for *Medical Image Analysis*, Elsevier (since october 2001).
- **X. Pennec** is a member of the editorial board of the journal *Medical Image Analysis* (Elsevier), of the *International Journal of Computer Vision* (Springer), of the SIAM *Journal on Imaging Sciences (SIIMS)*, and of the *Journal of Mathematical Imaging and Vision (JMIV)*.

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[0]http://www.elsevier.com/wps/find/journaleditorialboard.cws_home/620983/editorialboard

9.1.3.2. Reviewer - Reviewing Activities

- **H. Delingette** was a reviewer for the following journals: *Medical Image Analysis* (Elsevier), IEEE Transactions in Medical Imaging, IEEE Transactions in Biomedical Engineering, Computer Vision and Image Understanding, Biomedical Engineering, Computers in Biology and Medicine and Journal of Fluids and Structures.

- **X. Pennec** was a reviewer for the following journals: Biometrika, Chaos, Proceedings on the London Mathematical Society (PLMS), SIAM journal on Imaging Sciences (SIIMS), Medical Image Analysis (MedIA), IEEE Transactions on Pattern Analysis (PAMI), NeuroImage (NIMG).

- **M. Sermesant** was a reviewer for the following journals: Journal of the American College of Cardiology, IEEE Transactions on Medical Imaging, IEEE Transactions on Biomedical Engineering, Medical Image Analysis and Computers in Biology and Medecine.

9.1.4. Invited Talks

- **Nicholas Ayache** gave the following invited lectures:
  – To honor Michel Lazdunski, Nice Hospital, January 2016
  – Science and Society event, Toulouse, May 2016
  – Institut Universitaire de France, Annual Event, Rennes, June 2016
  – Connected Health, Monaco, June 2016
  – SSIMA Summer School, Bucharest, July 2016
  – MISS Summer School, Favigna, August 2016
  – Academy of Sciences , Sept 2016
  – IHU Liryc, Bordeaux, Sept 2016

- **Hervé Delingette** gave the following invited lectures at the:
  – MICCAI 2016 Programme Committee Workshop on May 27th in London.
  – Biomedical Image Analysis Seminar at University of Basel on November 22nd.

- **Xavier Pennec** gave invited lectures at the following events:
  – Colloquium of the Dieudonné Lab (LJAD), Nice University, October 10, 2016.
  – VIth Int. W. on Representation, analysis and recognition of shape and motion FroM Imaging data (RFMI 2016), Sidi Bou Said village, Tunisia, October 27-29 2016.
  – International Workshop on Geometry, PDE's and Lie Groups in Image Analysis, Eindhoven (NL) 24-26 August 2016.
  – Workshop on Geometry and Stochastics of Nonlinear, Functional and Graph Data, Bornholm (DK), 15-19 August 2016.
  – 12th IEEE IVMSP Workshop 2016, Bordeaux (FR), July 11-12, 2016.
  – Statistical Analysis of Manifold-Valued Data and Beyond: Nottingham workshop, 4-6 April 2016, UK.
  – Mathematical Imaging and Surface Processing, Mathematisches Forschungsinstitut Oberwolfach (DE), 24-30 January 2016.

- **Maxime Sermesant** gave an invited lecture at the Virtual Physiological Human Summer School, Barcelona.

9.1.5. Leadership within the Scientific Community

- **H. Delingette** is a member of the MICCAI Society Board of Directors from 2016 to 2019.

- **Nicholas Ayache** is a member of the French Academy of Sciences in the section of Mechanics and Informatics.

9.1.6. Scientific Expertise

- **Nicholas Ayache** was invited in Nagoya, Japan in February 2016 to evaluate a national program on the "Multidisciplinary Computational Anatomy Initiative" funded by the MEXT. He has been a member of the Research Council of the "Fondation pour la Recherche Médicale (FRM)" since January 2015.

- **Xavier Pennec** was an evaluator for the Fonds de la Recherche Scientifique-FNRS, Belgium, the Alpes Grenoble Innovation Recherche (AGIR) projects, and for the PhD fellowships of Ecole Normale cachan.

- **H. Delingette** was an evaluator for the ECOS Sud France-Chili program, for the European Research Concil, for the Comet program in Austria (FWF), for the International Graduate School of Science and Engineering (IGSSE) of the Technical University of Munich.

- **M. Sermesant** is a member of the Medical Simulation Working Group of Aviesan.

9.1.7. Research Administration

- **Nicholas Ayache** is a member of the scientific council of the Ile de France region since 2016.

- **Xavier Pennec** is a member of the Doctoral follow-up Committee (CSD) at Inria Sophia Antipolis, of the the "Comité de la Recherche Biomédicale en Santé Publique (CRBSP)" of the Nice hospitals, in charge of the relationships of Inria-Sophia with the Nice University Hospital (CHU), of and the board of the Ecole doctorale STIC.

- **H. Delingette** is a member of the local committee in charge of the scientific selection of visiting scientists (Comité NICE) and the local committee on the immersive platform.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: H. Delingette and X. Pennec, Introduction to Medical Image Analysis, 21h course (28.5 ETD), Master 2 MVA, ENS Cachan, France.

Master: X. Pennec and H. Delingette, Advanced Medical Imaging, 21h course (28.5 ETD), Master 2 MVA and École Centrale de Paris, France.

Master: X. Pennec and H. Delingette, Computational Anatomy and Physiology, 21h course (28.5 ETD), Master CBB - Computational Biology and Biomedicine, Univ. Nice-Sophia Antipolis.

Master: M. Sermesant, Computational Anatomy and Physiology, 3h course (4.5 ETD), Master CBB - Computational Biology and Biomedicine, Univ. Nice-Sophia Antipolis.

Master: X. Pennec is co-responsible of the Master CBB - Computational Biology and Biomedicine, Univ. Nice-Sophia Antipolis.

9.2.2. Theses Defended

- Pietro Gori , *Statistics on the brain connectivity of patients with neurological diseases*, University of Paris. Started in 2012. Thesis in collaboration with the Aramis project-team, co-directed by O. Colliot, S. Durrleman and N. Ayache. Defended on January 8, 2016.

- Mehdi Hadj-Hamou, *Biophysical modeling of the anatomical evolution of the brain*, Nice Sophia Antipolis University. Co-directed by N. Ayache and X. Pennec. Defended on December 14, 2016.

- Bishesh Khanal, *Modeling the atrophy of the brain in Alzheimer's disease*, Nice Sophia Antipolis University. Co-directed by X. Pennec and N. Ayache. Defended on July 20, 2016.

- Nina Miolane, *Geometric Statistics in Computational Anatomy: Template Estimation and Subspace Learning in Manifolds, Lie groups and Stratified Spaces*, Nice-Sophia Antipolis University. Directed by X. Pennec. Defended on December 16, 2016.

- Anant Vemuri, *Inter-operative biopsy site relocalization in gastroscopy : application to oesophagus*, Nice Sophia Antipolis University. Co-directed by S. Nicolau and N. Ayache. Defended on April 26th 2016.

- Matthieu Lê, *Brain tumor growth modeling : application to radiotherapy imaging*, Nice Sophia Antipolis University. Co-directed by H. Delingette and N. Ayache. Defended on June 23rd 2016.

- HdR : Maxime Sermesant, When Cardiac Biophysics Meets Groupwise Statistics: Complementary Modelling Approaches for Patient-Specific Medicine, Universite Nice Sophia Antipolis, June 9.

9.2.3. PhD in progress

Marc-Michel Rohé, *Analyse statistique spatio-temporelle des formes, déformations, flots et propriétés physiologiques du cœur*, Nice Sophia Antipolis University. Started in 2014. Co-directed by X. Pennec and M. Sermesant.

Sophie Giffard-Roisin, *Non-invasive Estimation of Cardiac Electrophysiological Parameters*, Nice Sophia Antipolis University. Started in 2014. Co-directed by N. Ayache and M. Sermesant.

Roch Molléro, *Uncertainty quantification in personalized electromechanical models. Application to cardiomyopathies and obesity*, Nice Sophia Antipolis University. Started in 2014. Co-directed by N. Ayache and M. Sermesant.

Thomas Demarcy, *Segmentation and anatomic variability of the cochlea and other temporal bone structures from medical images*, Nice Sophia Antipolis University. Started in 2014. Directed by H. Delingette.

Loïc Devilliers, *Consistency of statistics on infinite dimensional orbifolds – Applications to computational anatomy*, Nice Sophia Antipolis University. Started in October 2015. Co-directed by X Pennec and St. Allassonière.

Raphaël Sivera, *Analyse statistique de l'évolution de structures morphologiques partir de séquences temporelles d'IRM*, Nice Sophia Antipolis University. Started in October 2015. Co-directed by N. Ayache and H. Delingette.

Pawel Mlynarski, *Tumor segmentation based on Random Forests and Convolutional Neural Networks trained on partially annotaded data*, Nice Sophia Antipolis University. Started in December 2015. Co-directed by N. Ayache and H. Delingette.

Qiao Zheng, *Deep learning for cardiac image analysis*, Nice Sophia Antipolis University. Started in January 2016. Co-directed by N. Ayache and H. Delingette.

Shuman Jia, *Population-based Model of Atrial Fibrillation: from Shape Statistics to Group-wise Physiology*, Nice Sophia Antipolis University. Started in 2016. Co-directed by M. Sermesant and X. Pennec.

Wen Wei, *Learning Brain Alterations in Multiple Sclerosis from Multimodal Neuroimaging Data*, Nice Sophia Antipolis University. Started in 2016. Co-directed by N.Ayache and O.Colliot.

Julian Krebs, *Robust image registration based on machine learning*, Nice Sophia Antipolis University. Started in 2016. Co-directed by H. Delingette and N. Ayache.

9.2.4. Juries

N. Ayache was co-supervisor of the PhD theses of Matthieu Lê (Univ. of Nice Sophia Antipolis), Anant Vemuri (Univ. of Nice Sophia Antipolis), Pietro Gori (University of Paris), Mehdi Hadj-Hamou (Univ. of Nice Sophia Antipolis), and Bishesh Khanal (Univ. of Nice Sophia Antipolis). He was a member of the PhD thesis committee of Nina Miolane (Univ. of Nice Sophia Antipolis).

Hervé Delingette was co-supervisor of the PhD thesis of Matthieu Lê (Univ. of Nice Sophia Antipolis). He was a reviewer in the PhD thesis committee of Vincent Jaouen (Univ. of Tours) and of Tom Haeck (University KUL Leuven, Belgium). He was a member of the PhD thesis committee of Bishesh Khanal (Univ. of Nice Sophia Antipolis).

Xavier Pennec was supervisor or co-supervisor of the PhD theses of Bishesh Khanal (Univ. of Nice Sophia Antipolis), Mehdi Hadj-Hamou (Univ. of Nice Sophia Antipolis) and Nina Miolane (Univ. of Nice Sophia Antipolis).

Maxime Sermesant was a reviewer and a member of the PhD jury of Andjela Davidovic, Bordeaux University (Dec 9).

9.3. Popularization

- Nina Miolane participated to the following popularization events:
    - Speaker at Unesco France's Ceremony for 70th Anniversary.
    - Speaker at the Women Forum Global Meeting 2016. How to bring more women in the sci-tech workforce?
    - Speaker at the L'Oreal-Unesco Prizes Ceremony 2016.
    - Journal regional de France 3 Azur (Oct. 31 2016)
    - Invited on "Le Club de la Tete au Carre". France Inter (National Radio), Oct. 14 2016.
- M. Sermesant gave general audience lectures in regional high schools, during the Science Festival in Juan-les-Pins Congress center (Oct 23), and during the Inria-Industry meeting (Dec 1).

ASCOLA Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Steering and Organizing Committees

- A. Lebre took part to the organisation of the Grid'5000 school in Grenoble (70 attendees).
- A. Lebre took part to the organisation of the workshop "Stockage informatique" during the Journées Scientifiques event in Nantes.
- J. Noyé was a co-organizer of LaMod '16, a workshop on Language Modularity co-located with Modularity '16 in Málaga, Spain.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- J.-C. Royer was a member of the program committes WETCIE 2016, CAL 2016, ICIS 2016, IWAISE 2016, IIAI 2016.
- T. Ledoux was member of the program committees of the following workshops: Greens'16@ICSE, ARM'16@Middleware, CrossCloud'16@EuroSys.
- A. Lebre was a member of the program committees of ACM/IEEE CCGRID 2016, Europar 2016, ACM/IEEE SC 2016, IEEE CloudCom 2016, IEEE SSS 2016, OPTIM 2016.
- J. Noyé was a member of the program committee of Modularity '16 (Málaga, Spain).

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- A. Lebre is associate editor for the IEEE Transactions on Big Data journal.
- M. Südholt is joint editor-in-chief of the journal Transactions on Modularity and Software Composition (Springer), formerly Transactions on AOSD.
- M. Südholt is an associate editor of the Journal on Programming, an open access journal.

10.1.3.2. Reviewer - Reviewing Activities

- A. Lebre has been a reviewer for the IEEE TPDS and IEEE TCC Journals, the IEEE Cloud Computing magazine, and the Journal of Parallel and Distributed Computing.
- T. Ledoux has been a reviewer for the IEEE Communications Letters.
- J. Noyé has been a reviewer for the Journal of Object Technology and Science of Computer Programming.

10.1.4. Invited Talks

- A. Lebre and Anthony Simonet have been invited to the 9th edition of the CloudControl Workshop (Sweden).
- A. Lebre has been invited to the BigStorage Initial Training Schoom (Spain).

10.1.5. Leadership within the Scientific Community

- A. Lebre is leading the OpenStack "Massively Distributed Working Group" (further information at: https://wiki.openstack.org/wiki/Massively_Distributed_Clouds).

- A. Lebre is member of the executive committee of the GDR CNRS RSD (Reseau et Système distribué). He is also co-leading the transversal action Virtualization and Clouds of this GDR.
- A. Lebre is member of the executive and architect committees of the Grid'5000 GIS (Groupement d'intérêt scientifique).
- T. Ledoux is member of the board of the Green Lab Center association. This association promotes and disseminates Green IT practices and research prototypes to the world of education, research and companies [0].
- M. Südholt is a member of the steering committees of the two international conferences on Programming and Modularity.
- M. Südholt has been a member of the board of the Aspect-Oriented Software Association.

10.1.6. Research Administration
- Pierre Cointe has been the head of the Lina laboratory that managed research in Computer Science of the main research institutions in Nantes.
- Jacques Noyé is the deputy head of the Mines Nantes department of Automation, Production and Computer Sciences.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

The team is involved in the following undergraduate and graduate-level programs at Mines Nantes and University of Nantes (the institutions all of eaching staff belongs to):
- The team is a main contributor to the **engineering program of EMN**.
- Within this engineering program, the team is steering, chairing and the main contributor to a two-year **graduate-level informatics specialization**. H. Grall is managing this program.
- The team is leading a three-year **engineering program on software engineering**. T. Ledoux is managing this program.

The team has also been involved in the following MSc programs that have been carried out with partners from French and foreign universities:
- The team participates in the **MSc program "Alma"** on software architecture and distributed systems, a joint program steered by colleagues from University of Nantes. In this context, we are responsible for a 48-hour module on advanced software composition and take part in the program's governing board. M. Südholt is managing the participation of Mines Nantes in this program.
- J.-C. Royer was teaching "Architecture, component programming and OSGi", from March 7 until 12, level M1, at the University of Monastir (Tunisia).

m members have taught for about 220 hours on average in 2015 (hours of presence in front of students). Hereby, we have taken into account that researchers and some professors have not taught at times. In addition, another significant part of the program is taught by temporary staff, whose participation is managed by ASCOLA members.

10.2.2. Juries
- J.-C. Royer was reviewer of the HDR of Mohamed Bhiri (Université Grenoble), September 7, 2016. He was also member of the PhD defense of Jonathan Pépin (Université de Nantes) December 5, Madhi Benmoussa (Université Paris XIII) December 6, and Amine Benelallam (Ecole des Mines) December 7.
- A. Lebre was a member of the PhD committee of Vincent Kherbache, "Ordonnancement des migrations a` chaud de machines virtuelles", Université de Nice - Sophia Antipolis, Dec. 7.
- T. Ledoux was a member of the PhD committee of Zakarea Al Shara (Univ. Montpellier), Nov. 17.

10.3. Popularization
- A. Lebre has been invited to the CargoDays event (Nantes).

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[0] Green Lab Center

ASPI Project-Team

9. Dissemination

9.1. Promoting scientific activities

9.1.1. Scientific events organisation

As part of statistics semester of Labex Lebesgue, Valérie Monbet has co–organized the 3rd workshop on Stochastic Weather Generators, held in Vannes in May 2016. This workshop aimed at bringing together a wide range of researchers, practitioners, and graduate students whose work is related to the stochastic modelling of meteorological variables and stochastic weather generators. Stochastic weather generators give us ability to reliably predict climate-related risks by simulating sequences of daily weather and climate consistent with specific aspects of climate variability and change. The simulated sequences of meteorological variables (rainfall, wind, temperature,etc.) are typically used as inputs into complex environmental and ecosystem models. They have a wide range of applications in hydrology, agriculture and environmental management.

Within the programme *École d'été France Excellence* promoted by the French embassy in China, she has co–organized a two–weeks Summer School in Statistics, held in Rennes in June/July 2016. This initiative has offered Chinese students the opportunity to attend graduate courses in statistics, including practical and seminar sessions.

9.1.2. Participation in workshops, seminars, lectures, etc.

In addition to presentations with a publication in the proceedings, which are listed at the end of the document, members of ASPI have also given the following presentations.

Frédéric Cérou has given an invited talk on the convergence of adaptive multilevel splitting at the RESIM 2016 workshop held in Eindhoven in March/April 2016. He has given, jointly with Mathias Rousset, a talk on a central limit theorem for adaptive multilevel splitting at the 2nd meeting on Adaptive Multilevel Splitting and Rare Events, an event of the MSMath ERC project held at CERMICS in Marne–la–Vallée, in June 2016.

Patrick Héas has given a talk on learning geophysical systems from images, at the seminar of ENS Rennes, in April 2016, and a talk on reduced modeling from partial observations, at the SIAM conference on Uncertainty Quantification, held in Lausanne, in April 2016.

François Le Gland has given a talk on marginalization for rare event simulation in switching diffusions at the RESIM 2016 workshop held in Eindhoven in March/April 2016, and at the probability and statistics seminar of LJK (laboratoire Jean Kuntzmann) in Grenoble, in June 2016.

Valérie Monbet has given a talk on time varying autoregressive models for multisite weather generators at the 3rd workshop on Stochastic Weather Generators, held in Vannes in May 2016. She has also given given a series of three lectures (including a lab session) at the *École d'été France Excellence* Summer School in Statistics, held in Rennes in June/July 2016.

9.1.3. Research administration

François Le Gland is a member of the *conseil d'UFR* of the department of mathematics of université de Rennes 1. He is also a member of the *conseil scientifique* for the EDF/Inria scientific partnership.

Valérie Monbet is a member of both the *comité de direction* and the *conseil* of IRMAR (institut de recherche mathématiques de Rennes, UMR 6625). She is also the deputy head of the department of mathematics of université de Rennes 1, where she is a member of both the *conseil scientifique* and the *conseil d'UFR*.

9.2. Teaching, supervision, thesis committees

9.2.1. *Teaching*

Patrick Héas gives a course on Monte Carlo simulation methods in image analysis at université de Rennes 1, within the SISEA (signal, image, systèmes embarqués, automatique, école doctorale MATISSE) track of the master in electronical engineering and telecommunications.

François Le Gland gives

- a 2nd year course on introduction to stochastic differential equations, at INSA (institut national des sciences appliquées) Rennes, within the GM/AROM (risk analysis, optimization and modeling) major in mathematical engineering,

- a 3rd year course on Bayesian filtering and particle approximation, at ENSTA (école nationale supérieure de techniques avancées), Palaiseau, within the statistics and control module,

- a 3rd year course on linear and nonlinear filtering, at ENSAI (école nationale de la statistique et de l'analyse de l'information), Ker Lann, within the statistical engineering track,

- a course on Kalman filtering and hidden Markov models, at université de Rennes 1, within the SISEA (signal, image, systèmes embarqués, automatique, école doctorale MATISSE) track of the master in electronical engineering and telecommunications,

- and a 3rd year course on hidden Markov models, at Télécom Bretagne, Brest.

Valérie Monbet gives several courses on data analysis, on time series, and on mathematical statistics, all at université de Rennes 1 within the master on statistics and econometrics. She is also the director of the master on statistics and econometry at université de Rennes 1.

9.2.2. *Supervision*

François Le Gland has been supervising one PhD student

- Alexandre Lepoutre, title: *Tracking and detection in Track–Before–Detect context using particle filtering*, université de Rennes 1, started in October 2010, defense held on October 5, 2016, funding: ONERA grant, co–direction: Olivier Rabaste (ONERA, Palaiseau).

Frédéric Cérou and François Le Gland are jointly supervising one PhD student

- Ramatoulaye Dabo, provisional title: *Rare event simulation in epidemiology*, université Assane Seck de Ziguinchor (Senegal) and université de Rennes 1, started in September 2015, expected defense in 2018, co–direction: Alassane Diedhiou (université Assane Seck de Ziguinchor).

François Le Gland and Valérie Monbet are jointly supervising one PhD student

- Thi Tuyet Trang Chau, provisional title: *Non parametric filtering for Metocean multi–source data fusion*, université de Rennes 1, started in October 2015, expected defense in October 2018, funding: Labex Lebesgue grant and Brittany council grant, co–direction: Pierre Ailliot (université de Bretagne Occidentale, Brest).

François Le Gland is supervising two other PhD students

- Kersane Zoubert–Ousseni, provisional title: *Particle filters for hybrid indoor navigation with smart-phones*, université de Rennes 1, started in December 2014, expected defense in 2017, funding: CEA grant, co–direction: Christophe Villien (CEA LETI, Grenoble),

- Audrey Cuillery, provisional title: *Bayesian tracking from raw data*, université du Sud Toulon Var, started in April 2016, expected defense in 2019, funding: CIFRE grant with DCNS, co–direction: Claude Jauffret (université du Sud Toulon Var) and Dann Laneuville (DCNS, Nantes).

Valérie Monbet is supervising two other PhD students

- Audrey Poterie, provisional title: *Régression d'une variable ordinale par des données longitudinales de grande dimension : application à la modélisation des effets secondaires suite à un traitement par radiothérapie*, université de Rennes 1, started in October 2015, expected defense in 2018, funding: INSA grant, co–direction: Jean–François Dupuy (INSA Rennes) and Laurent Rouvière (université de Haute Bretagne, Rennes).

- Marie Morvan, provisional title: *Modèles de régression pour données fonctionnelles. Application à la modélisation de données de spectrométrie dans le proche infra rouge*, université de Rennes 1, started in October 2016, expected defense in 2019, funding: MESR grant, co–direction: Joyce Giacofci (université de Haute Bretagne, Rennes) and Olivier Sire (université de Bretagne Sud, Vannes).

Mathias Rousset is supervising one PhD student

- Yushun Xu, provisional title: *Variance reduction of overdamped Langevin dynamics simulation*, université Paris-Est, started in October 2015, expected defense in 2018, co–direction: Pierre-André Zitt (université Paris–Est).

9.2.3. Thesis committees

François Le Gland has been a reviewer for the PhD theses of Tepmony Sim (Télécom ParisTech, advisors: Randal Douc and François Roueff) and Clément Walter (université Denis Diderot, Paris, advisor: Josselin Garnier).

Valérie Monbet has been a member of the committee for the HDR of Mathieu Emily (université de Haute Bretagne, Rennes).

Mathias Rousset has been a member of the committee for the PhD thesis of Zofia Trstanova (Inria Grenoble, EPI NANO-D, advisor: Stéphane Redon).

ATHENA Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- R. Deriche is Adj. Director at the Doctoral School EDSTIC (Website: http://edstic.i3s.unice.fr/index. html)
- T. Papadopoulo (since september 2011) is a co-coordinator of the Master of Science in Computational Biology and Biomedicine from University of Nice Sophia Antipolis (Website: http://cbb. unice.fr). The scientific goal of this program is to focus on the human being from different perspectives (understanding and modeling functional aspects or interpreting biomedical signals from various devices) and at different scales (from molecules to organs and the whole organism).

10.1.1.2. Member of the Organizing Committees

- M. Clerc organized, with Bruno Cessac from Biovision team,the conference neurostim2016.inria.fr on neurostimulation of the sensory and central nervous systems.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- R. Deriche is member of the conference Programme Committee (PC) of the International Symposium on Biomedical Imaging (ISBI), member of the PC of MICCAI 2016 Workshop on Computational Diffusion MRI and member of the PC of MFCA 2016 MICCAI workshop on Mathematical Foundations of Computational Anatomy.
- Demian Wassermann, member of the Program Committee of MICCAI 2016.
- Maureen Clerc was member of the BCI Meeting 2016 Program Committee.

10.1.2.2. Reviewer

- R. Deriche serves several international institutions in reviewing applications : ERC Grants, Swiss National Science Foundation, the Netherlands Organisation for Scientific Research (NWO)...
- R. Deriche serves several international conferences (Isbi, MICCAI, ISMRM...) and international workshops (CD-MRI Miccai, MFCA Miccai...).
- T. Papadopoulo serves several international conferences as a reviewer (ICIP, EMBC, MICCAI, ISBI, CDMRI, HBM).
- D. Wassermann serves several international institutions in reviewing applications: ANR, the Netherlands Organisation for Scientific Research (NWO), ...
- D. Wassermann serves several international conferences as a reviewer (MICCAI, ISMRM, HBM, CDMRI, etc)

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- R. Deriche is member of the Editorial Board of the Journal of Neural Engineering, Associate Editor of SIAM Journal on Imaging Sciences (SIIMS), editorial board member at Springer for the book series entitled Computational Imaging and Vision and member of the Editorial Board of the Medical Image Analysis Journal

- M. Clerc is member of the Editorial Board of Biomedical Engineering OnLine, and of the ISTE-Wiley book series.

10.1.3.2. Reviewer - Reviewing Activities

- R. Deriche serves several international journals (NeuroImage, IEEE Transactions on Medical Imaging, Magnetic Resonance in Medicine, Journal of Mathematical Imaging and Vision, Medical Image Analysis Journal,...).
- T. Papadopoulo serves several international journals (IEEE Transactions on Biomedical Engineering, Frontiers Neuroscience, Journal of Physics A, International Journal on Computer Vision,...).
- D. Wassermann serves several international journals (NeuroImage, IEEE Transactions on Medical Imaging, Human Brain Mapping, Medical Image Analysis Journal,...).

10.1.4. Invited Talks

- M. Clerc gave invited talks at: Seminar SIESTE (ENS Lyon, March 2016), Imaging Seminar in Paris (Institut Henri Poincaré, November 2016)
- R. Deriche gave two plenary talks at the *13th IEEE International Conference on Signal Processing, November 7, 2016* in Chengdu and at the *Big Data in Medical Imaging Forum, November 10th, 2016* in Guiyang, both in China.
- R. Deriche gave a plenary talk at the *Summer school on Brain Connectomics, September 20, 2016* in Verona, Italy.
- T. Papadopoulo gave an invited talk in the ChildBrain symposium at the *Biomag conference, October 6, 2016* in Seoul, Korea [20].
- D. Wassermann gave a invited talks at: Stanford Medical School and at the Brain and Spine Institute, Paris.

10.1.5. Leadership within the Scientific Community

- M. Clerc coordinates the Inria Project Lab BCI-LIFT.
- R. Deriche is the P.I of the ERC AdG CoBCoM.

10.1.6. Scientific Expertise

- M. Clerc is a member of the Inria Evaluation Committee since 2015.
- M. Clerc is a member of the Scientific Committee of Académie 4 of University Côte d'Azur.
- R. Deriche is a member of the Scientific Committee of Académie 2 of University Côte d'Azur.
- R. Deriche serves several international institutions in reviewing applications : ERC Grants, Swiss National Science Foundation, the Netherlands Organisation for Scientific Research (NWO).

10.1.7. Research Administration

- M. Clerc is Déléguée Scientifique Adjointe (vice-head of Science) of the Sophia Antipolis Inria Research Center since 2014.
- M. Clerc is member of the Commission Scientifique Interne (CoSI) of Inria since 2014.
- R. Deriche is Chair of the 2015 and 2016 Inria Sophia Antipolis recruitment commitees
- R. Deriche is member of 4 Scientific Councils: University of Nice Sophia Antipolis, ITMO ITS (Institut des Technologies pour la Santé), Olea Medical Company (http://www.olea-medical.com/ and the GIS UNS-ENSL-CNRS-Inria.
- R. Deriche is member of the Administration Council of AFRIF (Association Française pour la Reconnaissance et l'Interprétation des Formes) and member of the Academic Council of UCA (Nice Côte d'Azur University)
- T. Papadopoulo is the head of the DTK platform committee of the Sophia Antipolis Inria Research Center since 2016.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Tutorial course by M. Clerc at ChildBrain Winter School (Jyväskylä, Finland, January 2016) : "Advanced Signal Processing".

Tutorial course by M. Clerc at IEEE International Conference on Systems Man and Cybernetics (Budapest, Hungary, October 2016): "Why bother with avanced modeling in BCI ? Lessons from neuroimaging".

Master: R. Deriche, Variational approaches and Geometrical Flows for Computational Brain Imaging, 36 ETD, M2 "Computational Biology and Biomedicine", University of Nice Sophia Antipolis, France.

Master: R. Deriche, Advanced Image Processing Techniques, 12 ETD, M1 International CBB & Ubinet, University of Nice Sophia Antipolis, France.

Master: T. Papadopoulo, *3D Computer Vision*, 12 ETD, M1 International Ubinet, University of Nice Sophia Antipolis, France.

Master: T. Papadopoulo, *Inverse Problems in Brain Functional Imaging*, 36 ETD, M2 "Computational Biology and Biomedicine", University of Nice Sophia Antipolis, France.

Master: T. Papadopoulo, *Inverse problems for brain functional imaging*, 24 ETD, M2, Mathématiques, Vision et Apprentissage, ENS Cachan, France.

Master: D. Wassermann, *Introduction to Computer Science*, 24 ETD, M2, "Computational Biology and Biomedicine", University of Nice Sophia Antipolis, France.

Master: D. Wassermann, *Machine Learning in Neuroimaging*, 36 ETD, University of Buenos Aires, Argentina

10.2.2. Supervision

PhD in progress: Rutger Fick, "Microstructure Recovery via dMRI", started Oct. 2013, Université Nice Sophia Antipolis. Supervisor: Rachid Deriche.

PhD in progress: Kai Dang, "Modeling and characterizing electrical conductivity for cochlear implantation", started Dec. 2013, Université Nice Sophia Antipolis. Supervisor: Maureen Clerc.

PhD defended in April 20, 2016: Gabriel Girard, "fMRI & dMRI", started Sept. 2012, Supervisors: Rachid Deriche & Maxime Descoteaux (University of Sherbrooke, CA).

PhD in progress: Mouloud Kachouane, "Invariants and biomarqueurs in dMRI", started Oct. 2012, Supervisors: Rachid Deriche & L. Boumghar (USTHB, Algiers).

PhD in progress: Thinhinane Megherbi, "HARDI & High Order Tensors", started Sept. 2011, Supervisors: Rachid Deriche & L. Boumghar (USTHB, Algiers)

PhD in progress: Marco Pizzolato, "Diffusion & Perfusion MRI: From bench to bedside" started Dec. 2013, Université Nice Sophia Antipolis. Supervisor: Rachid Deriche.

PhD in progress: Abib Alimi, "Diffusion & PLI" started Nov, 1st, 2016, Université Nice Sophia Antipolis. Supervisor: Rachid Deriche.

PhD in progress: Isa Costantini, "Brain Connectomics" started Oct. 1st, 2016, Université Nice Sophia Antipolis. Supervisor: Rachid Deriche.

PhD in progress: Brahim Belaoucha, "Using diffusion MR information to reconstruct networks of brain activations from MEG and EEG measurements", Université Nice Sophia Antipolis, started Oct. 2013, Supervisor: Theo Papadopoulo.

PhD in progress: Kostiantyn Maksymenko, "Inverse problem in EEG/MEG/SSEG: towards a better consideration of anatomo-functional constraints ", Université Nice Sophia Antipolis, started Oct. 2016, Supervisor: Theo Papadopoulo and Maureen Clerc.

PhD in progress: Guillermo Gallardo Diez, "Connectivity-Based Brain Parcellation", started Nov. 2015, Université Nice Sophia Antipolis. Supervisors: D. Wassermann/ R. Deriche

PhD in progress: Nathalie Gayraud, "Structured Dictionary Learning", University Nice Sophia Antipolis, started November 2015, supervisor: Maureen Clerc.

PhD in progress: Federica Turi, "User-adapted Brain Computer Interaction", University Nice Sophia-Antipolis, started October 2016, supervisor: Maureen Clerc.

Master: Kostiantyn Maksymenko, "Efficient lead field computation a la Reduced Basis Methods", Supervised by T. Papadopoulo and M. Clerc.

Master: Paul Görlach, "Rotational Invariants of Ternary Quartics", Supervised by E. Hubert and T. Papadopoulo. Clerc.

Master: Nahuel Lascano, "Weigthed Newtwork Representations of Structural Connectivity", Supervised by D. Wassermann.

Master: Leonel Exequiel Gomez, "Super-resolution approaches to Multi-Shell dMRI", Supervised by D. Wassermann.

Internship: Federica Turi, "Novel flashing strategies for the P300-speller", Supervised by M. Clerc.

10.2.3. Juries

- M. Clerc participated in PhD juries of: Michaël Acquadro (Grenoble, April 2016) as reviewer, Tafkarinas Medani (Paris 6, September 2016) as reviewer, Flavie Torrecillos (Marseille, October 2016) as examiner, Andéol Evain (Rennes, December 2016) as examiner.

- M. Clerc participated in HDR jury of Sophie Achard as reviewer (Grenoble, March 2016) and Fabien Lotte (Bordeaux, September 2016) as examiner.

- M. Clerc participated in the recruitment jury of Professor in section 26 in University Nice Sophia Antipolis.

- M. Clerc participated in the recruitment jury for CR2/CR1 in Inria Sophia Antipolis.

- R. Deriche chaired the recruitment jury for CR2/CR1 in Inria Sophia Antipolis.

- R. Deriche chaired the PhD jury of Simona Schiavi at Ecole Polytechnique, Paris Saclay, Dec. 1st, 2016.

- R. Deriche chaired the PhD jury of Mehdi Hadj-Hamou at Nice University, Dec. 14th, 2016.

- R. Deriche participated in the PhD Jury of P. Gori at ICM, Paris, Jan. 8th, 2016

- R. Deriche participated in the PhD Jury of G. Girard at Sherbrooke University, April, 20, 2016.

- T. Papadopoulo participated in the PhD Jury of G. Girard as reviewer at Sherbrooke University, April, 20, 2016.

- T. Papadopoulo participated in the PhD Jury of A. Pillain as reviewer at Telecom Bretagne, October, 12, 2016.

10.3. Popularization

During the "Semaine du Cerveau" (Brain Awareness week) in March 2016, Maureen Clerc organized a "Cafe Technologique" about Brain-Computer Interfaces, in which over 100 attendees could see a live demo of the P300 speller with both clinical-grade and consumer-grade devices.

Maureen Clerc participated in a "Gala for Amyotrophic Lateral Sclerosis" at the AXA Headquarters in Paris, a fundraising event, where she presented the P300 speller project.

AVALON Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Laurent Lefevre was :
    - Co-Workshop chair of Xgreen 2016 : Energy Efficiency in Large Scale Distributed Systems, Cartagena, Colombia, May 2016
    - Co-chair of the Special Session on Energy Efficient Management of Parallel Systems, Platforms, and Computations during PDP2016 : 24th Euromicro International Conference on Parallel, Distributed and Network based Processing, Heraklion, Greece, February 17-19, 2016
- Christian Perez was co-chair of the Topic 8 of Euro-Par 2016.

9.1.1.2. Member of the Organizing Committees

- Eddy Caron was:
    - Co-organizer of SC16 Inria Booth at Salt Lake City (Utah). November 13-18, 2016.
    - Co-organizer of SSS'2016 (The 18th International Symposium on Stabilization, Safety, and Security of Distributed Systems), Lyon, November 7-10, 2016.
    - Co-organizer of OpenStack WorkShop Lyon 2016 at ENS de Lyon. June 15, 2016.
- Hélène Coullon and Christian Perez were members of the organization team of the 5th workshop of the Joint Laboratory for Extreme Scale Computing, Lyon, 27-29 June 2016.
- Laurent Lefevre was :
    - Co-organizer of SC16 Inria Booth at Salt Lake City (Utah). November 13-18, 2016.
    - Co-organizer of the Ecoinfo conference on Eco-design of hardware", Grenoble, September 27, 2016
    - Co-organizer of the Atelier Compas 2016 : Economiser l'énergie dans les systèmes distribués, July 5, 2016 with Anne-Cécile Orgerie (IRISA, Rennes)
    - Co-organizer of the E3-RSD school on Energy Efficiency in Networks and Distributed Systems, Dinard, May 23-27, 2016 with Anne-Cécile Orgerie (IRISA, Rennes)
    - Tutorial Chair in CCGrid 2016: the 16th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing, Cartagena, Colombia, May 2016
- Frédéric Suter was the co-organizer of the 6th edition of the SimGrid Users Days, Fréjus, January 18-21, 2016.

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

- Eddy Caron was a member of the program committee of HCW'2016, ICACCI-2016, Xgreen 2016, CloudTech'16, CCGRID'2016
- Gilles Fedak was a member of the program committee of InterCloud'2016, CLoudCom'2016, Cluster 2016, Compass 2016, HPDC 2016, ICCCN'2016, ICPADS'2016.

- Olivier Glück was a member of the program committee of PDP 2016 (24th Euromicro International Conference on Parallel, Distributed, and Network-Based Processing) and the Xgreen2016 workshop of CCGrid 2016.
- Christian Perez was a member of the Workshop Committee at the 2016 ACM/IEEE International Conference on High Performance Computing, Networking, Storage and Analysis (SC16). He was a member of the program committee of the Grid'5000 winter School 2016. He served in the committee to select Outstanding Paper Award of HPCS 2016.
- Frédéric Suter was a member of the program committee of Vecpar 2016, ICCS 2016, ComPas 2016 and EuroMPI 2016

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards
- G. Fedak: Co-editor of Elsevier Journal of Cluster Computing

9.1.4. Invited Talks

Laurent Lefevre has been invited to give the following talks :
- "Reducing environmental impacts of ICT : challenges and solutions", Invited talk in "Agence de l'Eau Rhône Méditerranée et Corse", Lyon, December 15, 2016
- "Ecological digital world, is it possible ? / Numérique écologique, est ce possible ?", Invited Keynote for Université Ouverte de Lyon, Lyon, France, November 29, 2016
- "Grid'5000: French Nationwide Testbed for Research in Distributed Computing", Laurent Lefevre, BOF on Experimental Infrastructure and Methodology for HPC Cloud, Supercomputing 2016 Conference, Salt Lake City, USA, November 15, 2016
- "GreenFactory : orchestrating power capabilities and leverages at large scale for energy efficient infrastructures", Laurent Lefevre, CCDSC2016: Workshop on Clusters, Clouds, and Data for Scientific Computing, Dareize, France, October 3-6, 2016
- "Full life cycle in sustainable ICT for reaching energy reduction, energy efficiency and energy proportionality", Laurent Lefevre, Invited keynote talk, IEEE Tenth International Conference on Research Challenges in Information Science (RCIS2016) & Inforsid conference, Grenoble France, June 3, 2016

Gilles Fedak has been invited to give the following talks:
- "iEx.ec: Blockchain-based Cloud Computing", Inria Blockchain Day, Paris, December 12, 2016
- "Active Data: Large scale data management based on data life cycle", Journée Big Data de la Fédération Informatique de Lyon, December 9, 2016
- "Active Data, managing Data Life Cycle on heterogeneous systems and infrastructures", Workshop Data preservation (PREDON) of the MADICS research group on Big Data, Paris, CNRS, December 2, 2016
- "Blockchain applications are coming, what's next" Panel at the workshop ParisInvest, HEC, December 1st, 2016
- "iEx.ec: Blockchain-based Distributed Cloud Computing", Chaintech Meetup, Paris, November 29, 2016
- "iEx.ec: un Cloud distribué basé sur la blockchain", CES-3 Innovation Forum, Paris, 29 Septembre 2016
- "iEx.ec: un Cloud distribué basé sur la blockchain", EDF research Lab, Saclay, 28 Septembre 2016
- "iEx.ec: Blockchain-based Fully Distributed Cloud Computing",CAS Shanghai University, Shanghai, September 23, 2016
- "iEx.ec: Fully Distributed Cloud Computing thanks to the Ethereum Smart Contracts", Ethereum Developper Conference, Shanghai, September 21, 2016
- "iEx.ec: Blockchain-based Fully Distributed Cloud Computing", CNIC Chinese Academy of Sciences, Beijing, September 18, 2016
- "Relocaliser les data-centers dans la ville intelligente grâce à la blockchain" Smart Building Alliance, Lyon, France September 15, 2016

Frédéric Suter has been invited to give the following talk:

- "Modeling Distributed Platforms from Application Traces for Realistic File Transfer Simulation", Information Sciences Institute, University of Southern California, December 21, 2016.

9.1.5. Leadership within the Scientific Community

- Laurent Lefevre is Animator and chair of the transversal action on "Energy" of the French GDR RSD ("Réseaux et Systèmes Distribués")
- Christian Perez is co-leader of the pole Distributed Systems of the French GDR RSD ("Réseaux et Systèmes Distribués").

9.1.6. Scientific Expertise

- Eddy Caron reviewed a project for the French National Research Agency (ANR).
- Olivier Glück is member of the CNU (Conseil National des Universités) section 27 (Computer Science). He participated to the 2016 "Qualifications" session.
- Olivier Glück evaluated a Ph.D. CIFRE proposal (industrial funded PhD student).
- Christian Perez reviewed a project for the French National Research Agency (ANR).

9.1.7. Research Administration

- Eddy Caron is a member of the Inria's CDT (Commission de Développement Technologique) from Inria Rhone-Alpes center.
- Eddy Caron is the corresponding researcher "valorisation/transfert" in the Labex MILyon for the LIP laboratory.
- Olivier Glück is member of the "Conseil Académique" of Lyon 1 and Lyon University. He is also member of the "Conseil de la Faculté des Sciences et Technologies" of Lyon 1 University.
- Christian Perez is a member of the committee selection of the project call from the Rhône-Alpes region ARC6 (France). He is also a member of the Inria Grenoble Rhône-Alpes Strategic Orientation Committee.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Yves Caniou, Algorithmique programmation impérative, initiation, 10h, niveaux L1, Université Lyon 1, France

Licence: Yves Caniou, Système d'Exploitation, 35h, niveaux L3, Université Lyon 1, France

Licence: Yves Caniou, Système d'Exploitation, 35h, niveaux L2, Université Lyon 1, France

Licence: Yves Caniou, Programmation Concurrente, 33h, niveaux L3, Université Lyon 1, France

Licence: Yves Caniou, Réseaux, 36h, niveaux L3, Université Lyon 1, France

Master: Yves Caniou, Sécurité, 34h, niveaux M2, Université Lyon 1, France

Master: Yves Caniou, Projet, Bibliographie, Certification, 15h, niveaux M2, Université Lyon 1, France

Master: Yves Caniou, Sécurité, 20h, niveau M2, IGA Casablanca, Maroc

Master: Yves Caniou, Suivi d'étudiants (apprentissage, stage), 25h, niveaux M1 et M2, Université Lyon 1, France

Master: Yves Caniou, Responsible of professional Master SRIV (Systèmes Réseaux et Infrastructures Virtuelles), 30h, Université Lyon 1, France

Licence: Eddy Caron, Projet 1, 48h, L3, Ens de Lyon. France.

Licence: Eddy Caron, Architecture, Système et Réseaux, 48h, L3, Ens de Lyon. France.

Master: Eddy Caron, Projet Intégré, 42h, M1, Ens de Lyon. France.

Master: Eddy Caron, Système distribués, 30h, M1, Ens de Lyon. France.

Master: Eddy Caron, Distributed Computing: Models and Challenges, 8h, M2, Ens de Lyon. France.

Licence: Olivier Glück, Licence pedagogical advisor, 30h, niveaux L1, L2, L3, Université Lyon 1, France.

Licence: Olivier Glück, Initiation Réseaux, 2x9h, niveau L2, Université Lyon 1, France.

Licence: Olivier Glück, Réseaux, 2x70h, niveau L3, Université Lyon 1, France.

Master: Olivier Glück, Responsible of professional Master SIR (Systèmes Informatiques et Réseaux) located at IGA Casablanca, 20h, niveau M2, IGA Casablanca, Maroc

Master: Olivier Glück, Réseaux par la pratique, 20h, niveau M1, Université Lyon 1, France.

Master: Olivier Glück, Services et Protocoles Applicatifs sur Internet, 40h, niveau M2, Université Lyon 1, France.

Master: Olivier Glück, Services et Protocoles Applicatifs sur Internet, 24h, niveau M2, IGA Casablanca, Maroc

Master: Olivier Glück, Administration des Systèmes et des Réseaux, 16h, niveau M2, Université Lyon 1, France.

Master: Jean-Patrick Gelas, Programmation embarquée et mobile des objets, 17.5h, niveau M1, Université Lyon 1, France.

Master: Jean-Patrick Gelas, Introduction au Cloud Computing, 24h, niveau M2 (CCI), Université Lyon 1, France.

Master: Jean-Patrick Gelas, Système d'exploitation, 30h, niveau M2 (CCI), Université Lyon 1, France.

Master: Jean-Patrick Gelas, Projet en Informatique en Anglais, 10h, niveau M2 (CCI), Université Lyon 1, France.

Master: Jean-Patrick Gelas, Réseaux Avancés, 27h, niveau M2 (CCI), Université Lyon 1, France.

Master: Jean-Patrick Gelas, Sécurité et Admin des infra réseaux, 37.5h, niveau M2 (CCI), Université Lyon 1, France.

Master: Jean-Patrick Gelas, Technologies embarquées, 15h, niveau M2 (Image), Université Lyon 1, France.

Master: Jean-Patrick Gelas, Routage (BGP), Routeurs et IPv6, 16.5h, niveau M2, Université Lyon 1, France.

Master: Jean-Patrick Gelas, Systèmes embarqués (GNU/Linux, Android, ARM, Arduino), 39h, niveau M2, Université Lyon 1, France.

Master: Jean-Patrick Gelas, Analyse de performance, 3h, niveau M2 (TIW), Université Lyon 1, France.

Master: Jean-Patrick Gelas, Cloud Computing, 16h, niveau M2 (TIW), Université Lyon 1, France.

Master Informatique: Laurent Lefevre, "Parallelism", Université Claude Bernard, France. (18h), M1

Master Systèmes Informatique et Réseaux: Laurent Lefevre, "Advanced Networks", IGA Casablanca, Maroc (20h), M2

9.2.2. Supervision

PhD: Daniel Balouek-Thomert, *Ordonnancement et éco-efficacité dans les environnements virtualisés*, 09/2013, Eddy Caron (dir), Laurent Lefevre (co-dir), Gilles Cieza (NewGen society, co-dir), defended December 5th, 2016

PhD: Violaine Villebonnet, *Proportionnalité énergétique dans les systèmes distribués à grande échelle*, 9/2013, Laurent Lefevre (dir), Jean-Marc Pierson (IRIT, Toulouse, co-dir), defended December 6th, 2016

PhD in progress: Radu Carpa, *Efficacité énergétique des échanges de données dans une fédération d'infrastructures distribuées à grande échelle*, 10/2014, Laurent Lefèvre (dir), Olivier Glück (co-dir).

PhD in progress: Hadrien Croubois, *Étude et conception d'un système de gestion de workflow autonomique conçu pour l'animation 3D* , 10/2015, Eddy Caron.

PhD in progress: Pedro Silva, *Application model and co-scheduling algorithm for dynamic and evolutive data-intensive application*, 10/2014, Christian Perez (dir), Frédéric Desprez (co-dir).

PhD in progress: Issam Rais, *Multi criteria scheduling for exascale infrastructures*, 10/2014, Laurent Lefevre (dir), Anne Benoit (Roma Team, LIP, ENS Lyon, co-dir) and Anne-Cécile Orgerie (CNRS, Myriads team, Irisa Rennes, co-dir)

PhD in progress: Jérôme Richard, *Conception of a software component model with task scheduling for many-core based parallel architecture, application to the Gysela5D code*, 11/2014, Christian Perez (dir), Julien Bigot (CEA, co-dir).

PhD in progress: Alexandre Veith : *Elastic Mechanisms for Big-Data Stream Analytics*, Labex MiLyon, Laurent Lefevre (dir), Marcos Dias de Assuncao (co-dir) (2016-2019)

PhD in progress: Valentin Lorentz : *Energy traceability of data*, Gilles Fedak (dir), Laurent Lefevre (co-dir) (2016-2019)

PhD in progress: Hayri Acar, *Towards a green and sustainable software*, Parisa Ghodous (dir), Gulfem Alptekin (co-dir), Jean-Patrick Gelas (co-dir) (2014-2017)

PhD in progress: Jad Darrous : *Geo-distributed storage for distributed Cloud*, Gilles Fedak (dir), Shadi Ibrahim (co-dir, Kerdata team, Inria Rennes) (2016-2019)

PhD in progress: Anchen Chai: *Simulation of the Distributed Execution of a Medical Imaging Simulator*, Hugues Benoit-Cattin (co-dir, CREATIS, INSA Lyon), Frédéric Suter (co-dir).

PhD in progress: Aurélie Kong-Win-Chang: *Techniques de résilience pour l'ordonnancement de workflows sur plates-formes décentralisées (cloud computing) avec contraintes de sécurité*, Yves Robert (dir, ROMA, ÉNS-Lyon), Eddy Caron (co-dir) et Yves Caniou (co-dir).

9.2.3. Juries

Eddy Caron has been member of the following PhD jury:

- Mohamed Hamza Kaaouachi: "Une approche distribuée pour les problèmes de couverture dans les systèmes hautement dynamiques.", January 2016, Reviewer, UPMC.
- Divya Gupta: "Towards Performance and Dependability Benchmarking of Distributed Fault Tolerance Protocols", March 2016, Reviewer, Université Grenoble Alpes.
- Bassirou Gueye: " Services auto-adaptatifs pour les grilles pair-a`-pair", May 2016, Reviewer, Université de Reims Champagne-Ardenne.

Gilles Fedak has been member of the following PhD jury:

- Walid Saad: "Gestion de données pour le calcul scientifique dans les environnements grilles et cloud", October 2016, Reviewer, University of Sfax, Tunisia

Laurent Lefevre has been member of the following PhD juries:

- Chakadit Thaenchaikun : "Energy efficiency in wired networks : traffic engineering and switching off", University of Toulouse, November 2016, Reviewer
- Pablo Llopis Sanmillan : "Enhancing the programmability and energy efficiency of storage in HPC and virtualized environments", Universidad Carlos III de Madrid, Spain, July 2016, Jury member - president.
- Sareh Fotuhi Piraghaj : "Energy-Efficient Management of Resources in Enterprise and Container-based Clouds", University of Melbourne, Australia, June 2016, Reviewer
- Mohammed Hussein : "Energy Efficiency in LEO Satellite and Terrestrial Wired Environments", University of Toulouse, June 2016, Reviewer
- Fouad Hanna, : "Etude et développement du nouvel algorithme distribué de consensus FLC", University of Franche-Comté, Besancon, February 2016, Reviewer

Christian Perez has been member of the following HdR and PhD juries:

- Fabrice Huet, HdR: "From HPC to Big Data: Models and Tools for Large Scale Middleware", University of Nice Sophia-Antipolis, France., Feb 2016, Reviewer.
- Tomasz Buchert, PhD: "Managing large-scale, distributed systems research experiments with control-flows", University of Lorraine, France., Jan. 2016, jury member.
- Naweiluo Zhou, PhD: "Autonomic Thread Parallelism and Mapping Control for Software Transactional Memory", University of Grenoble, France., Oct 2016, president.

9.3. Popularization

- Laurent Lefevre has been :
  - Interviewed in "Interception" Radio Magazine on "To click, is to pollute" ("Cliquer c'est polluer"), France Inter Radio, 6 November 2016
  - Interviewed with Françoise Berthoud, "Télévision : Changement de norme = grand gâchis écologique - Site Reporterre.net, - 5 April 2016
- Gilles Fedak has been interviewed in Bitcoin.fr, November 2016

AVIZ Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- Jean-Daniel Fekete co-organizing the LIVVIL 2016 workshop on "Logging Visualization and Visualizing Logs" at IEEE VIS.
- Jean-Daniel Fekete served on the best paper committee for EuroVis 2016
- Pierre Dragicevic was Doctoral Colloquium co-chair at IEEE VIS 2016.
- Petra Isenberg co-organized the Beliv 2016 workshop on "Beyond Time and Error: Novel Evaluation Techniques for Visualization" at IEEE VIS.
- Petra Isenberg served as Posters co-chair for VIS 2016
- Petra Isenberg served on the best short-paper committee for EuroVis 2016
- Tobias Isenberg was posters co-chair for EuroVis 2016.
- Tobias Isenberg was visualization area co-chair for ISVC 2016.

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

- Jean-Daniel Fekete was a member of the program committees for Graph Drawing 2016
- Jean-Daniel Fekete was a member of the program committees for EuroVis 2016
- Jean-Daniel Fekete was a member of the program committees for ACM AVI 2016
- Pierre Dragicevic was a member of the program committee for VIS 2016.
- Pierre Dragicevic was a member of the program committee for CHI 2017.
- Petra Isenberg was a member of the program committee for CHI 2016.
- Petra Isenberg was a member of the program committee for Beliv 2016.
- Petra Isenberg was a member of the program committee for EuroVA 2016.
- Petra Isenberg was a member of the program committee for InfoVis 2016.
- Tobias Isenberg was a member of the program committee for IEEE SciVis 2016.
- Tobias Isenberg was a member of the program committee for IEEE VISAP 2016.
- Tobias Isenberg was a member of the program committee for Expresssive 2016.
- Tobias Isenberg was a member of the program committee for IEEE 3DUI 2016.
- Pascal Goffin was a member of the program committee for 9. Forum Medientechnik 2016.

9.1.2.2. Reviewer

- Jean-Daniel Fekete: VIS, CHI
- Pierre Dragicevic: VIS, UIST, IHM
- Petra Isenberg: EuroVA, EuroVis, InfoVis, Nordic Forum for Human-Computer Interaction Research (NordiCHI), UIST Beliv (Workshop), DFG (Funding Agency)
- Tobias Isenberg: 3DUI, CHI, EuroVis, Expressive, ISS, PacificVis, SciVis, VISAP
- Christoph Kinkeldey: CHI
- Lonni Besancon: CHI EA, ISMI, SUI, CHI

- Mathieu Le Goc: CHI

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- Tobias Isenberg is associate editor of Elsevier Computers & Graphics.
- Petra Isenberg and Tobias Isenberg were guest editors of a special issue of Sage Publishing's Information Visualization on visualization evaluation.

9.1.3.2. Reviewer - Reviewing Activities

- Petra Isenberg: Big Data Journal,CG&A, Journal of Graph Algorithms and Applications (JGAA), Information Visualization Journal (IVS), TVCG
- Tobias Isenberg: C&G, IV, TVCG
- Christoph Kinkeldey: JoEP (Journal of Economic Psychology), IJGI (ISPRS International Journal of Geo-Information), CP (Cartographic Perspectives), CaGIS (Cartography and Geographic Information Science)

9.1.4. Invited Talks

- Jean-Daniel Fekete: Bilan du programme ANR Kinsources, Paris, "Visualisation de réseaux dynamiques", July 8th, 2016
- Jean-Daniel Fekete: 2nd European Conference on Social Networks (EUSN), Paris, "Challenges in Social Network Visualization: Bigger, Dynamic, Multivariate.", June 16th, 2016
- Jean-Daniel Fekete: School in Geomatique (GIS), Lyon, "DataVis and InfoVis", May 31th, 2016.
- Jean-Daniel Fekete: Invited Talk, Aarhus University, "ProgressiVis: a New Workflow Model for Scalability in Information Visualization", Apr 20, 2016
- Jean-Daniel Fekete: Invited Talk, Inria Lille, "ProgressiVis: a New Workflow Model for Scalability in Information Visualization", Apr 15, 2016
- Pierre Dragicevic: "Bad Stats are Miscommunicated Stats". Invited talk at RWTH Aachen, 5 Feb 2016.
- Pierre Dragicevic: "Statistical Dances: Why No Statistical Analysis is Reliable and What To Do About It". Keynote talk at the BioVis 2016 symposium, 23 Oct 2016.
- Tobias Isenberg: "Tactile Navigation and Selection for 3D Data Exploration". University of Granada, Spain, May 25, 2016.
- Christoph Kinkeldey: "Challenges in Visually-Supported Reasoning with Uncertainty". VIA group, Telecom ParisTech, 23 June 2016.

9.1.5. Leadership within the Scientific Community

- Jean-Daniel Fekete is the chair of the Steering Community of the IEEE Information Visualization conference.
- Jean-Daniel Fekete is a member of the Visualization Steering Committee for the IEEE VIS conference
- Jean-Daniel Fekete is a member of the Steering Community of the EuroVis conference.
- Jean-Daniel Fekete is a member of the publication board of Eurographics.
- Tobias Isenberg is a member of the Steering Committee of the Expressive conference.
- Tobias Isenberg is a member of the Executive Committee of the Visualization and Computer Graphics Technical Committee of the IEEE Computer Society.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- "Visual Analytics" taught by Jean-Daniel Fekete at Ecole Centrale Paris, France
- "Block Course Visual Analytics" taught by Petra Isenberg at the University of Dresden, Germany
- "Visual Analytics" taught by Petra Isenberg at Ecole Centrale Paris, France
- "Introduction to Human-Computer Interaction" taught by Petra Isenberg at Ecole Centrale Paris, France
- "Information Visualization" co-taught by Petra Isenberg at Université Paris Sud
- "Non-Photorealistic Rendering" taught by Tobias Isenberg at the University of Granada, Spain
- "Introduction to Computer Graphics" taught by Tobias Isenberg at Polytech Paris-Sud
- "Photorealistic Rendering" taught by Tobias Isenberg at Polytech Paris-Sud and Université Paris-Saclay

9.2.2. Supervision

PhD: Evanthia Dimara, Information Visualization for Decision Making, Université Paris-Sud, 2014, Pierre Dragicevic and Anastasia Bezerianos

PhD: Mathieu Le Goc, Supporting Versatility in Tangible User Interfaces Using Collections of Small Actuated Objects, Université Paris-Sud, Defense date 15 Dec 2016, Pierre Dragicevic and Jean-Daniel Fekete

PhD: Pascal Goffin, From Individual to Collaborative Work, Université Paris-Sud, defended October 2016, Petra Isenberg and Jean-Daniel Fekete

PhD: Lonni Besançon, An Interaction Continuum for Scientific Visualization, Université Paris-Sud, 2014, Tobias Isenberg

9.2.3. Juries

- Jean-Daniel Fekete: Julien Tierny, HdR (Tenure) "Contributions à l'Analyse Topologique de Données pour la Visualisation Scientifique" , LIP6, Paris, Apr 29, 2016.
- Jean-Daniel Fekete: Matthias Nielsen, "Interactive Visual Analytics of Big Data A Web-Based Approach", Aarhus, Denmark, Apr 20, 2016
- Jean-Daniel Fekete: Mi-term PhD evaluation committee of Lobo María-Jesús, Saclay, May 2016.
- Jean-Daniel Fekete: Hiring Committee, Univ. Toulouse 1, France
- Pierre Dragicevic: Commission Scientifique Inria Saclay
- Pierre Dragicevic: PhD committee of Chat Wacharamanotham: Input Accuracy for Touch Surfaces. RWTH Aachen University, defended 5 February 2016.
- Pierre Dragicevic: Mi-term PhD evaluation committee of Nolwenn Maudet. 8 Sep 2016.
- Pierre Dragicevic: Mi-term PhD evaluation committee of Rafael Morales. 26 May 2016.
- Pierre Dragicevic: Post-doctoral assessment committee, project "Shareable Dynamic Media in Design and Knowledge Work", Aarhus University. Nov 2016.
- Petra Isenberg: Jury CR2 Inria Saclay

9.3. Popularization

- Pierre Dragicevic and Yvonne Jansen: the Curated List of Physical Visualizations is continuously being updated.
- Elsa Ferreira's interview with Mathieu Le Goc, Zooids: mais qui sont ces robots mignons?, Makery Magazine, 26 Nov 2016.
- Stéphanie Dupont's interview with Mathieu Le Goc, Jean-Daniel Fekete and Pierre Dragicevic: Nouvelle interface homme-machine: des mini robots pour l'affichage et l'interaction. 26 Oct 2016.
- Petra Isenberg, Tobias Isenberg, and collaborators published an open dataset of IEEE VIS publications at http://vispubdata.org
- Petra Isenberg, Tobias Isenberg, and collaborators published an online tool to explore keywords of the IEEE Visualization conference at http://keyvis.org
- Pascal Goffin: "Enrichir le mot écrit – Intégrer texte et données avec les Word-Scale Visualizations (visualisations mots)". EnsadLab/Spatial Media/Hist3D Colloquium: Les images du numérique. Histoires et futurs des images produites par ordinateur. Paris, France, 21 Mar 2016.
- Mathieu Le Goc and Zooids co-authors: Material for Zooids.

<div align="center">**AYIN Team**</div>

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. Member of the Organizing Committees

- Josiane Zerubia in collaboration with Farzad Kamalabadi from UIUC organized a special session at the Symposium URSI-France (http://ursi-france.telecom-paristech.fr/evenements/journees-scientifiques/2017.html) in Sophia Antipolis (February 2017).

- Josiane Zerubia is part of the organizing committee and will be co-Chair of the EARTHVISION workshop at CVPR'17 (http://cvpr2017.thecvf.com/) in Hawaii, USA, in July 2017.

- Josiane Zerubia is part of the organizing committee of the 50th GRETSI conference (http://gretsi.fr/colloque2017/2016/10/bienvenue-au-gretsi-2017/) which will take place in Juan-les-Pins, in September 2017.

8.1.2. Scientific Events Selection

8.1.2.1. Member of the Conference Program Committees

- Josiane Zerubia was part of the conference program committee of SYNASC'16 (http://synasc.ro/2016/) in Timisoara, Romania, in September 2016.

- Josiane Zerubia was part of the conference program committee of ISPRS/SPIE Remote Sensing'16 (http://spie.org/Documents/ConferencesExhibitions/ERS-ESD16-Final-lr.pdf) in Edinburgh, UK, in September 2016.

8.1.2.2. Reviewer

- Josiane Zerubia was a reviewer for the conferences IEEE ICASSP'16, IEEE ICIP'16, ISPRS-SPIE Remote Sensing'16, ECCV'16, IEEE CVPR'16, IAPR ICPR'16, IEEE EMBC'16, IEEE-EURASIP EUSIPCO'16 and SYNASC'16.

8.1.3. Journal

8.1.3.1. Member of the Editorial Boards

- Josiane Zerubia is an Associate Editor of the collection "Foundation and Trends in Signal Processing" (http://www.nowpublishers.com/SIG).

- Josiane Zerubia is a member of the Editorial Board of the "Revue Française de Photogrammétrie et de Télédétection of SFPT" (http://www.sfpt.fr/rfpt/).

- Josiane Zerubia is an Associate Editor of the electronic journal Earthzine (http://www.earthzine.org/).

8.1.3.2. Reviewer - Reviewing Activities

- Ihsen Hedhli was a reviewer for IEEE TGRS, TGRL and TIP journals and Elsevier Pattern Recognition Letters.

8.1.4. Invited Talks

- As IEEE SPS Distinguished Lecturer, Josiane Zerubia gave in 2016 ten invited talks: at DITEN Dept., University of Genoa, Italy, at the Faculty of Mathematics and Computer Science from the West University of Timisoara, Romania, at the Faculty of Electronics, Telecommunications & IT and the Faculty of Medical Engineering, University Politehnica of Bucharest, Romania, at the Georgia Tech Research Institute in Atlanta, USA, at the SenSIP Center, School of Electrical, Computer & Energy Engineering, Arizona State University, Tempe, USA, at both the Sine Seminars and the Remote Sensing Seminars, within the Coordinated Science Laboratory, University of Illinois at Urbana Champaign, USA, at the Signal and Communications laboratory in the Dept. of Engineering, University of Cambridge, UK, at the Faculty of Engineering, University of Bristol, UK, and finally a plenary talk at the international symposium ISIVC2016 in Tunis, organized by Sup'Com (see http://www.supcom.mincom.tn/Fr/Fr/Fr/actualites-de-l-ecole_7_280_D875#.WG0L9jU5ReR).

8.1.5. Leadership within the Scientific Community

- Josiane Zerubia is IEEE Fellow (http://www.ieee.org/membership_services/membership/fellows/index.html) since 2003 and IEEE SPS Distinguished Lecturer since 2016 (http://signalprocessingsociety.org/newsletter/2015/11/sps-announces-2016-class-of-distinguished-lecturers/).

8.1.6. Scientific Expertise

- Josiane Zerubia was a reviewer for the Israeli Ministry of Science, Technology and Space (http://most.gov.il/english/Pages/default.aspx)

- Josiane Zerubia is part of the Scientific Council of Academy 3 of UCA-Jedi (http://univ-cotedazur.fr/english/idex-uca-jedi/academies-of-excellence) dedicated to "Space, Environment, Risks and Resilience".

8.1.7. Research Administration

- Josiane Zerubia is part of the Board of Directors of the French Photogrammetry and Remote Sensing Society (http://www.sfpt.fr/sfpt/bureau/).

- Josiane Zerubia is a member of the Inria-SAM Center Committee since 2016.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Masters: Josiane Zerubia, Advanced Techniques in Signal and Image Processing, 30h eq. TD (20h of lectures), ISAE/SUPAERO, France. Josiane Zerubia is also director of this course (total: 30h of lectures and 10h of TD). This course was given to third-year students at ISAE/SUPAERO and was also validated by the M2 of Applied Mathematics at the University Toulouse III Paul Sabatier, France.

- Masters: Josiane Zerubia, Deconvolution and Denoising in Confocal Microscopy, 18h eq. TD (12h of lectures), M2 BCC, Université de Nice Sophia-Antipolis, France. Josiane Zerubia is also director of this course (total: 24h of lectures).

- Summer School (PhD and Post-doc level): Josiane Zerubia gave a presentation at the Summer School SSMIA'16 in Budapest, Romania.

8.2.2. Supervision

PhD (defended with best honors): Ihsen Hedhli, Change detection methods for multisensor and multiresolution remote sensing images for applications to environmental disaster management, University of Genoa and Université Nice Sophia Antipolis, started in January 2013, defended in March 2016, Gabriele Moser and Josiane Zerubia.

8.2.3. Juries

- Josiane Zerubia was a member of a PhD defense committee at University of Genoa, in Italy, in March 2016.

8.3. Popularization

- Josiane Zerubia presented Inria and Inria-SAM to Masters, PhDs and Post-docs of the following foreign universities during 2016: University of Genoa, West University of Timisoara, Georgia Tech, Arizona State University, University of Illinois at Urbana Champaign, University of Cambridge, University of Bristol.

- Josiane Zerubia was interviewed in August with two other French women scientists working in remote sensing by a journalist for Earthzine (webzine supported by IEEE and NASA) see   https://earthzine.org/2016/10/13/the-three-musketeers-making-an-impact-in-french-remote-sensing-and-breaking-down-gender-barriers/

- In September, Josiane Zerubia actively participated to a debate about Women in Signal Processing at the IEEE International Conference ICIP'16 (http://2016.ieeeicip.org/) in Phoenix, USA

- Josiane Zerubia, with Gabriele Moser and Sebastiano Serpico from University of Genoa, wrote in December an article about natural disaster monitoring for ERCIM News, see http://ercim-news.ercim.eu/en108/special/natural-disaster-monitoring-multi-source-image-analysis-with-hierarchical-markov-models.

BEAGLE Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. General Chair, Scientific Chair

- The team has been accepted as the main organizer of ECAL 2017
- Organization and chair of the second EvoEvo workshop (satellite workshop of CSS 2016), Amsterdam, September 20th 2016

8.1.1.2. Member of the Organizing Committees

- Co-organization of the minisymposium "Modeling Spatiotemporal Calcium Dynamics" at ECMTB 2016 (10th European Conference on Mathematical and Theoretical Biology), The University of Nottingham, UK, 11-15 July 2016 (H. Berry and R. Thüll, U Nottingham)
- Co-organization the thematic school "EIEFB 2016: Ecole interdisciplinaire d'échanges et de formation en biologie", Paris, 13-15 June 2016 (H. Berry and B. Abou, Univ. Paris Diderot).
- Co-organization of the module "Molecular assembling and dynamics: from experimentation to modeling" at the thematic school "Functional Microscopy in Biology" (MiFoBio 2016), Seignosse, France, 30 Sep-07 Oct 2016 (H. Berry, C. Favard, CNRS Montpellier and L. Héliot, CNRS Lille).
- E Tannier is a member of the organizing committee of ICGT 2018 (International Conference on Graph Theory)

8.1.2. Scientific Events Selection

8.1.2.1. Member of the Conference Program Committees

- C Knibbe is a member of the Program committee of Alife XV, Cancun, Mexico, July 2016
- C Rigotti is a member of the Program committee of ACM International Conference on Knowledge Discovery and Data Mining (KDD)
- E Tannier is a member of Recomb Comparative Genomics 2016 program Committee
- E Tannier is a member of ECCB 2016 program Committee
- E Tannier is a member of SEMOVI (séminaire de modélisation du vivant) program Committee
- G Beslon is a member of the Program committee of ALife 2016 (Cancun, Mexico)
- G Beslon is a member of the Program committee of Jobim 2016 (Lyon, France)
- G Beslon is a member of the Program Committee of MUME 2016 (Paris, France)

8.1.2.2. Reviewer

- CPM 2016, RECOMB 2016 (E Tannier)
- ECCB 2016 (C Knibbe)
- EuroPar 2016 (J Rouzaud-Cornabas)

8.1.3. Journal

8.1.3.1. Member of the Editorial Boards

- E Tannier is a member of the editorial committee of *Peer Community in Evolutionary Biology*, an open archive labeling system alternative to publications.
- H Berry is a member of the editorial committee of AIMS Biophysics

- PLoS One, Systematic Biology, Bioinformatics, Discrete Applied Mathematics, PLoS Computational Biology, BMC evolutionary Biology, Genome Biology and Evolution, Bulletin of Mathematical Biology (E Tannier)
- Scientific Reports, Physical Biology, Frontiers Synaptic Neuroscience, PLoS Computational Biology, Journal Mathematical Neuroscience, New Journal of Physics (H Berry)
- Entropy, PLoS Computational Biology (G Beslon)
- IEEE Geoscience, Remote Sensing Letters (C Rigotti)
- IEEE Transaction on Cloud Computing (J Rouzaud-Cornabas)

8.1.4. Invited Talks

- J Rouzaud-Cornabas, "Performance Optimization for Computational Biolog", Perfomance Analysis Day, Lyon, December 2016
- C Knibbe, "Insights on genome dynamics from in silico experimental evolution and mathematical modelling", Séminaire de Modélisation du Vivant (SeMoVi), 28th of September 2016, Lyon, France.
- C Knibbe, "Genome size evolution: Putting intuition to the test with modeling and simulation", Jacques Monod Conference on "Evolutionary genomics and systems biology: bringing together theoretical and experimental approaches", 10-14th of October 2016, Roscoff, France.
- G Beslon, Hybrid Systems Biology workshop (Grenoble, France) at the Semideev meeting (Saclay, France), at the FET technical seminar (Brussels, Belgium)
- H Berry, "Estimating the impact of anomalous diffusion on intracellular biochemical kinetics", workshop "Stochastic Modelling of Transport Processes In Biology", 30th-31st March 2016, Manchester, UK
- H Berry, "Estimating the effects of spatial non-homogeneities in intracellular diffusion-reactions", meeting of the BIOSS Working-Group, July 1st 2016, Lyon
- H Berry, "Calcium signals in astrocytes: from intercellular to subcellular models", workshop "In vitro and in silico modelling of neuron-astrocyte communication" of the 2016 Bernstein Conference, September 20-21 2016, Berlin, Germany
- H Berry, "The many dimensions of cortico-striatal STDP", meeting of the GDR BioComp, 10-12 Oct 2016, Lyon
- H Berry, "Anomalous diffusion in cells: experimental data and modelling", CIMPA School "Mathematical models in biology and medicine", December 05-16 2016, Moka, Mauritius.
- E Tannier, "The second root of molecular evolution" Genetic depatment of the Trinity College, Dublin, Feruary 2017
- E Tannier, "Molecules as documents of evolutionary history: 50 years before", Jacques Monod Conference *Molecules as Documents of Evolutionary History*, Roscoff, May 2016
- E Tannier, "Breaking bad", workshop *Pattern Avoidance and Genome Sorting*, Dagstuhl, February 2016

8.1.5. Leadership within the Scientific Community

- H Berry is a Member of the Scientific Board (comité scientifique) of GdR MIV (Microscopie et Imagerie du Vivant, GdR 2588)
- H Berry is a Member of the Steering Commitee (comité de pilotage) of GdR IMaBIO (Imagerie et Microscopie pour la BIOlogie, submitted)

8.1.6. Scientific Expertise

- H Berry is a Reviewer for the US National Science Foundation (NSF), call "Early-career Program"

- H Berry is a Member of the evaluation committee for research program ROSIRIS of the IRSN (Institut de Radioprotection et de Sûreté Nucléaire)
- E Tannier is a Member of the evaluation committee for the FRNQT, Research program in Quebec.

8.1.7. Research Administration

- C Knibbe is a member of Inria Grenoble-Rhône Alpes Comité de Développement Technologique (CDT)
- C Knibbe is a member of the Selection committee in CNU section 67/64 at Université Paris Diderot
- C Knibbe is a member of the Conseil de Laboratoire LIRIS (UMR 5205 CNRS)
- C Rigotti is an elected member of Insa Scientific board (Conseil scientifique)
- G Beslon member of the CoNRS (Section 6 and CID 51)
- G Beslon member of the scientific commission 5 (CSS5) of the IRD (Institut de Recherche pour le Developpement)
- H Berry is Vice-Chair of Inria's "Evaluation Committee" (Commission d'Evaluation)
- H Berry is Chair of the Search Committee for "Junior Research Scientists" (Président Jury d'admissibilité CR2) of Inria Grenoble Research Center
- H Berry is Elected member of Inria's "Scientific Board" (Conseil Scientifique)
- H Berry is Member of Inria's "Parity-Equality" Committee
- H Berry is Member of the Science Steering Committee of the Rhône-Alpes Complex Systems Institute (IXXI)
- E Tannier is an elected member of Inria Administration Council
- E Tannier is the scientific referent of the Inria symposium committee

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

License: J Rouzaud-Cornabas, Programmation orientée objets, 20heqTD, L3, INSA-Lyon, France

Master: J Rouzaud-Cornabas, Systèmes, 10heqTD, M1, INSA-Lyon, France

Master: J Rouzaud-Cornabas, Interface Homme Machine, 50heqTD, M1, INSA-Lyon, France

Master: J Rouzaud-Cornabas, Évaluation de performance et reproducibilité, 6heqTD, M2, INSA-Lyon, France

Master: J Rouzaud-Cornabas, Computational Science and High Performance Computing, 6heqTD, M2, INSA-Lyon, France

Master: J Rouzaud-Cornabas, Parallel Computing, 80heqTD, M2, INSA-Lyon, France

Master: J Rouzaud-Cornabas, Parallel Computing for Bio-informatics, 10heqTD, M2, INSA-Lyon, France

Licence: C Rigotti, Object-Oriented Programming and Graphical User Interfaces, 86h, L2, Department 1er cycle of INSA-Lyon.

Licence: C Rigotti, Simulation of Chemical Reactions, 26h, L2, Department 1er cycle of INSA-Lyon.

Licence: C Rigotti, Numerical Modelling for Engineering, 60h, L2, Department 1er cycle of INSA-Lyon.

Master: C Rigotti, Data Mining, 25h, M1, Bioinformatics and Modeling Department of INSA-Lyon.

Master: E Tannier, Algorithmics for Bioinformatics, 18h, M1, Bioinformatics and Modeling Department of INSA-Lyon.

Master: E Tannier, Algorithmics for Bioinformatics, 12h, M1, University of Lyon 1.

Licence: C Knibbe, Algorithmique et programmation procédurale, 123h eqTD, L2 Informatique, Université Lyon 1, France

Master: C Knibbe, Programmation web, 40h eqTD, M1 Informatique, Université Lyon 1, France

Master: C Knibbe, Connaissance métier pour la recherche, 24h eqTD, M2 Informatique, Université Lyon 1, France

Master: C Knibbe, Intelligence artificielle bio-inspirée, 22h eqTD, M2 Informatique, Université Lyon 1, France

Licence: C Knibbe, Applications en mathématiques et informatique, 39h eqTD, L1 Informatique, Université Lyon 1, France

Licence: C Knibbe, Programmation fonctionnelle pour le web, 20h eqTD, L2 Informatique, Université Lyon 1, France

Master: C Knibbe, Programmation orientée objets pour la bioinformatique, 52h eqTD, M1 Bioinformatique, Université Lyon 1, France

Master: C Knibbe, Projet en bioinformatique, 25h eqTD, M1 Bioinformatique, Université Lyon 1, France

8.2.2. Supervision

PhD : Ilya Prokin, "Modeling and simulation of signal transduction in living cells: synaptic plasticity of basal ganglia neurons", INSA Lyon, Ph.D. defended: December 02, 2016, Supervisor: H. Berry

PhD in progress : Marie Fernandez, "Extraction and analysis of the acoustic network of social birds: tools for population tracking", Starting date Oct 2016, co-supervision: H. Berry, H. Soula (CRC, Univ. P&M Curie, Paris) and C. Vignal (Univ. J. Monnet, Saint-Etienne)

PhD in progress : Audrey Denizot, "Simulation of calcium signaling in fine astrocytic processes", Starting date Oct 2016, co-supervision: H. Berry and H. Soula (CRC, Univ. P&M Curie, Paris)

PhD in progress : Alexandre Foncelle, 'Modeling the signaling pathway implicated in STDP: the role of endocannabinoid and dopamine signaling", Starting date Oct 2014, supervision: H. Berry

PhD in progress : Alvaro Mateos Gonzalez; "Anomalous subdiffusion equations as diffusion limits to integro PDEs with age structure", Starting date Sep 2014, co-supervision: H. Berry, Vincent Calvez (EPI Numed) and Thomas Lepoutre (EPI Dracula).

PhD in progress : Wandrille Duchemin; "Phylogénie des dépendences, dépendances des phylogénies", Starting date 2015, co-supervision: E Tannier and V Daubin (CNRS, Univ Lyon 1)

PhD in progress : Yoann Anselmetti; "Evolution de l'organisation des génomes en présence de génomes non assemblés", Starting date 2015, co-supervision: E Tannier and S Bérard (Univ Montpellier)

PhD in progress : Damir Hasic; "Gene tree Species tree reconciliation in the presence of gene conversion", Starting date 2016, co-supervision: E Tannier (Univ Sarajevo)

PhD in progress: Sergio Peignier, Subspace clustering algorithms based on biological evolution mechanisms, INSA de Lyon, started in September 2014, C Rigotti and G Beslon.

PhD in progress : Charles Rocabert, Studying Evolution of Evolution of Bacterial Microorganisms by Computer Simulation Approaches, started in October 2013, supervised by G Beslon and C Knibbe

PhD in progress: Yoram Vadee Le Brun, "Evolution expérimentale in silico de réseaux de régulation génétique", INSA-Lyon (now Min. Enseignement National), Starting date Sep 2013, co-supervision: G Beslon, J Rouzaud-Cornabas

PhD in progress: Vincent Liar, "Towards a quantitative digital genetics platform", INSA-Lyon, Starting date Oct 2016, co-supervision: G Beslon, J Rouzaud-Cornabas, C Ofria (Michigan State University, BEACON Center)

8.2.3. Juries

- C Knibbe is a reviewer of the PhD thesis Gaël Jalowicki, University College Dublin, October 2016
- H Berry is a Member (reviewer) of the PhD jury for Guillaume Rodriguez, "Modélisation des bases neuronales de la mémoire de travail paramétrique dans le cortex préfrontal" Univ. P & M Curie, Paris, Oct 20, 2016.
- H Berry is a Member (reviewer) of the HdR jury for Dominique Martinez, "Modélisation biologique, biocapteurs et inspiration pour la robotique autonome", Univ. Nancy-Lorraine, Nancy, 2017
- H Berry is a Member of the Search committee for two tenured Full Professor positions in Systems Biology at University P & M Curie, Paris, 2016 (64PR0596 and 65PR3266)
- G Beslon is a member of the Jury of Ilya Prokins (INSA-Lyon, Lyon, France)
- G Beslon is a reviewer of the PhD thesis of Arthur Bertrand (UPMC, Paris, France)
- G Beslon is a reviewer of the PhD thesis of Sandro Colizzi (Utrecht University, Utrecht, NL)

8.3. Popularization

- E Tannier gave a series of lectures for a large public at "Université Populaire de Lyon", on "anarchy in biology".

<center>BIGS Project-Team</center>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

- BIGS team has organised a two-days workshop "Rencontres des équipes Inria travaillant sur le cancer" in Paris. 10 inria teams were present. https://team.inria.fr/bigs/workshopcancer/
- A. Gégout-Petit co-organised the "Health Session" of the day Fédération Charles Hermite- Enterprises, Nancy, January 2016.
- Céline Lacaux participated to the organisation of the following events:
  - European Study Group with Industry, 117th edition, May 2016, Avignon.
  - Session *Statistics* of the 14th Colloque Franco-Roumain de Mathématiques Appliquées, August 2016, Iasi.
  - Conference of GDR 3475 Analyse Multifractale, September 2016, Avignon.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- A. Gégout-Petit is chair of 2017 "Congrès Francophone International de l'Enseignement de la Statistique" (CFIES), Grenoble, September, 2017.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

P. Vallois is in the editorial board of "Risk and Decision Analysis".

10.1.3.2. Reviewer - Reviewing Activities

All the BIGS members are regular reviewers for journals in probability, statistics and machine learning as: Bernoulli, Scandinavian Journal of statistics, Stochastics, Journal of Statistical Planning Inference, Journal of theoretical Biology, IEEE Trans. Biomedical Eng., Theoretical Biology and Medical Modelling, Royal Society of Chemistry, Signal Processing: Image Communication, Mathematical Biosciences, LIDA, Annals of Applied Probability, Annals of Operations Research and Journal of Machine Learning Research, as well as conferences such as ICML, World IFAC Congress, FOSBE, ALCOSP...

10.1.4. Invited Talks

- Anne Gégout-Petit was invited in SADA'2016 conference in Cotonou. [20]
- Bruno Scherrer was an invited speaker in EWRL'2016 workshop in Barcelona.
- Thierry Bastogne was invited the 19 October 2015 by Pr. Luc Leyns at the Vrije Universities Brussels for a talk on the *Statistical Analysis of Cell Impedance Signals for the Characterization of Anti-Cancer Drug Effects*.
- Romain Azaïs was an invited speaker in SSIAB 2016 in Rennes.
- S. Ferrigno : *Nouvelles approches d'estimation de la croissance en Foetopathologie*. Journée "Nouvelle approche de la croissance foetale", Maternité Régionale du CHRU de Nancy (Sept 2016).

10.1.5. Leadership within the Scientific Community

- Anne Gégout-Petit is member of the board of the European Regional Council of the Bernoulli society

- Céline Lacaux is responsible of the *Statistic team*, Laboratory of Mathematic of Avignon (since September 2016)

10.1.6. Scientific Expertise

- T. Bastogne: scientific expert in Biostatistics and Signal Processing in Nanomedicine for CYBER-nano (start-up).

10.1.7. Research Administration

- A. Gégout-Petit: elected member of the laboratory of mathematics "Institut Elie Cartan de Lorraine".
- Céline Lacaux is
    - member of the bord of the SMAI-MAS group,
    - elected member of the council of the Laboratory Mathematics of Avignon,
    - correspondant AMIES pour Avignon,
    - Member of the scientific committee of GDR 3477 Stochastic Geometry.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- A. Gégout-Petit : Head of the Master 2 "Ingénierie Mathématique et Outils Informatiques (Mathematical Engineering and Computer Tools)", Université de Lorraine
- A. Gégout-Petit created and is now in charge of cursus CMI in applied mathematics for Lorraine University
- P. Vallois is head of the "Parcours Mathématiques Financières" of the master "Applied mathematics" of Université de Lorraine
- P. Vallois is head of the convention between "Université de Lorraine and Université Hammam Sousse" about master organization. Master ISC (Ingénierie de Systèmes Complexes)
- T. Bastogne is in charge of the spécialité Systèmes & TIC du master Ingénierie de Systèmes Complexes
- T. Bastogne created and is now in charge of professional master: CIIBLE (Cybernétique, Instrumentation, Image en Biologie et medecinE) en M2 with Medicine Faculty of Université de Lorraine
- T. Bastogne created and is now in charge research master << Biosanté Numérique >> with engineering school "Telecom Nancy"
- Master: S. Ferrigno, Experimental designs, 4.5h, M1, fourth year of EEIGM, Université de Lorraine, France
- Master: S. Ferrigno, Data analyzing and mining, 63h, M2, third year of Ecole des Mines, Université de Lorraine, France
- Master: S.Ferrigno, Modeling and forecasting, 43h, M1, second year of Ecole des Mines, Université de Lorraine, France
- Master: S.Ferrigno, Training projects, 18h, M1/M2, second and third year of Ecole des Mines, Université de Lorraine, France
- Master: A. Muller-Gueudin, Probability and Statistics, 160h, second year of ENSEM and ENSAIA, University of Lorraine, France.
- Master: A. Muller-Gueudin, Scientific calculation with Matlab, 20h, second year of ENSAIA, University of Lorraine, France.
- Master: R. Azaïs, Machine learning, 20h, M2, Université de Lorraine and third year of Telecom Nancy, France.

- Master: R. Azaïs, Machine learning, 20h, M1, second year of Ecole des Mines, Université de Lorraine, France.

- Master: J.-M. Monnez, Multivariate Analysis, Master 2 IFM (Ingénierie de la Finance de Marché), until June 2016.

- Master: A.Gégout-Petit, Statistics, modeling, 15h, future teacher, Université de Lorraine, France

- Master: A.Gégout-Petit, Statistics, modeling, data analysis, 80h, master in applied mathematics, Université de Lorraine, France

- Licence: S. Wantz-Mézières, Applied mathematics for management, financial mathematics, Probability and Statistics, 160h, I.U.T. (L1/L2/L3)

- Licence: S. Wantz-Mézières, Probability, 100h, first year in Telecom Nancy engineering school (initial and apprenticeship cursus)

- Master: J.-M. Monnez, Data Analysis, Statistical Learning, Master 2 IMOI (Ingénierie Mathématique et Outils Informatiques), until June 2016.

- Licence: A. Muller-Gueudin, Statistics, 60h, first year of ENSAIA, University of Lorraine, France.

- Licence: S. Ferrigno, Descriptive and inferential statistics, 60h, L2, second year of EEIGM, Université de Lorraine, France

- Licence: S. Ferrigno, Statistical modeling, 60h, L2, second year of EEIGM, Université de Lorraine, France

- Licence: S. Ferrigno, Mathematical and computational tools, 20h, L3, third year of EEIGM, Université de Lorraine, France

- Licence: S. Ferrigno, Training projects, 20h, L1/L3, first, second and third year of EEIGM, Université de Lorraine, France

- Licence: C. Lacaux: Probability and Statistic, 75h, L3, University of Avignon.

- Licence: C. Lacaux: Numerical simulation in probability, 36.75h, L3, University of Avignon.

- Licence: C. Lacaux: Probability and Statitics, 22.5h, L1, University of Avignon.

- Licence: C. Lacaux: Statistic techniques applied to SVT, 25.5h, L3, University of Avignon.

- Licence: C. Lacaux: Statistics, 24h, L2, University of Avignon.

10.2.2. Supervision

- PhD : Clémence Karmann, " Network inference for zero-inflated models", Grant : Inria-Cordis. Advisors: A. Gégout-Petit, A. Muller-Gueudin.

- PhD : Florine Gréciet, " Modèles markoviens déterministes par morceaux cachés pour la propagation de fissures", grant CIFRE SAFRAN AIRCRAFT ENGINES, Advisors : R. Azaïs, A. Gégout-Petit.

- PhD : Kévin Duarte, "Aide à la décision médicale et télémédecine dans le suivi de l'insuffisance cardiaque", Advisors : J.-M. Monnez and E. Albuisson.

- PhD : P. Retif. Modeling, digital simulation and analysis of nanoparticles-X ray interaction. Applications to augmented radiotherapy. Theses, Université de Lorraine, Mar. 2016.

- Post-doc: Florian Bouguet. Advisors: Romain Azaïs, Anne Gégout-Petit, Aurélie Muller-Gueudin.

- Post-doc: Benoît Henry (starting in Dec. 2016). Advisors: Romain Azaïs with Inria team Madynes.

- Master: Yaojie Shi, Toulouse School of economics, 2016. « Analyse de données transcriptomiques et protéomiques en oncologie », Advisors: A. Gégout-Petit, A. Muller-Gueudin, B. Bastien (Société Transgene, Strasbourg).

- Master: Yuyan Cao, Toulouse School of economics, 2016. " Spatio-temporal Bayesian models for the analysis of esca disease", with Inra Bordeaux. Advisor: A. Gégout-Petit, L. Guérin-Dubrana.

- Master: Félicie Bonte, Master Ecologie Ecologie Lille, AgroParistech Nancy et Museum National d'Histoire Naturelle 2016. « Etude des modifications de la croissance et du développement des plantes herbacées en forêt en réponse aux changements globaux », co-direction AgroParistech Nancy. Advisors: A. Gégout-Petit, Jean-Claude Gégout, Serge Muller.

- Master: all BIGS members regularly supervise project and internship of master IMOI students

- Engineering school: all BIGS members regularly supervise project of "Ecole des Mines ", ENSEM or EEIGM students

10.2.3. Juries

- HDR, Bruno Scherrer, "Contributions algorithmiques au contrôle optimal stochastique à temps discret et horizon infini", Université de Lorraine, July, 2016, Examinator, A. Gégout-Petit

- HDR, Corine Hahn, "Penser la question didactique pour la formation en alternance dans l'enseignement supérieur. Dispositifs frontières, Statistique et Management." Université Lyon 2, May, 2016, Examinator, A. Gégout-Petit

- PhD, Florian Bouguet, "Etude quantitative de processus de Markov déterministes par morceaux issus de la modélisation", Université de Rennes, June, 2016, Referee: A. Gégout-Petit

- PhD, Houda Ghamlouch, "Modélisation de la dégradation, maintenance conditionnelle et pronostic : usage des processus de diffusion", Université Technologique de Troyes, June, 2016, Referee: A. Gégout-Petit

- PhD, Etienne Baratchart, "Etude quantitative des aspects dynamiques et spatiaux du développement métastatique à l'aide de modèles mathématiques", Université de Bordeaux, February, 2016, Referee: A. Gégout-Petit

- PhD, Johann Cuenin, Sur les modèles Tweedie multivariés, Université de Besancon, December, Examinator: A. Gégout-Petit

- PhD : Clémence Chamard-Jovenin, Impact d'une surexpression d'ERα36 et/ou d'une exposition aux alkylphénols sur la physiopathologie de la glande mammaire, Université de Lorraine, 9 décembre 2016. Examinator : A. Muller-Gueudin.

- PhD : M. Ben Abdallah, Université de Lorraine, "Un modèle de l'évolution des gliomes diffus de bas grade sous chimiothérapie", December, 12, 2016, jury member: S. Wantz-Mézières.

- PhD : Marc Bourotte, Générateur stochastique de temps multisite basé sur un champ gaussien multivarié, INRA, Équipe BioSP, July, 4th,2016, President : C. Lacaux.

- PhD : Nhu Dang, Estimation des indices de stabilité et d'autosimilarité par variations de puissances négatives, Laboratoire Jean Kuntzmann Grenoble, July, 5th,2016, Examinator : C. Lacaux.

10.3. Popularization

- A. Gégout-Petit is involved in the promotion of study in the fields of mathematics in Lorraine university. She was very active in the realisation of the video for the promotion of Mathematical studies http://videos.univ-lorraine.fr/index.php?act=view&id=3236.

- A. Gégout-Petit participates to the "Table ronde Bourse aux technologues, Big data et industrie du futur", Ecole des Mines de Nancy, November, 2016.

- Animation d'ateliers MATh.en.JEANS en collège dans la région de Nancy (Romain Azaïs, Clémence Karmann)

- S. Ferrigno: Advisor of a group of students, "La main à la Pâte" project, elementary schools, Nancy, January-June 2016

- S. Ferrigno: Advisor of a group of students, "La main à la Pâte" project, Institut médico-éducatif (IME), Commercy, September-December 2016

- S. Ferrigno: Advisor of a group of students, "De Léonard de Vinci au Drone" project, Collège Paul Verlaine, Malzéville, December 2016-February 2017.

<p style="text-align:center;">**BIOCORE Project-Team**</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

J.-L. Gouzé organized with P. Brest, H. Barelli and F. Besse the Signalife Maths-Bio workshop held at the Inria Sophia Antipolis center, on November 25.

10.1.1.1. Members of the conference program committee

J.-L. Gouzé is a member of the program committee for the conference BIOMATH, held in Sofia (Bulgaria), and POSTA (Rome, Italy). He is in the scientific committees of several summer schools.

O. Bernard is in the technical committee of the Computer Applied to Biotechnology (CAB) conferences, of the FOSBE conference (Foundations of Systems Biology in Engineering) and of the Algae Europe conference.

Valentina Baldazzi co-organised the HortiModel2016 international symposium on *Models for plant growth, environment control and farming management in protected cultivation*, Avignon, 16–22 September 2016.

10.1.1.2. Reviewers

All BIOCORE members have been reviewers for the major 2016 conferences in our field: CDC, IFAC NOLCOS,...

10.1.2. Journal

10.1.2.1. Members of the editorial board

M. Chaves is an Associated Editor of SIAM Journal on Applied Dynamical Systems (SIADS), since January 2015

10.1.2.2. Reviewers

All BIOCORE members have been reviewers for the major journals in our field: Automatica, IEEE Transactions on Automatic Control, Journal of Mathematical Biology, Mathematical Bisciences, New Phytologist,...

10.1.3. Invited talks

J.-L. Gouzé was invited to give the plenary introductory lecture at POSTA, the 5th International Symposium on Positive Systems, Università Campus Bio-Medico di Roma , Italy.

M. Chaves gave a talk at the workshop on "Asynchronous dynamics of logical models: assessing biologically relevant properties", at CIRM, Marseille (November 2016).

O. Bernard was invited to give a conference on microalgae at Ecole Centrale de Paris ("Biotechnological challenge") 'Use of microorganisms for biofuel production" (December, 8th, 2016).

O. Bernard was invited to give a talk at the ALgoReso workshop related to the development of innovative photobioreactors (May, 12th, 2016).

O. Bernard was invited for a presentation at the Metabolism in Systems Biology (Lille, 24th of November, 2016) workshop organized by the BIOSS working group.

O. Bernard was invited for a talk at the Days of the SFR Condorcet (Namur, 5-6 july, 2016).

10.1.4. Scientific expertise

J.-L. Gouzé was in several evaluation committees or juries: Stic Amsud, Région Région Aquitaine- Limousin - Poitou Charentes, Université de Grenoble, Centrale-Supelec.

O. Bernard is a member of the scientific committee of the companies Fermentalg and BioEnTech.

10.1.5. Research administration

J.-L. Gouzé is in the Inria committee supervising the doctoral theses, and a member of the scientific committee of Labex SIGNALIFE of the University of Nice-Sophia-Antipolis, and of COREBIO PACA. He is in the scientific committee of Académie 4 of UCA-Jedi. He is a member of the board of the SFBT (French Speaking Society for Theoretical Biology).

M. Chaves and J.-L. Gouzé were part of the committee for the selection of the 2016 Signalife PhD students.

M. Chaves is a member of the COST-GTRI (working group on International Relations at Inria's council for scientific and technological orientation). The group is charged with evaluating Inria's Associated Teams as well as some project proposals (EuroMed 3+3), and ERCIM post-docs.

M. Chaves is a member of the CLHSCT (local committee for the safety of working conditions)

O. Bernard represents Inria at the ANCRE (Alliance Nationale de Coordination de la Recherche pour l'Energie), in the biomass committee. He is a member of the ADT (Technological Development Actions) at Inria.

S. Touzeau is an elected member of the scientific committee of the MIA department at INRA (2011–2016). She is a member of the steering committee of the metaprogramme SMaCH *Sustainable Management of Crop Health*, INRA (since 2016).

F. Grognard is a member of the NICE committee, which allocates post-doctoral grants and fundings for visiting scientists at Inria Sophia Antipolis. He is a member of the scientific committee of the doctoral school "Sciences de la Vie" at the University of Nice-Sophia Antipolis. Since 2015, F. Grognard is a member of the MBIA CSS (Specialised Scientific Commission), in charge of the research scientists evaluation at INRA. He is member of the steering committee of Academy 3, Space, Environment, Risk & Resilience of UCA-JEDI.

L. Mailleret is the head of the M2P2 team (Models and Methods for Plant Protection) of ISA.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Bachelor: F. Grognard (45.5h ETD) and L. Mailleret (26h ETD), "Equations différentielles ordinaires et systèmes dynamiques", L3, 1st year Engineering in Modelling and Applied Mathematics, Polytech'Nice, Université of Nice Sophia Antipolis, France.

Bachelor: N. Bajeux (192h ETD) is ATER at IUT Nice Côte d'Azur of Université of Nice Sophia Antipolis, France.

Master: F. Grognard (33h ETD) and L. Mailleret (33h ETD), "Bio-Mathématiques", M1, 2nd year Engineering in Modelling and Applied Mathematics (eq. M1), Polytech'Nice, Université of Nice Sophia Antipolis, France.

Master: J.-L. Gouzé (9h ETD), M. Chaves (9h ETD), "Discrete and continuous approaches to model gene regulatory networks", Master of Science in Computational Biology (M2), University of Nice - Sophia Antipolis.

Master: J.-L. Gouzé (18h ETD), M. Chaves (12h ETD) "Modelling biological networks by ordinary differential equations", 4th year students, Génie Biologie, Polytech'Nice, University of Nice - Sophia Antipolis.

Master: O. Bernard (4.5h ETD), "Bioenergy from microalgae", M2, Master International Energy Management : alternatives pour l'énergie du futur, Ecole Nationale Supérieure des Mines de Paris, France.

Master: O. Bernard (18h ETD), "Modelling biotechnological processes", M2, Ecole Centrale de Paris, France.

Master: S. Touzeau (30.75h ETD), "Analyse de données", M1, 2nd engineering year in Génie Biologie, Polytech'Nice – Université Nice Sophia Antipolis, France.

Doctorat: M. Chaves gave courses at the Research School on "Modelling Complex Biological Systems in the Context of Genomics, advances in Systems and Synthetic Biology" (1.5h, Évry, March 2016) and the Summer School on "Modélisation formelle de réseaux de régulation biologique" (3h, Porquerolles, June 2016).

Doctorat: S. Touzeau (8h), "Mathematical modelling in animal and plant epidemiology", CIMPA-Cameroun-CETIC research school *Mathematical and Computer Models in Epidemiology, Ecology and Agronomy*, Yaoundé, Cameroon, September 2016.

O. Bernard together with F. Mairet and Q. Béchet supervised two projects for engineering school students. The first project involved 6 students of Ecole Nationale Supérieure des Mines de Paris (last year of engineering school, 1 week ("Combining photovoltaic panels and microalgae") and the second project involved three groups of 4 students from the Ecole Centrale de Paris (first year of engineering school), 4 months, to design a process with microalgae growing on a biofilm.

10.2.2. Supervision

HDR: F. Mairet, "Control theory applied to microorganism growth: from physiological insights to bioprocess management", December 7th, 2016.

PhD : C. Combe, "Quantitative and qualitative effects of light on the Growth of microalgae in dense cultures ", May, 9th, 2016, UPMC. Supervisors: A. Sciandra, S. Rabouille and O. Bernard.

PhD : E. Rousseau, "Impact of genetic drift and selection on the durability of plant resistance to viruses" ", May 27th, 2016, Univ. Nice Sophia Antipolis. Supervisors: F. Grognard, L. Mailleret, B. Moury, and F. Fabre (INRA Avignon).

PhD : G. Grimaud, "Modeling of the effect of temperature on phytoplankton: from acclimation to adaptation", June, 14th, 2016 Univ. Nice Sophia Antipolis. Supervisors: O. Bernard, F. Mairet and S. Rabouille.

PhD in progress : D. Demory, "Impact of virus dynamics on microalgae mortality ", since September 2013, UPMC. Supervisors: A. Sciandra and O. Bernard.

PhD in progress : N. Bajeux, "Influence d'une densité dépendance dans les modèles impulsionnels de dynamiques des populations", since October 2013, Univ. Nice Sophia Antipolis. Supervisors: F. Grognard and L. Mailleret.

PhD in progress : S. Casagranda. "Analysis and control of cell growth models", since November 2013, Univ. Nice Sophia Antipolis. Supervisors: J.-L. Gouzé and D. Ropers (Inria IBIS).

PhD in progress : S. Almeida. "Theoretical design of synthetic biological oscillators and their coupling", since October 2014, Univ. Nice Sophia Antipolis. Supervisors: M. Chaves and F. Delaunay (Univ. Nice, iBV).

PhD in progress : M. Caïa, "Characterization and modelling of a mixotrophic algae - bacteria ecosystem for waste recovery", since September 2015, University Montpellier. Supervisors: J.-P. Steyer and O. Bernard.

PhD in progress : M. Haond. "Causes et conséquences des fronts de colonisation poussés", since October 2015, Univ. Nice Sophia Antipolis. Supervisors: E. Vercken (UMR ISA), L. Mailleret and L. Roques (UR BioSP).

PhD in progress : C. Martinez von Dossow . "Modélisation et optimisation de consortia microalgues-bactéries", since February 2016, UPMC. Supervisors: O. Bernard, F. Mairet and A. Sciandra.

PhD in progress : L. Pereira. "Experimental and computational approaches to understanding the molecular origins of drug response heterogeneity, underlying resistance to cancer therapies", since October 2016, Univ. Nice Sophia Antipolis. Supervisors: M. Chaves and J. Roux (IRCAN, Nice).

PhD in progress : L. Chambon. "Control of models of genetic regulatory networks". since October 2016, Univ. Nice Sophia Antipolis. Supervisor J.-L. Gouzé.

PhD in progress : C. Lopez-Zazueta. "Use of Perturbation Theory to optimize metabolic production of biofuels by microalgae.", since January 2016, Univ. Nice Sophia Antipolis, supervisors O. Bernard and J.-L. Gouzé.

PhD in progress: S. Nilusmas, "Gestion durable des nématodes à galles en cultures maraîchères : modélisation et optimisation du déploiement des résistances et des pratiques agronomiques", since December 2016, Univ. Nice Sophia Antipolis. Supervisors: S. Touzeau, C. Caporalino (ISA), V. Calcagno (ISA), P. Castagnone (ISA) and L. Mailleret.

Master theses and engineering internships supervision

M1: Ambre Vaisseix, "Effet de la température pour des cultures de microalgues sous serre", Université de Nantes

M1: Anais Bacquet, "Modélisation métabolique de Chlorella sorokiniana, en condition mixotrophe pour identifier des stratégies optimales de consommation de déchets organiques", Univ. Nice Sophia Antipolis.

Engineer: Jérome Grenier, "Développement et modélisation d'un système innovant de production de microalguessous forme de biofilm", Ecole Centrale de Paris

M2: Christina Kozia, "Dynamical representation and analysis of models of genetic regulatory networks", Univ. Nice Sophia Antipolis.

Engineer: Arthur Péré, "Évaluation in silico de la durabilité de résistances variétales avec interaction entre gènes par une approche de modélisation", INSA Lyon.

M2: Samuel Nilusmas, "Évolution de la virulence chez un nématode phytoparasite : déploiement optimal et robuste de plantes résistantes", Université Claude Bernard Lyon 1.

10.2.3. Juries

M. Chaves was reviewer for the PhD defense of Simona Catozzi "Retroactivity in signal transduction: a comparative study of forward and backward responses in signaling cascades", University of Nice Sophia Antipolis, December 15, 2016.

J.-L. Gouzé was reviewer for the PhD of Hafiz Ahmed "Modeling and synchronization of biological rhythms: from cells to oyster behavior", University of Lille 1, September 22, 2016.

J.-L. Gouzé was reviewer for the PhD of Clément Aldebert, "Uncertainty in predictive ecology: consequence of choices in model construction ", Univ Aix-Marseille, November 29, 2016.

J.-L. Gouzé was in the jury of the HDR of Francis Mairet, " Control theory applied to microorganism growth: from physiological insights to bioprocess management ", University of Nice Sophia Antipolis, December 7, 2016.

J.-L. Gouzé was in the jury of the PhD of Dominique Lamonica, "Capturer les interactions écologiques en microcosme sous pression chimique à travers le prisme de la modélisation", Université Claude Bernard Lyon 1,April 8, 2016.

J.-L. Gouzé was in the jury of the PhD of Elsa Rousseau "Effect of genetic drift and selection on plant resistance durability to viruses", University of Nice Sophia Antipolis, May 27, 2016. F. Grognard and L. Mailleret were invited members of this jury

O. Bernard was reviewer for the HDR of S. Tebbani "Contribution à l'étude des systèmes non linéaires incertains : application à la commande de systèmes biotechnologiques ", University of Paris-Sud, November 7th, 2016.

O. Bernard was reviewer for the PhD thesis of C. E. Robles Rodriguez " Modeling and optimization of bio-lipid production by oleaginous yeasts ", University of Toulouse, October 19th, 2016.

O. Bernard was in the PhD jury of J. Rumin "Non-GMO improvement of microalgae performances", University of Nantes, March, 16th, 2016.

O. Bernard was in the PhD jury of G. Grimaud, "Modeling of the effect of temperature on phytoplankton: from acclimation to adaptation", Univ. Nice, June 14th, 2016.

O. Bernard was in the PhD jury of C. Combe, "Quantitative and qualitative effects of light on the Growth of microalgae in dense cultures ", UPM, May 9th, 2016.

S. Touzeau is in the thesis committees of David Demory (UPMC, 2013–2016).

10.3. Popularization

The activities related to microalgae have generated many articles in national newspapers (Le Monde, Nice Matin, journal du CNRS,...) where ...), and broadcasts on national radio (Europe 1) and TV (France 2, France 3). Several articles were written by the team members explaining the hurdles and potential of microalgae.

M. Chaves was part of the jury for the PhD student contest "Ma thèse en 180 sec" (regional stage, April 2016, Nice).

Biocore, especially Stefano Casagranda and Lucie Chambon, was involved in the "Spring of Researchers" and in the "Fête de la Science".

P. Bernhard has given conferences in Lycée René Gosciny, in Drap on January 12th (Le nombre d'or: mythes et curiosités), in Lycée Alexandre Dumas, in Cavaillon on February 29th ("Game Theory") and in Lycée Costebelle, in Hyères on March 15th (Le nombre d'or: mythes et curiosités).

BIOVISION Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. Member of the Organizing Committees

- Bruno Cessac: "Neural Network Dynamics in Health and Disease", 12-14 October 2016, Institut de Neurosciences de la Timone (INT), Marseille, France, http://www.gdr-neuralnet.cnrs.fr/en.
- Bruno Cessac: "Neurostim2016", http://neurostim2016.inria.fr/ 22 November 2016.

8.1.2. Scientific Events Selection

8.1.2.1. Member of the Conference Program Committees

- Pierre Kornprobst was a member of the program committee of the 24th European Signal Processing Conference (EUSIPCO 2016).

8.1.2.2. Reviewer

Pierre Kornprobst has been a reviewer for SIGGRPAH 2016.

8.1.3. Journal

8.1.3.1. Member of the Editorial Boards

Pierre Kornprobst is associate editor for the Computer Vision and Image Understanding Journal (CVIU).

8.1.4. Invited Talks

- Bruno Cessac, Toulon, March 2016.
- Bruno Cessac, Theoretical Physics lab, Geneve, March 2016.

8.1.5. Research Administration

- Pierre Kornprobst is an elected member of the Conseil Académique d'Université Côte d'Azur (UCA).
- Pierre Kornprobst leads the project UCAGate to provide UCA a new tool aiming at (i) giving a clear view of skills and competences of UCA for internal and external users, (ii) facilitate the emergence of new transdisciplinary synergies between UCA partners, (iii) provide UCA tools to show the transformation effect from the IDEX for the next evaluation. A first prototype is expected in February 2017.
- Pierre Kornprobst is member of the editorial committee of the Sophia Antipolis internal letter SAM & YOU.
- Pierre Kornprobst has been appointed by Inria Direction representative of the administration in the advisory committee of Inria contractual doctoral candidates[0] (on July 16, for two years).

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[0] Représentant de l'administration suppléant au sein de la Commission consultative des doctorants contractuels d'Inria

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence : Theodora Karvouniari, "Transmissions numériquese , 1ere année de l' IUT, Departement Réseaux et Telecommunications, 64h/ an, 50 students.

Master 2: Bruno Cessac, *Neuronal dynamics*, 36 hours, Master 2 of Computational Biology and Biomedicine, Université Nice Sophia Antipolis, France.

8.2.2. Supervision

- PhD in progress: Selma Souihel, "Generic and specific computational principles for the visual anticipation of motion trajectories". Started in November 2016. Supervisor B. Cessac

- PhD in progress: Theodora Karvouniari, "Retinal waves in the retina: theory and experiments". Started in October 2014. Supervisor, B. Cessac.

- PhD defended: Kartheek Medathati, "Towards synergistic models of motion information processing in biological and artificial vision", co-supervised by Pierre Kornprobst and Guillaume S. Masson (Institut de Neurosciences de la Timone, Marseille, France), December 13, 2016.

8.2.3. Juries

Bruno Cessac, member of the Jury's thesis: "Vers des modèles synergiques de l'estimation du mouvement en vision biologique et artificielle", by Kartheek Medathati.

Bruno Cessac, member of the Jury's thesis: "Structuration temporelle de la mémoire de travail dans les réseaux de neurones récurrents" by Guillaume Rodriguez.

8.3. Popularization

- Rencontre avec le public à la suite de la projection du film "La nuit qu'on suppose" de Benjamin d'Aoust, Médiathèque d'Antibes, 16 Janvier 2016.

- Bruno Cessac. Cafe In Sophia. La rétine, fonctionnement et thérapie, 28 Janvier 2016.

BIPOP Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Guillaume James, Chairman of the Euromech Colloquium 580 "Strongly Nonlinear Dynamics and Acoustics of Granular Metamaterials", 11 July-13 July 2016, Grenoble. http://580.euromech.org/

9.1.1.2. Member of the Organizing Committees

- Gilles Daviet, Alexandre Vieira, Jose Morales, Bernard Brogliato, members of local organization committee of the Euromech Colloquium 580 "Strongly Nonlinear Dynamics and Acoustics of Granular Metamaterials", 11 July-13 July 2016, Grenoble. http://580.euromech.org/.

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

- Vincent Acary, member of ENOC (European Nonlinear Oscillations Conference) Committee.
- Florence Bertails-Descoubes, member of the ACM SIGGRAPH Asia 2016 Technical Program Committee.
- Pierre-Brice Wieber, Associate Editor for Humanoids 2016 and ICRA 2017.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- Bernard Brogliato, Associate Editor at Nonlinear Analysis: Hybrid Systems
- Bernard Brogliato, Associate Editor at ASME Journal of Computational and Nonlinear Dynamics
- Pierre-Brice Wieber, Associate Editor at IEEE Transactions on Robotics

9.1.3.2. Reviewer - Reviewing Activities

- Bernard Brogliato, reviewer for IEEE Transactions on Automatic Control, Multibody System Dynamics, SIAM Journal on Optimization and Control, European Journal of Mechanics A/Solids, Nonlinear Dynamics, ASME Journal of Computational and Nonlinear Dynamics.
- Florence Bertails-Descoubes, reviewer for ACM Transactions on Graphics, ACM SIGGRAPH, ACM SIGGRAPH Asia, Eurographics, Symposium on Computer Animation, Computer-Aided Design, Computer-Aided Geometric Design, International Journal of Solids and Structures.
- Arnaud Tonnelier, reviewer for Scientific Reports, SIADS, PRE, PhysicaD.
- Vincent Acary, reviewer for several journals in Mechanics and Automatic Control.

9.1.4. Invited Talks

- Bernard Brogliato, invited seminar at Mathematics Department, INSA de Lyon, 09 June 2016 (contact: A. Petrov).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master 1 : Florence Bertails-Descoubes, Module IRL (découverte recherche), supervision stage Mickaël Ly, ENSIMAG 2A (Grenoble INP)

9.2.2. Supervision

HdR : Vincent Acary, Analysis, simulation and control of nonsmooth dynamical systems, Université de Grenoble Alpes, 16 juillet 2015.

PhD : Narendra Akhadkar, Modélisation numérique des mécanismes. Influence des jeux, de la déformation et des impacts multiples, Université Grenoble-Alpes, CIFRE I-MEP2 avec Schneider-Electric, 25 avril 2016, Vincent Acary et Bernard Brogliato

PhD : Gilles Daviet, Modèles et Algorithmes pour la Simulation du Contact Frottant dans les Matériaux Complexes : Application aux Milieux Fibreux et Granulaires, Universite' Grenoble-Alpes, 15 décembre 2016, Florence Bertails-Descoubes.

PhD : José Eduardo Morales Morales, Ondes localisées dans des systèmes mécaniques discrets excitables, Universite' Grenoble-Alpes, 29 novembre 2016, Guillaume James et Arnaud Tonnelier

PhD in progress : Alexandre Vieira, Commande Optimale de Systèmes Linéaires de Complémentarité, 01 octobre 2015, Christophe Prieur et Bernard Brogliato.s/'e

PhD in progress : Alejandro Blumentals, Analyse et Simulation de Systèmes Mécaniques avec Contact Frottant, 01 octobre 2013, Florence Bertails-Descoubes et Bernard Brogliato.

PhD in progress: Nestor Bohorquez Dorante, Control of Biped Robots, 01 octobre 2015, Pierre-Brice Wieber.

PhD in progress: Nahuel Vila, Control of Biped Robots, 01 octobre 2016, Pierre-Brice Wieber.

9.2.3. Juries

- Bernard Brogliato, member of Habilitation à Diriger des Recherches committee of Constantin Irinel Morarescu, CRAN Nancy (MCF université de Nancy), 03 novembre 2016.

- Bernard Brogliato, member of Habilitation à Diriger des Recherches committee of Stéphane Redon, Inria Grenoble (CR Inria), 27 mai 2016.

- Bernard Brogliato, member of Ph.D. Thesis committee of T.L. Nguyen (15 janvier 2016), INSA de Rennes (directeurs de thèse M. Hjiaj and C. Sansour).

- Bernard Brogliato, member of Ph.D. Thesis committee of O. Montano (20 mai 2016), CICESE Ensenada, Mexico (directeur de thèse Y. Orlov).

- Arnaud Tonnelier, member of Ph.D. Thesis committee of Catalina Vich Llompart (août 2016), Universitat de les Illes Balears (directeurs de thèse : Antoni Guillamon Grabolosa (UPC) and Dr. Prohens Rafel Sastre (UIB)).

- Arnaud Tonnelier, member of Ph.D. Thesis committee of Elif Köksal Ersöz (décembre 2016), Université Pierre et Marie Curie (directeurs de thèse: F. Clement et J.P. Françoise).

9.3. Popularization

- Modélisation de matériaux granulaires (Florence Bertails-Descoubes, Gilles Daviet) : participation à l'écriture d'un article court pour le CNRS, "Représenter du sable sans poudre aux yeux", http://www.cnrs.fr/ins2i/spip.php?article2175

<h1 style="color:red; text-align:center">BONSAI Project-Team</h1>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organization

10.1.1.1. General Chair, Scientific Chair

- RepSeq 2016, workshop on immune repertoire sequencing at ECCB 2016 (M. Giraud, M. Salson).

10.1.1.2. Member of the Organizing Committees

- SMPGD, Statistical Methods in Post Genomic Data (H. Touzet).

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- WABI 2016 (H. Touzet).
- RECOM-seq 2016 (H. Touzet).

10.1.2.2. Reviewer

- ECCB 2016 (J.-S. Varré, R. Chikhi).
- PSC 2016 (M. Salson).
- RECOMB-CG 2016 (J.-S. Varré).
- TCBB 2016 (J.-S. Varré).
- RECOMB 2016 (R. Chikhi).

10.1.3. Journal

10.1.3.1. Reviewer - Reviewing Activities

- Bioinformatics (M. Salson, J.-S. Varré, R. Chikhi, H. Touzet).
- PLoS Genetics (R. Chikhi).
- Genome Research (R. Chikhi).
- Nucleic Acids Research (R. Chikhi).
- Journal of Discrete Algorithms (M. Salson).
- Briefing in Bioinformatics (H. Touzet).

10.1.4. Invited Talks

- RegPep2016 (regulated peptides) in Rouen (France), Symposium 8 "In silico approaches to peptide identification and design" (M. Pupin).
- SMPGD keynote in Lille (France), (R. Chikhi).
- National meeting of GDR Informatique Mathématique in Paris (H. Touzet).
- MatBio 2016 in London (H. Touzet).
- Summer school in metagenomics in Paris (H. Touzet).

10.1.5. Scientific Expertise

- Reviewer for a Swiss National Science Foundation grant (R. Chikhi).
- Member of the scientific committee of the national program Environmics (H. Touzet).
- Reviewer for a CRSNG grant (H. Touzet).

- Reviewer for labex CIMI PhD grant (H. Touzet).
- Member of three HCERES committees: L2N (LINA and IRCCyN, Nantes), Loria (Nancy), I2M (Marseille) (H. Touzet).

10.1.6. Research Administration

- Member of the CUB for Inria Lille (S. Blanquart).
- Member of the Charles Viollette Institute Laboratory council (V. Leclère).
- Member of the Charles Viollette Institute scientific committee (V. Leclère).
- Member of the scientific operational committee of Xperium, Univ. Lille 1 (V. Leclère).
- Member of the Inria local committee for technology development (M. Pupin).
- Member of the executive council of the IFB, Institut Français de Bioinformatique, (M. Pupin).
- Member of the Inria local committee for the IT users (M. Salson).
- Member of the national scientific committee of INS2I–CNRS (H. Touzet).
- Member of the scientific committee of MBIA – INRA (H. Touzet).
- Head of the national CNRS network GDR Bioinformatique moléculaire (http://www.gdr-bim.cnrs.fr, H. Touzet).
- Vice-head of the Lille Bioinformatics platform, bilille (H. Touzet).
- Member of the CRIStAL Laboratory council (H. Touzet).
- Member of the CRIStAL scientific council, coordinator of the thematic group "Modeling for life sciences" (J.-S. Varré).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Teaching in computer science:

- Master: Y. Dufresne, *Algorithmics and complexity*, 36h, M1 Computer Science, Univ. Lille 1.
- License: Y. Dufresne, *Oriented object design*, 42h, L3 Computer Science, Univ. Lille 1.
- License: S. Janot, *Introduction to programming (C)*, 50h, L3 Polytech'Lille, Univ. Lille 1.
- License: S. Janot, *Databases*, 30h, L3 Polytech'Lille, Univ. Lille 1.
- Master: S. Janot, *Databases*, 12h, M1 Polytech'Lille, Univ. Lille 1.
- Master: S. Janot, *Logic and Semantic Web*, 80h, M1 Polytech'Lille, Univ. Lille 1.
- License: L. Noé, *Networks*, 42h, L3 Computer science, Univ. Lille 1.
- License: L. Noé, *Programming (Python)*, 54h, L3 Computer science' S3H, Univ. Lille 1.
- License: L. Noé, *Coding and information theory*, 36h, L2 Computer science, Univ. Lille 1.
- License: L. Noé, *Functional Programming*, 30h, L2 Computer science, Univ. Lille 1.
- License: P. Pericard, *Data structures*, 18h, L3 Polytech'Lille, Univ. Lille 1.
- License: P. Pericard, *Introduction to programming (C)*, 34h, L3 Polytech'Lille, Univ. Lille 1.
- License: P. Pericard, *Programming (C)*, 22h, L3 Polytech'Lille, Univ. Lille 1.
- License: P. Pericard, *Databases*, 22h, M1 Polytech'Lille, Univ. Lille 1.
- License: M. Pupin, *Introduction to programming (Python)*, 78h, L1 Computer science, Univ. Lille 1.
- License: M. Pupin, *Professional project*, 18h, L3 Computer science, Univ. Lille 1.
- Master: M. Pupin, *Introduction to programming (JAVA)*, 24h, M1 Mathématiques et finance, Univ. Lille 1.
- License: T. Rocher, *Algorithmics and programming*, 32h, L3 Polytech'Lille, Univ. Lille 1.

- License: T. Rocher, *Algorithmics and programming (remedial course)*, 8h, L3 Polytech'Lille, Univ. Lille 1.
- License: T. Rocher, *Databases*, 26h, L3 Polytech'Lille, Univ. Lille 1.
- License: C. Saad, *Algorithmics and programming*, 28h, L3 Polytech'Lille, Univ. Lille 1.
- License: C. Saad, *Databases*, 36h, L3 Polytech'Lille, Univ. Lille 1.
- Master: M. Salson, *Skeptical thinking*, 18h, M2 Journalist and Scientist, ESJ, Univ. Lille 1.
- License: M. Salson, *Coding and information theory*, 63h, L2 Computer science, Univ. Lille 1.
- License: J.-S. Varré, *Web programming*, 36h, L2 Computer Science, Univ. Lille 1.
- License: J.-S. Varré, Y. Dufresne, *Object oriented programming*, 36h, L2 Computer Science, Univ. Lille 1.
- License: J.-S. Varré, *Algorithms and data structures*, 50h, L2 Computer science, Univ. Lille 1.
- License: J.-S. Varré, *System*, 36h, L3 Computer science, Univ. Lille 1.
- Master: J.-S. Varré, Y. Dufresne, *Software project*, 24h, M1 Computer science, Univ. Lille 1.

Teaching in bioinformatics:

- License: S. Blanquart, R. Chikhi, M. Giraud, *Bioinformatics*, 40h, L3 Computer Science, Univ. Lille 1.
- Master: S. Blanquart, *Algorithms and applications in bioinformatics*, 24h, M1 Computer Science, Univ. Lille 1.
- Master: S. Blanquart, *Methods in phylogenetics*, 4h, M2 Biodiversité Evolution Ecologie, Univ. Lille 1.
- License: V. Leclère, *Biotechnology*, 24h, L3 Biology, Univ. Lille 1.
- Master: L. Noé, *Bioinformatics*, 40h, M1 Biotechnologies, Univ. Lille 1.
- Master: M. Pupin *Bioinformatics*, 40h, M1 Biology and Biotechnologies, Univ. Lille 1.
- Master: M. Salson, *Algorithms for life sciences*, 18h, M2 Complex models, algorithms and data, Univ. Lille 1.

Teaching in biology:

- Master, V. Leclère, *Mycology, secondary metabolites, food microbiology*, 37 h, M1 Biology, Univ. Lille 1.

10.2.2. Teaching administration

- Head of the computer science modules in the 1st year of licence, univ. Lille 1 (M. Pupin).
- Head of the licence semester "Computer Science – S3 Harmonisation (S3H)", univ. Lille 1 (L. Noé).
- Member of UFR IEEA council (M. Pupin, J.-S. Varré).
- Head of the 3rd year of licence of computer science, univ. Lille 1(J.-S. Varré).
- Head of the GIS department (Software Engineering and Statistics) of Polytech'Lille (S. Janot).
- Member of UFR Biologie council (V. Leclère).
- Head of the master "Innovations en biotechnologies végétales, enzymatiques et microbiennes", univ. Lille 1 (V. Leclère).

10.2.3. Supervision

- PhD : C. Vroland, Algorithmique pour la recherche de motifs approchée et application à la recherche de cibles de microARN, univ. Lille 1, 2016/05/18, H. Touzet, V. Castric, M. Salson.
- PhD : Y. Dufresne, Algorithmes pour l'annotation automatique de peptides non-ribosomiques, univ. Lille 1, 2016/12/01, M. Pupin, L. Noé.

- PhD in progress: P. Pericard, Methods for taxonomic assignation in metagenomics, 2013/11/01, H. Touzet, S. Blanquart.
- PhD in progress: T. Rocher, Indexing VDJ recombinations in lymphocytes for leukemia follow-up, 2014/11/01, M. Giraud, M. Salson.
- PhD in progress: C. Saad, Caractérisation des erreurs de séquençage non aléatoires, application aux mosaïques et tumeurs hétérogènes, 2014/10/01, M.-P. Buisine, H. Touzet, J. Leclerc, L. Noé, M. Figeac.
- PhD in progress: L. Siegwald, Bionformatic analysis of Ion Torrent metagenomic data, 2014/01/03, H. Touzet, Y. Lemoine (Institut Pasteur de Lille).
- PhD in progress: P. Marijon, Graph assembly analysis for third generation sequencing data, 2016/10/01, J.-S. Varré, R. Chikhi (Institut Pasteur de Lille).

10.2.4. Juries

- Member of the HDR committee of Laurent Mouchard (Univ. Rouen, J.-S. Varré).
- Member of the PhD committee of Qassin Esmael (Univ. Lille 1, M. Pupin, V. Leclère).
- Member of the PhD committee of Souhir Sabri (Univ Montpellier, V. Leclère).
- Member of the PhD committee of Wahiba Chaara (Univ. Paris 6, M. Giraud).
- Member of the PhD committee of Leandro Ishi (Univ. Lyon, R. Chikhi).
- Member of the PhD committee of Jerome Audoux (Univ. Montpellier, R. Chikhi, M. Salson).
- Member of the PhD jury of Clara Benoit (Univ. Lyon, R. Chikhi).
- Member of the HDR jury of Morgane Thomas-Chollier (IBENS, Ecole Normale Supérieure Paris, H. Touzet).
- Member of the HDR jury of Annie Chateau (LIRMM, Université de Montpellier, H. Touzet).
- Member of the HDR jury of Pierre Peterlongo (Inria Rennes, H. Touzet).
- Member of the HDR jury of Séverine Bérard (ISEM, Université de Montpellier, H. Touzet).
- Member of the PhD jury of Thomas Hume (LaBRI, Université Bordeaux 1, H. Touzet).
- Member of the PhD jury of Aymeric Antoine-Lorquin (IRISA, Université de Rennes 1, H. Touzet).
- Member of the hiring committee MdC of Univ. Nancy (M. Pupin).
- Member of the hiring committee MdC of Univ Lille 1 (V. Leclère).
- Member of the hiring committee professor of Univ. Rouen (H. Touzet).
- Member of the hiring committee Research Engineer of Univ. Paris-Diderot (M. Pupin).
- Member of the hiring committee of research engineer of Univ Lille 1 (V. Leclère).

10.3. Popularization

The team has always been very active in popularizing computational biology and computer science in general.

- M. Salson participated in an exchange with scientific journalists organized by the French association of scientific journalists (AJSPI). A journalist was hosted during one week in the team and M. Salson spent one week in the newsroom of *La Recherche*, a French science magazine.
- Within a project on skeptical thinking with a popularization association "Les Petits Débrouillards", M. Salson is part of the monitoring committee and gave lectures to social workers.
- The team participates to dissemination actions for high school students and high school teachers on a regular basis: multiple presentations on bioinformatics and research in bioinformatics with our dedicated "genome puzzles", booth about computer science unplugged for high school girls, booth at Xperium about development of biopesticides (including a demo on the use of Norine), plenary presentations at the "Day for Programming and Algorithmic Teaching", presentations at "Salon de l'étudiant", visit of high school students in the team (M. Giraud, M. Pupin, M. Salson, J.-S. Varré, R. Chikhi, V. Leclère)

CAGIRE Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

Member [RM] of the steering committee of the Special Interest Group "Turbulence Modelling" (SIG-15) of ERCOFTAC (European Research COmmittee for Flow, Turbulence and Combustion) that organizes a series of international workshops dedicated to cross-comparisons of the results of turbulence models and experimental/DNS databases.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees
- *Intl Symp. Turbulence, Heat and Mass Transfer* [RM]
- *Intl. Symp. Engineering Turbulence Modelling and Measurement* [RM]

10.1.2.2. Reviewer

This year, the team members have reviewed (6) contributions to the following conferences:
- ASME-GT Turbo Expo 2016 (Séoul, South Korea) (2) [PB]
- 6th Int. Symp. Hybrid RANS-LES models, 2016 (Strasbourg, France) (2) [RM]
- 36th IAHR World Congress, 2016 (The Hague, the Netherlands) (2) [RM]

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards
- International Journal of Aerospace Engineering: co-guest editor of the special issue "The Use of Multiperforated Liners in Gas Turbine and Aeroengine Combustion Systems" [0] ...[PB]
- Advisory Board of *International Journal of Heat and Fluid Flow* [RM]
- Advisory Board of *Flow, Turbulence and Combustion* [RM]

10.1.3.2. Reviewer - Reviewing Activities

During 2016, the team members reviewed (22) papers for the following journals:
- Aerospace Science and Technology (1) [PB]
- AIAA Journal (2) [RM]
- Compte Rendus Mécanique (1) [PB]
- Computers and Fluids (3) [PB] [VP]
- Energy and Buildings (1) [PB]
- Experiments in Fluids (1) [RM]
- Flow, Turbulence and Combustion (3) [RM]
- International Journal of Heat and Fluid Flow (2) [RM]
- Journal of Aerospace Lab (1) [PB]
- Journal of Computational Physics (1) [VP]
- Journal of Fluid Mechanics (1) [RM]
- Journal of Petroleum Science and Engineering (1) [PB]
- Nuclear Engineering and Design (2) [RM]
- Parallel Computing (1) [VP]
- Physics of Fluids (1) [RM]

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[0]https://www.hindawi.com/journals/ijae/osi/

10.1.4. Invited Talks

- Manceau, R., Progress in Hybrid Temporal LES (plenary lecture), Proc. 6th Symp. Hybrid RANS-LES Methods, Strasbourg, France, 2016

10.1.5. Research Administration

- Co-responsible for the organisation of the LMAP seminar [0] [JJ]
- Member of the LMAP council [PB]
- Member of the IPRA research federation council [RM]

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master : "Maths 2: Data analysis", 39h, M1 - Génie Pétrolier, Université de Pau et des Pays de l'Adour, Pau, France. [JJ]

Licence : "Stochastic simulations", 36h, L3 - MIASHS, Université de Pau et des Pays de l'Adour, Pau, France.[JJ]

Licence : "Linear regression and invariance analysis", 19h30, L3 - MIASHS, Université de Pau et des Pays de l'Adour, Pau, France.[JJ]

Master : "Finite volumes for hyperbolic systems and compressible fluid mechanics", 24h75, M2 - MMS, Université de Pau et des Pays de l'Adour, Pau, France. [VP]

Master : "Turbulence modelling" (in English), 27h30, M2 - International Master program Turbulence, Université de Poitiers/Ecole centrale de Lille, France. [RM]

Eng. 3 : "Industrial codes for CFD" (in English), 12h30, 3rd year of engineering school (M2), ENSMA, Poitiers, France. [RM]

Eng. 3 : "Advanced physics–Turbulence modelling for CFD", 16h, 3rd year of engineering school (M2), ENSGTI, France. [RM]

10.2.2. Supervision

PhD Jean-François Wald, Adaptive wall treatment for a second moment closure in the industrial context , Université de Pau et des Pays de l'Adour, France, defended 10 May 2016, Supervisor: [RM].

PhD in progress : Nurtoleu Shakhan, Modelling and simulation of supersonic jet in crossflow, University of Al Faraby (Almaty, Kazakhstan), started October 2013 (the thesis subject has been modified mid-2014)), Supervisor: A. Naïmanova and Co-Supervisor :[PB].

Young Engineer: Benjamin Lux, Implementation of h-p multigrid in Aerosol, Supervisor: [VP]

10.2.3. Juries

The participation in the following thesis juries is noted ("referee" in a French doctoral thesis jury is more or less equivalent to an external opponent in an Anglo-Saxon like PhD jury):

- PhD: F. Laurendeau, "Analyse expérimentale et modélisation numérique d'un actionneur plasma de type jet synthétique", University of Toulouse, France, 18 October 2016. Supervisors: G. Casalis and F. Chedevergne. [RM, referee]
- PhD: G. Arroyo-Callejo « Modélisation thermique avancée d'une paroi multi-perforée de chambre de combustion aéronautique avec dilution giratoire » University of Toulouse, France, 3 May 2016. Supervisor: P. Millan. [PB, referee]

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[0]http://lma-umr5142.univ-pau.fr/live/seminaires

- PhD: M. Nini, "Analysis of a novel hybrid RANS/LES technique based on Reynolds stress tensor reconstruction", Politecnico di Milano, Italy, 3 March 2016. Supervisors: Antonella Abba and Massimo Germano. [RM, referee]

- PhD: L. Labarrère "Étude théorique et numérique de la combustion à volume constant appliquée à la propulsion », University of Toulouse, France, 21 March 2016. Supervisor and co-supervisor: T. Poinsot et A. Dauptain. [PB]

- PhD: V. Popie « Modélisation asymptotique de la réponse acoustique de plaques perforées dans un cadre linéaire avec étude des effets visqueux », University of Toulouse, France, 14 January 2016. Supervisor and co-supervisor: S. Tordeux et E. Piot. [PB]

10.3. Popularization

- Unithé ou café, "Modelling and approximation in fluid mechanics", 21 June 2016, Inria BSO Center. [JJ]

CAIRN Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Selection

9.1.1.1. General Chair, Scientific Chair

E. Casseau was General Co-Chair of DASIP, Conference on Design and Architectures for Signal and Image Processing, October 12-14, 2016.

S. Derrien was Co-Chair of WRC, 10th HiPEAC Workshop on Reconfigurable Computing, January 18-20, 2016 (co-located with HiPEAC 2016).

T. Yuki was Co-Chair of IMPACT, 6th International Workshop on Polyhedral Compilation Techniques, January 18-20, 2016 (co-located with HiPEAC 2016).

9.1.1.2. Chair of Conference Program Committees

O. Sentieys was Track Chair at IEEE NEWCAS.

9.1.1.3. Member of the Conference Program Committees

D. Chillet was member of the technical program committee of HiPEAC RAPIDO, HiPEAC WRC, MCSoC, DCIS, ComPAS, DASIP, LP-EMS, ARC.

S. Derrien was a member of technical program committee of IEEE FPL and ARC conferences and of WRC and Impact workshops.

O. Sentieys was a member of technical program committee of IEEE/ACM DATE, IEEE FPL, ACM ENSSys, ACM SBCCI, IEEE ReConFig, CROWNCOM, FSP, FPGA4GPC.

T. Yuki was a member of technical program committee of SC'16, The International Conference for High Performance Computing, Networking, Storage and Analysis.

9.1.2. Journal

9.1.2.1. Member of the Editorial Boards

D. Chillet is member of the Editor Board of Journal of Real-Time Image Processing (JRTIP).

O. Sentieys is member of the editorial board of Journal of Low Power Electronics and International Journal of Distributed Sensor Networks.

A. Tisserand is Associate Editor of IEEE Transactions on Computers. He is a member of the editorial board of the International Journal of High Performance Systems Architecture, Inderscience.

9.1.3. Invited Talks

O. Sentieys gave an invited talk at FETCH (École d'hiver Francophone sur les Technologies de Conception des Systèmes embarqués Hétérogènes), Villard-de-Lans, France, in January 2016 on "Approximate Computing and Flexible Circuits for the IoT".

T. Yuki gave a half-day lecture at EJCP 2016, École Jeunes Chercheurs en Programmation, Lille.

T. Yuki gave an invited talk at University of Arizona in June 2016 on "Optimizing Compilers in High-Level Synthesis".

9.1.4. Leadership within the Scientific Community

D. Chillet is member of the Board of Directors of Gretsi Association.

F. Charot, O. Sentieys and A. Tisserand are members of the steering committee of a CNRS spring school for graduate students on embedded systems architectures and associated design tools (ARCHI).

O. Sentieys and A. Tisserand are members of the steering committee of a CNRS spring school for graduate students on low-power design (ECOFAC).

A. Tisserand is co-organizer and president of scientific council of Seminar on Security of Embedded Electronic Systems (IRISA-DGA).

O. Sentieys is a member of the steering committee of the GDR SOC-SIP.

9.1.5. *Scientific Expertise*

O. Sentieys served as a jury member in the EDAA Outstanding Dissertations Award (ODA).

9.2. Teaching - Supervision - Juries

9.2.1. *Teaching*

E. Casseau: signal processing, 16h, ENSSAT (L3)

E. Casseau: low power design, 6h, ENSSAT (M1)

E. Casseau: real time design methodology, 24h, ENSSAT (M1)

E. Casseau: computer architecture, 36h, ENSSAT (M1)

E. Casseau: system on chip and verification, 10h, Master by Research (SISEA) and ENSSAT (M2)

E. Casseau: high level synthesis, 12h, Master by Research (SISEA) and ENSSAT (M2)

E. Casseau: advanced processor architectures, 25h, Univ. of Science and Tech. of Hanoi (M2)

S. Derrien: component and system synthesis, 20h, Master by Research (MRI ISTIC) (M2)

S. Derrien: computer architecture, 12h, ENS Rennes (L3)

S. Derrien: computer architecture, 24h, ISTIC(L3)

S. Derrien: introduction to operating systems, 8h, ISTIC(M1)

S. Derrien: embedded architectures, 48h, ISTIC(M1)

S. Derrien: high-level synthesis, 6h, ISTIC(M1)

S. Derrien: software engineering project, 40h, ISTIC(M1)

F. Charot: processor architecture, 25h Univ. of Science and Tech. of Hanoi (M1)

D. Chillet: embedded processor architecture, 20h, ENSSAT (M1)

D. Chillet: multimedia processor architectures, 24h, ENSSAT (M2)

D. Chillet: low-power digital CMOS circuits, 6h, Telecom Bretagne (M2)

C. Killian: digital electronics, 62h, IUT Lannion (L1)

C. Killian: signal processing, 36h, IUT Lannion (L2)

C. Killian: automated measurements, 56h, IUT Lannion (L2)

C. Killian: measurement chain, 35h, IUT Lannion (L2)

C. Killian: embedded systems programming, 12h, IUT Lannion (L2)

C. Killian: automatic control, 9h, IUT Lannion (L2)

A. Kritikakou: computer architecture 1, 50h, ISTIC, Univ. Rennes 1 (L3)

A. Kritikakou: computer architecture 2, 50h, ISTIC, Univ. Rennes 1 (L3)

A. Kritikakou: operating systems 1, 24h, ISTIC, Univ. Rennes 1 (L3)

A. Kritikakou: operating systems 2, 64h, ISTIC, Univ. Rennes 1 (L3)

A. Kritikakou: multitasking operating systems, 45h, ISTIC, Univ. Rennes 1 (M1)

O. Sentieys: digital signal processing, 40h, ENSSAT (M1)

O. Sentieys: VLSI integrated circuit design, 40h, ENSSAT(M1)

O. Sentieys: high level synthesis, 16h, Master by Research (SISEA) and ENSSAT (M2)

A. Tisserand: multiprocessor architectures, 20h, ENSSAT and Master by Research (SISEA) (M2)

C. Wolinski: computer architectures, 92h, ESIR (L3)

C. Wolinski: design of embedded systems, 48h, ESIR (M1)

C. Wolinski: signal, image, architecture, 26h, ESIR (M1)

C. Wolinski: programmable architectures, 10h, ESIR (M1)

C. Wolinski: component and system synthesis, 10h, Master by Research (MRI ISTIC) (M2)

9.2.2. Teaching Responsibilities

C. Wolinski is the Director of ESIR.
S. Derrien is the responsible of the first year of the Master of Computer Science at ISTIC since Sep. 2012.
O. Sentieys is responsible of the "Embedded Systems" major of the SISEA Master by Research.
D. Chillet is the responsible of the ICT Master of University of Science and Technology of Hanoi.
C. Killian is the responsible of the second year of the Physical Measurement DUT at IUT of Lannion.

ENSSAT stands for *"École Nationale Supérieure des Sciences Appliquées et de Technologie"* and is an *"École d'Ingénieurs"* of the University of Rennes 1, located in Lannion.
ISTIC is the Electrical Engineering and Computer Science Department of the University of Rennes 1.
ESIR stands for *"École supérieure d'ingénieur de Rennes"* and is an *"École d'Ingénieurs"* of the University of Rennes 1, located in Rennes.

9.2.3. Supervision

PhD: Florent Berthier, Study and Design of an Ultra Low Power Asynchronous Core for Sensor Networks, Dec. 2016, O. Sentieys, E. Beigne.

PhD: Ali Hassan El-Moussawi, Performance/Accuracy Trade-Off in Automatic Parallelization for Embedded Many-Core Platforms, Dec. 2016, S. Derrien.

PhD: Jérémie Métairie, Reconfigurable Arithmetic Units for Secure Cryptoprocessors, May 2016, A. Tisserand, E. Casseau.

PhD in progress: Benjamin Barrois, Approximate Computing: a New Paradigm for Energy-Efficient Computing Architectures, Oct. 2014, O. Sentieys.

PhD in progress: Franck Bucheron, Secure Virtualization for Embedded Systems, Oct. 2011, A. Tisserand.

PhD in progress: Gaël Deest, Computing with Errors: Error-Tolerant Machine Code Generation for Unreliable Embedded Hardware, Oct. 2013, S. Derrien, O. Sentieys.

PhD in progress: Gabriel Gallin, Hardware Arithmetic Units and Crypto-Processor for Hyperelliptic Curves Cryptography, Oct. 2014, A. Tisserand.

PhD in progress: Aymen Gammoudi, New Visual Adaptive Real-Time OS for Embedded Multi-Core Architecture, Oct. 2015, D. Chillet, M.Khalgui.

PhD in progress: Mael Gueguen, Improving the performance and energy efficiency of complex heterogeneous manycore architectures with on-chip data mining, Nov. 2016, O. Sentieys, A. Termier.

PhD in progress: Xuan Chien Le, Indirect Monitoring in Self-Powered Wireless Sensor Networks for Smart Grid and Building Automation, Oct. 2013, O. Sentieys, B. Vrigneau.

PhD in progress: Audrey Lucas, Software support resistant to passive and active attacks for asymmetric cryptography on (very) small computation cores, Jan. 2016, A. Tisserand.

PhD in progress: Jiating, Luo, Communication protocol exploration in the context of 3D integration of multiprocessors interconnected by Optical Network-on-Chip with energy constraints, Nov. 2014, D. Chillet, C. Killian, S. Le-Beux.

PhD in progress: Genevieve Ndour, Approximate Computing with High Energy Efficiency for Internet of Things Applications, Apr. 2016, A. Tisserand, A. Molnos (CEA LETI).

PhD in progress: Joel Ortiz Sosa, Study and design of a digital baseband transceiver for wireless network-on-chip architectures, Nov. 2016, O. Sentieys, C. Roland (Lab-STICC).

PhD in progress: Kleanthis Papachatzopoulos, Predictable and fault-tolerant multicore architecture, Oct. 2016, A. Kritikakou, O. Sentieys.

PhD in progress: Tara Petric, Approximate@runtime: Playing with accuracy at run-time for low-power flexible circuits in IoT nodes, Nov. 2016, T. Yuki, O. Sentieys.

PhD in progress: Van Dung Pham, Design space exploration in the context of 3D integration of multiprocessors interconnected by Optical Network-on-Chip, Dec 2014, O. Sentieys, D. Chillet, C. Killian, S. Le-Beux.

PhD in progress: Rafail Psiakis, A Self-Healing Reconfigurable Accelerator Structure for Fault-Tolerant Multi-Cores, Oct. 2015, A. Kritikakou, O. Sentieys.

PhD in progress: Rengarajan Ragavan, Ultra-Low Power Reconfigurable Architectures for Computing and Control in Wireless Sensor Networks, Oct. 2013, O. Sentieys, C. Killian.

PhD in progress: Simon Rokicki, Hybrid Hardware/Software Dynamic Compilation for Adaptive Embedded Systems, Oct. 2015, S. Derrien.

PhD in progress: Baptiste Roux, Architectural Exploration of a Low-Power Flexible Radio Embedded on Drones, Oct. 2014, O. Sentieys, M. Gautier.

PhD in progress: Nicolas Roux, Sensor-aided Non-Intrusive Appliance Load Monitoring: Detecting Activity of Devices through Low-Cost Wireless Sensors, Oct. 2016, O. Sentieys, B. Vrigneau.

PhD in progress: Mai-Thanh Tran, Hardware Synthesis of Flexible and Reconfigurable Radio from High-Level Language Dedicated to Physical Layer of Wireless Systems, Oct. 2013, E. Casseau, M. Gautier.

CAMIN Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Christine Azevedo Coste was general chair of IFESS conference. http://ifess2016.inria.fr
M. Hayashibe is Co-Chair of IEEE Technical Committee on Human Movement Understanding at Robotics and Automation Society with E. Demircan (Univ. of Tokyo), D. Kulic (Univ. of Waterloo) and D. Oetomo (Univ. of Melbourne). https://sites.google.com/site/ieeehmu/

10.1.1.2. Member of the Organizing Committees

François Bonnetblanc, Mitsuhiro Hayashibe were membres of the IFESS organizing committee;

We organized the third European Computational Motor Control Summer School, June 26- July 2, 2016, Montpellier (Nicolas Schweighofer, Denis Mottet, Mitsuhiro Hayashibe) and Mitsuhiro Hayashibe organized Hands-on seminar for Friday July 1st. Motor Synergies. (AM : Andrea D'Avella, PM: Mitsuhiro Hayashibe)

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- David Guiraud was associate editor of Theme 6 (rehabilitation Engineering) at IEEE EMBC conference
- David Guiraud was member of the IFESS program committee
- François Bonnetblanc was member of the IFESS program committee
- David Andreu was member of the IFESS program committee
- Mitsuhiro Hayashibe was member of the IFESS program committee
- Daniel Simon, ETFA 2016 and ICINCO 2016
- Mitsuhiro Hayashibe was Associate Editor of IEEE ICRA'17 (International Conference on Robotics and Automation) in charge of handling reviews on 6 papers in Nov.2016.

10.1.2.2. Reviewer

- Christine Azevedo was reviewer for IFESS and Engineering in Medicine and Biology Conference conferences
- David Guiraud was reviewer for IFESS, IEEE EMBC conferences
- François Bonnetblanc was reviewer for the IFESS and IEEE EMBC conferences;
- Daniel Simon was reviewer for the ETFA, ICINCO and MED conferences;
- Karen Godary-Dejean was reviewer for the IROS conference

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

M. Hayashibe is member of the Editorial Board of the International Journal of Advanced Robotic Systems, in Rehabilitation Robotics. David Guiraud is member of the editorial board of Journal of Neural Engineering (JNE) M. Hayashibe is member of the Editorial Board of ROBOMECH Journal.

10.1.3.2. Reviewer - Reviewing Activities

- François Bonnetblanc was reviewer for Cerebral Cortex, Neuropsychologia, and for the Journal of Neurophysiology;
- David Guiraud was reviewer for IEEE TNSRE, IEEE TBME, JNE, MEP, IEEE TBIOCAS, JNER, IEEE TCSC, journals
- Christine Azevedo was reviewer for Gait and Posture, IEE Transactions on Robotics (TRO), Artificial Organs, IEEE Journal of Biomedical and Health Informatics, IEEE Transactions on Biomedical Engineering (TBME) and IEEE Transactions on Neural Systems and Rehabilitation Engineering (TNSRE) Journals

10.1.4. Invited Talks

Mitsuhiro Hayashibe gave 2 talks on "Personalized Neuroprosthetics" and " Synergetic Learning Control" for LSRO and BIOROB labs, EPFL respectively at October 2016 (Lausanne, Switzerland).
Mitsuhiro Hayashibe gave a talk on "Synergetic Learning Control Paradigm - Computational Motor Control Principle" at Workshop Human Motor Control and Learning (EUROMOV, Montpellier) on November 21th 2016. In this workshop, Prof. Mark L. Latash (Pennsylvania State University, USA) and Dr. Yen-Hsun Wu were also invited.
Christine Azevedo gave a talk on "Neuroprosthetics in functional assistance: from observation to artificial control of movement" at EUROMOV, Montpellier on November 10th 2016.
Christine Azevedo gave a lecture at the International Symposieum on Electrical Stimulation Applied to Assistive technologies at Brasilia University in May 2016
Christine Azevedo gave a lecture at Genoploys center in June 16th ithin RUREKA cycle of conferences

10.1.5. Leadership within the Scientific Community

Christine Azevedo Coste is member of the board of International Functional Electrical Stimulation Society.

10.1.6. Scientific Expertise

Karen Godary-Dejean is member of COSTI «Acquisition de données traitement et visualisation de données numériques – Mécatronique » at Transfert LR, and member of the tranfer commission at LIRMM.

10.1.7. Research Administration

Christine Azevedo Coste is member of Inria Evaluation Committee.
She is involved in the working group for DEFROST and CHROMA Inria teams creation.
David Guiraud is involved in the working group for BIOVISION Inria team creation.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- Master : Christine Azevedo, Ethics consideration in bioengineering research, 3h, M1, Master STIC SANTÉ, Montpellier University, France
- Master: Mitsuhiro Hayashibe, Neuroprotheses I and II (module coordinator), EMG and EEG signal processing and other rehabilitation modeling issues, 12h, Master STIC pour la Sante, Univ. de Montpellier, France;
- Master: Karen Godary-Dejean, computer engineering: embedded network, real time, DES (Discrete event system) modeling and control, dependability, formal validation, 230h, Polytech Montpellier.
- Master: David Guiraud, FES and Neuroprosthesis, M2 SMH, 12h, M1 and M2 Stic Santé 6h
- Master : D. Andreu, Software engineering, real time OS, discrete event systems, control architectures, networks, neuro-prosthesis, 200h, master and engineers degrees, Polytech Montpellier, France;

The team is leading 2 modules in Master Stic-Santé in Montpellier: Neuroprosthesis I (HMSN216) and II and (HMESN321). The objective is to initiate students to techniques used for the design of neuroprotheses in order to compensate for sensory motor deficiencies. This course aims at: investigating uses and needs for basic medical systems, as well as active and implantable ones and teaching of theoretical tools required for theirs understanding, settings and their conception (command, signal processing of physiological and physical signals, physical interfacing between living and artificial systems, bases in neurophysiology). Students will have to learn the following skills: electro- and neurophysiology bases required to understand active medical implantable systems, bases in signal processing, bases in embedded informatics and electronics, knowledge about sensory-motor functions and their deficiencies, bases on simulations and closed loop control for living and artificial systems.

10.2.2. Supervision

PhD defended on December 14th 2016 : Wafa Tigra, Assistance à la préhension par stimulation électrique fonctionnelle chez le patient tétraplégique, 01/10/2013, Christine Azevedo Coste, David Guiraud,

PhD defended on December 9th 2016 : Thomas Guiho, Évaluation de l'efficience de la stimulation électrique médullaire en vue de la restauration des fonctions urinaires et intestinales chez le patient lésé médullaire, 01/10/2013, David Guiraud, Christine Azevedo Coste

PhD in progress : Antony Boyer, Neuroplasticité et récupération dans les structures corticales et sous corticales distantes suite à une chirurgie éveillée des gliomes infiltrants de bas grades, 01/09/2016, François Bonnetblanc and Sofiane Ramdani.

PhD in progress : Marion Vincent, Mesures des potentiels évoqués par la stimulation électrique directe lors de la chirurgie éveillée des gliomes infiltrants de bas grades vers une compréhension des effets électrophysiologiques, 01/12/2013, François Bonnetblanc, David Guiraud and Hugues Duffau.

PhD in progress : Maxence Blond, Commande et modélisation d'un véhicule sous-marin, 18/01/2016, Daniel Simon, Vincent Creuze (LIRMM) and Ahmed Chemori (LIRMM).

PhD in progress : Ibrahim Merzoug, Validation formelle pour les systèmes embarqués critiques, Since Oct. 2014, K. Godary-Dejean and D. Andreu.

PhD in progress : Mélissa Dali, modèles de génération et de propagation de potentiel d'action neurla en condition de stimulation sélective multipolaire, since october 2014, David Guiraud and Olivier Rossel (up to july 2016).

PhD in progress : Benoît Sijobert, Stimulation électro-fonctionnelle pour l'assistance aux mouvements des membres inférieurs dans les situations de déficiences sensori-motrices, Since Dec. 2015, Christine Azevedo Coste and D. Andreu.

PhD in progress: Victor VAGNE, "Couplage de la Spectroscopie en proche infrarouge et de la stimulation Transcrânienne (NIRS-tDCS) à courant continu dans l'Evaluation diagnostique de l'ischémie cérébrale lors d'un AVC", Oct. 2016, M. Hayashibe, D. Guiraud, Vincent Costalat (CHU Montpellier) and Emmanuelle Le Bars (CHU Montpellier)

10.2.3. Juries

Daniel Simon was reviewer and member of the PhD jury of Wael Zouaoui (LAAS Toulouse, january 15, 2016).

Karen Godary-Dejean was member of the PhD jury of Louis Marie Givel,École Centrale de Nantes, december 16, 2016.

David Guiraud was reviewer of 2 PhD thesis at UTC and Univ. Of Toulon.

David Guiraud was member of the selection committee, CNU61, for an assistant professor position at the university of Nantes.

Christine Azevedo was member of the selection committee, Inria, Young graduate scientist ("CR2") in Paris.

David Andreu was reviewer and member of the PhD jury of Nicolas Gobillot, INPT Toulouse, april 29, 2016, and member of the PhD jury of Lotfi Jaiem, University of Montpellier, november 21, 2016.

10.3. Popularization

- Large cover in general media (radio, TV, newspapers) of Cybathlon project http://freewheels.inria.fr/

- Christine Azevedo presented Cybathlon project at DIRCOM Inria, Rocquencourt, in the context of Handicap national week.

- Christine Azevedo presented Freewheels experience at Carrefour du Pôle EUROBIOMED (Marseille).

- Christine Azevedo presented the job of researcher in secondary school Collège Léon Cordas (Montpellier)

<p style="text-align:center">**CAMUS Team**</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Member of the Conference Program Committees

Cédric Bastoul has been part of the program committee of IMPACT 2016 (International Workshop on Polyhedral Compilation Techniques), held in conjunction with the international conference HiPEAC 2016.

Philippe Clauss and Cédric Bastoul have been part of the program committee of IMPACT 2017 (International Workshop on Polyhedral Compilation Techniques), held in conjunction with the international conference HiPEAC 2017.

Alain Ketterlin has been part of the program committee of CGO 2016 (International Symposium on Code Generation and Optimization, http://cgo.org/cgo2016).

Cédric Bastoul and Vincent Loechner have been part of the program committee of both HIP3ES 2016 and HIP3ES 2017 (International Workshop on High Performance Energy Efficient Embedded Systems), held in conjunction with the international conference HiPEAC 2016 (resp. HiPEAC 2017).

Cédric Bastoul has been part of the program committee of PARMA+DITAM 2016 and PARMA+DITAM 2017 (Workshop on Parallel Programming and Run-Time Management Techniques for Many-core Architectures + Workshop on Design Tools and Architerctures for Multicore Embedded Computing Platforms), held in conjunction with HiPEAC 2016 (resp. HiPEAC 2017).

Cédric Bastoul has been part of the program committee of the international conference on Compiler Construction 2017 (CC'2017).

10.1.1.2. Reviewer

Philippe Clauss has been reviewer for the following conferences and workshops: IMPACT 2017 (International Workshop on Polyhedral Compilation Techniques), CC 2017 (International Conference on Compiler Construction).

Cédric Bastoul has been reviewer for the following international conferences and workshops: CC 2017 (International Conference on Compiler Construction), PARMA 2016 and 2017 (International Workshop on Parallel Programming and Run-Time Management Techniques for Many-core Architectures), IMPACT 2016 and 2017 (International Workshop on Polyhedral Compilation Techniques), HIP3ES 2016 and 2017 (International Workshop on High Performance Energy Efficient Embedded Systems).

Vincent Loechner has been reviewer for CC 2017 (International Conference on Compiler Construction), HIP3ES 2016 and 2017 (International Workshop on High Performance Energy Efficient Embedded Systems).

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

Since October 2001, J. Gustedt is Editor-in-Chief of the journal *Discrete Mathematics and Theoretical Computer Science* (DMTCS).

10.1.2.2. Reviewer - Reviewing Activities

Philippe Clauss has been reviewer for the following journals: ACM TACO (Transactions on Architecture and Code Optimization), Parallel Computing.

Cédric Bastoul has been reviewer for the *ACM Transactions on Parallel Computing International Journal* (TOPC).

Jens Gustedt has been reviewer for Theory of Computing Systems.

Vincent Loechner has been reviewer for *Computer Communications* (Elsevier).

10.1.3. Invited Talks

Philippe Clauss has been invited to present the framework Apollo at the Parallel Programming Laboratory of the University of Darmstadt, Germany, October the 28th.

Philippe Clauss has presented the framework Apollo at the COSI research group of the Colorado State University, Fort Collins, USA, July the 1st.

10.1.4. Scientific Expertise

Cédric Bastoul as been an expert for the French research ministry and the French finance ministry for the research tax credit programme.

Jens Gustedt served as expert for project evaluation for the Belgian FNRS, and as evaluator of the FEMTO-ST Lab, Besançon, for the French HCERES.

10.1.5. Standardization

Since Nov. 2014, Jens Gustedt is a member of the ISO working group SC22-WG14 for the standardization of the C programming language. He participates actively in the defect report processing, the planning of future versions of the standard, and publishes an ongoing document to track inconsistencies and improvements of the C threads interface.

This work on the C programming language also gave rise to the proposal of a language extension, Modular C. It has been used for the implementation of an efficient toolbox for *higher order automatic differenciation*, `arbogast`, see [18] and [19], which has been presented at the quadrennial conference of the domain, AD2016.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence : Philippe Clauss, Architecture des ordinateurs, 45h, Université de Strasbourg, France

Licence : Philippe Clauss, Systèmes d'exploitation, 40h, Université de Strasbourg, France

Master : Philippe Clauss, Compilation, 78h, Université de Strasbourg, France

Master : Philippe Clauss, Système et programmation temps-réel, 25h, Université de Strasbourg, France

Master : Philippe Clauss, Compilation avancée, 30h, Université de Strasbourg, France

Licence : Éric Violard, Programmation Fonctionnelle (licence informatique), 64h eq. TD, L2, Université de Strasbourg, France

Licence : Éric Violard, Architecture des Ordinateurs (licence informatique), 54h eq. TD, L2, Université de Strasbourg, France

Licence : Éric Violard, Logique et Programmation Logique (licence informatique), 34h eq. TD, L2, Université de Strasbourg, France

Licence : Éric Violard, Algorithmique et Structures de Données (licence mathématique), 39h eq. TD, L3, Université de Strasbourg, France

Licence : Éric Violard, Modèles de Calcul (licence informatique), 29h eq. TD, L1, Université de Strasbourg, France

Licence : Vincent Loechner, Systèmes d'exploitation, 51h, L2, Université de Strasbourg, France

Master : Vincent Loechner, parallélisme, 14h, M1, Université de Strasbourg, France

Master : Vincent Loechner, calcul parallèle, 32h, M1, Université de Strasbourg, France

Master : Vincent Loechner, langages interprétés, 37h, M1, Université de Strasbourg, France

Master : Vincent Loechner, OS embarqués, 31h, M2, Université de Strasbourg, France

Telecom Physique Strasbourg : Vincent Loechner, calcul parallèle, 20h, M2, Université de Strasbourg, France

Licence : Alain Ketterlin, Systèmes d'exploitation, 20h, Université de Strasbourg, France

Licence : Alain Ketterlin, Systèmes Concurrents, 24h, Université de Strasbourg, France

Licence : Alain Ketterlin, Réseaux et protocoles, 42h, Université de Strasbourg, France

Master : Alain Ketterlin, Compilation, 26h, Université de Strasbourg, France

Licence : Cédric Bastoul, Architecture, 68h, L1 (IUT), Université de Strasbourg, France

Licence : Cédric Bastoul, Operating Systems, 16h, L2, Université de Strasbourg, France

Licence : Cédric Bastoul, Concurrent Systems, 19h, L3, Université de Strasbourg, France

Master : Cédric Bastoul, Compiler Design, 48h, M1, Université de Strasbourg, France

Master : Cédric Bastoul, Parallelism, 16h, M1, Université de Strasbourg, France

Master : Cédric Bastoul, Introduction to Research, 7h, L3+M1, Université de Strasbourg, France

2nd year engineering school: Jens Gustedt, programmation avancée, 20h, ENSIIE Strasbourg, France

Licence : Jens Gustedt, systèmes concurrents, 20h, Université de Strasbourg, France

10.2.2. Supervision

PhD: Tomasz Buchert, Madynes team, *Orchestration of experiments on distributed systems*, since Oct 2011, defended on Jan 6 2016, Jens Gustedt & Lucas Nussbaum.

PhD: Juan Manuel Martinez Caamaño, *Fast and Flexible Compilation Techniques for Effective Speculative Polyhedral Parallelization*, September 29th 2016, Philippe Clauss and Philippe Helluy (IRMA lab., University of Strasbourg)

PhD: Michel Massaro, *Méthodes numériques pour les plasmas sur architectures multicœurs*, December 16th 2016, Philippe Helluy and Vincent Loechner

PhD: Lénaïc Bagnères, Adaptation automatique et semi-automatique des optimisations de programmes, September 30th, Christine Eisenbeis and Cédric Bastoul

PhD: Olexander Zinenko, Interactive Program Restructuring, November 25th 2016, Stéphane Huot and Cédric Bastoul

PhD in progress: Yann Barsamian, *Optimization and parallelization of particle and semi-Lagrangian methods for multi species plasma simulations*, since Oct 2014, Éric Violard

PhD in progress: Mariem Saied, *Ordered Read-Write Locks for Multicores and Accelerators*, since Nov 2013, Jens Gustedt & Gilles Muller.

PhD in progress: Daniel Salas, *Integration of the ORWL model into parallel applications for medical research*, since Mar 2015, Jens Gustedt & Isabelle Perseil.

PhD in progress: Nabil Hallou, *Dynamic binary optimizations*, since January 2013, Erven Rohou (PACAP team) and Philippe Clauss

PhD in progress: Harenome Ranaivoarivony-Razanajato, *Hierarchical Optimization and Parallelization*, September 2016, Vincent Loechner and Philippe Clauss

PhD in progress: Maxime Schmitt, *Automatic Generation of Adaptive Codes*, September 2016, Cédric Bastoul and Philippe Helluy

PhD in progress: Paul Godard, *Parallelization and Scalability of an Image Processing Pipeline for Professional Printing*, September 2016, Vincent Loechner and Cédric Bastoul

10.2.3. *Juries*

Philippe Clauss participated to the following PhD committees in 2016:

Date	Candidate	Place	Role
Jun. 30	Guillaume Iooss	Colorado State Univ., USA	Reviewer
Oct. 28	Zhen Li	Univ. Darmstadt, Germany	Reviewer
Sept. 29	Juan Manuel Martinez Caamaño	Univ. Strasbourg	Advisor
Dec. 14	Julien Pagès	Univ. Montpellier	Reviewer

Cédric Bastoul participated to the following PhD committees in 2016:

Date	Candidate	Place	Role
June 22	Abdul Memon	Paris-Saclay University	Reviewer
September 30	Lénaïc Bagnères	Paris-Saclay University	Advisor
November 18	Albert Saa	Universitat Autònoma de Barcelona	Reviewer
November 25	Oleksandr Zinenko	Paris-Saclay University	Advisor
November 30	Pierre Guillou	Paris Sciences et Lettres Research University	Reviewer

Vincent Loechner participated to the following PhD committees in 2016:

Date	Candidate	Place	Role
May 10	Arjun Suresh	Univ. Rennes 1	Examiner
December 16	Michel Massaro	Univ. Strasbourg	Co-advisor

Vincent Loechner was the president of the recruiting jury (*comité de sélection*) for an assistant professor position at the Department of Mathematics and Computer Science of the University of Strasbourg, during Spring 2016.

10.3. Popularization

Jens Gustedt is regularly blogging about efficient programming, in particular about the C programming language. He also is an active member of the stackoverflow community a technical Q&A site for programming and related subjects. A first complete online version of his book *Modern C*, to appear in 2017, has been accessed more than 10000 times on a single day.

CAPSID Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

Marie-Dominique Devignes is a member of the Steering Committee for the European Conference on Computational Biology (ECCB).

David Ritchie is a member of the Bureau of the GGMM (Groupe de Graphisme et Modélisation Moléculaire).

Marie-Dominique Devignes organised a workshop ("Atelier Santé") for the Fédération Charles Hermite ("Journée Enterprises", 21/01/2016).

9.1.1.2. Member of Organizing Committees

Marie-Dominique Devignes co-organised a workshop on Structural Modeling of Type IV Secretion Systems (PEPS workshop "Model-ICE", 13/12/2016).

9.1.2. Scientific Events Selection

9.1.2.1. Member of Conference Program Committees

Marie-Dominique Devignes was a member of the programme committee for KDIR-2016, ECCB-2016, and BIBM-2016.

9.1.2.2. Reviewer

David Ritchie was a reviewer for IJCAI-2016.

Marie-Dominique Devignes reviewed grant applications for the Medical Research Council (UK) and National Science Centre (Poland).

9.1.3. Journal

9.1.3.1. Member of Editorial Boards

David Ritchie is a member of the editorial board of Scientific Reports.

9.1.3.2. Reviewing Activities

The members of the team have reviewed manuscripts for *Algorithms for Molecular Biology, Bioinformatics, Current Opinion in Structural Biology, Journal of Biomedical Semantics, Journal of Computational Chemistry Journal of Chemical Information and Modeling, Journal of Molecular Recognition,* and *Proteins: Structure, Function & Bioinformatics.*

9.1.4. Invited Talks

David Ritchie gave a presentation at the *6th CAPRI Evaluation Meeting* in Tel Aviv.

9.1.5. Research Administration

Marie-Dominique Devignes is Chargée de Mission for the CyberBioHealth research axis at the LORIA and is a member of the "Comipers" recruitment committee for Inria Nancy – Grand Est.
David Ritchie is a member of the Commission de Mention Informatique (CMI) of the University of Lorraine's IAEM doctoral school, and is a member of the Bureau of the Project Committee for Inria Nancy – Grand Est.
Marie-Dominique Devignes was a member of the "Commission de spécialistes" for the recruitment of an associate professor in computer science at Telecom Nancy, Université de Lorraine, April-May 2016.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Sabeur Aridhi, *Programming Techniques and Tools,* 24 hours, L1, Telecom Nancy, Univ. Lorraine.

Licence: Sabeur Aridhi, *Big Data Hackathon,* 4 hours, L3, Telecom Nancy, Univ. Lorraine.

Licence: Marie-Dominique Devignes, *Relational Database Design and SQL,* 30 hours, L3, Telecom Nancy, Univ. Lorraine.

Master: Marie-Dominique Devignes, *Gene Discovery in Biological Databases,* 8 hours, M1, Univ. Lorraine.

9.2.2. Supervision

PhD in progress: Maria Elisa Ruiz Echartea, *Multi-component protein assembly using distance constraints,* 01/11/2016, David Ritchie.

PhD in progress: Gabin Personeni, *Exploration of linked open data in view of knowledge discovery. Application to the biomedical domain,* 01/10/2014, Marie-Dominique Devignes, Adrien Coulet.

PhD in progress: Seyed Ziaeddin Alborzi, *Large-scale exploration of 3D protein domain family binding sites,* 01/10/2014, David Ritchie, Marie-Dominique Devignes.

9.2.3. Juries

HDR: Olivier Dameron, *Ontology-based methods for analysing life science data,* Université de Rennes, 11/01/2016.

PhD: Minh-Son Phan, *Contribution á l'estimation de la similarité dans un ensemble de projections tomographiques non-orientées,* Université de Strasbourg, 07/10/2016, Pr Mohamed Tajine, Dr Étienne Baudrier, Dr Loïc Mazo.

PhD: Yassine Ghouzam, *Nouvelles approches pour l'analyse et la prédiction de la structure tridimensionnelle des protéines,* Université Paris 7, 18/10/2016, Dr Jean-Christophe Gelly.

PhD: Benoît Henry, *Probability theory applied to evolutionary biology,* Université de Lorraine, 17/11/2016, Dr Nicolas Champagnat, Dr David Ritchie.

PhD: Yoann Dufresne, *Algorithmique pour l'annotation automatique de peptides non ribosomiques,* Université de Lille, 01/12/2016, Pr Maude Pupin, Dr Laurent Noé.

9.3. Popularization

An article on our KBDOCK resource for studying protein-protein interactions was published in ERCIM News (edition 104, January 2016) [22].

The team made a presentation at the public "Cité Forum" in Nancy (01-02 Apr 2016).

CARAMBA Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organization

10.1.1.1. Member of the Organizing Committees

- Together with Anne-Lise Charbonnier (Inria Nancy – Grand Est), the Caramba team is organizing the "Journées Codage et Cryptographie 2017", whose objective is to regroup the French speaking community working on error-correcting codes and on cryptography. It is affiliated with the "Groupe de travail C2" of the GDR-IM.

10.1.2. Scientific Events Selection

10.1.2.1. Member of steering committees

- Pierrick Gaudry is a member of the steering committee of the Workshop on Elliptic Curve Cryptography (ECC).

10.1.2.2. Member of the Conference Program Committees

- Emmanuel Thomé was a member of the program committee of the 35th Annual International Conference on the Theory and Applications of Cryptographic Techniques (Eurocrypt 2016).
- Marine Minier was a member of the Program Committee of the conference MyCrypt 2016.
- Pierrick Gaudry was a member of the Program Committee of the conference Selected Areas in Cryptography SAC 2016 and of EUROCRYPT 2017.
- Paul Zimmermann was a member of the Program Committee of the International Workshop on the Arithmetic of Finite Fields (WAIFI 2016).

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Pierrick Gaudry is a member of the editorial board of the journal Applicable Algebra in Engineering, Communication and Computing.

10.1.3.2. Reviewer - Reviewing Activities

Members of the project-team did share in reviewing submissions to renowned conferences and journals. Actual publications venues are not disclosed for anonymity reasons.

10.1.4. Invited Talks

- Emmanuel Thomé was invited as a Distinguished Lecturer for the Computer and Information Security Seminar at the University of Pennsylvania in November 2016.
- Pierrick Gaudry was invited speaker at the YACC 2016 conference in Porquerolles, at the workshop "Mathematical Structures for Cryptography" in Leiden (Netherlands), and at the "Journées Aléa 2016" in Marseille.

10.1.5. Other committees

- Jérémie Detrey is chairing the *Commission des Utilisateurs des Moyens Informatiques* (CUMI) of the Inria Nancy – Grand Est research center.
- Emmanuel Thomé is a member of
  – the management committee for the research project "CPER Cyberentreprises" (co-chair).

      – the *Comité Local Hygiène, Sécurité, et Conditions de Travail* of the Inria Nancy – Grand Est research center.

- Pierrick Gaudry is vice-head of the *Commission de mention Informatique* of the *École doctorale IAEM* of the University of Lorraine;

- Pierre-Jean Spaenlehauer is a member of the *Commission développement technologique* (CDT) of the Inria Nancy – Grand Est research center.

- Paul Zimmermann is member of the Scientific Committee of the EXPLOR *Mésocentre*, and was member until August of the Inria Evaluation Board and the CoSI (*Commission Scientifique*).

10.1.6. Research Administration

- Laurent Grémy is a member of the *Conseil de laboratoire* of the Loria.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: Jérémie Detrey, *Sécurité des systèmes d'information*, 6 hours (practical sessions), M2 Informatique, Université de Lorraine, Faculté des sciences et technologies, Vandœuvre-les-Nancy, France.

Master: Pierre-Jean Spaenlehauer, *Introduction à la cryptographie*, 18h eq. TD, M1 Informatique, Université de Lorraine, Faculté des sciences et technologies, Vandœuvre-les-Nancy, France.

Master: Pierre-Jean Spaenlehauer, *Introduction à la sécurité des systèmes et à la cryptographie*, 32h eq. TD, M2 Mathématiques IMOI, Université de Lorraine, Faculté des sciences et technologies, Vandœuvre-les-Nancy, France.

Master: Emmanuel Thomé, *Introduction to Cryptography*, 12 hours (lectures), M1, Télécom Nancy, Villers-lès-Nancy, France.

Master: Emmanuel Thomé, *Cryptography and Security*, 20 hours (lectures + exercises), M2, Télécom Nancy and École des Mines de Nancy, France.

Licence: Jérémie Detrey, *Méthodologie*, 24 hours (practical sessions), L1, Université de Lorraine, Faculté des sciences et technologies, Vandœuvre-les-Nancy, France.

Licence: Jérémie Detrey, *Sécurité des applications Web*, 2 hours (lecture), L1, Université de Lorraine, IUT Charlemagne, Nancy, France.

Jérémie Detrey, *Introduction à la sécurité et à la cryptographie*, 10 hours (lectures) + 10 hours (tutorial sessions) + 10 hours (practical sessions), L3, Université de Lorraine, Faculté des sciences et technologies, Vandœuvre-les-Nancy, France.

Licence: Pierrick Gaudry, *Méthodologie*, 48 hours (practical sessions), L1, Université de Lorraine, Faculté des sciences et technologies, Vandœuvre-lès-Nancy, France.

10.2.2. Supervision

Internship: Nicolas Levy, *Algorithmes de factorisation d'entiers basés sur la structure des corps quadratiques réels*, L3 ÉNS Lyon, June-July, Pierre-Jean Spaenlehauer.

Internship: Joshua Peigner, *Factorisation d'idéaux pour l'implantation du crible algébrique*, ÉNS Rennes, June-July, Emmanuel Thomé.

Internship: Robin Fedele, *Consolidation de la couche Python de CADO-NFS*, Univ. Lorraine, May-June, Paul Zimmermann.

Internship: Élise Tasso, *Étude comparative de divers algorithmes de friabilisation*, Mines Nancy, October-June (1 day each week), Pierrick Gaudry.

Ph.D. in progress: Simon Abelard, *Comptage de points de courbes algébriques sur les corps finis et interactions avec les systèmes polynomiaux*, Univ. Lorraine; since Sep. 2015, Pierrick Gaudry & Pierre-Jean Spaenlehauer.

Ph.D. in progress: Svyatoslav Covanov, *Algorithmes de multiplication : complexité bilinéaire et méthodes asymptotiquement rapides*, since Sep. 2014, Jérémie Detrey et Emmanuel Thomé.

Ph.D. in progress: Laurent Grémy, *Analyse et optimisation d'algorithmes de cribles arithmétiques*, since Oct. 2013, Pierrick Gaudry & Marion Videau.

Ph.D. defended: Hugo Labrande, *Explicit computation of the Abel-Jacobi map and its inverse* [1], defended on November 14th, 2016.

10.2.3. Juries

Marine Minier: reviewer of the PhD *Implantation sécurisée de protocoles cryptographiques basés sur les codes correcteurs d'erreurs* by Tania Richmont defended at Univ. Jean Monnet Saint-Etienne, October 24th, 2016.

Pierrick Gaudry: reviewer of the PhD *Computational Aspects of Jacobians of Hyperelliptic Curves* by Alina Dudeanu defended at EPFL, Switzerland; member of the jury for the PhD of Florent Ulpat Rovetta (Marseille) and of Hugo Labrande (Nancy).

Emmanuel Thomé: reviewer (and president of jury) of the Habilitation Thesis *Contributions à la Résolution Algébrique et Applications en Cryptologie* by Guénaël Renault, defended at University Pierre et Marie Curie, December 8th, 2016.

Emmanuel Thomé: jury member (advisor) for the PhD of Hugo Labrande (see above).

10.3. Popularization

- Laurent Grémy and Pierre-Jean Spaenlehauer have animated a stand in the "Village des Sciences du Loria" in March 2016.

- Laurent Grémy and Pierre-Jean Spaenlehauer have animated a stand during the celebration of the Loria's 40 years anniversary in June 2016.

- Pierrick Gaudry organized and participated to a debate fed by excerpts from movies on the topic of cryptography and privacy in October 2016.

<p style="text-align:center;color:red;font-weight:bold;font-size:large;">CARDAMOM Project-Team</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

> H. Beaugendre: Numerical workshop for the STORM European project, Inria Bordeaux, France, November 2016
>
> M. Colin: Congress JEF, dedicated to young researchers in PDE analysis and applications, Bordeaux, France, March 2016
>
> M. Ricchiuto : International workshop B'WAVES 2016, Bergen, Norway, June 2016 (https://project.inria.fr/ tsunamischool2016/)
>
> M. Ricchiuto : TANDEM and Defis Littoral Tsunami School, Bordeaux, France, April 2016 (http://www.uib. no/en/bwaves2016)
>
> M. Ricchiuto : Verification, Validation et Quantification des incertitudes en simulation numerique (VVUQ), Aristote seminar cycles, Ecole Polytechnique, France, November 2016 (http://www.association-aristote.fr/ doku.php/association-aristote.fr_doku.php_simulation)

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

> P.M. Congedo : NICFD 2016 Conference, Varenna, Italy, October 2016.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

> Mathieu Colin is a member of the board of the journal Applications and Applied Mathematics: An International Journal (AAM)
>
> Mario Ricchiuto is member of the editorial board of *Computers & Fluids (Elsevier)*, and of *GEM - International Journal on Geomathematics (Springer)*
>
> A special issue of the European Journal of Mechanics / B Fluids will be dedicated to the 2 editions of the international workshop B'Waves on wave breaking, held in 2014 in Bordeaux (M. Colin and M. Ricchiuto as co-organizers), and in 2016 in Bergen (M. Ricchiuto as co-organizer). M. Colin and M. Ricchiuto will be guest editors of this issue

9.1.3.2. Reviewer - Reviewing Activities

We reviewed papers for top international journals in the main scientific themes of the team : journal of Computational Physics, Computer Methods in Applied Mechanics and Engineering, Optimization and Engineering, International Journal of Numerical Methods in Fluids, Physics of Fluids, Journal of Marine Science and Technology, Engineering Applications of Computational Fluid Mechanics, Computers and Fluids, International Journal of Modelling and Simulation in Engineering Aircraft Engineering and Aerospace Technology, International Journal of Computational Fluid Dynamics, Applications and applied mathematics : An international journal, Discrete and Continuous Dynamical Systems - Series A, Electronic Journal of Differential Equations, Calculus of Variations and Partial Differential Equations, Nonlinear Analysis: Modelling and Control, Advanced Nonlinear Studies, Communications on Pure and Applied Analysis, Communications in Computational Physics, Nonlinearity, Applications and Applied Mathematics: An International Journal, Journal of Differential Equations, Analysis and Mathematical Physics.

9.1.4. Invited Talks

- P.M. Congedo, Presentation at Journees Scientifiques Inria, June 2016, Rennes
- P.M. Congedo, "General introduction to Uncertainty Quantification", CNES, March 2016, Toulouse
- M. Kazolea, "Wave breaking in Boussinesq free sruface models", International Workshop B'Waves2016, Bergen (Norway)
- M. Ricchiuto, "Numerical issues in tsunami simulation: dispersion and diffusion ?scales?, what order of accuracy ?", TANDEM and Defis Littoral 2016 Tsunami school, Bordeaux

9.1.5. Leadership within the Scientific Community

P.M. Congedo has been appointed as the Co-Director of the Inria International Lab Inria-CWI.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Cécile Dobrzynski, Langages en Fortran 90, 54h, L3, ENSEIRB-MATMÉCA, FRANCE

Master : Héloïse Beaugendre, TP langage C++, 48h, M1, ENSEIRB-MATMÉCA, FRANCE

Master : Héloïse Beaugendre, Calcul Haute Performance (OpenMP-MPI), 40h, M1, ENSEIRB-MATMÉCA et Université de Bordeaux, France

Master : Héloïse Beaugendre, Initiation librairie MPI, 12h, M2, Ecole de Technologie Superieure, Université du Québec, Montréal, Canada

Master : Héloïse Beaugendre, Responsable de filière de 3ème année, 15h, M2, ENSEIRB-MATMÉCA, France

Master : Héloïse Beaugendre, Calcul parallèle (MPI), 78h, M2, ENSEIRB-MATMÉCA, France

Master : Héloïse Beaugendre, Encadrement de projets de la filière Calcul Haute Performance, 11h, M2, ENSEIRB-MATMÉCA, France

Master : Héloïse Beaugendre , Projet fin d'études, 4h, M2, ENSEIRB-MATMÉCA, FRANCE

Master : Mathieu Colin : Integration, M1, 54h, ENSEIRB-MATMÉCA, FRANCE

Master : Mathieu Colin : PDE, M2, 30h, ENSEIRB-MATMÉCA, FRANCE

Master : Mathieu Colin : Fortran 90, M1, 44h, ENSEIRB-MATMÉCA, FRANCE

Master : Mathieu Colin : PDE, M1, 28h, University of Bordeaux, FRANCE

Master : Mathieu Colin : Analysis, L1, 47h, ENSEIRB-MATMÉCA, FRANCE

Master: Luc Mieussens, Transport de particules : modèles, simulation, et applications, 24h, M2, ENSEIRB-MATMECA, France

Master : Luc Mieussens, Projet fin d'études, 4h, M2, ENSEIRB-MATMÉCA, FRANCE

Doctorat : P.M. Congedo, Uncertainty quantification, theory and application to algorithms, CFD and global change, Apr 2015, CERFACS, Toulouse, France, 4h.

Master : Mario Ricchiuto : Fluid Dynamics II, 20h, ENSEIRB-MATMÉCA, FRANCE

Master : Mario Ricchiuto, Encadrement de projets TER, 10h, ENSEIRB-MATMÉCA, FRANCE

9.2.2. Supervision

HdR : Héloise Beaugendre, Contributions à la simulation numérique des écoulements fluides : exemples en milieu poreux et en aéronautique , Bordeaux University, 18 March 2016.

PhD : Fusi Francesca, Stochastic robust optimization of a helicopter rotor airfoil, March 2016.

PhD : Bellec Stevan, Discrete asymptotic modelling of free surface flows, 5 October 2016.

PhD : Viville Quentin, Construction d'une méthode hp-adaptative pour les schémas aux Résidus Distribués, Bordeaux University, 22 November 2016.

PhD: Filippini Andrea, Nonlinear finite element Boussinesq modelling of non-hydrostatic free surface flows, 14 December 2016.

PhD: Nouveau Léo, Adaptative Residual Based Schemes for Solving the Penalized Navier-Stokes Equations with Moving Bodies - Application to Ice Shedding Trajectories, Bordeaux University, 16 December 2016.

PhD in progress : Arpaia Luca, Continuous mesh deformation and coupling with uncertainty quantification for coastal inundation problems, started in March 2014.

PhD in progress : Bosi, Umberto, ALE spectral element Boussinesq modelling of wave energy converters, started in November 2015

PhD in progress : Cortesi Andrea, Predictive numerical simulation for rebuilding freestream conditions in atmospheric entry flows, started in October 2014.

PhD in progress: Lin Xi, Asymptotic modelling of incompressible reactive flows in self-healing composites, started in October 2014.

PhD in progress: Perrot Gregory, Physico-chemical modelling of self-healing ceramic composites, started in October 2011.

PhD in progress : Peluchon Simon, Approximation numérique et modélisation de l'ablation différentielle de deux matériaux: application à l'ablation liquide. Started in December 2014. Advisor: Luc Mieussens. PhD hosted in CEA-CESTA.

PhD in progress: Aurore Fallourd, Modeling and Simulation of inflight de-icing systems, Started in October 2016.

PhD in progress: Guillaume Jeanmasson, Explicit methods with local time stepping for the simulation of unsteady turbulent flows. Started in October 2016. Advisor: Luc Mieussens. Hosted in ONERA Châtillon.

PhD in progress: Francois Sanson, Uncertainty propagation in a system of codes, started in February 2016.

PhD in progress: Nassim Razaaly, Robust optimization of ORC systems, started in February 2016.

9.2.3. *Juries*

P.M. Congedo : Rapporteur de thèse de Elio Bufi, ENSAM Paris Tech, December 2016.

CARMEN Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- 6th international conference on "Computational Surgery," Bordeaux, May 2016 (Y. Coudière).
- The annual workshop of IHU Liryc, Bordeaux, October 2016 (Y. Coudière).

N. Zemzemi organized a mini-symposium intitled "Imaging and inverse modeling" in PICOF 2016, from 01/06/2016 to 03/06/2016. Autrans, France.

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

- 6th international conference on "Computational Surgery," Bordeaux, May 2016 (Y. Coudière).
- CARI 2016 (N. Zemzemi)

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

M. Potse: associate editor of Frontiers in Cardiac Electrophysiology.

9.1.3.2. Reviewer - Reviewing activities

M. Potse: Heart Rhythm, IEEE Transactions on Biomedical Engineering, Medical & Biological Engineering & Computing, Journal of Electrocardiology.

Y. Coudière: Journal of computational and applied mathematics, PLOS ONE, SMAI Journal of Computational Mathematics

N. Zemzemi: Inverse Problems, Europace, Inverse Problems in Science and Engineering

9.1.4. Invited Talks

M. Bendahmane: Université Qadi Ayyad, IST d'Essaouira (Morocco), April 2016

M. Bendahmane: University of Oslo (Norway), October 2016.

Y. Coudière: University of Ottawa (Canada), February 2016.

N. Zemzemi gave a course in the CIMPA research school: "Modelling and simulating the electrical activity of the heart Direct and Inverse problems". From 04/10 to 10/10 2016. Tunis, Tunisia.

N. Zemzemi: Course on the electrophysiology modelling: Forward and Inverse problems.Ecole doctorale de mathématique. Faculté des sciences de Tunis. From 10/01/2016 to 15/01/2016. Tunis, Tunisia.

M. Potse gave an invited presentation titled "Visualization of 3D Lead Fields" at the 43rd International Congress on Electrocardiology.

9.1.5. Leadership within the Scientific Community

M. Potse is council member of the International Society of Electrocardiology.

9.1.6. Scientific Expertise

Y. Coudière:

- ATER committee for Université de Bordeaux
- Reviewer PhD Thesis of P.-L. Colin, Université Lille 1, 27/06/2016
- Reviewer HDR Thesis of M. Sermesant, Université de Nice Sophia-Antipolis, 09/06/2016
- SNF (Swiss National Science foundation)

9.1.7. Research Administration

Y. Coudière:

- Scientific responsability of the IMB (CNRS UMR 5251) team "Calcul Scientifique et Modélisation," 60 persons.
- Responsible for the scientific communication (*Chargé de mission à l'animation scientifique*) of the IMB

N. Zemzemi: Administration of the Inria associated team Epicard (section 8.4.1.1).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

DUT : P. E. Bécue, Introduction to modelling and Principal Component Analysis, 43 hours, level N/A, IUT Orsay, France

DUT : P. E. Bécue, Object Oriented Programming with java, 9 hours, level N/A, IUT Orsay, France

9.2.2. Supervision

PhD : A. Davidović, "Multiscale Mathematical Modeling of Structural Heterogeneities in Cardiac Electrophysiology," Université de Bordeaux, 9 December 2016, supervised by Y. Coudière.

PhD in progress: P. E. Bécue, "Modélisation et simulation numérique de l'électrophysiologie cardiaque à l'échelle microscopique," started 1 October 2014, supervised by F. Caro, M. Potse, and Y. Coudière.

PhD in progress: C. Douanla Lontsi, "Schémas d'ordre élevé pour des simulations réalistes en électrophysiologie cardiaque," started 1 November 2014, supervised by Y. Coudière.

PhD in progress: A. Gérard, "Modèles numériques personnalisés de la fibrillation auriculaire," started 1 September 2015, supervised by Y. Coudière.

9.2.3. Juries

M. Bendahmane was a jury member (*rapporteur*) for the PhD thesis of Jamila Lassoued (*Université de Tunis*).

9.3. Popularization

The Carmen team has responded to a call of Cap'Maths in 2014 on dissemination and popularization of mathematics destined for young pupils, the general public, and (future) mathematical professionals. For this project, G. Ravon and Y. Coudière developed a *serious game* called Heart Attack. The game is destined for middle and high school students as an introduction to mathematical modeling. The principal goal of the game is to illustrate the notion of numerical modeling in medical research, and in particular in cardiac rhythmology. The player takes the role of a scientist having developed a numerical model for the electrical activity of the heart and tries to learn how to prevent an arrhythmia. A secondary goal is to teach about the electrical activation mechanism of the heart.

Integrating scientific simulations in an interactive website is challenging because of the constraints imposed by a web-based framework. As a result of this project we have learned a great deal about such developement and about the collaboration with professional web developers.

CARTE Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. General Chair, Scientific Chair

Nazim Fatès was a co-organiser of ACA'16 (Fourth International Workshop on Asynchronous Cellular Automata and Asynchronous Discrete Models), a workshop which was held during the ACRI 2016 conference, Fez (Morocco), September 8, 2016.

8.1.2. Scientific Events Selection

8.1.2.1. Member of the Conference Program Committees

- Nazim Fatès was member of the Program Committees of ANTS'16 (10th International Conference on Swarm Intelligence), AUTOMATA'16 (22nd International Workshop on Cellular Automata and Discrete Complex Systems) and ACRI'16 (12th International conference on Cellular Automata for Research and Industry).
- Emmanuel Hainry was member of the Program Committee of Developments in Implicit Computational Complexity (DICE) 2016.
- Mathieu Hoyrup was member of the Program Committee of Computability and Complexity in Analysis (CCA) 2016.
- Romain Péchoux was member of the Program Committee of Ressource Aware Computation (RAC) 2016.
- Simon Perdrix was member of the Program Committees of QPL'16 Quantum Physics and Logic, and IQFA'16 7th IQFA's Colloquium.

8.1.2.2. Reviewer

- Emmanuel Hainry reviewed articles for DICE and ICALP.
- Mathieu Hoyrup reviewed articles for ICALP and STACS.
- Emmanuel Jeandel reviewed articles for STACS and MFCS.
- Romain Péchoux reviewed articles for FOSSACS, ISMVL, RAC, LFA and STACS

8.1.3. Journal

8.1.3.1. Member of the Editorial Boards

- Nazim Fatès is a member of the editorial board of the *Journal of cellular automata*.
- Emmanuel Jeandel is member of the editorial board of RAIRO-ITA

8.1.3.2. Reviewer - Reviewing Activities

- Nazim Fatès reviewed articles for *Natural Computing*, the *Journal of statistical physics*, *Advanced in Complex systems*, the *Journal of cellular automata*.
- Emmanuel Hainry reviewed an article for Applicable Analysis and Discrete Mathematics.
- Mathieu Hoyrup reviewed articles for Bulletin of Symbolic Logic, Memoirs of the American Mathematical Society, Transactions of the American Mathematical Society.
- Emmanuel Jeandel reviewed articles for Advances in Mathematics, Journal of Discrete Algorithms and Ergodic Theory and Dynamical Systems.
- Romain Péchoux reviewed articles for AMS Mathematical Review, Information & Computation.

- Simon Perdrix reviewed articles for Quantum Information and Computation.

8.1.4. Invited Talks

- Mathieu Hoyrup was invited to give a talk in the special session "Constructive and computable analysis" of the conference Computability in Europe (CiE) in Paris, June 2016.
- Emmanuel Jeandel gave a talk for the national days of GDR-IM.

8.1.5. Leadership within the Scientific Community

- Nazim Fatès is the vice-chair of the IFIP working group 1.05 on Cellular Automata and Discrete Complex Systems.
- Simon Perdrix co-organised the quantum software workshop during the one-day event on quantum Technologies at the french Ministry of Research (July 5, 2016).

8.1.6. Scientific Expertise

- Emmanuel Jeandel reviewed projects for Agence Nationale de la Recherche

8.1.7. Research Administration

Isabelle Gnaedig is:

- vice-leader of the team CARTE,
- member of the scientific mediation committee at Inria Nancy Grand-Est.

Emmanuel Hainry is:

- member of the CNU (Conseil National des Universités), Section 27.
- organizer of the CARTE Seminar.
- examiner for the admission exam of ENS and École Polytechnique.

Mathieu Hoyrup is:

- principal investigator of a PHC Imhotep with Walid Gomaa (Alexandria E-Just University).
- organizer of the Formal Methods Seminar at Loria.

Simon Perdrix:

- is responsible of GT IQ (groupe de travail Informatique quantique) at the CNRS GdR IM (groupe de recherche Informatique Mathématique).
- has been elected member and scientific secretary at CoNRS (Comité National de la Recherche Scientifique) section 6.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence:

- Isabelle Gnaedig
    - To the limits of the computable, 6 hours, Opening course-conference of the collegium "Lorraine INP", Nancy France
- Emmanuel Hainry
    - Systèmes d'exploitation, 30h, L1, IUT Nancy Brabois, Université de Lorraine, France
    - Algorithmique, 40h, L1, IUT Nancy Brabois, Université de Lorraine, France
    - Web dynamique, 60h, L1, IUT Nancy Brabois, Université de Lorraine, France
    - Bases de données, 30h, L1, IUT Nancy Brabois, Université de Lorraine, France

- Programmation objet, 12h, L2, IUT Nancy Braboi, Université de Lorraine, Frances
- Complexité, 30h, L2, IUT Nancy Brabois, Université de Lorraine, France
- Mathieu Hoyrup
  - Bases de la Programmation Orientée Objet, 20 HETD, L2, Université de Lorraine, France
  - Interfaces Graphiques, 10 HETD, L2, Université de Lorraine, France
- Emmanuel Jeandel
  - Algorithmics and Programming 1, 60h, L1 Maths-Info
  - Algorithmics and Programming 4, 30h, L3 Informatique
  - Modelling Using Graph Theory, 30h, L3 Informatique
  - Networking, 15h, L3 Informatique
  - Data Compression, 45h, L2 Informatique
- Romain Péchoux
  - Programmation orientée objet, 61,5h, L3 MIASHS
  - Programmation orientée objet, 53,5h, L2 MIASHS
  - Outils logiques pour l'informatique, 35h, L1 MIASHS
  - Bases de données, 40h, L3 Sciences de la Gestion
  - Algorithmic complexity, 30h, L3 MIAGE, IGA Casablanca, Morocco.

Master:

- Nazim Fatès
  - Systèmes complexes adaptatifs, 15h ETD, M2, UL, France.
  - Agents intelligents et collectifs, 22h ETD, M1, UL, France.
- Isabelle Gnaedig
  - Design of Safe Software, Coordination of the module, M2, Telecom-Nancy (Université de Lorraine), Nancy, France,
  - Rule-based Programming, 20 hours, M2, Telecom-Nancy (Université de Lorraine), Nancy, France.
- Emmanuel Hainry
  - Complexity and Complex Systems, 12h, M2, FST, Université de Lorraine, France
- Emmanuel Jeandel
  - Algorithmics and Complexity, 30h, M1 Informatique
  - Combinatorial Optimization, 36h, M1 Informatique
- Romain Péchoux
  - Mathematics for computer science, 30h, M1 SCA
  - Advanced Java, 52,5h, M1 MIAGE
  - Implicit Complexity, 15h, M2 Informatique
- Simon Perfrix
  - Pépites Algorithmiques, 6h, M1/M2 at Ecole des Mines de Nancy.

8.2.2. Supervision

- Emmanuel Jeandel and Simon Perdrix supervised the Master Thesis of Renaud Vilmart on ZX-calculs, and the Master Thesis of Arinta Auza-Primandini on quantum circuits with memory.

- Emmanuel Jeandel and Simon Perdrix are advisors of Renaud Vilmart, PhD student (UL) since October 2016.
- Romain Péchoux is coadvisor of Pierre Mercuriali, PhD student, Université de Lorraine (50%, advisor: Miguel Couceiro, PR, Université de Lorraine).

8.2.3. Juries

- Mathieu Hoyrup participated in the jury of the PhD of Ludovic Patey, Université Paris Diderot, February 26.
- Emmanuel Jeandel reviewed the PhD thesis of Rodrigo Torres (Universidad de Concepción, Chile) in January, and participated in the PhD defense of Benoît Chappet de Vangel, Université de Lorraine, November 14th.

8.3. Popularization

Nazim Fatès contributed to the collective book *Lettres à Turing* (ed. Thierry Marchaisse, May 2016), which addresses the legacy of Turing in our Modern Times. He was invited to discuss this book and the question of artificial intelligence in three national radio programs:

- France Culture, La marche des sciences, "Cher alan Turing", 1 hour, with Aurélie Luneau, 23 June 2016.
- RFI, Autour de la question, "Que devons-nous à Alan Turing?", 1 hour, with Sophie Joubert, 24 June 2016.
- RFI, Autour de la question, "Jusqu'où ira l'intelligence artificielle?", 1 hour, with Sophie Joubert, 7 October 2016.

Nazim Fatès participated to an open discussion (table ronde) on the theme of artificial intelligence ("Intelligence artificielle : quel monde prépare-t-elle ?"), invitation by the Cercle universitaire of Enghien-les-bains, on the 27th of Septembre in Enghien-les-bains. He was interviewed by Eric Chaverou, journalist at France Culture for his radio program of May 20, 2016, on the theme: "L'intelligence artificielle made in France". This interview is available on the website of the radio program or directly via soundcloud. He participated to a public debate on the theme "Jusqu'où ira l'intelligence artificielle ?" the Café des sciences et techniques, organised by the CNAM, in Épinal, 21 January 2016.

<h1 style="color:red; text-align:center">CASCADE Project-Team</h1>

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. Events and Activities

- a regular seminar is organized: http://www.di.ens.fr/CryptoSeminaire.html
- quarterly Paris Crypto Days (https://pariscryptoday.github.io) supported by CryptoCloud and aS-CEND
- working group on lattices (http://perso.ens-lyon.fr/damien.stehle/LATTICE_MEETINGS.html), joint with ENS Lyon
- BibTeX database of papers related to Cryptography, open and widely used by the community (https://cryptobib.di.ens.fr)

8.1.1.2. Steering Committees of International Conferences

- steering committee of CANS: David Pointcheval
- steering committee of PKC: David Pointcheval
- steering committee of LATINCRYPT: Michel Abdalla (chair)
- steering committee of PAIRING: Michel Abdalla

8.1.1.3. Other Steering Committees

- steering committee of the Coding and Cryptography working group (GT-C2 - https://crypto.di.ens.fr/c2:main) of the *Groupe de Recherche Informatique Mathématique* (GDR-IM): Damien Vergnaud is the Head of this steering committee

8.1.1.4. Board of International Organisations

- Board of the *International Association for Cryptologic Research* (IACR): Michel Abdalla (2013 – 2018), David Pointcheval (2008–2016)

8.1.2. Scientific Events Selection

8.1.2.1. Program Committee Chair

- Africacrypt '16 – 13-15 April (Fes, Morocco): David Pointcheval

8.1.2.2. Program Committee Member

- Financial Crypto '16 – 22–26 February (Barbados): Damien Vergnaud
- PKC '16 – 6-9 March (Taiwan): David Pointcheval
- Africacrypt '16 – 13-15 April (Fes, Morocco): Georg Fuchsbauer
- Eurocrypt '16 – 8-12 May (Vienna, Austria): Michel Abdalla and Georg Fuchsbauer
- AsiaPKC 2016 – 30 May 30 - 03 June (Xi'an, China): Damien Vergnaud
- Crypto '16 – 14-18 August (Santa Barbara, California, USA): David Pointcheval
- ACM CCS '16 – 24-28 October (Vienna, Austria): Hoeteck Wee
- ProvSec '16 – 10-12 November (Nanjing, China): Georg Fuchsbauer
- CANS '16 – 14-16 November (Milan, Italy): Georg Fuchsbauer
- Asiacrypt '16 – 4-8 December (Hanoi, Vietnam): Georg Fuchsbauer

8.1.3. Editorial Boards of Journals

Editor-in-Chief

– of the *International Journal of Applied Cryptography (IJACT)* – Inderscience Publishers: David Pointcheval

Associate Editor

– of *IET Information Security*: Michel Abdalla

– of *ETRI Journal*: Michel Abdalla

– of *Applicable Algebra in Engineering, Communication and Computing*: David Pointcheval

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Master: David Pointcheval, Jacques Stern, Damien Vergnaud, Introduction to Cryptology, M1, ENS

- Master: Michel Abdalla, David Pointcheval, Cryptography, M2, MPRI

- Master: Damien Vergnaud, Advanced Algebra and Applications to Cryptography, Ecole Centrale Paris

- Master: David Pointcheval, Cryptography, M2, ESIEA

- IACR-SEAMS School on "Cryptography: Foundations and New Directions": David Pointcheval

8.2.2. Defenses

- PhD: Adrian Thillard, Counter-measures against side-channel attacks and secure multi-party computation, ENS, December 12th, 2016 (Supervisor: Damien Vergnaud)

- PhD: Alain Passelègue, Algebraic Frameworks for Pseudorandom Functions, ENS, December 9th, 2016 (Supervisor: Michel Abdalla)

- PhD: Mario Cornejo, Security for the cloud, ENS, November 17th, 2016 (Supervisor: Michel Abdalla)

- HdR: Hoeteck Wee, Advances in Functional Encryption, ENS, July 1st, 2016

- PhD: Fabrice Ben Hamouda, Diverse Modules and Zero-Knowledge, ENS, July 1st, 2016 (Supervisors: Michel Abdalla & David Pointcheval)

8.2.3. Supervision

- PhD in progress: Raphael Bost, Symmetric Searchable Encryption, from 2014, David Pointcheval (with Pierre-Alain Fouque, at Rennes)

- PhD in progress: Florian Bourse, Encryption Schemes for the Cloud, from 2014, Michel Abdalla & David Pointcheval

- PhD in progress: Geoffroy Couteau, Efficient secure two-party computation for the Cloud, from 2014, David Pointcheval & Hoeteck Wee

- PhD in progress: Rafael Del Pino, Lattice-Based Cryptography – Complexity and Ideal-Lattices, from 2014, Vadim Lyubashevsky

- PhD in progress: Pierrick Meaux, Lattice-Based Cryptography – Advanced Features, from 2014, Vadim Lyubashevsky

- PhD in progress: Thierry Mefenza Nountu, Number-Theoretic Study of Pseudorandom Cryptographic Primitives, from 2014, Damien Vergnaud

- PhD in progress: Aurélien Dupin, Multi-Party Computations, from 2015, David Pointcheval (with Christophe Bidan, at Rennes)

- PhD in progress: Pierre-Alain Dupont, Secure Communications, from 2015, David Pointcheval

- PhD in progress: Romain Gay, Functional Encryption, from 2015, Michel Abdalla & Hoeteck Wee

- PhD in progress: Dahmun Gourdazi, Secure and Fast Cryptographic Implementation for Embedded Devices, from 2015, Damien Vergnaud

- PhD in progress: Louiza Khati, Disk Encryption Modes, from 2015, Damien Vergnaud

- PhD in progress: Michele Minelli, Increased efficiency and functionality through lattice-based cryptography, from 2015, Michel Abdalla & Hoeteck Wee

- PhD in progress: Anca Nitulescu, Verifiable Outsourced Computations, from 2015, David Pointcheval

- PhD in progress: Razvan Rosie, Practical Functional Encryption Schemes For the Cloud, from 2015, Michel Abdalla & Hoeteck Wee

- PhD in progress: Quentin Santos, Advanced Cryptography from a Blockchain, from 2015, David Pointcheval

- PhD in progress: Jérémy Chotard, Attribute-Based Encryption, from 2016, David Pointcheval (with Duong Hieu Phan, at Limoges)

- PhD in progress: Michele Orrù, Functional Encryption, from 2016, Hoeteck Wee & Georg Fuchs-bauer

8.2.4. Juries

- PhD Adrian Thillard. *Countermeasures to side-channel attacks and secure multi-party computation* – ENS – France, December 12th, 2016: Damien Vergnaud (supervisor)

- PhD Alain Passelègue. *Algebraic Frameworks for Pseudorandom Functions* – ENS – France, December 9th, 2016: Michel Abdalla (supervisor)

- PhD Mario Cornejo. *Security for the cloud* – ENS – France, November 17th, 2016: Michel Abdalla (supervisor), David Pointcheval

- PhD Christian Janson. *On the Verification of Computation and Data Retrievability* – Royal Holloway University of London – UK, October 11th, 2016: Michel Abdalla

- PhD Brice Minaud. *Analyse de primitives cryptographiques récentes* – Université Rennes I – France, October 7th, 2016: David Pointcheval

- PhD Houda Ferradi. *Integrity, Authentication and Confidentiality in Public-Key Cryptography* – ENS – France, September 22nd, 2016: Michel Abdalla

- HdR Hoeteck Wee. *Advances in Functional Encryption* – ENS – France, July 1st, 2016: Michel Abdalla, David Pointcheval

- PhD Fabrice Ben Hamouda. *Diverse Modules and Zero-Knowledge* – ENS – France, July 1st, 2016: Michel Abdalla & David Pointcheval (supervisors)

- PhD Alberto Battistello. *On the security of embedded systems against physical attacks* – UVSQ – France, June 29th, 2016: David Pointcheval

- PhD Antoine Delignat-Lavaud. *On the Security of Authentication Protocol for the Web* – ENS – France, March 14th, 2016: David Pointcheval

- PhD Rémy Chrétien. *Automated analysis of equivalence properties for cryptographic protocols* – ENS Cachan – January 11th, 2016: David Pointcheval

CASTOR Project-Team

7. Dissemination

7.1. Promoting Scientific Activities

7.1.1. Scientific Events Organisation

7.1.1.1. Member of the Organizing Committees

- D. Auroux, C. Boulbe and L. Busé (Aromath - Inria) have organized a SEME (Semaine d'Etudes Maths-Entreprises) under the initiative of AMIES.
    - Project proposed by Option Way, Optis, Thales Alenia Space, Wever, Exact Cure
    - 25-29 Juanary 2016, Campus Sophia Tech (Inria, Univ. Nice Sophia Antipolis)
    - http://math.unice.fr/~auroux/SEME/
- From April 12th to 15th 2016, CASTOR (Boniface Nkonga, Hervé Guillard, Afeintou Sangam) has organized in Sophia Antipolis, the annual user meeting of the Jorek code that has gathered 25 plasma specialists around the development of this code dedicated to MHD studies in Tokamaks.
- Minisymposium: Numerical Methods for Magnetohydrodynamics/Méthodes numériques pour les équations de la magnétohydrodynamique, CANUM 2016, 43e Congrès National d'Analyse Numérique, Obernai, France, May 09-13, 2016.

  The simulation of electrical conducting fluids relies on numerical methods from computational fluid dynamics and computational electrodynamics. As the underlying magnetohydrodynamic (MHD) models are non-standard coupled systems of non-linear partial differential equations, the main ingredients of numerical solution methods such as preconditioners, iteration schemes and stability require special attention. Moreover, in many applications such as plasmas, where we have no unique canonical MHD formulation in terms of PDEs, the development of numerical methods goes hand in hand with modelling: the models depend on the time and length scales of interest, but particular variations can avoid pitfalls in the numerical simulation.

  In this minisymposium we gathered talks from different application areas. Contributions included numerical analysis and computational methods for both established MHD models as well as specialized models for applications in plasma physics:
    - José Costa, CASTOR, Inria, SAM: High order stabilized finite element method for MHD and Reduced-MHD plasma modelling
    - Emmanuel Franck, Inria NANCY GRAND EST: Analyse des préconditionneurs physiques pour les équations d'Euler et de la MHD linéarisée
    - Céline Caldini-Queiros, MPI Garching: Couplage de modèles MHD et cinétiques dans des géométries complexes
    - Tahar Boulmezaoud, Université de Versailles: Equilibres magnétohydrostatiques et champs force-free

7.1.2. Journal

7.1.2.1. Member of the Editorial Boards

- C. Boulbe is layout editor of the free journal SMAI-Journal of Computational Mathematics.
- J. Blum is member of
    - the editorial board of the Journal of Scientific Computing (JSC),
    - the scientific commitee of the collection "Mathématiques et Statistiques" of the ISTE publications,

– editor in chief of the ISTE Open Science journal: "Mathématiques appliquées et stochastiques".

7.1.2.2. Reviewer - Reviewing Activities

H. Guillard is reviewer for several journals including

- Journal of computational physics
- Computers and Fluids

7.1.3. Invited Talks

- J. Blum, The use of optimal control theory for equilibrium identification and optimization of plasma scenarios, Swiss Plasma Center, EPFL, Switzerland, November 28, 2016
- H.Heumann, Control methods for the optimization of plasma scenarios in a tokamak. Oberseminar Scientific Computing, University Würzburg, Würzburg, Germany, November 14, 2016
- H.Heumann, Numerical methods for tokamak plasma equilibrium evolution at the resistive diffusion timescale, Zurich Colloquium in Applied and Computational Mathematics, ETH Zurich, Zurich, Switzerland, March 16, 2016
- H.Heumann, Free-Boundary Axisymmetric Plasma Equilibria: Computational Methods and Applications , Theory Group Seminar, Princeton Plasma Physcis Laboratory, Princeton, USA, March 3, 2016
- H.Heumann, Quasi-static Free-Boundary Equilibrium of Toroidal Plasma: Computational Methods and Applications, Magneto-fluid dynamics seminar, Courant Institut, New York University, New York, USA, February 23, 2016

7.1.4. Leadership within the Scientific Community

- J. Blum is:
    - a member of the scientific committee of Academy 1 of UCA-IDEX JEDI: «Networks, Information and Digital society»,
    - member of the "bureau" and the director committee of the Fédération FR-FCM (Fédération de Recherche Fusion par Confinement Magnétique - ITER).
- H. Guillard is coordinator of the topic "Turbulence and transport of edge plasma" within the Fédération FR-FCM
- C. Boulbe is task coordinator of the ACT2: Free boundary equilibrium and Control within the Eurofusion WPCD workpackage.
- B. Nkonga is chairman of the GAMNI ("Groupe pour l'Avancement des Méthodes Numériques de l'Ingénieur"), group of the SMAI.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Ecole d'ingénieur: D. Auroux, Optimisation, 66h, M1, Polytech Nice, Université de Nice Sophia Antipolis, France

Ecole d'ingénieur: D. Auroux, Méthodes numériques, 36h, M2, Polytech Nice Sophia, Université de Nice Sophia Antipolis, France

Ecole d'ingenieur: D. Auroux, Projet, 35h, L3, Polytech Nice Sophia Antipolis, France

Master: B. Faugeras, Optimisation, 18h, M1, Université de Nice Sophia Antipolis, France

Master: J. Blum, Optimisation et contrôle, 20h, M2, Université de Nice Sophia Antipolis, France

Master: J. Blum, Optimisation, 18h, M1, Université de Nice Sophia Antipolis, France

Ecole d'ingénieur: J. Blum, Commande Optimale, 37.5h, M2, Polytech Nice Sophia, Université de Nice Sophia Antipolis, France

Ecole d'ingénieur: C. Boulbe, Analyse Numérique, 71.5h, L3, Polytech Nice Sophia Antipolis, France

Ecole d'ingenieur: C. Boulbe, Méthodes numériques - EDP, 66h, M1, Polytech Nice Sophia Antipolis, France

Ecole d'ingenieur: C. Boulbe, Projet, 35h, L3, Polytech Nice Sophia Antipolis, France

Licence: S. Minjeaud, module Eléments de calcul différentiel, 18 h, L3, Université de Nice Sophia Antipolis, France.

Master: S. Minjeaud, module Méthodes numériques en EDP, 36 h, M1, Université de Nice Sophia Antipolis, France.

Master: S. Minjeaud, module Analyse et simulations numériques pour les EDP, 20 h, M2, Université de Nice Sophia Antipolis, France.

Master: S. Minjeaud, module Simulations numériques des problèmes d'évolution, 20 h, M2, Université de Nice Sophia Antipolis, France.

Master: S. Minjeaud, Méthodes numériques en EDP, 18 h, M1, Université de Nice Sophia Antipolis, France.

Master: B. Nkonga, Analyse Numérique, 40h, M1, Université de Nice Sophia Antipolis, France

Ecole d'ingénieur/Master: B. Nkonga, Méthode des éléments finis, 24h, M2, Polytech Nice Sophia, France

Ecole d'ingénieur/Master: B. Nkonga, Eléments finis mixtes, 24h, M2, Polytech Nice Sophia, France

Ecole d'ingénieur/Master: B. Nkonga, Scilab, 28h, L3, Polytech Nice Sophia, France

Licence: A. Sangam, Analyse, 40h, L1, Université Nice Sophia Antipolis, France

Licence: A. Sangam, Modélisation, 10h, L1, Université Nice Sophia Antipolis, France

Licence: A. Sangam, Analyse, 50h, L2, Université Nice Sophia Antipolis, France

Licence: A. Sangam, Méthodes Numériques et Formelles, 40h, L2, Université Nice Sophia Antipolis, France

Licence: A. Sangam, Mathématiques Appliquées, 50h, L3, Université de Nice Sophia Antipolis, France

Master: A. Sangam, Introduction to Finite Elements, 25h, M1, Université Nice Sophia Antipolis, France

7.2.2. Supervision

- PhD in progress: E. Estibals, "MHD réduite: Modélisation et Simulation numérique utilisant des éléments finis stabilisés d'ordre élevé sur un maillage courbe non-structuré. Application à l'injection de glaçons et de masse dans ITER", 15th october 2013, Hervé Guillard, Afeintou Sangam.

- PhD in progress : X. Song, "Model based control oriented scenario construction in Tokamak", october 2016, Blaise Faugeras, Holger Heumann.

- PhD in progress : J. Llobell, "Schémas numériques sur grilles décalées pour la dynamique des gaz", October 1st 2015, T. Goudon, S. Minjeaud.

7.2.3. Juries

R. Pasquetti was in the following juries:

- HdR : Pascal Henri Biwole, Université Côte d'Azur,

- PhD : Benjamin Gaume, Université d'Evry Val-d'Essonne.

B. Nkonga was referee in the following juries:

- HdR: Jérôme Breil, Université de Bordeaux,
- PhD: Quentin Viville, Université de Bordeaux,
- PhD: Sara Pavan, Université Paris-Est.

H. Guillard was in the PhD jury thesis of

- PhD: José Costa, Université Côte d'Azur.
- PhD:: Léo Nouveau, Université de Bordeaux.

J. Blum was in the PhD jury thesis of

- PhD: Vladimir Groza, Université Côte d'Azur,
- PhD: Bienvenu Youmbi, Université Côte d'Azur,
- PhD: Michel Massaro, Université de Strasbourg.

7.3. Popularization

J. Blum has been invited to a dinner-conference organized by the Rotary Club of Grenoble Sud.
Title of the talk: "L'énergie de demain, ITER un soleil miniature?"

CEDAR Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Selection

9.1.1.1. Chair of Conference Program Committees

Y. Diao has been the Program Committee Chair of the ACM Symposium on Cloud Computing (SoCC) 2016, Chair of the ACM Symposium on Cloud Computing, October 2016 and Chair of the Inaugural Paris Big Data Summit, March 2016.

I. Manolescu has been the Program Committee Chair of the International Conference on Scientific and Statistical Database Management (SSDBM) 2016, and the Vision Papers track chair in the Extending Database Technologies (EDBT) conference 2016.

9.1.1.2. Member of the Conference Program Committees

- I. Manolescu has been a member of program committee of the IEEE Conference on Data Engineering (ICDE) 2016, of the Workshop on Data Engineering for the Semantic Web (DESWeb, in conjunction with ICDE) 2016 and of the Workshop on Semantic Big Data (SBD) 2016 in conjunction with the ACM SIGMOD conference.
- M. Thomazo has been member of the PC of ICCS'16, IJCAI'16 and PRIMA'16.

9.1.1.3. Reviewer

- M. Thomazo has reviewed for RR'16, VLDB'16 and ICDT'17.

9.1.2. Journal

9.1.2.1. Member of the Editorial Boards

- Y. Diao is Editor-in-Chief of the ACM SIGMOD Record, Associate Editor of ACM Transactions on Databases (TODS) and Editor of the Proceedings of Very Large Databases (PVLDB), 2016
- I. Manolescu has been an Associate Editor for the ACM Transactions of the Web (TWeb) and a member of the editorial board of PVLDB 2016.

9.1.2.2. Reviewer - Reviewing Activities

- Y. Diao has reviewed for the EDBT vision track
- I. Manolescu has reviewed for the ACM Transactions on Database Systems (TODS).
- M. Thomazo has reviewed for the Journal of Web Semantics.

9.1.3. Invited Talks

- I. Manolescu has given an invited talk "Estocada: Flexible Hybrid Stores" at the INESC institute in Portugal.
- I. Manolescu has given an invited talk "CliqueSquare: Flat Plans for Massively Parallel RDF Queries" at the Aalborg University, in Denmark.
- M. Thomazo has presented FactMinder, a tool developed in the prequel of Cedar, to a panel of computer scientists and journalists at the Tech&Check event organized by Duke University

9.1.4. Leadership within the Scientific Community

I. Manolescu has been a coordinator of Task 1 (Scalable and Secure Data Processing) of the DataSense axis of the DigiCosme Labex (*Laboratoire d'Excellence*). I. Manolescu has been a member of the ACM SIGMOD Jim Gray PhD Award Committee, of the IEEE TCDE Awards Committee. She has also been a member of the EDBT (Extending Database Technology) Association and of the Steering Committee of BDA (*Bases de Données Avancées*). I. Manolescu has joined the Board of Trustees of the Proceedings of VLDB (PVLDB) Endowment in 2016.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Master: Y. Diao has taught the course "Systems for Big Data Analytics" in the Data Science Master Program of Université Paris Saclay
- Master: I. Manolescu, Architectures for Massive Data Management, 30h, M2, Université Paris-Saclay, France.
- Master: I. Manolescu, Database Management Systems, 52h, M1, École Polytechnique, France.
- Doctorat: I. Manolescu, Scalable Tools for Linked Data Analytics, 20h, Aalborg University, Denmark.
- Master: M. Thomazo, Database Management Systems, 20h, M1, École Polytechnique, France
- Master: M. Thomazo, Introduction to Big Data Systems, 40h, M2, Université Paris-Saclay, France

9.2.2. Supervision

Raphael Bonaque: "Structured, Social and Semantic Search", Université Paris Saclay, September 30, 2016, Bogdan Cautiş, François Goasdoué, and Ioana Manolescu.

Damian Bursztyn: "Scalable Techniques for Web Data Management", December 15, 2016, François Goasdoué and Ioana Manolescu.

Tien Duc Cao: "Extraction et interconnexion de connaissances appliquée aux données journalistiques", since October 2016, Ioana Manolescu and Xavier Tannier (LIMSI/CNRS and Université de Paris Sud)

Sejla Čebirić: "CloudSelect: Data Mobility Within, Across and Outside Clouds", since September 2015, F. Goasdoué and I. Manolescu.

Enhui Huang: Interactive Data Exploration at Scale, since October 2016, Y. Diao.

Y. Diao has as well supervised 5-10 students each semester for the 3A research project and been mentor and chair of the defense of 17 student summer internship projects.

9.2.3. Juries

I. Manolescu has been a member of the PhD committee of Raphaël Bonaque and Damian Burstzyn, and a referee and jury member for the PhD of Gonçalo Simões at INESC-ID, Portugal.

9.3. Popularization

- M. Thomazo has presented a game based on RDF graphs and social networks as part of Fête de la Science in Inria Saclay, in October.
- The ANR ContentCheck project on **content management techniques for journalistic fact-checking** has attracted news attention in a series of general-audience articles published by Ouest France, Le Devoir (Canada), Rue89, Le Monde, Inria and CNRS, among others:
    - http://www.ouest-france.fr/leditiondusoir/data/569/reader/reader.html#!preferred/1/package/569/pub/570/page/8
    - http://www.ledevoir.com/politique/canada/450937/sur-la-piste-du-mensonge
    - http://rue89.nouvelobs.com/2015/10/26/algorithmes-antimensonge-fin-bobards-politique-261827
    - http://data.blog.lemonde.fr/2015/10/23/le-fact-checking-peut-il-sautomatiser/
    - http://www.inria.fr/centre/saclay/actualites/un-logiciel-de-fact-checking-pour-comprendre-le-monde-qui-nous-entoure
    - https://lejournal.cnrs.fr/articles/un-logiciel-qui-decrypte-la-politique

The project has also lead to an interview by Science Po students studying in the Communication Master of the school, around automated fact-checking topics: https://inciviveritas.wordpress.com/menu-page/lautomatisation-du-fact-checking/.

CELTIQUE Project-Team

6. Dissemination

6.1. Promoting Scientific Activities

6.1.1. Scientific Events Organisation

6.1.1.1. General Chair, Scientific Chair

- PLMW@SPLASH 2016 (Programming Languages Mentoring Workshop) was chaired by Sandrine Blazy and Ulrik Prag-Schultz
- CoqPL 2017 (International Workshop on Coq for PL) was chaired by Sandrine Blazy and Emilio Jesus Gallego Arias

6.1.1.2. Member of the Organizing Committees

- JFLA 2016 (Journées Francophones des Langages Applicatifs) was locally organized by Julien Signoles and Alan Schmitt

6.1.2. Scientific Events Selection

6.1.2.1. Chair of Conference Program Committees

- VSTTE 2016 (Verified Software: Theories, Tools, and Experiments) was chaired by Sandrine Blazy and Marsha Chechik

6.1.2.2. Member of the Conference Program Committees

- CoqPL 2017 (International Workshop on Coq for PL) : Sandrine Blazy
- CPP 2017 (ACM SIGPLAN Conference on Certified Programs and Proofs) : Delphine Demange
- POPL 2017 (Symposium on Principles of Programming Languages) : Delphine Demange (External Program Committee)
- ESOP 2017 (European Symposium on Programming) : David Pichardie
- CC 2017 (International Conference on Compiler Construction) : David Pichardie
- IFL 2016 (International symposium on Implementation and application of Functional Languages) : Sandrine Blazy
- APLAS 2016 (Asian Symposium on Programming Languages and Systems) : Sandrine Blazy
- VSTTE 2016 (Verified Software: Theories, Tools, and Experiments) : Sandrine Blazy, Frédéric Besson
- GPCE 2016 (Generative Programming: Concepts & Experiences) : Sandrine Blazy
- DS@STAF 2016 (Doctoral Symposium) : Sandrine Blazy
- CPP 2016 (Certified Proofs and Programs) : Sandrine Blazy
- HaTT 2016 (International Workshop - Hammers for Type Theories) : Frédéric Besson
- AFADL 2016 (Approches Formelles dans l'Assistance au Développement de Logiciels) : Sandrine Blazy
- iFM 2016 (International Conference on integrated Formal Methods) : Delphine Demange
- FTfJP 2016 (Workshop on Formal Techniques for Java-like Programs) : Delphine Demange
- IFIP SEC 2016 (31st International Conference on ICT Systems Security and Privacy) : Thomas Jensen

6.1.2.3. Reviewer

- POPL 2017 (Symposium on Principles of Programming Languages): Alan Schmitt

- ESOP 2017 (European Symposium on Programming): Alan Schmitt
- VMCAI 2017 (International Conference on Verification, Model Checking, and Abstract Interpretation) : Delphine Demange

6.1.3. Journal

6.1.3.1. Reviewer - Reviewing Activities

- Journal of Software Evolution and Process: Sandrine Blazy
- International Journal of Computer Mathematics: Alan Schmitt
- Science of Computer Programming: Alan Schmitt

6.1.4. Invited Talks

- Journées nationales 2016 GDR Informatique Mathématique : Delphine Demange

6.1.5. Leadership within the Scientific Community

- Thomas Jensen is director of the Department NUMERIC of informatics, mathematics and electrical engineering at University Bretagne Loire.
- Thomas Jensen is leader of the security track of the LABEX Comin Labs.

6.1.6. Scientific Expertise

- Sandrine Blazy: expertise of 1 ANR project.
- Thomas Jensen: expertise of full project proposals for the ANR.

6.1.7. Research Administration

- Sandrine Blazy is member of Section 6 of the national committee for scientific research CoNRS from Sept. 2016.
- Sandrine Blazy is coordinator of the LTP (Languages, Types, Proofs) group of the French GDR GPL.

6.2. Teaching - Supervision - Juries

6.2.1. Teaching

Licence : Sandrine Blazy, Functional programming, 30h, L3, Université Rennes 1, France

Licence: Delphine Demange, Software Engineering, 40h, L2, Université de Rennes 1, France

Licence: Delphine Demange, Functional Programming, 75h, L1, Université de Rennes 1, France

Licence: Thomas Genet, Software Engineering, 58h, L2, Université de Rennes 1 / Istic, France

Licence : Alan Schmitt, Programmation Fonctionnelle, 72h (2 semestres), L3, Insa Rennes, France

Licence : David Pichardie, Algorithms, 36h, L3, ENS Rennes, France

Licence : David Cachera, Logic, 36h, L3, ENS Rennes, France

Master : Sandrine Blazy, Méthodes Formelles pour le développement de logiciels sûrs, 53h, M1, Université Rennes 1, France

Master : Thomas Genet, Formal Design and Verification, 108h, M1, Université de Rennes 1 / Istic, France

Master : Thomas Genet, Cryptographic Protocols, 24h, M2, Université de Rennes 1 / Istic, France

Master : David Pichardie, Mechanized Semantics, 15h, M2, Université Rennes 1, France

Master : Sandrine Blazy, Mechanized Semantics, 15h, M2, Université Rennes 1, France

Master : Sandrine Blazy, Semantics, 24h, M1, Université Rennes 1, France

Master : David Cachera, Semantics, 24h, M1, Université Rennes 1, France

Master : Sandrine Blazy, Software vulnerabilities, 20h, M2, Université Rennes 1, France

Master : Delphine Demange, Software Security, 9h, M2, Université Rennes 1, France

Master : Thomas Jensen, Program analysis and Software Security, 36h, M2, Université Rennes 1, France.

6.2.2. Supervision

PhD in progress : Alexandre Dang, Compiler for security, Octobre 2016, Thomas Jensen and Frédéric Besson

PhD in progress : Julien Lepiller, Binary Validation of Software Fault Isolation, Octobre 2016, Thomas Jensen and Frédéric Besson

PhD in progress : Gurvan Cabon, Analyse non locale certifiée en JavaScript grâce à une sémantique annotée, 1st september 2015, Alan Schmitt

PhD in progress : Florent Saudel, Vulnerability discovery, November 2015, Sandrine Blazy, Frédéric Besson and Dimitri Kirchner (Amossys)

PhD in progress : Alix Trieu, Formally verified compilation and static analysis, January 2016, Sandrine Blazy and David Pichardie

PhD in progress: David Bühler, Communication between analyses by deductive verification and abstract interpretation, November 2013, Sandrine Blazy and Boris Yakobowski (CEA)

PhD in progress : Yon Fernandez De Retana, Verified Optimising Compiler for high-level languages, 1st september 2015, David Pichardie and Delphine Demange

PhD in progress : Yannick Zakowski, Programs Logics for Concurrency, 1st september 2014, David Pichardie and David Cachera

PhD in progress : Oana Andreescu, Static analysis of functional specifications, 1st September 2013, Thomas Jensen, Stéphane Lescuyer (Prove & Run)

PhD in progress: Pauline Bolignano, Modeling and abstraction of system software, 1st November 2013, Thomas Jensen, Vincent Silés (Prove & Run)

Pierre Wilke, Formally verified compilation of low-level C code, Sandrine Blazy and Frédéric Besson, defended Nov 2016

Martin Bodin, Certified Analyses of JavaScript, Thomas Jensen and Alan Schmitt, defended Nov 2016

6.2.3. Juries

Sandrine Blazy, jury member (reviewer) for the PhD defense of Stefania Dumbrava, December 2016, Paris-Sud University, France

Sandrine Blazy, jury member (reviewer) for the PhD defense of Léon Gondelman, December 2016, Paris-Sud University, France

Sandrine Blazy, jury member (president) for the PhD defense of Thomas Degueule, December 2016, Rennes 1 University, France

Sandrine Blazy, jury member (president) for the PhD defense of Arjun Suresh, May 2016, Rennes 1 University, France

Sandrine Blazy, jury member for the selection of Inria CR (researcher) candidates, March and April 2016, Inria, Saclay, France.

Sandrine Blazy, jury member for the selection of a professeur at University of Perpignan, May 2016, Perpignan, France.

Alan Schmitt, jury member for the selection of Inria CR (researcher) candidates, March and April 2016, Inria, Rennes, France.

Delphine Demange, jury member for the selection of a Maître de Conférences at University Paris Diderot (Paris 7) / IRIF, May 2016, Paris, France.

Alan Schmitt, jury member (reviewer) for the PhD defense of Régis Spadotti, May 2016, Université Toulouse III

Alan Schmitt, jury member (reviewer) for the HDR defense of Nicolas Tabareau, November 2016, Université de Nantes

Thomas Jensen, jury member (reviewer) for the PhD defense of Denis Martinez, February 2016, Université de Montpellier

Thomas Jensen, jury member for the PhD defense of Oliver Schwarz, October 2016, KTH, Stockholm, Sweden

Thomas Jensen, jury member (reviewer) for the PhD defense of Rabah Laouadi, December 2016, Université de Montpellier

David Pichardie, jury member for the PhD defense of Jacques-Henri Jourdan, May 2016, Université de Paris Diderot

6.3. Popularization

Talk "Bug, Virus, Intrusion, Pirates... So many threats and no defense? Yes... maths.", Thomas Genet, given three times in high schools close to Rennes.

<p style="text-align:center; color:red">**CHROMA Team**</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- O. Simonin was co-chair of the Workshop DEMUR "On-line decision-making in multi-robot coordination" at International Conf. RSS, Ann Arbor, University of Michigan, June 2016.
- O. Simonin was General chair of the 2eme Journée nationale Robotique & IA., Clermont-Ferrand, RFIA 2016, 27 juin 2016.
- C. Laugier, Ph. Martinet, C. Stiller and U. Nunes, organized a workshop entitled "8th Workshop on Planning, Perception and Navigation for Intelligent Vehicles - A bridge between Robotics and ITS technologies" at IEEE ITSC 2016, Rio de Janeiro, November 1st 2016 (about 90 attendees).
- C. Laugier has been appointed as Program co-chair for IEEE/RSJ IROS 2018 (Madrid) and General co-Chair of IEEE/RSJ IROS 2019 (Hong Kong).

10.1.1.2. Member of the Organizing Committees

- C. Laugier was Associate Editor for IEEE/RSJ IROS 2016, for IEEE ICRA 2016, and for IEEE ITSC 2016.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- Jilles S. Dibangoye was Program Committee member of the following conferences:
    - International Joint Conference on Artificial Intelligence (IJCAI)
    - Autonomous Agent and Multi-agent Systems International Conference (AAMAS)
- O. Simonin is Program Committee member for Autonomous Agent and Multi-agent Systems International Conference (AAMAS) Special Track Robotics.
- O. Simonin is Program Committee member of the JFSMA conference since 2008 (Journées Francophones sur les Systèmes Multi-Agents).

10.1.2.2. Reviewer

- A. Martinelli served, in quality of reviewer, at the following international conferences: ICRA 2016, IROS 2016, ACC 2016.
- O. Simonin served, in quality of reviewer, at the following international conferences : IROS 2016, ICRA 2016.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- C. Laugier is Member of the Steering Committee of the journal IEEE Transaction on Intelligent Vehicles.
- C. Laugier Senior Editor of the journal IEEE Transaction on Intelligent Vehicles.
- C. Laugier is member of the Editorial Board of the journal IEEE ROBOMECH
- O. Simonin is a member of the editorial board of RIA Revue d'Intelligence Artificielle.

10.1.3.2. Reviewer - Reviewing Activities

- A. Martinelli served, in quality of reviewer, for the following journals: Transaction on Automation Science and Engineering, IEEE Robotics and Automation Letters.
- Jilles S. Dibangoye served as a reviewer for the following journals: Journal on Artificial Intelligence Research (JAIR), Artificial Intelligence Journal (AIJ), IEEE Transactions on Robotics (TRO).
- O. Simonin serves, in quality of reviewer, for Autonomous Robots Journal (AURO) and the Revue d'Intelligence Artificielle (RIA).

10.1.4. Invited Talks

Anne Spalanzani was invited to give a talk at

- Xerox (Meylan), september 2016.
- the conference RFIA (Clermont Ferrand), June 2016.
- the journées scientifique d'Inria (Rennes), June 2016.

Agostino Martinelli was invited to give a talk at

- Centro Piaggio, University of Pisa, June 2016, "Nonlinear Unknown Input Observability: the General Analytic Solution".
- Automation Lab, University of Tor Vergata, Rome, December 2016, "Nonlinear Unknown Input Observability: the General Analytic Solution".
- Vision and Perception lab., University of Zurich, December 2016, "Visual-Inertial Sensor Fusion".

Christian Laugier was invited to give a talk at

- IEEE ICIT 2016, Session on Cognitive Systems and Automation for Service Robotics and Intelligent Mobility, Taipei, March 2016, "Bayesian Perception & Decision for Autonomous Vehicles and Mobile Robots".
- Mediatek International Company, Hsinchu, Taiwan, March 15th 2016, "Bayesian Perception Technologies and Industrial Applications".
- City-U Seminar, Hong Kong, April 22nd 2016, "Bayesian Perception & Decision for Autonomous vehicles and Mobile Robots".
- Robotics Symposium, CUHK, T-Stone Robotics Institute, Hong Kong, April 21-22 2016, "Embedded Bayesian Perception & Decision-making for Autonomous Mobility in Dynamic Human Environments".
- IEEE ARSO 2016, Plenary talk, Shanghai, July 2016, "Towards Fully Autonomous Driving ? The Perception & Decision-Making Bottleneck".

Olivier Simonin was invited to give a talk at

- Université de Babes-Bolyai, Cluj-Napoca, Romania, July 2016.
- Workshop SAMPEN, Lyon, Januray 27, 2016.
- Robotics Times Connect, Lyon, December 7, 2016.

10.1.5. Leadership within the Scientific Community

- C. Laugier is co-chair with Philippe Martinet and Christoph Stiller, of the IEEE RAS Technical Committee on "Autonomous Ground Vehicles and Intelligent Transportation Systems (AGVITS)".
- C. Laugier is member of the Committee "safety of autonomous vehicles" (committee leaded by ARDI in the scope of the Innovation Regional Strategy).

10.1.6. Scientific Expertise

- C. Laugier has been invited as a panel member of the evaluation committee of "Beijing Institute of Technology (BIT)". A three days evaluation seminar has been held in Beijing on November 9-11, 2016.
- C. Laugier is Scientific Consultant for the Probayes company.

- O. Simonin is member of the 2017 ANR scientific committee.

10.1.7. Research Administration

- C. Laugier is a member of several Ministerial and Regional French Committees on Robotics and Autonomous Cars.
- O. Simonin is member of the Rhone-Alpes Robotics cluster (Coboteam), for Inria and INSA de Lyon entities.
- A. Martinelli carried out the activity of leader for the ANR project VIMAD
- A. Martinelli carried out the activity of leader for the CARNOT project SEDIA

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

INSA Lyon 5th year : O. Simonin, resp. of the Robotics option : AI for Robotics, Software and Hardware for robotics, Robotics projects, 50h, M2, Dept. Telecom INSA de Lyon, France.

INSA Lyon 3rd year : O. Simonin, Algorithmique et programmation, 20h, L3, Dept. Telecom INSA de Lyon, France.

M2R MoSIG: A. Martinelli, Autonomous Robotics, 12h, ENSIMAG Grenoble

INSA Lyon 5th year : A. Spalanzani, Navigation en environnement humain, 2h, M2, INSA de Lyon, France.

E-learning

10.2.2. Supervision

PhD in progress: Tiana Rakotovao Andriamahefa, Embedded Bayesian Perception on a Multi-core Architecture, 2013, C. Laugier and D. Ruspini (CEA LETI).

PhD in progress: David Sierra Gonzalez, Autonomous Driving, 2014, E. Mazer (Inria Prima), J. Dibangoye, C. Laugier (cooperation Toyota).

PhD in progress: Mathieu Barbier, Decision making for Intelligent Vehicles, 2015, E. Mazer (Inria Prima), O. Simonin, C. Laugier (cooperation Renault)

PhD in progress: Vishnu K. Narayanan, semi-autonomous navigation of a electric wheelchair using visual servoing and user intention analysis, 2013, M. Babel (Lagadic Team) and A. Spalanzani.

PhD in progress: Stefan Chitic, Middleware for multi-robot systems, 2013, O. Simonin, J. Ponge (CITI-Dynamid), Ministry funding.

PhD in progress: Pavan Vasishta, behavioral modeling in urban environments. A. Spalanzani and D. Vaudreydaz (Pervasive Interaction), started in Feb. 2016.

PhD in progress: Mihai Popescu, Robot fleet mobility under communication constraints, 2015, O. Simonin, A. Spalanzani, F. Valois (Agora), Regional funding.

Starting PhD: Guillaume Bono, Global-local Optimization Under Uncertainty for Goods Distribution Using a Fleet of Autonomous Vehicles, O. Simonin, J. Dibangoye, L. Matignon, INSA-Volvo Chair funding.

Starting PhD: Remi Cambuzat, Robots de TEléprésence : Navigation Sociale et Interaction VErbale immersives, G. Bailly (CNRS GIPSA lab), A. Spalanzani, O. Simonin, Regional funding.

10.2.3. Juries

- O. Simonin was a member (president) of the defense committee of the PhD thesis of Emmanuel Hermellin, Univ. de Montpellier, LIRMM, November 18, 2016.
- O. Simonin was a member of the defense committee of the PhD thesis of Arnaud Paris, Université d'Orléan, Labo PRISME, Bourges, October 17, 2016.

- O. Simonin was a member of the defense committee of the PhD thesis of Patrick Bechon, Université de Toulouse, ISAE Supaero, May 26, 2016.

- O. Simonin was a member (president) of the defense committee of the PhD thesis of Osamah Saif, Université de Technologie de Compiègne UTC, March 23, 2016.

- O. Simonin was a member (president) of the defense committee of the PhD thesis of Zhicheng Hou, Université de Technologie de Compiègne UTC, February 10, 2016.

- A. Spalanzani was a reviewer and a member of the defense committee of the PhD thesis of Omar Adair Islas Ramìrez, Université Pierre et Marie Curie, November 28th, 2016.

- A. Spalanzani was a member of the defense committee of the PhD thesis of Suman Raj Bista, Université de Rennes 1, December 20th, 2016.

- C. Laugier was reviewer and member of the defense committee of the PhD thesis of Alexandre Armand (ENSTA ParisTech, May 31 2016).

<h1 style="text-align:center; color:red">CIDRE Project-Team</h1>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Emmanuelle Anceaume served as the general chair of OPODIS 2015 (19th International Conference on Principles of Distributed Systems), December 2015, Rennes, France.

10.1.1.2. Member of the Organizing Committees

Christophe Bidan served as a member of the organization committee of C&ESAR 2016 (23rd Computers & Electronics Security Applications Rendez-vous), November 2016, Rennes, France.

Nicolas Prigent served as a member of the organization committee of SSTIC 2016 (Symposium sur la sécurité des technologies de l'information et des communications), June 2016, Rennes, France.

Frédéric Tronel served as a member of the organization committee of SSTIC 2016 (Symposium sur la sécurité des technologies de l'information et des communications), June 2016, Rennes, France.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

Nicolas Prigent serves as a program chair of VizSec 2016 (IEEE Symposium on Visualization for Cyber Security), October 2016, Baltimore, MD, USA.

10.1.2.2. Member of the Conference Program Committees

Emmanuelle Anceaume served as a member of the following program committees:
- Algotel 2016 (18èmes Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications), May 2016, Bayonne, France.
- DSN 2016 (46th Annual IEEE/IFIP International Conference on Dependable Systems and Networks), June 2016, Toulouse, France.
- ATC 2016 (13th IEEE International Conference on Advanced and Trusted Computing), July 2016, Toulouse, France.
- PECCS 2016 (6th International Joint Conference on Pervasive and Embedded Computing and Communication Systems), July 2016, Lisbon, Portugal.
- TrustCom 2016 (5th IEEE International Conference on Trust, Security and Privacy in Computing and Communications, security track), August 2016, Tianjin, China.
- SRDS 2016 (35th International Symposium on Reliable Distributed Systems), September 2016, Budapest, Hungary.
- NCA 2016 (15th International Symposium on Network Computing and Applications), October 2016, Cambridge, MA, USA.

Christophe Bidan served as a member of the following program committees:
- CRiSIS 2016 (11th International Conference on Risks and Security of Internet and Systems), September 2016, Roscoff, France.
- C&ESAR 2016 (23rd Computers & Electronics Security Applications Rendez-vous), November 2016, Rennes, France.
- IWTCC 2016 (3rd International Workshop on Trust in Cloud Computing), December 2016, Shanghai, China.

Christopher Humphries served as a member of the program committee of VizSec 2016 (IEEE Symposium on Visualization for Cyber Security), October 2016, Baltimore, MD, USA.

Michel Hurfin served as a member of the following program committees:

- Ubisafe 2016 (8th IEEE International Symposium on UbiSafe Computing) August 2016, Tianjin, China.
- CARI 2016 (13rd African Conference on Research in Computer Science and Applied Mathematics), October 2016, Hammamet, Tunisia.

Frédéric Majorczyck served as a member of the program committee of VizSec 2016 (IEEE Symposium on Visualization for Cyber Security), October 2016, Baltimore, MD, USA.

Ludovic Mé served as a member of the following program committees:

- CARI 2016 (13rd African Conference on Research in Computer Science and Applied Mathematics), October 2016, Hammamet, Tunisia.
- AICCSA 2016 (13th ACS/IEEE International Conference on Computer Systems and Applications), November 2016, Agadir, Morocco.

Nicolas Prigent served as a member of the following program committees:

- SSTIC 2016 (Symposium sur la sécurité des technologies de l'information et des communications), June 2016, Rennes, France.
- GraMSec 2016 (3rd International workshop on Graphical Models for Security), June 2016, Lisbon, Portugal.

Eric Totel served as a member of the program committee of Ubisafe 2016 (8th IEEE International Symposium on UbiSafe Computing), August 2016, Tianjin, China.

Frédéric Tronel served as a member of the program committee of SSTIC 2016 (Symposium sur la sécurité des technologies de l'information et des communications) June 2016, Rennes, France.

10.1.2.3. Reviewer

- Laurent Georget - AICCSA 2016 (13th ACS/IEEE International Conference on Computer Systems and Applications).
- Gilles Guette - ICISSP 2016 (International Conference on Information System Security and Privacy) and AICCSA 2016 (13th ACS/IEEE International Conference on Computer Systems and Applications).
- Michel Hurfin - NCA 2016 (15th International Symposium on Network Computing and Applications).
- Ludovic Mé - NETYS 2016 (5th International Conference on NETworked sYStems).
- Valérie Viet Triem Tong - ICISSP 2016 (International Conference on Information Systems Security and Privacy).

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Michel Hurfin belongs to the editorial board of the Springer open access journal of Internet Services and Applications.

- Emmanuelle Anceaume - Elsevier JPDC (Journal of Parallel and Distributed Computing), Performance Evaluation, IEEE TDSC (Transactions on Dependable and Secure Computing), and IEEE TPDS (Transactions on Parallel and Distributed Systems).
- Michel Hurfin - Springer JISA (Journal of Internet Services and Applications) and Elsevier JPDC (Journal of Parallel and Distributed Computing).
- Ludovic Mé - journal "Revue Africaine de la Recherche en Informatique et Mathématique Appliquée".
- Guillaume Piolle - IJIS (International Journal on Information Security) and IEEE IS (Intelligent Systems).
- Valérie Viet Triem Tong - IEEE TPDS (Transactions on Parallel and Distributed Systems).

10.1.4. Invited Talks

Eric Totel has been invited to SEC2 (2nd workshop on Security in Clouds), July 2016, Lorient, France. He has given a talk about "Anomaly Based Intrusion Detection in Distributed Applications without global clock".

Valérie Viet Triem Tong has been invited to the Journées scientifiques Inria for a short presentation entitled Helping malware to execute themselves. She was also invited to give a talk during the Séminaire Aristote at the école Polytechnique (Palaiseau, France). Her presentation was concerning Android Malware analysis. Lastly, she has been invited at the 4th International Symposium on Information Systems Security (CISSI'2016 Morocco) for a invited talk about the need and the challenges in Education of formal computer programming.

10.1.5. Leadership within the Scientific Community

Ludovic Mé serves the Scientific Council of the LIRIMA (Laboratoire International de Recherche en Informatique et Mathématiques Appliquées).

Ludovic Mé chairs the steering Committee of the annual French conference RESSI (Rendez-Vous de la Recherche et de l'Enseignement de la Sécurité des Systèmes d'Information). He is a member of the Steering Committee of the annual international conference RAID (International Symposium on Research in Attacks, Intrusions and Defenses).

10.1.6. Scientific Expertise

Guillaume Piolle has been heard by the LIBE commission of the 82nd Internal Session of the European Youth Parliament, on "Data encryption, data protection and terrorism".

10.1.7. Research Administration

Emmanuelle Anceaume has participated in various juries (Post-doctoral grants, delegation Inria, PEDR Inria). As a member of the CE Inria, Emmanuelle Anceaume has participated to the hiring committee CR2/CR1 of Rennes and Sophia Antipolis.

Michel Hurfin is the local representative of the "mission jeunes chercheurs" in Rennes. He is a member of the "Commission personnel" and is in charge of the PhD student recruitment campaign of Inria Rennes Bretagne Atlantique. He is a member of the councils of the doctoral school Matisse. He is a member of the advisory board of the doctoral training center of EIT Digital in Rennes.

Ludovic Mé acts as Scientific Officer for the Rennes - Bretagne Atlantic Inria Research Center. As such, he is also a member of the Evaluation Commission and of the Internal Scientific Council of Inria.

Valérie Viet Triem Tong is member of the group working on the new Master proposal in computer science (for both CentraleSupelec and Inria)

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence: Christophe Bidan, *Algorithms and Data Structures*, 36 hours of lecture including 7.5 hours of lectures, L3 - first year of the engineering degree, CentraleSupélec, France;

Licence: Christophe Bidan, *Software Engineering*, 12 hours, L3 - first year of the engineer degree, CentraleSupélec, France;

Licence: Christophe Bidan, *Supervision of student project*, 1 project, L3 - first year of the engineer degree, CentraleSupélec, France;

Master: Christophe Bidan is responsible for the module *Secured information systems*, M2 - third year of the engineer degree, CentraleSupélec, France;

Master: Christophe Bidan, *Applied cryptography*, 6 hours of lecture, M2 - master 2 degree, University of Rennes 1, France;

Master: Christophe Bidan, *Applied cryptography*, 15 hours including 6 hours of lecture, M2 - third year of the engineer degree, CentraleSupélec, France;

Master : Christophe Bidan, *Cryptographic Protocols*, 6 hours of lecture, mastère CS (Cyber Security), CentraleSupélec, France;

Master: Christophe Bidan, *Information systems*, 4.5 hours, M1 - second year of the engineer degree, CentraleSupélec, France;

Master: Christophe Bidan, *Supervision of student project*, 2 projects, M1 - second year of the engineer degree, CentraleSupélec, France;

Licence: Gilles Guette, *Network Initiation*, 57.5 hours, L3 - Licence, ISTIC/University of Rennes 1, France;

Licence: Gilles Guette, *Network Initiation*, 41.5 hours, L3 - first year of the engineer degree, ESIR, France;

Master: Gilles Guette, *Network Routing*, 32 hours, M1 - second year of the engineer degree, ESIR, France;

Master: Gilles Guette, *Mobile Network Routing*, 5 hours, M1 - second year of the engineer degree, ESIR, France;

Master: Gilles Guette, *Advanced Network Services*, 10 hours, M1 - second year of the engineer degree, ESIR, France;

Master: Gilles Guette, *Network Project*, 24 hours, M1 - second year of the engineer degree, ESIR, France;

Master: Gilles Guette, *Security*, 28 hours, M1 - second year of the engineer degree, ESIR, France;

Master: Gilles Guette, *Network and System Security*, 12 hours, M2 - third year of the engineer degree, ESIR, France;

Master: Gilles Guette, *Network Modeling*, 18 hours, M2 - third year of the engineer degree, ESIR, France;

Master: Gilles Guette, *Supervision of student project*, 1 project, M2 - third year of the engineer degree, ESIR, France;

Master: Gilles Guette, *Supervision of student internship*, M2 - Université Claude Bernard Lyon 1, France, Institut Francophone International, Hanoï, Viet-Nam;

Licence: Guillaume Hiet, *Algorithms and Data Structures*, 12.5 hours, L3 - first year of the engineer degree, CentraleSupélec, France;

Master: Guillaume Hiet, *Computer security and privacy for the engineer*, 8 hours, M1 - second year of the engineer degree, CentraleSupélec, France;

Master: Guillaume Hiet, *Buffer overflow vulnerabilities*, 16 hours, M2 - third year of the engineer degree, CentraleSupélec, France;

Master: Guillaume Hiet, *Buffer overflow vulnerabilities*, 16 hours, M2 - Mastère Spécialisé CS (Cyber Security), CentraleSupélec, France;

Master: Guillaume Hiet, *Pentest*, 19 hours, M2 - third year of the engineer degree, CentraleSupélec, France;

Master: Guillaume Hiet, *Pentest*, 3 hours, M2 - Mastère Spécialisé CS (Cyber Security), CentraleSupélec, France;

Master: Guillaume Hiet, *Introduction to Linux*, 3 hours, M2 - Mastère Spécialisé CS (Cyber Security), CentraleSupélec, France;

Master: Guillaume Hiet, *Java Security*, 4.5 hours, M2 - Mastère Spécialisé CS, CentraleSupélec, France;

Master: Guillaume Hiet, *Linux Security*, 18 hours, M2 - Mastère Spécialisé CS , CentraleSupélec, France;

Master: Guillaume Hiet, *Linux Security*, 7.5 hours, third year of the engineer degree, CentraleSupélec, France;

Master: Guillaume Hiet, *LDAP*, 7.5 hours, third year of the engineer degree, CentraleSupélec, France;

Master: Guillaume Hiet, *Intrusion Detection*, 15 hours, M2 - Mastère Spécialisé CS, CentraleSupélec, France;

Master: Guillaume Hiet, *Intrusion Detection*, 13.5 hours, M2 - third year of the engineer degree, M2 research degree of University of Rennes 1, CentraleSupélec, France;

Master: Guillaume Hiet, *Security Monitoring*, 3 hours, M2, cycle "Sécurité Numérique", INHESJ, France;

Master: Guillaume Hiet, *Computer Security*, 31.5 hours, M2, Mastère Spécialisé Architecte des Systèmes d'Information, CentraleSupélec, France;

Master: Guillaume Hiet, *Intrusion Detection*, 16 hours, M2, University of Rennes 1, France;

Master: Guillaume Hiet, *Intrusion Detection*, 10 hours, M2 - third year of the engineer degree, ESIR, France;

Master: Guillaume Hiet, *Intrusion Detection*, 9 hours, M2, Université of Limoges, France;

Master: Guillaume Hiet, *Firewall*, 6 hours, M2, University of Rennes 1, France;

Master: Guillaume Hiet, *Supervision of student project*, 4 projects, M1 - second year of the engineer degree, CentraleSupélec, France;

Master: Guillaume Hiet, *Supervision of student project*, 2 projects, M2 - third year of the engineer degree, CentraleSupélec, France;

Master: Guillaume Hiet, *Supervision of student project*, 2 projects, M2 - Mastère Spécialisé CS (Cyber Security), CentraleSupélec, France;

Licence : Ludovic Mé, *Software Engineering*, 18 hours, L3 - first year of the engineer degree, CentraleSupélec, France;

Licence : Ludovic Mé, *Software Engineering tutorials*, 6 hours, L3 - first year of the engineer degree, CentraleSupélec, France;

Licence : Ludovic Mé, *Software Engineering and Java development*, 18 hours, L3 - first year of the engineer degree, CentraleSupélec, France;

Master : Ludovic Mé, *Information systems tutorials*, 6 hours, M1 - second year of the engineer degree, CentraleSupélec, France;

Master : Ludovic Mé, *Operating systems tutorials*, 3 hours, M1 - second year of the engineer degree, CentraleSupélec, France;

Master : Ludovic Mé, *Supervision of student project*, 1 project, 38 hours, M1 - second year of the engineer degree, CentraleSupélec, France;

Licence : Guillaume Piolle, *Algorithms*, 16.5 hours, L3 - first year of the engineer degree, CentraleSupélec, France;

Licence : Guillaume Piolle, *Software engineering*, 18 hours, L3 - first year of the engineer degree, CentraleSupélec, France;

Master : Guillaume Piolle, *Modelling, Algorithms and Programming*, 30 hours, M1 - second year of the engineer degree, CentraleSupélec, France;

Master : Guillaume Piolle, *Computer security and privacy*, 9 hours, M1 - second year of the engineer degree, CentraleSupélec, France;

Master : Guillaume Piolle, *Computer networks*, 9 hours, M1 - second year of the engineer degree, CentraleSupélec, France;

Master : Guillaume Piolle, *Software project*, 8.5 hours, M1 - second year of the engineer degree, CentraleSupélec, France;

Master : Guillaume Piolle, *Security Policies*, 4.5 hours, M2 - third year of the engineer degree, CentraleSupélec, France;

Master : Guillaume Piolle, *Java programming*, 4.5 hours, M2 - third year of the engineer degree, CentraleSupélec, France;

Master : Guillaume Piolle, *Computer networks*, 9 hours, M2 - third year of the engineer degree, CentraleSupélec, France;

Master : Guillaume Piolle, *Software engineering*, 18 hours, M2 - third year of the engineer degree, CentraleSupélec, France;

Master : Guillaume Piolle, *Network Access Control*, 9 hours, M2 - third year of the engineer degree, CentraleSupélec, France;

Master : Guillaume Piolle, *Web development*, 18 hours, M2 - third year of the engineer degree, CentraleSupélec, France;

Master : Guillaume Piolle, *Privacy protection*, 4.5 hours, M2 - third year of the engineer degree, CentraleSupélec, France;

Master : Guillaume Piolle, *Computing project*, 40 hours, M2 - third year of the engineer degree, CentraleSupélec, France;

Licence : Eric Totel, *Models and programming languages*, 19.5 hours including 10.5 hours of lecture, L3 - first year of the engineer degree, CentraleSupélec, France;

Licence : Eric Totel, *Foundations of computer science, data structures and algorithms*, 6 hours, L3 - first year of the engineer degree, CentraleSupélec, France;

Licence : Eric Totel, *Software Modeling*, 15 hours, L3 - first year of the engineer degree, CentraleSupélec, France;

Master : Eric Totel, *Computer systems' architecture*, 60 hours, M1 - second year of the engineer degree, CentraleSupélec, France;

Master : Eric Totel, *C language*, 24 hours including 6 hours of lecture, M2 - master CS (Cyber Security), CentraleSupélec, France;

Master : Eric Totel, *C language and C++ language*, 12 hours including 6 hours of lecture, M2 - third year of the engineer degree, CentraleSupélec, France;

Master : Eric Totel, *Dependability* , 9 hours including 7.5 hours of lecture, M2 - third year of the engineer degree and master research, CentraleSupélec, France;

Master : Eric Totel, *Dependability*, 3 hours of lecture, M2 - third year of the engineer degree (ingénierie des systèmes automatisés), CentraleSupelec, France;

Master : Eric Totel, *Dependability*, 4.5 hours of lecture, M2 - post-graduate training (master Architecture des Réseaux de Communication), CentraleSupélec, France;

Master : Eric Totel, *Intrusion Detection*, 6 hours of lecture, M2 - M2 - master CS (Cyber Security), CentraleSupélec, France;

Master : Eric Totel, *Intrusion Detection*, 8 hours of lecture, M2 - master 2 degree, University of Rennes 1, France;

Master : Eric Totel, *Intrusion Detection*, 4 hours of lecture, M2 - master 2 degree, University of Rennes 1, France;

Master : Eric Totel, *Supervision of student project*, 4 projects, M1 - second year of the engineer degree, CentraleSupélec, France;

Master : Eric Totel, *Supervision of student project,* 1 project, M2 - third year of the engineer degree, CentraleSupélec, France;

Licence: Frédéric Tronel, *Software engineering*, 40 hours, L3 - first year of the engineer degree, CentraleSupélec, France;

Licence: Frédéric Tronel, *Operating Systems*, 12 hours, L3 - first year of the engineer degree, CentraleSupélec, France;

Master: Frédéric Tronel is responsible of the M2 degree in *CyberSecurity* (mastère spécialisé), organized jointly by CentraleSupélec and Télécom Bretagne, France;

Master: Frédéric Tronel, *Operating systems*, 21 hours hours, M2 - third year of the engineer degree, CentraleSupélec, France;

Master: Frédéric Tronel, *Compilers*, 18 hours, M2 - third year of the engineer degree, Centrale-Supélec, France;

Master: Frédéric Tronel, *Automatic reasoning*, 4.5 hours, M2 - third year of the engineer degree, CentraleSupélec, France;

Master: Frédéric Tronel, *Assembly Language*, 6 hours, M2 - third year of the engineer degree, CentraleSupélec, France;

Master: Frédéric Tronel, *Buffer overflow vulnerabilities (theory and practice)*, 20.5 hours, M2 - third year of the engineer degree, CentraleSupélec, France;

Master: Frédéric Tronel, *Firewall*, 15 hours, M2 - third year of the engineer degree, CentraleSupélec, France;

Master: Frédéric Tronel, *Calculability in distributed systems*, 6 hours, M2, jointly with University of Rennes 1 and CentraleSupélec, France;

Master: Frédéric Tronel, *Computer network*, 8 hours, M2, jointly with University of Rennes 1 and CentraleSupélec, France;

Licence : Valérie Viet Triem Tong, *Algorithms and Data Structures*, 36 hours of lecture including 7 hours of lectures, L3 - first year of the engineering degree, CentraleSupélec, France;

Licence : Valérie Viet Triem Tong, *Supervision of student project*, 6 projects of 2nd year of the engineer degree, CentraleSupélec, France;

Master : Valérie Viet Triem Tong, *Games Theory*, 18 hours, M1 - second year of the engineering degree, CentraleSupélec, France;

Master : Valérie Viet Triem Tong, *Formal Methods*, 9 hours, M2 - third year of the engineering degree, CentraleSupélec, France;

Master : Valérie Viet Triem Tong, *Intrusion detection using information flow control*, 9 hours, M2 / third year of the engineering degree, CentraleSupélec, France;

Master : Valérie Viet Triem Tong, *Programming in Java*, 12 hours, M1 - international students (NplusI) second year of the engineering degree, CentraleSupélec, France;

Master : Valérie Viet Triem Tong, *Small elements of decidability*, 7.5 hours, M2 - third year of the engineering degree, CentraleSupélec, France;

Master : Valérie Viet Triem Tong, *Supervision of student project*, 1 project, mastere CS (Cyber Security), CentraleSupélec, France;

Master : Valérie Viet Triem Tong, *Supervision of student project*, 8 projects, M1 - second year of the engineer degree, CentraleSupélec, France;

Master : Valérie Viet Triem Tong, *Supervision of student project*, 2 projects mastere CS (Cyber Security), CentraleSupélec, France;

Master : Valérie Viet Triem Tong, *Supervision of student project*, 1 project year of the engineer degre, CentraleSupélec, France;

Doctorant : Valérie Viet Triem Tong, *Malware analysis by OS information flow tracking*, 2 hours, Inria, Summerschool - Cyber in Bretagne, France;

10.2.2. Supervision

PhD : Julien Lolive, *Entrelacement des mécanismes d'identification et de respect de la vie privée pour la protection des contenus externalisés*, May 2016, supervised by Caroline Fontaine (50% - Télécom-Bretagne) and Sébastien Gambs (50%);

PhD : Erwan Godefroy, *Définition et évaluation d'un mécanisme de génération de règles de corrélation liée à l'environnement*, September 2016, supervised by Michel Hurfin (33%), Eric Totel (33%), and Frédéric Majorczyk (34% - DGA MI);

PhD : Pierre Obame Meye, *Sûreté de fonctionnement dans le nuage de stockage*, December 2016, supervised by Emmanuelle Anceaume (33%), Frédéric Tronel (33%), and Philippe Raipin Parvedy (34% - Orange Labs);

PhD in progress: Deepak Subramanian, *Multi-level Information Flow Monitoring*, started in January 2013, supervised by Christophe Bidan (20%) and Guillaume Hiet (80%);

PhD in progress: Antoine Guellier, *Utilisation de la cryptographie homomorphe pour garantir le respect de la vie privée*, started in October 2013, supervised by Christophe Bidan (50%) and Nicolas Prigent (50%);

PhD in progress: Kun He, *Mise en œuvre de techniques de droit à l'oubli pour les contenus numériques*, started in October 2013, supervised by Christophe Bidan (50%) and Gaëtan LeGuelvouit (50% - IRT B-Com);

PhD in progress: Mouna Hkimi, *Détection d'intrusion dans les systèmes distribués*, started in October 2013, supervised by Eric Totel (50%) and Michel Hurfin (50%);

PhD in progress: Solenn Brunet, *Privacy-preserving location-based services*, started in October 2014, supervised by Sébastien Gambs (50%) and Jacques Traoré (50% - Orange Labs Caen);

PhD in progress: Laurent Georget, *Validation Formelle d'un moniteur de flux d'information pour le noyau Linux*, started in October 2014, supervised by Mathieu Jaume (25% - MdC LIP6), Guillaume Piolle (25%), Frédéric Tronel (25%), and Valérie Viet Triem Tong (25%);

PhD in progress : Florian Grandhomme, *Protocole de routage externe type BGP dans un environnement réseaux tactiques adhoc mobiles : faisabilité, performances et qualité de service*, started in October 2014, supervised by Gilles Guette (50%), Adlen Ksentini (25% - Eurecom), and Thierry Plesse (25% - DGA MI);

PhD in progress: Thomas Letan, *Contribution à la sécurité des couches basses des systèmes d'information*, started in January 2015, supervised by Guillaume Hiet (50%), Pierre Chifflier (25% - ANSSI), and Ludovic Mé (25%);

PhD in progress: Oualid Koucham, *Détection d'intrusions pour les systèmes de contrôle industriels*, started in January 2015, supervised by Stéphane Mocanu (50% - Gipsa-lab), Guillaume Hiet (25%), and Jean-Marc Thiriet (25% - Gipsa-lab);

PhD in progress: Damien Crémilleux, *Visualisation d'évènements de sécurité pour la supervision*, started in October 2015, supervised by Christophe Bidan (30%), Nicolas Prigent (35%), and Frédéric Majorczyk (35% - DGA MI);

PhD in progress: Mourad Leslous, *Déclenchement automatique de codes jugés suspects dans les applications Android*, started in October 2015, supervised by Thomas Genet (20% - Celtique Inria project 20), Jean François Lalande (40% - INSA Centre Val de Loire), and Valérie Viet Triem Tong (40%);

PhD in progress: Mounir Nasr Allah, *Contrôle de flux d'information par utilisation conjointe d'analyse statique et d'analyse dynamique accélérée matériellement*, started in November 2015, supervised by Guillaume Hiet (75%) and Ludovic Mé (25%);

PhD in progress: Pernelle Mensah, *Adaptation de la Politique de Sécurité guidée par l'Evaluation du Risque dans les Infrastructures de Communication modernes*, started in January 2016, supervised by Eric Totel (25%), Guillaume Piolle (25%), Christine Morin (25% - Myriad Inria project), and Samuel Dubus (25% - Nokia);

PhD in progress: David Lanoë, *Détection d'intrusion dans les applications distribuées : l'approche comportementale comme alternative à la corrélation d'alertes*, started in october 2016, supervised by Michel Hurfin (50%) and Eric Totel (50%);

PhD in progress: Aurélien Trulla, *Caractérisation de malware Android par suivi de flux d'information et nouvelles techniques d'évasion*, started in October 2016, supervised by Jean Louis Lanet (25% - Tamis Inria project) and Valérie Viet Triem Tong (75%);

PhD in progress : Ronny Chevalier , "Enhanced computer platform security through an intrusion-detection approach", started in November 2016, supervised by Guillaume Hiet (50%), Boris Balacheff (25% - HP), and Ludovic Mé (25%);

PhD in progress: Laetitia Leichtnam, *Visualisation pour la caractérisation d'événements de sécurité*, started in october 2016, supervised by Eric Totel (40%), Nicolas Prigent (30%) and Ludovic Mé (30%);

PhD in progress : Charles Xosanavongsa, *Combining Attack Specification and Dynamic Learning from traces for correlation rule generation*, started in december 2016, supervised by Eric Totel (50%) and Ludovic Mé (50%);

PhD in progress : Yves Mocquard, *Population protocols*, started in september 2015, supervised by Bruno Sericola (Dyonisos Inria project) and Emmanuelle Anceaume.

10.2.3. Juries

Ludovic Mé was a member of the PhD committee for the following PhD thesis:

- Antoine Rault, *Protection de la vie privée des utilisateurs dans un système de recommandations collaboratif distribué*, University of Rennes 1, 06/23/2016 (President of the Jury);
- Tarek Sayeh, '*Contrôle sélectif de l'accès à des données RDF'*, University of Lyon 1, 09/08/2016 (President of the Jury);
- Ronan-Alexandre Cherrueau, *Composition de techniques de sécurité pour préserver la vie privée dans le contexte de l'informatique en nuage*, Ecole des Mines de Nantes, 11/18/2016 (Reviewer).

Eric Totel was a member of the PhD committee for the following PhD thesis:

- Siwar Kriaa, *Modélisation conjoint de la sûreté et de la sécurité pour l'évaluation des risques dans les systèmes cyber-physiques*, University of Paris-Saclay, Mars 2016 (President of the Jury);
- François Xavier Aguessy, *Evaluation Dynamique de Risque et Calcul de Réponses Basés sur des Modèles d'Attaques Bayésiens*, Telecom Sud-Paris and University Pierre & Marie Curie, September 2016. (Reviewer).

Guillaume Hiet was a member of the PhD committee for the PhD of Florent Marchand de Kerchov entitled *étendre des interpréteurs par détournement, ou comment étendre des interpréteurs sans en modifier le code*, prepared at Ecole des Mines de Nantes, 18 november 2016.

10.3. Popularization

Emmanuelle Anceaume was interviewed on the topic « Blockchain : comment le bitcoin révolutionne l'économie numérique ? » in a broadcast of "le labo des savoirs" (http://labodessavoirs.fr/emissions-du-labo/).

Guillaume Piolle has participated to the scientific popularization program *à la découverte de la recherche* aimed at secondary education pupils. His participation consisted in presentations about the objectives, methods and results of research activities in computer security and privacy (including, but not limited to our activities in CIDRE). It took place in high schools in Redon, Cesson-Sévigné and Dol-de-Bretagne.

Valérie Viet Triem Tong participates to (the stand and demo of) the 8h International Forum of CyberSecurity (FIC 2016).

Valérie Viet Triem Tong has published in Interstice a paper entitled "Lutter contre les codes malveillants" (https://interstices.info/jcms/p_91111/lutter-contre-les-codes-malveillants).

CLIME Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Reviewer

- Isabelle Herlin: International Conference on Computer Vision and Pattern Recognition (CVPR), International Conference on Computer Vision (ECCV), Asian Conference on Comuter Vision (ACCV), International Conference on Image Processing (ICIP).

10.1.2. Journal

10.1.2.1. Reviewer - Reviewing Activities

- Julien Brajard: IEEE Transactions on Geoscience and Remote Sensing (TGRS).
- Isabelle Herlin: IEEE Transactions on Geoscience and Remote Sensing (TGRS), IEEE Geoscience and Remote Sensing Letters, Mathematical Methods in Applied Sciences.

10.1.3. Invited Talks

- Vivien Mallet: Processing environmental simulations and observations for smart cities; Perspectives and New Challenges in Data Science, École des Ponts ParisTech; February 2016.
- Vivien Mallet: Assimilation de données et prévision d'ensemble appliquées à la qualité de l'air; CEA seminar; June 2016.

10.1.4. Scientific Expertise

- Isabelle Herlin is a member of the Scientific Council of ANDRA (French national radioactive waste management agency)
- Isabelle Herlin is a member of the Scientific Council of CSFRS (High Council for Strategic Education and Research in France).
- Isabelle Herlin and Vivien Mallet reviewed several research proposals, especially for ANR (France).

10.1.5. Research Administration

- Isabelle Herlin is a member of the program committee of DIGITEO, French research cluster in science and technology of information.
- Isabelle Herlin is a member of the Evaluation Committee at Inria.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master OACOS/WAPE: Marc Bocquet, Vivien Mallet, Jean-Matthieu Haussaire; Introduction to Data Assimilation for Geophysics; 12 hours; M2; UPMC, X, ENS, ENSTA ParisTech, École des Ponts ParisTech; France.

Master SGE and 3rd-year class at École des Ponts ParisTech: Vivien Mallet; Air quality modeling; 4.5 hours; M2; Universities Paris Diderot- Paris 7, Paris 12 and École des Ponts ParisTech, France.

Training: Vivien Mallet; Uncertainty Quantification: Ensembles and Data Assimilation – Application to Climate and Geosciences; 5.25 hours; CERFACS; France.

Training: Vivien Mallet; Introduction to data assimilation: Kalman filters and ensembles; 4.5 hours; CEMRACS (summer school).

10.2.2. Supervision

- PhD in progress : Pacôme Eberhart, "Génération automatique de codes performants et fiables pour l'assimilation de données", September 2013, Fabienne Jezequel, Pierre Fortin and Julien Brajard

- PhD in progress : Jean Thorey, "Prévision d'ensemble du rayonnement solaire pour la production photovoltaïque du parc EDF", November 2013, Vivien Mallet.

- PhD in progress: Ruiwei Chen, "Quantification d'incertitude en simulation des émissions du trafic routier", November 2014, Vivien Mallet.

- PhD in progress: Raphaël Ventura, "Simulation numérique de la ville par couplage entre la modélisation et l'observation", September 2014, Vivien Mallet.

- PhD in progress: Ngoc Bao Tran Le, "Quantification d'incertitude par réduction de modèle de dispersion atmosphérique", November 2016, Vivien Mallet.

10.2.3. Juries

- Vivien Mallet for the PhD defense of Michaël Zamo, "Statistical Post-processing of Deterministic and Ensemble Windspeed Forecasts on a Grid", December 2016, Météo France.

10.3. Popularization

Vivien Mallet and Raphaël Ventura, together with Cong Kinh Nguyen (MiMove), Pierre-Guillaume Raverdy (SED), Fadwa Rebhi (MiMove), Fabienne Giboudeaux (Paris city), Awa Ndiaye (Paris city), Gilles Plattner (Particitae) and Laure Turcati (Particitae), took part to collaborative measuring of noise pollution with volunteers from the general public. Using the mobile application Ambiciti, the volunteers carried out a journey in a city district in order to measure noise pollution with their smartphones, and therefore help to map noise pollution in the area. At the end of the journeys, the observations were merged with an existing noise map so as to produce an improved map. Discussion about the strengths and limitations of mobile observation were engaged, and the activity helped to inform about noise pollution. This was carried out in Paris at the opening of the "Canopée des Halles", at Futur en Seine festival and during the "journée sans voiture".

<p style="text-align:center">**COAST Project-Team**</p>

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. Member of the Organizing Committees

- François Charoy was co-chair of the PhD Forum for ICSOC 2016
- Claudia-Lavinia Ignat is in the organisation committee of The Fifteenth International Workshop on Collaborative Editing Systems in conjunction with CSCW 2017

8.1.2. Scientific Events Selection

8.1.2.1. Member of the conference program committees

- Claude Godart was PC member of the conference program committee of BPMDS (Business Process Modeling, Development and Support), EDOC (The enterprise computing conference), ICSOC (International Conference on Services Oriented Computing), IEEE CLOUD Computing, ICWS (IEEE International Conference on Web Services), SCC (IEEE International Conference on Services Computing), S2 ICIOT (S2 International Conference on Internet of Things), IEEE/WIC/ACM WI (Web Intelligence conference), WISE (Web Information Systems Engineering) conferences.
- Claudia-Lavinia Ignat was PC member of CSCW (International Conference on Computer Supported Cooperative Work and Social Computing) 2016, CDVE (International Conference on Cooperative Design, Visualization and Engineering) 2016, ICEBE (International Conference on e-Business Engineering) 2016 and The First IFIP Internet of People Workshop (IoP-W'16) in conjunction with Networking 2016 conference
- Olivier Perrin was PC Member of ICSOC 2016, I3E 2016 (15th IFIP Conference on e-Business, e-Services and e-Society), VECOS 2016 (10th International Workshop on Verification and Evaluation of Computer and Communication Systems), and some workshops.
- François Charoy was PC Member of ICEBE (International Conference on Business Engineering) 2016, CTS 2016 (International Symposium on Collaborative Technologies and Systems), DG.O (International Conference on Digital Government Research) 2016, IEEE WETICE 2016, ICSOC 2016, IEEE International Conference on Business Information Systems and of several workshops.
- Khalid Benali was PC Member of WorldCIST'16 (World Conference on Information Systems and Technologies), I-ESA'2016 (Interoperability of Enterprise Software and Applications), AFIN 2016 (International Conference on Advances in Future Internet), I3E 2016 (IFIP Conference on e-Business, e-Services and e-Society), ICICS 2016 (7th International Conference on Information and Communication Systems), MEDES 2016 (8th International Conference on Management of Digital EcoSystems), SYSCO'16 (third international conference on collaborative systems) and SoEA4EE'2016 (The 8th Workshop on Service oriented Enterprise Architecture for Enterprise Engineering).
- Gérald Oster was a PC member of CoopIS 2016 (International Conference on Cooperative Information Systems).

8.1.3. Journal

8.1.3.1. Member of the editorial boards

- Claude Godart is member of the editorial board of IEEE Transactions on Service Computing, International Journal of Services Computing, and member of the review board of the International Journal of Next Generation Computing.

- Claudia-Lavinia Ignat is member of the editorial board of Journal of CSCW (Computer Supported Cooperative Work).
- François Charoy is member of the editorial board of Service Oriented Computing and Applications Journal (Springer).

8.1.3.2. Reviewer - Reviewing activities

- In 2016, Olivier Perrin reviewed papers for IEEE Transactions on Services Computing journal, IEEE Transactions on Parallel and Distributed Systems and Journal of Systems and Software.
- In 2016, Claudia-Lavinia Ignat reviewed papers for Concurrency and Computation: Practice and Experience, World Wide Web Journal, CHI 2016 and CSCW 2017.
- In 2016, Gérald Oster reviewed papers for Computer Supported Cooperative Work Journal, Concurrency and Computation: Practice and Experience journal and CSCW 2017.

8.1.4. Invited talks

- François Charoy has been invited as a keynote Speaker at the IEEE WETICE Conference in Paris [6] on Collaborative Networks and Crisis Management.
- Claudia-Lavinia Ignat gave an invited lecture in May 2016 at SOAMED Graduate School in Berlin on Replicated Data Consistency
- Claudia-Lavinia Ignat gave an invited talk in June 2016 at the Department of Psychology, Wright State University, on Large-scale trust-based collaboration
- Claudia-Lavinia Ignat gave an invited talk in July 2016 at the Department of Computer Science and Engineering, Ohio Center of Excellence in Knowledge-enabled Computing (Kno.e.sis), Wright State University on Large-scale trust-based collaboration
- Gérald Oster gave an invited talk in July 2016 at the Department of Computer Science and Engineering, Ohio Center of Excellence in Knowledge-enabled Computing (Kno.e.sis), Wright State University on Distributed real-time collaborative editing

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Permanent members of the COAST project-team are leading teachers in their respective institutions. They are responsible of lectures in disciplines like software engineering, database systems, object oriented programming and design, distributed systems, service computing and more advanced topics at all levels and in different of departments in the University. Most of the PhD Students have also teaching duties in the same institutions. As a whole, the COAST team accounts for more than 2500 hours of teaching. Members of the COAST team are also deeply involved in the pedagogical and administrative life of their departments.

- Gérôme Canals was the head of the Computer science department of the Nancy-Charlemagne University Institute of Technology (IUT Nancy Charlemagne) since September 2010 and until August 2016, and is responsible for the professional licence degree "Web application programming" since sept. 2001.
- Claude Godart is responsible for the Computer Science department of the engineering school ESSTIN.
- Khalid Benali is responsible for the professional Master degree speciality "Distributed Information Systems" of MIAGE and of its international branch in Morocco.
- François Charoy is responsible of the Software Engineering specialisation at the TELECOM Nancy Engineering School of University of Lorraine.
- Pascal Urso is responsible for the "Security, Services, Systems and Network" track of the master degree in computer science at University of Lorraine since September 2013.

8.2.2. Supervision

PhD (in progress): Quang Vinh Dang, Trust-based large scale collaboration, started in 10/2014, Claudia-lavinia Ignat and François Charoy

PhD (in progress): Hoai Le Nguyen, Study of group performance and behavior in collaborative editing, started in 9/2015, Claudia-Lavinia Ignat and François Charoy

PhD (in progress): Hoang Long Nguyen, A Trust Based Authorization Model and Framework for the Cloud, started in 11/2015, Claudia-Lavinia Ignat and Olivier Perrin

PhD (defended): Luc André, Replication and Consistency Maintenance in Peer-to-Peer Collaborative Environment, started in 9/2011, François Charoy and Gérald Oster

PhD (in progress): Victorien Elvinger, Secured Replication for Peer-to-Peer Collaborative Infrastructures, started in 10/2015, François Charoy and Gérald Oster

PhD (defended): Ahmed Bouchami , Sécurité des données collaboratives d'une plateforme PaaS, started in 11/2012, Olivier Perrin

PhD (in progress): Jordi Martori i Adrian, Data constraints for large-scale collaboration, started in 10/2013, François Charoy and Pascal Urso

PhD (in progress): Guillaume Rosinoski, Elastic BPM and the Cloud, started in 10/2014, François Charoy and Samir Youssef

PhD (in progress): Quentin Laporte-Chabasse, Federation of Organisations over Peer to Peer Collaborative Network, started in 10/2016, François Charoy and Gérald Oster

PhD (in progress): Béatrice Linot, Trust in cooperative systems, Jérome Dinet et François Charoy, started 11/2016

8.2.3. Juries

- François Charoy was head of the Selection committee at TELECOM Nancy, Université de Lorraine

COAST members were members of the following PhD and HdR defense committees:

- Mondi Ravi, PhD, Université de Grenoble, January 2016 (François Charoy)
- Tomasz Buchert, PhD, Université de Lorraine, January 2016 (François Charoy)
- Luc André, PhD, Université de Lorraine, May 2016 (François Charoy and Gérald Oster)
- Adrian Shatte, PhD, James Cook University, Cairns, Australia, September 2016 (François Charoy)
- Wassim Derguech, PhD, National University of Ireland, Galway, Ireland, December 2016 (François Charoy)
- Philippe Dirix, PhD, Université de Lille, July 2016 (Khalid Benali)
- Bouchra El Idrissi, PhD, Université Mohammed V de Rabat, Maroc, September 2016 (Khalid Benali)
- Ghada Gharbi, PhD, Université de Toulouse 3, November 2016 (Claude Godart)
- Hind Benfenatki, PhD, Université de Lyon 1, December 2016 (Claude Godart)
- Brice Nedelec, PhD, Université de Nantes, October 2016 (Gérald Oster)
- Anthéa Mayzaud, PhD, Université de Lorraine, October 2016 (Olivier Perrin)
- Noran Azmy, PhD, Universität des Saarlandes and Université de Lorraine, November 2016 (Olivier Perrin)

8.3. Popularization

- In March 2016 members of the team (François Charoy and Phillippe Kalitine) participated to the "Rencontres Université Entreprise" in Paris to demonstrate the collaborative editor MUTE (http://www.rue-aef.com)

- In January 2016 Claudia-Lavinia Ignat presented Coast research activities to the first year students at Ecole de Mines de Nancy

- In May 2016 Claudia-Lavinia Ignat gave a lecture on Replicated Data Consistency at SOAMED Graduate School in Berlin

- In May 2016 Claudia-Lavinia Ignat organised the meeting Research@Inria at Inria Nancy-Grand Est for presenting to internship students, PhD students and postdocs various Inria programs and the main research topics at Inria with a focus on activities of research teams at Inria Nancy-Grand Est. She also presented the main activities of a researcher and briefly described her research work.

- In November 2016 members of the team (François Charoy and Matthieu Nicolas) participated to the "Rencontre Inria-Industrie" (RII) on the topic - Interactions avec les objets et services numériques" in Lille to demonstrate MUTE collaborative editor

- In December 2016 members of the team (Claudia-Lavinia Ignat, Gérald Oster, Matthieu Nicolas and Phillippe Kalitine) participated to the "Rencontre Inria-Industrie" (RII) on the topic - Nouvelles technologies pour la protection des données et des systèmes numériques" in Nancy to demonstrate collaborative editor MUTE

- In December 2016 members of the team (Gérald Oster, Matthieu Nicolas and Phillippe Kalitine) demonstrated the collaborative editor MUTE during the visit of the Rectors of the Mexican Technological Universities at LORIA in the context of the bilateral MEXPROTEC program.

8.4. Institutional commitment

- Claudia-Lavinia Ignat is in charge of European affairs for Inria Nancy Grand-Est. She is the Delegate of International Relations for Inria Nancy-Grand Est and member of COST-GTRI commission. She is member of the Inria Nancy-Grand Est COMIPERS committee. She participated to a working group in charge with the design of a booklet for industrials describing the technological offer of Inria Nancy-Grand Est (she was responsible for the part concerning Large-scale collaborative services and systems). She is responsible with the activity kindergarten at AGOS Inria Nancy-Grand Est.

<p style="text-align:center">**COATI Project-Team**</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

Frédéric Havet

GCO 2016: 2nd French Brazilian Workshop on Graphs and Combinatorial Optimization, Redonda, Ceara, Brazil, May 28-April 1, 2016;

4th STINT meeting, January 25-27, Saint Bonnet de Champsaur, France;

Workshop on Shannon capacity, September 11-16, Cassis, France.

Bruce Reed

Workshop on Shannon capacity, September 11-16, Cassis, France.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

David Coudert

ONDM'16 : 20th International Conference on Optical Networking Design and Modeling, Cartagena, Spain, May 9-12, 2016;

IEEE ICC'16 : IEEE International Conference on Communications, Kuala Lumpur, Malaysia, May 23-27, 2016;

USRR'16 : 4th International Workshop on Understanding the Inter-play between Sustainability, Resilience and Robustness in networks, Halmstad, Sweden, September 15, 2016;

IEEE Globecom'16 : IEEE Global Communications Conference, Washington, DC, USA, December 4-8, 2016.

Frédéric Havet

AAIM 2016: 11th International Conference on Algorithmic Aspects in Information and Management, Bergamo, Italy, July 18-20, 2016;

JGA 2016: 18th Journées Graphes et Algorithmes, Paris, France, November 16-18, 2016.

Nicolas Nisse

AlgoTel 2016: 18es Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications, Bayonne, France, 24-27 May, 2016.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Jean-Claude Bermond

Computer Science Reviews, Discrete Mathematics, Discrete Applied Mathematics, Journal of Graph Theory, Journal Of Interconnection Networks (Advisory Board), Mathématiques et Sciences Humaines, Networks, Parallel Processing Letters the SIAM book series on Discrete Mathematics, Transactions on Network Optimization and Control , Discrete Mathematics, Algorithms and Applications.

David Coudert

Discrete Applied Mathematics (Elsevier); Networks (Wiley).

Frédéric Havet

Discrete Mathematics and Theoretical Computer Science;

Nicolas Nisse

Guest editor of Special issue on Theory and Applications of Graph Searching Problems for Theoretical Computer Science (December 2016).

Bruce Reed

Journal of Graph Theory, Electronic Journal of Combinatorics;

10.1.3.2. Reviewer - Reviewing Activities

Members of COATI have reviewed numerous manuscripts submitted to international journals, including: Algorithmica, Algorithms, Bulletin of the Malaysian Mathematical Sciences Society, Computer Communications, Computer Networks, Computers & Operations Research, Discrete Applied Mathematics, European Journal of Operational Research, IEEE/OSA Journal of Lightwave Technology, Networks, Photonic Network Communications, The Computer Journal, Theoretical Computer Science, IEEE/ACM Transactions on Communications, IEEE/ACM Transactions on Networking, IEEE Transactions on Network and Service Management, etc.

10.1.4. Invited Talks

David Coudert

On the design of reliable wireless backhaul networks. International Conference on Ad Hoc Networks and Wireless (AdHoc-Now'16), Lille, France (July 4-5, 2016);

On the notion of hyperbolicity in graphs. Seminar of the Complex Networks team, LIP6, UPMC, Paris (October 12, 2016).

Nicolas Nisse

Spy Games. Groupe de travail de l'équipe CRO, LIF, Marseille, July 18th, 2016;

Recovery of disrupted airline operations. Seminar of LIMOS, Univ. Blaise Pascal, Clermont-Ferrand, January 28th, 2016.

Bruce Reed

The Typical Structure of H-Free Graphs. Sao Paulo Advanced School on Algorithms, Combinatorics, and Optimization, Sao Paulo, Brazil, July 216;

How To Determine If A Random Graph With A Fixed Degree Sequence Has A Giant Component. Sao Paulo Advanced School on Algorithms, Combinatorics, and Optimization, Sao Paulo, Brazil. July 2016;

On The Structure Of Typical H-Free Graphs. University of Birmingham Combinatorics Seminar, Birmingham, United Kingdom, May 2016;

How To Determine If A Random Graph With A Fixed Degree Sequence Has A Giant Component. Simon Fraser University, July 2016;

40th Australian Conference on Combinatorial Mathematics and Combinatorial Computing, NewCastle Australia, December 2016;

How To Determine If A Random Graph With A Fixed Degree Sequence Has A Giant Component. 13th Workshop on Algorithms and Models for the Wb Graph, Montreal, Canada, December 2016.

10.1.5. Leadership within the Scientific Community

David Coudert

Member of the steering committee of *Pôle ResCom du GDR RSD du CNRS* (since 2005);

Member of the steering committee of *Rencontres francophones sur les aspects algorithmiques des télécommunications* (AlgoTel).

Frédéric Havet

Member of the steering committee of *GT Graphes du GDR IM du CNRS*;

Member of the steering committee of *Journées Graphes et Algorithmes (JGA)*;

Member of the steering committee of *Journée Combinatoire et Algorithmes du Littoral Méditerranéen (JCALM)*.

Bruce Reed

Member of the selection committee for the CRM-Fields-Pims Prize.

10.1.6. Scientific Expertise

Jean-Claude Bermond

Expert for DRTT-MESR (Crédit impôt recherche(CIR et agréments) and various projects outside France.

David Coudert

Expert for the Future and Emerging Technologies Open Scheme (FET-Open) European program, and the ANR.

Frédéric Giroire

Expert for ANR.

Frédéric Havet

Expert for ANR.

Michel Syska

Expert for DRTT PACA.

10.1.7. Research Administration

Jean-Claude Bermond

Responsible fo the cooperation between Inria and Greece (meeting with the french Embassy in greece, obtention of join grants and of financial support for internships via the Bodossakis Fundation).

David Coudert

Scientific coordinator of the evaluation seminar of the Inria theme "Networks and Telecommunications", Rungis, France, March 22-24, 2016.

Frédéric Havet

Responsible of the ComRed Team of I3S;

Recruiting committee (comité de sélection) University of Nice Sophia Antipolis.

Michel Syska

Elected member of CPRH (Comité Permanent de Ressources Humaines) University of Nice Sophia Antipolis;

Recruiting committee (comité de sélection) University of Nice Sophia Antipolis.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence

Pierre Aboulker

Recherche opérationnelle, 74h ETD, Niveau L2, IUT de Nice Côte d'Azur, UNS.

Julien Bensmail

Système d'information et logistique, 36h ETD, niveau S3, IUT Nice Côte d'Azur, UNS.

Christelle Caillouet

Database and advanced information system, 36h ETD, Level L2, IUT Nice Côte d'Azur, UNS;

Delivery Optimization, 30h ETD, Level L3, IUT Nice Côte d'Azur, UNS;

Introduction to Programming, 60h ETD, Level L1, IUT Nice Côte d'Azur, UNS;

Guillaume Ducoffe

Introduction au Web, 28h30 ETD, Level L2, Polytech Nice Sophia, France

Programmation Orientée Objet, 39h ETD, Level L2, Polytech Nice Sophia, France

Principes des systèmes d'exploitation, 26h ETD, Level L2, IUT de Nice Côte d'Azur, UNS.

Valentin Garnero

Introduction aux systèmes informatiques, 108h, niveau S1, IUT Nice Côte d'Azur, UNS.

Luc Hogie

Programmation Répartie, 36h ETD, IUT Nice Côte d'Azur, UNS.

Nicolas Huin

Introduction aux réseaux, 21h ETD, niveau S1, IUT Nice Côte d'Azur, UNS.

William Lochet

Paradigmes et interprétation, 18h ETD, L3, Univ. Côte d'Azur

Programmation objet, 18h ETD, L3, Univ. Côte d'Azur

Compilation, 18h ETD, L3, Univ. Côte d'Azur

Projet scientifique, 30h ETD, L2, Univ. Côte d'Azur

Informatique générale, 36h ETD, L1, Univ. Côte d'Azur

Intro programmation C, 12h ETD, L1, Univ. Côte d'Azur

Joanna Moulierac

Networks, 100h ETD, L1, IUT Nice Côte d'Azur, UNS.

Nicolas Nisse

Introduction à l'algorithmique, 24h ETD, MPSI, Lycée International Valbonne, France.

Steven Roumajon

Architecture des réseaux, 48h ETD, L2, IUT Nice Côte d'Azur, UNS.

Michel Syska

Operating Systems: Advanced Programming, 40h ETD, Level L2, IUT Nice Côte d'Azur, UNS;

Data Structures and Algorithms, 20h ETD, Level L2, IUT Nice Côte d'Azur, UNS;

Algorithmics, 30h ETD, Level L2, IUT Nice Côte d'Azur, UNS;

Distributed Programming, 30h ETD, Level L2, IUT Nice Côte d'Azur, UNS;

Bash Scripting, 30h ETD, Level L3, IUT Nice Côte d'Azur, UNS;

Introduction to Algorithms and Complexity, 60h ETD, Level L3, IUT Nice Côte d'Azur, UNS;

Linux System Administration, 35h ETD, Level L3, IUT Nice Côte d'Azur, UNS.

Master

David Coudert

Algorithms for Telecoms, 32h ETD, stream UbiNet of Master 2 IFI and Master RIF, UNS.

Frédéric Giroire,

Algorithmics of Telecommunications, 18h ETD, stream UbiNet of Master 2 IFI, UNS;

Green Networks, 18h ETD, stream UbiNet of Master 2 IFI, UNS;

Introduction to probability and statistics, 15h ETD, International Master 1, UNS;

Frédéric Havet

Graph colouring, 4h ETD, M2 MDFI, Aix Marseille Univ., France.

Nicolas Nisse

Graph Algorithms, 18h ETD, M2 IFI, parcours UBINET, UNS, France.

Resolution Methods, 15h ETD, M1 international, UNS, France;

Graph decompositions, 4h ETD, M2 MDFI, Aix Marseille Univ. , France

Stéphane Pérennes

Calcul concurrent et distribué en Java, 30h TP, Master 1 Miage. Polytec Nice.

Responsabilités pédagogiques

Julien Bensmail

Co-organizer of the « Forum sur les poursuites d'études », IUT Nice Côte d'Azur (November 10, 2016);

Representative of the QLIO department at « Salon de l'étudiant », Palais des expositions, Nice (November 26, 2016).

Christelle Caillouet

Co-Responsible of QLIO Department, until February 2016.

Joanna Moulierac

Co-Responsible of the DUT Informatique en Alternance, Computer Science Department, from January 2014 to March 2016.

10.2.2. Supervision

PhD : Guillaume Ducoffe, *Metric properties of large graphs* https://team.inria.fr/coati/phd-defense-of-guillaume-ducoffe/, Université Nice Sophia Antipolis, December 9, 2016. Supervisor : David Coudert;

PhD in progress : Nicolas Huin, *Energy efficient Software Defined Networks*, since Oct. 2014, Supervisors: Frédéric Giroire and Dino Lopez (I3S);

PhD in progress : William Lochet, *Forcing subdivisions in digraphs*, since Sept. 2015, Supervisors: Frédéric Havet and Stéphan Thomassé (ENS Lyon);

PhD in progress : Fionn McInerney, *Combinatorial Games in Graphs*, since Oct. 2016, Supervisor: Nicolas Nisse;

PhD in progress : Steven Roumajon, *Les déterminants de la compétitivité régionale : données microéconomiques et réseaux d'innovation*, since Nov. 2015, Supervisors: Patrick Musso (Gredeg) and Frédéric Giroire;

PhD in progress : Andrea Tomassilli, *Diffusion of information on large dynamic graphs*, since Oct. 2016, Supervisors: Stéphane Pérennes and Frédéric Giroire.

10.2.2.1. Internships

Rohit Agarwal

Date: from Jul 2016 until Aug 2016

Institution: Univ. Nice Sophia Antipolis (France)

Supervisor: Nicolas Nisse

Theodoros Karagkioules

Date: until March 2016

Institution: NKUA, Athens (Greece)

Supervisor: Nicolas Nisse

Raul Wayne Teixeira Lopez

Date: from Sep 2016 until Nov 2016

Institution: UFC, Fortaleza (Brazil)

Supervisor: Frédéric Havet

Ioannis Mantas

Date: from Mar 2016 until Aug 2016

Institution: Univ. Nice Sophia Antipolis (France)

Supervisor: David Coudert

Simon Nivelle

Date: from Jun 2016 until Jul 2016

Institution: ENS Cachan (France)

Supervisor: Guillaume Ducoffe et Nicolas Nisse

Stefano Ponziani

Date: from Mar 2016 until Aug 2016

Institution: Univ. Nice Sophia Antipolis (France)

Supervisor: Guillaume Ducoffe et Frédéric Giroire

Konstantinos Priftis

Date: until March 2016

Institution: Univ. of Patras (Greece)

Supervisor: David Coudert

Panagiotis Pylarinos

Date: from Nov. 2016

Institution: NKUA, Athens (Greece)

Supervisor: David Coudert

Andrea Thomassilli

Date: from Mar 2016 until Aug 2016

Institution: Univ. Nice Sophia Antipolis (France)

Supervisor: Nicolas Huin et Frédéric Giroire

Vladyslav Zaika

Date: from Mar 2016 until Aug 2016

Institution: Univ. Nice Sophia Antipolis (France)

Supervisor: Nicolas Nisse

10.2.3. Juries

David Coudert :

Member of the PhD jury of Guillaume Ducoffe, Univ. Nice Sophia Antipolis, December 9, 2016;

Referee and member of the PhD jury of Mohamad Kanj, Univ. Rennes, December 20, 2016;

Frédéric Giroire:

Member of the PhD jury of Leonardo Linguaglossa, Université Paris Diderot (Paris 7), September 9, 2016.

Frédéric Havet :

Member of the PhD jury of G. Duvillié, Université Montpellier, October 7 2016.

Nicolas Nisse :

Referee and member of the PhD jury of Valentin Garnero, Université Montpellier, July 4 2016.

Referee and member of the PhD jury of Jean-Florent Raymond, Université Montpellier, November 18 2016.

Member of the PhD jury of Guillaume Ducoffe, Univ. Nice Sophia Antipolis, December 9, 2016;

10.3. Popularization

Guillaume Ducoffe:

Fête de la Science: presented the stand "Introduction à l'algorithmique" at Valrose, Univ. Nice Sophia Antipolis, France, October 12nd, 2016.

Frédéric Havet:

Fête de la Science: co-organised the Village des Sciences at Vinon-sur-Verdon, France (November 10-14, 2016). F. Havet gave many talks and animated several stands during the whole week.

Semaine des Mathématiques : presented the stand "Les formes de largeur constantes" at Vinon sur Verdon (March 17, 2016)

Culture Science au Lycée : gave thé conference "Magie mathématique et binaire" at Lycée Caucadis Vitrolles (April 28, 2016) and the conferences "La magie du bonaire" and "La Science du Ballon de Football" at Lycée Caucadis Vitrolles (December 9, 2016).

Vendredis de la Science: conducted scientific workshops for school children (6-11 year old) on friday afternoon. Weekly in Januray-February and May-June 2016.

General audience conference : gave the conference "La Science du Ballon de Football" at Rians, Var, France (January 29, 2016).

Nicolas Nisse:

Fête de la Science: animated several stands during the Village des Sciences at Vinon-sur-Verdon, France (November 10-14, 2016).

Fête de la Science: animated several stands in Palais des Congrès de Juan-Les-Pins, October 22-23rd, 2016

Steven Roumajon:

Fête de la Science: presented the stand "Introduction à l'algorithmique" at Valrose, Univ. Nice Sophia Antipolis, France, October 12nd, 2016.

COFFEE Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

We do not keep track of such activities.

9.1.1.2. Member of the Organizing Committees

We do not keep track of such activities.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

We do not keep track of such activities.

9.1.2.2. Member of the Conference Program Committees

We do not keep track of such activities.

9.1.2.3. Reviewer

We do not keep track of such activities.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

T. Goudon if founding editor and co-Editor in chief of SMAI-J. Computational Mathematics

9.1.4. Invited Talks

We do not keep track of such activities.

9.1.5. Scientific Expertise

FONDECYT (Chili), CERG (Hong-Kong), National Evaluation and Foresight Agency (Espagne), FRS-FNRS (Belgique), ANR and AERES/HCERES.

T. Goudon is member of Scientific Committees of CIRM and FSMP.

9.1.6. Research Administration

Roland Masson is the head of the team PDE and Numerical Analysis of the laboratory J.A. Dieudonné.

Thierry Goudon is member of the Evaluation Committee of Inria.

Thierry Goudon is Scientific Officer at the French Ministry of Education and Research.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Members of the team are faculties of University Nice Sophia Antipolis and they teach in all degrees of the University.

T. Goudon is President of the national competition to hire teachers (agregation de mathematiques).

9.2.2. Supervision

PhD : Arthur Vavasseur, Kinetic models for particles interacting with their environment , Univ. Côte d'Azur, Oct. 2016, supervised by T. Goudon

PhD : Nathalie Ayi, Influence of stochasticity on many-scale problems, Univ. Côte d'Azur, Sept. 2016, supervised by F. Berthelin & L. Saint Raymond (DMA-ENS)

PhD : Bastien Polizzi, Modeling and numerical simulations for fluid mechanics systems with constraints ; application to biology and road traffic, Univ. Côte d'Azur, Sept. 2016, supervised by M. Ribot & T. Goudon

PhD : Maya Grozza, Modelization and discretization of two-phase flows in porous media with discrete fracture networks Univ. Côte d'Azur, Nov. 2016, supervised by R. Masson with Laurent Jeannin (GDFSuez EP), and Jean Frédéric Thebault (Storengy)

PhD in progress : Laurence Beaude, started in november 2015, co-supervised by R. Masson, K. Brenner from LJAD and S. Lopez, F. Smai from BRGM, Discretization of high energy geothermal systems in faulted porous media

PhD in progress : Julian Hennicker, started in june 2014, co-supervised by R. Masson, K. Brenner and P. Samier from TOTAL, Discretization of multiphase Hybrid dimensional Darcy flow models in fractured porous media.

PhD in progress : Julie Llobell, stated Sept. 2015, co-supervised by T. Goudon and S. Minjeaud (team Castor), Staggered schemes for conservation laws of gas dynamics.

PhD in progress : Giulia Lissoni, started Sept. 2016, co-supervised by T. Goudon and S. Krell, Domain decomposition and DDFV methods.

PhD in progress : Thi Huong, started June 2014, Le, supervised by S. Junca, vibrations and mechanical systems, nonlinear modes with an unilateral constraint.

PhD in progress : Pierre Castelli, started Sept. 2013, supervised by S. Junca, smoothing effect for conservation laws (P. Castelli is teacher at Lycée d'Audiberti, Antibes)

The bibliography is automatically extracted form hal; it looks far from complete.

COMETE Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

Note: In this section we include only the activities of the permanent internal members of Comète.

10.1.1. Scientific events organisation

10.1.1.1. Member of the organizing committee

Catuscia Palamidessi is member of:

The Executive Committee of SIGLOG, the ACM Special Interest Group on Logic and Computation. Since 2014.

The Organizing Committee of LICS, the ACM/IEEE Symposium on Logic in Computer Science. Since 2010.

The Council of EATCS, the European Association for Theoretical Computer Science. Since 2005.

The Steering Committee of ETAPS, the European Joint Conferences on Theory and Practice of Software. Since 2006.

The Steering Committee of EACSL, the European Association for Computer Science Logics. Since 2015.

The Steering Committee of CONCUR, the International Conference in Concurrency Theory. Since 2016.

The Steering Committee of FORTE, the International Conference on Formal Techniques for Distributed Objects, Components, and Systems. Since 2014.

The IFIP Technical Committee 1 – Foundations of Computer Science. Since 2007.

The IFIP Working Group 2.2 – Formal Description of Programming Concepts. Since 2001.

The IFIP Working Group 1.7 – Theoretical Foundations of Security Analysis and Design. Since 2010.

Frank D. Valencia is member of:

The steering committee of the International Workshop in Concurrency EXPRESS. Since 2010.

10.1.2. Scientific events selection

10.1.2.1. Member of conference program committees

Catuscia Palamidessi is/has been a member of the program committees of the following conferences and workshops:

ICTAC 2017. The 14th International Colloquium on Theoretical Aspects of Computing. Hanoi, Vietnam, 23-27 October 2017.

TASE 2017. The 11th International Symposium on Theoretical Aspects of Software Engineering. Nice, France, 13-15 September 2017.

CONCUR 2017. The 28th International Conference on Concurrency Theory. Berlin, Germany, 5-8 September 2017.

CSL 2017. The 26th EACSL Annual Conference on Computer Science Logic. Stockholm, Sweden, 20-25 August 2017.

ICSOFT-PT 2017. The 12th International Conference on Software Paradigm Trends. Lisbon, Portugal, 24-26 July 2017.

ICALP 2017 (Track B). The 44th International Colloquium on Automata, Languages, and Programming. Warsaw, Poland, 10–14 July 2017.

FORTE 2017. The 37th IFIP International Conference on Formal Techniques for Distributed Objects, Components, and Systems. Neuchâtel, Switzerland, 19-22 June 2017.

CSR 2017. The 12th International Computer Science Symposium in Russia. Kazan, Russia, 8–12 June 2017.

ICTAC 2016. The 13th International Colloquium on Theoretical Aspects of Computing. Taipei, Taiwan, 24-31 October 2016.

LOPSTR 2016. The 26th International Symposium on Logic-Based Program Synthesis and Transformation, 6-8 September 2016.

CONCUR 2016. The 27th International Conference on Concurrency Theory. Québec City, Canada, 23-26 August 2016.

TASE 2016. The 10th International Symposium on Theoretical Aspects of Software Engineering. Shanghai, China, 17-19 July 2016.

FCS 2016. The Workshop on Foundations of Computer Security. Lisbon, Portugal, 27 June 2016.

MFPS XXXII. The Thirty-second Conference on the Mathematical Foundations of Programming Semantics. Carnegie Mellon University, Pittsburgh, USA, 23-26 May 2016.

PhDs in Logic VIII. Darmstadt, Germany, 9-11 May 2016.

UEOP 2016. The 1st Workshop on Understanding and Enhancing Online Privacy. San Diego, USA, 21 February 2016.

Konstantinos Chatzikokolakis is/has been a member of the program committees of the following conferences and workshops:

ICDE 2017: IEEE International Conference on Data Engineering

CSF 2017: 30th IEEE Computer Security Foundations Symposium

POST 2017: 6th International Conference on Principles of Security and Trust

BIGQP 2017: International Workshop on Big Geo Data Quality and Privacy

PETS 2016: The 16th Privacy Enhancing Technologies Symposium

WWW 2016: 25th World Wide Web conference

APVP 2016: 7ème Atelier sur la Protection de la Vie Privée

Frank D. Valencia is/has been a member of the program committees of the following conferences and workshops:

PPDP 2016. The 18th International Symposium on Principles and Practice of Declarative Programming (PPDP 2016).

ICTAC 2016. The 13th International Colloquium on Theoretical Aspects of Computing (ICTAC 2016).

ICLP DC 2016. 12th ICLP Doctoral Consortium.

10.1.2.2. Reviewer

The members of the team reviewed several papers for international conferences and workshops.

10.1.3. Journals

10.1.3.1. Member of the editorial board

Catuscia Palamidessi is:

Member of the Editorial Board of Mathematical Structures in Computer Science, published by the Cambridge University Press.

Member of the Editorial Board of Acta Informatica, published by Springer.

Member of the Editorial Board of the Electronic Notes of Theoretical Computer Science, published by Elsevier Science.

Member of the Editorial Board of LIPIcs: Leibniz International Proceedings in Informatics, Schloss Dagstuhl –Leibniz Center for Informatics.

Konstantinos Chatzikokolakis is:

Editorial board member of the newly established Proceedings on Privacy Enhancing Technologies (PoPETs), a scholarly journal for timely research papers on privacy.

10.1.3.2. Reviewer

The members of the team reviewed several papers for international journals.

10.1.4. Other Editorial Activities

Frank D. Valencia has been:

Co-editor of the special issue on Mathematical Structures in Computer Science dedicated to the best papers from the 12th International Colloquium on Theoretical Aspects of Computing.

10.1.5. Other Activities

10.1.5.1. Invited talks

Catuscia Palamidessi has given invited talks at the following conferences and workshops:

DISCOTEC 2016 (Keynote speaker). The 11th International Federated Conference on Distributed Computing Techniques. Crete, Greece, 6-9 June 2016.

Journée sur la Securité, la Sureté et la Confidentialité. Organized by Paris VII, Paris XIII and Systematic. Paris, France, 10 May 2016.

10.1.5.2. Participation in other committees

Catuscia Palamidessi has been serving in the following committees:

Member of the Alonzo Church Award Committee. Since 2015. This award is for an outstanding contribution to Logic and Computation within the past 25 years.

President of the selection committee for the EATCS Best Paper Award at the ETAPS conferences. Since 2006.

10.1.5.3. Service

Catuscia Palamidessi has served as:

Reviewer for the projects proposal for the program PRIN, sponsored by the Italian MIUR ("Ministero dell'Istruzione, dell'Università e della Ricerca"). Since 2004.

Member of the comité de selection for a position for Maitre de Conferences at l'Université de Paris VII (Paris Diderot). Spring 2016.

Frank Valencia has served as:

Directeur adjoint de l'UMR 7161, le Laboratoire d'Informatique de l'Ecole Polytechnique (LIX). May 2016 - .

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

PhD : Catuscia Palamidessi has been teaching a course for PhD students, on Protection of sensitive information, at the University of Venice, Italy. April 2016. Total 30 hours.

Master : Frank D. Valencia has been teaching the undergraduate course "Computability", 45 hours, at the Pontificia Universidad Javeriana de Cali, Colombia. July 27 - Nov 1, 2016.

Master : Frank D. Valencia has been teaching the masters course "Foundations of Computer Science", 45 hours, at the Pontificia Universidad Javeriana de Cali, Colombia. Jan 27 - Jun 1, 2016.

Master: Konstantinos Chatzikokolakis and Catuscia Palamidessi have been teaching a course on the Foundations of Privacy at the MPRI, the Master Parisien pour la Recherche en Informatique. University of Paris VII. A.Y. 2016-17. Total: 24 hours plus 6 hours for the exam and the exercise session is preparation to the exam.

10.2.2. Supervision

PhD in progress (2016-) Tymofii Prokopenko. Ecole Polytechnique and ENS Cachan. Grant Digiteo-Digicosme. Co-supervised by Konstantinos Chatzikokolakis, Catuscia Palamidessi, and Serge Haddad.

PhD in progress (2015-) Joris Lamare. Ecole Polytechnique. Grant MSR Center. Co-supervised by Catuscia Palamidessi and Konstantinos Chatzikokolakis.

PhD in progress (2014-) Michel Guzman. Ecole Polytechnique. Grant Inria CORDI-S. Co-supervised by Catuscia Palamidessi and Frank D. Valencia.

PhD completed (2013-16) Salim Percy. Ecole Polytechnique. Grant Digiteo-Digicosme. Co-supervised by Frank D. Valencia and Stefan Haar.

10.2.3. Juries

Catuscia Palamidessi has been reviewer and member of the board at the PhD defense for the thesis of the following PhD student:

Huu-Hiep Nguyen, PhD student supervised by Abdessamad Imine, University of Lorraine, France. November 2016. Title of the thesis: Social Graph Anonymization.

10.2.4. Other didactical duties

Catuscia Palamidessi is:

External member of the scientific council for the PhD in Computer Science at the University of Pisa, Italy. Since 2012.

Member of the Committee d'Encadrement de Thèse of Jun Wang (PhD student supervised by Qiang Tang and Peter Ryan), University of Luxembourg. Since December 2014.

Member of the advising committee for the PhD of Andrea Margheri (PhD student supervised by Rosario Pugliese), University of Florence, Italy. 2014-16.

Konstantinos Chatzikokolakis and Catuscia Palamidessi have designed, and coordinate, a course on the Foundations of Privacy at the MPRI, the Master Parisien pour la Recherche en Informatique. University of Paris VII. A.Y. 2016-17.

<p style="text-align:center">COMMANDS Project-Team</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events selection

10.1.1.1. Member of the conference program committees

- F. Bonnans, 14th EUROPT Workshop on Advances in Continuous Optimization, Poznań, July 3-6, 2016.

10.1.2. Journal

10.1.2.1. Member of the editorial boards

- F. Bonnans: Corresponding Editor of "ESAIM:COCV" (Control, Optimization and Calculus of Variations), and Associate Editor of "Applied Mathematics and Optimization", "Optimization, Methods and Software", and "Series on Mathematics and its Applications, Annals of The Academy of Romanian Scientists".

10.1.2.2. Reviewer - Reviewing activities

Reviews for major journals in the field such as Applied Mathematics and Optimization, Automatica, J. Diff. Equations, J. of Optimization Theory and Applications the SIAM J. Optimization, SIAM J. Control and Optimization, Inverse problems, Journal of Numerical Mathematics, Operations Research, Optimization, Process Control, Math. Reviews.

10.1.3. Invited talks

- A. Kröner: Seminars in U. Konstanz, U. Hamburg, 2016.
- Minisymposium Numerical methods for time-dependent transportation and optimal control problems. Computational Methods in Applied Mathematics (CMAM), Jyväskyla, Finland, July 31-Aug. 6,2016;
- Minisymposium 'Optimal Control - Theory and Applications', Emerging Trends in Applied Mathematics and Mechanics, Perpignan, May 30-June 3, 2016;
- Minisymposium 'Numerical aspects of controllability of PDEs and inverse problems', CANUM (Congrès d'Analyse Numérique), Obernai, May 9-13, 2016;
- A. Kröner: Workshop on *Numerical methods for Hamilton-Jacobi equations in optimal control and related fields*, Linz, Austria, Nov., 2016;

10.1.4. Leadership within the scientific community

- F. Bonnans: French representative to the IFIP-TC5 committee (International Federation of Information Processing; TC7 devoted to System Modeling and Optimization).
- F. Bonnans: member of the PGMO board and Steering Committee (Gaspard Monge Program for Optimization and Operations Research, EDF-FMJH).
- F. Bonnans: member of the Broyden Prize committee (from the Journal Optimization Methods and Software).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master :

F. Bonnans: *Numerical analysis of partial differential equations arising in finance and stochastic control*, 36h, M2, Ecole Polytechnique and U. Paris 6, France.

F. Bonnans: *Optimal control*, 15h, M2, Optimization master (U. Paris-Saclay) and Ensta, France.

F. Bonnans: *Stochastic optimization*, 15h, M2, Optimization master (U. Paris-Saclay), France.

A. Kröner : Optimal control of partial differential equations, 20h, M2, Optimization master (U. Paris-Saclay), France.

E-learning F. Bonnans, several lecture notes on the page
http://www.cmap.polytechnique.fr/∼bonnans/notes.html

10.2.2. Supervision

- PhD : Benjamin Heymann, Dynamic optimization with uncertainty; application to energy production. Polytechnique fellowship, defense October 2016, F. Bonnans and A. Jofre.

- PhD in progress : Cédric Rommel, Data exploration for the optimization of aircraft trajectories. Started November 2015, F. Bonnans and P. Martinon. CIFRE fellowship (Safety Line).

- PhD in progress : Arthur Le Rhun, Optimal and robust control of hybrid vehicles (IFPEN fellowship), started Sept. 2016, F. Bonnans and P. Martinon.

10.2.3. Juries

- HDR Juries: F. Silva (Limoges), A. Rondepierre (Toulouse, rapporteur).

10.3. Popularization

- J.F. Bonnans: *Comment optimiser la gestion d'un micro-réseau électrique intelligent ?* Cahier de l'Institut Louis Bachelier N. 23 (2016), p. 12-13.

COMPSYS Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Alain Darte is general chair of the steering committee of CPC (International Workshop on Compilers for Parallel Computing), which regroups in Europe, every 18 months, a large community of researchers interested in compilers for HPC. He participated to CPC'16 in Valladolid in July 2016.

10.1.1.2. Member of the Organizing Committees

Tomofumi Yuki was co-organizer of IMPACT'16 (International Workshop on Polyhedral Compilation Techniques, http://impact.gforge.inria.fr/impact2016/) with Michelle Strout (University of Arizona).

10.1.1.3. Spring School on Numerical Simulation and Polyhedral Compilation

Alain Darte (with the help of Tomofumi Yuki for the program) co-organized with Violaine Louvet (Institute Camille Jordan in Lyon, now lead of UMS Gricad in Grenoble) a second polyhedral spring school, May 9-13 2016, targeting both the polyhedral community and HPC users from numerical analysis. This spring school has been labelled (and funded) as a CNRS interdisciplinary spring school (https://mathsinfohpc.sciencesconf. org/), with a total budget of roughly 39 Keuros, including funding from Labex MILYON, CNRS, GDR Calcul, ENS, LIP, and registrations fees, which were kept low to keep the spirit of the first spring school on polyhedral code analysis and optimizations.

This second spring school was motivated by the need for a more global approach for HPC applications, that combines the design of numerical methods with extensive hardware considerations, in interaction with languages and compilers, so as to take into account both the complexity of architectures and the needs of their non-expert users. Research communities in computer science (architecture, compilation) and applied mathematcs (numerical simulation) are not always aware of this need; at least their work do not always spread enough across the other discipline to lead to mutual influence. Automatic code optimizations and tools also require a better evaluation of their applicability. The goal of this research school – or meeting place of two communities – was to make the link between some of the most recent advances on automatic program optimizations (in particular polyhedral techniques and tools) and applied mathematics (schemes for numerical simulation), in relation with application needs. This school was therefore interdisciplinary, with a strong will to bring communities together on the common theme of supercomputing.

We finally opted for a single track instead of parallel sessions, which helped federate the two communities. The school included courses on architectures (M. Haefele, Maison de la simulation), on numerical schemes in connection with stencils (T. Dumont, ICJ), on simulation methods (discontinuous Galerkin) in particular for GPU (P. Helluy, Strasbourg), on polyhedral techniques and tiling (A. Darte, Compsys), on some polyhedral compilers such as Pluto (U. Bondhugula, Bangalore) and PPCG (S. Verdoolaege, ENS), on the roofline model for performance analysis (M. Püschel, ETH Zürich), on stencils and tensors optimizations (Ramanujam, Baton Rouge), on numerical precision (C. Rubio-Gonzalez, UC Davis), plus some additional talks on reproducibility, applications, the ECM model, etc. The school was a success, with 71 participants, roughly half from each community, with 29 coming from abroad (Italy, Algeria, USA, India, Canada, Germany, Croatia, Switzerland, Austria, Belgium), and a majority (37) being PhD students.

The future will tell if our objectives have been reached, i.e., if the two communities will interact more on the long term and rethink their work with an interdisciplinary look, to invent new computing schemes and compilers more suitable for the constraints of today's architectures, in particular their memory hierarchy and locality needs. In Compsys at least, one can already see some moves in this direction, with the interdisciplinary internship of Julien Versaci co-advised by Tomofumi Yuki, the participation of Alain Darte as a referee to the PhD jury of T. Gasc (CEA, Maison de la Simulation, ENS Cachan), a planned seminar by Alain Darte at Maison de la Simulation in early 2017, starting exchanges with the LMGC lab (Montpellier) on their applications, and a planned mini-symposium, following the line of this spring school, at SMAI 2017.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

In addition to the organization, Tomofumi Yuki was program co-chair of IMPACT'16, with Michelle Strout (University of Arizona).

10.1.2.2. Member of the Conference Program Committees

Alain Darte was a member of the program committee of HPCS'16 (International Conference on High Performance Computing & Simulation) and will be member of the program committee of PACT'17 (International Conference on Parallel Architectures and Compilation Techniques).

Paul Feautrier was a member of the program committees of IMPACT'16 and IMPACT'17.

Tomofumi Yuki was a member of the program committees of SC'16, X10 Workshop'16, IMPACT'16, and IMPACT'17.

10.1.2.3. Reviewer

Alain Darte, Paul Feautrier, and Tomofumi Yuki were reviewers for the different program committees to which they participated.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

No participation to journal editorial boards in 2016.

10.1.3.2. Reviewer - Reviewing Activities

Alain Darte was a reviewer for the "Software, Practice, and Experience" journal.

Paul Feautrier was a reviewer for the "International Journal of Parallel Programming".

Tomofumi Yuki was a reviewer for the TACO, TOPLAS, JPDC, and TPDS journals.

10.1.4. Invited Talks

Alain Darte was invited to give a talk on "Liveness Analysis in Explicitly-Parallel Programs" at ScalPerf'16 in Bertinoro (Italy), Sep. 2016.

Paul Feautrier was invited to give a talk (in two parts) "Toward A Polynomial Model with Application to the OpenStream Language" at the second and third LCS (Language, Compilation, Semantics) LIP seminars, in June and November 2016.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master:
- Paul Feautrier was invited to give a talk on "New Architectures, New Compilations Problems", at the student seminar for the IMAG M2 course, Grenoble, December 5, 2016.

Spring/Summer Schools:

- Alain Darte, as part of the spring school on numerical simulation and polyhedral compilation, gave a half-day course on "Introduction to Automated Polyhedral Code Optimizations and Tiling", see https://mathsinfohpc.sciencesconf.org.
- Tomofumi Yuki, a part of the École Jeunes Chercheurs en Programmation 2016, gave a half-day course on "Research in Compilers and Introduction to Loop Transformations", see http://ejcp2016.univ-lille1.fr/.

10.2.2. Supervision

PhD: Guillaume Iooss, "Detection of linear algebra operations in polyhedral programs" [16], joint PhD ENS-Lyon/Colorado State University, started Sep. 2011, defended July 1st, 2016, advisors: Christophe Alias and Alain Darte (ENS-Lyon) / Sanjay Rajopadhye (Colorado State University).

PhD: Alexandre Isoard, "Extending Polyhedral Techniques towards Parallel Specifications and Approximations" [17], ENS-Lyon, started in Sep. 2012, defended July 5th, 2016, advisor: Alain Darte.

Guillaume Iooss is now post-doc in the Parkas team, while Alexandre Isoard is R&D engineer at Xilinx (Dublin, Ireland, then San Jose, Ca).

10.2.3. Juries

Alain Darte was one of the two reviewers of the PhD of Thibault Gasc (CEA DAM DIF, Maison de la Simulation, November 2016), entitled "Modèles de performance pour l'adaptation des méthodes numériques aux architectures multi-cœurs vectorielles. Application aux schémas Lagrange-Projection en hydrodynamique compressible". He was also member of the juries of the PhD of Alexandre Isoard, as adviser, and of Guillaume Iooss as administrative co-adviser.

10.3. Popularization

The interdisciplinary spring school organized in May 2016 (see Section 10.1) is a form of popularization of compiler technology (in particular polyhedral optimizations) towards HPC users from the numerical simulation community.

CONVECS Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- H. Garavel is a member of the model board [0] of MCC (*Model Checking Contest*). In 2016, he helped preparing new models (especially those in the NUPN format) and verified, using the CÆSAR.BDD tool of CADP, the forms describing all benchmark models submitted by the contest participants; this revealed a number of inconsistencies. The mission and activities of the model board are described in a journal paper [15].

- Together with Peter Höfner (Data61, CSIRO, Sydney, Australia), H. Garavel set up a model repository (hosted on the Gforge of Inria) to collect and archive formal models of real systems; this infrastructure is used by the series of MARS workshops [0]. The first model deposited in this repository was W. Serwe's description in LOTOS and LNT of an asynchronous circuit implementing the Data Encryption Standard.

- G. Salaün is member of the steering committee of the SEFM (*International Conference on Software Engineering and Formal Methods*) conference series since 2014.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

- R. Mateescu was the tool chair of TACAS'2016 (*22th International Conference on Tools and Algorithms for the Construction and Analysis of Systems*), Eindhoven, The Netherlands, April 2–8, 2016.

- G. Salaün was co-chair of SVT-SAC'2016 (the *Software Verification and Testing* track of the *31st ACM Symposium on Applied Computing*), Pisa, Italy, April 4–8, 2016.

9.1.2.2. Member of the Conference Program Committees

- H. Garavel was program committee member of the 6th FMF (*Forum Methodes Formelles*), Toulouse-Grenoble-Saclay, France, January 26, 2016.

- F. Lang was program committee member of GaM'2016 (*Graphs as Models*), Eindhoven, The Netherlands, April 2–3, 2016.

- G. Salaün was program committee member of SOAP-SAC'2016 (the *Service-Oriented Architecture and Programming* track) of SAC'2016, Pisa, Italy, April 4–8, 2016.

- R. Mateescu was program committee member of SPIN'2016 (*23rd International SPIN Symposium on Model Checking of Software*), Eindhoven, The Netherlands, April 7–8, 2016.

- G. Salaün was program committee member of CIEL'2016 (*5ème Conférence en IngénieriE du Logiciel*), Besançon, France, June 7, 2016.

- G. Salaün was program committee member of COMPSAC'2016 (*40th IEEE International Conference on Computers, Software and Applications*), Atlanta, Georgia, USA, June 10–14, 2016.

- G. Salaün was program committee member of WWV'2016 (*12th International Workshop on Automated Specification and Verification of Web Systems*), Porto, Portugal, June 26, 2016.

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[0] http://mcc.lip6.fr/models.php
[0] http://www.mars-workshop.org/

- H. Garavel and G. Salaün were program committee members of SEFM'2016 (*14th International Conference on Software Engineering and Formal Methods*), Vienna, Austria, July 4–8, 2016.

- G. Salaün was program committee member of RV'2016 (*16th International Conference on Runtime Verification*), Madrid, Spain, September 23–30, 2016.

- R. Mateescu was program committee member of FMICS-AVoCS'2016 (*International Workshop on Formal Methods for Industrial Critical Systems and Automated Verification of Critical Systems*), Pisa, Italy, September 26–29, 2016.

- H. Garavel was program committee member of HILT'2016 (*Workshop on High Integrity Language Technology*), Pittsburgh, PA, October 6–7, 2016.

- R. Mateescu was program committee member of ICTSS'2016 (*28th International Conference on Testing Software and Systems*), Graz, Austria, October 17–19, 2016.

- G. Salaün was program committee member of FACS'2016 (*13th International Conference on Formal Aspects of Component Software*), Besançon, France, October 19–21, 2016.

9.1.2.3. Reviewer

- G. Barbon was a reviewer for COMPSAC'2016, SVT-SAC'2017, and FSEN'2017 (*7th IPM International Conference on Fundamentals of Software Engineering*), Tehran, Iran, April 26–28, 2017.

- H. Garavel was a reviewer for SPIN'2016.

- F. Lang was a reviewer for FORTE'2016 (*36th IFIP International Conference on Formal Techniques for Distributed Objects, Components and Systems*), Heraklion, Crete, Greece, June 6–9, 2016.

- R. Mateescu was a reviewer for FACS'2016 and SEFM'2016.

- G. Salaün was a reviewer for DAIS'2016 (*16th IFIP International Conference on Distributed Applications and Interoperable Systems*), Heraklion, Crete, Greece, June 6–9, 2016.

- W. Serwe was a reviewer for SEFM'2016, FMICS-AVoCS'2016, RV'2016, and DATE'2017 (*20th International Conference on Design, Automation and Test in Europe*), Lausanne, Switzerland, March 27–31, 2017.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- H. Garavel is an editorial board member of STTT (*Springer International Journal on Software Tools for Technology Transfer*).

9.1.3.2. Reviewer - Reviewing Activities

- G. Barbon was a reviewer for JSS (*Journal of Systems and Software*).

- H. Garavel was a reviewer for the Mathematical Reviews (MathSciNet) of the American Mathematical Society.

- F. Lang was a reviewer for STTT.

- R. Mateescu was a reviewer for Acta Informatica and STTT.

- G. Salaün was a reviewer for IJCIS (*International Journal of Cooperative Information Systems*), JLAMP (*Journal of Logic and Algebraic Methods in Programming*), IEEE TSE (*Transactions on Software Engineering*), and TSI (*Technique et Science Informatiques*).

- W. Serwe was a reviewer for SPE (*Journal on Software: Practice and Experience*) and STTT.

9.1.4. Software Dissemination and Internet Visibility

The CONVECS project-team distributes several software tools: the CADP toolbox (see § 5.1), the TRAIAN compiler (see § 5.2), the PIC2LNT translator, the PMC model checker, and the DLC compiler.

In 2016, the main facts are the following:

- We prepared and distributed twelve successive versions (2016-a to 2016-l) of CADP.
- A new version 2.8 of TRAIAN was released on February 29, 2016.
- We were requested to grant CADP licenses for 507 different computers in the world.

The CONVECS Web site [0] was updated with scientific contents, announcements, publications, etc.

By the end of December 2016, the CADP forum [0], opened in 2007 for discussions regarding the CADP toolbox, had over 389 registered users and over 1769 messages had been exchanged.

Also, for the 2016 edition of the Model Checking Contest, we provided four families of models (totalling 62 Nested-Unit Petri Nets) derived from our LNT models. A journal article presenting the achievements of the Model Checking Contest since its origins has been published [15].

Other research teams took advantage of the software components provided by CADP (e.g., the BCG and OPEN/CAESAR environments) to build their own research software. We can mention the following developments:

- An approach for specifying formally the composition of Web services [27]
- The Vercors integrated environment for verifying and running distributed components [43], [46]
- The PN2MC tool for modeling and verifying RTCP-nets [53]
- The Alvis tool for designing hierarchical communication diagrams [54]
- The IDCM tool for designing and integrating complex systems [48], [47]
- The Availability Analyzer tool for software architecture decomposition alternatives [55]

Other teams also used the CADP toolbox for various case studies:

- Formal specification and verification of TCP extended with the Window Scale Option [49]
- Performance evaluation of concurrent data structures [56]
- Heuristic search for equivalence checking [31]
- Using formal models to cross check an implementation [52]
- Proving linearizability via branching bisimulation [57]
- Computing maximal weak and other bisimulations [28]
- Verification methodologies for fault-tolerant Network-on-Chip systems [58]

9.1.5. Awards and Distinctions

H. Garavel is an invited professor at Saarland University (Germany) as a holder of the Gay-Lussac Humboldt Prize.

9.1.6. Invited Talks

- H. Garavel gave a talk entitled "*Process Calculi: Towards the Great Unification*" on January 12, 2016 at the Formal Methods seminar of Inria Grenoble.
- R. Mateescu gave a talk entitled "*On-the-Fly Verification for Extended Action-Based Temporal Logics*" on March 3rd, 2016 at IST Graz, Austria.
- H. Garavel was a guest speaker at the 9th German national D-CON meeting that took place in Saarbrücken, Germany, on March 7–8, 2016, where he gave a talk entitled "*Nested-Unit Petri Nets*".
- G. Salaün gave a talk entitled "*Automated Verification of Asynchronously Communicating Systems*" on March 15, 2016 at the LORIA laboratory, Nancy, France.
- H. Garavel gave a talk entitled "*On the Simplest Way to Build Integers from Naturals*" on April 28, 2016 at Saarland University, Germany.

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[0]http://convecs.inria.fr
[0]http://cadp.inria.fr/forum.html

- G. Barbon gave a talk entitled "*Debugging Concurrent Programs using Model Checking and Mining Techniques*" at MOVEP'2016 (*12th Summer School on Modelling and Verification of Parallel Processes*) that took place in Genova, Italy, on June 17–July 1, 2016.

- H. Garavel gave a talk entitled "*On the Most Suitable Axiomatization of Signed Integers Using Free Constructors*" during WADT'2016 (*23rd International Workshop on Algebraic Development Techniques*) that took place in Gregynog, Wales, UK, on September 21–24, 2016.

- H. Garavel gave two talks entitled "*Term Rewrite Systems and the Definition of Signed Integers*" and "*Benchmarking Implementations of Conditional Term Rewrite Systems*" on September 30, 2016 at the LSV laboratory, Cachan, France.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

CONVECS is a host team for MOSIG [0] (*Master of Science in Informatics at Grenoble*), the international master programme in computer science, common to Grenoble INP and Université Grenoble Alpes.

In 2016, we carried out the following teaching activities:

- H. Garavel, together with Laurence Pierre (TIMA, Grenoble), created a new curriculum HECS [0] ("*High-confidence Embedded and Cyberphysical Systems*") for 2nd-year MOSIG students. This curriculum opened for the first time in September 2016.

- F. Lang, R. Mateescu, G. Salaün, and W. Serwe gave lectures on models for concurrency, temporal logics, equivalences, formal languages and verification (36 hours) as part of the MOSIG/HECS-2 course ("*Modeling and Analysis of Concurrent Systems*") led by G. Salaün.

- H. Garavel gave lectures on probabilistic models, stochastic models, and static/dynamic fault trees (6 hours) as part of the MOSIG/HECS-3 course ("*Performance and quantitative properties*") led by Goran Frehse (Verimag).

- H. Garavel gave lectures on the synchronous languages Lustre and SCADE, and on model-driven engineering (7.5 hours) as part of the MOSIG/HECS-4 course ("*Industrial processes for high-confidence design*") led by Laurence Pierre (TIMA).

- G. Salaün was co-responsible of the ISI (*Ingéniérie des Systèmes d'Information*) department of ENSIMAG ("*École Nationale Supérieure d'Informatique et de Mathématiques Appliquées*", Grenoble INP) from September 1, 2011 until August 31st, 2016.

- G. Salaün is Professor at Université Grenoble Alpes since September 1st, 2016, and teaches algorithmics, programming, and Web development at the MMI department of IUT1. He is also headmaster of the SMIN professional licence (L3, 3rd year of university), 192 hours.

- W. Serwe supervised a group of six teams in the context of the "*projet Génie Logiciel*" (55 hours "*équivalent TD*", consisting in 16.5 hours of lectures, plus supervision and evaluation).

- F. Lang gave a lecture on formal methods (9 hours "*équivalent TD*") in the framework of the software engineering course given to the first year students of MOSIG.

- F. Lang gave a lecture on "*Modélisation et vérification de systèmes concurrents et temps-réel*" (27 hours "*équivalent TD*") to the third year computer science engineering students of ENSIMAG.

- G. Barbon gave a lecture on "*Théorie des Langages 1*" at ENSIMAG (18 hours "*équivalent TD*").

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[0] http://mosig.imag.fr
[0] http://hecs.imag.fr

9.2.2. *Supervision*

- Fatma Jebali, "*A Formal Framework for Modelling and Verifying Globally Asynchronous Locally Synchronous Systems*", Université Grenoble Alpes, September 12, 2016, F. Lang and R. Mateescu
- PhD in progress: G. Barbon, "*Debugging Concurrent Programs using Model Checking and Mining Techniques*", Université Grenoble Alpes, since October 2015, G. Salaün and V. Leroy
- PhD in progress: L. Marsso, "*Formal Methods for Testing Networks of Controllers*", Université Grenoble Alpes, since October 2016, R. Mateescu, W. Serwe, I. Parissis, and Ch. Deleuze
- PhD in progress: U. Ozeer, "*Autonomous Resilience of Applications in a Largely Distributed Cloud Environment*", Université Grenoble Alpes, since November 2016, X. Etchevers, G. Salaün, F.-G. Ottogalli, and J.-M. Vincent

9.2.3. *Juries*

- R. Mateescu was reviewer of Oleksandra Kulankhina's PhD thesis, entitled "*A Framework for Rigorous Development of Distributed Components: Formalisation and Tools*", defended at University of Nice Sophia-Antipolis on October 14, 2016.
- G. Salaün was reviewer of Guillaume Verdier's PhD Thesis, entitled "*Variants of Acceptance Specifications for Modular System Design*", defended at University of Toulouse on March 29, 2016.

9.3. Popularization

H. Garavel participates to the program committee and organization committee of FMF (Formal Methods Forum [0]), a series of industrial conferences on formal methods set up by the competitivity clusters Aerospace Valley and Minalogic, with the support of Inria and many other partners. The 6th FMF conference, devoted to safety engineering, was held on January 26, 2016. The 7th FMF conference, devoted to formal methods and cybersecurity, is scheduled on January 31, 2017.

H. Garavel and R. Mateescu co-operated with Gérard Berry to prepare his lecture on explicit-state enumerative verification given at Collège de France on April 22, 2016.

9.4. Miscellaneous Activities

H. Garavel was a member of the 2016 Inria selection committee for hiring research officers (*chargés de recherche*).

In 2016, H. Garavel was appointed to the Executive Commission in charge of International Relations at COMUE University Grenoble Alpes.

F. Lang is chair of the "*Commission du développement technologique*", which is in charge of selecting R&D projects for Inria Grenoble – Rhône-Alpes.

R. Mateescu is the correspondent of the "*Département des Partenariats Européens*" for Inria Grenoble – Rhône-Alpes.

R. Mateescu is a member of the "*Comité d'orientation scientifique*" for Inria Grenoble – Rhône-Alpes.

R. Mateescu is a member of the "*Bureau*" of the LIG laboratory.

G. Salaün was an elected member of the council of the LIG laboratory until August 31, 2016.

G. Salaün is a member of the Scientific Committee of the PCS action of the PERSYVAL Labex.

W. Serwe is "*chargé de mission*" for the scientific axis *Formal Methods, Models, and Languages* of the LIG laboratory.

W. Serwe is (together with Laurent Lefèvre from the AVALON Inria project-team) correspondent in charge of the 2016 Inria activity reports at Inria Grenoble – Rhône-Alpes.

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[0] http://projects.laas.fr/IFSE/FMF

<p style="text-align:center">**CORSE Project-Team**</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Ylies Falcone: 1st international summer school on Runtime Verification; 3rd international Competition on Runtime Verification
- Frédéric Desprez: EuroPAR 2016 (co-chair and workshop chair)

9.1.1.2. Member of the Organizing Committees

- Fabrice Rastello: Program Committee ACM/IEEE CGO 2015; Steering Committee Journées française de la compilation; Steering Committee ACM/IEEE CGO

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

- Fabrice Rastello: Program Chair ACM/IEEE CGO 2016; Program Chair "Journées française de la compilation", Aussois, 2016
- Ylies Falcone: Program Chair RV 2016

9.1.2.2. Member of the Conference Program Committees

- Fabrice Rastello: ACM CC 2016, ACM SRC SC 2016, ACM/IEEE SRC SC 2016
- Alain Ketterlin: ACM/IEEE CGO 2016
- Ylies Falcone: CARI 2016, SSS 2016, RV 2016, Pre-Post'16, SAC-SVT'16
- Frédéric Desprez: Closer 2016, CCGrid 2016, HPC 2016, EuroPAR 2016, CloudCom 2016

9.1.3. Journal

9.1.3.1. Reviewer - Reviewing activities

- Fabrice Rastello: ACM TACO
- Ylies Falcone: Formal Aspects of Computing, ACM Transactions on Automatic and Control, Acta Informatica, Formal Methods in System Design, International Journal of Information and Computer Security, Science of Computer Programming, Software Tools for Technology Transfer, Journal of Systems and Software, NFM 2016

9.1.4. Invited talks

- Fabrice Rastello: UCDenver: "Toward Automatic Characterisation of the Data Access Complexity of Programs"
- Ylies Falcone: American University of Beirut: "On the Runtime Enforcement of Timed Properties"
- Ylies Falcone: LAAS Toulouse: "On the Runtime Enforcement of Timed Properties"
- Frédéric Desprez: Inria Alumni: "Internet des objets, Où sont les ruptures? Activités à l'Inria"
- Frédéric Desprez: SUCCES Workshop: "CIMENT, GRICAD, Grid'5000: La synergie grenobloise"
- Frédéric Desprez: CCDSC Workshop: "BOAST: Performance Portability Using Meta-Programming and Auto-Tuning"
- Frédéric Desprez: Eurecom Seminar 2016: "Challenges and Issues of Next Cloud Computing Platforms"

- Frédéric Desprez: European Commission, Brussels: "Research Issues for Future Cloud Infrastructures"
- Frédéric Desprez: CIRM, CEMRACS 2016 summer school: "OpenCL Introduction"
- François Broquedis: CIRM, CEMRACS 2016 summer school: "A Gentle Introduction to OpenMP Programming"
- Jean-François Méhaut: CEMRACS 2016 summer school: "Overview of architectures and programming language for parallel computing"

9.1.5. Scientific expertise

- Frédéric Desprez: European project in the FP7 framework
- Frédéric Desprez: Comité d'orientation stratégique de CIRRUS (COMUE Paris)
- Frédéric Desprez: Groupe Technique GENCI
- Frédéric Desprez: Conseil Scientifique GIS France Grille
- Frédéric Desprez: GENCI, expert for grants of computing resources (CT6)
- Ylies Falcone: Representative of France in the COST Action ARVI
- Ylies Falcone: COST Action ARVI, co-leader of Working Group on Core Runtime Verification
- Jean-François Mehaut: Eurolab-4-HPC, expert for cross site mobility research grants
- Jean-François Mehaut: GENCI, expert for grants of computing resources (CT6)

9.1.6. Research administration

- Frédéric Desprez: Deputy Scientific Director at Inria
- Frédéric Desprez: Director of the GIS GRID5000
- Frédéric Desprez: Conseil Scientifique ESIEE Paris

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master II: Fabrice Rastello, Advanced Compilers, 12 hours, ENS Lyon

Master I: Jean-François Méhaut, Operating System Design, 50 hours, Polytech Grenoble

L3: Jean-François Méhaut, Numerical Methods, 50 hours, Polytech Grenoble,

L3: Jean-François Méhaut, Advanced Algorithms, 50 hours, Polytech Grenoble

L3: François Broquedis, Imperative programming using python, 40 hours, Grenoble Institute of Technology (Ensimag)

L3: François Broquedis, C programming, 80 hours, Grenoble Institute of Technology (Ensimag)

M1: François Broquedis, Operating systems and concurrent programming, 40 hours, Grenoble Institute of Technology (Ensimag)

M1: François Broquedis, Operating Systems Development Project - Fundamentals, 20 hours, Grenoble Institute of Technology (Ensimag)

M1: François Broquedis, Operating Systems Project, 20 hours, Grenoble Institute of Technology (Ensimag)

Master: Florent Bouchez Tichadou, Compilation project, 15 hours, M1 Info & M1 MoSig

Licence: Florent Bouchez Tichadou, C programming, 24 hours, L3, Grenoble Institute of Technology (Ensimag)

Master: Florent Bouchez Tichadou, Algorithmic Problem Solving, 41 hours, M1 MoSIG

Licence: Florent Bouchez Tichadou, Algorithms languages and programming, 121 hours, L2 UGA

Licence: Florent Bouchez Tichadou is responsible of the second year of INF (informatique) and MIN (mathématiques et informatique) students at UGA

Master I: Ylies Falcone Proof Techniques and Logic Reminders, MoSIG, 3 hours

Master I: Ylies Falcone Recaps on Object-Oriented Programming, MoSIG, 3 hours

Master II: Ylies Falcone Introduction to Runtime Verification, MoSIG HECS, 8 hours.

Master I: Ylies Falcone Programming Language Semantics and Compiler Design, MoSIG, 66 hours

License: Ylies Falcone Languages and Automata, UJF, 105 hours

Master: Ylies Falcone is co-responsible of the first year of the International Master of Computer Science (Univ. Grenoble Alpes and INP ENSIMAG)

9.2.2. Supervision

9.2.2.1. Fabrice Rastello

PhD defended [3]: Duco van Amstel, Scheduling and optimization for memory locality of dataflow programs on many-core processors, advised by Fabrice Rastello and Benoit Dupont-de-Dinechin

PhD defended [1]: Diogo Sampaio, Profiling Guided Hybrid Compilation, October 8 2013, advised by Fabrice Rastello

PhD defended: Venmugil Elango, Dynamic Analysis for Characterization of Data Locality Potential, advised by Fabrice Rastello and P. Sadayappan.

PhD in progress: François Gindraud, Semantics and compilation for a data-flow model with a global address space and software cache coherency, January 1st 2013, advised by Fabrice Rastello and Albert Cohen.

PhD in progress: Fabian Grüber, Interactive & iterative performance debugging, September 2016, advised by Fabrice Rastello and Ylies Falcone.

PhD in progress: Philippe Virouleau, *Improving the performance of task-based runtime systems on large scale NUMA machines*, co-advised by Thierry Gautier (Inria/AVALON), Fabrice Rastello, François Broquedis

9.2.2.2. Jean-François Méhaut

PhD defended (April 2016): Oleg Iegorov, advised by Alexandre Termier (Dream/Irisa), Vincent Leroy (SLIDE/LIG) and Jean-François Méhaut

PhD defended (October 2016): Nassim Halli, CIFRE with Asselta, advised by Henri-Pierre Charles (CEA/DRT List), Jean-François Méhaut

PhD defended [36]: Naweiluo Zhou, advised by Eric Rutten (Inria, CtrlA), Gwenael Delaval (UGA, CtrlA), Jean-François Méhaut

PhD in progress: Thomas Messi Nguelé, advised by Maurice Tchuenté (Yaoundé I, LIRIMA) and Jean-François Méhaut

PhD in progress: Thomas Goncalves, advised by Marc Perache (CEA/DAM), Frédéric Desprez, Jean-François Méhaut

PhD in progress: Luis Felipe Milani, advised by Lucas Schnoor (UFRGS), François Broquedis and Jean-François Méhaut

PhD in progress: Vanessa Vargas, advised by Raoul Velazco (CNRS, TIMA) and Jean-François Méhaut

PhD in progress: Raphaël Jakse, Monitoring and Debugging Component-Based Systems, advised by Jean-François Mehaut and Ylies Falcone.

9.2.2.3. Frédéric Desprez

PhD defended (October 2016): Jonathan Pastor, advised by Frédéric Desprez, Adrien Lèbre (EMN Nantes, Ascola team)

PhD in progress: Pedro Silva, advised by Frédéric Desprez, C. Perez (Inria, Avalon team)

PhD in progress: Georgios Christodoulis, advised by Frederic Desprez, Olivier Muller (TIMA/SLS) and François Broquedis

PhD in progress: Thomas Goncalves, advised by Marc Perache (CEA/DAM), Frédéric Desprez, Jean-François Méhaut

PhD in progress: Ye Xia, advised by Thierry Coupaye (Orange), Frédéric Desprez, Xavier Etchevers (Orange)

9.2.2.4. François Broquedis

PhD in progress: Georgios Christodoulis, *Adaptation of a heterogeneous runtime system to efficiently exploit FPGA* advised by Frederic Desprez, Olivier Muller (TIMA/SLS) and François Broquedis

PhD in progress: Philippe Virouleau, *Improving the performance of task-based runtime systems on large scale NUMA machines*, co-advised by Thierry Gautier (Inria/AVALON), Fabrice Rastello, François Broquedis

9.2.2.5. Ylies Falcone

PhD in progress: Hosein Nazarpour, Monitoring Multithreaded and Distributed Component-based Systems, advised by Saddek Bensalem (Vérimag) and Ylies Falcone.

PhD in progress: Antoine El-Hokayem, Decentralised and Distributed Monitoring of Cyber-Physical Systems, advised by Ylies Falcone.

PhD in progress: Fabian Grüber, Interactive & iterative performance debugging, September 2016, advised by Fabrice Rastello and Ylies Falcone.

PhD in progress: Raphaël Jakse, Monitoring and Debugging Component-Based Systems, advised by Jean-François Mehaut and Ylies Falcone.

9.2.3. Juries

9.2.3.1. Fabrice Rastello

Venmugil Elango, Advisor, *Dynamic Analysis for Characterization of Data Locality Potential*, PhD of OSU, 06/01/2016

Arjun Suresh, Reviewer, *Intercepting Functions for Memoization*, PhD of Université de Rennes, 10/04/2016

Duco Van-Amstel, Advisor, *Scheduling and optimization for memory locality of dataflow programs on many-core processors*, Université Grenoble Alpes, 11/07/2016.

Juan Manuel Martinez Caamano, Reviewer, *Fast and Flexible Compilation Techniques for Effective Speculative Polyhedral Parallelization*, Université de Strasrbourg, 29/09/2016

Pierre Guillou, Reviewer, *Compilation efficace d'applications de traitement d'images pour processeurs manycore*, Université de recherche PAris Sciences et Lettres, 30/11/2016

9.2.3.2. Jean-François Méhaut

Oleg Iegorov, Advisor,*Data Mining Approach to Temporal Debugging of Embedded Streaming Applications*, PhD of Université Grenoble Alpes, April 2016

Nassim Halli, Advisor, *Code Optimizations of High Performance Java Applications*, PhD of Université Grenoble Alpes, October 2016

Naweiluo Zhou, Advisor, *Autonomic Thread Parallelism and Mapping Control for Software Transactional Memory System*, PhD of Université Grenoble Alpes, October 2016

Marc Sergent, Reviewer, *Passage à l'échelle d'un support d'exécution à base de tâches pour l'algèbre linéaire creuse*, PhD of Université de Bordeaux, October 2016

Jean-Charles Papin, Reviewer, *A Scheduling and Partitioning Model for Stencil-based Applications on ManyCore Devices*, PhD of Ecole Normale Supérieure de Cachan, July 2016

9.2.3.3. Frédéric Desprez

Jean-Marie Couteyen, Reviewer, *Parallélisation et passage à l'échelle du code FLUSEPA*, PhD of Université de Bordeaux, September 2016

Jonathan Pastor, Advisor, *Contributions à la mise en place d'une infrastructure de Cloud Computing à large échelle* , Ecole des Mines de Nantes, October 2016

CQFD Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Member of the Conference Program Committees

J. Anselmi has been a member of the TPC of the international conferences: VALUETOOLS-2016, ASMTA-2016 and ECQT-2016.

F. Dufour is a member of the organizing committee of the international SIAM conference on Control & its Application, SIAM CT17.

M. Chavent has been vice-president of the program committee of the 5èmes Rencontres R in Toulouse in 2016.

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

F. Dufour is associate editor of the journal: SIAM Journal of Control and Optimization since 2009.

J. Saracco is an associate editor of the journal Case Studies in Business, Industry and Government Statistics (CSBIGS) since 2006.

10.1.2.2. Reviewer - Reviewing Activities

All the members of CQFD are regular reviewers for several international journals and conferences in applied probability, statistics and operations research.

10.1.3. Invited Talks

F. Dufour gave the following invited talks:

- *Unconstrained and Constrained Optimal Control of Piecewise Deterministic Markov Processes*, Workshop on switching dynamics & verification, Institut Henri Poincaré, Paris, France, January 28-29, 2016.
- *Stability of piecewise deterministic Markov processes*, Department of Statistics, Oxford University, United Kingdom, October 11, 2016.
- *Numerical Approximations for Average Cost Markov Decision Processes*, Inria Team TAO Seminar, February 9, 2016.

P. del Moral gave the following invited lectures:

- *An introduction to Feynman-Kac integration and genealogical tree based particle models*, Thematic Cycle on Monte-Carlo techniques, Labex Louis Bachelier, Institut Henri Poincaré, January 15, 22, 29, and February 12, 2016.
- *Mean Field Particle Samplers In Statistical Learning and Rare Event Analysis*, CFM-Imperial Distinguished Lecture Series, Imperial College, United Kingdom, October 18, 25, and November 1, 8, 2016.

A. Genadot gave the following talks:

- *Moyennisation à la mode de T. G. Kurtz pour des processus déterministes par morceaux*, Université de Lorraine, Nancy, January 14, 2016.
- *Averaging for some simple constrained Markov process*, Journées MAS, université Grenoble-Alpes, August 29, 30 and 31, 2016.

J. Saracco gave the following talks:

- *Analyse de la variance : une vision de type modèlle linŕaire gaussien ou comment expliquer une variable quantitative par un ou plusieurs facteurs qualitatifs*, University of Monastir (Tunisia), April 2016

- *Un exemple de régression semiparamétrique : l'approche SIR (sliced inverse regression)*, University of Monastir (Tunisia), April 2016

- *La régression par quantile non-paramétrique et semi-paramétrique*, "Les jeudis de Santé Publique", Paris, November 2016

J. Saracco was an invited professor at University of Monastir (Tunisia) in november 2016 and gave a course on Multidimensional Statistics.

Marie Chavent gave the following invited lecture :

- *Multivariate analysis of mixed data: The PCAmixdata R package,*, CMStatistics, Seville, December 2016.

10.1.4. Research Administration

F. Dufour is member of the *Bureau du comité des projets*, Inria Bordeaux Sud-Ouest.

J. Saracco is deputy director of IMB (Institut de Mathématiques de Bordeaux, UMR CNRS 5251) since 2015.

M. Chavent is member of the national evaluation commitee of Inria.

M. Chavent is member of the council of the Institut de Mathématique de Bordeaux.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- Licence : J. Anselmi, Probabilités et statistiques, 13 heures, Institut Polytechnique de Bordeaux, école ENSEIRB-MATMECA, filiere telecom, France.

- Licence : J. Anselmi, Probabilités et statistiques, 13 heures, Institut Polytechnique de Bordeaux, école ENSEIRB-MATMECA, filiere electronique, France.

- Licence: M. Chavent, Analyse des données, 15 ETD, L3, Bordeaux university, France

- License: M. Chavent, Modélisation statistique, 15 ETD, niveau L3, Bordeaux university, France

- Master : M. Chavent, Apprentissage automatique, 50 ETD, niveau M2, Bordeaux university, France

- Licence : F. Dufour, Probabilités et statistiques, 16 heures, niveau L3, Institut Polytechnique de Bordeaux, école ENSEIRB-MATMECA, France.

- Master : F. Dufour, Méthodes numériques pour la fiabilité, 24 heures, niveau M1, Institut Polytechnique de Bordeaux, école ENSEIRB-MATMECA, France.

- Master : F. Dufour, Probabilités, 20 heures, niveau M1, Institut Polytechnique de Bordeaux, école ENSEIRB-MATMECA, France.

- P. Legrand, Algèbre (responsable de l'UE), Licence 1 SCIMS (108 heures)

- P. Legrand, Informatique pour les mathématiques (responsable de l'UE), Licence 1 et Licence 2 (36 heures)

- P. Legrand, Espaces Euclidiens. (responsable de l'UE), Licence 2 SCIMS (54 heures)

- P. Legrand, Formation Matlab pour le personnel CNRS (responsable de l'UE), (24 heures)

- Licence: J. Saracco, Probability and Descriptive statistics, 27h, L3, First year of ENSC - Bordeaux INP, France

- Licence: J. Saracco, Mathematical statistics, 20h, L3, First year of ENSC - Bordeaux INP, France

- Licence: J. Saracco, Data analysis (multidimensional statistics), 20h, L3, First year of ENSC - Bordeaux INP, France
- Master: J. Saracco, Statistical modeling, 27h, M1, Second year of ENSC - Bordeaux INP, France
- Master: J. Saracco, Applied probability and Statistics, 40h, M1, Second year of ENSCBP - Bordeaux INP, France
- Master: J. Saracco, Probability and Statistics, 12h, M2, Science Po Bordeaux, France
- A. Genadot, Probabilités de bases (18h), Licence MIASHS première année, Université de Bordeaux.
- A. Genadot, Statistiques de bases (18h), Licence MIASHS première année, Université de Bordeaux.
- A. Genadot, Probabilités (36h), Licence MIASHS deuxième année, Université de Bordeaux.
- A. Genadot, Processus (18h), Licence MIASHS troisième année, Université de Bordeaux.
- A. Genadot, Modélisation statistique (18h), Licence MIASHS troisième année, Université de Bordeaux.
- A. Genadot, Martingales (25h), Master MIMSE première année, Université de Bordeaux.
- A. Genadot, Probabilités (20h), Master MEEF première année, Université de Bordeaux.

10.2.2. Supervision

- PhD completed: Adrien Todeschini, Elaboration et validation d'un système de recommandation bayésien, supervised by F. Caron and M. Chavent.
- PhD completed: Christophe Nivot, Optimisation de la chaîne de montage du futur lanceur européen, May 2016, B. supervised by B. de Saporta and F. Dufour.
- PhD in progress : Alizé Geeraert, Contrôle optimal des processus Markoviens déterministes par morceaux et application à la maintenance, University of Bordeaux, supervised by B. de Saporta and F. Dufour (defense scheduled in June 2017).
- PhD in progress : Ines Jlassi, Contributions à la régression inverse par tranches et à l'estimation non para métrique des quantiles conditionnels, University of Monastir (Tunisia), September 2013, supervised by J. Saracco and L. Ben Abdelghani Bouraoui.
- PhD in progress : Hadrien Lorenzo, Analyses de données longitudinales de grandes dimensions appliquées aux essais vaccinaux contre le VIH et Ebola, University of Bordeaux, September 2016, supervised by J. Saracco and R. Thiebaut.

10.2.3. Juries

J. Saracco is vice president of the french statistical society (SFdS).

CTRL-A Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

Stéphane Mocanu is OC member of RESSI 2017 national meeting (https://ressi2017.sciencesconf.org/).

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

Eric Rutten was program co-chair of the International Workshop on Autonomic High Performance Computing (AHPC 2016) (http://hpcs2016.cisedu.info/2-conference/workshops—hpcs2016/workshop08-ahpc) as part of the International Conference on High Performance Computing & Simulation (HPCS 2016) (http://hpcs2016.cisedu.info or http://cisedu.us/rp/hpcs16), July 18 - July 22, 2016, The University of Innsbruck, Innsbruck, Austria

Eric Rutten is organizer of an Open Invited Track on "Control for Computing Systems" at the 20th IFAC World Congress, to be held in Toulouse, July 9-14, 2017, (https://www.ifac2017.org/OIT#geht5).

10.1.2.2. Member of the Conference Program Committees

Gwenaël Delaval is PC member of the International Workshop on Autonomic High Performance Computing (AHPC 2016). (http://hpcs2016.cisedu.info/2-conference/workshops—hpcs2016/workshop08-ahpc)

Eric Rutten is PC member of the 13th International Workshop on Discrete Event Systems (WODES 2016), Xi'an, China on May 30 - June 1, 2016 (http://wodes2016.diee.unica.it) ; for the SEfSAS Book 3 (Software Engineering for Self-Adaptive Systems: Assurances) Volume 3 to be published by Springer LNCS. ; for the two major conferences on the topic : the 13th IEEE International Conference on Autonomic Computing (ICAC 2016) Wuerzburg, Germany, July 19-22, 2016 (http://icac2016.uni-wuerzburg.de) and the 4th International Conference on Cloud and Autonomic Computing (ICCAC 2016), Augsburg, Germany on September 12-16, 2016 (http://iccac2016.se.rit.edu), Part of FAS* - Foundation and Applications of Self* Computing Conferences, Collocated with the IEEE Self-Adaptive and Self-Organizing System Conference ; he is PC member of the 2017 edition of these two conferences as well.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Eric Rutten is invited editor of Cluster Computing, The Journal of Networks, Software Tools and Applications (Springer), for the special issue of ICCAC 2015 Best Papers (http://link.springer.com/journal/10586/19/2/page/1).

10.1.3.2. Reviewer - Reviewing Activities

Stéphane Mocanu is reviewer for the journal of Discrete Events Dynamical Systems.

Eric Rutten is reviewer for the journal of Distributed Computing (Springer) ; the IEEE Transactions on Software Engineering ; the ACM Transactions on Adaptative and Aautonomic Systems.

10.1.4. Invited Talks

Eric Rutten was invited to give a talk at the 9th Cloud Control Workshop, Stockholm, June 27-29 2016 (by invitation only) (http://cloudresearch.org/workshops/9th) and at the séminaire LIP / Avalon, 16 février 2016, ENS Lyon (https://intranet.inria.fr/Actualite/SEMINAIRE-16-02-16-ERIC-RUTTEN-ENS-DE-LYON).

10.1.5. Scientific Expertise

Eric Rutten is remote referee for the ERC advanced grants program.

10.1.6. Research Administration

Eric Rutten is member of the LIG laboratory concil, and in charge of scientific relations between Inria Grenoble Rhône-Alpes and CEA Tech.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

S. Mocanu teaches at ENSE3 school of INPG : TCP/IP networks, Real-time communications, Smart-grid communications and IEC 61850, Reliability, Embedded and real-time systems. He is Head of the Control Systems Master program at ENSE3.

G. Delaval teaches at levels L2, L3, M1 at UFRIM2AG (Computer Science Dept.) of UGA : Algorithmic, Programming, Compilation. Soguy Gueye gives tutorials in Programming in the same program.

10.2.2. Supervision

- PhDs in progress :
  - Adja Ndeye SYLLA ; Generation of coordination rules from an automaton, in the context of the redeployment of distributed contra; applications ; feb. 2015 ; E. Rutten, F. Pacull and M. Louvel (CEA)
  - Chabha Hireche, Etude et implémentation d'une approche probabiliste de contrôle de mission de drone autonome ; oct 2015 ; S. Mocanu, Catherine Dezan (U. Bretagne Occidentale), and Jean-Philippe Diguet (U. Bretagne Sud)
  - Ahmed Altaher : Mise en oeuvre d'un cadre de sureté de fonctionnement pour les systèmes de contrôle industriel : application à des systèmes de distribution d'énergie électrique (smart grids) ; april 2013 ; S. Mocanu, and J-M Thiriet (Gipsa-lab)
  - Maëlle Kabir-Querrec; Cybersécurité des systèmes de contrôle pour les smart-grids ; nov. 2014 ; S. Mocanu, and J-M Thiriet (Gipsa-lab)
  - Oualid Koucham, Détection d'intrusions dans les systèmes de contrôle industriels ; oct 2015 ; S. Mocanu, and J-M Thiriet (Gipsa-lab)
- PhD defended : Naweiluo Zhou ; Application-aware policies and control for transactional memory systems ; defended 19 oct. 2016 ; E. Rutten, G. Delaval, J.F. Mehaut (Inria/LIG Corse) [14] .

DAHU Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. General chair, scientific chair

Serge Abiteboul co-organized the workshop "Data, responsibly" at Dagstuhl on ethics in massive data analysis.

9.1.2. Scientific events selection

9.1.2.1. Member of the conference program committees

Serge Abiteboul: Data engineering (ICDE'2016); In 2016, Serge Abiteboul also participated in Awards committees for the French Academy of Sciences and Inria.

Victor Vianu: FOIKS'16.

9.1.2.2. Reviewer

The members of the team reviewed numerous papers for numerous international conferences and journals.

9.1.3. Journal

9.1.3.1. Member of the editorial boards

Victor Vianu: Associate Editor of ACM TOCL, Editor of the Database Theory column in SIGACT News.

9.1.4. Invited talks

Victor Vianu gave invited talks at the Dagstuhl Workshop on Foundations of Data Management, April 2016; POLARIS Colloquium, Univ. of Lille, June 2016; and Ecole Polytechnique, Saclay, July 2016.

Serge Abiteboul gave invited talks in international meetings at Int'l Symp. on DIStributed Computing in Paris, Didapro 6 in Namur, Dagstuhl Workshop on Foundations of Data Management, Dagstuhl workshop on Data, Responsibly, and Paris Open Source Summit.

9.1.5. Leadership within the scientific community

Serge Abiteboul is co-chair of the Parity and Equality committee of Inria.

9.1.6. Scientific expertise

Sylvain Schmitz reviewed grant proposals for the Agence Nationale de la Recherche (ANR).

9.1.7. Research administration

Since 2015 Luc Segoufin is an elected member of the CNHSCT of Inria.

Serge Abiteboul chaired the selection commitee for the call for proposal Dune "Développement d'Universités Numériques Expérimentales"/

9.2. Teaching - Supervision - Juries

9.2.1. *Teaching*

Licence : Sylvain Schmitz, Formal Languages, 22.5h, L3, ENS Cachan, France

Master : Sylvain Schmitz, Tree Automata Techniques and Applications, 22.5h, M1, ENS Cachan, France

Master : Sylvain Schmitz, Formal Languages, 30h, M2, ENS Cachan, France

Master : Sylvain Schmitz, Logic, 26.3h, M2, ENS Cachan, France

Master : Sylvain Schmitz, Logical and Computational Structures for Linguistic Modeling, 18h, M2, ENS Cachan, France

Master2 : Serge Abiteboul, Web data management, 15h, MPRI

Master1 : Serge Abiteboul, Initiation to scientific research (lab), 15h

Licence : Serge Abiteboul, Relational databases, 30h, ENS Cachan

E-learning

Mooc Bases de Données Relationnelles - Bador (in French), Inria Fun, Serge Abiteboul, Benjamin Nguyen and Philippe Rigaux, Start January 2016; about 6000 students registered, 6+ weeks. Target audience: students in L3/Master, engineers and scientists using databases.

9.2.2. *Supervision*

PhD in progress: Nathan Grosshans, branching program, 01/09/2014, Luc Segoufin and Pierre McKenzie (University of Montreal)

PhD in progress: David Montoya, Personal information management systems, 01/02/2014, Serge Abiteboul

PhD in progress: Alexandre Vigny, enumeration, 01/09/2015, Luc Segoufin and Arnaud Durand

PhD in progress: Karima Rafes, Web semantic and Internet of Thing, 01/02/2015, Serge Abiteboul

PhD in progress: Simon Halfon, Well quasi orders, 01/09/2015, Sylvain Schmitz and Philippe Schnoebelen

PhD in progress: Anthony Lick, Proof systems for data queries, 01/09/2016, David Baelde and Sylvain Schmitz

PhD in progress: Su Yang, Analytics in Personal information management systems, 01/09/2016, Serge Abiteboul et Pierre Senellart

9.2.3. *Juries*

Luc Segoufin was on the Ph.D committee of Florent Capelli, Université de Paris 7, in June 2016.

Sylvain Schmitz was on the Ph.D. committees of Silva Stella, Università degli studi di Torino, in January 2016, and of Michael Blondin, Université de Montréal, in June 2016.

Serge Abiteboul was on the Ph.D. committee of Damian Bursztyn, University of Paris-Saclay, in December 2016.

9.3. Popularization

For the last couple of years, Serge Abiteboul has initiated and is coordinating an invited blog for Le Monde newspaper, namely Binaire, http://binaire.blog.lemonde.fr. He is the initiator of "The Cabale Informatique de France", a joint action between the Société Informatique de France and Wikipédia France to improve the quality of Wikipédia pages about Computer Science in France. He organized a Workshop Initiation to Wikipedia in Poitiers

Serge Abiteboul is Scientific curator of the exhibit "Terra Data" at Cité des Sciences de La Villette, 2017. He is member of the editorial board of Les big data à découvert, directed Mokrane Bouzeghoub and Rémy Mosseri. He gave invited talks at La Pépinière 4.1 in Nancy, Rencontres du Numérique of ANR, Parole Publique, Sciences à Coeur at Sorbonne Univ., Espace Mendes France at Poitiers,

Serge Abiteboul is Chairman of the Executive Council of the Foundation Blaise Pascal for the promotion of Maths and Computer Science.

<p align="center" style="color:red">DANTE Project-Team</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- Jean Pierre Chevrot, Éric Fleury, Márton Karsai, Jean-Philippe Magué were scientific chairs of the Workshop on Data Driven Approach to Networks and Language.
- Éric Fleury, Márton Karsai and Paulo Gonạlves were scientific chairs of the Workshop on Processes On and Of Networks.

10.1.1.2. Member of the Organizing Committees

- Éric Fleury, Mátrton Karsai and Laetitia Lecot were on the Organizing committee for the Network Science Thematic Semester
- Márton Karsai was in the organising committee of Computational Social Science: from social contagion to collective behaviour ECCS 2016 Satellite.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Isabelle Guérin Lassous was the general chair of ACM PE-WASUN 2016.
- Márton Karsai was the one of the program chairs of the conferences Do2Net, ComplexNetworks2016, D2NetLang, CSS2016.

10.1.2.2. Member of the Conference Program Committees

- Éric Fleury was on the PC of the conference ComplexNet, of the Conference on Complex Networks: From Theory to Interdisciplinary Applications, SensorNet 2017 and CoRes 2016.
- Márton Karsai was on the PC of the conferences NetSci-X 2016, IC2S2 2016, CompleNet 2016, WebSci16, Do2Net, AlgoTel 2016, ComplexNetworks2016, D2NetLang 2016, DyNo 2016 IEEE/ACM ASONAM 2016, CCS 2016, SocInfo 2016, CSS 2016, Contagion'16, COMPLEX NETWORKS 2016
- Isabelle Guérin Lassous was on the PC of: ACM MSWiM 2016, ICC 2016, Globecom 2016, ISCC 2016 and MedHocNet 2016.
- Thomas Begin was on the PC of: IEEE LCN 2016.
- Christophe Crespelle was on the PC of WG 2016.

10.1.2.3. Reviewer

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Isabelle Guérin Lassous is member of the editorial boards of Computer Communications (Elsevier), Ad Hoc Networks (Elsevier) and Discrete Mathematics & Computer Science.

- Anthony Busson is member of the editorial boards of Computer Communications (Elsevier).

- Márton Karsai is member of the editorial boards of Advances in Complex Systems (World Scientific).

- Jean Pierre Chevrot, K. Drager (U. of Hawaii), P. Foulkes (U. of York) are the chief editors of a special issue in the journal TopiCS in Cognitive Science on the theme "Sociolinguistic variation and cognitive science, coordination".

- Philippe Nain is Editor-in-Chief of Performance Evaluation (Elsevier)

10.1.3.2. Reviewer - Reviewing Activities

- Márton Karsai was acting as reviewer for the journals of Nature Communications, PNAS, PRL, PRX, PRE, Scientific Reports, EPJ Data Science, SNAM, EPL, EPJ B, PLoS One, Journal of Statistical Mechanics, Physics Letter A, Advanced in Complex Systems, Journal of Physics: Condensed Matter, Complex Networks, New Journal of Physics, Physica Scripta, Network Science,

- Jean-Pierre Chevrot was acting as reviewer for he journal Animal Behavior.

10.1.4. Invited Talks

- Márton Karsai gave invited talks at NetSciX'16 (January 2016, Wroclaw, Poland), Workshop on mechanisms underlying local to global signals in networks (19 May 2016, Lyon, France), HOMS NetSci'16 Satellite (30 May 2016, Seoul, Korea), Social Connectome NetSci'16 Satellite (30 May 2016, Seoul, Korea), SocioNet'16 workshop ENS Lyon (8 June 2016, Lyon, France), Coarse-graining of Complex Systems CCS'16 Satellite (21 September 2016, Amsterdam, The Netherlands), BURSTINESS in human behaviour and other natural phenomena, CCSÃ16 Satellite (21 September 2016, Amsterdam, The Netherlands), PhD course on Network Science (guest lecturer) Uppsala University, Department of Information Technology (18 November 2016, Uppsala, Sweden).

- Éric Fleury gave a invited talk at ISI foundation, Torino Italy and SocioNet'16 workshop ENS Lyon (8 June 2016, Lyon, France).

- Thomas Begin gave an invited talk at Diva Lab, University of Ottawa, Canada.

- Jean Pierre Chevrot gave two invited talks Ã the University of Oslo (Norway) at the Workshop Bridging gaps: Conceptual and epistemological approaches, Center for Multilingualism in Society across the Lifespan (MultiLing)

- Christophe Crespelle gave an invited talk at the Vietnam Institute for Advanced Studies in Mathematics, Hanoi, and the University of Bergen, Norway.

10.1.5. Leadership within the Scientific Community

10.1.6. Scientific Expertise

- Isabelle Guérin Lassous is a member of the research committee of the Milyon labex.

- Isabelle Guérin Lassous was a member of the HCERES evaluation committee of the IRISA laboratory.

- Isabelle Guérin Lassous is vice-chair of the HCERES evaluation committee of the LORIA laboratory.

- Isabelle Guérin Lassous was a member of the National Committee of the CNRS, section 06.

- Éric Fleury is member of the Inria senior research position (DR2) jury and junior research position (CR2/CR1)

- Éric Fleury has been an expert for the Fund for Scientific Research - FNRS.
- Éric Fleury has been a member of evaluation panels as part of the French National Research Agencyâs (ANR) for ANR.
- Éric Fleury is member of the Inria Evaluation Committee.
- Éric Fleury is Co-chair of the Networking group ResCom of the CNRS GDR ASR. He is also a member of the scientific committee of the GDR ASR.
- Márton Karsai was reviewer for ANR, H2020 FET Open RIA.
- Philippe Nain is the coordinator of the "Strategic Technology Monitoring & Prospective Studies Inria Unit".
- Jean-Pierre Chevrot reviewed a ten-year track application for the University of New Mexico (UNM, US)

10.1.7. *Research Administration*

- Paulo Gonçalves is scientific liaison officer for international relations in Inria Research Centre of Rhône-Alpes.
- Paulo Gonçalves was scientific correspondent of the International Relations for the Computer Science Department at ENS Lyon. Responsibility ended in September 2016.
- Paulo Gonçalves is a member of the executive committee of the Milyon labex and referent for its valorisation committee.
- Christophe Crespelle is member of the steering committee of the IXXI - Rhône-Alpes Complex Systems Institute.
- Isabelle Guérin Lassous is vice-chair of the LIP laboratory.
- Isabelle Guérin Lassous is member of the department council of the Computer Science department of Université Lyon 1.
- Anthony Busson is Vice-president of the Thesis Commission at LIP.
- Anthony Busson is member of the committee of "Ecole Doctorale" 512 in computer science and mathematics.
- Éric Fleury is Deputy Scientific Delegate for Inria Grenoble Rhône Alpes
- Éric Fleury is in the in the Executive Committee of the IXXI â Rhône-Alpes Complex Systems Institute.
- Éric Fleury is member of the Council of the LIP laboratory.
- Éric Fleury is a member of the executive committee of the Milyon labex.
- Anthony Busson is the vice president of the thesis committee of the LIP laboratory.
- Thomas Begin is an elected member of the Council of the LIP laboratory.
- Jean Pierre Chevrot is member of the steering committee of the IXXI - Rhône-Alpes Complex Systems Institute.
- Márton Karsai is the co-responsible for the M2 master program in Modelling of Complex Systems at ENS Lyon
- Márton Karsai is the elected council member of the Complex System Society (2015-)
- Márton Karsai is the elected member of the steering committee of the IXXI Complex System Institute (2016-)

10.2. Teaching - Supervision - Juries

10.2.1. *Teaching*

10.2.1.1. *Teaching by Éric Fleury*

Éric Fleury is Professor at the Computer Science department of ENS de Lyon and holds a Inria chair.

  Master: CR15 - Complex Networks, 18H, M2, ENS de Lyon, France

10.2.1.2. Teaching by Márton Karsai

Márton Karsai is Associate Professor at the Computer Science department of ENS de Lyon and holds a Inria chair.

Master: CR15 - Complex Networks, 21H, M2, ENS de Lyon, France

Master: Dynamical Processes on Networks, 6H, M2, ENS de Lyon, France

Master: Modeling Social Systems, 9H, M2, ENS de Lyon, France

Master: Complex Networks 16H, Collegio Carlo Alberto, Torino Italy (guest lecturer)

10.2.1.3. Teaching by Paulo Gonçalves

Engineering school CPE-Lyon (years 3-5): Signal Processing (80 hours/yr)

10.2.1.4. Teaching by Isabelle Guérin Lassous

Professor at Université Claude Bernard Lyon 1 in the Computer Science department since 2006. She lectures at the University.

Master: "Networking", 20h, Master (M1), University Lyon 1, France

Master: "QoS and Multimedia Networks", 30h, Master (M2), University Lyon 1, France

Master: "Wireless Networks", 15h, Master (M2), University Lyon 1, France

Master: "Introduction to Networking", 30h, Master (M2), University Lyon 1, France

10.2.1.5. Teaching by Anthony Busson

Professor at the IUT (Institut Universitaire de Technologie) of Université Claude Bernard Lyon 1 in the computer science department since 2012.

Master: "MPLS", 6h, Master (M2), University Lyon 1, France

DUT: full service (192h) in networking, operating-systems, and programmation.

10.2.1.6. Teaching by Thomas Begin

Assistant Professor at Université Claude Bernard Lyon 1 in the Computer Science department since 2009.

Master: "Networking", 20h, Master (M1), University Lyon 1, France

Master: "Advanced networks", 20h, Master (M2 SRIV), University Lyon 1, France

Master: "Computer networks", 20h, Bachelor (L3), University Lyon 1, France

Master: "Introduction to Networking", 30h, Master (M2 CCI), University Lyon 1, France

Master: "Distributed systems", 10h, Master (M1), University Lyon 1, France

10.2.1.7. Teaching by Christophe Crespelle

Assistant Professor at Université Claude Bernard Lyon 1 in the Computer Science department since 2009.

Master: "Complex networks", 15h, Master (M2), ENS de Lyon, France

Master: "Introduction to Computer Science", 30h, Master (M2), ENS de Lyon, France

Bachelor: "Combinatorial Optimisation", 18h, Bachelor (4th year), Vietnam National University in Hanoi, Vietnam

10.2.1.8. Teaching by Philippe Nain

University of Massachusetts at Amherst: graduate course on "Performance Modelling of Communication Networks and Distributed Systems" (32 hours).

10.2.2. Supervision

PhD defense: Yannick Léo, Deep dive into social network and economic data: a data driven approach for uncovering temporal ties, human mobility and socioeconomic correlations, ENS de Lyon, Dec 2016, Éric Fleury, Christophe Crespelle and Márton Karsai.

PhD in progress: Sarra Ben Alaya, Multi-scale classification and analysis of data on networks. Nov. 2015, P. Gonçalves (P. Borgnat, co-advisor)

PhD in progress: Esteban Bautista Ruiz, Statistical Graph Signal Processing. P. Gonçalves (P. Abry, co-advisor). Started Sept. 1st, 2016.

PhD in progress: Laurent Reynaud, Optimised mobility strategies for wireless networks. March 2013, I. Guérin Lassous

PhD in progress: Huu-Nghi Nguyen, Admission control in SDN networks. April 2014, T. Begin and A. Busson and I. Guérin Lassous

PhD in progress: Mohammed Amer, WiFi network management: a SDN approach. January 2015, A. Busson and I. Guérin Lassous

PhD in progress: Matteo Morini, New tools for understanding the dynamics of social networks, Oct 2013, E. Fleury, P. Jensen and M. Karsai

PhD in progress: Samuel Unicomb, Spreading processes on temporal networks, Oct 2016, E. Fleury and M. Karsai

PhD in progress: Jacobo Levy Abitbol, Information diffusion and language evolution on dynamical social networks, Oct 2016, E. Fleury and M. Karsai

PhD in progress: Marija Stojanova, Performance Modelling of IEEE 802.11 networks , Oct 2016, T. Begin

PhD in progress: Imen Achour, Data Dissemination Protocols for Vehicular Ad hoc Networks, informal supervising by A. Busson with T. Bejaoui and S. Tabbane (Supcom - Tunis)

10.2.3. Juries

- Isabelle Guérin Lassous was a member of the HDR examination boards of Christoph Neumann at Technicolor/Université de Rennes 1 and Frédéric Le Mouël at INSA de Lyon.

- Isabelle Guérin Lassous was a member of the Ph.D thesis examination board of Guillaume Gaillard at INSA de Lyon.

- Éric Fleury was member and reviewer of the HdR examination board of Tommasso Venturini at ENS de Lyon.

- Éric Fleury was president of the PhD examination boards of Michal Krol at UGA.

- Anthony Busson was member of the PhD examination boards of Lyad Cherif at Université Paris XI. December 2016.

- Anthony Busson was member of the PhD examination boards of Saiefeddine Bouallegue at Sup'Com / University of Carthage. June 2016.

- Anthony Busson was member of the mid-term examination boards for the PhD of Tu Lam Thanh at Supélèc. November 2016.

DATAMOVE Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Euro-Par, Grenoble, August 2016: General chair and local organization.
- HCW'2016 (25th IEEE Heterogeneous Computing Workshop), Hyderabad, May 2016a: General Chair

9.1.1.2. Member of the Organizing Committees

- EGPGV (Eurographics Symposium on Parallel Rendering and Visualization): President of the steering committee.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Euro-Par, Grenoble, August 2016: Topic chair.

9.1.2.2. Member of the Conference Program Committees

ISAV 2016, November 2016, Salt Lake City, USA

2nd IEEE BidDataSecurity, April 8-10 2016, New York, USA

IPDPS 2016 (27th IEEE International Parallel & Distributed Processing Symposium), May 23-27 2016, Chicago, USA

CloudTech, My 24-26 2016, Marrakech, Marocco

COMPAS, July 5-8 2016, Lorient, France

PMAA'16 (10th internat. workshop on Parallel Matrix Algorithms and Applications), July 6-8 2016, Bordeaux, France

ISPDC (15th Internat Symposium on Parallel and Distributed Computing), July 8-10 2016, Fuzhou, China

EuroMPI, September 25-28 2016, Edinburgh, Scotland, UK

28th SBAC-PAD, October 26-28 2016, Los Angeles, USA,

Edu-HPC (Workshop on Education for High-Performance Computing), November 2016, Salt Lake city, USA

CloudCom, December 12-15 2016, Luxemburg

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Associate Editor of the Parallel Computing journal PARCO.

Member of the Editorial Board of JPDC.

Member of the Editorial Board of Computational Methods in Science and Technology.

Member of the Editorial Board of ARIMA (revue africaine de recherche en informatique et maths appliquées).

Member of the Editorial Board of IEEE Trans. Parallel and Distributed Systems TPDS.

9.1.4. Scientific Expertise

ANR project evaluation expert

Nederlands e-science center expert

9.1.5. Research Administration

Executive committee member of Mathematics and Computer Science Council of Univ. Grenoble-Alpes (Membre du directoire du Conseil du Pôle MSTIC de l'UGA)

Mathematics and Computer Science Council of Univ. Grenoble-Alpes Members (Membre du Conseil du Pôle MSTIC de l'UGA)

Steering commitee of Grid'5000

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: Denis Trystram is responsible of the first year (M1) of the international Master of Science in Informatics at Grenoble (MOSIG-M1).

Master: D. Trystram, P.-F. Dutot, "Complexity, approximation theory and randomization" master course (M2) at Univ. Grenoble-Alpes

Master: Pierre-François Dutot. 226 hours per year. Licence (first and second year) at IUT2/UPMF (Institut Universitaire Technologique de Univ. Grenoble-Alpes) and 9 hours Master M2R-ISC Informatique-Systèmes-Communication at Univ. Grenoble-Alpes.

Master: Grégory Mounié. 242 hours per year. Master (M1/2nd year and M2/3rd year) at Engineering school ENSIMAG, Grenoble-INP.

Master: Bruno Raffin. 28 hours per year. Parallel System. International Master of Science in Informatics at Grenoble (MOSIG-M2).

Master: Olivier Richard. 222 hours per year. Master at Engineering school Polytech-Grenoble, Univ. Grenoble-Alpes.

Master: Denis Trystram. 200 hours per year in average, mainly at first level of Engineering School ENSIMAG, Grenoble-INP.

Master: Frédéric Wagner. 220 hours per year. Engineering school ENSIMAG, Grenoble-INP (M1/2nd year and M2/3rd year) (190h), Master DESS/M2-P SCCI Security (30h).

9.2.2. Supervision

PhD: David Glesser, Energy Aware Resource Management for HPC, Univ. Grenoble-Alpes. Defended November 2016. Advisers: Denis Trystram and Yianis Georgiou (ATOS/BULL)

PhD : Marwa Sridi, Un modèle de structure de données Cache-aware pour un parallélisme et un l'équilibrage dynamique de la charge, Univ Grenoble-Alpes. Defended April 2016. Advisers: Bruno Raffin, Vincent Faucher (CEA) and Thierry Gautier.

PhD in progress : Julio Toss, Parallel Algorithms and Data Structures for Physically Based Simulation of Deformable Objects, Univ. Grenoble-Alpes and UFRGS (co-tutelle). Started October 2013. Advisers: Bruno Raffin and Joao Comba (UFRGS).

PhD in progress : Estelle Dirand, Integration of High-Performance Data Analytics and IOs for Molecular Dynamics on Exascale Computer, Univ. Grenoble-Alpes. Started January 2016. Advisers: Bruno Raffin and Laurent Colombet (CEA).

PhD in progress: Michael Mercier, Resource Management and Job Scheduling in HPC–Cloud environments towards the Big Data era, Univ. Grenoble Alpes. Started October 2016. Advisers: Olivier Richard and Bruno Raffin.

PhD in progress: Raphaël Bleuse, Affinity Scheduling, Univ. Grenoble-Alpes. Started October 2013. Adviser: Denis Trystram and Gregory Mounié.

PhD in progress: Millian Poquet, Energy consumption optimization for high performance computing, Univ. Grenoble-Alpes. Started October 2014. Advisers: Denis Trystram and Pierre-François Dutot

PhD in progress: Valentin Reis, Machine Learning for resource management, Univ. Grenoble-Alpes. Started October 2015. Advisers: Denis Trystram and Eric Gaussier

PhD in progress: Abhinav Srivastav, Multi-objective Scheduling, Univ. Grenoble-Alpes. Started October 2015. Advisers: Denis Trystram and Oded Maler

PhD in progress: Alessandro Kraemer, Scheduling in the Cloud, Univ Grenoble-Alpes and UFPR (co-tutelle). Started October 2014. Advisers: Olivier Richard and Denis Trystram.

PhD in progress: Fernando Machado Mendonca, Locality Aware Scheduling, Univ. Grenoble-Alpes, Advisers: Frederic Wagner and Denis Trystram.

PhD in progress: Mohammed Khatiri, Tasks scheduling on heterogeneous Multicore, Univ. Grenoble-Alpes and University Mohammed First (co-tutelle), Advisers: Denis Trystram, El Mostafa DAOUDI (University Mohammed First, Oujda, Maroc)

9.2.3. *Juries*

PhD Defense of François Lehericey, 20th of September 2016. Jury Member. Ray Tracing Based Collision Detection: A quest for Performance. Université Bretagne Loire.

PhD Defense of Rémy Dautriche, 20th of October 2016. Jury President. Multi-scale Interaction Techniques for the Interactive Visualization of Execution Traces. Univ Grenoble-Alpes.

PhD Defense of Xiaohu Wu, 16th of February 2016. Reviewer. University of Nice.

PhD Defense of Ziad Sultan, 17th of June 2016. Jury President. Parallel Generic and Adaptive Exacte Linear Algebra. Univ. Grenoble-Alpes

9.3. Popularization

In conjonction with the Polaris team, the team (Seniors and PhDs) participates to several "computer science with hands" events, notably the "Fête de la science", every year, but also some visits of classes from high school of the area along the year at Inria Rhône-Alpes.

Talk at the ISN conference organized by Inria, dedicated to present the computer science to teachers of High School

<p style="text-align:center;color:red;">**DATASHAPE Team**</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Jean-Daniel Boissonnat and Frédéric Chazal co-organized the joint GUDHI-TOPDATA workshop in Porquerolles, October 17-20.

Frédéric Chazal co-organized the SMAI-SIGMA Conference 2016 at Luminy (CIRM) in November.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

Maks Ovsjanikov: Paper co-chair of the Symposium on Geometry Processing 2016 (SGP 2016).

10.1.2.2. Member of the Conference Program Committees

Frédéric Chazal: Symposium on Geometry Processing 2016 (SGP 2016).

Steve Oudot: Symposium on Geometry Processing 2016 (SGP 2016).

Marc Glisse: Symposium on Computational Geometry (SoCG 2016).

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Jean-Daniel Boissonnat is a member of the Editorial Board of *Journal of the ACM*, *Discrete and Computational Geometry*, *International Journal on Computational Geometry and Applications*.

Frédéric Chazal is a member of the Editorial Board of *SIAM Journal on Imaging Sciences*, *Discrete and Computational Geometry (Springer)*, *Graphical Models (Elsevier), and Journal of Applied and Computational Topology (Springer)*.

Steve Oudot is a member of the Editorial Board of *Journal of Computational Geometry*.

10.1.4. Invited Talks

Frédéric Chazal, ACCAPT conference, Aalborg, Danmark, April 2016.

Frédéric Chazal, Joint Mathematical Meetings, Seattle, USA, January 2016.

Frédéric Chazal, Séminaire Parisien de Géométrie Algorithmique, Paris, October 2016.

Frédéric Chazal, 9th International Conference of theERCIM WG on Computational and Methodological Statistics, December 2016.

Steve Oudot, ACCAPT conference, Aalborg, Danmark, April 2016.

Steve Oudot, Workshop SIGMA 2016, CIRM, France, November 2016.

Steve Oudot, Applied Topology Seminar, Brown University, USA, November 2016.

Steve Oudot, Topology and Neuroscience Seminar, Princeton University, USA, November 2016.

10.1.5. Scientific Expertise

Frédéric Chazal was a member of the ANR committee, CES 40 (Mathematics and Computer Science).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master : Frédéric Chazal, Analyse Topologique des Données, 30h eq-TD, Université Paris-Sud, France.

Master : Jean-Daniel Boissonnat and Marc Glisse, Computational Geometry Learning, 36h eq-TD, M2, MPRI, France.

Doctorat : Frédéric Chazal and Bertrand Michel, An introduction to Topological Data Analysis, 18h eq-TD, Universitad Autonoma de Barcelona, Spain.

Master : Steve Oudot, Topological Data Analysis, 45h eq-TD, M1, École Polytechnique, France.

Master : Steve Oudot and Frédéric Cazals, Geometric Methods for Data Analysis, 30h eq-TD, M1, École Centrale Paris, France.

Master : Jean-Daniel Boissonnat, Winter School on Computational geometry and Topology, Inria Sophia Antipolis Méditerrannée, January 2016.

Doctorat : Steve Oudot, École Mathématique en Afrique on *Topologie différentielle, géométrie algébrique et applications*, La Marsa, Tunisia, March-April 2016.

Doctorat : Steve Oudot, Summer School on Mathematical Methods for High-Dimensional Data Analysis, Technical University of Munich, Germany, July 2016.

10.2.2. Supervision

PhD: Thomas Bonis, Statistical Learning Algorithms for Geometric and Topological Data Analysis, December 1st, 2016, Frédéric Chazal.

PhD : Mael Rouxel-Labbé, Génération de maillages anisotropes, december 16, 2016, Jean-Daniel Boissonnat.

PhD: Ruqi Huang, Algorithms for topological inference in metric spaces, December 14, 2016, Frédéric Chazal.

PhD in progress: Eddie Aamari, A Statistical Approach of Topological Data Analysis, started September 1st, 2014, Frédéric Chazal (co-advised by Pascal Massart).

PhD in progress: Claire Brécheteau, Statistical aspects of distance-like functions , started September 1st, 2015, Frédéric Chazal (co-advised by Pascal Massart).

PhD in progress: Bertrand Beaufils, Méthodes topologiques et apprentissage statistique pour l'actimétrie du piéton à partir de données de mouvement, started November 2016, Frédéric Chazal (co-advised by Bertrand Michel).

PhD in progress: Mathieu Carrière, Topological signatures for geometric data, started November 1st, 2014, Steve Oudot.

PhD in progress: Jérémy Cochoy, Decomposition and stability of multidimensional persistence modules, started September 1st, 2015, Steve Oudot.

PhD in progress: Nicolas Berkouk, Categorification of topological graph structures, started November 1st, 2016, Steve Oudot.

PhD in progress: Alba Chiara de Vitis, Concentration of measure and clustering.

PhD in progress: Siargey Kachanovich, Approximate algorithms in higher dimensional geometry.

PhD in progress: François Godi, Data structures and algorithms for topological data analysis and high dimensional geometry.

10.2.3. Juries

Frédéric Chazal was a member (and reviewer) of the PhD defense committee of Mariia Fodetenkova (Inria Nancy).

DEDUCTEAM Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. General Chair, Scientific Chair

G. Dowek has co-organized the meeting Universality of Proofs in Dagstuhl.

8.1.1.2. Member of the Organizing Committees

G. Dowek is a member of the steering committee of FSCD.

8.1.2. Scientific Events Selection

8.1.2.1. Member of the Conference Program Committees

F. Blanqui was member of the program committee of the 2016 Coq Workshop.

8.1.2.2. Reviewer

F. Blanqui reviewed papers for IJCAR 2016 and CSL 2016.

8.1.3. Journal

8.1.3.1. Member of the Editorial Boards

G. Dowek is an editor of TCS-C.

8.1.4. Invited Talks

G. Dowek has been an invited speaker at ISEEP 2016.

G. Dowek has been an invited speaker at Physics and Computation 2016.

8.1.5. Scientific Expertise

G. Dowek has been a member of a commitee dedicated to an update of the high school informatics curriculum.

8.1.6. Research Administration

G. Dowek is the President of the Scientific Board of the Société informatique de France.

G. Dowek is a member of the Scientific Board of la Main à la Pâte.

G. Dowek is a member of the commission de réflexion sur l'éthique de la recherche en sciences et technologies du numérique d'Allistene.

G. Dowek is a member of the comité national français d'histoire et de philosophie des sciences et des techniques.

F. Blanqui is co-director of the pole 4 (programming: models, algorithms, languages and architectures) of Paris-Saclay University's doctoral school on computer science.

F. Blanqui is referent of LSV PhD students.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

G. Dowek is attached professor at the École normale supérieure de Paris-Saclay. He has given a course at MPRI. He has given a course to the student preparing the teacher's recruiting exam Agrégation. He is responsible for the second year of master.

F. Blanqui gave a course (15h) on rewriting theory at the MPRI.

8.2.2. *Supervision*

PhD : Raphaël Cauderlier, Object-Oriented Mechanisms for Interoperability between Proof Systems, CNAM, 10/10/2016, Catherine Dubois

8.2.3. *Juries*

F. Blanqui was member of the 2016 Inria recruitment committee for young graduate scientists.

F. Blanqui was member of the jury for the best scientific production of the year within Paris-Saclay University's doctoral school on computer science.

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DEFI Project-Team

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10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- G. Allaire is scientific chair and one of the main organizers of the CEA/GAMNI seminar on computational fluid mechanics, IHP Paris (January 2016).

10.1.1.2. Member of the Organizing Committees

- L. Chesnel co-organized with Xavier Claeys and Sonia Fliss the workshop "Waves in periodic media and metamaterials" in Cargese http://uma.ensta-paristech.fr/conf/metamath/Metamath/Workshop.html
- L. Chesnel co-organize the seminar of the Centre de Mathématiques Appliquées of École Polytechnique.
- G. Allaire co-organized the PGMO conference (8-9 November 2016)
- J.R. Li is member of Organizing Committee of SIAM Conference on Computational Science and Engineering, 2017
- J.R. Li is organizer of Ecole d'ete d'excellence for Chinese Master's students funded by French Embassy in China, 2017.
- H. Haddar Co-organized the "International Conference on Computational Mathematics and Inverse Problems", Michgan, 15-19 August 2016

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- J.R. Li is member of the SIAM Committee on Programs and Conferences 2017-2019
- H. Haddar is memeber of the scientific committee of the conference series TAMTAM and Waves

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- G. Allaire is member of the editorial board of
    – book series "Mathématiques et Applications" of SMAI and Springer,
    – ESAIM/COCV, Structural and Multidisciplinary Optimization,
    – Discrete and Continuous Dynamical Systems Series B,
    – Computational and Applied Mathematics,
    – Mathematical Models and Methods in Applied Sciences (M3AS),
    – Annali dell'Universita di Ferrara,
    – OGST (Oil and Gas Science and Technology),
    – Journal de l'Ecole Polytechnique - Mathématiques,
    – Journal of Optimization Theory and Applications.
- H. Haddar is
    – member the editorial advisory board of Inverse Problems
    – Associate Editor of the SIAM Journal on Scientific Computing

10.1.3.2. Reviewer - Reviewing Activities

The members of the team reviewed numerous papers for numerous international journals. Too many to make a list.

10.1.4. Invited Talks

- G. Allaire
    - Congrès LEM2I à Hammamet, Tunisie (avril 2016).
    - Workshop "Variational Models of Fracture" à Calgary, Canada (mai 2016).
    - Congrès ECCOMAS à Heraklion, Crête (juin 2016).
    - European forum on additive manufacturing, Chatenay Malabry (juin 2016).
- H. Haddar
    - "ATAVI International Conference on Acoustics and Vibration ICAV'2016" from 21 to 23 March 2016 in Hammamet - Tunisia
    - Journées des Mathématiciens Tunisiens à l'Etranger 20-21 juillet 2016 Cité des Sciences de Tunis
    - Oberwolfach Workshop Theory and Numerics of Inverse Scattering Problems, 18 Sep - 24 Sep 2016.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- Licence : Grégoire Allaire, Approximation Numérique et Optimisation, for students in the second year of Ecole Polytechnique curriculum: 8 lessons of 1h30.
- Licence : Houssem Haddar, Approximation Numérique et Optimisation, for students in the second year of Ecole Polytechnique curriculum: 8 TDs of 4h.
- Licence : Houssem Haddar, Variational analysis of partial differential equations, for students in the second year of Ecole Polytechnique curriculum: 8 TDs of 4h.
- Licence: Lucas Chesnel, "Elementary tools of analysis for partial differential equations", 29 equivalent TD hours, L3, Ensta ParisTech, Palaiseau, France
- Master : Grégoire Allaire, Optimal design of structures, for students in the third year of Ecole Polytechnique curriculum. 9 lessons of 1h30.
- Master : Grégoire Allaire, Transport et Diffusion, for students in the third year of Ecole Polytechnique curriculum. With F. Golse, 1/2 of 9 lessons of 1h30.
- Master : Houssem Haddar, Inverse problems, for Master (M2) students of Ecole Polytechnique and Paris 6 University, 1/2 of 9 lessons of 2h.
- Master: Lucas Chesnel, "The finite element method", 6 equivalent TD hours, M1, Ensta ParisTech, Palaiseau, France

10.2.2. Supervision

- Ph.D. : G. Fournet, Inclusion of blood flow in micro-vessels in a new dMRI signal model, October 2016, J.-R. Li and L. Ciobanu
- Ph.D.: S. Schiavi, Homogenized models for Diffusion MRI, December 2016, H. Haddar and J.-R. Li
- PhD : M. Giacomini, Shape optimization and Applications to aeronautics, December 2016, O. Pantz and K. Trabelsi
- PhD : A. Maury, shape optimization for non-linear structures, December 2016, G. Allaire and F. Jouve
- PhD : C. Patricot, coupling algorithms in neutronic/thermal-hydraulic/mechanics for numerical simulation of nuclear reactors, March 2016, G. Allaire and E. Hourcade

- PhD in progress : J.-L. Vié, optimization algorithms for topology design of structures, December 2016, G. Allaire and E. Cancès

- Ph.D. in progress: M. Lakhal, Time domain inverse scattering for buried objects, 2014, H. Haddar

- Ph.D. in progress: T.P. Nguyen, Direct and Inverse scattering from locally perturbed layers, 2013, H. Haddar

- Ph.D. in progress: B. Charfi, Identification of the sigular support of a GIBC, 2014, H. Haddar and S. Chaabane

- Ph.D. in progress: K. Van Nguyen, Modeling, simulation and experimental verification of water diffusion in neuronal network of the Aplysia ganglia, 2014, J.-R. Li and L. Ciobanu

- PhD in progress : A. Talpaert, the direct numerical simulation of vapor bubbles at low Mach number with adaptative mesh refinement, 2013, G. Allaire and S. Dellacherie

- PhD in progress : A. Bissuel, linearized Navier Stokes equations for optimization, floating and aeroaccoustic, 2014, G. Allaire

- PhD in progress :P. Geoffroy on topology optimization by the homogenization method in the context of additive manufacturing (Safran Tech, to be defended in 2019), G. Allaire.

- PhD in progress : K. Napal, Transmission eigenvalues and non destructive testing of concrete like materials , 2016, L. Chesnel H. Haddar and L. Audibert

- PhD in progress : M. Kchaou, Higher order homogenization tensors for DMRI modeling, 2016, H. Haddar, J.R Li and M. Moakher

<p style="text-align:center">**DEFROST Team**</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Conference Program Committees

- Jeremie Dequidt is member of the CP committee of the AFIG (Association Française d'Informatique Graphique) conference and VRIPHYS conference
- Christian Duriez is member of the CP committee of Eurohaptics

10.1.1.2. Reviewer

- Jeremie Dequidt has been reviewer for International Journal of Computer Assisted Radiology and Surgery (IJCARS) and AFIG 2016
- Damien Marchal has been reviewer for IEEE 3D User Interface 2016 (3DUI 2016) and EuroHaptic 2016.
- Christian Duriez has been reviewer for the conferences IEEE VR 2016 and ICRA 2017.

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

- Christian Duriez is member of the editorial board of IEEE Transaction on Haptics

10.1.2.2. Reviewer - Reviewing Activities

- Christian Duriez has been reviewer for the journals ACM Transaction on Graphics, Computer and Graphics, IEEE Transactions on Robotics, Soft Robotic Journal (SORO).

10.1.3. Invited Talks

- Christian Duriez and Thor Bieze were invited for a talk at the Spring School on Soft-robotics at Livorno (April 2016)
- Christian Duriez was invited for a talk at the conference POSS in Paris (november 2016).

10.1.4. Scientific Expertise

Christian Duriez is a scientific advisor of InSimo (Inria Spin-off)

10.1.5. Research Administration

Christian Duriez is vice-responsible of Research Jobs Committee at Inria Lille.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence : Jeremie Dequidt, Programming, 54h, L3, University of Lille/Polytech Lille, France

Licence : Jeremie Dequidt, Advance Programming, 16h, L3, University of Lille/Polytech Lille, France

Licence : Jeremie Dequidt, Databases, 12h, L3, University of Lille/Polytech Lille, France

Licence : Frederick Largilliere, Computer science fundamentals, 48h, L1, University of Lille 3, France

Licence : Frederick Largilliere, Certificate of computer science and internet knowledge, 27.5h, L2 - L3, University of Lille 3, France

Master : Jeremie Dequidt, Theoretical Computer Science, 24h, M1, University of Lille/Polytech Lille, France

Master : Jeremie Dequidt, Surgical Simulation, 12h, M2, University of Lille/Polytech Lille, France

Master : Thor Morales Bieze, Bio-inspired robotics, 20h, M2, University of Lille/Polytech Lille, France

Master : Damien Marchal, Reality-Virtual et Interaction, 20h, M2, University of Lille, France

Master : Christian Duriez, Interactive hysics-based enginesh, M2, University of Lille, France

10.2.2. Supervision

PhD in progress: Frederick Largilliere, Stiffness control of interfaces based on soft robots through numerical modelization, 01/11/2013, Laurent Grisoni, Christian Duriez

PhD in progress: Thor Morales Bieze, Design, modeling and control of soft, continuum manipulators, 10/10/2013, Rochdi Merzouki, Christian Duriez

PhD in progress: Zhongkai Zhang, Visual servoing control of soft robots based on real-time Finite Element Method, 01/10/2015, Jeremie Dequidt, Christian Duriez

PhD in progress: Maxime Thieffry, High velocity control of soft robots, 01/10/2016, Christian Duriez, Alexandre Kruszewski, Thierry Marie Guerra

10.2.3. Juries

- Christian Duriez was president of the committee of the PhD jury of José Dolz (University of Lille 2)
- Christian Duriez was reviewer of the PhDs of Johan Sarrazin (University of Grenoble) and Pierre-Luc Manteaux (University of Grenoble)
- Christian Duriez was examiner of the PhD of Zilong Shao (University of Lille)

10.3. Popularization

- Olivier Goury and Christian Duriez participated in "Fête de la science: Opération Chercheurs itinérants", which involves giving scientific lectures in middle and high schools.
- Christian Duriez and Mario Sanz Lopez participated in the "Bourse aux Technologies" at Bercy, Paris (22 March).
- Popularization session 13:45 on the topic of Arduino by Mario Sanz Lopez.
- Popularization session 13:45 on the topic of Software development good practices by Bruno Carrez.
- Damien Marchal participated in "Chti'Code". Chti'Code is an action of the University of Lille 1, which aims to promoting computer education in primary schools. Damien Marchal intervened with computer science student in 4 CM2 classes for a total of 20h.
- Jeremie Dequidt was jury member of the second robotic competition SI / @ Baggio.

DIANA Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

Chadi Barakat is on the editorial board of the *Computer Networks* journal, on the Technical Program Committee for the ACM Internet Measurement Conference (IMC) 2017, the ACM CoNext Conference 2016, the International Teletraffic Congress (ITC) 2017, the Passive and Active Measurement (PAM) Conference 2016, the IEEE Measurement and Networking (M&N) Workshop 2017, the Algotel Conference 2016, and the Asian Internet Engineering Conference (AINTEC) 2016. He is currently the scientific referee for international affairs at Inria Sophia Antipolis and member of the Conseil d'Orientation Scientifique et Technologique at Inria within the working group of international affairs (COST-GTRI).

Walid Dabbous is in member of the technical program committee of the IEEE INFOCOM International Workshop on Computer and Networking Experimental Research Using Testbeds, CNERT 2016. He is founding member of the ns-3 consortium. He co-organizeed the workshop on Future challenges in User-Centric Networks, co-located with Sigmetrics 2016 in June 2016. He is member of the scientific council of the Inria Bell-Labs laboratory on Communication networks of the future. He also servers as a chair of the scientific committee of the User Centric Networking (UCN@Sophia) Laroratory of Excellence. He was member of board of directors of the Telecom Platform Association responsible for the deployment and operation of the Com4Innov mutualized platform until July 2016. He is also member of the Ubinet International Master program steering committee. He is member of the Inria Sophia Antipolis project committee's bureau (Bureau du CP).

Arnaud Legout is on the editorial board of the *Computer Networks* journal, and was PC member of the ACM IMC 2016 conference. Arnaud Legout is the president of the Commission of the users of IT resources of Sophia Antipolis Inria research center.

Damien Saucez was co-organizer of the GdR RSD – Journées Cloud 2016 – with Fabien Hermenier (I3S). The conference over 2 days was composed of 16 presentations and two industrial keynotes (Amazon Web Services and Amadeus) with 50 attendees. The objective of this annual conference is to provide a forum for French researchers from the networking community and the distributed system community to exchange their latest findings. Damien Saucez was TPC member of IEEE ICC 2017, IEEE CCNC 2017, ACM CoNEXT Student Workshop 2016, DRCN 2016, IEEE CCNC 2016, ACM WNS3 2016, and IEEE Globecom 2016 SAC CN.

Thierry Turletti, Senior ACM and IEEE member, served in 2016 in the program committees of the following international workshops and conferences: the ACM SIGCOMM 2016 Posters and Demos, Salvador, Brazil, August 2016, the 7th Workshop on ns-3 at Seattle, Washington, June 15-16, 2016 and the 11th ACM Workshop on Challenged Networks (CHANTS), New York, USA, October 2016. Thierry Turletti is member of the Editorial Boards of the *Journal of Mobile Communication, Computation and Information* (WINET) published by Springer Science and of the *Advances in Multimedia Journal* published by Hindawi Publishing Corporation. He is chairman of the Committee for Technological Development (CDT) and member of the committee NICE that studies postdoc and visiting researcher applications at Inria Sophia Antipolis.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master Ubinet: Chadi Barakat and Walid Dabbous, Evolving Internet, 31.5 hours, M2, University of Nice-Sophia Antipolis, France.

Master Ubinet: Chadi Barakat and Walid Dabbous, Internet Measurements and New Architectures, 31.5 hours, M2, University of Nice-Sophia Antipolis, France.

Master 1 International: Chadi Barakat, Algorithms for Networking, 22.5 hours, M1, University of Nice-Sophia Antipolis, France.

Master Estel: Chadi Barakat, Voice over IP, 9 hours, University of Nice-Sophia Antipolis, France.

Master RISM: Chadi Barakat, Mobility and wireless networking, 10.5 hours, University of Avignon, France.

Master Ubinet: Arnaud Legout, From BitTorrent to Privacy, 36 hours, M2, University of Nice-Sophia Antipolis, France.

Master 1 International: Arnaud Legout, Oral and written communications, 18 hours, M1, University of Nice-Sophia Antipolis, France.

Master IUP GMI: Damien Saucez, Security and privacy in networks, 38h, M2, University of Avignon, France.

IUT : Damien Saucez, Advanced Network Services and Operator Network Technologies, 27h, L1 and L2, University of Nice-Sophia Antipolis, France.

E-learning

Python: Arnaud Legout and Thierry Parmentelat are co-authors of the MOOC "Python : des fondamentaux à l'utilisation du langage" that lasts 7 weeks on FUN (https://www.france-universite-numerique-mooc.fr/), Inria. For the third session there were 12954 registered persons among them 1603 qualified for the final attestation of achievement.

Bioinformatics: As part of our contribution to E-learning activities, Thierry Parmentelat was co-author in a MOOC published on the FUN platform and named "Bioinformatique : algorithmes et génomes". This MOOC is dedicated to an introduction to the algorithmic techniques used in the interpretation of DNA sequences. It was played for the second time in French in 2016, and Thierry's contribution, as compared with the first session that was played in 2015. has been the addition of notebooks where the various algorithms are brought to the students' disposal, so they can run them interactively, or any variation they would want to study, on any DNA fragment they want, including all the ones from the ENA database https://www.ebi.ac.uk/ena/data/sequence/search. The first notebook-enhanced version of this MOOC in French was played in spring 2016 https://www.fun-mooc.fr/courses/inria/41003S02/session02/info, and attracted 3270 students. An English version of the notebook-enhanced MOOC is scheduled to run on the same FUN platform in spring 2017.

9.2.2. Supervision

PhD: Maksym Gabielkov defended his PhD on "Information propagation in social networks" in June 2016. His thesis was supervised by Arnaud Legout.

PhD: Xuan Nam Nguyen defended his PhD on "Software Defined Networking in challenged environments" April 22, 2016. His thesis was co-supervised by Thierry Turletti and Walid Dabbous. Damien Saucez also actively contributed to the thesis direction.

PhD: Riccardo Ravaioli defended his PhD on "Active and Passive Inference of Network Neutrality" on July 13th 2016. His thesis was co-supervised by Chadi Barakat and Guillaume Urvoy-Keller (I3S).

PhD in progress: Karyna Gogunska works on "Empowering Virtualized Networks with Measurement As a Service (MaaS)". Her thesis is co-supervised by Chadi Barakat and Guillaume Urvoy-Keller (I3S).

PhD in progress: Muhammad Jawad Khokhar works on "From Network Level Measurements to Expected Quality of User Experience". His PhD is supervised by Chadi Barakat.

PhD in progress: Mohamed Naoufal Mahfoudi works on cross-layer optimization techniques for next generation MIMO-based networks since November 2015. His thesis is co-supervised by Walid Dabbous and Robert Staraj (LEAT).

PhD in progress: Ghada Moualla works on "the problem of network faults and how to circumvent them by the means of Software Defined Networking, virtualization, and service function chaining" since November 2015. Her thesis is co-supervised by Thierry Turletti and Damien Saucez.

PhD in progress: Vitalii Poliakov works on "the application of Software Defined Networking on 5G networks in order to optimise the Quality of Experience of network services" since November 2015. His thesis is co-supervised by Damien Saucez and Lucile Sassatelli (I3S).

PhD in progress: Hardik Soni works on "Software Defined Networking in challenged environments" since September 2014. His thesis is co-supervised by Thierry Turletti and Walid Dabbous.

PhD in progress: Luigi Vigneri works on "Vehicles as a Mobile Cloud: Leveraging mobility for content storage and dissemination" since April 2014. His thesis is co-supervised by Chadi Barakat and Thrasyvoulos Spyropoulos (Eurecom).

9.2.3. *Juries*

Chadi Barakat served as reviewer of Panagiotis Matzakos PhD thesis, "Scheduling and Congestion Management Policies for QoS Provision in Disruption Tolerant Networks" defended in October at Eurecom.

Walid Dabbous served as reviewer of Leonardo Linguaglossa PhD thesis, "Two challenges of Software Networking: Name-based Forwarding and Table Verification", defended on September 9th 2016 at the Université Sorbonne Paris Cité.

Walid Dabbous served as jury member of Nikolaos Spountzis PhD thesis, "Network Layer Optimization for Next Generation Heterogeneous Networks", defended on December 14th 2016 at Eurecom.

Walid Dabbous served as reviewer for mid-term PhD defense of Sumit Kumara at Eurecom for his thesis entitled "Simultaneous multi-standard SDR platform".

Arnaud Legout served as reviewer of Riccardo Petrocco PhD thesis, "Scalable Video Coding Support for P2P Networks", defended on April 9, 2016, at TU Delft.

Damien Saucez served as reviewer for mid-term PhD defense of Sergio Livi at Université de Nice Sophia Antipolis for his thesis entitled "Towards NFV-based Green Networks".

Thierry Turletti served as reviewer of Sadaf Yasmin PhD thesis, "Cost-effective routing and cooperative framework or opportunistic networks", defended on February 17 2016 at the Faculty of Computing Mohammad Ali Jinnah University, Islamabad, Pakistan.

Thierry Turletti served as reviewer of Guillaume Gaillard PhD thesis, "Opérer les réseaux de l'Internet des Objets à l'aide de contrats de qualité de service (SLA)", defended on December 19 at University of Lyon, INSA Lyon, France.

9.3. Popularization

Chadi Barakat keeps participating to the organization of the Mediterranean Students Days @ Campus SophiaTech. The fourth edition took place on March 9-11, 2016, and the fifth edition will took place on February 28-March 2, 2017. All details on this event can be found at http://univ-cotedazur.fr/events/meddays.

Walid Dabbous contributed to a large audience book on Big Data ("Les Big Data à Découvert", CNRS Editions, 2017). His participation [29] is on "Networks for Big Data".

Arnaud Legout gave a presentation on Internet Privacy to high school students at Lycée Amiral in Grasse.

Damien Saucez was invited at AuvernIX to give a tutorial on the Locator/ID Separation Protocol (LISP) in December 2016.

Damien Saucez was invited in December 2016 to present Future Internet challenges to high school students at Lycée Aubrac de Bollène in the context of "Science culture au lycée".

Damien Saucez was invited at the Amadeus Global Forum in June 2016 to present the future of Software Defined Networking.

DICE Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- Ste´phane Frénot, French Tech, représentant de la COMUE de Lyon
- Ste´phane Grumbach, ANR, Comite´ de Pilotage Scientifique du De´fi 8 « Socie´te´s innovantes »
- Ste´phane Grumbach, scientific committee Global Forum
- Ste´phane Grumbach, scientific committee Colle`ge des Bernardins, Journalisme et bien commun a` l'heure des algorithmes

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Stéphane Grumbach has been chair of the following conferences:

- From data on ecosystems to ecosystems of data, Seminar in cooperation between ENS and EPFL, Lausanne, 21 October 2016
- Seminar Intermediation and Smartness, Anthropocene Curriculum, The Technosphere Issue, Haus der Kulturen der Welt, Berlin, 15-23 April 2016

9.1.3. Invited Talks

Stéphane Grumbach has given the following talks:

- Panel The Transatlantic Data War, obama2016: L'héritage Obama. Tensions et reconfigurations après la présidentielle, Paris, 12-14 déc. 2016
- Panel L'impact des algorithmes sur les media et la culture, Entretiens Jacques Cartier, Lyon 21 novembre 2016
- The Datasphere, in control of ecosystems, The 136th RIHN seminar, Research Institute for Humanity and Nature, Kyoto, 18 November 2016
- Digital Platforms, Europe Asia, Diverging Spaces?, The Relevance of Area Studies for the Sciences and Public Policy, DIJ, Tokyo, 14-15 November 2016
- Platforms vs Administrations, The mutation of data driven government, , ECNU, Shanghai, 9 November 2016
- Panel The Data Revolution, Global Forum, Digitalization: the global transformation, Eindhoven, 19-20 September 2016
- Innovation, pouvoir et territoires, Summer School Cespec 2016, (IX Edizione) Futuri. Immaginare il mondo di domani, Cuneo-Savigliano-Alba-Mondovì, 13-17 settembre 2016
- Révolutions dans la culture et la transmission des savoirs à l'heure du numérique, TUBA'X-PERTS, Lyon, 9 juin 2016
- Conférence "Grand Témoins" : le BIG DATA, Grand rendez-vous de la Métropole, Lyon, 23 mars 2016 video
- Géopolitique du numérique : enjeux des plateformes globales pour la région, LeLabIdF, ThinkLab de la Région Île-de-France, Paris, 17 mars 2016
- Intelligence artificielle, le pouvoir aux machines ? Collège des Bernardins, Paris, 11 février 2016

9.1.4. Research Administration

Ste´phane Grumbach is director of IXXI, the complex Systems Institute.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master : Stéphane Grumbach, Guerre, climat et enjeux de l'Anthropocène, 2h, M1, ENS de Lyon, France

Master : Stéphane Grumbach, La révolution numérique et les difficultés d'ajustement des administrations françaises, 2h, M1, ENTPE, France

Master : Stéphane Grumbach, Réseaux sociaux et Nouveaux Outils de Communication, 2h, M1, INSA Lyon, France

Master : Damien Reimert, - Bitcoin, 24h, M1, INSA de Lyon, France

Master : Damien Reimert, Javascript, 43h, M1, Télécom St-Étienne, France

Licence : Damien Reimert, Développement Mobile, 39h, L3, Télécom St-Étienne, France

Licence : Aurélien Faravelon, HTML5 CSS3 Javascript, 24h, L3, IUT 2 Grenoble, France

Master : Aurélien Faravelon, Economie de l'intermediation, 2h, M2, Ecole centrale de Lyon, France

Licence : Robert Riemann, INSA, Algorithmique et programmation 1, 27HETD, L1, INSA Lyon, France

9.2.2. Supervision

PhD : Etienne Brody, DataFlow compilation from JavaScript, INSA Lyon, 21 Juin, Stéphane Frénot

PhD in progress : Robert Riemann, systemes de vote decentralise´s, sept 2014, Ste´phane Grumbach

9.3. Popularization

Aurélien Faravelon: 12/05/2016, Débats Citoyens, Musée Galo Romain de Lyon

Robert Riemann: 28/12/2016, Chaos Communication Congress/We fix the Net assembly, Hambourg

<div align="center">**DIONYSOS Project-Team**</div>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

Pierre L'Ecuyer is member of the Steering Committee of MCQMC.

G. Rubino and B. Tuffin are members of the Steering Committee of the International Workshop on Rare Event Simulation (RESIM).

Y. Hadjadj-Aoul is a member of the steering committee of the International Conference on Information and Communication Technologies for Disaster Management (ICT-DM) from December 2015.

Yann Busnel has been "Habilité à diriger les recherches" at the École Normale Supérieure de Rennes, under the seal of University Bretagne Loire, in December 2016, presenting a defense entitled "Analyse et traitement de flux de données large échelle".

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Bruno Tuffin served as TPC co-chair for the 10th International Conference Performance Evaluation Methodologies and Tools (Valuetools'16), September 2016, Taormina, Italy.
- Yassine Hadjadj-Aoul served as TPC co-chair for the 3rd International Symposium on Networks, Computers and Communications (ISNCC 2016), May 2016, Hammamet, Tunisia.
- Yassine Hadjadj-Aoul served as TPC co-chair for the 13th conférence francophone sur les nouvelles technologies de la répartition (NOTERE 2016), Paris, France.

10.1.2.2. Member of the Conference Program Committees

Pierre L'Ecuyer was a member of the program committee of the following events:

- MCQMC'2016: Twelve International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, Stanford, California, Aug. 2016.
- SIMULTECH 2016: International Conference on Simulation and Modeling Methodologies, Technologies and Applications, Lisbon, Portugal, July 2016.
- ICORES 2016: International Conference on Operations Research and Enterprise Systems, Rome, Italy, Feb. 2016.

Bruno Tuffin was a member of the program committee of the following events:

- 5th Workshop on Smart Data Pricing (SDP 2016), Workshop of IEEE INFOCOM 2016, San Francisco, USA, April 2016.
- IEEE ICC 2016 - Communications Software, Services and Multimedia Applications Symposium, 23-27 May 2016, Kuala Lumpur, Malaysia.
- 22nd Asia-Pacific Conference on Communications (APCC 2016), Yogyakarta, Indonesia on 25-27 August 2016.
- GECON2016 (13th International Conference on Economics of Grids, Clouds, Systems, and Services), 20-22 September 2016, Athens, Greece.
- The International Conference on Wireless Networks and Mobile Communications (WINCOM?16). Fez, Morocco, October 26-29, 2016.
- Globecom'16 - CSSMA (2016 IEEE Global Communications Conference: Communications Software, Services and Multimedia Apps), 4-8 December 2016, Washington VD, USA.

Bruno Sericola was member of the program committee of the following events:

- ASMTA 2016: 23rd International Conference on Analytical and Stochastic Modelling Techniques and Applications, Cardiff, Wales, UK, August 2016.
- MACOM 2016: 9th International Workshop on Multiple Access Communications, Aalborg, Denmark, November 2016.
- INTERNET 2016: 8th International Conference on Evolving Internet, Barcelona, Spain, November 2016.
- DEPEND 2016: 9th International Conference on Dependability, Nice, France, July 2016.

Yann Busnel was a member of the program committee of the following events:

- NCA 2016: 15th IEEE International Symposium on Network Computing and Applications, Boston, USA, October 2016.
- CoRes 2016: 1ères Rencontres Francophones sur la Conception de Protocoles, l'Évaluation de Performance et l'Expérimentation des Réseaux de Communication, Bayonne, France, May 2016.

Adlen Ksentini was member of the program committee of the following events:

- IEEE ICC 2016 Mobile Wireless Networks Symposium, Kuala Lumpur, Malaysia 2016.
- IEEE Globecom 2016 Mobile Wireless Networks Symposium, Washington, DC USA 2016.
- IEEE WCNC 2016, Doha, Qatar, 2016.

Yassine Hadjadj-Aoul was a member of the program committee of the following events:

- IEEE ICC 2016 Mobile Wireless Networks Symposium, Kuala Lumpur, Malaysia 2016.
- IEEE Globecom 2016 Mobile Wireless Networks Symposium, Washington, DC USA 2016.
- IEEE WCNC 2016, Doha, Qatar, 2016.
- IEEE CSCN 2016 IEEE Conference on Standards for Communications & Networking, Berlin, Germany, 2016.

Gerardo Rubino was a member of the program committee of the following events:

- Networking 2016, The IFIP Networking Conference, Vienne, Autriche, May 2016.
- MAM9 (9th) International Conference on Matrix Analytic Methods in Stochastic Models, Budapest, Hongrie, June 2016.
- COMTEL 2016, VIII International Congress in Computer Science and Telecommunications, Lima, Perú, September 2016.
- Mascots 2016, the IEEE International Symposium on Modelling, Analysis and Simulation of Computer and Telecommunications Systems, Londres, UK, September 2016.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Bruno Tuffin is the Simulation Area Editor for *Informs Journal on Computing*.

Bruno Tuffin is an associate editor for the following journal:

- Mathematical Methods of Operations Research, since November 2008.

Pierre L'Ecuyer is an associate editor for the following journals:

- ACM Transactions on Mathematical Software, since August 2004.
- Statistics and Computing (Springer-Verlag), since June 2003.
- International Transactions in Operational Research, since May 2007.

Bruno Sericola is an associate editor for the following journals:

- International Journal of Stochastic Analysis, since April 2010.
- Performance Evaluation, since April 2015.

Bruno Sericola is Editor in Chief of the books series "Stochatic Models in Computer Science and Telecommunications Networks", ISTE/WILEY, since March 2015.

Yassine Hadjadj-Aoul is a member of the editorial broad of the CSC "International Journal of Computer Networks (IJCN)" since 2012.

Yassine Hadjadj-Aoul was a member of the guest editorial board of the following journals:

- Special issue in IGI, International Journal of Distributed Systems and Technologies (IJDST), "Information and Communication Technologies for Disaster Management" [99], Vol. 7, Issue 4, ISSN: 1947-3532 (October 2016)
- Hindawi Mobile Information Systems (Editorial), "Wireless and Mobile Technologies for the Internet of Things" [100], vol. 2016, ID 8206548 (2016)

10.1.3.2. Reviewer - Reviewing Activities

In addition to the reports done during his associate editor and conference TPC member duties, Bruno Tuffin has reviewed papers in 2016 for COMNET, Operations Research, Stochastic Models, Computers & OR, Journal of Communications & Networks.

Bruno Sericola served as a reviewer for several major international journals and conferences.

Adlen Ksentini has reviewed papers in 2016 for Transaction Paralel Distributed Systems-TPDS, Transaction on Wireless Communication - TWC, Transaction on Vehicular Technology - TVT, Wireless Communication Magazine, Elsevier Computer Communication.

Yassine Hadjadj-Aoul has reviewed papers in 2016 for Transaction on Vehicular Technology-TVT, Wireless Communication Magazine, Elsevier Computer Communication and for the following international conferences: Globecom'16, ICC'16, WCNC'16 and others.

César Viho has reviewed project proposals for the ANR and for CIFRE contracts for the ANRT. He has reviewed papers for the journals IEEE Transaction on Wireless Communication, IEEE Transactions on Vehicular Communications, IEEE Communications Magazine, and for the following international conferences: IWCNC, Globecom, and CCNC.

Gerardo Rubino has reviewed papers for several international journals and conferences (Networking 2016, MAM9, Mascots 2016, ...), ANR projects, etc.

10.1.4. Invited Talks

B. Tuffin. gave a plenary talk "Some applications of importance sampling to dependability analysis" at the International Conference on Monte Carlo techniques, Paris, France, July 2016.

B. Tuffin gave the following seminar presentations:

- B. Tuffin. Net neutrality. IRISA Evaluation by HCRES, Jan. 2016.
- P. L'Ecuyer, P. Maillé, N. Stier-Moses, B. Tuffin. Stochastic Optimization for Search Engines: Revenue-Maximizing Rankings with Quality-Sensitive Consumers. CREM-IRISA Workshop on Network Economics, January 2016.
- P. Maillé, G. Simon, B. Tuffin. On revenue-oriented Content Delivery Networks and their impact on Net Neutrality. CREM-IRISA Workshop on Network Economics, January 2016.
- B. Tuffin. La neutralité du Net. Journées scientifiques Inria, Rennes, Juin 2016.
- P. Maille and B. Tuffin. Auctions For Online Ad Space Among Advertisers Mixing Pay-per-view And Pay-per-click. DIRO, Université de Montréal, Canada, Nov 30, 2016.

Y. Hadjadj-Aoul gave a plenary talk "Efficient support of Massive M2M communications during emergency situations" at the International Conference on Information and Communication Technologies for Disaster Management (ICT-DM 2016), Vienna, Austria, December 2016.

Y. Busnel gave a plenary talk "Comment générer des échantillons uniformes sur des grandes masses de données ?" at the 9ème Colloque Francophone sur les sondages, Gatineau, Canada, October 2016.

G. Rubino made several invited and keynote talks in 2016:

- an invited talk at Advances in Uncertainty Quantification Methods, Algorithms and Applications, Kaust, Saudi Arabia, about rare event analysis [37];
- an invited talk at SIAM Conference on Uncertainty Quantification, Lausanne, Suisse, about rare event analysis in static models [39];
- a keynote at Mascots'16, London, UK, about a new performance metric [34];
- an invited talk at Technoconférence "Nouvelles expériences son et vidéo", Rennes, France, about QoE measuring [35];
- a keynote in Math AmSud Seminar, Montevideo, Uruguay, about QoE analysis and Big Data problems [38];
- a keynote at SoCPaR'16, Vellore, India, about new results concerning Perceptual Quality measuring [36].

10.1.5. Leadership within the Scientific Community

Bruno Tuffin is the co-director of the common lab ALSTOM-Inria since 2014.

Gerardo Rubino is one of the three French representatives at the Scientific Committee of the IFCAM (Indo-French Centre for Applied Mathematics), managing the cooperation in mathematics of the two countries, and federating at the French side, among several other participants, Inria and CNRS.

Gerardo Rubino is a member of the CSV (the technical committee) of the Images and Networks Cluster of Brittany, France.

10.1.6. Research Administration

- Bruno Sericola is responsible for the Inria Rennes-Bretagne Atlantique budget.
- Bruno Sericola is the leader of the research group MAPI (Math Appli Pour l'Info) the goal of which is to improve the collaboration between computer scientists and mathematicians.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master 2nd year: Bruno Sericola, Mathematics, 12 hours, M2, Istic/University of Rennes 1, France.

Master 2nd year: Bruno Sericola, Logistic and performance, 12 hours, M2, Faculté de sciences économiques/University of Rennes 1, France.

Master 2nd year: Gerardo Rubino, Performance Evaluation, Istic/University of Rennes 1, France, 16 hours.

Master 2nd year: Performance Evaluation, Bruno Tuffin, Istic/University of Rennes 1, France, 4 hours.

Master 2nd year: César Viho, Algorithms on graphs, 40 hours, Istic/University of Rennes 1, France

Master 2nd year: César Viho, Multimedia Networking, 8 hours, Istic/University of Rennes 1, France

Master 2nd year: Yassine Hadjadj-Aoul, Multimedia streaming over IP (MMR), 48 hours, Esir/University of Rennes 1, France

Master 2nd year: Yassine Hadjadj-Aoul, Multimedia services in IP networks (RSM), 29 hours, Esir/University of Rennes 1, France

Master 2nd year: Yassine Hadjadj-Aoul, Software Defined Networks, 4 hours, Istic/University of Rennes 1, France

Master 2nd year: Yassine Hadjadj-Aoul, Video streaming over IP, 8 hours, Istic/University of Rennes 1, France

Master pro. 2nd year: Yassine Hadjadj-Aoul, C Programming, 12 hours, Istic/University of Rennes 1, France

ENSAI Rennes 3rd year: Gerardo Rubino, Neural Networks, 9 hours.

Supelec Rennes 3rd year: Gerardo Rubino, Dependability Analysis, 15 hours.

Seminars: Yann Busnel, Big Data for Security and Safety, 12 hours, Sapienza Universitá di Roma, Italy, April 2016.

Seminars: Yann Busnel, Big Data for Security and Safety, 18 hours, Indian Institute of Technology, Indore, India, October 2016.

10.2.2. Supervision

PhD in progress: Ajit Rai, "Availability prediction with logistics", started in May 2015; advisors: B. Tuffin & G. Rubino, University Rennes 1.

PhD in progress: Corentin Hardy,"Device-Assisted Distributed Machine-Learning on Many Cores", started in April 2016; advisors: Bruno Sericola & Erwan Le Merrer from team Cidre, University Rennes 1.

PhD in progress: Yves Mocquard, "Analyse de flux de données massifs dans les systèmes distribués large échelle", started on September 2015; advisors: Bruno Sericola and Emmanuelle Anceaume from team Cidre, University Rennes 1.

PhD in progress: Ali Hodroj, "Enhancing content delivery to multi-homed users in broadband mobile networks", started in November 2015; advisors: Bruno Sericola, Marc Ibrahim and Yassine Hadjadj-Aoul, University Rennes 1 and St Joseph University of Beyrouth.

PhD in progress: Hamza Ben Ammar, "Socially-aware network and cache resources optimization for efficient media content delivery in Content Centric Networks", started in October 2015; advisors: Yassine Hadjadj-Aoul, Adlen Ksentini and Soraya Ait Chellouche, University Rennes 1.

PhD in progress: Imad Alawe, "Mobile SDN architecture", started in October 2015; advisors: César Viho, Yassine Hadjadj-Aoul, University Rennes 1, Philippe Bertin, B-COM and Davy Darche, TDF.

PhD in progress: Jean-Michel Sanner; Cifre Grant, Orange Labs, "SDN technologies for network services performances adaptation of carriers networks"; started on January 2013; Advisors: Y. Hadjadj-Aoul and G. Rubino; University Rennes 1.

PhD in progress: Yue Li; Cifre Grant, Orange Labs; title: "Elaboration d'une architecture réseau unifiée, ouverte et flexible", started on October 2013; Advisors: Y. Hadjadj-Aoul and G. Rubino; University Rennes 1.

PhD in progress: Nicolás Jara, "Fault tolerant design of dynamic WDM optical networks", Technical University Federico Santa María (UTFSM) and university of Rennes 1, France. Advisors: R. Vallejos (Chile) and G. Rubino (France). Defense in 2017.

PhD in progress: Laura Aspirot, "Fluid Approximations for Stochastic Telecommunication Models", University of the Republic, Uruguay. Advisors: E. Mordecki (Uruguay) and G. Rubino (France). Defense in 2017.

PhD in progress: Jorge Graneri, "Mathematical Models for Semantic Memory", University of the Republic, Uruguay. Advisors: E. Mizraji (Uruguay) and G. Rubino (France). Started end 2016.

Master Project R& I 2016–2017, of Joshua Peignier and Estelle Varloot: "Game-theoretic tools to analyze classical vs collaborative economies". Advisors: B. Tuffin and P. Maillé from Telecom Bretagne.

10.2.3. Juries

Bruno Tuffin was a member of the following PhD defense committees:

- Juan Eduardo Piccini: "Static Reliability and Resilience in Dynamic Systems", University of the Republic, Montevideo, Uruguay, Mars 2016; reviewer.

- Maïder Estécahandy: "Méthodes accélérées de Monte-Carlo pour la simulation d'événements rares. Applications aux Réseaux de Petri", Université de Pau et de l'Amour, Mars 2016; reviewer.
- Wenjing Shuai: "Management of electric vehicle systems with self-interested actors", Telecom Bretagne, Sept. 2016; president.
- Simon Theissing: "Supervision en Transport Multimodal", université de Paris-Saclay, Dec. 2016.

Bruno Sericola was a reviewer of the following PhD defense committee:

- A. Anjuka: "Stationary analysis of fluid queueing models", Faculty of Science and Humanities, Anna University, Chennai, India.

Bruno Sericola was the president of the jury for the recruitement of Inria researchers in 2016.

Gerardo Rubino was a member of the following PhD defense committees:

- Juan Eduardo Piccini: "Static Reliability and Resilience in Dynamic Systems", University of the Republic, Montevideo, Uruguay, Mars 2016; reviewer.
- Wassim Abbessi: "Mesures et Modélisation Fluide de Trafic Multimédia en Vue d'une Meilleure Gestion du Flux", ENSI, Tunisia, November 12, 2016; reviewer.
- Yu-Ting Lin: "Performance analysis of video streaming services in mobile networks', ParisTech, Paris, December 9, 2016; reviewer.

César Viho was:

- a member of juries for the recruitment of young graduate scientists and senior researchers at Inria;
- a member of the juries for the recruitment of young Associate Professors and Full Professors at ISTIC-Université Rennes 1;
- the Director of the MATISSE (Mathematics, Electronics and Computer Sciences) doctoral school in charge of managing the recruitment of PhD students and their activities during their doctorate, in all the concerned areas of the doctoral school.

10.3. Popularization

- P. Maillé and B. Tuffin responded to the public consultation on draft BEREC Guidelines on implementation of net neutrality rules. 2016.
- G. Rubino makes regular presentations to high school students about the research work in general, and specific technical topics in particular. Current talks:
  - Randomness as a tool
  - Internet as a research problem
  - Great challenges in maths: the Riemann Hypothesis
  - Great challenges in math/computer science: the "P versus NP" problem

DISCO Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. General Chair, Scientific Chair

- Catherine Bonnet is together with Alexandre Chapoutot (ENSTA ParisTech) and Paolo Mason (L2S) the co-organizer of the Working Group Shy of Digicosme on the Plateau de Saclay.

- Catherine Bonnet was together with Alexandre Chapoutot and Laurent Fribourg (ENS Cachan) the co-organizer of the DigiCosme Spring School 2016 on Hybrid Systems, May 9-13, ENSTA ParisTech.

- Sorin Olaru was the Scientific organizer of the Workshop "Interpolation-based techniques for constrained control: from improved vertex control to robust model predictive control alternatives" at ECC 201

8.1.2. Scientific Events Selection

Frédéric Mazenc was Associate Editor for the conferences 2017 American Control Conference, Seattle, USA and the 55th IEEE Conference on Decision and Control, Las Vegas, USA, (2016).

Ali Zemouche was Associate Editor for the conferences 2017 American Control Conference, Seattle, USA, and the 55th IEEE Conference on Decision and Control, Las Vegas, USA, (2016).

8.1.2.1. Member of the Conference Program Committees

Catherine Bonnet was a member of the International Program Committee of the IFAC Conference on Time-Delay Systems - IFAC TDS2016.

Sorin Olaru was a member of the conference program committee: International Conference on System Theory, Control and Computing - ICSTCC 2016.

Guillaume Sandou was a member of the program committee of the 2016 IEEE Symposium on Computational Intelligence in Production and Logistics Systems, Athens, Greece.

Ali Zemouche was a member of the International Program Committee of the IFAC ACD16 Conference, Lille, November 2016.

Ali Zemouche is a member of the Technical Program Committee of the 2017 IEEE - ACC Conference, Seattle, May 2017.

8.1.2.2. Reviewer

The team reviewed many papers for international Conferences eg IEEE CDC 2016; IEEE ACC 2016, IFAC TDS 2016

8.1.3. Journal

8.1.3.1. Member of the Editorial Boards

Frédéric Mazenc is Member of the Mathematical Control and Related Fields editorial board.

Frédéric Mazenc is Member of the European Journal of Control editorial board.

Frédéric Mazenc is Associate Editor for the Asian Journal of control.

Frédéric Mazenc is Associate Editor for the Journal of Control and Decision.

Frédéric Mazenc is Associate Editor for IEEE Transactions on Automatic Control.

Sorin Olaru is a Member of the editorial board of IMA Journal of Mathematical Control and Information

Ali Zemouche is Member of the European Journal of Control editorial board.

Ali Zemouche is Associate Editor for SIAM Journal on Control and Optimization.

8.1.3.2. Reviewer - Reviewing Activities

The team reviewed many papers for international journals of mathematics, e.g. European Journal of Control, Automatica, IEEE Trans. Aut. Contr., SICON, IEEE Trans. on Control Systems Technology, Journal of Process Control, Asian Journal of Control, transactions on control systems and technology journal as well as a book for Springer.

8.1.4. Invited Talks

Frédéric Mazenc was a speaker of 'The 5th International Symposium on Positive Systems'. September 14th-16th 2016, Universita Campus Bio-Medico di Roma, Italy. Title of his talk: *Stability analysis of a differential-difference system through a linear Lyapunov functional design.*

Frédéric Mazenc was a plenary speaker of the workshop 'Stability and Control of Infinite-Dimensional Systems', 12-14 October 2016, Passau, Germany. Title of his talk: *New trajectory based approach for systems with delay: application to the reduction model technique.*

8.1.5. Leadership within the Scientific Community

Catherine Bonnet and Sorin Olaru are members of the IFAC Technical Committees Robust Control.

Catherine Bonnet is a member of the IFAC Technical Committees Distributed Parameter Systems and Non linear Control Systems. She is a member of the SIAG/CST (SIAM Activity group Control System Theory) steering committee.

For 'The 5th International Symposium on Positive Systems', September 14th-16th 2016, Universita Campus Bio-Medico di Roma, Frédéric Mazenc organized an invited session entitled *Positive systems with delay*.

8.1.6. Scientific Expertise

Catherine Bonnet is a member of the Evaluation Committee of Inria since September 2015.

Catherine Bonnet has been an expert for ANR.

Since 2014, Frédéric Mazenc is an expert for the FNRS (Belgium). His mission consists in evaluating research projects funded by this institution.

Since 2012, Frédéric Mazenc is a, expert for the ANVUR (National Agency for the Evaluation of Universities and Research Institutes, Italy). His mission consists in evaluating the contribution of Italian scientists.

Since 2011, Frédéric Mazenc is a, expert for the Romanian National Council for Development and Innovation (Romania). His mission consists in evaluating research projects funded by the this institution.

8.1.7. Research Administration

Catherine Bonnet is a Management Committee member of the COST action *Fractional-order systems; analysis, synthesis and their importance for future design*, member of the board of Directors of the consortium Cap'Maths, of the administration council of the association *Femmes et Mathématiques*, of the Inria Parity Committee (created in 2015) and of the *Cellule veille et prospective* of Inria.

Frédéric Mazenc and Sorin Olaru are members of the Conseil du Laboratoire of Laboratoire des Signaux et Systèmes (L2S).

Frédéric Mazenc is president of the commission scientifique du CRI Saclay-Ile-de-France.

Frédéric Mazenc is member of the Bureau du Comité des Projets du CRI Saclay-Ile-de-France.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence : Guillaume Sandou, Signals and Systems, 87h, L3, CentraleSupélec
Licence : Guillaume Sandou, Mathematics and programming, 18h, L3, CentraleSupélec
Licence : Sorin Olaru, Numerical methods and Optimization, 24h, niveau M1, SUPELEC, France
Licence : Sorin Olaru, Hybrid systems, 16h, M2, SUPELEC, France
Licence : Sorin Olaru, Automatic Control, 8h , M1, SUPELEC, France
Licence : Sorin Olaru, Signals and systems, 8h , L3, SUPELEC, France
Licence : Sorin Olaru, Embedded systems, 8h , M1, Centrale Paris, France
Master : Dina Irofti, Java programming, 40h, M2, Paris-Sud
Master : Dina Irofti, Industrial computing, 16h, M1, Paris-Sud
Master : Guillaume Sandou, Automatic Control, 8h, M1, CentraleSupélec
Master : Guillaume Sandou, Numerical methods and optimization, 28h, M1 and M2, Centrale-Supélec
Master : Guillaume Sandou, Modelling and system stability analysis, 21h, M2, CentraleSupélec
Master : Guillaume Sandou, Control of energy systems, 22h, M2, CentraleSupélec
Master : Guillaume Sandou, Robust control and mu-analysis, 9h, M2, CentraleSupélec
Master : Guillaume Sandou, Systems identification, 32h, M2, ENSTA
Master : Guillaume Sandou, System Analysis, 22h, M2, Ecole des Mines de Nantes
F. Mazenc: March 2016. Teaching (in English) for the *International Graduate School on Control* of the EECI (Master level). 21 hours). Subject : introduction to the ordinary differential equations, Lypunov design, control and observation of nonlinear dynamical systems.

8.2.2. Supervision

PhD in progress : Saeed Ahmed, Bilkent University, Stability analysis and control of switched systems with time-delay. Supervisor : Hitay Ozbay. Co-supervisor : Frédéric Mazenc.

PhD in progress : Nadine Aoun, Modélisation de réseaux de chaleur et gestion avancée multi-échelles de la production, de la distribution et de la demande. Supervisor: Guillaume Sandou.

PhD in progress : Caetano Cardeliquio, Stability and stabilization of (possibly fractional) systems with delays. French Supervisor : Catherine Bonnet, Brazilian Supervisor : André Fioravanti.

PhD in progress : Walid Djema, Analysis of an AML model enabling evaluation of polychemio-therapies delivered in the case of AML which have a high level of Flt-3 duplication (Flt-3-ITD). Supervisor : Catherine Bonnet. Co-supervisors : Jean Clairambault and Frédéric Mazenc.

PhD : Sophie Frasnedo, Optimisation globale des lois de commande des autodirecteurs sur critére optronique : application à un autodirecteur à double phase de stabilisation. Supervisors : Gilles Duc et Guillaume Sandou, soutenue le 6 décembre 2016

PhD in progress : Nicolo Gionfra, Optimisation du pilotage d'un parc d'énergies renouvelables avec stockage et du réseau de distribution sous-jacent. Supervisors: Houria Siguerdidjane et Guillaume Sandou.

PhD : Mohamad Koteich, Modélisation et Observabilité des Machines Electriques en vue de la commande sans capteur mécanique. Supervisors: Gilles Duc et Guillaume Sandou, soutenue le 18 mai 2016.

PhD in progress : Mohamed Lotfi Derouiche, Sur l'optimisation par métaheuristiques avancées de lois de commande prédictive non linéaire. Supervisor: Soufienne Bouallegue, Joseph Haggége et Guillaume Sandou.

PhD in progress : Juliette Pochet, Analyse de performance et de résilience d'une ligne de type RER équipée d'un automatisme CBTC. Supervisor: Guillaume Sandou.

8.2.3. Juries

Catherine Bonnet was a reviewer of the PhD thesis of Marine Jacquier entitled "*Mathematical modeling of the hormonal regulation of food intake and body weight - Application to caloric restriction and leptin resistance*", University of Lyon 1, February 5th 2016.

Catherine Bonnet was a member of several recruiting committees: Junior Researcher competition in Inria Grenoble - Rhône-Alpes, Senior Researcher competition at Inria, Professor competition at University of Perpignan, Preofessor competition at CentraleSupelec.

Frédéric Mazenc was a reviewer of the PhD thesis of Youssef Bourfia, entitled "*Modélisation et Analyse de Modèles en Dynamique Cellulaire avec Applications à des Problèmes Liés aux Cancers*", (University of Cadi Ayyad de Marrakech and University of Pierre et Marie Curie, December 28, 2016).

Frédéric Mazenc was an examiner of the HDR of Ali Zemouche, entitled "*State Observer Design and Stabilization of Nonlinear Systems via LMIs*". Centre de Recherche en Automatique de Nancy, UMR 7039 CNRS - Université de Lorraine, December 01, 2016.

Sorin Olaru has been appointed as evaluator for V. Grelet's PhD thesis at University of Lyon. The thesis was defended on February 18th 2016.

Guillaume Sandou was a reviewer of the PhD thesis Modélisation dynamique et gestion avancée de réseaux de chaleur, Loic Giraud, Université Grenoble Alpes

Guillaume Sandou was a member of the following PhD theses committees:

- Roman Le Goff Latimier, " *Gestion et dimensionnement d'une flotte de véhicules électriques associée Ã une centrale photovoltaique : co-optimisation stochastique et distribuée*", 26 septembre 2016.

- Sinziana Carloganu, "*Evaluation des produits d'effacements réalisés sur un ensemble de consommateurs d'électricité par identification d'un modéle global*", 8 décembre 2016.

Ali Zemouche was an examiner of two PhD theses under the supervision of Professor Hieu TRINH from Deakin University, Geelong, Australia:

- The PhD thesis of Minh Cuong Nguyen, entitled "*State Observer Design Methods for Lipschitz Time-Delay Systems*", Deakin University, Geelong, Australia, September 15, 2016.

- The PhD thesis of Ngoc Thanh Pham, entitled "*Robust Load Frequency Control of Interconnected Grids with Electric Vehicles*", Deakin University, Geelong, Australia, December 9, 2016.

DIVERSE Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

Benoit Baudry and Benoit Combemale have been general co-chairs for MODELS 2016, the major international conference in the area of model-driven software and systems engineering.

9.1.1.2. Member of the Organizing Committees

Mathieu Acher:

- Social media chair, MODELS 2016

Arnaud Blouin:

- Student volunteers co-chair, MODELS 2016
- Social Media Chair, EICS 2016

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Noël Plouzeau was the program committee chair of the Component Based Software Engineering (CBSE) in 2016. Jean-Marc Jézéquel was co-chair of Digital Intelligence 2016, April 2016, Quebec City, Canada.

9.1.2.2. Member of the Conference Program Committees

Mathieu Acher:

- PC member SPLC 2016
- PC member SAC 2016
- PC member VaMoS 2016
- PC member SEAA 2016
- PC member REVE 2016

Olivier Barais:

- PC member SEAA 2016
- PC member 10th IEEE ICOSST-2016
- PC member compas2016
- PC member ASE 2016
- PC member TTC 2016
- PC member SAC 2016

Benoit Baudry:

- PC member ICSE 2016
- PC member ISSTA 2016
- PC member ICST 2016
- PC member ASE 2016

Arnaud Blouin:
- PC member of the foundation track for MODELS 2016
- PC member for IHM 2016
- PC member of the NIER/demo track for VISSOFT 2016
- PC member for the UCDAS workshop at COMPSAC 2016

Benoit Combemale:
- PC member for ECMFA'16
- PC member for ICMT'16
- PC member for the GEMOC'16 workshop at MODELS'16
- PC member for the EXE'16 workshop at MODELS'16
- PC member for the MiSE'16 workshop at ICSE'16
- PC member for the LaMOD'16 workshop at Modularity'16
- PC member for the MoMo'16 workshop at Modularity'16

Johann Bourcier:
- PC member for the SEsCPS'16 workshop at ICSE'16

Jean-Marc Jézéquel:
- Program Board of MODELS 2016
- PC member for SPLC 2016 Industry Track
- PC member for SPLC 2016 Vision Track
- PC member for SEAMS 2016
- PC member for GEMOC 2016

9.1.2.3. Reviewer

Arnaud Blouin was a reviewer for ICST 2016, ASE 2016, ECMFA 2016. Noël Plouzeau was a reviewer for ICSE 2016. Olivier Barais was a reviewer for ICSE 2016, Sosym 2016. Johann Bourcier was a reviewer for ICSE 2016, ASE 2016 and Middleware 2016.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Benoit Baudry:
- SOSYM
- STVR

Benoit Combemale:
- Springer Journal on Software and System Modeling (SoSYM),
- Elsevier Journal on Computer Languages, Systems and Structures (COMLAN),
- Elsevier Journal on Science of Computer Programming (SCP), Advisory Board member of the Software Section.

9.1.3.2. Reviewer - Reviewing Activities

Mathieu Acher was a reviewer for TSE, JSS, IST.

Johann Bourcier was a reviewer for JSS, IEEE Communications Magazine,

Arnaud Blouin: SoSyM

Jean-Marc Jézéquel:

- Associate Editor in Chief of SOSYM
- IEEE Computer
- JSS
- JOT

9.1.4. Invited Talks

Benoit Baudry:

- Running software in uncertain environments. Invited talk at the ACCESS Distinguished Lecture Series at KTH, Stockholm.
- ECSLER: tool support for runtime evolution inside the JVM at the CREST workshop on genetic improvement, University College London.
- Improving software quality and DevOps automation with STAMP at OW2'con 2016.

Benoit Combemale:

- Towards Language-Oriented Modeling. Invited talk at RWTH Aachen University, Germany.
- Dynamic Validation & Verification in Language-Oriented Modeling. Keynote at MoDeVVA 2016.
- On the Globalization of Modeling Languages. Invited talk at CNES.
- A Bit of Software Engineering! Invited talk at Airbus.
- Modeling for Smart Cyber-Physical Systems. Invited talk at the French CPS days.
- Modeling for Sustainability. Invited talk at Lancaster University, United Kingdom.

9.1.5. Leadership within the Scientific Community

Benoit Baudry:

- Steering committee member for the ACM/IEEE MODELS conference

Benoit Combemale:

- Steering committee member for the ACM SLE conference
- Founding member and member of the advisory board of the GEMOC initiative.

9.1.6. Research Administration

Benoit Baudry is the leader of the DiverSE research team; he is in the scientific advisory board of the SVV lab, University of Luxembourg.

Jean-Marc Jézéquel is Director of IRISA (UMR 6074). He is Coordinator of the academic club of the French Cyber-defense Excellence Cluster, and Director of the Rennes Node of EIT Digital.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

The DIVERSE team bears the bulk of the teaching on Software Engineering at the University of Rennes 1 and at INSA Rennes, for the first year of the Master of Computer Science (Project Management, Object-Oriented Analysis and Design with UML, Design Patterns, Component Architectures and Frameworks, Validation & Verification, Human-Computer Interaction) and for the second year of the MSc in software engineering (Model driven Engineering, Aspect-Oriented Software Development, Software Product Lines, Component Based Software Development, Validation & Verification, *etc.*).

Each of Jean-Marc Jézéquel, Noël Plouzeau, Olivier Barais, Johann Bourcier, Arnaud Blouin, and Mathieu Acher teaches about 200h in these domains, with Benoit Baudry and Benoit Combemale teaching about 50h, for a grand total of about 1300 hours, including several courses at ENSTB, Supelec, and ENSAI Rennes engineering school.

Olivier Barais is deputy director of the electronics and computer science teaching department of the University of Rennes 1. Mathieu Acher is in charge of teaching duties management of this department. Noël Plouzeau is the head of the final year of the Master in Computer Science at the University of Rennes 1. Johann Bourcier is co-manager of the Home-Automation option at the ESIR engineering school in Rennes.

The DIVERSE team also hosts several MSc and summer trainees every year.

9.2.2. Supervision

- PhD: Sana Ben Nasr [17], *Mining and Modeling Variability from Natural Language Documents: Two Case Studies*, Inria, April 2016, B. Baudry and M. Acher
- PhD: Guillaume Becan [19] *Metamodels and Feature Models: Complementary Approaches to Formalize Product Comparison Matrices*, MESR, September 2016, B. Baudry and M. Acher
- PhD: Thomas Degueule , *Composition and interoperability of domain-specific language engineering*, Univ. Rennes I, 02/12/16
- PhD: Francisco Acosta , *Automatic Deployment and Reconfigurations in Internet of Things*, Univ. Rennes I, 12/12/2016
- PhD: David Mendez Acuna , *Variability in Modeling Languages*, Inria, 16/12/2016
- PhD: Jacky Bourgeois , *Automatic Synchronization of Energy Production and Consumption*, Open University, DATE
- PhD in progress: Mohamed Boussaa, *An Architecture for Testing Large-Scale Dynamic Distributed Systems*, 2013, B. Baudry, O. Barais
- PhD in progress: Alejandro Gomez Boix, *Distributed counter-measure against browser fingerprinting*, 2016, B. Baudry, D. Bromberg
- PhD in progress: Nicolas Harrand, *Automatic diversity for code obfuscation*, 2016, B. Baudry
- PhD in progress: Pierre Laperdrix, *Secretless moving target against browser fingerprinting*, B. Baudry, G. Avoine
- PhD in progress: Johan Pelay, *Langage pour une programmation incrémentale de réseau*, 2016, O. Barais, F. Guillemin
- PhD in progress: Quentin Plazar, *Combining Decision Procedures for Constraint Programming and SMT*, 2015, M. Acher, A. Goetib
- PhD in progress: Marcelino Rodriguez Cancio, *Automatic computation diversification*, 2015, B. Baudry and B. Combemale
- PhD in progress: Paul Temple, *Variability Testing of Computer Vision Algorithms*, 2015, M. Acher, J.-M. Jézéquel
- PhD in progress: Kwaku Yeboah-Antwi, *Runtime emergence of software diversity*, 2013, B. Baudry
- PhD in progress: Manuel Leduc, *TITRE*, 2016, O. Barais, B. Combemale
- PhD in progress: Youssou NDiaye, *Modelling and evaluating security in user interfaces*, 2016, N. Aillery, O. Barais, A. Blouin, A. Bouabdallah
- PhD in progress: Jean-Émile Dartois, *TITRE*, 2016, O. Barais
- PhD in progress: Oscar Luis, *Automatic test amplification*, 2016, B. Baudry
- PhD in progress: Alexandre Rio, *TITRE*, 2016, O. Barais, Y. Morel
- PhD: in progress, Kevin Corre, *Modélisation de la confiance dans les services sociaux et conversationnels*, 2014, O. Barais, G. Sunye
- PhD: in progress, Gwendal Le Moulec, *Towards the automatic synthesis of virtual reality applications*, 2015, B. Arnaldi, A. Blouin, V. Gouranton

9.2.3. Juries

9.2.3.1. Mathieu Acher

was in the examination committee of the following PhD thesis:
- Guillaume Becan, September 2016, Univ Rennes I, Supervisor
- Sana Ben Nasr, April 2016, Univ Rennes I, Supervisor
- Jaime Chavarriaga, December 2016, Vrije Universiteit Brussel, Reviewer

9.2.3.2. Arnaud Blouin

was in the examination committee of the following PhD thesis:
- Thomas Degueule, December 2016, Univ Rennes I, Supervisor

9.2.3.3. Olivier Barais

was in the examination committee of the following PhD thesis:
- Thomas Degueule, December 2016, Univ Rennes I, Supervisor
- Maxime Colman, December 2016, Univ Lille I, Reviewer
- Alexandre Garnier, December 2016, EMN - Univ Nantes, Reviewer
- Matias Ezequiel Vara Larsen, April 2016, Univ Nice, Reviewer
- Djamel Khelladi, September 2016, UPMC, Reviewer
- Simon Dupont, April 2016, EMN - Univ Nantes, Reviewer

9.2.3.4. Benoit Baudry

was in the examination committee of the following PhD thesis:
- Guillaume Becan, September 2016, Univ Rennes I, Supervisor
- Sana Ben Nasr, April 2016, Univ Rennes I, Supervisor
- David Mendez, December 2016, Univ Rennes I, Supervisor

9.2.3.5. Olivier Barais

was in the examination committee of the following HDR:
- Sébastien Leriche, November 2016, ENAC, Reviewer

9.2.3.6. Jean-Marc Jézéquel

was in the examination committee of the following HDR:
- Tewfik Ziadi, December 2016, UPMC, Reviewer

9.2.3.7. Benoit Combemale

was in the examination committee of the following PhD thesis:
- Thomas Degueule, December 2016, Univ Rennes I, Supervisor
- Blazo Nastov, november 2016, Univ. Montpellier, Reviewer
- Florent Latombe, June 2016, Univ Toulouse, Examiner
- Andreas Wortmann, June 2016, Aachen University, Germany, Reviewer
- Matias Ezequiel Vara Larsen, April 2016, Univ Nice, Examiner

9.2.3.8. Johann Bourcier

was in the examination committee of the following PhD thesis:
- Francisco Javier Acosta Padilla, December 2016, Univ Rennes I, Supervisor

9.2.3.9. Jean-Marc Jézéquel

was in the examination committee of the following PhD thesis:
- Jabier Martinez, October 2016, Univ. Luxemburg, Examiner

9.3. Popularization
- IT industry forums. Our recent work on diversity against browser fingerprinting and the associated web site [0] have been demonstrated in the a major cybersecurity forum (FIC'15 [0]), the largest IT event organized by the European commission (ICT'15 [0]) and two open source forums (OWF'14 [0] and FOSSA'14 [0]).
- General-audience press. Our work on browser fingerprinting has been featured Le Monde [0], and two full articles appeared in the MISC [0] and the Clubic magazines [0].

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[0]https://amiunique.org/
[0]https://fic2015.com/home/
[0]https://ec.europa.eu/digital-single-market/en/ict2015
[0]http://www.openworldforum.paris/
[0]https://fossa.inria.fr/
[0]http://abonnes.lemonde.fr/sciences/article/2014/11/24/le-fossa-bazar-techno-participatif_4528568_1650684.html
[0]http://connect.ed-diamond.com/MISC/MISC-081/Le-fingerprinting-une-nouvelle-technique-de-tracage

<p style="text-align:center;">DOLPHIN Project-Team</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- N. Melab: Chair of the HPCS'2016 workshop (Parallel Optimization using / for Multi and Many-core High Performance Computing) organized in conjunction with HPCS'2016, Innshbruck, Austria, June 7th 2015.
- N. Melab: Chair of 5 simulation and HPC-related seminars at Lille 1 oct-dec. 2016 (CENAERO, Intel, Atos-Bull, FFT, UPMC).
- E-G. Talbi: General chair of META'2016 Int. Conf. on Metaheuristics and Nature Inspired Computing, Marrakech, Morocco, Oct 2016, 105 participants.
- E-G. Talbi, Program co-chair of HM'2016 Int. Conf on Hybrid Metaheuristics, Exeter, UK, May 2016.

10.1.1.2. Member of the Organizing Committees

- D. Brockhoff: co-organizer of the Surrogate-Assisted Multi-Criteria Optimization workshop at the Lorentz Center in Leiden, The Netherlands, Feb/Mar 2016
- D. Brockhoff: co-organizer of the Blackbox Optimization Benchmarking workshop (BBOB-2016) at GECCO in Denver, CO, USA
- CEC 2016 special session entitled "Advances in Decomposition-based Evolutionary Multiobjective Optimization", Vancouver, Canada, organized by Saul Zapotecas Martinez, Bilel Derbel, Qingfu Zhang, Carlos A. Coello Coello, July 2016
- E-G. Talbi: organisation of META'2016 Int. Conf. on Metaheuristics, Marrakech, Morocco, Oct 2016.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- E-G. Talbi, HM'2016
- E-G. Talbi, META'2016

10.1.2.2. Member of the Conference Program Committees

- CEC -IEEE Congress on Evolutionary Computation 2016
- CIBCB - IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology 2016
- GECCO conference 2016
- HM 2016
- ICORES 2016
- LION Conference 2016
- MICAI 2016
- MIM 2016
- MOD 2016
- PPSN 2016

- ROADEF 2016
- GECCO conference 2016
- IEEE Congress on Evolutionary Computation (CEC), Vancouver, Canada, July 24-29, 2016
- The ACM Genetic and Evolutionary Computation Conference (GECCO), Denver, Colorado, USA, July 20-24, 2016
- IEEE International Workshop on Nature Inspired Distributed Computing (IPDPS/NIDISC'2016), Chicago, Illinois, USA, May 23-27, 2016
- IEEE Intl. Workshop on Parallel Computing and Optimization (IPDPS/PCO), Chicago, Illinois, USA, May 23-27, 2016
- Grid'5000 winter school, Grenoble, France, February 2-5, 2016
- Colloque sur l'Optimisation et les Systèmes d'information (COSI), Sétif, Algérie, May 30 - June 1, 2016
- Intl. Conf. on Contemporary Computing (IC3), Noida, India, Aug. 11-13, 2016
- The 2nd Intl. Conf. on Cloud Computing Technologies and Applications (CloudTech), Marrakesh, Morocco, May 24-26, 2016.
- 8th IEEE Intl. Conf. on Cloud Computing Technology and Science (CloudCom), Luxembourg, Dec. 12-15, 2016
- PPSN 2016: 14th International Conference on Parallel Problem Solving from Nature (Edinburgh, UK, 2016)
- GECCO 2016: Genetic and Evolutionary Computation Conference, Evolutionary Combinatorial Optimization and Metaheuristics (ECOM) track (Denver, USA, 2016)
- CEC 2016: IEEE Congress on Evolutionary Computation (Vancouver, Canada, 2016)
- EvoCOP 2016: 16th European Conference on Evolutionary Computation in Combinatorial Optimisation (Porto, Portugal, 2016)

10.1.2.3. Reviewer

- Dimo Brockhoff: CEC'2016, GECCO'2016 (EMO track), PPSN'2016, FOGA'2017, EMO'2017

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- L. Jourdan: Review Editor Frontiers in Big Data
- N. Melab: Guest Editor (in collaboration with M. Mezmaz) of a special on Multi/Many-core computing for parallel Metaheuristics in Wiley Concurrency and Computation: Practice and Experience, April 2016.
- N. Melab: Guest Editor (in collaboration with A. Zomaya and I. Chakroun) of a special on Parallel Optimization using/for Multi and Many-core High Performance Computing in Journal of Parallel and Distributed Computing (JPDC), 2016.
- E-G. Talbi : Editor of the Journal « Computers and Industrial Engineering (CAIE, Elsevier)» Area «Computational Intelligence».

10.1.3.2. Reviewer - Reviewing Activities

- IEEE Transactions on Evolutionary Computation, Evolutionary Computation, Journal of Heuristics, Artificial Intelligence Journal
- Applied Soft Computing
- Computers in Biology and Medecine
- Computers & Industrial Engineering
- Computers & Operations Research

- EJOR European Journal of Operational Research
- IEEE Transaction on Evolutionary Computation
- International Journal of Metaheuristics
- International Journal of Molecular Sciences
- International Journal of Production research
- International Transactions in Operational
- JOH Journal of Heuristics
- JOCO Journal of Combinatorial Optimization
- JPDC Journal of Parallel and Distributed Computing
- Nature Scientific Report
- Soft Computing (SOCO)
- Transactions on Computational Biology and Bioinformatics
- ACM Computing Surveys
- Computation and Concurrency: Practice and Experience (CCPE)
- Parallel Processing Letters
- Parallel Computing
- Journal of Parallel and Distributed Computing (JPDC)
- 4OR: A Quarterly Journal of Operations Research (Springer)
- ASOC: Applied Soft Computing (Elsevier)
- CAIE: Computers & Industrial Engineering (Elsevier)
- ITOR: International Transactions in Operational Research (Wiley)
- NEUCOM: Neurocomputing (Elsevier)

10.1.4. Invited Talks

- D. Brockhoff: invited talk on multiobjective optimization, MEXICO/Mascot-Num meeting, Nov 2016, Nantes
- D. Brockhoff: invited tutorial at GECCO'2016 on Evolutionary Multiobjective Optimization, Jul 2016, Denver, CO, USA
- B.Derbel and A. Liefooghe: Designing and understanding EMO algorithms, Invited talk, City University, Hong Kong, November 2016
- A. Liefooghe: Fitness landscape analysis, problem features and performance prediction for multi-objective optimization, Workshop on Landscape-aware heuristic search (PPSN 2016), Edinburgh, UK, September 2016 (joint work with Fabio Daolio, Sébastien Verel, Hernan Aguirre, and Kiyoshi Tanaka)
- L. Jourdan, "Combinatorial optimization for Bioinformatics", invited talk (1day), summer school of Bioinformatics, Angers, 2016
- L. Jourdan, "The emerging use of Optimization methods for Datamining in Big Data", invited talk, summer school of Cyber-Physical Systems (CPS), Toulouse, 2016.
- L. Jourdan, "Modélisation et optimisation multi-objectif pour l'extraction de connaissances Le cas des applications médicales", Mars 2016, Séminaire Expert, Worldline.
- C. Dhaenens "Exemple de collaboration réussie entre l'entreprise et le monde de la recherche", CCI Grand Lille, Fev. 2016.
- N. Melab: Tutorial on Grid'5000, Arcus international project "E2D2", May 2016, Université Lille 1.

- E-G. Talbi: Multi-objective metaheuristics, Invited seminar, Colorado State University, Fort Colins, Colorado, USA, Mar 2016.
- E-G. Talbi: Optimization under uncertainty, Invited seminar, Univeridad Elche, Elche, Spain, Apr 2016.
- E-G. Talbi: Parallel evolutionary algorithms for multi-objective optimization, Keynote speaker BIOMA'2016 7th Int. Conf. on Bioinspired Optimization Methods and their Applications, Bled, Slovenia, May 2016.
- E-G. Talbi: Parallel metaheuristics, Invited seminar, CINVESTAV, Mexico, Sept 2016.
- E-G. Talbi: Combining metaheuristics with mathematical programming and data mining, Keynote speaker, NEO'2016 Int. Workshop on Numerical and Evolutionary Optimization, Tlalnepantla, Mexico, Sept 2016.
- E-G. Talbi: A survey of hybrid metaheuristics with exact methods and machine learning, Tutorial, META'2016 Int. Conf. on Metaheuristics and Nature Inspired computing, Marrakech, Morocco, Oct 2016.

10.1.5. Leadership within the Scientific Community

- L. Jourdan : Co-president of the working group "ATOM: Multi-objective optimization", GDR RO.
- L. Jourdan, A. Liefooghe : Secretary of the association "Artificial Evolution" (EA).
- C. Dhaenens: member of the scientific council of GDR RO (Operations research)
- C. Dhaenens: nominated member at Co-NRS, section 6 (National committee of CNRS)
- N. Melab: scientific leader of Grid'5000 (https://www.grid5000.fr) at Lille, Since 2004
- N. Melab: Chargé de Mission of High Performance Computing and Simulation at Université Lille 1, Since 2010
- E-G. Talbi : Co-president of the working group "META: Metaheuristics - Theory and applications", GDR RO and GDR MACS.
- E-G. Talbi : Co-Chair of the IEEE Task force on Cloud Computing within the IEEE Computational Intelligence Society.

10.1.6. Scientific Expertise

- D. Brockhoff: external reviewer of a research proposal for the National Science Centre Poland
- N. Melab: Member of the advisory committee for the IT and management engineer training at Faculté Polytechnique de Mons
- E-G. Talbi : Expert for Qatar Foundation QNRF projects, 2016.

10.1.7. Research Administration

- C. Dhaenens: Vice-head of CRIStAL laboratory (Centre de Recherche en Informatique, Signal et Automatique de Lille), common to CNRS, University of Lille and Ecole Centrale de Lille, 430 people.
- L. Jourdan: member of the Bureau du Département de domaine Informatique pour l'école doctorale SPI, University of Lille
- N. Melab: Member of the steering committee of "Maison de la Simulation" at Université Lille 1
- E-G. Talbi, Coordinator of the International Relationships of Inria Lille Nord Europe.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- Master : Dimo Brockhoff, Introduction to Optimization, 18h ETD, M2 Apprentissage, Information et Contenu, U. Paris-Saclay, France

- Master : Dimo Brockhoff, Advanced Optimization, 18h ETD, M2 Apprentissage, Information et Contenu, U. Paris-Saclay, France
- Master : Dimo Brockhoff, Introduction to Optimization, 54h ETD, MSc in Data Sciences & Business Analytics, CentraleSupelec/ESSEC, France
- Master : Laetitia Jourdan, Business Intelligence, 30h, M1, University of Lille 1, France
- Master : Laetitia Jourdan, Datamining, 60h , M1, University of Lille 1, France
- Master : Laetitia Jourdan, Datawarehouse, 30h, M1, University of Lille 1, France
- Licence: Laetitia Jourdan : Informatique, 48h, L1 University of Lille 1, France
- Master: Laetitia Jourdan : Responsible of Master MIAGE Formation en Alternance, ,University of Lille 1, France
- Licence: Laetitia Jourdan: Co-responsible of Licence 1 Computer Science, University of Lille 1, France
- Engineering school : Clarisse Dhaenens, Graphs and Combinatorics, 80 HeqTD, Polytech Lille, University Lille 1, France
- Engineering school : Clarisse Dhaenens, Operations Research, 70 HeqTD, Polytech Lille, University Lille 1, France
- Engineering school : Clarisse Dhaenens, Algorithmics and programming, 45 HeqTD, Polytech Lille, University Lille 1, France
- Engineering school : Clarisse Dhaenens, responsible of the 5th year of statistics and computer science department.
- Engineering school : Marie-Eléonore Kessaci, Graphs and Combinatorics, 44 HeqTD, Polytech Lille, University Lille 1, France
- Engineering school : Marie-Eléonore Kessaci, Algorithmics and programming, 51 HeqTD, Polytech Lille, University Lille 1, France
- Engineering school : Marie-Eléonore Kessaci, Databases, 71 HeqTD, Polytech Lille, University Lille 1, France
- Engineering school : Marie-Eléonore Kessaci, Mathematics, 20 HeqTD, Polytech Lille, University Lille 1, France
- Engineering school : Marie-Eléonore Kessaci, responsible of the 3th year of statistics and computer science department.
- Master lecture: N. Melab, Supercomputing, 24h, Master 2, Université Lille 1, France
- Master lecture: N. Melab, Operations Research, 78h, Master 1, Université Lille 1, France
- Master leading: N. Melab, Co-head (with C. Chainais) of the master 2 of advanced scientific computing, U. Lille 1
- Licence: A. Liefooghe, Algorithmic and Data structure, 36h ETD, L2, Université de Lille 1, France
- Licence: A. Liefooghe, Algorithmic for Operations Research, 36h ETD, L3, Université de Lille 1, France
- Master: A. Liefooghe, Databases, 30h ETD, M1, Université de Lille 1, France
- Master: A. Liefooghe, Advanced Object-oriented Programming, 53h ETD, M2, Université de Lille 1, France
- Master: A. Liefooghe, Combinatorial Optimization, 10h ETD, M2, Université de Lille 1, France
- Master: A. Liefooghe, Multi-criteria Decision Aid and Optimization, 25h ETD, M2, Université de Lille 1, France
- A. Liefooghe is supervising the Master 2 MIAGE IPI-NT
- Master : Bilel Derbel, Combinatorial Optimization, 35h, M2, University Lille 1, France

- Master : Bilel Derbel, Grid Computing, 16h, M2, University Lille 1, France
- Master : Bilel Derbel, Parallel and Distributed Programming, 35h, M1, University Lille 1, France
- Master : Bilel Derbel, Algorithms and Applications, 28h, M1, University Lille 1, France
- Engineering school : El-Ghazali Talbi, Advanced optimization, 36h, Polytech'Lille, University Lille 1, France
- Engineering school : El-Ghazali Talbi, Data mining, 36h, Polytech'Lille, University Lille 1, France
- Engineering school : El-Ghazali Talbi, Operations research, 60h, Polytech'Lille, University Lille 1, France
- Engineering school : El-Ghazali Talbi, Graphs, 25h, Polytech'Lille, University Lille 1, France

10.2.2. Supervision

- PhD in progress: Gauvain Marquet, Mono-objective decomposiiton for multi-objective optimization, University Lille 1, Sep. 2014, Bilel Derbel and El-Ghazali Talbi
- PhD in progress: Maxence Vandromme, Datamining et optimisation combinatoire adaptés à la prévention et à l'orientation de patients, début : 1/06/2014, CIFRE with Alicante Co-direction : Clarisse Dhaenens and Laetitia Jourdan
- PhD in progress : Sylvain Dufourny, Optimisation de décisions économiques concurrentielles dans un simulateur de gestion d'entreprise, Novembre 2012, Clarisse Dhaenens
- PhD in progress : Aymeric Blot, Réagir et s'adapter à son environnement : Concevoir des méthodes autonomes pour l'optimisation combinatoire à plusieurs objectifs, september 2015, co-directed Laetitia Jourdan and Marie-Eléonore Marmion
- PhD in progress : Lucien Mousin, Exploiter la connaissance pour mieux optimiser, october 2015, co-directed Clarisse Dhaenens and Marie-Eléonore Marmion
- PhD in progress : AnneLise Bedenel, Classification supervisée et non supervisée en présence de descripteurs évoluant dans le temps. Application à la comparaison d'assurances en ligne, co-directed Laetitia Jourdan and Christophe Biernacki (Modal Inria Team)
- PhD (cotutelle in progress): Jan GMYS, Parallel Branch-and-Bound for solving permutation problems on multi- and many-core clusters, Nouredine Melab (Université Lille 1) and Daniel Tuyttens (UMONS, Belgium), Defense end of 2017
- PhD in progress : A. Q. Nguyen, Green scheduling on cloud computing systems, 11/2012, El-Ghazali Talbi and Pascal Bouvry
- PhD in progress : Oumayma Bahri, Fuzzy multi-objective optimization, 11/2013, El-Ghazali Talbi and Nahla Ben-Omar
- PhD in progress : Sohrab Faramarzi, Optimization of medical lab, 02/2016, El-Ghazali Talbi

10.2.3. Juries

- C. Dhaenens: PhD Thesis: B. Tounsi, "Contributions à la chaîne logistique e-commerce : Intégration dans l'e-fulfillment et tarification de services de livraison", Université Lille 1, Dec. 2016.
- C. Dhaenens: HDR : L. Boudjeloud, "Approches coopératives et semi-interactives pour le traitement de données massives et temporelles", Université de Lorraine, Dec. 2016.
- L. Jourdan: PhD Thesis: Métaheuristiques hybrides distribuées et massivement parallèles, de Omar ABDELKAFI Université de Haute Alsace, November 7th 2016 (Présidente de Jury)
- L. Jourdan: PhD Thesis: Le routage avec transbordement et collaboration, de Nicolas Danloup, Université de Béthune Artois, December 1st 2016 (Présidente de Jury) Hyperheuristics in Logistics, de Kassem DANACH, Ecole Centrale Lille, December 21st 2016 (Présidente de Jury).
- L. Jourdan: PhD Thesis: Contribution à la synthèse et l'optimisation multi-objectif par essaims particulaires de lois de commande robuste RST de système dynamique, de 'Riadh Madiouni', de l'Université Paris Est - Créteil, June 20th 2016 (Rapporteur)

- L. Jourdan: PhD Thesis: A dynamic programming operator for metaheuristics to solve vehicle routing problems with optional visits, de 'Leticia VARGAS' du LAAS-CNRS, June 24th 2016. (Rapporteur)

- L. Jourdan: PhD Thesis: Conception d'alliages par optimisation combinatoire multiobjectifs : thermodynamique prédictive, fouille de données, algorithmes génétiques et analyse décisionnelle de 'Edern Menou' Université de Nantes, October 19th 2016. (Rapporteur)

- HDR: Sebastien Verel, "Apport à l'analyse des paysages de fitness pour l'optimisation mono-objective et multi-objective", Université du Littoral - Côte d'Opale, December 12th, 2016.

- PhD thesis: Ania Kaci, "Conception d'une architecture extensible pour le calcul massivement parallèle", Université Paris-Est, December 14th, 2016.

- PhD thesis: Escobar Fernando, "High Performance Computing Archtectures based on Reconfigurable Platforms for Scientific Applications, Université de Mons, March 30th, 2016.

- PhD thesis: K. Lefrouni, "Contrôle de congestion dans les réseaux de communication", EMI – Université Mohammed V Rabat, Maroc, Jan 2016.

- PhD thesis: S. Nielsen, "Diversity preserving genetic algorithms – Application to the inverted folding problem and analogous formulated benchmarks", University of Luxembourg, Luxembourg, Feb 2016.

- PhD thesis: K. E. Vazquez Ortiz, "Advanced methods to solve the maximum parsimony problem", Université d'Angers, France, June 2016.

- PhD thesis: Urrego Agudelo Lilliam, "A novel method for the approximation of risk of blackout in operational conditions", Université Paris-Est, Créteil, Nov 2016.

10.3. Popularization

- Clarisse Dhaenens, Fanny Dufossé, Laetitia Jourdan, Marie-Eléonore Marmion: Operational research - for 2nde during integration week (June 2016)

- Laetitia Jourdan, Marie-Eléonore: Computer Unplugged, Numériqu'elle Day (November 2016)

- Laetitia Jourdan: Computer Unplugged, Primary School (December 2016)

DRACULA Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- International conference "LyonSysBio" (Lyon Systems Biology), Lyon (France), 17 - 18 November 2016 (http://lyonsysbio2016.sciencesconf.org/?lang=en). Co-organizers: Fabien Crauste and Olivier Gandrillon.
- Regular SeMoVi Rhone-Alpes seminar in biological modeling (http://www.biosyl.org/news/semovi), 5 seminars organized in 2016, with one international lecturer each time. Co-organizer : Olivier Grandrillon and Fabien Crauste.
- Minisymposium: "Polymer dynamics models and applications to neurodegenerative disease", the 11th AIMS Conference on Dynamical Systems, Differential Equations and Applications, 01 - 05 July 2016, Orlando, Florida, USA (http://www.aimsciences.org/conferences/2016/). Co-organizers: Laurent Pujo-Menjouet and Leon Tine.
- Summer School in Probability and PDE for Biology, July 2016 (held at the CIRM) http://scientific-events.weebly.com/1426.html. Co-organizers: Thomas Lepoutre.
- Workshop on complex systems of reaction-diffusion (https://www.ljll.math.upmc.fr/kibord/workshop_march_2016.html). Co-organizers: Thomas Lepoutre.

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

- International conference "LyonSysBio" (Lyon Systems Biology), Lyon (France), 17 - 18 November 2016 (http://lyonsysbio2016.sciencesconf.org/?lang=en). Co-organizers : Fabien Crauste and Olivier Gandrillon.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- Fabien Crauste: Computational and Mathematical Methods in Medicine (HPG).
- Laurent Pujo-Menjouet: Journal for theoretical Biology; Mathematical Modelling of Natural Phenomena.
- Mostafa Adimy: Journal of Nonlinear Systems and Applications; Chinese Journal of Mathematics.
- Olivier Gandrillon: BMC research Notes.

9.1.3.2. Reviewer - Reviewing Activities

- Fabien Crauste: Bulletin of Mathematical Biology; Discrete and Continuous Dynamical Systems Series B; Funkcialaj Ekvacioj (Functional Equations); Journal of Mathematical Biology; Journal of Biological Systems; Systems and Control Letters.
- Laurent Pujo-Menjeout: Journal of Mathematical Biology.
- Celine Vial: Comptes Rendus Mathematique (CRAS).
- Mostafa Adimy: Mathematical Methods in the Applied Sciences; Zeitschrift fuer Angewandte Mathematik und Physik (ZAMP)

9.1.4. Invited Talks

- Fabien Crauste: Workshop "French-Spanish Workshop on Evolution Problems", Valladolid (Spain), May 16-17.
- Laurant Pujo-Menjouet: Marseille Monthly seminar Aix-Marseille Université, Institut de Mathématiques de Marseille (I2M).
- Mostafa Adimy: Workshop "French-Spanish Workshop on Evolution Problems", Valladolid (Spain), May 16-17.
- Mostafa Adimy: Workshop "Modelling the Dissemination and Control of Arboviroses", Polytechnic School, San Lorenzo (Paraguay), October 5-8.

9.1.5. Scientific Expertise

- Celine Vial: Member of CNU 26; Member of a comity for "Maître de conférences" Pierre et Marie Curie university.
- Celine Vial: Member of the jury of the agregation of mathematic in Tunisia.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Master: Fabien Crauste, Population Dynamics, 15h ETD, M2, UCBL, Lyon. Laurent:
- Licence: Laurent Pujo-Menjout, Bio-mathématiques et Modélisation, 10h ETD, L3, UCBL, Lyon.
- Licence: Laurent Pujo-Menjout, Analyse numérique, 72h ETD, L3, UCBL, Lyon.
- Licence: Laurent Pujo-Menjout, Equations différentielles et aux dérivées partielles, 72h ETD, L3, UCBL, Lyon.
- Licence: Laurent Pujo-Menjout, Analyse I : les réels et les fonctions, 72h ETD, L1, UCBL, Lyon.
- Licence: Laurent Pujo-Menjout, Mathématiques Appliquées - Equations Différentielles, 18h ETD, L2, UCBL, Lyon.
- Licence: Laurent Pujo-Menjout, Equations Différentielles ordinanires and Modélisation, 54h ETD, L3, INSA, Lyon.
- Master: Laurent Pujo-Menjout, Modélisation en biologie et médecine, 7.5h ETD, M1, UCBL, Lyon.
- Master: Laurent Pujo-Menjout, Systèmes dynamiques, 78h ETD, M1, UCBL, Lyon.
- Master: Laurent Pujo-Menjout, Gestion de projet en ingénierie mathématique, 3h ETD, M1, UCBL, Lyon.
- Master: Laurent Pujo-Menjout, Equations aux Différences, 29h ETD, M1, INSA, Lyon.
- Master: Mostafa Adimy, Reaction-diffusion and age-structured equations with application to biological populations, 45h ETD, M2, School of Applied Mathematics (EMAp), FGV, Rio de Janeiro, Brazil.

9.2.2. Supervision

- PhD: Abdennasser Chekroun, "Équations différentielles et aux différences à retard pour des modèles de dynamique des cellules souches hématopoïétiques", Université Lyon, until March 2016, encadrant: Mostafa Adimy.
- PhD: Marine Jacquier, "Mathematical modeling of the hormonal regulation of food intake and body weight : applications to caloric restriction and leptin resistance", Université de Lyon, until February 2016, encadrants: Fabien Crauste, Mostafa Adimy and Hedi Soula.
- PhD in progress: Simon Girel, "Multiscale modelling of the immune response", Université Lyon, since September 2015, encadrant: Fabien Crauste.
- PhD in progress: Aurélien Canet, "Contribution à l'étude de la quantification de la réponse d'une tumeur solide après un traitement par radiothérapie", Université Lyon, since January 2016, encadrants: Larry Bodgi, Nicolas Foray and Laurent Pujo-Menjouet.

- PhD in progress : Loïs Boullu, Modélisation de la mégacaryopoïèse et applications aux maladies liées â la production des plaquettes, Université Lyon 1, October 2014, Laurent Pujo-Menjouet and Jacques Bélair (co-tutelle avec l'Université de Montréal).

- PhD in progress: Manaf Ahmed, "Probabilistic and statistical study of the spatiotemporal dependence; application to environment", since october 2013, encadrants: C. Vial, V. Maume-Deschamps and P. Ribereau.

- PhD in progress: Mélina Ribaud, "Robustness in multi-objective optimization for the design of rotating machine", since september 2015, encadrants: C. Vial, C. Helbert and F. Gillot.

- PhD in progress : Loïc Barbarroux, modélisation mathématique de la réponse immunitaire chez un individu en vue d'optimiser des stratégies de vaccination, Université de Lyon 1, since October 2013, Mostafa Adimy and Phillipe Michel.

- PhD in progress : Apollos Besse, The role of tumor-immune interaction in combined treatments for chronic myeloid leukemia, Université Lyon 1, since October 2014, Samuel Bernard and Thomas Lepoutre.

- PhD in progress : Alvaro Mateso Gonzales, Models for anomalous diffusion, ENS Lyon, since October 2014, Thomas Lepoutre, Hugues Berry and Vincent Calvez (Alvaro is not member of Dracula team).

- PhD in progress : Flavien Duparc, Etude d'un modèle mathématiques de régulation de l'hémoglobine chez les patients dialysés, Université Lyon 1, since October 2014, Mostafa Adimy and Laurent Pujo-Menjouet.

- PhD in progress : Ulysse Herbach, Modèles graphiques probabilistes pour l'inférence de réseaux de gènes, Université Lyon 1, since October 2015, Olivier Gandrillon, Thibault Espinasse (ICJ) and Anne-Laure Fougères (ICJ).

- PhD in progress : Arnaud Bonnafoux, Vers une inférence automatique de réseaux de gènes dynamiques à partir de « mégadonnées » temporelles discrètes acquises sur cellules uniques, Université Lyon 1, since November 2015, Olivier Gandrillon (CIFRE with the COSMO company).

- HDR: Laurent Pujo-Menjouet, "Étude de modèles mathématiques issus de la biologie du cycle cellulaire et de la dynamique des protéines", Université Lyon, Decembre 2016.

9.2.3. Juries

- Mostafa Adimy was reviewer and member of the PhD of Benjamin Conti (Université d'Aix Marseille), "Équations de réaction-diffusion dans un environnement périodique en temps Applications en médecine".

- Mostafa Adimy was member of the PhD of Abdennasser Chekroun (Université de Lyon 1), "Contribution à l'analyse mathématique d'équations aux dérivées partielles structurées en âge et en espace modélisant une dynamique de population cellulaire".

- Mostafa Adimy was member of the PhD of Youssef Bourfia (Université de Marrakech and Université Pierre et Marie-Curie), "Modélisation et Analyse de Modèles en Dynamique Cellulaire avec Applications à des Problèmes Liés aux Cancers".

- Mostafa Adimy was member of the HDR of Laurent Pujo-Menjouet (Université de Lyon 1), "Etude de modèles mathématiques issus de la biologie du cycle cellulaire et de la dynamique des protéines".

- Fabien Craute was reviewer and member of the PhD of Ana Jarne Munoz (Université de Bordeaux), "Modeling the effect of exogenous Interleukin 7 in HIV patients under antiretroviral therapy with low immune reconstitution".

- Fabien Craute was reviewer and member of the PhD of David Granjon (Université Pierre et Marie Curie et Université de Lausanne), "Modeling of Calcium Homeostasis in the Rat and its perturbations".

- Celine Vial was member of the PhD of Zahraa Salloum (Université de Lyon 1), "Maximum de vraisemblance empirique pour la détection de changements dans un modèle avec un nombre faible ou très grand de variables".

9.3. Popularization

- Fabien Crauste : Conference "Grippe saisonnière, épidémie, pandémie : quel apport des mathématiques ?" Université Ouverte, Bibliothèque de Lyon, March 30, 2016.
- Laurent Pujo-Menjouet : Conference "Mathématiques et relations amoureuses : les jeux de l'amour et sans le hasard ?" Université Ouverte, Bibliothèque de Lyon, February 3, 2016.

<p align="center" style="color:red">DREAMPAL Project-Team</p>

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Selection

8.1.1.1. Member of the Conference Program Committees

V.Rusu was a member in the PC of the 2016 edition of the Int. Workshop on Rewriting Logic and Applications, and will be the organizer of the next edition of the event. He was was also PC member of Approches Formelles pour la Validation Logicielle (AFADL'2016).

8.1.2. Research Administration

Vlad Rusu is elected member at Inria's Evaluation Committee. As such he has been involved in several activities regarding promotions of researchers, team creations, and team evaluations.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence : V.Rusu, Logic, 30hrs, L3, Univ. Lille, France.

Doctorat : V. Rusu, External adviser for PhD students, Univ. Iasi, Romania.

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DYLISS Project-Team

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9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Selection

9.1.1.1. Member of the Conference Program Committees

- JOBIM (2016): French conference of Bioinformatics [A. Siegel]
- BBCC (2015): Bioinformatica e Biologia Computazionale in Campania [O. Dameron]
- IC 2016 Atelier IA et santé, Symposium sur l'Ingénierie des Connaissances [O. Dameron]
- JFO 2016: Journées Francophones sur les ontologies [O. Dameron]
- SASB 2016: The six international workshop on static analysis and system biology [N.Théret]
- ICGI 2016: The 13th International Conference on Grammatical Inference [F. Coste]

9.1.1.2. Review

- ISMB 2016, Biotechno 2016 [A. Siegel]

9.1.2. Journal

9.1.2.1. Member of the Editorial Boards

- Academic editor: Plos One [J. Bourdon]

9.1.2.2. Reviewer - Reviewing Activities

- Journal of Mathematical Biology. Bioinformatics. Theorie des Sciences Informatiques. [A. Siegel]
- Briefings in Bioinformatics, Journal of Biomedical Informatics, Journal of Biomedical Semantics. [O. Dameron]
- Molecular Cancer, Oncotarget,Hepatology, Int J cancer, Bioinformatics and Biology Insight, Chembioint, Cell death and Disease, Plos One [N. Théret]
- IEEE BIBM 2016: IEEE International Conference on Bioinformatics and Biomedicine [F. Coste]

9.1.3. Invited Talks

- M. Aite *User-control metabolic network reconstruction within flexible workflows with the PADMet Toolbox*, INRA Food Working Group annual assembly, Paris (Jul. 2016)
- F. Coste *Grammatical inference of protein languages*, Seminar of Department of Biomedical Engineering, Wroclaw University of Technology, Polland (May 2016)
- F. Coste *Partial multiple sequence alignments to model protein families*, Theoretical Biology and Bioinformatics Group, Utrecht Univ., Netherland (Sep. 1016)
- F. Coste *Modelling protein families with Protomata-Learner*, University of Chile (Nov. 2016)
- C. Trottier *The PADMET-Toolbox and AuReMe workflow: application to the genome-scale metabolic network reconstruction of algae*, IDEALG project Annual General Meeting, Lorient (Nov. 2016)
- C. Frioux *Metabolic network gap-filling: parsimonious combinatorial methods to approach biological reality*, INRA Food Working Group annual assembly, Paris (Jul. 2016)
- C. Frioux *Answer Set Programming for bioinformatics and metabolic networks*, University of Potsdam Knowledge Processing and Information System group weekly seminar, Potsdam, Germany (Oct. 2016)
- A. Siegel *Cancer biology in the Dyliss Group*, Inria (Mar. 2016)

- A. Siegel *Identification of logical models for signaling pathways: towards a systems biology loop*, EMCTS, Nottingham, UK (Jul. 2016) [39]

- A. Siegel *An introduction to metabolic networks modelling*, INRA (Oct. 2016)

- A. Siegel *A prospective about the construction of bioId chip based on multi-scale integrative methods*, University of Chile (Nov. 2016)

- A. Siegel *Combinatorial problems related to the reconstruction of genome-scale metabolic networks*, University of Lille, Workshop of the BIOSS working group on metabolism (Nov. 2016)

- N.Théret *Computational modeling to identify biomarkers and targets*, DHU2020, Fibrosis and remodelling: from common pathways to personalized targets, Autumn School (Oct. 2016)

9.1.4. Leadership within the Scientific Community

- Member of the steering committee of the International Conference on Grammatical Inference [F. Coste].

- The team was involved in the foundation of a national working group on the symbolic study of dynamical systems named bioss [web access]. The group gathers more 100 scientists, from computer science to biology. Three meetings were organized this year. The group is supported by two French National Research Networks: bioinformatics (GDR BIM : bioinformatique moléculaire) and informatics-mathematics (GDR IM : Informatique Mathématique). It gathered twice in 2016: for a general meeting in Lyon (Jul. 2016) and for a workshop focused on computational and methological insights about metabolic network in Lille (Nov. 2016) [A. Siegel]

9.1.5. Scientific Expertise

- Member (nominated) CNU section 65 [O. Dameron]

- Scientific Advisory Board of GDR BIM " Molecular Bioinformatics" [J. Nicolas].

- Inria National evaluation board [A. Siegel]

- Member of the Operational Legal and Ethical Risk Assessment Committee (COERLE) at Inria [J. Nicolas].

- Recruitment committees: Professor (UMPC, Paris) [A. Siegel, N Théret], Associate professor (Nancy) [O. Dameron), Engineer (INRA) [A. Siegel], Inria senior researcher (National committee) [A. Siegel].

- Member of the IRISA laboratory council [F. Coste].

- Member of the Inria Rennes center council [A. Siegel].

- Scientific Advisory Board of Biogenouest [J. Bourdon, N Théret].

- Member of SCAS (Service Commun d'Action Sociale) of Univ. Rennes 1 [C. Belleannée].

- Member of CUMIR (Commission des Utilisateurs des Moyens Informatiques, Inria Rennes) [F. Coste].

- Expertise for Prix Victor et Erminia MESCLE [N. Théret]

- Expertise for Ligue Contre le Cancer, InterRégion Rhône-Alpes-Auvergne-Drome-Saone et Loire [N. Théret]

- Member of the board of directors of the French Society for biology of the extracellular matrix [N. Théret]

9.2. Teaching - Supervision - Juries

9.2.1. Teaching track responsibilities

- Coordination of the doctoral school "Life, Agronomy and Health" of University of Rennes 1 [N. Théret]

- Coordination of the master degree "Bioinformatics and genomics", Univ. Rennes1 [O. Dameron]
- Coordination of the track "From Data to Knowledge: Machine Learning, Modeling and Indexing Multimedia Contents and Symbolic Data", Master in Computer Science, University of Rennes 1, France [F. Coste].

9.2.2. Course responsibilities

- "Bioinformatique expérimentale", Master 1 in computer science, Univ. Rennes1 & ENS [O. Dameron]
- "Bases de mathématiques et probablité" and "Méthodes en informatique", Master1 in public health, Univ. Rennes 1 [O. Dameron]
- "Représentation des connaissances biomédicales", Master 2 in public health, Univ. Rennes 1 [O. Dameron]
- "Principes de programmation et d'algorithmique", Master 1 in bioinformatics, Univ. Rennes 1 [O. Dameron]
- "Gestion de projets informatiques", Master 1 in bioinformatics, Univ. Rennes 1 [O. Dameron]
- "Standardisation des connaissances et bio-ontologies", Master 2 in bioinformatics, Univ. Rennes 1 [O. Dameron]
- "e-Santé et réseaux hospitaliers", last year in engineering school ESIR, Univ. Rennes 1, [O. Dameron]
- "Equilibre Dynamique de la communication Cellulaire" Master 2 in Sciences cellulaire et Moléculaire du Vivant, Univ. Rennes 1 [N. Theret]

9.2.3. Teaching

Licence: C. Belleannée, Langages formels, 22h, L3 informatique, Univ. Rennes1, France.

Licence: C. Belleannée, Traitement de textes et données tabulées, 40h, L1 informatique, Univ. Rennes1, France.

Licence: C. Belleannée, Algorithmique et Programmation Fonctionnelle, 60, L1 informatique, Univ. Rennes1, France.

Licence: J. Coquet, Algorithmique et Programmation Fonctionnelle, 40h, L1 informatique, Rennes1, France.

Licence: O. Dameron, Biostatistiques, 12h, PACES, Univ. Rennes 1, France.

Licence: V. Delannée, Bureautique, 36h, DFGSP2, Univ. Rennes 1, France.

Licence: C. Frioux, Bureautique, 12h, L1 informatique, Rennes1, France.

Master: C. Belleannée, Algorithmique du texte et bioinformatique, 10h, M1 informatique, Univ. Rennes1, France

Master: C. Belleannée, Préférences, Logique et Contraintes, 40h M1 informatique,Univ. Rennes1, France

Master: F. Coste, Apprentissage Supervisé, 10h, M2 Informatique, Univ. Rennes 1, France

Master: F. Coste, Données Séquentielles Symboliques, 10h, M2 Informatique, Univ. Rennes 1, France

Master: O. Dameron, Bases de mathématiques et probablité, 30h, Master1 in public health, Univ. Rennes 1, France.

Master: O. Dameron, Méthodes en informatique, 50h, Master1 in public health, Univ. Rennes 1, France.

Master: O. Dameron, Bioinformatique expérimentale, 10h, M1 informatique, Univ. Rennes 1 and ENS Rennes, France.

Master: O. Dameron, Principes de programmation et algorithmique, 50h, M1 bioinformatique et génomique, Univ. Rennes 1, France.

Master: O. Dameron, Gestion de projets informatiques, 23h, M1 bioinformatique et génomique, Univ. Rennes 1, France.

Master: O. Dameron, Standardisation des connaissances et bio-ontologies, 24h, M2 bioinformatique et génomique, Univ. Rennes 1, France.

Master: O. Dameron, Représentation des connaissances biomédicales, 20h, M2 bioinformatique et génomique, Univ. Rennes 1, France.

Master: A. Siegel, Integrative and Systems biology, 20h, M2, Univ. Rennes 1, France

Master: N. Théret, Extracellular matrix remodeling and Signaling, 3H, Univ. Rennes 1, France

Master: N. Théret, Extracellular matrix remodeling and Signaling, 3H, Univ. Cergy Pontoise, France

Doctorat: A. Siegel, Modelling the integration of heterogeneous knowledge with Answer Set Programming, 4h, Ecole de printemps, Porquerolles, France

9.2.4. Supervision

HDR: Olivier Dameron *Ontology-based methods for analyzing life science data* [12]

PhD : Aymeric Antoine-Lorquin, *TITRE*, started in Oct. 2013, supervised by C. Belleannée, defended on the 1st of December 2016 [11]

PhD in progress : Lucas Bourneuf, *Justifiable graph decomposition to assist biological network understanding*, started in Oct. 2016, supervised by J. Nicolas.

PhD in progress : Jean Coquet, *Semantic-based reasoning for biological pathways analysis*, started in Oct. 2014, supervised by O. Dameron and N. Théret.

PhD in progress : Victorien Delannée, *Optimisation à différentes échelles pour étudier la variabilité de la toxicité de contaminants alimentaires*, started in Oct. 2014, supervised by A. Siegel and N. Théret.

PhD in progress : Clémence Frioux, *Using preferences in Answer Set Programming to decipher interactions within the species of an ecosystem at the genomic scale*, started in Oct. 2015, supervised by A. Siegel.

PhD in progress : Julie Laniau, *Méthodes d'optimisation combinatoire pour reconstruire et analyser les systèmes métaboliques de microalgues*, started in Oct. 2013, supervised by A. Siegel and D. Eveillard.

PhD in progress : Yann Rivault, *Analyse de parcours de soins à partir de bases de données médico-administratives en utilisant des outils du Web Sémantique : identification de complications et de leurs déterminants suite à la pose chirurgicale de dispositif médical implantable en ambulatoire* , started in Oct. 2015, supervised by O. Dameron and N. Lemeur.

9.2.5. Juries

- *Member of Ph-D thesis juries*. M. Morterol, Univ. Paris Sud [A. Siegel, reviewer]. A. Rougny, Univ. Paris Sud [A. Siegel, reviewer]. P. Traynard, ENS Paris [A. Siegel, jury member]. A Lamora, Univ. Nantes [N. Théret, reviewer]. L. Alcaraz, Univ. Lyon [N. Théret, reviewer], F Courivaud, UMPC [N. Théret, reviewer]. P Hascoet, Univ. Rennes1 [N. Théret, president]

- *Member of habilitation thesis juries*. O. Dameron, Univ. Rennes 1 [A. Siegel, jury member], A. Chateau, Univ. Montpellier [A. Siegel, reviewer]. M. Elati, Univ. Evry [A. Siegel, reviewer]. L. Levy, Univ Paris-Diderot [N. Théret, reviewer]. C. Le Goff, Univ Paris Descartes [N. Théret, reviewer].

- *Member of medical thesis jury*. P. Hamon, Rennes [O. Dameron, jury member].

9.2.6. Internships

- Internship, from Jan until Jun 2016. Supervised by A. Siegel. Student: Mael Conan. Subject: Reconstruction of the metabolic map of E. Synecchococcus.

- Internship, from Jan until Jun 2016. Supervised by M. Chevallier and A. Siegel. Student: Pierre Vignet. Subject: Development of a web interface for the aided-curation of metabolic network identifiers.

- Internship, from Jun until Jul 2016. Supervised by O. Dameron and A. Siegel. Student: David Saulpic. Subject: Using formal concept analysis to classify the attractors of perturbated boolean networks.

- Internship, from Jan. until Jun 2016. Supervised by J. Nicolas. Student: Lucas Bourneuf. Subject: Model reduction with power graph algorithms.

- Internship, from Feb. until Jun 2016. Supervised by F. Coste. Student: Mikael Demirdelen. Subject: Fast parser for biological sequences and a new algorithm for the inference of substitutable languages.

- Internship, from Jun until Jul 2016. Supervised by O. Dameron. Student: Arnaud Belcour. Subject: Intégration de données biologiques en RDF pour l'analyse de réseaux de régulation.

- Internship, from Jun until Jul 2016. Supervised by O. Dameron. Student: Mael Kerbiriou. Subject: Création et analyse d'un réseau de régulation génique en RDF : application au puceron.

- Internship, from Jun until Jul 2016. Supervised by A. Evrard. Student: Xavier Garnier. Subject: Mise à jour et développement d'AskOmics, outil d'intégration et d'interrogation de données biologiques.

- Internship, from Jan. until Jun. 2016. Supervised by C. Belleannée. Student: Nathan Alary. Subject: Données génomiques et données ChIP-Seq au service de la prédiction de sites de fixation d'un facteur de transcription. Application au facteur LXRalpha.

- Internship, from Mar until Aug 2016. Supervised by J. Got. Student: Sanae El Mhijar, Subject: Analyse et vérifications du réseau métabolique de *Tisochrysis lutea*.

- Internship, from May until Jul 2016. Supervised by F. Coste. Student: RemySun, Subject: Learning Deep Latent Features of Proteins.

- Internship, from Jun. until Jul. 2016. Supervised by F. Morreews. Student: Vivien Le Breton Subject: RDF et SPARQL pour l'integration de réseaux métaboliques et génétiques de référence.

- Internship, from Jan. until Jun. 2016. Supervised by J. Nicolas. Student: Guillaume Lebreton Subject: Metabolic pathway reconstruction on metagenomes, application to the development of a bacterial consortium for fermented products.

- Internship, from Apr. until Jun. 2016. Supervised by J. Nicolas. Student: Marie Salmon Subject: Analyse par concepts formels de données génomiques sur le mélanome du chien.

9.3. Popularization

- *Organization of Sciences en Cour[t]s*. Since 2007, Sciences en Cour[t]s is a project of Nicomaque organization, the association of PhD and PhD students of Brittany. It is a popularization Festival where PhD students explain their thesis via short films of 5min. The goal is to present their scientific researches to the general public. Every year, PhD students of Inria/IRISA join the organization or make movies.[*J. Coquet (coordinator of the festival), V. Delannée (president of Nicomaque), A. Antoine-Lorquin (organizer of the festival)*] [more info].

- *Production of Sciences en Cour[t]s film*. "Une petite histoire de symbiose(s)" .[*C. Frioux*] [more info].

- *Bioinfo-fr.net* Bioinfo-fr.net is a french web site where researchers, engineers and students talks about bioinformatics. We have written or contributed to 3 articles for this web site on diverse subjects: "Remise des diplômes du master BIG (Rennes)", "Les dev' jam c'est bon pour vous !", "Ecrire son parseur à la main: chroniques d'une mauvaise bonne idée". [*L Bourneuf, O. Dameron*]. [more info].

DYOGENE Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- Bartlomiej Blaszczyszyn: 5th Stochastic Models Conference in Będlewo, Poland; http://www.math. uni.wroc.pl/~lorek/bedlewo2016/index.php

- Ana Busic: Workshop on the stochastic optimization and games with applications to energy and networks; http://gdrro.lip6.fr/?q=node/147

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- Bartlomiej Blaszczyszyn: WiOpt/Spaswin 2016.

- Anne Bouillard: Valuetools 2016 conference.

- Ana Busic: QEST 2016, IEEE SmartGridComm 2016,

- Jocelyne Elias: GSNC 2016, Globecom 2016 SAC CN, IEEE WCNC 2016, WD 2016, IEEE ICCVE 2016.

- Marc Lelarge: AISTATS 2017, NIPS 2016, Workshop on Algorithms and Models for the Web Graph 2016, ACM SIGMETRICS 2017, 2016, ACM Mobihoc 2017, 2016, IEEE INFOCOM 2017, 2016, ICALP 2016.

10.1.2.2. Reviewer

- Dalia-Georgiana Herculea: IEEE VTC , IEEE ICT.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Marc Lelarge: IEEE Transactions on Network Science and Engineering, Bernoulli Journal, Queueing Systems.

10.1.3.2. Reviewer - Reviewing Activities

- Bartlomiej Blaszczyszyn: Ann. Appl. Probab., IEEE TNSE, TWC, WCL.

- Dalia-Georgiana Herculea: IEEE Access, Wiley Transactions on Emerging Telecommunications Technologies.

10.1.4. Invited Talks

- Bartlomiej Blaszczyszyn: Workshop on Continuum Percolation in Lille http://math.univ-lille1.fr/ ~heinrich/Contperc2016/ , 1st Symposium on Spatial Networks in Oxford http://www.eng.ox.ac.uk/ sen/events.html, Workshop on Probabilistic Methods in Telecommunication WIAS Berlin https:// www.wias-berlin.de/workshops/PMT16/.

- Anne Bouillard: ASMTA conference.

- Ana Busic: Institute for Mathematics and its Applications, Univ. of Minnesota, Indo-UK workshop on Energy Management, ICMS Edinburgh,Workshop EDF Lab', Simons Institute Berkeley, Faculty of Electrical Engineering and Computing, University of Zagreb,

- Dalia-Georgiana Herculea: Institute of Stochastics, University of Ulm, LINCS Internal Workshop.

10.1.5. Leadership within the Scientific Community

- Ana Busic is co-responsable of the research group COSMOS (Stochastic optimization and control, modeling and simulation) of the GDR-RO; http://gdrro.lip6.fr/?q=node/78.

- Dalia-Georgiana Herculea: Representation of Phd students in the Board of Laboratory of Information, Networking and Communication Sciences (LINCS).

10.1.6. Scientific Expertise

- Bartlomiej Blaszczyszyn: ANR France, ISF Israel, NSC Poland, ERC Europe.

10.1.7. Research Administration

- A. Busic: Co-president of CES (Commission des Emplois Scientifiques) of Inria Paris, Member of the hiring committee for CR2 research positions at Inria Paris, Member of CDT (Commission de développement technologique) of Inria Paris.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence: Anne Bouillard (Cours) et Rémi Varloot (TD) **Structures et algorithmes aléatoires** 80heqTD, L3, ENS, France.

Licence: Anne Bouillard (Cours) **Théorie de l'information et du codage** 24 heqTD, L3, ENS, France.

Licence: Anne Bouillard (Cours) **Algorithmique et programmation** 21 heqTD, L3, ENS, France.

Master: Bartlomiej Blaszczyszyn (Cours) **Processus ponctuels, graphes aléatoires et géeométrie stochastique** 39heqTD, M2 Probabilités et Modèles Aléatoires, UPMC, France

Master: Anne Bouillard (Cours + TD) **Fondements de la modélisation des réseaux** 18heqTD, M2, MPRI, France

Master: Ana Busic and Marc Lelarge (Cours) et Rémi Varloot (TD) **Modéles et algorithmes de réseaux**, 50 heqTD, M1, ENS, Paris, France.

Master: Ana Busic (Cours) **Simulation**, 13.5 heqTD, M2 AMIS UVSQ, France.

Master: Marc Lelarge (TD) **Networks: distributed control and emerging phenomena** (cours given by Laurent Massoulié) M2, Ecole Polytechnique, France.

Master: Marc Lelarge (TD) **Aléatoire** (cours given by Sylvie Mél'eard) M2, Ecole Polytechnique, France.

10.2.2. Supervision

PhD: Kumar Gaurav, On some diffusion and spanning problems in configuration model [3], defended in November 2016, supervised by B. Blaszczyszyn

PhD in progress: Léeo Miolane, supervised by Marc Lelarge

PhD in progress: Dalia-Georgiana Herculea, co-advised by B. Blaszczyszyn, E. Altman and Ph. Jacquet

PhD in progress: Lennart Gulikers, supervised by Marc Lelarge with Laurent Massoulié

PhD in progress: Md Umar Hashmi, Decentralized control for renewable integration in smartgrids, from December 2015, co-advised by A. Busic and M. Lelarge

PhD in progress: Alexandre Hollocou: supervised by Marc Lelarge with Thomas Bonald

PhD in progress: Christelle Rovetta, Applications of perfect sampling to queuing networks and random generation of combinatorial objects, from December 2013, co-advised by Anne Bouillard and Ana Busic

PhD in progress: Sébastien Samain, Monte Carlo methods for performance evaluation and reinforcement learning, from November 2016, supervised by A. Busic

PhD in progress: Rémi Varloot, supervised by Marc Lelarge with Laurent Massoulié

PostDoc: Arpan Mukhopadhyay, supervised by Marc Lelarge with Nidhi Hegde

PostDoc: Virag Shah: supervised by Marc Lelarge with Laurent Massoulié and Milan Vojnovic

10.2.3. Juries

- Anne Bouillard: reviewer of the PhD thesis of Mickael Back (University of Kaiserslautern).

- Ana Busic: PhD jury of Alexandra Ugolnikova, LIPN (Université Paris Nord), Rim Kaddah (Télécom ParisTech).

- Bartlomiej Blaszczyszyn: reviewer of the PhD thesis of Jihong YU LRI (Université Paris-Sud).

- Marc Lelarge: reviewer for the PhD thesis of Kevin Scaman (ENS Cachan) and Van Hao Can (Université Aix-Marseille).

10.3. Popularization

- Anne Bouillard: invited speaker at "Girls can code" 2016 session (Training session for female junior and senior highschool students).

ECUADOR Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. Member of the organizing committees

- Laurent Hascoët is on the organizing commitee of the EuroAD Workshops on Algorithmic Differentiation.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master : Laurent Hascoët, Optimisation avancée, 15 h, M2, University of Nice

9.2.2. Supervision

PhD in progress : Ala Taftaf, "Extensions of Algorithmic Differentiation by Source Transformation to meet some needs of Scientific Computing", started july 2013, advisor L. Hascoët.

PhD in progress : Éléonore Gauci, "Norm-oriented criteria for CFD and coupled CSM-CFD systems", started october 2014, advisor A. Dervieux

9.2.3. Juries

- Alain Dervieux, jury, PhD defense of Laure Billon, Mines Paristech, december 9.
- Laurent Hascoët, jury, PhD defense of Vladimir Groza, University of Nice, november 9.

9.3. Popularization

Laurent Hascoët wrote an article about AD for the blog "binaire", hosted by "Le Monde". May 9.

<h1 style="text-align: center; color: red;">ERABLE Project-Team</h1>

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific events organisation

8.1.1.1. General chair, scientific chair

- Alberto Marchetti-Spaccamela is member of the Steering committee of WG, Workshop on Graph Theoretic Concepts in Computer Science, and of ATMOS, Workshop on Algorithmic Approaches for Transportation Modeling, Optimization, and Systems.
- Marie-France Sagot was from 2010 to 2016 member and from 2014 to 2016 Chair of the Steering Committee of the International Conference *LATIN* (http://www.latintcs.org/). She is member of the Steering Committee of the *European Conference on Computational Biology* (*ECCB*) since 2002 and of the International Symposium on Bioinformatics Research and Applications (ISBRA) since 2008.

8.1.1.2. Member of the organising committees

- Leen Stougie was co-organiser, together with Neil Olver and René Sitters of the 8th Workshop on Flexible Network Design, July 4-8, 2016, Vrije Universiteit, Amsterdam, The Netherlands.

8.1.2. Scientific events selection

8.1.2.1. Member of the conference program committee

- Laurent Bulteau (external collaborator of ERABLE) was a member of the program committee for the following international conferences in 2016: 41st International Symposium on Mathematical Foundations of Computer Science (MFCS 2016) and 11th International Conference on Algorithmic Aspects of Information and Management (AAIM).
- Pierluigi Crescenzi was a member of the program committee for the following international conferences in 2016: 17th Italian Conference on Theoretical Computer Science (ICTCS), 31st IEEE International Parallel & Distributed Processing Symposium (IPDPS).
- Roberto Grossi was a member of the program committee for the following international conferences in 2016: 12th Latin American Theoretical Informatics Symposium (LATIN), 27th International Workshop on Combinatorial Algorithms (IWOCA), 8th International Conference on Fun with Algorithms (FUN).
- Alberto Marchetti-Spaccamela was a member of the program committee for the following international conference in 2016: 15th International Symposium on Experimental Algorithms (SEA).
- Nadia Pisanti was a member of the program committee for the following international conferences in 2016: 10th International Workshop on Algorithms and Computation (WALCOM), 5th International Symposium on Network Enabled Health Informatics, Biomedicine and Bioinformatics (Hi BI BI), 5th RECOMB Satellite Workshop on Computational Cancer Biology (RECOMB-CCB), 16th Workshop on Algorithms in BIoinformatics (WABI), 6th RECOMB Satellite Workshop on Massively Parallel Sequencing (RECOMB-Seq), 12th International Symposium on Bioinformatics Research and Applications (ISBRA), 7th International Conference on Information Technology on Bio- and Medical-Informatics (ITBAM), 6th IEEE International Conference on Computational Advances in Bio and Medical Sciences (ICCABS).
- Marie-France Sagot was a member of the program committee for the following international conferences in 2016: Intelligent Systems for Molecular Biology (ISMB), Prague Stringology Conference 2016, 11th International Conference on Algorithmic Aspects of Information and Management (AAIM), 20th Annual International Conference on Research in Computational Molecular Biology (RECOMB), 14th RECOMB Satellite Workshop on Comparative Genomics (RECOMB-CG), 16th Workshop of Algorithms in Bioinformatics (WABI).

- Leen Stougie was a member of the program committee of the following conferences in 2016: 18th Conference on Integer Programming and Combinatorial Optimization (IPCO), Workshop on Approximation and Online Algorithms (WAOA).

8.1.2.2. Reviewer

Besides the above, various other members of ERABLE have been reviewer for other international conferences, such as SODA etc.

8.1.3. Journal

8.1.3.1. Member of the editorial board

- Pierluigi Crescenzi is member of the Editorial Board of *Journal of Computer and Systems Science* and *Electronic Notes on Theoretical Computer Science*.
- Roberto Grossi is member of the Editorial Board of *Theory of Computing Systems (TOCS)* and *RAIRO – Theoretical Informatics and Applications – Informatique Théorique et Applications*.
- Alberto Marchetti-Spaccamela is member of the Editorial Board of *Theoretical Computer Science* and *Transactions on Algorithms Engineering*.
- Nadia Pisanti is since 2012 member of Editorial Board of *International Journal of Computer Science and Application (IJCSA)*.
- Marie-France Sagot is member of the Editorial Board of *Lecture Notes in Bioinformatics* (subseries of *Lectures Notes in Computer Science*), *Journal of Discrete Algorithms*, *BMC Bioinformatics*, and *BMC Algorithms for Molecular Biology*.
- Leen Stougie is member of the Editorial Board of *Transactions on Algorithms Engineering* since 2010, *Surveys in Operations Research and Management Science* since 2011, and *Journal of Industrial and Management Optimization* since 2013.
- Cristina Vieira is Executive Editor of *Gene*, and since 2014 member of the Editorial Board of *Mobile DNA*.

8.1.3.2. Reviewer for Journals

Members of ERABLE have reviewed papers for the following journals: *Theoretical Computer Science*, *Algorithmica*, *IEEE/ACM Transactions in Computational Biology and Bioinformatics (TCBB)*, *Algorithms for Molecular Biology*, *Scientific Reports*, *Journal of Computational Biology*, *BMC Bioinformatics*, *Computing and Informatics*, *BMC Evolutionary Biology*, *Genetica*, *Gene*, *Genome Biology and Evolution*, *Genetical Research*, *Genome Research*, *Molecular Biology and Evolution*, *Insect Biochemistry and Molecular Biology*, *PLoS Genetics*, *Mutation research*, *mBio*, *Frontiers in Microbiology*, *Infection, genetics and evolution*, *PLoS Biology*.

8.1.4. Invited talks

Clara Benoit-Pilven gave a lecture (Workshop Colib'read, November 7-8, 2016).

Roberto Grossi gave an invited talk (Eleventh International Conference on Algorithmic Aspects in Information and Management (AAIM), Bergamo, Italy, July 18-20, 2016).

Gunnar Klau gave an invited talk (Simon's Institute for the Theory of Computing, Workshop on Network Biology, April 11-15, 2016).

Vincent Lacroix gave a lecture+demonstration (Workshop Colib'read, November 7-8, 2016). He also made an invited presentation in the context of a CNRS training meeting (Formation Bioinformatique pour les NGS Montpellier, March 24, 2016)

Hélène Lopez-Maestre gave a lecture (Workshop Colib'read, November 7-8, 2016).

Nadia Pisanti gave two invited talks (Data Driven Innovation Open Summit, Rome, May 20-21, 2016; Conference Mathematical Foundations in Bioinformatics (MatBio), London, UK, July 20, 2016).

Marie-France Sagot gave two invited talks (German Conference on Bioinformatics (GCB), Berlin, Germany, Sept 12-15, 2016; First Workshop on Enumeration Problems and Applications (WEPA), Aubière, France, Nov 21-22, 2016).

Blerina Sinaimeri gave a talk (University of Palermo, Sept 27, 2016).

Leen Stougie gave two lectures (Graduate School on Methods for Discrete Structures, Free University Berlin, 25 April 2016; 7th Cargese Workshop on Combinatorial Optimization, October 9-14, 2016).

Laura Urbini gave a lecture (Warwick University, Computer Science Department, November 10, 2016).

8.1.5. *Leadership within the scientific community*

Alberto Marchetti-Spaccamela is Member of the Council of EATCS, the European Association for Theoretical Computer Science.

Leen Stougie was Chairman of the Dutch Network on the Mathematics of Operations Research (Landelijk Netwerk Mathematische Besliskunde (LNMB)) from February 2011 to January 2016. From February 2016, he is Member of the general board of the LNMB. He is also Chairman Program Committee Econometrics and OR, VU Amsterdam and Member of the Board of the research school ABRI-VU, Amsterdam.

Cristina Vieira is director of the GDRE "Comparative genomics" since the latter was renewed in 2010.

Marie-France Sagot and Fabrice Vavre are members of the Steering Committee of the LabEx Ecofect (http://ecofect.universite-lyon.fr/).

8.1.6. *Scientific expertise*

Marie-France Sagot is member of the Advisory Board of the CWI, Amsterdam, The Netherlands, and chair of the "Commissions Scientifiques Spécialisées" (CSS) of the INRA for the Department of Applied Mathematics and Computer Science. She was also a Panel Member for the ERC.

Fabrice Vavre is member of the Section 29 of the Comité National de la Recherche Scientifique (CoNRS).

8.1.7. *Research administration*

Hubert Charles is director of the Biosciences Department of the Insa-Lyon.

Alberto Marchetti-Spaccamela is Director of the Department of Computer, Control, and Management Engineering Antonio Ruberti at Sapienza University of Rome, Italy.

Nadia Pisanti is since 2013 member of the Board of the Regional PhD School of Computer Science at the University of Pisa, Italy.

Alain Viari is since 2012 Deputy Scientific Director at Inria responsible for the domain "Digital Health, Biology and Earth". He thus represents Inria at several national instances related to Life Sciences, Health and Environment.

8.2. Teaching - Supervision - Juries

8.2.1. *Teaching*

Most of the members of ERABLE are Assistant / Associate or Full Professors and as such have a heavy load of teaching. Depending on the country, this represents between 150 to 192 hours in front of a class plus the additional work of preparing the courses and exams, and of correcting the latter. Many are also responsible for some of the university courses at the undergraduate or graduate levels.

More in detail:

- In France:
  - Hubert Charles is responsible for the Master of Modelling and Bioinformatics (BIM) at the Insa of Lyon. He teaches 192 hours per year in statistics and biology.
  - Pierluigi Crescenzi taught 120h (72h of Programming in Java for the undergraduate program in Computer Science and 48 of Distributed Algorithms for the Master in Computer Science) at the University of Florence.
  - Vincent Lacroix is responsible for several courses both at the University (L2: Bioinformatics, L3: Advanced Bioinformatics, M1: Methods for Genomics, M1: Methods for Transcriptomics, M1: Projects, M2: Bioethics) and at the Insa (M1: Gene Expression). He teaches 192 hours per year in bioinformatics and statistics.
  - Arnaud Mary taught 109+115 hours in 2016 at the University of Lyon 1 (L1: mathematics; L2: bioinformatics; M1: data analysis; M1: computer science).
  - Cristina Vieira is responsible for the Evolutionary Genetics and Genomics academic career of the Master Ecosciences-Microbiology. She was awarded an IUF (Institut Universitaire de France) distinction and teaches genetics 64 hours per year at the University and ENS Lyon.
- In Italy: Nadia Pisanti taught a total of 104 hours (L1: algorithms and programming; M2: algorithms for bioinformatics).
  - Alberto Marchetti-Spaccamela taught 60 hours of Computing Models (undergraduate class) and 30 hours of Privacy in the electronic society (master class) at Sapienza University of Rome.
  - Nadia Pisanti taught 72h (24h of Programming in C for the undergraduate program in Computer Science and 42 of Algorithms for Bioinformatics for the Master in Computer Science) at the University of Pisa.

Inria or CNRS Junior and senior researchers as well as PhD students and postdocs are also involved in teaching. Notably Alice Julien-Laferrière (PhD student) taught 6 hours (Jury PEL 4); Hélène Lopez-Maestre (PhD student) and Laura Urbini (PhD student) taught each 64 hours of Mathematics and Statistics at the Department of Biology (undergraduate students); Blerina Sinaimeri (Junior Inria Researcher) taught 12h in Discrete Mathematics at the Master of Modelling and Bioinformatics (BIM), INSA, University Lyon 1, as well as 24h at the Master 2 in Computer Science at the ENS Lyon; Fabrice Vavre taught 25h on symbiosis (L3, M1, M2, University Lyon 1, ENS Lyon, University of Poitiers).

Roberto Grossi also participated this year to the Olympiads in Informatics.

8.2.2. Supervision

The following are the PhDs defended in ERABLE in 2016.

- Martin Wannagat, University of Lyon 1, June 2016, supervisors: M.-F. Sagot, A. Marchetti-Spaccamela, L. Stougie.
- Alice Julien-Laferrière, University of Lyon 1, December 2016, supervisors: M.-F. Sagot, V. Lacroix, S. Vinga.

8.2.3. Juries

The following are the PhD or HDR juries to which members of ERABLE participated in 2016.

- Gunnar Klau: Reviewer of the PhD of Arnon Mazza, Tel Aviv University, and of the HDR of Pierre Peterlongo, University of Rennes.
- Marie-France Sagot: Reviewer of the PhD of Yoann Dufresne, University of Lille 1, France.
- Blerina Sinaimeri: Reviewer of the PhD of Nilakantha Paudel, University of Rome, Italy.

8.3. Popularisation

Gunnar Klau wrote an article for ERCIM News about Networks in Biology (http://ercim-news.ercim.eu/en104/special/networks-to-the-rescue-from-big-omics-data-to-targeted-hypotheses).

Roberto Grossi participated to the Pisa CoderDojo (https://www.unipi.it/index.php/news/item/7983-toscana-dojocon-2016-una-giornata-per-la-programmazione-digitale).

Marie-France Sagot, together with Roeland Merks from the CWI, co-edited a special Theme for ERCIM News on Tackling Big Data in the Life Sciences (http://ercim-news.ercim.eu/images/stories/EN104/EN104-web.pdf).

Blerina Sinaimeri participated to the "Conférences ISN et enseignement 2016" organised by Inria, 27 April 2016, to "Les journées nationales de l'APMEP: À la lumière des mathématiques", October 2016, and to "Filles et informatique : une équation lumineuse !" (Nov. 28. 2016, Lyon, France).

Fabrice Vavre participated in a television program on Arte, on the topic of "Ces microbes qui nous gouvernent".

<h1 style="text-align:center; color:red;">EVA Project-Team</h1>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Event Organization

10.1.1.1. General Chair, Scientific Chair

- **Pascale Minet**
    1. co-chair with Leila Saidane of PEMWN 2016, organized in Paris (at the CNAM), France, November 2016.
- **Thomas Watteyne**
    1. Co-chair with Fabrice Theoleyre and Antoine Gallais of a special session on "Industrial Internet of Things: Constraints, Guarantees, and Resiliency" at the 23rd IEEE International Conference on Telecommunications (ICT), Thessaloniki, Greece, 16-18 May 2016.
    2. Technical Program Committee Chair and Local Chair, EAI Conference on Interoperability in IoT (InterIoT), Paris, France, October 2016.
    3. Demo Chair, IEEE International Conference on Sensing, Communication and Networking (SECON), London, UK, 27-30 June 2016.
    4. General Chair, Second ETSI 6TiSCH plugtests, Paris, France, 2-4 February 2016.
- Nadjib Achir
    1. track chair of the Internet of Things (IoT) track of the Selected Areas in Communications Symposium of IEEE Global Telecommunications Conference 2014
- Selma Boumerdassi
    1. chair of the International Workshop on Energy Management for Sustainable Internet-of-Things and Cloud Computing (EMSICC 2016), August 2016.
    2. chair of the International Conference on Mobile, Secure and Programmable Networking (MSPN 2016), June 2016.

10.1.1.2. Member of the Organizing Committee

- **Pascale Minet**
    1. chaired the session entitled "Wireless Sensor networks II" at the IEEE MASS 2016 conference held in Brasilia in October 2016.
- **Paul Muhlethaler**
    1. have invited two presenters Laurent Georges (ESIEE) and Nadjib Ait Saadi (Paris XII) at EVA-MIMOVE-RITs seminar. Laurent Georges presented his work on software radio and Nadjib Ait Saadi on virtualisation and communication in data centers.
- **Thomas Watteyne**
    1. Demo Chair, IEEE International Conference on Sensing, Communication and Networking (SECON), London, UK, 27-30 June 2016.
- Christine Anocq
    1. member of the organizing committee of the international conference PEMWN 2016

10.1.2. Scientific Events Selection

The list of conferences Inria-EVA researcher participated in as Technical Program Committee (TPC) members:

- **Nadjib Achir**

    1. TPC Member IEEE Global Telecommunications Conference, GLOBECOM 2016.

    2. TPC Member IEEE International Conference on Communications, ICC 2016.

    3. TPC Member Personal, Indoor and Mobile Radio Communications, PIMRC 2016.

    4. TPC Member IEEE Wireless Communications and Networking Conference, WCNC 2016.

    5. TPC Member IEEE Consumer Communications & Networking Conference, CCNC 2016.

    6. TPC Member Global Information Infrastructure and Networking Symposium, GIIS 2016.

    7. TPC Member International Conference On Network of the Future, NoF 2016.

    8. TPC Member of the fourth International conference on Performance Evaluation and Modeling in Wireless Networks, PEMWN 2016.

- **Selma Boumerdassi**

    1. TPC Member IEEE Global Telecommunications Conference, GLOBECOM 2016

    2. TPC Member IEEE International Conference on Communications, ICC 2016

    3. TPC Member International Conference on Open and Big Data, OBD, 2016

    4. TPC Member International Conference on Performance Evaluation and Modeling in Wired and Wireless Networks, PEMWN, 2016

    5. TPC Member International Conference on Platform Technology and Service, PlatCon, 2016

- **Pascale Minet**

    1. CSCN 2016, IEEE Conference on Standards for Communications and Networking, October 2016.

    2. CCNC 2016, 13th Annual IEEE Consumer Communications and Networking Conference, January 2016.

    3. DCNET 2016, 7th International Conference on Data Communication Networking, July 2016.

    4. PEMWN 2016, 5th International Conference on Performance Evaluation and Modeling in Wired and Wireless Networks, November 2016.

    5. PECCS 2016, 6th International conference on Pervasive and Embedded Computing and Communication Systems, July 2016.

    6. RTNS 2016, 24th International Conference on Real-Time and Network Systems, November 2016.

    7. Wireless Days, IFIP international conference, March 2016.

    8. WiSEE 2016, IEEE International Conference on Wireless for Space and Extreme Environments, September 2016.

- **Paul Muhlethaler**

    1. 3rd International Workshop on Energy Management for Sustainable Internet-of-Things and Cloud Computing (EMSICC 2016) 24 August 2016 Vienna.

    2. Technical Committee of the International Conference on Mobile, Secure and Programmable Networking MSPN' 2016, June 1 - 3 2016, Paris, France.

    3. Steering Committee Member of MobileHealth 2016, 6th EAI International Conference on Wireless Mobile Communication and Healthcare, November 14–16, 2016, Milan, Italia

    4. Technical Committee of the fourth International conference on Performance Evaluation and Modeling in Wireless Networks, PEMWN 2016, 22-24 November 2016, Paris, France.

- **Thomas Watteyne**

1. TPC Member IFIP/IEEE International Symposium on Integrated Network Management, workshop on Future Networks for Secure Smart Cities (FNSSC), 2017.
2. TPC Member IEEE International Conference on Communications (ICC), Selected Areas in Communications (SAC), 2015, 2016, 2017.
3. TPC Member IEEE International Conference on Telecommunications (ICT), Thessaloniki, Greece, 16-18 May 2016.
4. TPC Member IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), 2008, 2009, 2013, 2016.
5. TPC Member International Conference on Embedded Wireless Systems and Networks (EWSN), 2016.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- **Nadjib Achir**
  1. guest editor of the special issue "Planning and Deployment of Wireless Sensor Networks", of the International Journal of Distributed Sensor Networks.

- **Thomas Watteyne**
  1. Editor, EAI Transactions on Internet of Things since 2015.
  2. Editor, IEEE Internet of Things (IoT) Journal 2014-2016.

10.1.3.2. Reviewer - Reviewing Activities

- **Nadjib Achir**
  1. Sensor Networks (MDPI)
  2. Wireless Communications and Mobile Computing (Wiley)
  3. Internet of Things Journal (IEEE)
  4. Ad Hoc Networks Journal (Elsevier)

- **Selma Boumerdassi**
  1. The Journal of Human-centric Computing and Information Sciences (Springer).

- **Pascale Minet**
  1. Annals of Telecommunications,
  2. Ad Hoc Networks,
  3. International Journal of Distributed Sensor Networks,
  4. International Journal of Networked and Distributed Computing,
  5. Journal of Sensor and Actuator Networks,
  6. Computer Communications Journal,
  7. Sensors Journal.

- **Paul Muhlethaler**
  1. Annals of telecommunications
  2. Ad Hoc Networks,
  3. Journal of Distributed Sensor Networks,
  4. Journal of Networked and Distributed Computing,
  5. IEEE Transactions on Wireless Communications
  6. IEEE Transactions on Vehicular Technology
  7. IEEE Transactions on Information Theory
  8. International Journal of Distributed Sensor Networks. Hindawi.

10.1.4. Invited Talks and Panels

- **Thomas Watteyne**: SmartMesh IP: a ready-to-use IoT Solution. Inria-Chile, 2 December 2016.
- **Thomas Watteyne**: From Smart Dust to 6TiSCH: Academic and Commercial Background on TSCH Technology, Sensor Platform for HEalthcare in a Residential Environment (SPHERE) seminar, University of Bristol, Bristol, UK, 6 October 2016.
- **Thomas Watteyne** was panelist on "A Not So Politically Correct Reality Check about the IoT", ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc), Paderborn, Germany, 5-8 July 2016.
- **Thomas Watteyne**: A Not So Politically Correct Reality Check about the IoT. ACM MobiHoc, Paderborn, Germany, 6 July 2016.
- **Thomas Watteyne** was panelist on "IoT & quantified self" at the open Inria conference on "Digital Sciences and Technologies for Health", Futur en Seine Festival, Paris, France, 10 June 2016.
- **Thomas Watteyne**: HeadsUp! Long-Term Real-Time Patient Position Monitoring. International Conference on Digital Sciences and Technologies for Health, Futur en Seine Festival, Paris, France, 10 June 2016.
- **Thomas Watteyne** was panelist on "IoT & Smart City" at the Inria@Silicon Valley annual workshop (BIS), Paris, France, 9 June 2016.
- **Thomas Watteyne**: PEACH: Predicting Frost Events in Peach Orchards Using IoT Technology, Inria@Silicon Valley annual workshop (BIS), "IoT & Smart City" panel, Paris, France, 9 June 2016.
- **Thomas Watteyne**: Overview (Industrial) IoT Standardization Efforts at IETF. ITU Meeting, Geneva, Switzerland, 10 May 2016.
- **Thomas Watteyne**: Having fun with Industrial IoT, University of Southern California, Los Angeles, CA, USA, 1 April 2016.
- **Thomas Watteyne**: Not-so-Politically Correct Food for Thought on NGIoT, US-Europe Invited Workshop on Next-Generation IoT (NGIOT), Los Angeles, CA, USA, 31 March 2016.
- **Thomas Watteyne**: Industrial IoT Standards and not-to-industrial applications, GDR SOC-SIP/RSD, Paris, France, 30 March 2016.

10.1.5. Leadership within the Scientific Community

- **Thomas Watteyne** is co-chair of IETF 6TiSCH standardization working group.
- **Thomas Watteyne** is Senior member of the IEEE since 2015.

10.1.6. Scientific Expertise

- **Paul Muhlethaler**is a reviewer for the European Commission. He regularly reviews project; this year he was at the last review meeting of E3Network a project dedicated to high-speed radio links in the E-band.
- **Thomas Watteyne** and Tengfei Chang consulted for ETSI as part of the "panel of experts" to prepare the Test Description and Golden Image for the ETSI 6TiSCH 3 plugtests, held on 15-16 July 2016 in Berlin, Germany.
- **Thomas Watteyne** and Tengfei Chang consulted for ETSI as part of the "panel of experts" to prepare the Test Description and Golden Image for the ETSI 6TiSCH 2 plugtests, held on 2-4 February 2016 in Paris, France.

10.1.7. Research Administration

- **Pascale Minet** was member of the evaluation committee in charge of recruiting an Assistant Professor at the University of Auvergne, Clermont-Ferrand in April and May 2016.
- **Pascale Minet** was a member of the EDITE Doctoral School's Grant Allocation Committee (June 2016).

- **Thomas Watteyne** is member of the Inria-Paris "Comite de Centre" since 2016, where we work on making sure Inria-Paris will always remain one of the greatest places to work at!

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

License:

- **Thomas Watteyne** taught a 2-h course on industrial IoT at University of Southern California (USC), USA, 1 April 2016.

Master:

- **Thomas Watteyne** and Keoma Brun-Laguna taught a 4-day course on IoT, with associated hands-on labs. ENSTA ParisTech. Together with Dominique Barthel, 12-15 December 2016.

- **Thomas Watteyne** taught a 1/2-day crash course on the Industrial IoT, ParisTech, 5 October 2016.

10.2.2. Supervision

PhD:

- Mohamed Hadded, "Design and Optimizaion of Access Control Protocols in Vehicular Ad Hoc Networks (VANETs)", EDITE - Télécom Sud-Paris, November 2016, **Paul Muhlethaler** adviser, Anis Laouiti, co-adviser.

PhD in progress:

- Nesrine Ben Hassine "Learning algorithms for network resource management", UVSQ, Sept 2017 (expected), **Pascale Minet** adviser, co-adviser Dana Marinca.

- Younes Bouchaala "Handling Safety Messages in Vehicular Ad Hoc Networks (VANETs)", UVSQ, Sept 2017 (expected), **Paul Muhlethaler** adviser.

- Keoma Brun-Laguna "Limits of Time Synchronized Channel Hopping" *(tentative title)*, EDITE - UPMC, Dec 2018 (expected), **Thomas Watteyne** adviser.

- Jonathan Muñoz "km-scale Industrial Networks" *(tentative title)*, EDITE - UPMC, Oct 2018 (expected), **Thomas Watteyne** adviser.

10.2.3. Juries

HdR:

- Gerard Chalhoub, "Enhanced communications in data collection multihop wireless sensor networks", University of Auvergne, June 2016, **Pascale Minet** examinator.

PhD:

- Guillaume Gaillard, "Opérer les réseaux de l'Internet des Objets", University of Lyon - INSA. Viva on 19 December 2016. **Pascale Minet** reviewer.

- Mohamed Hadded "Design and Optimization of Access Control Protocols in Vehicular Ad Hoc Networks (VANETs)" Thèse de Telecom Sud Paris. Viva on 30 Novembre 2016. Anis Laouiti examiner, **Paul Muhlethaler** examiner.

- Naourez Mejri, "Vers une ville intelligente au service du citoyen mobile: découverte de l'infrastructure d'accès et gestion intelligente de parkings", University of La Manouba, ENSI, Tunis. Viva in November 2016. **Pascale Minet** examiner, **Paul Muhlethaler** reviewer.

- Nour Brinis Khay, "Stratégies de collecte de données dans les réseaux de capteurs", University of La Manouba, ENSI, Tunis. Viva in November 2016. **Pascale Minet** examiner.

- Alexandre Ragaleux, "Mécanismes D'Accès Multiple dans les Réseaux Sans Fil Large Bande", Université Pierre et Marie Curie. Viva on 22 September 2016. **Nadjib Achir** reviewer.

- Remy Leone "Intelligent Gateway for Low-Power Wireless Networks" ("Passerelle intelligente pour réseaux de capteurs sans fil contraints" in French), Telecom ParisTech, France, under the supervision of Jean Louis Rougier and Vania Conan. Viva on 24 June 2016. **Thomas Watteyne** examiner.

- Kevin Roussel, "Évaluation et amélioration des plates-formes logicielles pour réseaux de capteurs sans-fil, pour optimiser la qualité de service et l'énergie", Inria Nancy/ Université de Lorraine, France, under the supervision of Ye-Qiong Song and Olivier Zendra. Viva on 3 June 2016. **Thomas Watteyne** examiner.

- Samira Chouikhi "Tolérance aux pannes dans un réseau de capteurs sans fil multi-canal " University of Paris East Marne-La-Vallée. Viva in June 2016. **Pascale Minet** examiner, **Paul Muhlethaler** reviewer.

- Jin Cui, "Data aggregation in wireless sensor networks", University of Lyon - INSA. Viva in June 2016. **Pascale Minet** reviewer.

- Mohamed Nidhal Mejri "Securing vehicular networks against denial of service attacks", Université Paris 13. Viva on 19 May 2016. **Paul Muhlethaler** president, **Nadjib Achir** examiner.

- Chiraz Houaida, "Vers des mécanismes de routage robustes et optimisés dans un réseau sans-fil métropolitain et collaboratif", University of Toulouse. Viva in May 2016. **Pascale Minet** reviewer.

- Antonio O. Gonga, "Mobility and Multi-channel Communications in Low-power Wireless Networks", KTH Electrical Engineering, under the supervision of Prof. Mikael Johansson. Viva on 14 January 2016. **Thomas Watteyne** examiner.

10.3. Popularization

10.3.1. Demos

Inria-EVA is working with the Inria-Paris management team to install a permanent demo on the Inria-Paris premises in Q1 2017. Pieces of the same demo have been presented to all people and teams visiting the lab. For example, the high school students from the Lycee Louis-Le-Grand on 1 June 2016.

10.3.2. Videos

The following videos were prepared with the audio/video team of Inria.

1. Interview of **Thomas Watteyne** during the "Nouveaux Arrivants" workshop. To be published.

2. "Save The Peaches" details the Smart Agriculture deployment. Featuring **Thomas Watteyne** and Keoma Brun-Laguna.
   - English version: https://www.youtube.com/watch?v=_qGSH8l0Vkk
   - French version: https://www.youtube.com/watch?v=cZvGw7DyIzI

10.3.3. In the News

1. **Thomas Watteyne** featured in "Experto en IoT realiza webinar con Inria Chile". Inria-Chile newsletter, December 2017.

2. Interview of **Thomas Watteyne**: "In Argentina alone, connected agriculture could have saved 10,000 jobs in one year", Inria Homepage, November 2016.

3. Interview of **Thomas Watteyne** in "La Gazette", the Inria-Paris newsletter, on Smart Agriculture, October 2016.

4. **Thomas Watteyne** featured in "Outcome Report from the US-Europe Invited Workshop on Next-Generation Internet of Things @USC", Inria-SiliconValley Newsletter, 26 July 2016.

5. Keoma Brun-Laguna presented the PEACH project during the annual Math exhibition in Paris, on 28 May 2016.

6. **Thomas Watteyne** featured in "Inria deploys a wireless sensor network in Argentina to save peaches", Inria-Paris homepage, 22 April 2016.

7. **Thomas Watteyne** featured in "Great fun at the OpenWSN & OpenMote tutorial at IEEE GLOBE-COM in San Diego!", Inria-SiliconValley Newsletter, 17 March 2016.

8. **Thomas Watteyne** featured in "6TiSCH cherche à concilier protocole IPv6, réseau radio maillé et performance industrielle", L'embarque, 8 February 2016.

10.3.4. Web Presence & Social Media

- The Inria-EVA team maintains the following websites:
    - https://team.inria.fr/eva/
    - http://www.savethepeaches.com/
    - http://www.snowhow.io/
    - http://www.solsystem.io/
    - http://www.headsup.tech/

- The Inria-EVA team maintains the Twitter accounts:
    - EVA (https://twitter.com/InriaEVA), 180 tweets
    - OpenWSN (https://twitter.com/openWSN), 88 tweets
    - savethepeaches (https://twitter.com/peachesthesave), 73 tweets
    - HeadsUp! (https://twitter.com/heads_up_tech), 28 tweets
    - REALMS team (https://twitter.com/realms_team), 28 tweets
    - SOLsystem (https://twitter.com/S0Lsystem), 16 tweets
    - snowhow (https://twitter.com/snowhow_io), 14 tweets

EX-SITU Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- IHM 2016, *Conférence Francophone d'Interaction Homme-Machine*, Doctoral Consortium Co-Chair: Michel Beaudouin-Lafon, Jury: Wendy Mackay

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- NIME 2016, *New Interfaces for Musical Expression*, Conference Workshop Chair: Joseph Malloch
- ACM/CHI 2016, *Music and HCI*, Conference Workshop Co-Organisers: Wendy Mackay, Joseph Malloch
- ACM/CHI 2016, *Human-Centred Machine Learning*, Conference Workshop Co-Organiser: Wendy Mackay
- ERC CREATIV Workshop *CREATIV*, Conference Workshop Organiser: Wendy Mackay
- MOCO 2016, *International Symposium on Movement and Computing*, Conference Steering Committee member: Sarah Fdili Alaoui

10.1.2.2. Member of the Conference Program Committees

- IEEE VR 2016, *Virtual Reality Conference*: Cédric Fleury
- GI 2016, *Graphics Interface Conference*: Cédric Fleury
- GRAPP 2016, *Conference on Computer Graphics Theory and Applications*: Cédric Fleury
- 3DCVE 2016, *IEEE VR Workshop on Collaborative Virtual Environments*: Cédric Fleury
- CHI 2017, *ACM CHI Conference on Human Factors in Computing Systems*: Michel Beaudouin-Lafon, Wendy Mackay
- CHI 2017, *ACM UIST User Interface Software and Technology*: Wendy Mackay
- MOCO 2016, *International Symposium on Movement and Computing*: Sarah Fdili Alaoui

10.1.2.3. Reviewer

- IJHCS *International Journal on Human-Computer Interaction*: Wendy Mackay
- ACM CSCW 2016 *ACM Conference on Computer-Supported Cooperative Work*: Wendy Mackay
- ACM CHI 2016 *ACM Conference on Human Factors in Computing Systems*: Marianela Ciolfi Felice, Germán Leiva, Oleksandr Zinenko, Ignacio Avellino, Nolwenn Maudet, Joseph Malloch, Theophanis Tsandilas, Michel Beaudouin-Lafon, Wendy Mackay, Sarah Fdili Alaoui
- ACM UIST 2016 *ACM Symposium on User Interface Software and Technology*: Joseph Malloch, Theophanis Tsandilas, Nolwenn Maudet, Ignacio Avellino, Jessalyn Alvina, Cédric Fleury, Michel Beaudouin-Lafon, Wendy Mackay
- UBICOMP 2016, *ACM International Joint Conference on Pervasive and Ubiquitous Computing*: Theophanis Tsandilas
- SIGGRAPH Asia 2016: Theophanis Tsandilas
- ACM MobileHCI 2016, *ACM Conference on Human-Computer Interaction with Mobile Devices and Services*: Jessalyn Alvina

- IEEE 3DUI 2016, *Symposium on 3D User Interfaces*: Cédric Fleury
- IEEE Visualization: Michel Beaudouin-Lafon
- IHM 2016, *Conférence Francophone d'Interaction Homme-Machine*: Cédric Fleury
- WAMCA 2016, *Workshop on Applications for Multi-Core Architectures*: Oleksandr Zinenko
- IMPACT 2016, *International Workshop on Polyhedral Compilation Techniques*: Oleksandr Zinenko
- TEI 2016, *International Conference on Tangible, Embedded and Embodied Interactions*: Sarah Fdili Alaoui
- DIS 2016, *Designing Interactive Systems*: Sarah Fdili Alaoui

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Editor for the Human-Computer Interaction area of the new ACM Books Series (published with Morgan & Claypool Publishers): Michel Beaudouin-Lafon (2013-)
- CACM, *Communications of the ACM Web Editorial Board*, ACM: Wendy Mackay (2008-)
- CACM *Communications of the ACM New Publications Board*, ACM: Wendy Mackay (2015-)
- TOCHI, *Transactions on Computer Human Interaction*, ACM: Michel Beaudouin-Lafon (2009-), Wendy Mackay (2016-)
- JIPS, *Journal d'Interaction Personne-Système*, AFIHM: Michel Beaudouin-Lafon (2009-)
- IJHCS, *International Journal of Human-Computer Study*, Elsevier: Michel Beaudouin-Lafon (Member of the Advisory Board, 2009-)
- JCSCW, *Journal of Computer Supported Cooperative Work*, Springer: Michel Beaudouin-Lafon (Member of the Advisory Board, 2010-)

10.1.3.2. Reviewer - Reviewing Activities

- Computers and Graphics: Theophanis Tsandilas
- TVCG, *Transactions on Visualization and Computer Graphics*, IEEE: Cédric Fleury
- UAIS, Universal Access in the Information Society: Michel Beaudouin-Lafon
- JAISE, Journal of Ambient Intelligence and Smart Environments: Michel Beaudouin-Lafon

10.1.4. Invited Talks

- Beyond Lab: Entre L'Homme et la Machine : Le Défi des Nouvelles Interfaces "*Interaction en Grand*", 8 February 2016: Michel Beaudouin-Lafon
- Beyond Lab: Entre L'Homme et la Machine : Le Défi des Nouvelles Interfaces "*Apprentissage Incrémental de Gestes*", 8 February 2016: Wendy Mackay
- Beyond Lab: Entre L'Homme et la Machine : Le Défi des Nouvelles Interfaces "*Movement Connoisseurship for User eXperience in Digital Art and HCI*", 8 February 2016: Sarah Fdili Alaoui
- Beyond Lab: Entre L'Homme et la Machine : Le Défi des Nouvelles Interfaces "*Papier Interactif pour la Créativité*", 8 February 2016: Theophanis Tsandilas
- FAST (Fusing Audio and Semantic Techologies for Intelligent Music Production and Consumption) Workshop Paris "*Creative Musical Expression with Human-Computer Partnerships*", 15 February 2016: Wendy Mackay
- ENS Cachan Semainaire d'Informatique "*Co-Adaptive Instruments. Can we reinvent the graphical user interface*", 2 March 2016: Wendy Mackay
- Café Techno – Inria Alumni & NUMA, "*Quelles interactions avec le monde numérique de demain ?*", March 2016: Michel Beaudouin-Lafon
- Les Outils du Design, ENSCI, "*Instrumental Interaction*", April 2016: Michel Beaudouin-Lafon

- École Thématique Maths-Info-HPC, Saint-Germain-au-Mont-d'Or, "*Polyhedral Code Transformations via Interactive Visualizations*", 10 May 2016: Oleksandr Zinenko
- Journée d'étude Scénariser la danse par le numérique, Université de Strasbourg "*Étude du mouvement expressif dans les interactions incorporée pour la danse*", 18 May 2016: Sarah Fdili Alaoui
- May Residency of the Moving Stories Project, Simon Fraser University "*Embodied Interaction for dance and tools for supporting choreography*", 28 May 2016: Sarah Fdili Alaoui
- ERC CREATIV Workshop "*Creating Human-Computer Partnerships*", 13 June 2016: Wendy Mackay
- ICCC International Conference on Computational Creativity 2016: ERC Comics Invited Address "*Creating CoAdaptive partnerships*", 29 June 2016: Wendy Mackay
- ENS Paris, "*Polyhedral program transformations via interactive visualization*", 1 June 2016: Oleksandr Zinenko
- ARC Raymond Hains, Ecole Européenne Supérieure Beaux Arts de Rennes, "*Construire et déconstruire les logiciels du design*", 11 octobre 2016: Nolwenn Maudet
- Journée MENESR-EHESS: Coding and computer science in our schools: new ways of learning? "*Entre les enfants et les ordinateurs: Human Computer Interaction*", 11 october 2016: Wendy Mackay
- CM Lab, Tokyo Tech, "*Designing Design Tools*", 20 october 2016: Nolwenn Maudet
- Google Japan, Tokyo, Japan, "*Expressive Keyboards: Expressive Keyboards: Enriching Gesture-Typing on Mobile Devices*", 20 October 2016: Jessalyn Alvina
- Rencontre Inria – Industrie Lille "*Interactions avec les objets ! et services numeriques*", 25 November 2016: Wendy Mackay
- TEDx Saclay, "*Dancing in digital*", 30 November 2016: Sarah Fdili Alaoui
- Rencontres Lurs: "*Droit à l'Erreur*", 25 August 2016: Wendy Mackay
- UniThé ou Café "*Créer des Partenariats Homme-Machine*", 17 November 2016: Wendy Mackay
- Infomuse, Casa Paganini "*Embodied Interaction for dance and tools for supporting choreograph*", 14 Decembre 2016: Sarah Fdili Alaoui

10.1.5. Scientific Expertise

- European Research Council, Panel member for Starting Grants: Michel Beaudouin-Lafon
- CNRS Mission pour l'Interdisciplinarité, Panel member for the call "Sciences Sociales et Cognitives des Comportements Collectifs": Michel Beaudouin-Lafon
- ACM/CHI Best Paper Award Committee "Best Paper Award Committee": Wendy Mackay
- ACM/SIGCHI "Lifetime Service Award Committee": Wendy Mackay

10.1.6. Research Administration

- Computer Science Department, Université Paris-Saclay: Wendy Mackay (member of steering committee)
- CNRS, Conseil Scientifique de l'Institut INS2I: Michel Beaudouin-Lafon (member)
- Telecom ParisTech: Michel Beaudouin-Lafon (member of research committee)
- IRCAM: Michel Beaudouin-Lafon (member of scientific committee)
- "Institut de la Société Numérique", IDEX Laboratory of Université Paris-Saclay: Michel Beaudouin-Lafon (member of steering committee)
- "Conseil de Laboratoire", LRI: Wendy Mackay, Cédric Fleury (members)
- "Conseil Scientifique", LRI: Michel Beaudouin-Lafon (member)
- "Commission Locaux", LRI: Theophanis Tsandilas (member)

- CCSU, "Commission Consultative de Spécialistes de l'Université", Computer Science department: Michel Beaudouin-Lafon, Wendy Mackay (members)
- COERLE "Comité Operationnel d'Evaluation des Risques Légaux et Ethiques", Inria: Wendy Mackay
- CERNI "Comité d'Ethique pour les Recherches Non Interventionnelles", Université Paris-Sud: Wendy Mackay
- "Commission de Développement Technologique", Inria: Theophanis Tsanidlas (member), until April 2016

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Interaction & HCID Masters: Wendy Mackay, *Career Seminar* 21 hrs, M2, Univ. Paris-Sud

Interaction & HCID Masters: Michel Beaudouin-Lafon, *Fundamentals of Human-Computer Interaction*, 21 hrs, M1/M2, Univ. Paris-Sud

Interaction & HCID Masters: Michel Beaudouin-Lafon, Wendy Mackay *Fundamentals of Situated Interaction*, 21 hrs, M1/M2, Univ. Paris-Sud

Interaction & HCID Masters: Wendy Mackay, *Design of Interactive Systems*, 21 hrs, M1/M2, Univ. Paris-Sud

Interaction & HCID Masters: Wendy Mackay, *Advanced Design of Interactive Systems*, 21 hrs, M1/M2, Univ. Paris-Sud

Interaction & HCID Masters: Wendy Mackay, *Business Development Lab* 21 hrs, M1, Univ. Paris-Sud

Interaction & HCID Masters: Michel Beaudouin-Lafon & Cédric Fleury, *Groupware and Collaborative Interaction*, 31.5 hrs, M1/M2, Univ. Paris-Sud

Interaction & HCID Masters: Sarah Fdili Alaoui, *Creative Design*, 21 hrs, M1/M2, Univ. Paris-Sud

Interaction & HCID Masters: Sarah Fdili Alaoui, *Design Project*, 21 hrs, M1/M2, Univ. Paris-Sud

Interaction & HCID Masters: Sarah Fdili Alaoui, *Gesture and Mobile Interaction*, 4 hrs, M1/M2, Univ. Paris-Sud

HCID Masters: Wendy Mackay & Michel Beaudouin-Lafon, *Fundamentals of Situated Interaction*, 21 hrs, M2, Univ. Paris-Sud

Interaction & HCID Masters: Sarah Fdili Alaoui, *Programmation des interfaces interactives avancées*, 15 hrs, L3, Univ. Paris-Sud

Polytech 5th year Apprentices: Sarah Fdili Alaoui, *Informatique Graphique et visualisation*, 12 hrs, M2, Univ. Paris-Sud

Polytech 5th year: Cédric Fleury, *Réalité Virtuelle et Interaction*, 48 hrs, M2, Univ. Paris-Sud

Polytech 3st year: Cédric Fleury, *Interaction Homme-Machine*, 18 hrs, M1, Univ. Paris-Sud

Polytech 3st year: Cédric Fleury, *Projet Java-Graphique-IHM*, 24 hrs, M1, Univ. Paris-Sud

Polytech 1st year: Cédric Fleury, *Introduction à l'Informatique*, 71 hrs, L1, Univ. Paris-Sud

M1 Informatique: Theophanis Tsandilas, *Évaluation des Interfaces*, 2 hrs, M1, Univ. Paris-Sud

10.2.2. Supervision

PhD students

PhD: Oleksandr Zinenko, *Interactive Program Restructuring*, Université Paris-Saclay, 25 November 2016. Advisors: Stéphane Huot (Inria Lille) & Cédric Bastoul (Université de Strasbourg)

PhD: Ghita Jalal, *Supporting visual composition with reified interactive properties*, Université Paris-Saclay, 16 December 2016. Advisor: Wendy Mackay

PhD in progress: Ignacio Avellino, *Remote Collaboration in Large Interactive Spaces*, September 2014. Advisors: Michel Beaudouin-Lafon & Cédric Fleury

PhD in progress: Jessalyn Alvina, *Mobile Co-Adaptive Instruments*, September 2014. Advisor: Wendy Mackay

PhD in progress: Nolwenn Maudet, *Substrates and Co-Adaptive Instruments*, September 2014. Advisors: Wendy Mackay & Michel Beaudouin-Lafon

PhD in progress: Marc-Emmanuel Perrin, *Novel Interaction Models for Multi-surface Visualization*, September 2014. Advisors: Michel Beaudouin-Lafon & James Eagan (Télécom ParisTech)

PhD in progress: Marianela Ciolfi Felice, *Substrates and Co-adaptive Instruments for Creativity*, September 2015. Advisors: Wendy Mackay & Sarah Fdili Alaoui

PhD in progress: Carla Griggio, *Interactive Human-Machine Learning*, September 2015. Advisor: Wendy Mackay

PhD in progress: Germán Leiva, *Interaction-driven Software Development*, September 2015. Advisor: Michel Beaudouin-Lafon

PhD in progress: Wanyu Liu, *Modeling the speed-accuracy trade-off of pointing tasks using the tools of information theory*, October 2015. Advisors: Olivier Rioul (Institut Mines Telecom) & Michel Beaudouin-Lafon

PhD in progress: Yujiro Okuya, *Sensorimotor interface for Collaborative Virtual Environments based on heterogeneous interactive devices: application to industrial design*, October 2015. Advisors: Patrick Bourdot (LIMSI-CNRS) & Cédric Fleury

PhD in progress: Michael Wessely, *Sketching and Physical Prototyping for Creative Fabrication Design*, November 2015. Advisors: Theophanis Tsandilas & Wendy Mackay

PhD in progress: Stacy (Shu-Yuan) Hseuh, *Embodied design for Human-Computer Co-creation*, November 2015. Advisors: Wendy Mackay & Sarah Fdili Alaoui

PhD in progress: Philip Tchernavskij, *Towards Unified Principles of Interaction*, October 2016. Advisor: Michel Beaudouin-Lafon

Masters students

Brennan Jones, University of Calgary, "Physical and virtual avatars for telepresence and remote collaboration": Ignacio Avellino, Cédric Fleury & Michel Beaudouin-Lafon

Francesco Vitale, Université Paris-Saclay, "Field study of operating systems upgrades": Joanna McGrenere, Wendy Mackay

Dimitri Belopopsky, Université Paris-Saclay, "La Grande Vitrine des Choses": Michel Beaudouin-Lafon, Wendy Mackay, Joseph Malloch

Sruthi Coimbatore Viswanathan, Université Paris-Saclay, "Touch Keyboard with Haptic Feedback": Michel Beaudouin-Lafon

Iva Karabatic, Université Paris-Saclay, "Chord input on a digital whiteboard": Wendy Mackay, Michel Beaudouin-Lafon

Diana Lipcanu, Université Paris-Saclay, "The Inteaction Musuem": Wendy Mackay, Michel Beaudouin-Lafon

Isha Van Baar, Université Paris-Saclay, "The Inteaction Musuem": Wendy Mackay, Michel Beaudouin-Lafon

Nam Giang, Université Paris-Saclay, "Interactive Video Preview Playlist": Wendy Mackay, Carla Griggio

Midas Nouwens, Université Paris-Saclay, "Communication Appliances to Support Communication for Distributed Families": Wendy Mackay, Carla Griggio

Pierre Mahe, IRCAM, "EMBRACe Expressive Movement Body fRAmework and Computing": Sarah Fdili Alaoui

Niels Mourette, IRCAM, "The augmented body from within": Sarah Fdili Alaoui

Shu-Yuan Hsueh, IRCAM & ENSCII, "Dynamic Guides for Embodied Interactiob": Wendy Mackay, Sarah Fdili Alaoui

Philip Tchernavskij, University of Aarhus, "Information Substrates for Asymmetrical Collaboration": Wendy Mackay, Michel Beaudouin-Lafon

10.2.3. Juries

Mathieu Le Goc, Inria Saclay, December 2016 (Advisor: Jean-Daniel Fekete): Michel Beaudouin-Lafon, President.

Alex Goguey, Inria Lille, October 2016 (Advisor: Géry Casiez): Michel Beaudouin-Lafon, reviewer.

Andéol Evain, IRISA, December 2016 (Advisor: Anatole Lécuyer): Michel Beaudouin-Lafon, reviewer.

Emiline Brulé, Télécom Paris, 6 June 2016 (Advisor: Annie Gentes): Wendy Mackay, reviewer.

10.3. Popularization

Organisation d'une Journée d'étude, 15 April 2016 @ ENSCI *La fabrique des outils, concevoir et pratiquer les logiciels de design*: Nolwenn Maudet

BeyondLab, 10 February 2016 *Meet-up sur les nouvelles interfaces*: Sarah Fdili Alaoui, Michel Beaudouin-Lafon, Wendy Mackay, and Theophanis Tsandilas

Inria Rencontres Industrielles 2016, "*Expressive Keyboards: Enriching Gesture-Typing on Mobile Devices*", 25 November 2016: Jessalyn Alvina, Wendy Mackay

Inria Rencontres Industrielles 2016, "*StickyLines: Reifying Alignment and Distribution of Graphical Objects*", 25 November 2016: Michel Beaudouin-Lafon, Wendy Mackay

ACM UIST Demonstration, "*Expressive Keyboards*", Jessalyn Alvina

ACM UIST Demonstration, "*StickyLines*", Marianela Ciolfi

ACM UIST Demonstration, "*Stretchis*", Michael Wessely

ACM UIST Demonstration, "*UIST Video Playlist*", Carla Griggio

ACM "*HCI Pioneers*", Michel Beaudouin-Lafon, Wendy Mackay

<p style="text-align: center; color: red;">**EXMO Project-Team**</p>

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. Member of the Organizing Committees

- Jérôme Euzenat was organiser of the 11th Ontology matching workshop of the 15th ISWC, Kobe (JP), 2016 (with Pavel Shvaiko, Ernesto Jiménez Ruiz, Michele Cheatham, Oktie Hassanzadeh and Ryutaro Ichise),

8.1.2. Scientific Events Selection

8.1.2.1. Member of Conference Program Committees

- Manuel Atencia, Jérôme David and Jérôme Euzenat have been programme committee members of the conference "European conference on artificial intelligence (ECAI)" 2016
- Jérôme Euzenat was programme committee member of the "International conference on Knowledge Representation and Reasoning (KR)" 2016
- Manuel Atencia and Jérôme Euzenat have been programme committee members of the "International semantic web conference (ISWC)" 2016
- Manuel Atencia, Jérôme David and Jérôme Euzenat have been programme committee members of the "European Semantic Web Conference (ESWC)" 2016
- Jérôme Euzenat was programme committee member of the "International Conference on Formal Ontologies for Information Systems (FOIS)" 2016
- Jérôme Euzenat was programme committee member of the "International Conference on Conceptual Structures (ICCS)" 2016
- Jérôme Euzenat was programme committee member of the "International Conference on Web Information Systems and Technologies (WebIST)" 2016
- Tatiana Lesnikova and Jérôme Euzenat have been scientific committee member of the "Language resources and evaluation conference (LREC)" 2016
- Jérôme Euzenat was programme committee member of the "French fundamental artificial intelligence days" (JAIF) 2016
- Jérôme David was programme committee member of the ISWC "Ontology matching" workshop (OM) 2016
- Jérôme David was programme committee member of the EGC workshop on "quality of linked open data" (QLOD) 2016
- Jérôme Euzenat was programme committee member of the ESWC workshop on "Completing and Debugging the Semantic Web (CoDeS)", 2016.
- Jérôme Euzenat was programme committee member of the ECAI workshop on "Diversity-aware artificial intelligence", 2016.

8.1.2.2. Reviewer

- Jérôme David and Tatiana Lesnikova have been a reviewer for the 15th "International Semantic Web Conference (ISWC)", 2016.

8.1.3. Journal

8.1.3.1. Member of the Editorial Boards

- Jérôme Euzenat is member of the editorial board of *Journal of web semantics* (area editor), *Journal on data semantics* and the *Semantic web journal*.

8.1.3.2. Reviewer - Reviewing Activities

- Manuel Atencia has been reviewer for *Semantic web journal* and *ACM transactions on database systems*.
- Jérôme David has been reviewer for *Artificial intelligence review* and *Semantic web journal*.
- Jérôme Euzenat has been reviewer for *IEEE transactions on knowledge and data engineering*, *Knowledge and information systems* and *Artificial intelligence review*.

8.1.4. Invited Talks

- "Extraction de clés de liage de données", Invited talk, 16e conférence internationale francophone sur l'extraction et la gestion des connaissances (EGC), Reims (FR), 2016-01-21 (Jérôme Euzenat).
- Series of four seminars at UniRio, Rio de Janeiro (BR): "Introduction to ontology matching and alignment" 2016-03-11, "Repairing alignments and cultural evolution" 2016-03-17, "Data link key extraction (and relation with Formal concepts analysis)" 2016-03-22, "(Belief) revision in networks of ontologies" 2016-03-30 (Jérôme Euzenat).
- "Introduction to ontology matching and alignment", Seminar IBM Research, Rio de Janeiro (BR), 2016-03-23 (Jérôme Euzenat).
- "Semantic web evolution: tectonic quake or gentle drift?", Invited talk, 12th International Conference on Web Information Systems and Technologies (WebIST), Roma (IT), 2016-04-24 (Jérôme Euzenat).
- "Knowledge change, failure, adaptation, and evolution", Invited talk, 2nd Joint ontology workshops (JOWO), Annecy (FR), 2016-07-06 (Jérôme Euzenat).
- "Data interlinking with formal concept analysis and link keys", Invited talk, 13th international conference on concept lattices and applications (CLA), Moskow (RU), 2016-07-19 (Jérôme Euzenat).
- "Fixing knowledge in the distributed age", Invited tutorial, 10th international conference on scalable uncertainty managament (SUM), Nice (FR), 2016-09-21 (Jérôme Euzenat).

8.1.5. Leadership within the Scientific Community

- Jérôme Euzenat is member of the executive committee and the scientific council of the CNRS Pre-GDR "Artificial intelligence".

8.1.6. Scientific Expertise

- Jérôme David has been consulting for the start-up Budplace.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

8.2.1.1. Responsibilities

- Jérôme David is coordinator, with Véronique Sansonnet, of the Master "Mathematicques et informatiques appliquées aux sciences humaines et sociales" (Univ. Grenoble Alpes);
- Manuel Atencia is coordinator of option "Web, Informatique et Connaissance" of Master M1 "Mathematicques et informatiques appliquées aux sciences humaines et sociales" (Univ. Grenoble Alpes);
- Jérôme Euzenat is, with Sihem Amer-Yahia, coordinator of the "AI and the web" option of the M2R in computer science and applied mathematics (Univ. Grenoble Alpes).

8.2.1.2. Lectures

Licence: Jérôme David, Algorithmique et programmation par objets, 90h, L2 MIASHS, UGA, France

Licence: Jérôme David, Introduction à Python, Licence ESSIG, 24h, UGA, France

Licence: Manuel Atencia, Technologies du Web, LP ESSIG, 18h, UGA, France

Licence: Manuel Atencia, Introduction aux technologies du Web, 60h, L3 MIASHS, UGA, France

Master: Jérôme David, Programmation Java 2, 45h, M1 MIASHS, UGA, France

Master: Jérôme David, Documents XML, 30h, M1 MIASHS, UGA, France

Master: Manuel Atencia, Langages et technologies du Web 2, 21h, M1 MIASHS, UGA, France

Master: Manuel Atencia, Introduction à la programmation web, 30h, M1 MIASHS, UGA, France

Master: Manuel Atencia, Intelligence Artificielle, 7,5h, M1 MIASHS, UGA, France

Master: Jérôme David, JavaEE, 30h, M2 MIASHS, UGA, France

Master: Jérôme David, Développement Web Mobile, 30h, M2 MIASHS, UGA, France

Master: Manuel Atencia, Web Sémantique, 30h, M2 MIASHS, UGA, France

Master: Jérôme Euzenat, Semantic web: from XML to OWL, 23heqTD, M2R, UGA, France

Post-graduate level: Jérôme Euzenat, "Ontology matching", 1h30, Tutorial, 13th international conference on concept lattices and applications (CLA), Moskow (RU), 2016

8.2.2. Supervision

8.2.2.1. PhD

- PhD: Armen Inants, "Qualitative calculi with hererogeneous universes", Univ. Grenoble Alpes, 2016-04-25
- PhD: Tatiana Lesnikova, "RDF data interlinking: evaluation of cross-lingual methods", Univ. Grenoble Alpes, 2016-05-04

8.2.2.2. Master

- MSc: Mashruf Chowdury, Agreement and disagreement between ontologies, M2R Informatics, Univ. Grenoble Alpes, June 2016
- MSc: Irina Dragoste, Ontology evolution through interaction, M2R Informatics, Univ. Grenoble Alpes, September 2016
- MSc: Maroua Gmati, Reasoning with link keys, M2R Informatics, Univ. Grenoble Alpes, June 2016

8.2.3. Juries

- Jérôme Euzenat has been external examiner of the computer science PhD of Filip Radulovic (Universidad Politécnica de Madrid) "RIDER: a recommendation framework for exploiting evaluation results and user quality requirements" supervised by Asunción Gómez-Pérez, 2016
- Manuel Atencia has been external examiner of the computer science PhD of Daniel Vila Suero (Universidad Politécnica de Madrid) "A framework for ontology-based library data generation, access and exploitation" supervised by Asunción Gómez-Pérez and Jorge Gracia del Rio, 2016
- Jérôme Euzenat has been external examiner of the computer science PhD of Damien Graux (Université Grenoble Alpes) "On the efficient distributed evaluation of SPARQL queries" supervised by Nabil Layaïda and Pierre Genevès, 2016

8.3. Popularization

- Jérôme Euzenat gave a training conference in computer science for high-school teachers on "Language and semantics", Inria, Montbonnot (FR), 2016-02-10

FLOWERS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- PY. Oudeyer and M. Lopes have been general co-chair of Second Interdisciplinary Symposium on Information Seeking, Curiosity and Attention (Neurocuriosity 2016), London, UK (150 participants). https://goo.gl/BYL0h4

- D. Roy has been general chair of the colloquium "Robotique et Education" in Bordeaux, june 2016, http://dm1r.fr/colloque-robotique-education/.

10.1.1.2. Member of the Organizing Committees

- Manuel Lopes co-organized the R:SS 2016 workshop on Bootstrapping Manipulation Skills 06.2016 http://www.bootstrapping-manipulation.com/

- Alexander Gepperth co-organized a special session ("Incremental learning algorithms and application") on ESANN 2016, together with Barbara Hammer of Bielefled university (Germany).

- PY. Oudeyer has been member of the steering committee of the IEEE ICDL-Epirob conference.

- PY. Oudeyer has been member of the steering committee of the fOSSa conference.

- PY. Oudeyer has been "Robotics Liaison" of IJCNN 2017, Anchorage, Alaska.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- David Filliat was Associate Editor for IROS.

- PY. Oudeyer has been member of the PC committee of IEEE ICDL-Epirob 2016.

- Alexander Gepperth was member of the program committe for IJCNN 2016, ECAI 2016 and ESANN 2016.

10.1.2.2. Reviewer

- David Filliat was reviewer for the IFAC, IV, RFIA, ICRA conferences.

- Sébastien Forestier was reviewer for IEEE ICDL-Epirob

- Manuel Lopes was reviewer for IEEE IROS, IEEE ICDL-EPIROB, IEEE ICRA, IJCAI, NIPS

- Thibaut Munzer was reviewer for IEEE IJCAI.

- Baptiste Busch reviewer for IEEE RO-MAN.

- PY. Oudeyer has been a reviewer for the conferences IEEE ICDL-Epirob and Humanoids 2016.

- Alexander Gepperth was reviewer for ESANN 2016, IJCNN2016, IEEE Symposium on Intelligent Vehicles (IV) and ECAI 2016

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- PY. Oudeyer has been editor of IEEE CIS Newsletter on Cognitive and Developmental Systems: https://openlab-flowers.inria.fr/t/ieee-cis-newsletter-on-cognitive-and-developmental-systems/129

- PY. Oudeyer has been associate editor of IEEE Transactions on Cognitive and Developmental Systems

- PY Oudeyer has been associate editor of Robotics and Automation Letters (RA-L).
- PY. Oudeyer has been associate editor of Frontiers in Neurorobotics and Frontiers in Humanoid Robotics.
- PY. Oudeyer has been Associate editor of International Journal of Social Robotics (Springer).

10.1.3.2. Reviewer - Reviewing Activities

- David Filliat was reviewer for Journal of Intelligent Service Robotics.
- Alexander Gepperth was reviewer IEEE Transactions on Intelligent Transportation Systems
- Anna-Lisa Vollmer was reviewer for Frontiers in Robotics and AI and IEEE Transactions on Cognitive and Developmental Systems.
- PY. Oudeyer has been a reviewer for the Robotics and Automation Magazine, the Journal of Language Evolution.

10.1.4. Invited Talks

- David Filliat gave an invited presentation "Apprentissage pour les vehicules intelligents et la robotique developpementale" during the workshop "Intelligence Artificielle et Véhicule à Conduite Deleguee" organized by VEDECOM on september 28th.
- PY. Oudeyer, "Open-source art/science with Poppy Project", 15th january, Journée ECARTS, Univ. Bordeaux.
- PY. Oudeyer, "Mondes Mosaiques", Librairie Mollat, 2 février, Bordeaux.
- PY. Oudeyer, "Self-organization and active learning of language", 21 mars, Lattice, ENS Paris.
- PY. Oudeyer, "Intelligence artificielle et robotique", 21 mars, Grand Palais, Paris.
- PY. Oudeyer, "Intelligene artificielle et philosophie", 20 mai, Bordeaux.
- PY Oudeyer, "How robotic modelling can help us understand complex dynamics in development", 22 may, Views by Two keynote, International Conference on Infant Studies, New-Orleans.
- PY. Oudeyer, "Robotique éducative: les projets de l'équipe Flowers", Colloque Robotique et Education, Bordeaux.
- PY. Oudeyer, "Curiosity, exploration and learning in humans and machines", 9 july, ISSAS Summer School, Geneva, Switzerland.
- PY. Oudeyer, "How robotic modelling can help us understand complex dynamics in language and sensorimotor development", 9th september, Creativity and Evolution Summer School, Como, Italy.
- PY. Oudeyer, "Comment la modélisation robotique aide à comprendre la dynamique du développement de l'enfant", 18 septembre, Colloque Biologie et Information, Cerisy, France.
- PY. Oudeyer, "Active exploration for lifelong developmental learning in humans and machines: intrinsic motivation, maturation and social guidance", 5th october, Google Deepmind seminar, London, UK.
- PY. Oudeyer, "Diverstiy of forms and developmental functions of curiosity-driven exploration", 8th october, London UK.
- PY. Oudeyer, "Intelligence artificielle et humain", Entretiens de la Cité, 5th november, Lyon, France.
- PY. Oudeyer, "Artificial intelligence and robotics: scientific, technological and societal challanges", 8th november, Académie des Technologies, Paris, France.
- PY. Oudeyer, "From fundamental research in models of human learning to educational applications", 16th november, Journée Learning Lab, Paris, France.
- PY. Oudeyer, "Diverstiy of forms and developmental functions of curiosity-driven exploration", 17th november, Journée GdR Robotique et Neuroscience, Bordeaux.
- PY. Oudeyer, "Machine learning and robotics", 5th december, Technion ConnectedWorld conference, Paris.

10.1.5. Leadership within the Scientific Community

PY. Oudeyer has been chair of IEEE Computational Intelligence Society technical committee on cognitive and developmental systems (10 task forces, 65 members); The activities of the TC are described at: https://openlab-flowers.inria.fr/t/ieee-cis-tc-on-cognitive-and-developmental-systems/41

10.1.6. Scientific Expertise

- M Lopes was expert for the EU Commission scientific programme.
- PY. Oudeyer has been an expert for the European Commission, the Polish National Research Agency, and the Swedish National Research Agency.
- PY. Oudeyer has been expert for Main à la Pâte for the textbook project "1, 2, 3: Codez!" to teach computer science in primary schools.
- PY. Oudeyer has been expert for Académie des Technologies and OPECST on artificial intelligence and its interaction with society.

10.1.7. Research Administration

PY. Oudeyer has been scientific responsible of Inria-Ensta-ParisTech EPC.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: Robotique Developmental et Cognitive, 35 heures, Nantes, (Manuel Lopes et PY Oudeyer)

Master: Robotique Developmental et Cognitive, 35 heures, Universite de Bordeux, (Manuel Lopes et PY Oudeyer)

License: Inteligencia Artificial, 90 heures, Instituto Superior Tecnico, Lisboa, (Manuel Lopes)

License: Introduction to Matlab, 21 heures. L3, ENSTA - ParisTech (David Filliat).

Master: Robotique Mobile, 21 heures. M2, ENSTA - ParisTech (David Filliat).

Master: Perception pour la Robotique, 6 heures. M2, ENSTA - ParisTech (David Filliat).

Master: Perception pour la robotique, 12 heures. M2 Systemes Avances et Robotique, University Pierre et Marie Curie (David Filliat)

Master: Perception pour la Robotique Développementale, 3 hours, CogMaster (David Filliat)

Licence Informatique, 64h Bordeaux University (Sébastien Forestier)

PY. Oudeyer taught a course on "Robotic modelling of cognitive development" at ENS Rennes, 12 h

PY. Oudeyer taught a course on "Robotic modelling of cognitive development" at Enseirb, 2 h

PY. Oudeyer taught a course on "Robotic modelling of cognitive development" at CogMaster, Paris, 3 h

PY. Oudeyer taught a course on "Developmental and cognitive robotics" at Univ. Mons, Belgium, 3h

PY. Oudeyer coordinated the project Poppy Education, which has developped several educational robotics kits for computer science education in high-schools

Continuing education: Robotics for education, 30 h, EPFL (Didier Roy)

10.2.2. Supervision

PhD in progress: Sébastien Forestier, Models of curiosity-driven learning of tool use and speech development, started in sept. 2015 (superv. P-Y. Oudeyer)

PhD in progress: William Schueller, Study of the impact of active learning and teaching in naming games dynamics, started in sept. 2015 (superv. P-Y. Oudeyer)

PhD in progress: Alvaro Ovalle-Castaneda, Computational models of intrinsically motivated learning and exploraiton, started in oct. 2016 (superv. P-Y. Oudeyer)

PhD in progress: Thibault Desprez, Design and study of the impact of educational robotic kits in computer science education, started in dec. 2016 (superv. P-Y. Oudeyer)

PY. Oudeyer supervised three master thesis internship: Thibault Desprez (M2, educational robotics), Marie Demangeat (M2, educational robotics), Sébastien Mick (M2, design and study of robotic prosthesis)

PY. Oudeyer supervised a team of computer and pedagogical engineers and researchers for the project Poppy Education (Didier Roy, Stéphanie Noirpoudre, Théo Segonds, Damien Caselli, Nicolas Rabault, Matthieu Lapeure)

PhD in progress: Thomas Hecht, Bio-inspired sensor fusion, started November 2013 (superv. Alexander Gepperth).

PhD : Egor Sattarov, Multimodal vehicle perception architecture, Université Paris-Saclay, 9/12/2016 (co-superv. Alexander Gepperth).

PhD : Thomas Kopinski, Machine Learning for human-machine interaction, Université Paris-Saclay, ENSTA ParisTech, 12/02/2016 (superv. Alexander Gepperth).

PhD in progress: Benjamin Clement, Intelligent Tutoring Systems, started oct 2015 (superv. Manuel Lopes and Pierre-Yves Oudeyer).

PhD in progress: Thibaut Munzer, Learning from Instruction, started oct 2013 (superv. Manuel Lopes).

PhD in progress: Baptiste Busch, Interactive Learning, started oct 2014 (superv. Manuel Lopes).

PhD in progress: Alexandra Delmas, Auto-Apprentissage Auto-Adaptable pour la compliance au traitement, started oct 2014 (superv. Manuel Lopes).

PhD : Alexandre Armand, Situation Understanding and Risk Assessment Framework for Preventive Driver Assistance, Université Paris-Saclay, ENSTA ParisTech, 31/05/2016, superv. David Filliat, Javier Ibanez-Guzmann

PhD in progress: Yuxin Chen, Interactive learning of objects and names on a humanoid robot, started oct. 2013 (superv. David Filliat).

PhD in progress: Celine Craye, Curiosity and visual attention for the guidance of an exploration robot, started apr. 2014 (superv. David Filliat).

PhD in progress: Adrien Matricon : Task dependent visual feature selection for optimising and generalizing robotics skills (superv. David Filliat, Pierre-Yves Oudeyer).

PhD in progress: José Magno Mendes Filho, Planning and control of an autonomous AGV in environment shared with humans, started Oct. 2015 (superv. David Filliat and Eric Lucet (CEA))

PhD in progress: Joris Guery, Domain adaptation for visual object recognition, started Oct. 2014 (superv. David Filliat and Bertrand Le Saulx (ONERA))

HdR :Alexander Gepperth, New learning paradigms for real-world environment perception, université Pièrre et Marie Curie, 27/6/2016

10.2.3. Juries

Manuel Lopes was in the jury of Ben-Manson Toussaint (2016), Modeling Perceptual-Gestural Knowledge for Intelligent Tutoring Systems, supervised by Vanda Luengo, University of Grenoble, France

David Filliat was in the jury of Isabelle Leang (15/12/2016, Rapporteur) : Fusion en ligne d'algorithmes de suivi visuel d'objet

David Filliat was in the jury of Egor Sattarov (09/12/2016, Examinateur) : Etude et quantification de la contribution des systèmes de perception multimodale assistés par des informations de contexte pour la détection et le suivi d'objets dynamiques

Alexander Gepperth was in the jury of Egor Sattarov (09/12/2016, Examinateur) : Etude et quantification de la contribution des systèmes de perception multimodale assistés par des informations de contexte pour la détection et le suivi d'objets dynamiques

Alexander Gepperth was in the jury of Thomas Kopinski (12/2/2016, Examinateur) : Machine learning method for human-machine interaction

David Filliat was in the jury of Fabrice Mayran de Chamiso (18/11/2016, Examinateur) : Navigation exploratoire au long de la vie une approche intégrant planification, navigation, cartographie et localisation pour des robots mobiles disposant de ressources finies

David Filliat was in the jury of Chunlei Yu (15/09/2016, Examinateur) : Contribution to evidential models for perception grids Application to intelligent vehicle navigation

David Filliat was in the jury of Hendry Ferreira Chame (10/01/2016, Rapporteur) : Egocentric Representations for Autonomous Navigation of Humanoid Robots

PY. Oudeyer was a member of the PhD juries of Maxime Carrere (Combiner les apprentissages motivés et associatifs, Univ. Bordeaux), Remi Fresnoy (Modélisation de l'activité gestuelle et sélection automatique de feedback pour des environnements interactifs d'apprentissage : application à la calligraphie, UTC Compiègne), Raphaël Rose-Andrieux (Modèle probabiliste hiérarchique de la locomotion bipède).

PY. Oudeyer was a member of the HdR of Alexander Gepperth, "New learning paradigms for real-world environment perception", Ensta ParisTech, Paris.

PY. Oudeyer was a member of the jury for selecting ENS Rennes (France) PhD grants.

10.3. Popularization

10.3.1. Poppy Education

10.3.1.1. Events participation

January 2016, Observation Sequence for students from middle-school (Inria Bordeaux Sud-Ouest): S. Noirpoudre, T. Desprez, M. Demangeat, T. Laine) - We welcomed 5 students from middle-school (14 years old) during a week to discover the working environment and to introduce them to robotics

January 2016, Robot makers'day (Talence): S. Noirpoudre, D. Caselli, T. Desprez - Exhibition stand to show the projet Poppy Education and Poppy robots

January 2016, Training day at Espe de Bordeaux (Ecole supérieure du professorat et de l'éducation): D. Roy, S. Noirpoudre, T. Desprez, M. Demangeat) - Train a group of teachers initiate in programmation with the language visual Snap! and to robotics with Poppy Ergo Jr)

January 2016, Robots day (Multimedia library of Talence): P. Rouanet, T. Segonds - Programming workshop with Poppy torso robot

January 2016, Robots day (Multimedia library of Talence): P. Rouanet - A talk to present the platform robotics Poppy through science, art and education.

January 2016, Symposium Didastic-Didapro (Namur): D. Roy - Talk to present Poppy Education

January 2016, Eidos 2016 event (Dax): S. Noirpoudre - A talk to present Poppy Education

March 2016, Education exhibition Educatice-Educatec (Paris) : S. Noirpoudre, D. Roy - Exhinibition stand to present the robotics platforme Poppy and the use in Education (Poppy Education)

March 2016, Training day at Espe de Bordeaux (Ecole supérieure du professorat et de l'éducation): T. Desprez - Train a group of teachers in Snap!

March 2016, SNCEEL (organisation professionnelle de chefs d'établissement d'enseignement libre), Journées Collèges event (Paris), T. Desprez - Talk to present Poppy project and the pedagogical activities

April 2016, Connect thouars event (Talence): T. Desprez, S. Noirpoudre, M. Demangeat - Exhibition stand to present the project Poppy Education and workshop animation for kids (programming of Ergo in Snap!)

April 2016, Rob'o d'Evian: D. Roy (Evian) - Talk to present Poppy Education

May 2016, Robotics and Education days (ENS Lyon): D. Roy, S. Noirpoudre - Talk to present Poppy project and the pedagogical activities

May 2016, Bordeaux Geek Festival (Bordeaux): M. Demangeat, T. Desprez - Exhibition stand to show/present the robotics platform Poppy

May 2016, Forum des Nouvelles Initiatives de Médiation Scientifique (Bordeaux): D. Roy - Talk to present the project Poppy Education

May 2016, Forum des Nouvelles Initiatives de Médiation Scientifique (Bordeaux): T. Desprez, S. Noirpoudre - Exhibition stand to present the project Poppy Education and show the robots (real demonstrations) and pedagogical activities

May 2016, Visit of teachers of Espe Aquitaine (Inria - Bordeaux Surd-Ouest): S. Noirpoudre, D. Roy - Visit of the research center and presentation of Poppy Education project and to the robotic kits (25 teachers)

June 2016, Symposium Education and Robotics (Talence): D. Roy, T. Desprez - Talk to present Poppy Education project (purpose, pedagogical activities and the results)

June 2016, Symposium Education and Robotics (Talence): S. Noirpoudre - Exhibition stand to show Poppy Education project (demonstrations)

August 2016, Université d'été Ludovia (Ax-les-Thermes): P. Rouanet, M. Demangeat - Exhibition stand Poppy Education during 3 days in partnership with l'Académie de Bordeaux

August 2016, Université d'été Ludovia (Ax-les-Thermes): D. Roy, P. Rouanet, M. Demangeat - Workshop / presentation / demonstration of Poppy Education as part of the ExplorCamps.

October 2016, Coding Pi Science Day (CERN close to Geneva): S. Noirpoudre, T. Segonds - Conference to present the pedagogical robotic kit Poppy Ergo Jr

October 2016, Coding Pi Science Day (CERN close to Geneva): S. Noirpoudre, T. Segonds - Robotics workshop, one day to build and program a robot (30 participants)

October 2016, Fête de la science (Inria Bordeaux Sud-Ouest): S. Noirpoudre - 8 programming workshop in 2 days (with middle school students) using Snap! and the robot Poppy Ergo Jr

November 2016, Erasmus project "ICT WORLD : Imaging, Coding, Transforming and Modeling the World" (Inria Bordeaux Sud-Ouest): S. Noirpoudre, programming workshop using Snap! and the robot Poppy Ergo Jr (35 students and 14 teachers)

Novembre 2016, Inria Learning Lab (Paris): D. Roy - Presentation of Poppy Education

December 2016, Observation Sequence for Grade 3 Students (Inria Bordeaux Sud-Ouest): S. Noirpoudre, T. Desprez) - We welcomed 2 students from middle-school during a week to discover the working environment and to introduce them to robotics

10.3.1.2. Training and meeting

- January 2016, Meeting with teachers partners of the Poppy Education: Poppy Education project team - Talking about pedagogical activities and robots availabilities

- March 2016, Meeting with teachers partners of Poppy Education, Poppy Education project Team - Feedback and presentations on pedagogical activities and the use of robots in the classroom

- May 2016, Meeting with teachers partners of Poppy Education, Poppy Education project team - Feedback on pedagogical activities and the use of robots in the classroom

- May 2016, Train Inria workers (from scientific mediation), S. Noirpoudre - Learn how to present the Poppy project

- June 2016, Train Canope 33 workers, S. Noirpoudre - Programming the robot Ergo Jr using Snap!

- October 2016, Meeting with teachers partners of the Poppy Education project: Poppy Education project team - Presentation of the progress of the year and presentations of pedagogical activities

- November 2016, Train new teachers partners of Poppy Education: S. Noirpoudre - Building and programming the robot Poppy Ergo Jr

10.3.2. Inirobot

10.3.2.1. Events participation

January 2016, Training day at Espe de Bordeaux (Ecole supérieure du professorat et de l'éducation): D. Roy, S. Noirpoudre, T. Desprez, M. Demangeat) - Train a group of teachers initiate in programmation with the Inirobot kit.

January 2016, Symposium Didastic-Didapro (Namur): D. Roy - Talk to present Inirobot kit.

March 2016, Education exhibition Educatice-Educatec (Paris) : S. Noirpoudre, D. Roy - Exhinibition stand to present the robotics kit Inirobot.

March 2016, SNCEEL (organisation professionnelle de chefs d'établissement d'enseignement libre), Journées Collèges event (Paris), T. Desprez - Talk to present Inirobot kit.

April 2016, Rob'o d'Evian: D. Roy (Evian) - Talk to present Inirobot kit.

May 2016, Robotics and Education days (ENS Lyon): D. Roy, S. Noirpoudre - Talk to present Inirobot kit.

May 2016, Forum des Nouvelles Initiatives de Médiation Scientifique (Bordeaux): D. Roy - Talk to present inirobot kit.

June 2016, Symposium Education and Robotics (Talence): D. Roy - Talk to present Inirobot kit.

August 2016, Université d'été Ludovia (Ax-les-Thermes): P. Rouanet, M. Demangeat - Exhibition stand Inirobot during 3 days in partnership with l'Académie de Bordeaux

August 2016, Université d'été Ludovia (Ax-les-Thermes): D. Roy, P. Rouanet - Workshop / presentation / demonstration of Inirobot kit as part of the ExplorCamps.

August 2016, Université d'été Ludovia (Ax-les-Thermes): D. Roy wins Ludovia Prize. http://ludovia.org/2016/coups-de-coeur-de-ludovia/

September 2016, Colloque sur les contenus périscolaires (Artigues-près-Bordeaux): D. Roy - inirobot (organized by Senator Françoise Cartron)

October 2016, Journées APMEP (Lyon): J. Rivet, G. Lassus, members of Poppy Education teachers team - workshops on Inirobot and Poppy Education, organized by D. Roy

October 2016, Journées APMEP (Lyon): D. Roy wins Hoquenghem Prize. https://www.inria.fr/centre/bordeaux/actualites/didier-roy-recoit-le-prix-serge-hocquenghem

Novembre 2016, Inria Learning Lab (Paris): D. Roy - Presentation of Inirobot kit.

10.3.2.2. Training and meeting

- Février 2016, French Senat (Paris), audition by Senator Françoise Cartron for educational activities : D. Roy - presentation / demonstration of Inirobot kit .
- October 2016, Robotics for education Training week "Graines de sciences": D. Roy (Fondation "La Main à la Pâte", Marseille CIRM)

10.3.3. KidBreath

February 11th 2016, 2nd Meeting for Aquitaine and Euskadi companies in Biology and Health: A. Delmas - Poster presentation of KidBreath project.

September 16th to 18th 2016, Hackathon of innovation in pulmonary diseases Respirhacktion: A. Delmas - Oral presentation and project development in hackathon.

October 5th to 7th 2016, 5th Conference in Health Ergonomics and Patient Safety: A. Delmas - Poster presentation of KidBreath project [102],

November 16th 2016, Learning Lab day: A. Delmas, B. Clément, P-Y. Oudeyer, D. Roy - Oral presentation of Flowers projects linked to Education.

December 2nd to 3rd 2016, 5th edition of Serious Games in Medicine Conference: A. Delmas - Oral presentation of KidBreath project

10.3.4. Other

PY Oudeyer wrote popular science articles about computer science, artificial intelligence and robotics, and gave several interviews in the general press and at radio and TV programs: see http://www.pyoudeyer.com/popular-science/ and http://www.pyoudeyer.com/press/ and has been maintaining a youtube channel showing popular science videos https://www.youtube.com/channel/UC7QuDF8AaE6mqEM9W_S30RA/featured

D. Roy is co-organiser of R2T2 International Mission with EPFL and ESPE Martinique: Remote Robotics programming with children. https://www.thymio.org/en:thymio-r2t2

<div align="center" style="color:red">**FLUMINANCE Project-Team**</div>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- J. Erhel organizes with J-R. de Dreuzy and T. Le Borgne the international conference CWMR (Saint-Malo, France, June 2018).

9.1.1.2. Member of the Organizing Committees

Etienne Mémin

- SWGEN (Vannes) program committee
- Scientific committee of the national colloqium on data assimilation, (Grenoble)

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

Jocelyne Erhel

- international advisory committee of the parallel CFD conferences (Kobe, Japan, May 2016).
- program committee of the international conference CARI 2016.
- scientific committee of JEMP 2016.
- scientific committee of NLAA 2016.
- program committee of the workshop Visualization in Environmental Sciences 2016 (co-event of EuroVis)

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Jocelyne Erhel

- member of the editorial board of ETNA.
- member of the editorial board of ESAIM:Proceedings and Surveys.

Etienne Mémin

- Associate editor for the Int. Journal of Computer Vision (IJCV)
- Associate editor for the Image and Vision Computing Journal (IVC)

9.1.3.2. Reviewer - Reviewing Activities

Jocelyne Erhel: Reviewer for the journals ADWR, ARIMA, JCAM, MATCOM
Dominique Heitz: Reviewer for Exp. in Fluids, ASME J. on Heat Transfer
Cédric Herzet: Reviewer for IEEE Tr. on Signal Processing, IEEE Tr. on Information Theory
Etienne Mémin: Reviewer for Tellus-A, IEEE Im. Proc., IEEE trans. Pat. Anal. Mach. Intel. , Im. Vis. Comp.,
Exp. in Fluids, Nonlinear Proc. in Geophysics., Journ. of Comp. Phys, Fluid Dynamics Research.

9.1.4. Invited Talks

Dominique Heitz

- Next generation transport aircraft workshop, Honolulu, Hawai, 22-25, February, 2016.
- Cap Aliment training "Les technologies douces de conservation des denrées alimentaires", Nantes, 13, October, 2016. Assisses du Génie des Procédés, région OUEST - Nantes, 9, november, 2016

Cédric Herzet

- GdR Isis « Algorithmes gloutons pour l'optimisation sous contrainte de parcimonie », Juin 2016

Roger Lewandowski

- Special Session on Above and Beyond Fluid Flow studies: In celebration of the 60th birthday of Prof. William Layton » within the Fall Western Sectional Meeting of the AMS, University of Denver, Denver, CO October 8-9, 2016.

Etienne Mémin

- E. Mémin. Représentation sous incertitude d'écoulements géophysiques, Huitième Ecole Interdisciplinaire de Rennes sur les Systèmes Complexes, Oct. 2016.

9.1.5. Leadership within the Scientific Community

- J. Erhel is scientific coordinator of the website Interstices (since June 2012). https://interstices.info.

9.1.6. Scientific Expertise

- J. Erhel is a member of the scientific council of IFPEN, since April 2016.
- J. Erhel was reviewer for ANR.

9.1.7. Research Administration

Jocelyne Erhel

- correspondent of Maison de la Simulation for Inria Rennes.
- correspondent of AMIES for Inria Rennes, from September 2015.
- member of the Inria national committee for secondment, 2016.
- member of the Inria local committee for health and safety (référent chercheur) from January 2016.
- member of the Inria administrative commission (CAP) for researchers, from January 2016.

Dominique Heitz

- Responsible of the Irstea ACTA Team
- Member of Pôle Cristal scientific council
- Member of Irstea OPAALE research unit Executive Committee
- Member of Irstea center of Rennes Executive Committee

Etienne Mémin

- Responsible of the "Commission Développement Technologique" Inria Rennes
- Member of the "Commission Personnel" Inria-IRISA Rennes

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Jocelyne Erhel, Optimisation, 24h, niveau L3, ENSAI Rennes

Licence : Dominique Heitz, Mécanique des fluides, 30h, niveau L2 INSA Rennes

Master: Jocelyne Erhel, modélisation et calcul scientifique, 12h, niveau M2, INSA Rennes

Master: Jocelyne Erhel, arithmétique flottante, 4h, niveau M1, INSA Rennes

Master : Dominique Heitz, Mécanique des fluides, 25h, niveau M1, Dep GMA INSA Rennes

Master : Cédric Herzet, Représentations parcimonieuses et compressed sensing, niveau M2, ENSAI, 12h

Master : Cédric Herzet, Représentations parcimonieuses et compressed sensing, niveau M2, niveau M2, INSA, 10h

Master: Roger Lewandowski, Euler and the Navier-Stokes equations, M2, master « fondamental mathematics ».

Master : Etienne Mémin, Analyse du mouvement, Mastere Informatique, 15h, niveau M2, Université de Rennes 1.

Master : Etienne Mémin, Vision par ordinateur , 15h, niveau M2, ESIR Université de Rennes 1.

9.2.2. *Supervision*

Master research work: C. Bonvoisin (ENS Cachan) February 2016 to June 2016, advisor R. Lewandowski

PhD in progress: B. Delfino, University of Rennes 1, November 2015, co-advisors J.-R. de Dreuzy and J. Erhel.

PhD in progress: P.-M. Gibert, University of Lyon, October 2015, co-advisors D. Tromeur-Dervout and J. Erhel.

PhD in progress: B. Hamlat, University of Rennes 1, October 2016, co-advisors J. Erhel and A. Michel.

PhD in progress : Benoit Pinier, Scale similarity and uncertainty for Ocean-Atmosphere coupled models, started 01/10/2014, supervisors: Roger Lewandowski, Etienne Mémin

PhD in progress : Valentin Resseguier, Oceanic models under uncertainty and image assimilitation, started 01/10/2013, Bertrand Chapron (Ifremer), Etienne Mémin

PhD in progress : Pranav Chandamouli, Turbulent complex flows reconstruction via data assimilation in large eddy models, started october 2015, Dominique Heitz, Etienne Mémin.

PhD in progress : Romain Schuster, Large-scale fluid motion estimation, started october 2016, Dominique Heitz, Etienne Mémin.

9.2.3. *Juries*

Jocelyne Erhel

- Rafife Nheili, PhD, Univ. Perpignan (rapporteur)

Etienne Mémin

- Laurent Cordier HDR, Univ. Poitiers.

- Nicolas Papadakis, HDR IMB, Univ. Bordeaux

- Yann Michel, HDR Meteofrance, Univ. Toulouse Paul Sabatier (Rapporteur)

- Van Linh Nguyen, PhD Univ. Lille (Rapporteur)

- Iliass Azijli, PhD TU Delft (Rapporteur),

- Raphael Legrand, PhD Meteofrance Univ. Paul Sabatier Toulouse (Rapporteur)

9.3. Popularization

Jocelyne Erhel

- présidente du jury du rallye de mathématiques du CNED, 2016.

- talk at day "au coeur des maths, enfermement ou liberté ?", LVN, May 2016.

- scientific responsible of the scientific culture web journal "Interstice" (https://interstices.info/)

Dominique Heitz

- Interview dans L'Usine Nouvelle, No 3479, pp. 30-31, 2016

FOCUS Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

I. Lanese: Co-chair and local organizer for the 8th Conference on Reversible Computation (RC 2016), Bologna, July 7th-8th, 2016.

9.1.1.2. Chair of Conference Program Committees

I. Lanese: 36th IFIP International Conference on Formal Techniques for Distributed Objects, Components and Systems (FORTE 2016)

D. Sangiorgi: 43rd International Colloquium on Automata, Languages, and Programming (ICALP 2016), Rome, July 2016

9.1.1.3. Member of the Conference Program Committees

M. Bravetti: 5th European Conference on Service-Oriented and Cloud Computing (ESOCC 2016); 14th International Conference on Software Engineering and Formal Methods (SEFM 2016); 10th IEEE International Conference on Big Data Science and Engineering (IEEE BigDataSE 2016); 2016 IEEE International Conference on Big Data (IEEE BigData 2016) 32nd Symposium on Applied Computing, track on Software Verification and Testing (SAC-SVT 2016); 7th International Conference on Fundamentals of Software Engineering (FSEN 2017).

U. Dal Lago: 13th IFIP WG 1.3 International Workshop on Coalgebraic Methods in Computer Science (CMCS 2016); 1st International Conference on Formal Structures for Computation and Deduction (FSCD 2016); 15th International Workshop on Termination (WST 2016); 17th International Workshop on Logic and Computational Complexity (LCC 2016, Chair).

I. Lanese: 1st International Workshop on Pre- and Post-Deployment Verification Techniques (PrePost 2016); 9th Interaction and Concurrency Experience (ICE 2016); 25th European Symposium on Programming (ESOP 2016); Special Track on Microservices: Science and Engineering of the 9th IEEE International Conference on Service-Oriented Computing and Applications (MSE @ SOCA 2016).

S. Martini: DIDAMATICA - Informatica per la Didattica (DIDAMATICA 2016).

D. Sangiorgi: 10th International Conference on Language and Automata Theory and Applications (LATA'16).

V. Vignudelli: 9th Interaction and Concurrency Experience (ICE 2016).

G. Zavattaro: 21st International Symposium on Formal Methods (FM2016); 5th European Conference on Service-oriented and Cloud Computing (ESOCC'16); 27th International Conference on Concurrency Theory (CONCUR'16); 31st ACM/SIGAPP Symposium On Applied Computing - track on Software Verification and Testing (ACM-SAC 2016).

9.1.1.4. Member of the Editorial Boards

U. Dal Lago: Logical Methods in Computer Science.

M. Gabbrielli: Int. Journal Theory and Practice of Logic Programming.

C. Laneve: Frontiers in ICT (Section Formal Methods).

I. Lanese: Editor in chief of the Open Journal of Communications and Software (Scientific Online).

The Scientific World Journal (Hindawi Publishing Corporation): editor till August 3, 2016

F. Montesi: Guest editor for "Special issue on Service-Oriented Architecture and Programming (SOAP 2013)". Science of Computer Programming.

D. Sangiorgi: Acta Informatica, Distributed Computing, RAIRO Theoretical Informatics and Applications.

9.1.2. Invited Talks

U. Dal Lago: gave an invited course "Implicit Complexity and the Curry-Howard Correspondence" at 'Days in Logic 2016', Lisboa, Portugal.

D. Hirschkoff: gave an invited course "Mechanised Coinductive Proofs" at East China Normal University (Shanghai, China), in november 2016 (a course mainly targeted towards master students).

S. Martini: gave the invited talk "Types in programming languages, between modelling, abstraction and correctness" at 'Computability in Europe' (Cie 2016), special session on History and Philosophy of Computing, Paris, June 2016.

G. Zavattaro: gave an invited course on cloud computing management at the 'Bertinoro International Spring School 2016' (BISS'16), Bertinoro, Italy, 6-11 March, 2016.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Mario Bravetti

  Master: "Linguaggi, Compilatori e Modelli Computazionali", 120 hours, 1st year, University of Bologna, Italy.

- Ugo Dal Lago

  Undergraduate: "Introduction to Programming in Python", 20 hours, 1st year, University of Bologna, Italy.

  Undergraduate: "Optimization", 36 hours, 2nd year, University of Bologna, Italy.

  Master: "Cryptography", 36 Hours, 2nd Year, University of Bologna, Italy.

- Daniel Hirschkoff

  Master: "Coinductive Methods in Computer Science", 2nd year, Ecole Normale Supérieure de Lyon.

- Maurizio Gabbrielli

  Undergraduate: "Programming languages", 40 hours, 2nd year, University of Bologna, Italy.

  Master: "Artificial Intelligence", 60 hours, 2nd year, University of Bologna, Italy.

- Elena Giachino

  Undergraduate: "Programmazione", 40 hours, 1st year, University of Bologna, Italy.

- Saverio Giallorenzo

  Undergraduate: "Laboratorio di Operating Systems", 40 hours, 2nd year, University of Bologna, Italy.

- Ivan Lanese

  Undergraduate: "Programmazione", 32 hours, 1st year, University of Bologna, Italy.

  Undergraduate: "Algoritmi e Strutture Dati", 45 hours, 2nd year, University of Bologna, Italy.

  Master: "Ingegneria del Software Orientata ai Servizi", 22 hours, 2nd year, University of Bologna, Italy.

- Cosimo Laneve

Undergraduate: "Programmazione", 70 hours, 1st year, University of Bologna, Italy.

Master: "Analisi di Programmi", 42 hours, 1st year, University of Bologna, Italy.

- Simone Martini

    Undergraduate: "Introduction to programming in Python", 58 hours, 1st year, University of Bologna, Italy.

    Undergraduate: "Computer abilities for biologists", 8 hours, 1st year, University of Bologna, Italy.

    Master: "Logical Foundations of Computer Science", 48 hours, 2nd year, University of Bologna, Italy.

- Davide Sangiorgi

    Undergraduate: "Operating Systems", 110 hours, 2nd year, University of Bologna, Italy.

    Master: "Models for concurrency", 15 hours, 2nd year, University of Bologna, Italy.

- Marco Solieri

    Undergraduate: "UNIX system programming", 48 hours, 3rd year, Université Paris Diderot

    Undergraduate: "Network programming", 48 hours, 3rd year, Université Paris Diderot

- Gianluigi Zavattaro

    Undergraduate: "Computer Architectures", 60 hours, 1st year, University of Bologna, Italy

    Undergraduate: "Programming Languages", 60 hours, 2nd year, University of Bologna, Italy

9.2.2. Supervision

PhD thesis completed in 2016:

- Alberto Cappai, " On Equivalences, Metrics, and Computational Indistinguishability", University of Bologna, April 2016.

- Alessandro Rioli, " Coinductive Techniques on a Linear Quantum λ-calculus", University of Bologna, April 2016.

- Marco Solieri, "Sharing, Superposition and Expansion — Geometrical Studies on the Semantics and Implementation of λ-calculi and Proof-Nets", S. Guerrini (Paris Nord) and S. Martini. [11].

- Saverio Giallorenzo, "Real-World Choreographies", University of Bologna, April 2016 [10].

Below are the details on the PhD students in Focus: starting date, topic or provisional title of the thesis, supervisor(s). These are all PhDs in progress.

- Adrien Durier, september 2016, "Proving behavioural properties of higher-order concurrent languages", ENS de Lyon and University of Bologna. Supervisors Daniel Hirschkoff and Davide Sangiorgi.

- Abel Garcia, January 2014, "Analysis of Cloud Computing Systems". Supervisor C. Laneve.

- Francesco Gavazzo, October 2015, "Coinductive Techniques for Effectful Lambda Calculi". Supervisors U. Dal Lago and D. Sangiorgi.

- Raphaelle Crubillé, October 2015, "Bisimulation Metrics and Probabilistic Lambda Calculi", Université Denis Diderot and University of Bologna. Supervisors Thomas Ehrhard and Ugo Dal Lago.

- Vincenzo Mastandrea, October 2015, "Deadlock analysis in ASP". Supervisors Cosimo Laneve and Ludovic Henrio (CNRS Sophia Antipolis).

- Valeria Vignudelli, January 2014, "Probabilities in Higher-Order languages". Supervisor D. Sangiorgi.

9.2.3. *Juries*

U. Dal Lago has been member of the PhD evaluation committee for Charles Grellois (April 2016, Université Paris 7), and Thomas Leventis (December 2016, Université Aix-Marseille).

D. Hirschkoff has been referee (rapporteur) for the Habilitation à Diriger les Recherches of Nicolas Tabareau, Université de Nantes), November 2016, and member of the PhD committee of Martin Bodin (Université Rennes 1), Nov. 25, 2016.

S. Martini has been supervisor and member of the PhD evaluation committee for Marco Solieri (Université Paris 13 and Università di Bologna).

G. Zavattaro: has been member of the PhD jury of Laura Nenzi and Andrea Morichetta, IMT Lucca, Italy, July 2016.

9.3. Popularization

Simone Martini has carried out extended work of scientific divulgation, including

- member of the technical committee of Olimpiadi del Problem Solving (at Italian Ministry of Education), http://www.olimpiadiproblemsolving.com;
- invited talks ("Il pensiero computazionale spiegato ai manager", given at 'Il codice del futuro', Teatro anatomico dell'Archiginnasio, Bologna, May 2016, and "Pensare computazionale: una quarta competenza dopo scrivere, leggere e far di conto", given at 'Trasformazioni sociali e trasmissione delle conoscenze nell'Università italiana', Bologna, November 2016);
- various talks at institutes and workshops on the teaching methods for Computer Science;
- coordinator of some initiatives for the 'Hour of Code', see https://italia.code.org/ and http://www.programmailfuturo.it.

D. Hirschkoff takes part in several popularization activities in schools, in Lyon (association "Maths en Jeans").

9.3.1. *Other duties*

S. Martini is a member of the Board of CINI (Italian National Interuniversity Consortium for Informatics), designated by the Ministry for Semplificazione e Pubblica Amministrazione, from 2015.

S. Martini has been elected Head of the Department of Computer Science and Engineering, University of Bologna, for the term 2015-2018.

D. Sangiorgi has been coordinator of undergraduate studies at the Department of Computer Science and Engineering, University of Bologna (Informatica per il Management), till October 2016, when G. Zavattaro has taken over from him.

<p style="text-align:center; color:red; font-weight:bold; font-size:larger">FUN Project-Team</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- Nathalie Mitton is a member of the Steering committee of CIoT.
- Nathalie Mitton is general chair for AdHocNow 2016 and InterIoT 2016 and symposium chair of Wireless Ad hoc and Sensor Networks symposium ICNC 2017.
- Valeria Loscri' is TPC chair for BODYNETS 2016, general co-chairs for PASC 2016, TPC co-chair for CoWPER 2016, TPC chair for the IoT day 2016
- Mouna Rekik was publicity chair for AdHocNet 2016.
- Aziz Mbacke is publicity chair for AdHocNow 2016.
- Riccardo Petrolo was web chair for AdHocNow 2016.
- Jean Razafimandimby Anjalalaina, was Publicity Chair for IoTIP 2016.

10.1.1.2. Member of the Organizing Committees

- the next CapTronic workshop on Factories of the future. Attendees : industries, ≈ 50 participants
- the International Conference on Ad Hoc Networks and Wireless (AdHoc-Now) from July 4th to July 6th (https://project.inria.fr/AdHocNow2016/), Attendees : academics, international ≈ 50 participants
- the Rescom days in January 12th and 13th, Attendees : academics, french-speaking ≈ 70 participants

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Valeria Loscri is co-program chairs for AdHocNow 2016.
- Nathalie Mitton is/was (co-)program chair of the RESCOM community days in January 2016, for AdHocNow 2016, UIC 2016, VTC-Spring 2016, IoTIP 2016, ICNC 2016 and CSE 2016. She is co-program chair for WSCP 2017, VTC2017 and SWC 2017.

10.1.2.2. Member of the Conference Program Committees

- Valeria Loscri is/was in the Technical Program Committee (TPC) of MoWNet'16, IDCS 2016, HPCC 2016, WiMob 2016, ICARSC 2016, GIoTS 2017, MoWNet 2017, WiMob 2017, NanoComm 2017.
- Nathalie Mitton is/was in the Technical Program Committee (TPC) ICC 2016, SmartComp 2016, GlobeCom 2016, WPMC2016, PASC 2016, Wisarn 2016, CCNC 2017, VTC 2017
- Simon Duquennoy is TPC member of EWSN 2016 (and 2017), IEEE DCoSS 2016 (and 2017), IEEE MASS 2016, InterIoT 2016, UIC 2016

10.1.3. Journal

- Valeria Loscri is Co-editor in the Special Issue on Smart Wireless Access Networks and Systems For Smart Cities, Elsevier Ad Hoc Networks.
- Valeria Loscri is Co-editor for the book MIoT2015, Management of Cyber Physical Objects in the Future Internet of Things on behalf of Springer.

- Valeria Loscri is Co-editor for the book Vehicular Social Networks, on behalf of CRC Press Taylor and Francis Group.
- Valeria Loscri is a member of the 'Research Group on IoT Communications and Networking Infrastructure' at ComSoc Communities.

10.1.3.1. Member of the Editorial Boards

- Nathalie Mitton is editorial board members of AHSWN since 2011.
- Nathalie Mitton is editorial board member of Adhoc Networks since 2012.
- Nathalie Mitton is editorial board member of IET-WSS since 2013.
- Nathalie Mitton is editorial board member of ComSoc MMTC e-letter since 2014.
- Nathalie Mitton is editorial board member of Wiley Transactions Emerging Telecommunications Technologies since 2016.
- Nathalie Mitton is editorial board member of Wireless Communications and Mobile Computing since 2016.
- Valeria Loscri is editorial board member of International Journal of Advanced Robotic Systems since 2016

10.1.4. Invited Talks

- Nathalie Mitton was invited speaker at CNRS Josy Days in Paris in October 2016
- Nathalie Mitton was invited speaker at Smyle Workshop at EPFL in Neuchatel, Switzerland, in September 2016
- Riccardo Petrolo was invited speaker at Rice University in Houston, USA in September 2016
- Nathalie Mitton was invited speaker at 4th International Workshop on Next Generation Green Wireless Networks (NextGWiN 2016) in Dublin, Ireland, September 2016
- Nathalie Mitton was invited speaker at Southeast University Seminar in Nanjing, China in June 2016
- Valeria Loscri was invited speaker at BIS days in Paris, June 2016
- Nathalie Mitton was invited speaker at 10th European eAccessibility Forum "e-Accessibility in a Connected World in Paris, May 2016
- Nathalie Mitton was invited speaker at UCN@Sophia Labex seminar Sophia Antipolis, April 2016
- Nathalie Mitton was invited speaker at "US-EU Workshop on the Next Generation Internet", Los Angeles, March 206
- Nathalie Mitton was invited speaker at "IoT day Paris Descartes" on March 2016
- Valeria Loscri and Nathalie Mitton were invited speakers at JEAI days in Lille on February 2016
- Simon Duquenoy was invited speaker at Bristol for the Sphere IRC project, in November 2016

10.1.5. Leadership within the Scientific Community

Nathalie Mitton is a member of the Steering Committee of the GDR Rescom.

10.1.6. Scientific Expertise

Nathalie Mitton is an elected member of the evaluation community of Inria. She has acted as a reviewer for ANRT and ANR project submissions. She is also member of the scientific committees of the competitiveness cluster of MATIKEN and for CITC (International Contactless Technologies Center).

Valeria Loscri is Scientific European Responsible for Inria Lille - Nord Europe. She has been reviewer in the context of 2017 Air Force Young Investigator Research Program. *Simon*

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

E-learning

> Mooc, Nathalie Mitton, "Villes intelligentes : défis technologiques et sociétaux" , 5-week mooc by the IPL CityLab@Inria team, FUN, Inria, to open in January 2016

Master : Valeria Loscri, Objets Communicants, 24h (Mineure Habitat Intelligent), Ecole des Mines de Douai, France.

Master : Nathalie Mitton, Wireless sensor networks, 16h eqTD (Master MINT), Université Lille 1 and Telecom Lille 1, France

Bsc: Nathalie Mitton, Contactless technologies, 20h eqTD, Université de Valenciennes, France

Bsc: Farouk Mezghani, Contactless technologies, 20h eqTD, Université de Valenciennes, France

BSC: Riccardo Petrolo, Réseaux Informatique, 36h TP and TD (Licence Info), Université Lille 1, France

BSC: Riccardo Petrolo, Technologies du Web, 36h TP and TD (Licence 1), Université Lille 1, France

Master : Viktor Toldov, Systèmes Numériques (VHDL), 6h eqTD (Formation d'ingénieur), Télécom Lille, France

Licence : Jean Razafimandimby, Algorithms and Programming 1, 32h TP and TD, Université Lille 1, France

Licence : Jean Razafimandimby, Algorithms and Programming 2, 32h TP and TD, Université Lille 1, France

10.2.2. Supervision

PhD defended on July 26th 2016: Mouna Rekik, geographic multi path routing protocol based on swarm intelligence for wireless sensor and actuator networks in the context of Smart Grids, co-supervision Université Lille 1 and University of Sfax (Tunisia), 2013-2017, Nathalie Mitton and Zied Chtourou

PhD defended on Oct 25th 2016: Riccardo Petrolo, Internet of Things and Smart Cities, Université Lille 1, 2013-2016, Nathalie Mitton and Valeria Loscri

PhD in progress: Viktor Toldov, : Interférence et consommation dans les réseaux de capteurs, Université Lille 1, 2013-2016, Nathalie Mitton and Laurent Clavier

PhD in progress: Jean Razafimandimby, Distributed Cooperation and Communication among Heterogeneous Devices, Université Lille 1, 2014-2017, Nathalie Mitton and Valeria Loscri

PhD in progress: Aziz Mbacke, Smart Deployment of heterogeneous sensors and RFID in a Smart City, Université Lille 1, 2015-2018, Nathalie Mitton and Hervé Rivano (Urbanet)

PhD in progress: Jad Nassar, Ubiquitous networks for smart grids, Université Lille 1, 2015-2018, Nathalie Mitton and Nicolas Gouvy (HEI)

10.2.3. Juries

- PhD/HDR committees :
  - Simon Duquennoy was a member of the PhD defense committee of
    * Mathieu Michel, University Mons Belgium, September 2016
    * Anwar Hithnawi, ETH Zurich in November 2016.
  - Valeria Loscri was a member of the PhD defense committee of Riad Mazloum, University Paris 6, December 2016.

- Valeria Loscri was reviewer of the the following PhD thesis: Orazio Briante, Universitá Mediterranea di reggio Calabria, May 2016.
- Nathalie Mitton is/was reviewer of the following PhD thesis:
  * Remy Leone, UPMC, June 2016,
  * Quentin Bramas, UPMC, October 2016,
  * Laurent Reynaud, Univ. Lyon 1, March 2017.
- Nathalie Mitton was a member of the HDR defense committee of Nadjib AIT SAADI, University of Paris-Est Creteil Val de Marne (UPEC) 18 july 2016.

- Researcher selection committees :
  - Valeria Loscri was member of the Inria CR2 Lille competition selection committee.
  - Nathalie Mitton was member of the Inria CR2 Grenoble competition selection committee.
  - Nathalie Mitton was member of the Inria Research Grant Position selection committee.
  - Nathalie Mitton was member of the Assistant Professor (MdC) at Universités de Valenciennes, Rennes et de Lorraine, Institut Mines Telecom ParisTech competition selection committees.

- Nathalie Mitton is a member of the scientific committee of "Convergences du Droit et du Numérique".

- Valeria Loscri is a member of the committe of "Journée Nationale de l'Internet des Objets".

10.3. Popularization

- Tahiry Razafindralambo and Simon Duquennoy gave a talk for 13-45 in April 2016
- Emilio Compagnone gave a talk for 13-45 in May 2016
- Cristina Cano gave a talk at "30 min de Sciences" in May 2016
- Emilio Compagnone and Valeria Loscri gave a talk and a demo at Robotic Day at Euratechnologies in July 2016
- Nathalie Mitton, Cristina Cano and Viktor Toldov gave talks at IoTWeek by CITC on June 2016
- Nathalie Mitton gave a talk at NormaFret by i-Trans competitiveness cluster in September 2016
- Aziz Mbacke, Jad Nassar and Julien Vandaele gave some talks in high schools for the "Fête de la Science" in October 2016
- Nathalie Mitton co-authored popularization articles in La main à la pâte (to be published in January 2017), white paper on e-accessibility for BrailleNet/G3ict and an article in *Big Data à découvert* by CNRS edition.

<h1 style="text-align:center; color:red">GALEN Project-Team</h1>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- Pesquet, Jean-Christophe (co-organizer): Special session on Advanced Optimization Methods for Online Signal Processing at the European Signal Processing Conference (EUSIPCO) 2016

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

- Kokkinos, Iasonas: European Conference on Computer Vision (ECCV) 2016, Asian Conference on Computer Vision (ACCV), IEEE Conference on Computer Vision and Pattern Recognition (CVPR)

9.1.2.2. Member of the Conference Program Committees

- Pesquet, Jean-Christophe: European Signal Processing Conference (EUSIPCO), IEEE International Conference on Image Processing (ICIP)

9.1.2.3. Reviewer

The members of the team reviewed numerous papers for several international conferences, such as for the annual conferences on Computer Vision and Pattern Recognition (CVPR), Medical Image Computing and Computer Assisted Intervention (MICCAI), Neural Information Processing Systems (NIPS) and International Conference on Learning Representations (ICLR), IEEE International Conference and Acoustics Speech and Signal Processing (ICASSP), IEEE International Conference on Image Processing (ICIP), IEEE Statistical Signal Processing workshop (SSP), European Signal Processing Conference.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- Paragios, Nikos: Medical Image Analysis Journal (MedIA), SIAM Journal on Imaging Sciences
- Kokkinos, Iasonas: Image and Vision Computing Journal (IVC), Computer Vision and Image Understanding Journal (CVIU), Special Issue on Deep Learning for Computer Vision (guest editor)
- Zacharaki, Evangelia: Medical Physics (guest editor), International Journal of Radiology, Dataset Papers in Science (Radiology)

9.1.3.2. Reviewer - Reviewing Activities

- Pesquet, Jean-Christophe: IEEE Trans. on Signal Processing, IEEE Trans. on Image Processing, IEEE Trans. on Information Theory (IEEE-TI), Signal Processing, SIAM Journal on Optimization, SIAM Journal on Imaging Sciences, Journal of Mathematical Imaging and Vision, Journal of Optimization Theory and Applications
- Kokkinos, Iasonas: International Journal of Computer Vision, IEEE Trans. on Pattern Analysis and Machine Intelligence, Computer Vision and Image Understanding (CVIU)
- Chouzenoux, Emilie: IEEE Trans. on Image Processing, IEEE Trans. Image Processing, Journal of Mathematical Imaging and Vision (JMIV), Journal of Optimization Theory and Applications, Journal of Global Optimization
- Zacharaki, Evangelia: IEEE Trans. on Medical Imaging (T-MI), Medical Image Analysis (MedIA), Trans. on Biomedical Engineering, Neuroimage, Artificial Intelligence in Medicine, Expert Systems with Applications

- Ferrante, Enzo: IEEE Trans. on Medical Imaging (T-MI), Medical Image Analysis (MedIA), Computarized Medical Imaging and Graphics (CMIG)

9.1.4. Invited Talks

- Pesquet, Jean-Christophe: Modena (Optimization Techniques for Inverse Problems workshop), Mathematics Faculty of Wien University,
  Polytechnic University of Warsaw.

- Kokkinos, Iasonas: Local features workshop held in conjunction with ECCV, October 2016 (keynote speech),
  Astronomical Data Analysis Summer School, Chania, Greece, May 2016 (keynote speech),
  September 2016, Qualcomm-UvA Deep Vision Seminar
  Perceptual Organization in Computer Vision Workshop (CVPR), Jun 2016,
  Facebook Artificial Intelligence Research (FAIR) Paris, May 2016,
  ETH,May 2016,
  Oxford University, March 2016,
  Univerity College London, March 2016,
  Center for Machine Perception, Prague, March 2016,
  Simon Fraser University, February 2016.

- Chouzenoux, Emilie: Séminaire Parisien des Mathématiques Appliquées à l'Imagerie, IHP, Paris, November 2016,
  Cavalieri workshop on Optimization and Optimal Transport for Imaging, Inria Paris, October 2016.

- Zacharaki, Evangelia: LIGM, Université Paris Est, November 2016

9.2. Teaching - Supervision - Juries

Masters

Kokkinos, Iasonas

- Master: Machine Learning for Computer Vision, 24, M2, Ecole Normale Superieure-Cachan, FR
- Master: Introduction to Deep Learning, 24, M2, CentraleSupélec, FR

Zacharaki, Evangelia

- Master: Foundations in Machine Learning, 36, M2 DataScience, CentraleSupélec , FR

Corbineau, Marie-Caroline and Pesquet, Jean-Christophe

- Master: Advanced course on Optimization, 30h, M1, CentraleSupélec,FR

Chouzenoux Emilie and Pesquet, Jean-Christophe

- Master: Foundations of Distributed and Large Scale Computing, 24h, M2 DataScience, CentraleSupélec,FR

9.2.1. Supervision

PhD in progress : Eugène Belilovsky, Structured Output Prediction on Large Scale Neuroscience Data, Universite Paris-Saclay & KU Leuven, 2014-2017, M. Blaschko

PhD in progress : Jiaqian Yu, Structured Prediction Methods for Computer Vision and Medical Imaging, Universite Paris-Saclay, 2014-2017, M. Blaschko

PhD in progress : Wacha Bounliphone, Statistical tools for Imaging-Genetics data integration, 2013-2016, Universite Paris-Saclay & KU Leuven, M. Blaschko & A. Tenenhaus

PhD in progress : Diane Bouchacourt, Large Scale Diverse Learning for Structured Output Prediction, 2014-2017, M. Pawan Kumar

PhD in progress: Siddhartha Chandra, Efficient Learning and Optimization for 3D Visual Data, 2013-2016, I. Kokkinos, Pawan Kumar

PhD in progress: Stefan Kinauer, Surface-based representations for high-level vision tasks, 2013-2016, I. Kokkinos.

PhD in progress: Alp Guler, Learning 3D representations for high-level vision, 2016-2018, I. Kokkinos.

PhD in progress : Stavros Alchatzidis, Message Passing Methods, Parallel Architectures & Visual Processing, 2011-2014 (extended), Nikos Paragios

PhD in progress : Enzo Ferrante, 2D-to-3D Multi-Modal Deformable Image Fusion, 2012-2015 (extended), N. Paragios

PhD in progress : Vivien Fecamp, Linear-Deformable Multi-Modal Deformable Image Fusion, 2012-2015 (extended), N. Paragios

PhD in progress : Evgenios Kornaropoulos, Diffusion Coefficient: a novel computer aided bio-marker, 2013-2016, N. Paragios

PhD in progress : Maxim Berman, Learning Higher Order Graphical Models, 2014-2017, N. Paragios, I. Kokkinos

PhD in progress : Hariprasad Kannan, Efficient Inference on Higher Order Graphs, 2014-2017, N. Paragios

PhD in progress : Huu Dien Khue Le, Graph-based Visual Perception : Theories and Applications, 2014-2017, N. Paragios

PhD in progress : Marie-Caroline Corbineau, Fast online optimization algorithms for machine learning and medical imaging, 2016-2019, supervised by Emilie Chouzenoux and J.-C. Pesquet

PhD in progress : Loubna El Gueddari, Parallel proximal algorithms for compressed sensing MRI reconstruction - Applications to ultra-high magnetic field imaging, 2016-2019, supervised by Emilie Chouzenoux and J.-C. Pesquet

PhD in progress : Azar Louzi, Fast online optimization algorithms for machine learning and computer vision, 2016-2019, supervised by Emilie Chouzenoux and J.-C. Pesquet

9.2.2. Juries

The faculty members of the team (N. Paragios, J.-C. Pesquet, I. Kokkinos, E. Chouzenoux) participated in several PhD Thesis Committees, HDR Committees and served as Grant Reviewers.

GALLIUM Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

Michel Mauny is a member of the steering committee of the OCaml workshop.

Didier Rémy was a member of the steering committee of the OCaml workshop until September 2017. He is a member of the steering committee of the ML Family workshop.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

Xavier Leroy was a member of the program committees of the Compiler Construction conference (CC 2016), of the conference on Interactive Theorem Proving (ITP 2016), and on the external review committee of the symposium on Principles of Programming Languages (POPL 2017).

François Pottier was a member of the program committees of the conferences Journées Francophones des Langages Applicatifs (JFLA 2017) and Compiler Construction (CC 2017).

10.1.2.2. Reviewer

In 2016, the members of Gallium reviewed at least 30 conference submissions.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Xavier Leroy is area editor (programming languages) for the Journal of the ACM. He is on the editorial board for the Research Highlights column of Communications of the ACM. He is a member of the editorial board of the Journal of Automated Reasoning.

François Pottier is an editor for the Journal of Functional Programming.

10.1.4. Invited Talks

Xavier Leroy was an invited speaker at the ICALP conference (Rome, July 2016).

10.1.5. Research Administration

Xavier Leroy is *délégué scientifique adjoint* of Inria Paris and appointed member of Inria's *Commission d'Évaluation*. He participated in the following Inria hiring and promotion committees: *jury d'admissibilité DR2*, *promotions CR1*, and *promotions DR1*.

Xavier Leroy was a member of the hiring committee for a professor position at Université de Lorraine.

Xavier Leroy was a member of the HCERES evaluation panel for the LORIA laboratory.

François Pottier is a member of the *Commission de Développement Technologique* and (as of January 2016) chairs the *Comité de Suivi Doctoral* of Inria Paris.

Didier Rémy is *Deputy Scientific Director* (ADS) in change of *Algorithmics, Programming, Software and Architecture*.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: Xavier Leroy and Didier Rémy, "Functional programming languages", 15+18h, M2 (MPRI), Université Paris Diderot, France.

Master: Luc Maranget, "Semantics, languages and algorithms for multi-core programming", 13.5h, M2 (MPRI), Université Paris Diderot, France.

Master: "Principles of Programming Languages", 32h, M1, ENSTA-ParisTech, France.

Licence: François Pottier, "Programmation avancée" (INF441), 20h, L3, École Polytechnique, France.

Master: François Pottier, "Compilation" (INF564), 20h, M1, École Polytechnique, France.

Licence: Michael Rainey and Umut Acar, "Theory and practice of parallel computing" (part of a longer course entitled 15-210, "Parallel and Sequential Data Structures and Algorithms"), 9h, L3, Carnegie Mellon University, USA.

Michel Mauny has been a Professor at ENSTA-ParisTech from August 1st, 2005 to July 31st, 2016. While at ENSTA-ParisTech, Michel Mauny was in charge of the specialization "Architecture and Security of Information Systems" (MSc. 2nd year).

François Pottier has been a Professeur Chargé de Cours at École Polytechnique from September 1st, 2004 to August 31st, 2016.

Didier Rémy is Inria's delegate in the pedagogical team of the MPRI.

Fabrice Le Fessant has been involved in the second edition of the OCaml MOOC on the FUN platform, in coordination with the OCamlPro team in charge of the development of the exercise platform [33].

10.2.2. Supervision

M2 (Master Pro): Jacques-Pascal Deplaix, Epitech, supervised by François Pottier.

M2 (MPRI): Ambroise Lafont, École Polytechnique, supervised by Xavier Leroy.

PhD: Pierre Halmagrand, "Automated Deduction and Proof Certification for the B Method" [45], Conservatoire National des Arts et Métiers, defended December 10, 2016, supervised by David Delahaye, Damien Doligez and Olivier Hermant.

PhD: Jacques-Henri Jourdan, "Verasco: a formally verified C static analyzer" [11], Université Paris Diderot, defended May 2016, supervised by Xavier Leroy.

PhD: Gabriel Scherer, "Which types have a unique inhabitant?" [12], Université Paris Diderot, defended March 2016, supervised by Didier Rémy.

PhD in progress: Vitalii Aksenov, "Parallel Dynamic Algorithms", Université Paris Diderot, since September 2015, supervised by Umut Acar (co-advised with Anatoly Shalyto, ITMO University of Saint Petersburg, Russia).

PhD in progress: Thomas Blanc (ENSTA-ParisTech & OCamlPro), "Analyses de programmes complets, application à OCaml", Université Paris-Saclay, since February 2014, supervised by Michel Mauny and Pierre Chambart (OCamlPro).

PhD in progress: Pierrick Couderc (ENSTA-ParisTech & OCamlPro), "Typage modulaire du langage intermédiaire du compilateur OCaml," Université Paris-Saclay, since December 2014, supervised by Michel Mauny, Grégoire Henry (OCamlPro) and Fabrice Le Fessant.

PhD in progress: Albin Coquereau (ENSTA-ParisTech), "Amélioration de performances pour le solveur SMT Alt-Ergo: conception d'outils d'analyse, optimisations et structures de données efficaces pour OCaml," Université Paris-Saclay, since October 2015, supervised by Michel Mauny, Sylvain Conchon (LRI, Université Paris-Sud) and Fabrice Le Fessant.

PhD in progress: Armaël Guéneau, "Towards Machine-Checked Time Complexity Analyses", Université Paris Diderot, since September 2016, supervised by Arthur Charguéraud and François Pottier.

PhD in progress: Thomas Williams, "Putting Ornaments into practice", Université Paris Diderot, since September 2014, supervised by Didier Rémy.

10.2.3. *Juries*

François Pottier was a reviewer for the Ph.D. thesis of Benoît Vaugon, Université Paris-Saclay, March 2016. He was a reviewer for the Habilitation of Damien Pous, ENS Lyon, September 2016. He was a member of the jury for the Ph.D. thesis of Léon Gondelman, Université Paris-Saclay, December 2016.

Xavier Leroy was on the Ph.D. committee of Pierre Wilke, Université Rennes 1, November 2016.

Didier Rémy was chair of the Ph.D. committee of Raphaël Cauderlier, Conservatoire National des Arts et Métiers (CNAM), October 2016.

10.3. Popularization

Xavier Leroy gave a popularization talk on formal methods at the plenary days of Inria's DGD-T (may 2016) and another on critical avionics software for first-year students at École Polytechnique (june 2016).

GAMMA3 Project-Team

7. Dissemination

7.1. Promoting Scientific Activities

7.1.1. Scientific Events Organisation

7.1.1.1. Member of the Organizing Committees

A. Loseille is a committee member of the International Meshing Roundtable.

7.1.2. Scientific Events Selection

7.1.2.1. Member of the Conference Program Committees

P. Laug has been a Member of the Conference Committee of The 13th ISGG Symposium on Numerical Grid Generation, hosted at The 20th IMACS World Congress, Xiamen, China, 10-14 Dec. 2016.

7.1.2.2. Reviewer

Team members have reviewed papers for the International Meshing Roundtable and MASCOT/ISGG.

7.1.3. Journal

7.1.3.1. Reviewer - Reviewing Activities

Team members have reviewed manuscripts submitted to International Journal for Numerical Methods in Engineering, Journal of Computational Physics, Computers and Structures, Engineering with Computers, MATCOM, SIAM Journal.

7.1.4. Scientific Expertise

P. Laug has been a Member of a Site Visit Committee for an Industrial Research Chair application at the NSERC/CRSNG (Natural Sciences and Engineering Research Council of Canada / Conseil de recherches en sciences naturelles et en génie du Canada), Université Laval, Quebec City, Nov. 2016.

7.2. Teaching - Supervision - Juries

HdR : Laurence Moreau, Méthodes de remaillage et d'optimisation pour la simulation numérique, mémoire d'Habilitation à diriger des Recherches, Université de Technologie de Troyes, 26 Mai 2015.

7.2.1. Juries

- F. Alauzet a été Président du jury d'HDR de G. Puigt (Université de Toulouse)
- P. L. George a été rapporteur du jury de thèse de G. Brèthes (Inria Sophia)
- A. Loseille a été examinateur pour la thèse d'A. Botella (Université de Lorraine)

GANG Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

Pierre Fraigniaud has organized the 1st conference on Highlights of Algorithms (HALG 2016), Paris, June 2016. This conference has gathered more than 200 participants to attend talks presenting the most significant results on algorithms produced in the academic year 2015-2016. The 2nd issue of this conference, Highlights of Algorithms 2017, will take place in Berlin.
http://highlightsofalgorithms.org

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

- Carole Delporte was PC Co-chair of NETYS 2016 — the 4th International Conference on Networked Systems, Morocco, May 18-20, 2016.
- Pierre Fraigniaud is PC chair for the Track Algorithms of the 31st IEEE International Parallel & Distributed Processing Symposium (IPDPS), to be held in Orlando, Florida, USA, May 29 - June 2, 2017. http://www.ipdps.org

9.1.2.2. Member of Conference Program Committees

- Hugues Fauconnier: NETYS 2016, PODC 2016.
- Carole Delporte: ICDCN 2016, ICDCS 2016, DISC 2016, OPODIS 2016.
- Adrian Kosowski: PODC 2016, ALGOSENSORS 2016, ICALP 2017.
- Pierre Fraigniaud: WWW 2016, ESA 2016, IPDPS 2016, OPODIS 2016, SIROCCO 2016, ALGO-SENSORS 2016, FUN 2016, WWW 2017, SPAA 2017, DISC 2017.
- Amos Korman: ICALP 2017

9.1.3. Journal

9.1.3.1. Member of Editorial Boards

- Pierre Fraigniaud is a member of the Editorial Board of Distributed Computing (DC).
- Pierre Fraigniaud is a member of the Editorial Board of Theory of Computing Systems (TOCS).
- Pierre Fraigniaud is a member of the Editorial Board of Fundamenta Informaticae (FI).

9.1.4. Invited Talks

Adrian Kosowski: SIROCCO 2016

9.1.5. Scientific Expertise

Pierre Fraigniaud is member of the evaluation committee for the ERC Starting Grants (Panel 6).

9.1.6. Research Administration

Pierre Fraigniaud is director of the Institute de Recherche en Informatique Fondamentale (IRIF).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: Carole Delporte and Hugues Fauconnier, Algorithmique distribuée avec mémoire partagée, 6h, M2, Université Paris Diderot

Master: Hugues Fauconnier, Cours programmation répartie, 33h, M2, Univ. Paris Diderot

Master: Carole Delporte, Cours et TP Protocoles des services internet, 44h, M2, Univ. Paris Diderot

Master: Carole Delporte, Cours Algorithme réparti, 33h, M2, Univ. Paris Diderot

Master: Carole Delporte and Hugues Fauconnier, Protocoles Réseaux, 72h, M1, Université Paris Diderot

Licence: Carole Delporte and Hugues Fauconnier, Sécurité informatique, 36h, L3, Univ. Paris Diderot

Licence: Hugues Fauconnier, Programmation objet et interfaces graphiques, 48h, L2-L3, EIDD

Licence: Boufkhad Yacine, Algorithmique et Informatique, 132h, L1, IUT de l'Université Paris Diderot

Licence: Boufkhad Yacine, Programmation Orientée Objet, 60h, L2, IUT de l'Université Paris Diderot

Licence: Boufkhad Yacine, Traitement de données, 16h, L2, IUT de l'Université Paris Diderot

Master: Pierre Fraigniaud, Algorithmique avancée, 24h, Ecole Centrale Supélec Paris, M2

Master: Pierre Fraigniaud, Algorithmique parallèle et distribuée, 24h, Ecole Centrale Supélec Paris, M2

Master: Adrian Kosowski, Randomization in Computer Science: Games, Networks, Epidemic and Evolutionary Algorithms, 18h, M1, École Polytechnique

Licence: Adrian Kosowski, Design and Analysis of Algorithms, 32h, L3, École Polytechnique

Master: Pierre Fraigniaud and Adrian Kosowski, Algorithmique distribuée pour les réseaux, 24h, M2, Master Parisien de Recherche en Informatique (MPRI)

Master: Fabien de Montgolfier and Michel Habib, Grand Réseaux d'Interaction, 44h, M2, Univ Paris Diderot

Licence: Fabien de Montgolfier, Protocoles Réseau (TP/TD), 24h, M1, Univ Paris Diderot

Licence: Fabien de Montgolfier, Programmation avancée (cours/TD/projet, bio-informatique), 52h, L3, Univ. Paris Diderot

Master: Fabien de Montgolfier, Algorithmique avancée (bio-informatique), 26h, M1, Univ Paris Diderot

Licence: Fabien de Montgolfier, Algorithmique (TD), 26h, L3, Ecole d'Ingénieurs Denis Diderot

Master : Laurent Viennot, Graph Mining, 3h, M2 MPRI, Univ. Paris Diderot

Licence: Michel Habib, Algorithmique, 45h, L, ENS Cachan

Master: Michel Habib, Algorithmique avancée, 24h, M1, Univ. Paris Diderot

Master: Michel Habib, Mobilité, 33h, M2, Univ. Paris Diderot

Master: Michel Habib, Méthodes et algorithmes pour l'accès à l'information numérique, 16h, M2, Univ. Paris Diderot

Master: Michel Habib, Algorithmique de graphes, 12h, M2, Univ. Paris Diderot

Licence: Pierre Charbit, Introduction a la Programmation, 30h, L1, Université Paris Diderot, France

Licence: Pierre Charbit, Automates finis, 52h, L2, Université Paris Diderot, France

Licence: Pierre Charbit, Types de Données et Objet, 52h, L1, Université Paris Diderot, France

Master: Pierre Charbit, Programmation, 60h, M2Pro PISE, Université Paris Diderot, France

Master: Pierre Charbit, Algorithmique de Graphes, 12h, M2 MPRI, Université Paris Diderot, France

9.2.2. Supervision

PhD: Leonardo Linguaglossa (co-advised by Laurent Viennot, Fabien Mathieu and Diego Perino, both from Nokia Bell Labs) was a PhD hired by Inria through the ADR CCN contract. He obained his PhD last September [1] at Paris Diderot University.

PhD in progress: Simon Collet (co-advised by Amos Korman and Pierre Fraigniaud). Title of thesis is: "Algorithmic Game Theory Applied to Biology". Started September 2015.

PhD in progress: Lucas Boczkowski (co-advised by Amos Korman and Iordanis Kerenidis). Title of thesis is: "Computing with Limited Resources in Uncertain Environments". Started September 2015.

PhD in progress: Brieuc Guinard (advised by Amos Korman). Title of thesis is: "Algorithmic Aspects of Random Biological Processes". Started October 2016.

PhD in progress: Laurent Feuilloley (advised by Pierre Fraigniaud). Title of thesis is: "Synchronous Distributed Computing". Started September 2015.

PhD in progress: Mengchuan Zou (co-advised by Adrian Kosowski and Michel Habib). Title of thesis is: "Local and Adaptive Algorithms for Optimization Problems in Large Networks". Started October 2016.

PhD in progress: Finn Volkel (advised by Michel Habib). Title of Thesis: "Convexity in graphs", started september 2016.

PhD in progress: Léo Planche (co-advised by Étienne Birmelé and Fabien de Montgolfier). Title if thesis is : "Classification de collections de graphes". Started October 2015.

PhD in progress: Alkida Balliu and Dennis Olivetti (PhD students from L'Aquilla University and Gran Sasso Science Institute) are supervised by Pierre Fraigniaud.

PhD in progress: Lucas Hosseini (co-advised by Pierre Charbit, Patrice Ossona de Mendez and Jaroslav Nešetřil since Sept. 2014. Title : Limits of Structures.

9.2.3. Juries

Laurent Viennot was president of the jury in the PhD defense of Claudio Imbrenda on "Analysing Traffic Cacheability in the Access Network at Line Rate" at Telecom ParisTech (November 2016).

Michel Habib was reviewer for the PhD thesis of Matteo Seminaroti, "Combinatorial Algorithms for the seriation problem", Tilburg University, Holland, december 2016.

Laurent Viennot was reviewer for the PhD thesis of Guillaume Ducoffe on "Proprie´te´s me´triques des grands graphes" at Côte d'Azur Univ. (December 2016).

Laurent Viennot was co-advisor for the PhD thesis of Leonardo Linguaglossa on "Two challenges of Software Networking: Name-based Forwarding and Table Verification" at Paris Diderot Univ. (September 2016).

Carole Delporte was reviewer for the PhD thesis of Claire Capdevielle on "Étude de la complexité des implémentations d'objets concurrents et sans attente, abandonnables ou solo-rapides" at Bordeaux Univ (November 2016).

9.3. Popularization

- Laurent Viennot is "commissaire d'exposition" for the permanent exposition on "Informatique et sciences du numérique" at Palais de la déécouverte in Paris (opening in October 2017).

- An article centered around the eLife 2016 paper "A locally-blazed ant trail achieves efficient collective navigation despite limited information" [14], whose co-authors include Amos Korman (co-corresponding author), Lucas Boczkowski, and Adrian Kosowski, appeared on the Israeli daily newspaper "Haaretz", Dec 2016.

- The team has made contributions to the Encyclopedia of Algorithms [44], [41].

GECO Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- Mario Sigalotti was member of the organizing committee of the *Workshop on switching dynamics & verification*, IHP, Paris, January 28-29, 2016.
- Ugo Boscain and Mario Sigalotti were member of the organizing committee of the *Workshop on quantum dynamics & control*, IHP, Paris, May 23-24, 2016.

9.1.2. Journal

9.1.2.1. Member of the Editorial Boards

- Ugo Boscain is Associate Editor of SIAM Journal of Control and Optimization
- Ugo Boscain is Managing Editor of Journal of Dynamical and Control Systems
- Mario Sigalotti is Associate Editor of Journal of Dynamical and Control Systems
- Ugo Boscain is Associate Editor of ESAIM Control, Optimisation and Calculus of Variations
- Ugo Boscain is Associate Editor of Mathematical Control and Related Fields
- Ugo Boscain is Associate editor of Analysis and Geometry in Metric Spaces

9.1.3. Invited Talks

- Mario Sigalotti gave an invited talk at the "ExQM Miniworkshop: Mathematics of Quantum Control", Munich, Germany, February 2016.
- Ugo Boscain gave an invited talk at the conference "Geometric Analysis in Control and Vision Theory", Voss, Norway, May 2016.
- Ugo Boscain gave an invited talk at the seminar of the *Departement de Mathématiques d'Orsay*, May 2016.
- Ugo Boscain gave an invited talk at the conference "Recent Trends in Differential equations", Aveiro, Portugal, June 2016.
- Mario Sigalotti gave an invited talk at the *Séminaire de géométrie sous-riemannienne*, IHP, Paris, June 2016.
- Ugo Boscain gave the opening talk at the conference "Geometry, PDE's and Lie Groups in Image Analysis", Eindhoven, The Netherlands, August 2016.
- Mario Sigalotti gave an invited talk at the seminar of the *Dipartimento di Matematica - Università degli Studi di Trento*, Italy, September 2016.
- Ugo Boscain gave an invited talk at the conference "Nouvelles directions en analyse semiclassique", Chalès, France, December 2016.

9.1.4. Research Administration

- Mario Sigalotti is member of the IFAC technical committee "Distributed Parameter Systems".
- Mario Sigalotti is member of the steering committee of the *Institut pour le Contrôle et la Décision* of the Idex Paris-Saclay.

9.2. Teaching - Supervision - Juries

9.2.1. Supervision

- PhD (concluded): Guiherme Mazanti, "Stabilité et taux de convergence pour les systèmes à excitation persistante" [1], supervisors: Yacine Chitour, Mario Sigalotti. Discussed on September 2016.

- PhD in progress: Ludovic Sacchelli, "Sub-Riemannian geometry, hypoelliptic operators, geometry of vision", started in September 2015, supervisors: Ugo Boscain, Mario Sigalotti.

- PhD in progress: Nicolas Augier, "Contrôle adiabatique des systèmes quantiques", started in September 2016, supervisors: Ugo Boscain, Mario Sigalotti.

- PhD in progress: Mathieu Kohli, "Volume and curvature in sub-Riemannian geometry", started in September 2016, supervisors: Davide Barilari, Ugo Boscain.

- PhD in progress: Jakub Orłowski, "Modeling and steering brain oscillations based on in vivo optogenetics data", started in September 2016, supervisors: Antoine Chaillet, Alain Destexhe, and Mario Sigalotti.

9.2.2. Juries

- Ugo Boscain was member of the commission for the PhD defense of Valentina Franceschi, Padue, March 2016.

- Mario Sigalotti was member of the commission for the PhD defense of Francesco Boarotto, SISSA, Trieste, September 2016.

- Ugo Boscain was reviewer and member of the commission for the PhD defense of Jérémy Rouot, Nice, November 2016.

9.3. Popularization

Ugo Boscain gave a concert-seminar at the event "Musique & Mathématiques 2016", Besanon, November 2016.

GENSCALE Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- Workshop Colib'read. Scientific and practical organization [C. Lemaitre, C. Marchet, P. Peterlongo]

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- WCO16, Gdansk, Poland (co-chair) [A. Mucherino]

10.1.2.2. Member of the Conference Program Committees

- BIBM 2016: IEEE International Conference on Bioinformatics and Biomedicine [D. Lavenier]
- BIOKDD 2016: 15th International Workshop on Data Mining in Bioinformatics [D. Lavenier]
- ACM PASC16 Conference : Platform for Advanced Scientific Computing [D. Lavenier]
- RECOMB 2016 : International Conference on Research in Computational Molecular Biology [D. Lavenier]
- ECCB 2016 : 15th European Conference on Computational Biology [P. Peterlongo]
- SeqBio 2016 : Bioinformatics multidisciplinary workshop [P. Peterlongo]
- WACEBI 2016 : Workshop on Accelerator-Enabled Algorithms and Applications in Bioinformatics [D. Lavenier]

10.1.2.3. Reviewer

- RECOMB 2017 [R. Andonov, C. Lemaitre]
- ECCB 2016 [P. Peterlongo]

10.1.3. Journal

10.1.3.1. Reviewer - Reviewing Activities

- Algorithms for Molecular Biology [P. Peterlongo]
- Bioinformatics [D. Lavenier, P. Peterlongo]
- BMC Bioinformatics [P. Peterlongo]
- Drug Dicovery Today [D. Lavenier]
- Journal of Parallel and Distributed Computing [D. Lavenier]
- Plos One [D. Lavenier, R. Andonov]
- Journal of Biomedical and Health Informatics [D. Lavenier]
- Briefing in Bioinformatics [D. Lavenier]
- Theoretical Computer Science [P. Peterlongo]
- Fundamenta Informaticae, Integrated Computer-Aided Engineering (IOS Press) [A. Mucherino]
- COMPAG, Elsevier [A. Mucherino]

10.1.4. Invited Talks

- D. Lavenier, *Parallel Processing of Sequencing Data*, Conférence d'informatique en Parallélisme, Architecture et Système, Lorient, France, July 2016

- D. Lavenier *GATB: A Genomic Analysis Tool Box for designing parallel and low memory fingerprint bioinformatics software*, Pasteur Institut, Paris, France, Sep. 2016.
- D. Lavenier, *Low memory fingerprint data structure for genomics*, ENS Rennes, France, oct. 2016.
- D. Lavenier *GATB: A Genome Analysis Tool Box for designing parallel and low memory footprint bioinformatics software*, Workshop on Emerging Bioinformatics Applications for Microbial Ecogenomics, Brest, France, oct. 2016.
- C. Lemaitre, *Comparing numerous metagenomics datasets*, Laboratoire de Biométrie et Biologie Évolutive, Lyon, France, Nov. 2016.
- P. Peterlongo *De novo comparison of (large number of) metagenomic samples*, Metagenomics day, Billile, Lille, France June 2016.
- P. Peterlongo *Finding SNPs de novo from reads* , Bioadvection workshop, Napoli, Italy, June 2016.
- P. Peterlongo *De novo comparison of (large number of) metagenomic samples, What are the technical challenges? what can we expect from this?*, RCAM workshop - keynote speaker, The Hague, Netherlands, September 2016.
- P. Peterlongo *Multiple Comparative Metagenomics using Multiset k-mer Counting*, Pasteur Summer School 2016 In Metagenomics, September 2016.
- C. Lemaitre *Comparaison (massive) de (nombreux) metagénomes. Passons par les kmers pour passer à l'échelle*, Journée scientifique sur "le Microbiome" organisée par Biogenouest, Rennes, France, December 2016.
- F. Legeai *Les analyses bioinformatiques pour les données épigénomiques*, Atelier ChIP du réseau REacTION, Paris, France, December 2016.
- R. Andonov, *Global Optimization Methods for Genome Scaffolding and Completing Genome Assemblies*, Workshop on Graph Assembly Algorithms for omics data, Univ. Milano-Bicocca, Italy, November 18, 2016

10.1.5. Leadership within the Scientific Community

- P. Peterlongo. Animator of one of the scientific axes of the GDR BIM group of research.
- P. Peterlongo. Member of the SFBI board.

10.1.6. Scientific Expertise

- Expert for the MEI (International Expertise Mission), French Research Ministry [D. Lavenier]
- Member of the Scientific Council of BioGenOuest [D. Lavenier]
- Member of the Scientific Council of the Computational Biology Institute of Montpellier [D. Lavenier]

10.1.7. Research and Pedagogical Administration

- Member of the CoNRS, section 06, [D. Lavenier]
- Member of the local Inria Rennes CDT (Technologic Transfer Commission) [D. Lavenier]
- Member of the steering committee of the INRA BIPAA Platform (BioInformatics Platform for Agro-ecosystems Arthropods) [D. Lavenier]
- Member of the steering committee of The GenOuest Platform (Bioinformatics Platform of BioGenOuest) [D. Lavenier]
- Representative of the environnemental axis of UMR IRISA [C. Lemaitre]
- AGOS first secretary [P. Peterlongo]
- Organisation of the weekly seminar "Symbiose" [P. Peterlongo]
- Scientific Responsible for International Relationships at ISTIC [A. Mucherino]
- Member of "Commission Affaires Internationales" at University of Rennes 1 [A. Mucherino]

- In charge of the bachelor's degree in the computer science department of University of Rennes 1 (90 students) [R. Andonov]

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence : R. Andonov, Graph Algorithms, 60h, Univ. Rennes 1, France.

Licence : A. Mucherino, Java basis, 80h, L1, Univ. Rennes 1, France.

Master : A. Mucherino, R. Andonov, Operational Research, 78h, M1, Univ. Rennes 1, France.

Master : A. Mucherino, Introduction to Computational Systems and Networks, 42h, M1, Univ. Rennes 1, France.

Master : A. Mucherino, Object Oriented Programming, 40h, M1, Univ. Rennes 1, France.

Master : A. Mucherino, P. Peterlongo and R. Andonov, Algorithms on Sequences and Structures, 36h, M2, Univ. Rennes 1, France.

Master : A. Mucherino, Parallel Computing (in English), 18h, M1, Univ. Rennes 1, France.

Master : C. Lemaitre, Dynamical systems for biological networks, 20h, M2, Univ. Rennes 1, France.

Master : C. Lemaitre, P. Peterlongo, Algorithms on Sequences for Bioinformatics, 24h, M1, Univ. Rennes 1, France.

Master : P. Peterlongo, Experimental Bioinformactics, 12h, M1, ENS Rennes, France.

Master : D. Lavenier, Research training module, 24h, M1, Univ. Rennes 1, Rennes, France.

Master : R. Andonov, Advanced Algorithmics, 25h, Univ. Rennes 1, France.

Training : P. Durand, G. Rizk, GATB Programming Day, 8h (June 16th), Univ. Rennes 1, Rennes, France.

Training : P. Durand, G. Rizk, GATB Programming Day, 8h (May 9th), Institut Henri Poincaré, France.

E-learning

Online tutorial : GATB-Core Online Training tool. http://gatb-core.gforge.inria.fr/training/

discoSnp tutorial available from the discoSnp webpage: https://colibread.inria.fr/software/discosnp/

10.2.2. Supervision

HdR : Pierre Peterlongo, Lire les lectures : analyse de données de séquençage, Univ. Rennes 1, 25/01/2016, [11] https://hal.inria.fr/tel-01278275.

PhD in progress : G. Benoit, New algorithms for comparative metagenomics, 01/11/2014, D. Lavenier and C. Lemaitre.

PhD in progress : A. Limasset, Algorithm for Genomics, 09/2014, D. Lavenier and P. Peterlongo.

PhD in progress : C. Guyomar, Bioinformatic tools and applications for metagenomics of bacterial communities associated to insects, 01/10/2015, C. Lemaitre and F. Legeai.

PhD in progress : C. Marchet, Nouvelles méthodologies pour l'assemblage de données de séquençage polymorphes, 01/10/2015, P. Peterlongo.

PhD in progress : P. Hoan Son, Data mining and bioinformatics, 01/2015, D. Lavenier and A. Termier.

PhD in progress : S. François, Combinatorial Optimization Approaches for Bioinformatics, 01/10/2016, R. Andonov.

10.2.3. Juries

- *President of Ph-D thesis jury*. Phuong Do Viet, University of Montpellier [R. Andonov], Karel Brinda, University of Marne la Vallée [D. Lavenier]

- *Member of Ph-D thesis juries*. Joseph Lucas, University Pierre et Marie Curie [C. Lemaitre].

- *Referee of Ph-D thesis*. Cécile Monat, University of Montpellier [D. Lavenier], C. Vroland, University of Lille [P. Peterlongo].

- *Member of Ph-D thesis comitees*. L. Ishi Soares de Lima, University of Lyon [C. Lemaitre], Yoann Aigu, University of Rennes [F. Legeai], Hélène Boulain, University of Rennes [F. Legeai], Chunxiang Hao, University of Rennes [D. Lavenier], Alix Mas, University of Rennes [P. Peterlongo], Pierre Charrier, University of Nantes [P. Peterlongo], Cervin Guyomar, University of Rennes [P. Peterlongo], Lea Siegwald, University of Lille [P. Peterlongo].

10.3. Popularization

- Operation "A la découverte de la recherche" [P. Peterlongo]

<h1 style="text-align:center; color:red;">GEOSTAT Project-Team</h1>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

H. Yahia: organization of the conference *Signals & Physics* in October 2016, Inria Paris.

9.1.1.2. Member of the Organizing Committees

H. Yahia: organization of the conference *Signals & Physics* in October 2016, Inria Paris.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

H. Yahia, N. Brodu and K. Daoudi are members of the advisory board committee of the IEEE *11th International Conference on Industrial and Information Systems* (ICIIS 2016), 3-4 December 2016, IIT Roorkee, India, http://www.iciis2016.org/commitee.html.

9.1.2.2. Member of the Conference Program Committees

N. Brodu is co-organizing an EGU session (European Geophysical Union) and has presented 2 papers in the session.

9.1.2.3. Reviewer

H. Yahia and N. Brodu have reviewed papers for the ICIIS 2016 conference.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- G. Attuel is a member of the editorial board of CMSIM journal (from CHAOS Conference), sections plama and biophysics.
- H. Yahia: Frontiers in Fractal Physiology.

9.1.3.2. Reviewer - Reviewing Activities

- N. Brodu: PRL (physical review letters), PRE, Remote Sensing.
- K. Doudi: reviewer for IEEE Transactions on Audio, Speech and Language Processing.
- H. Badri: ICIP Conference.

9.1.4. Invited Talks

- H. Badri is invited to give on oral presentation at the conference RFIA 2016 for the reception of his AFRIF 2015 Best PhD award. Title of the presentation: *Sparse and Scale-invariant methods in image processing*.
- H. Yahia was an invited keynote speaker at the 11th International Conference on Industrial and Information Systems (ICIIS 2016), 3-4 December 2016, IIT Roorkee, India. Title: *Non-convex sparsity. Applications in Image processing*.
- N. Brodu was an invited keynote speaker on the subject of super-resolution at the 11th International Conference on Industrial and Information Systems (ICIIS 2016), 3-4 December 2016, IIT Roorkee, India. Title: *Super-resolving multiresolution images with band-independent geometry of multispectral pixels* .

9.1.5. Leadership within the Scientific Community

- N. Brodu has given a presentation at the RISC-E school held at Rennes in October 2016. The presentation corresponds to 2 master UE.
- N. Brodu has given a presentation in february 2016 at the LaBRI/IMS/IMB lab: *Super-resolution of multispectral images* (part 1) and *Stochastic image analysis* (part 2).

9.1.6. Scientific Expertise

- H. Yahia and K. Daoudi have proposed scientific expertise for the I2S company, with an industrial collaboration prepared and submitted for 2017.
- H. Yahia and N. Brodu have proposed scientific expertise for the LECTRA company.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Doctorat: H. Yahia, *Advancement in Signal Processing, Application to Earth Observation*, 30 hours, IIT Roorkee, GIAN courses, India.

Master : K. Daoudi, *financial mathematics*, 20 hours, Master2 MIAGE, University of Lorraine.

Master: N. Brodu, *Analyse de données massives par apprentissage automatique*, 2 days, EDMI Bordeaux.

Licence : A. El Aouni, *Programmation web (PHP, javascript, CSS)*, 24 hours, L3, Rabat University, Morroco.

9.2.2. Juries

- H. Yahia: member of the HDR jury of S. Jacquir (Bourgogne University, Laboratoire LE2I UMR CNRS 6306).
- N. Brodu: 1st year PhD jury.

9.3. Popularization

N. Brodu has given a presentation at Inria's *Unithé ou café* : (April 1st): Title: « Des images satellites aux messages sur les sites »

GRACE Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- D. Augot is member of the committee of the CCA seminar on coding and cryptology. This seminar regularly attracts around 30 participants.

10.1.2. Scientific Events Selection

10.1.2.1. Reviewer

- D. Augot was reviewer for International Symposium on Information Theory

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- D. Augot is member of the editorial board of the *RAIRO - Theoretical Informatics and Applications*, a Cambridge journal published by EDP Sciences.
- D. Augot is member of the editorial board of the *International Journal of Information and Coding Theory*, InderScience publishers.
- F. Morain is member of the editorial board of the *Applicable Algebra in Engineering, Communication and Computing*, Springer.
- A. Couvreur was editor with Alp Bassa (Bogazici University, Turkey) and David Kohel (Aix-Marseille University) of a number of *AMS Contemporary Mathematics* for the proceedings of the conference AGCT (*Arithmetic Geometry Cryptography and Coding Theory*) 2015.

10.1.3.2. Reviewer - Reviewing Activities

- D. Augot was reviewer for
    - Discrete Mathematics
    - Designs, Codes and Cryptography
    - Linear and Multilinear Algebra
    - Finite Fields and their applications
- A. Couvreur was reviewer for
    - Discrete Mathematics
    - Designs, Codes and Cryptography
    - Journal of Algebra

10.1.4. Invited Talks

- D. Augot was invited speaker at Yet Another Cryptography Conference (YACC), Porquerolles, June 2016.
- B. Smith was an invited speaker at the 20th international Workshop on Elliptic Curve Cryptography (ECC), Izmir, Turkey, September 2016.
- A. Couvreur gave a talk to represent the group *Codes et Cryptographie* of the GdR *Informatique Mathématiques* (GdR IM) at the *Journées nationales du GdR IM* at University Paris 13 (January 13).

10.1.5. Scientific Expertise

- D. Augot participated in a round table at a workshop organized by French National Assembly (lower house) at, on blockchains (March 24th).
- D. Augot participated in a round table at Paris Dauphine on blockchains, organized by the chair "Chaire Gouvernance & Régulation" (November 1).
- D. Augot made a talk on hashing and blockchain at a workshop on blockchains held at Institut Poincaré (November 16).

10.1.6. Teaching in international postgraduate summer schools

- B. Smith gave lectures on *Basic public-key constructions with elliptic curves* and *Advanced constructions in curve-based cryptography* at the *Summer school on real-world crypto and privacy*, Sibenik, Croatia, June 2016.
- B. Smith gave a course on *asymmetric cryptography and elliptic curves* at the *Crypto-CO summer school on cryptography and security*, Bogota, Colombia, July 2016.
- B. Smith gave lectures on elliptic curves at the *ECC2016 Computational Algebraic Number Theory School*, Izmir, Turkey, September 2016.

10.1.7. Research Administration

Committees

- A. Couvreur is an elected member of Saclay's *comité de centre*.
- A. Couvreur is an elected member of Saclay's *Comité local Hygiène, Sécurité et Conditions de Travail*.
- A. Couvreur is the *jeune chercheur référent* for the *commission de suivi doctoral* of Inria Saclay.
- D. Augot is a member of LIX's *conseil de direction*.
- D. Augot is the vice-head of Inria's *comité de suivi doctoral*
- D. Augot is a member of LIX's *assemblée des chefs d'équipe*
- D. Augot is elected member of the *conseil académique consultatif* of Paris-Saclay University.
- F. Levy-dit-Vehelis a representative of "enseignants-chercheurs" of LIX.
- F. Morain, B. Smith and A. Couvreur are elected members of the *Conseil de Laboratoire* of the LIX.
- F. Morain is vice-head of the Département d'informatique of Ecole Polytechnique.
- F. Morain represents École polytechnique in the committee in charge of *Mention HPC* in the *Master de l'université Paris Saclay*.
- F. Morain is member of the Board of Master Parisien de Recherche en Informatique (MPRI).
- B. Smith is a *Correspondant* for International Relations at Saclay.
- B. Smith is a member of the COST-GTRI.
- B. Smith is a member of the teaching committee of the Department of Computer Science of the École polytechnique.
- B. Smith is the academic coordinator for Computer Science in the new *Bachelor* program at École polytechnique.

Committees

- D. Augot was in the committee assessing candidates for Univ. Paris 8.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence :

- D. Augot was mentoring a group of polytechnique students on a L3 projet on homomorphic encryption and voting (6 students)
- D. Augot was mentoring a group of polytechnique students on a L3 projet on blockchains and hyperledger, in collaboration with Orange (5 students)
- F. Levy-dit-Vehel, "Mathématiques discrètes pour la protection de l'information", 24h (equiv TD), 2nd year (L3), ENSTA ParisTech, France.
- J. Lavauzelle, 1I002, "Introduction à la programmation en C", tutorial class (38.5h), L1, Université Pierre et Marie Curie, France
- J. Lavauzelle, 2I011, "Méthodes numériques", tutorial class (21h), L2, Université Pierre et Marie Curie, France
- J. Lavauzelle, 1I001, "Éléments de programmation", tutorial class (38.5h), L1, Université Pierre et Marie Curie, France
- J. Lavauzelle, 2I003, "Initiation à l'algorithmique", tutorial class (21.25h), L2, Université Pierre et Marie Curie, France
- A. Couvreur and E. Barelli, INF311, "Introduction à l'informatique", 26.7h(equiv TD), 1st year, Ecole Polytechnique, France.
- E. Barelli, INF411, "Les bases de la programmation et de l'algorithmique", 21.3h (equiv TD), 2nd year (L3), Ecole Polytechnique, France.
- B. Smith, INF442, "Traitement des données massives", 32h TD, 2nd year, École polytechnique
- A. Couvreur and B. Smith, INF411, "Les bases de la programmation et de l'algorithmique", 32h TD, 2nd year, École polytechnique

Master :

- D. Augot was mentoring François Bonnal, on a M1 research training projet, "bitcoin malleability"
- D. Augot was mentoring Édouard Dufour-Sans, on a M1 research training projet, "symmetric information theoretically secure private information retrieval schemes and applications"
- F. Levy-dit-Vehel, "Cours de Cryptographie", 30h. (equiv TD), 3rd year (M1), ENSTA ParisTech, France.
- B. Smith, "Algorithmes arithmétiques pour la cryptologie", 15h, MPRI (M2), Paris
- A. Couvreur, INF558a, "Introduction to cryptology", 25h, Ecole Polytechnique (M1).
- A. Couvreur, "Introduction to coding theory and cryptology", 10h, MPRI (M2), Paris.
- B. Smith supervised Nagarjun Chinthamani Dwarakanath for a 3A project and an M1 project on efficient curve-based cryptosystems at École polytechnique
- A. Couvreur supervised Evrim Petek's M2 internship on the power decoding algorithm.
- A. Couvreur supervised Anas Aarab's M1 TRE (*Travail de Recherche Encadré*) on the decoding of Reed Solomon codes.

Doctorat :

- Ben Smith made a lecture at the spring school on coding and cryptology at La Chapelle-Gauthier.

10.2.2. Supervision

- PhD in progress. J. Lavauzelle has began his Ph.D. on locally decodable codes and cryptogra[hic applications, on October 1st, 2015, under the supervision of D. Augot and F. Levy-dit-Vehel.

- PhD in progress. E. Barelli has begun his PhD on Algebraic-Geometry codes for code-based crypto on October 1st, 2015, under the supervision of D. Augot and A. Couvreur.

- PhD in progress. N. Duhamel has begun his PhD on genus 2 curves for cryptography, under the supervision of B. Smith and F. Morain.

- Completed PhD. P. Karpman, starting in 2013, defended in November 2016 his PhD on security of symmetric crytographic primitives.

10.2.3. Juries

- D. Augot was examiner in the jury of Fanny Jardel, who defended her thesis "Calcul et Stockage Distribués pour les Réseaux de Communication", January 11, Télécom-ParisTech

- D. Augot was examiner in the jury of Cécile Pierrot, who defended her thesis "Le logarithme discret dans les corps finis", November 25, Pierre and Marie Curie University.

- F. Morain was referee and examiner in the jury of Alexandre WALLET, who defended his thesis "Le problème de décomposition de points dans les variétés jacobiennes", December 14, Pierre and Marie Curie University.

- A. Couvreur is member of the jury of the agrégation de mathématiques and coordinator of option C ("algèbre et calcul formel).

10.3. Popularization

- At the occasion of Nokia Bell Labs Future X-Days, September 2016, D. Augot, N. Coxon and F. Levy-dit-Vehel demoed N. Coxon's implementation of a code based *private information retrieval scheme*

- D. Augot made a two hours lecture on bitcoin to the French *institut des actuaires*.

GRAPHDECO Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

George Drettakis chairs the Eurographics working group on Rendering.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Adrien Bousseau is co-chair of the Tutorial program of Eurographics 2017.

9.1.2.2. Member of Conference Program Committees

Adrien Bousseau was on the program committee of Eurographics 2017 and of SIGGRAPH Asia 2016 technical briefs and posters.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Adrien Bousseau is Associate Editor of The Visual Computer journal (Springer)

George Drettakis is Associate Editor of ACM Transactions on Graphics (TOG) and of Computational Visual Media (CVM).

9.1.3.2. Reviewer - Reviewing Activities

Adrien Bousseau was reviewer for ACM TOG, IEEE TVCG, SIGGRAPH, SIGGRAPH Asia, Computers & Graphics, ACM CHI, ACM UIST, AFIG.

George Drettakis was reviewer for SIGGRAPH, Computer Graphics Forum.

9.1.4. Leadership within the Scientific Community

George Drettakis chairs the local "Jacques Morgenstern" Colloquium organizing committee.

9.1.5. Scientific Expertise

G. Drettakis is a member of the Scientific Advisory Board (SAB) of Aalto University, Finland, and participated in the SAB meeting at Aalto in October.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Abdelaziz Djelouah, TP système d'information, niveau L1, Université Nice Sophia Antipolis, 24h

Licence : Johanna Delanoy, TP Bases de données and personal project, niveau L1, IUT - Université Nice Sophia Antipolis, 64h

Masters II: G. Drettakis, A. Bousseau: Foundations of Image Synthesis, CentralSupelec, Paris, 28h

Masters I: A. Bousseau, G. Drettakis: Image Synthesis International Masters I, University of Nice Sophia-Antipolis, 12h

Masters I: G. Drettakis, A. Bousseau: Image Synthesis, Masters MAPI Cannes, University of Nice Sophia-Antipolis, 12h

9.2.2. *Supervision*

PhD in progress : Rodrigo Ortiz-Cayon, Mixed image-based rendering, Nice Sophia Antipolis University, started Dec. 2013, to be defended in Feb. 2017, advisor: G. Drettakis

PhD in progress : Théo Thonat, Multi-view image processing for image-based rendering, Nice Sophia Antipolis University, started Oct. 2015, advisor: G. Drettakis

PhD in progress : Johanna Delanoy, Data-driven sketch-based modeling, Nice Sophia Antipolis University, started Oct. 2015, advisor: A. Bousseau

PhD in progress : Jean-Dominique Favreau, geometric analysis of line drawings, Nice Sophia Antipolis University, started Oct. 2014, advisor: A. Bousseau and F. Lafarge (Titane)

PhD in progress : Valentin Deschaintre, lightweight material capture, Nice Sophia Antipolis University, started Nov. 2016, advisor: A. Bousseau and G. Drettakis

PhD in progress : Julien Philip, Mixed rendering for cultural heritage, Nice Sophia Antipolis University, started Nov. 2016, advisor: G. Drettakis

PhD in progress : Simon Rodriguez, Combining image-based and procedural modeling, Nice Sophia Antipolis University, started Nov. 2016, advisor: G. Drettakis

9.2.3. *Juries*

Adrien Bousseau was in the PhD committees of Boris Raymond (Inria Bordeaux) and Elena Garces (University of Zaragoza)

George Drettakis was in the PhD committees Oriel Frigo (Paris Descartes) and was an evaluator (rapporteur) for Kaan Yucer (ETH Zurich) and Yitzchak Lockerman (Yale).

9.3. Popularization

George Koulieris described his research in an interview for the Inria@SiliconValley Newsletter [0].

Adrien Bousseau described his research in two interviews for the Inria website [00].

Adrien Bousseau gave demos of his tool to help people practice drawing-by-observation techniques during the "Rencontres du numérique" organized by ANR (Nov. 16th) and during the "Rencontres Inria-Industrie" on e-learning (Dec. 1st).

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[0] https://project.inria.fr/siliconvalley/2016/06/21/post-doc-george-koulieris/
[0] https://www.inria.fr/en/centre/sophia/news/adrien-bousseau-receives-an-erc-starting-grant
[0] https://www.inria.fr/centre/sophia/actualites/adrien-bousseau-laureat-du-prix-jeune-chercheur

<h1 style="color:red; text-align:center">GRAPHIK Project-Team</h1>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

9.1.1.1.1. 2016 Events

- We were local co-organizers (with the Coconut team at LIRMM) of the French workshop JIAF (Journées d'Intelligence Artificielle Fondamentale), held in Montpellier in June 2016, in conjunction with the JFPC, the Journées de Programmation par Contraintes (JFPC). https://www.supagro.fr/jfpc_jiaf_2016/index_jiaf.php
- Still with Coconut team at LIRMM, we also welcomed the opening days of the National CNRS Group on theoretical and algorithmic aspects of Artificial Intelligence (pre-GDR IA) in Jun. 2016.
- Marie-Laure Mugnier co-organized the workshop "Ontologies and logic programming for query answering" co-located with IJCAI 2016 http://ontolp.lsis.org/

9.1.1.1.2. 2017 Events

- We are organizing the 30th Workshop on Description Logics, to be held in July 2017 in Montpellier. The general chairs are Meghyn Bienvenu and Marie-Laure Mugnier. https://project.inria.fr/dl2017/
- Madalina Croitou will co-organise the 5th International Workshop of Graph Based Knowledge Representation and Reasoning collocated with IJCAI 2017 in Melbourne Australia. The organiser list is the same as GKR 2015. More information about past editions can be found at: https://www.lirmm.fr/~croitoru/GKR/
- Madalina Croitoru and Pierre Bisquert will organize a special session "Agronomy and AI" at IEA-AIE 2017 (30th International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems) http://www.cril.univ-artois.fr/ieaaie2017/main/specialtracks/

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

We are regularly members of the program committees of the main generalist conferences in AI (i.e., IJCAI, AAAI, ECAI) and more specialized conferences and workshops (KR, the main conference in knowledge representation and reasoning, RR —Web reasoning and Rule Systems, SUM — International Conference on Scalable Uncertainty Management, COMMA — International Conference on Computational Models of Argument, Metadata and Semantics Research Conference, etc.)

For 2016, we served in the following program committees:

- IJCAI 2016 (21st International Conference on Artificial Intelligence): 1 senior PC + 3 PC
- ECAI 2016 (22nd European Conference on Artificial Intelligence): 2 PC
- ISWC 2016 (15th International Semantic Web Conference): 1 PC
- AAAI 2016 (30th AAAI Conference on Artificial Intelligence): 2 PC
- DL 2016 (29th International Workshop on Description Logics): 2 PC
- RR 2016 (10th International Conference on Web Reasoning and Rule Systems): 2 PC
- FOIS 2016 (9th International Conference on Formal Ontology in Information Systems): 1 PC
- BDA 2016 (Gestion de Données — Principes, Technologies et Applications): 1 PC
- FoIKS 2016 (9th International Symposium on Foundations of Information and Knowledge Systems): 1 PC
- CARI 2016 (13ème Colloque Africain sur la Recherche en Informatique et Mathématiques Appliquées): 1 PC
- IC 2016 (27es journées francophones d'Ingénierie des Connaissances): 1 PC
- MTSR 2016, AgroSEM Special track (10th Metadata and Semantics Research Conference): 1 PC
- LFA 2016 (25ème Conférence sur la Logique Floue et ses Applications): 1 PC

For 2017, we will serve in the following program committees (list not exhaustive yet):

- IJCAI 2017 (22nd International Conference on Artificial Intelligence): 1 senior PC, 1 PC
- AAAI 2017 (31st AAAI Conference on Artificial Intelligence): 2 PC
- PODS 2017 (36th International Conference on the Principles of Database Systems): 1 PC
- ICDT 2017 (20th International Conference on Database Theory): 1 PC
- SIGMOD 2017 (ACM SIGMOD International Conference on Management of Data): 1 PC
- EGC 2017 (Extraction et Gestion des Connaissances): 1 PC
- IC 2017 (28èmes journées francophones d'Ingénierie des Connaissances): 1 PC

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Patrice Buche Member of the ARIMA Editorial Board (http://arima.inria.fr/docs/04redaction.html)

Rallou Thomopoulos is chapter coordinator in 2016 special issue of the IFSET journal, and member of the proposal committee of the special issue 2011 of the RNTI journal (Revue des Nouvelles Technologies de l'Information) on the topic of the evaluation of methods in EKD (Extraction of Knowledge from Data).

9.1.3.2. Reviewer - Reviewing Activities

Reviews for *Artificial Intelligence* and *Journal of Artificial Intelligence Research* (JAIR).

9.1.4. Invited Talks

- Meghyn Bienvenu was invited speaker at IJCAI 2016 (International Joint Conference in Artificial Intelligence), Early Career Spotlight track: "Ontology-mediated query answering : Harnessing knowledge to get more from data"
- Meghyn Bienvenu was keynote speaker at RR 2016 (International Conference on Web Reasoning and Rule Systems): "Query rewriting : Limits and possibilities"
- Meghyn Bienvenu was invited speaker at Reasoning Web (RW) Summer School 2016: "Inconsistency-Tolerant Querying of Inconsistent Description Logic Knowledge Bases"
- Meghyn Bienvenu (with Magdalena Ortiz)) was invited speaker at ESSLLI 2016 (European Summer School in Logic, Language and information): "Ontology- Mediated Query Answering with Horn Description Logics"

9.1.5. Invited Seminars

- Efstathios Delivorias gave a talk at the Computational Logic Group Seminar Dresden 2016.
- Meghyn Bienvenu gave a talk at the Séminaire Inria CEDAR 2016.
- Marie-Laure Mugnier, Rallou Thomopoulos, Bruno Yun and Patrice Buche gave talks at the INRA research school "intégration de connaissances et modèles", Nantes, Nov. 2016

9.1.6. Leadership within the Scientific Community

- **Scientific animation at INRA**: Patrice Buche co-animates the national network INRA IN-OVIVE, devoted to methods and tools for big data management in life sciences, agronomy and food processing http://www6.inra.fr/reseau-in-ovive
  In particular, he co-organized three editions of the IN-OVIVE workshop dedicated to heterogeneous data sources integration in life sciences during the French conference IC (ingénierie des connaissances) from 2013 to 2016 https://workshop.inra.fr/in_ovive_2016/Programme
  Patrice Buche is also co-animator (2012-2017) at the national level of the INRA CATI ICAT "Ingénierie des connaissances et analyse textuelle" http://www6.inra.fr/cati-icat/Presentation. Moreover, he co-animates the regional seminar MIAD (Mathematical models for decision making in environment, agronomy and processing of agricultural resources).

- **Scientific animation at the national level**: Marie-Laure Mugnier is member of the animating committee of the pre-GDR "Aspects algorithmiques de l'Intelligence Artificielle" http://www.gdria.fr and of the organizing committee of the workshop "Journées d'Intelligence Artificielle Fondamentale" (JIAF, the annual meeting of the French community on the foundations of AI) http://icube-web.unistra.fr/gdri3/index.php/Thème_1_:_Intelligence_Artificielle_Fondamentale

  Rallou Thomopoulos is co-leader (together with César Acéves, INSA Toulouse) of the trans-unit program "InCom" (Knowledge and Model Integration) of the CEPIA Division of INRA.

9.1.7. Scientific expertise

- Rallou Thomopoulos and Madalina Croitoru are members of the management committee of the European cooperation network (COST) "Mathematical and Computer Science Methods for Food Science and Industry", accepted in Nov. 2105. http://www.cost.eu/COST_Actions/ca/CA15118http://www.cost.eu/COST_Actions/ca/CA15118?management

- Marie-Laure Mugnier is member of the scientific advisory board of the Food and Bioproducts department (CEPIA) at INRA (2011-2016).

- Michel Chein is member of the scientific advisory board of ABES (French Agency for Academic Libraries), (2010-2016)

- Patrice Buche participates to the Wheat Data initiative of Research Data Alliance, whose objective is to propose recommandations for wheat and other cereals data http://ist.blogs.inra.fr/wdi/ (2015-2016)

- Marie-Laure Mugnier was member of the HCERES 2016 evaluation committee for IRISA.

- We also participate to punctual expertise tasks, as experts for ANR, INRA and Inria.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

The six faculty members teach at all university levels (IUT, Licence, Master). The main courses they are in charge of are: Logics (L), Web Technologies (IUT), Artificial Intelligence (M), Knowledge Representation and Reasoning (M), Social and Semantic Web (M). Some full-time researchers give Master courses (J.-F. Baget 40H; M. Bienvenu 15H).

In addition, Rallou Thomopoulos has been lecturer in the 2015-2016 "Multicriteria Decision Methods" training session, and instructor in the "Companion Modeling" and "Data, Knowledge and Model Integration" 2016 training programs of Laval University (Quebec).

Moreover, faculty members have some specific responsibilities in the Computer Science Licence and Master:

- Michel Leclère (Faculty): since 2011, he manages the program "Data, Knowledge and Natural Language Processing" (DECOL), part of the Master of Computer Science (about 30 students). This program is co-managed by Federico Ulliana (Faculty) since 2016.

- Marie-Laure Mugnier (Faculty): since 2011, she is (co)-director of the Master in Computer Science, which gathers 6 programs (about 250 students). She also led the Master project for the next four years (LMD4, from 2015/16 to 2018/2019).

- Madalina Croitoru (IUT): since Sept. 2014, she manages the "année spéciale" (about 25 students).

9.2.2. Involvement in University Structures

- Michel Leclère: since Sept. 2015, he is deputy manager of the Computer Science teaching Department from the Science Faculty, Univeristy of Montpellier.
- Marie-Laure Mugnier: since 2016, she is member of the "pôle de formation et de recherche" MIPS (Mathématiques, Informatique, Physique et Systèmes) of the University of Montpellier.

9.2.3. Supervision

9.2.3.1. Thesis defended in 2016

- Namarata Patel defended her PhD thesis "Mise en oeuvre de préférences dans les problèmes de décision" on Oct., 7 2016 in Montpellier. Advisor: Souhila Kaci (Univ. Montpellier), co-advisor: Roland Ducournau (Univ. Montpellier), reviewers: Jérôme Lang (CNRS, LAMASADE) and Nic Wilson (Univ. College Cork), jury members: Farid Nouioua (Univ. Aix-Marseille) and Nadjib Lazaar (Univ. Montpellier).
- Abdallah Arioua defended his PhD thesis ""Formalizing and Studying Dialectical Explanations in Inconsistent Knowledge Bases" on Oct., 17 2016 in Montpellier. Advisors: Patrice Buche (UMR IATE) and Madalina Croitoru (Univ. Montpellier), reviewers: Anthony Hunter (Univ. College London) and Nicolas Maudet (Univ. Pierre et Marie Curie), jury members: Juliette Dibie (AgroParis-Tech), Leila Amgoud (IRIT), Bernard Cuq (Montpellier SupAgro) and Jérôme Fortin (Univ. Montpellier).
- Fabien Garreau defended his PhD thesis "Extension d'ASP pour couvrir des fragments DL traitables : étude théorique et implémentation" on Nov., 24 2016 in Angers. Advisor: Igor Stephan (Univ. Angers), co-advisors: Jean-François Baget (Inria) and Laurent Garcia (Univ. Angers), reviewers: Andreas Herzig (IRIT) and Philippe Lamarre (INSA Lyon), jury members: Odile Papini (Univ. Aix-Marseille), Claire Lefevre (Univ. Angers) and Marie-Laure Mugnier (Univ. Montpellier).
- Swan Rocher defended his PhD thesis "Querying Existential Rule Knowledge Bases: Decidability and Complexity" on Nov., 25 2016 in Montpellier. Advisor: Marie-Laure Mugnier (Univ. Montpellier), co-advisor: Jean-François Baget (Inria), reviewers: Marie-Christine Rousset (Univ. Grenoble) and Sebastian Rudolph (TU Dresden), jury members: Andreas Pieris (Univ. Edinburgh) and Christophe Paul (CNRS, LIRMM).

9.2.3.2. Ongoing thesis

PhD in progress are:

- Stathis Delivorias. Supervisors: Federico Ulliana, Michel Leclère and Marie-Laure Mugnier. "Boundedness and Module extraction in Existential Rules KBs". Started Oct. 2015.
- Abdelraouf Hecham. Supervisors: Madalina Croitoru and Pierre Bisquert. "Logical argumentation with dual cognitive systems". Algerian National Ministry Grant 2015-2018.
- Bruno Yun. Supervisors: Madalina Croitoru, Rallou Thomopolous, Srdjan Vesic. "Decision Making and Ranking Semantics in Logical Argumentation Frameworks". French National Ministry Grant 2016-2019.

9.2.4. Juries

In the following list, we exclude our participation in the PhD juries of GraphIK PhD Students.

- Marie-Laure Mugnier was PhD jury president - Christopher Beatrix - University of Nantes /LERIA - November 2016
- Meghyn Bienvenu was PhD co-supervisor - Camille Bourgaux - University of Orsay / LRI - September 2016
- Mare-Laure Mugnier was PhD reviewer - Camille Bourgaux - University of Orsay / LRI - September 2016

- Marie-Laure Mugnier was HDR reviewer - Nathalie Pernelle - University of Orsay / LRI - June 2016
- Patrice Buche was PhD reviewer - Fatma Chamekh - University of Jean Moulin / Lyon 3- December 2016
- Patrice Buche was HDR examiner - Nathalie Pernelle - University of Orsay / LRI - June 2016
- Federico Ulliana was member of the selection committee for a "Maître de conférence" position in Paris Dauphine

HEPHAISTOS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- J-P. Merlet was General Chair of ARK 2016, organized by the team in Grasse (70 attendees), [16]

10.1.1.2. Member of the Organizing Committees

- J-P. Merlet is a member of the scientific committee of the European Conference on Mechanism Science (EUCOMES), chairman of the scientific Committee of the Computational Kinematics workshop, a member of the steering Committee of IROS
- Y. Papegay is a permanent member of the International Steering Committee of the International Mathematica Symposium conferences series.

10.1.2. Scientific Events Selection

10.1.2.1. Reviewer

- J-P. Merlet has been reviewing Editor for IROS 2016.
- The members of the team reviewed numerous papers for numerous international conferences.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- J-P. Merlet is board member of the Journal of Behavorial Robotics

10.1.4. Invited Talks

- J-P. Merlet has given a talk during the Scientific days of Inria and the Human Robot Interaction workshop

10.1.5. Leadership within the Scientific Community

- J-P. Merlet is Inria representative to the PPP Eurobotics aisbl. He is a member of the IFToMM (International Federation for the Promotion of Mechanism and Machine Science) Technical Committees on History and on Computational Kinematics and has be re-elected as one of the 10 members of IFToMM Executive Council, the board of this federation. He is a member of the scientific committee of the CNRS GDR robotique.

10.1.6. Scientific Expertise

- J-P. Merlet was involved in project evaluations for several foreign funding agencies (Israel, Austria, Finland). He was also appointed as *Nominator* for the Japan's Prize. He was a member of the jury of the PhD Award of GDR robotique.

10.1.7. Research Administration

- J-P. Merlet is an elected member of Inria Scientific Council. and member of the CAC of UCA COMUE.
- O. Pourtallier is a board member of SeaTech, an Engineering School of University of Toulon. She is a member of the Inria CSD (doctoral students monitoring), and is responsible of the Inria NICE committee (long term invited scientists and post-doctoral student selection).
- Y. Papegay is a member of the Inria CUMIR and of the ADT committee

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: J-P. Merlet lectured 8 hours on robotics and connected objects to Master NeuroMoteur (M2) at University Paris Est. He has participated to the Parallel Kinematic Machine summer school organized by LIRMM (6h)

Master : O. Pourtallier lectured 6 hours on game theory to Master OSE (M2), at École des Mines de Paris, Sophia Antipolis, France.

E-learning

Mooc ICN : J-P. Merlet and Y. Papegay have contributed to this MOOC which is intended top introduce the numerical world to teacher. '

10.2.2. Supervision

- PhD in Progress : A. Massein, Design of Smart Environment for Human Behaviour Recognition, 2013-2016, supervisors: D.Daney, Y. Papegay

10.2.3. Juries

- J-P. Merlet has been a member of 5 PhD and 3 HDR juries, and for 6 of them has been the president of the jury.

10.3. Popularization

- J-P. Merlet has participated to a meeting "Future of robotics" organized by the Académie of Sciences. As a member of Executive Council of IFToMM he has contributed to the organization of the third Students International Olympiad on Mechanism and Machine Science held in Madrid. He is also a regular reviewer for Interstices and a contributor [18]

- Y.Papegay is actively participating to the Math.en.Jeans initiative for Mathematics teaching for undergraduate students. He has organized and animated summer schools in experimental mathematics and computer sciences. A three weeks session has been held at the University of Western Australia in Perth in July and three other one week sessions have been held in Oxford in June and August gathering around 50 high-school students - most of them were awardees in Mathematics Olympiads.

<p style="text-align:center">**HIEPACS Project-Team**</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

PMAA'16 The 9th International Workshop on Parallel Matrix Algorithms and Applications (PMAA16) was held in Bordeaux (France) and run from July 6 to 8, 2016.

10.1.1.2. Member of the Organizing Committees

The members of HIEPACS were involved in the PMAA'16 organizing committees.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

IEEE PDP'16 (J. Roman), IPDPS'16 (L. Giraud), HiPC'16 (A. Guermouche), PDCN'16 (L. Giraud), PDSEC'16 (O. Coulaud, L. Giraud), SC'16 (E. Agullo, L. Giraud).

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

L. Giraud is member of the editorial board of the SIAM Journal on Matrix Analysis and Applications (SIMAX).

10.1.3.2. Reviewer - Reviewing Activities

ACM Trans. on Mathematical Software, Advances in Computational Mathemtics, Computing and Fluid, IEEE Trans. on Parallel and Distributed Systems, International Journal of High Performance Computing Applications, Journal of Computational Physics, Journal of Scientific Computing, Linear algebra with applications, Mathematics and Computers in Simulation, Parallel Computing, SIAM J. Matrix Analysis and Applications, SIAM J. Scientific Computing, Theory of Computing Systems.

10.1.4. Invited Talks

L. Giraud, "Hard faults and soft-errors: possible numerical remedies in linear algenra solvers", VecPar'16, Porto.

10.1.5. Scientific Expertise

- E. Agullo: US Department of Energy's (DOE's) Exascale Computing Project (ECP) reviewing for research and development in Software Technology, specifically in the area of Math Libraries.
- P. Ramet is "Scientific Expert" at the CEA-DAM CESTA since oct. 2015.
- Jean Roman is member of the "Scientific Board" of the CEA-DAM. As representative of Inria, he is member of the board of ETP4HPC (European Technology Platform for High Performance Computing), of the French Information Group for PRACE, of the Technical Group of GENCI and of the Scientific Advisory Board of the Maison de la Simulation.

10.1.6. Research Administration

Jean Roman is a member of the Direction for Science at Inria : he is the Deputy Scientific Director of the Inria research domain entitled *Applied Mathematics, Computation and Simulation* and is in charge at the national level of the Inria activities concerning High Performance Computing.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

We indicate below the number of hours spent in teaching activities on a yearly basis for each scientific staff member involved.

Undergraduate level/Licence

- A. Esnard: System programming 36h, Computer architecture 40h, Network 23h at Bordeaux University.

- M. Faverge: Programming environment 26h, Numerical algorithmic 30h, C projects 20h at Bordeaux INP (ENSEIRB-MatMeca).

- P. Ramet: System programming 24h, Databases 32h, Object programming 48h, Distributed programming 32h, Cryptography 32h at Bordeaux University.

Post graduate level/Master

- E. Agullo: Operating systems 24h at Bordeaux University ; Dense linear algebra kernels 8h, Numerical algorithms 30h at Bordeaux INP (ENSEIRB-MatMeca).

- O. Coulaud: Paradigms for parallel computing 24h, Hierarchical methods 8h at Bordeaux INP (ENSEIRB-MatMeca).

- A. Esnard: Network management 27h, Network security 27h at Bordeaux University; Programming distributed applications 35h at Bordeaux INP (ENSEIRB-MatMeca).

- M. Faverge: System programming 74h, Load balancing and scheduling 13h at Bordeaux INP (ENSEIRB-MatMeca).
  He is also in charge of the second year of Embedded Electronic Systems option at Bordeaux INP (ENSEIRB-MatMeca).

- L. Giraud: Introduction to intensive computing and related programming tools 20h, INSA Toulouse; Introduction to high performance computing and applications 20h, ISAE; On mathematical tools for numerical simulations 10h, ENSEEIHT Toulouse; Parallel sparse linear algebra 11h at Bordeaux INP (ENSEIRB-MatMeca).

- A. Guermouche: Network management 92h, Network security 64h, Operating system 24h at Bordeaux University.

- P. Ramet: Load balancing and scheduling 13h, Numerical algorithms 30h at Bordeaux INP (ENSEIRB-MatMeca). He also gives classes on Cryptography 30h, Ho Chi Minh City in Vietnam.

- J. Roman: Parallel sparse linear algebra 10h, Algorithmic and parallel algorithms 22h at Bordeaux INP (ENSEIRB-MatMeca).
  He is also in charge of the last year "Parallel and Distributed Computing" option at ENSEIRB-MatMeca which is specialized in HPC (methodologies and applications). This is a common training curriculum between Computer Science and MatMeca departments at Bordeaux INP and with Bordeaux University in the context of Computer Science Research Master. It provides a lot of well-trained internship students for Inria projects working on HPC and simulation.

Summer School: on an annual basis, we run a three day advanced training (lecture and hands on) on parallel linear algebra in the framework of the European PRACE PATC (PRACE Advanced Training Centres) initiative. This training has been organized in many places in France and will be held next year in Ostrava - Czech Republic.

10.2.2. Supervision

PhD in progress : Pierre Blanchard; Fast hierarchical algorithms for the low-rank approximation of dense matrices and applications ; O. Coulaud, E. Darve.

PhD in progress : Nicolas Bouzat; Fine grain algorithms and deployment methods for exascale plasma physic applications ; M.Mehrenberger, J.Roman, G. Latu (CEA Cadarache).

PhD : Jean-Marie Couteyen Carpaye; Contributions to the parallelization and the scalability of the FLUSEPA code; defended on September 19th; P. Brenner, J. Roman.

PhD in progress : Arnaud Durocher; High performance Dislocation Dynamics simulations on heterogeneous computing platforms for the study of creep deformation mechanisms for nuclear applications; O. Coulaud, L. Dupuy (CEA).

PhD in progress : Aurélien Falco; Data sparse calculation in FEM/BEM solution; E. Agullo, L. Giraud, G. Sylvand.

PhD in progress : Cyril Fournier; Task based programming for unstructured mesh calculations; L. Giraud, G. Stafelbach.

PhD in progress : Grégoire Pichon; Utilisation de techniques de compression $\mathcal{H}$-matrices pour solveur direct creux parallèle dans le cadre des applications FEM; L. Giraud, P. Ramet.

PhD in progress : Louis Poirel; Algebraic coarse space correction for parallel hybrid solvers; E. Agullo, L. Giraud.

PhD : Maria Predari; Load balancing for parallel coupled simulations; defended on December 9th; A. Esnard, J. Roman.

10.2.3. Juries

- Okba Hamitou, "Efficient preconditioning method for the CARP-CG iterative solver for the solution of the frequency- domain visco-elastic wave equation", referee: Jan S. Hesthaven, Luc Giraud; Université de Grenoble, spécialité: mathématiques appliquées, 22 Décembre 2016.

- Jean-Charles Papin, "A Scheduling and Partitioning Model for Stencil-based Applications on Many-Core Devices", referee Jean-François Méhaut, Olivier Coulaud; Université Paris-Saclay pré´parée à l'École Normale Supérieure de Cachan spécialité: mathématiques appliquées, 8 Septembre 2016.

HYBRID Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. General chair, scientific chair

- Bruno Arnaldi was Scientific Chair of "Journées de l'AFRV" 2016, Brest, France.
- Anatole Lécuyer was Program Chair of IEEE Virtual Reality 2016.
- Maud Marchal was Program Chair of IEEE Symposium on 3D User Interfaces 2016.

10.1.2. Scientific events selection

10.1.2.1. Member of the conference program committees

- Anatole Lécuyer was Member of the conference program committee of Eurohaptics 2016.
- Ferran Argelaguet was Member of the conference program committee of IEEE Symposium on 3D User Interfaces 2016, ACM Virtual Reality Software and Technology 2016, and ACM Symposium on Spatial User Interfaces 2016.
- Maud Marchal was Member of the best paper committee of "Journées Françaises de l'Informatique Graphique" 2016.
- Valérie Gouranton was Member of the program committee of 3DCVE Workshop 2016.

10.1.2.2. Reviewer

- Ferran Argelaguet was Reviewer for ACM CHI 2016, Eurohaptics 2016.
- Maud Marchal was Reviewer for ACM Siggraph 2016, IEEE Virtual Reality 2016, IEEE Symposium on 3D User Interfaces 2016, Eurohaptics 2016.
- Valérie Gouranton was Reviewer for IEEE Virtual Reality 2016.

10.1.3. Journal

10.1.3.1. Member of the editorial boards

- Anatole Lécuyer is Associate Editor of Frontiers in Virtual Environments, and Presence journals.
- Ferran Argelaguet is Review Editor of Frontiers in Virtual Environments.
- Maud Marchal is Associate Editor of Computer Graphics Forum, Review Editor of Frontiers in Virtual Environments, and Member of the Editorial Board of Revue Francophone d'Informatique Graphique.

10.1.3.2. Reviewer - Reviewing activities

- Ferran Argelaguet was Reviewer for ACM Transactions on Graphics, IEEE Transactions on Visualization and Computer Graphics, and The Visual Computer.
- Maud Marchal was Reviewer for IEEE Transactions on Visualization and Computer Graphics, IEEE Transactions on Haptics, and The Visual Computer.
- Valérie Gouranton was Reviewer for Revue d'Intelligence Artificielle.

10.1.4. Invited talks

- Ferran Argelaguet was invited at the Bauhaus University Weimar (November 16).

10.1.5. Leadership within the scientific community

- Bruno Arnaldi is Vice-President of AFRV (French Association for Virtual Reality).

- Valérie Gouranton is Member of Executive Committee of AFRV (French Association for Virtual Reality).

10.1.6. Scientific expertise

- Bruno Arnaldi was Expert for French ANR (Agence Nationale de la Recherche).
- Maud Marchal was Expert for the Natural Sciences and Engineering Research Council of Canada (NSERC).

10.1.7. Research administration

- Bruno Arnaldi is Deputy Director of IRISA.
- Maud Marchal is Co-Head of the MRI Master Research in Computer Science.

10.2. Teaching - Supervision - Juries

Anatole Lécuyer:

Master MNRV: "Haptic Interaction", 9h, M2, ENSAM, Laval, FR

Ecole Centrale de Nantes : "Haptic Interaction and Brain-Computer Interfaces", 4.5h, M1-M2, Ecole Centrale de Nantes, FR

Master SIBM: "Haptic and Brain-Computer Interfaces", 4.5h, M2, University of Rennes 1, FR

Bruno Arnaldi:

Master INSA Rennes: "VAR: Virtual and Augmented Reality", 12h, M2, INSA Rennes, FR

Master INSA Rennes: "Virtual Reality", courses 6h, projects 16h, M1 and M2, INSA Rennes, FR

Master INSA Rennes: Projects on "Virtual Reality", 20h, M1, INSA Rennes, FR

Ferran Argelaguet:

Master STS Informatique MITIC: "Techniques d'Interaction Avancées", 26h, M2, ISTIC, University of Rennes 1, FR

Master INSA Rennes: "Modeling and Engineering for Biology and Health Applications", 12h, M2, INSA Rennes, FR

Maud Marchal:

Master INSA Rennes: "Modeling and Engineering for Biology and Health Applications", 48h, M2 and responsible of this lecture, INSA Rennes, FR

Master SIBM: "Biomedical simulation", 3h, M2, University of Rennes 1, FR

Valérie Gouranton:

Licence: "Introduction to Virtual Reality", 22h, L2 and responsible of this lecture, INSA Rennes, FR

Licence: Project on "Virtual Reality", 16h, L3 and responsible of this lecture, INSA Rennes, FR

Master INSA Rennes: "Virtual Reality", 16h, M2, INSA Rennes, FR

Master INSA Rennes: Projects on "Virtual Reality", 20h, M1, INSA Rennes, FR

Florian Nouviale:

Ecole Centrale de Nantes: "Training on Unity3D", 6h, M1/M2, Ecole Centrale de Nantes, FR

Ronan Gaugne:

Insa Rennes: Projects on "Virtual Reality", 50h, L3/M1/M2, Insa Rennes, FR

10.2.1. Supervision

10.2.1.1. PhD (defended)

- Guillaume Claude, "The sequencing of actions in collaborative virtual environments", INSA Rennes, July 2016, Supervised by Bruno Arnaldi, Valérie Gouranton

- François Lehericey, "Détection de collision par lancer de rayon : la quête de la performance", INSA Rennes, September 2016, Supervised by Bruno Arnaldi, Valérie Gouranton

- Jérémy Lacoche, "Plasticity for User Interfaces in Mixed Reality", Université Rennes 1, July 2016, Supervised by Thierry Duval, Bruno Arnaldi, Jérôme Royan, Eric Maisel

- Morgan Le Chénéchal, "Awareness Model for Asymmetric Remote Collaboration in Mixed Reality", INSA Rennes, July 2016, Supervised by Bruno Arnaldi, Thierry Duval, Valérie Gouranton, Jérôme Royan

- Lucas Royer, "Visualization tools for needle insertion in interventional radiology", INSA Rennes, December 6th, 2016, Supervised by Alexandre Krupa and Maud aud Marchal

- Andéol Evain, "Optimizing the Use of SSVEP-based Brain-Computer Interfaces for Human-Computer Interaction", University of Rennes 1, December 6th, 2016, Supervised by Anatole Lécuyer, Nicolas Roussel, Géry Casiez and Ferran Argelaguet

10.2.1.2. PhD (in progress)

- Jean-Baptiste Barreau, "Virtual Reality and Archaelogy", Started in February 2014, Supervised by Valérie Gouranton and Bruno Arnaldi

- Benoit Le Gouis, "Multi-scale physical simulation", Started in October 2014, Supervised by Bruno Arnaldi, Maud Marchal and Anatole Lécuyer

- Lorraine Perronet, "Neurofeedback applications based on EEG, fMRI and VR", Started in January 2014, Supervised by Christian Barillot and Anatole Lécuyer

- Gwendal Le Moulec, "Automatic generation of VR applications", Started in October 2015, Supervised by Valérie Gouranton, Bruno Arnaldi and Arnaud Blouin

- Anne-Solène Dris-Kerdreux, "Training in virtual reality for construction applications", Started in November 2015, Supervised by Valérie Gouranton and Bruno Arnaldi

- Antoine Costes, "Haptic texturing", Started in November 2015, Supervised by Anatole Lécuyer and Ferran Argelaguet

- Guillaume Cortes, "Improving tracking in VR", Started in November 2015, Supervised by Anatole Lécuyer

- Hakim Si-Mohammed, "BCI and HCI", Started in October 2016, Supervised by Anatole Lécuyer and Ferran Argelaguet

- Gautier Picard, "Collaborative VR", Started in October 2016, Supervised by Valérie Gouranton, Bernard Gibaud and Bruno Arnaldi

- Hadrien Gurnel, "Prise en compte de la déformation d'organe pour l'assistance robotisée d'insertion d'aiguille", Started in October 2016, Supervised by Alexander Krupa and Maud Marchal

10.2.2. Juries

10.2.2.1. Selection committees

- Bruno Arnaldi was Member of Selection committee of Assistant Professor Position at Ecole Centrale de Nantes.

10.2.2.2. PhD and HDR juries

- Anatole Lécuyer was Member of PhD committees of Henrique Debarba (EPFL, Switzerland), Axelle Pillain (Telecom Bretagne), Maxence Rangé (Univ. Rennes 1), Jérémie Plouzeau (ENSAM Chalon), Andéol Evain (Univ. Rennes 1), and Member of HDR committee of Reinhold Scherer (TU Graz, Austria).

- Bruno Arnaldi was President of PhD committees of Kévin Jordao (INSA de Rennes), Hui-Yin Wu (Univ. Rennes 1), Charlotte Hoareau (Enib Brest), Sabhi Ahmed (Paris 8), Guillaume Claude (INSA Rennes), Morgan Le Chénéchal (INSA Rennes) and François Lehericey (INSA Rennes), Jérémy Lacoche (Univ. Rennes 1)

- Valérie Gouranton was Member of PhD committees of Guillaume Claude (INSA Rennes), Morgan Le Chénéchal (INSA Rennes) and François Lehericey (INSA Rennes)

- Maud Marchal was Reviewer of PhD theses of Johan Sarrazin (Univ. Grenoble Alpes), Pierre-Luc Manteaux (Univ. Grenoble Alpes) and Camille Schreck (Univ. Grenoble Alpes), and Member of PhD committee of Lucas Royer (INSA Rennes).

- Ferran Arguelaguet was Member of PhD committee of Andéol Evain (Univ. Rennes 1).

10.3. Popularization

The team has organized, together with MimeTIC team, a press conference and a press release on the "6-Finger Illusion" in May 2016. This event has been followed by lots of articles (internet, press) and radio coverages, including: France Inter, RFI, Europe 1, Le Monde, Libération, Les Echos, etc.

In addition, the results of the team have been disseminated in several other media coverages in 2016:

- "Journal télévisé 20h" (National prime time news), France2 channel (02/16) : presentation of the BCI activity.

- "Journal télévisé du soir", TVRennes channel (04/16) : presentation of the Forum Eurocities visit in Immersia.

- "La tête au carré", France Inter radio (10/16) : participation of Anatole Lécuyer.

The team has also participated to numerous dissemination events in 2016 (chronological order):

- "Open House ISTIC 2016" (Rennes, 01/16) : booth and demos of the team.

- "Forum EuroCities" (Rennes, 04/16) : presentation from Ronan Gaugne and demos in Immersia.

- "Les 10 ans du Quai Branly" (Paris, "Quai Branly" Museum, 06/16) : talk from Valérie Gouranton and Ronan Gaugne on virtual archaeology.

- "French-American Doctorat Exchange program 2016" (Rennes, 07/16): presentation from Ferran Argelaguet on Hybrid activities.

- "Journées du Patrimoine 2016" (Rennes, "Champs Libres" Museum, 09/16) : demos related to virtual archaelogy.

- "Journées Science et Musique 2016" (Rennes, 10/16) : co-organization of this event, and presentation of several demos.

- "Nuit Art et Science 2016" (Brest, 10/16) : demo on musical composition history in virtual reality and Immersia.

- "NEUROPLANETE 2016" (Nice, 10/16) : talk from Anatole Lécuyer and dissemination in "Le Point" journal.

- "Rencontres Inria Industrie: Interactions avec les objets et services numériques" (Lille, 11/16): demonstration from Ferran Argelaguet.

HYCOMES Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Selection

9.1.1.1. Member of the Conference Program Committees

Benoî Caillaud has served on the program committee of ACSD 2016 (http://acsd2016.mat.umk.pl), a conference on the applications of concurrency in system design. He is a member of the steering committe of ACSD since 2006.

9.1.1.2. Reviewer

Benoît Caillaud has reviewed papers submitted to the ACSD 2016 and ACC 2016 conferences.

Khalil Ghorbal reviewed two regular research papers for the Hybrid Systems: Computation and Control Conference.

Khalil Ghorbal reviewed two journal papers for the IEEE Transactions on Automatic Control.

Khalil Ghorbal reviewed a journal paper for the Computer Journal (Oxford Journals, Science and Mathematics).

Khalil Ghorbal reviewed a journal paper for the Information and Computation journal (Elsevier).

9.1.2. Invited Talks

Benoît Caillaud has given an invited talk on *Time Domains in Hybrid Systems Modeling* at the SHARC 2016 workshop and ALROB meetingthat took place in Brest in June 2016 (http://lab-sticc.univ-brest.fr/~goulven/sharc2016/program/index.html).

In May 13, 2016, Khalil Ghorbal gave an invited talk about the invariant generation for polynomial ordinary differential equations during the Effective Algebraic Geometry Seminar, IRMAR, Rennes, France.

In May 23, 2016, Ayman Aljarbouh presented a talk at the Embassy of Sweden in Tokyo for the first Japanese Modelica Conference (MODELICA2016), May 23-24, 2016, Tokyo, JAPAN.

In July 2016, Ayman Aljarbouh presented a poster during the French-American Doctoral Exchange Seminar (FADEx) 2016: Systèmes Cyber-Physiques, July 04-08, 2016, Grenoble, FRANCE.

In November, 5-12, Albert Benveniste was invited at the Systems Research Center, a center of excellence of the University of Maryland at College Park, USA.

9.1.3. Research Administration

Benoît Caillaud is head of the *Languages and Software Engineering* department of IRISA (http://www.irisa.fr/en/departments/d4-language-and-software-engineering). He has been in charge of presenting the departement during the evaluation seminar of IRISA by HCERES in January 2016.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master : Benoît Caillaud is teaching with Marc Pouzet a first year master degree course on *hybrid systems modeling*. The course is open to the students registered to the computer science research and innovation curriculum of the university of Rennes 1 and ENS Rennes, France.

Master : Khalil Ghorbal was "Chargé de TD" (20h Eq TD) for the "Analyse et Conception Formelles" module open for students registered to the computer science master degree of the university of Rennes 1 and ENS Rennes, France.

9.2.2. Supervision

PhD in progress : Ayman Aljarbouh, *Accelerated Simulation of Hybrid Systems*, started january 2014, supervised by Benoît Caillaud. Ayman Aljarbouh is expected to defend his PhD in MArch 2017.

9.2.3. Juries

Khalil Ghorbal was reviewer in the PhD defense committee of Sameh Mohamed, "Une Méthode Topologique pour la Recherche d'Ensembles Invariants de Systèmes Continus et á Commutation", defended in October 17th, 2016, Univ. Paris Saclay (ENS Cachan).

I4S Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Member of the Conference Program Committees

J.Dumoulin is

- member of the scientific committee of the GI Division (Geosciences Instrumentation and Data Systems) of EGU (European Geosciences Union) for infrastructure instrumentation and monitoring since April 2013. (http://www.egu.eu/gi/structure/)
- member of the scientific committee of QIRT (quantitative Infrared Thermography) since February 2014 (http://www.qirt.org/)
- organizer and chair of a session at EGU 2016 (http://www.egu2016.eu/).

L. Mevel

- is member of the EWSHM scientific committee.
- is member of the IOMAC scientific committee.

V. Le Cam is head and general secretary of the EWSHM scientific committee.

Q. Zhang:

- Member of IFAC Technical Committee on Modelling, Identification and Signal Processing.
- Member of IFAC Technical Committee on Fault Detection, Supervision and Safety of Technical Processes.

M. Doehler

- was organizer of an invited session at EWSHM 2016.
- session organizer at two COST workshops (http://www.cost-tu1402.eu/events).

10.1.1.2. Reviewer

V. Le Cam was session chairman for the EWSHM 2016 in Bilbao

L. Mevel was reviewer and session chairman for the EWSHM 2016 in Bilbao, and reviewer for IFAC WC 2017

Q. Zhang was reviewer for CDC 2016, IFAC WC 2017

M. Doehler was reviewer and session chairman for EWSHM 2016 in Bilbao, and reviewer for MED 2016, IFAC WC 2017

J. Dumoulin was reviewer and session chairman for QIRT 2016 and at EGU 2016 in GI division

10.1.2. Journal

10.1.2.1. member of the Editorial Boards

L. Mevel is member of the editorial board of journal of Mathematical Problems in Engineering.

L. Mevel is member of the editorial board of journal of Shock and Vibration.

Q. Zhang is member of the editorial board of the journal of Intelligent Industrial Systems.

J. Dumoulin is member of the editorial board of the journal of Quantitative Infrared Thermography.

J. Dumoulin is member of the editorial board of the journal of Geoscientific Instrumentation and Data Systems.

10.1.2.2. Reviewer - Reviewing activities

X. Chapeleau was reviewer for Journal: Sensors and Journal of Civil Structural Health Monitoring

L. Mevel was reviewer for Mechanical Systems and Signal Processing, journal of Sound And Vibration and Journal of Control and SHM.

M. Doehler was reviewer for Automatica, International Journal of Control, International Journal of Systems Science, Mechanical Systems and Signal Processing, Journal of Sound and Vibration, Mathematical Problems in Engineering, Smart Materials and Structures, Journal of Intelligent Material Systems and Structures

J. Dumoulin was reviewer for IEEE Transactions on Instrumentation and Measurement, Quantitative Infrared Thermography Journal, Optics and Lasers in Engineering journal , Journal Cultural Heritage, International Journal of Architectural Heritage, Journal of Geophysics and Engineering, Research in Nondestructive Evaluation

10.1.3. Invited Talks

J. Dumoulin was invited speaker at the 4th Youth in Conservation of Cultural heritage YOCOCU 2016, 21-23 September 2016, Madrid, Spain.

J. Dumoulin was invited keynote speaker at ERICE in October 2016.

J. Dumoulin was invited speaker at SFT 2016 in March 2016.

M. Mogoro (from SNCF) and V. Le Cam have been invited to give a keynote at the first SHM Conference dedicated to Railway in Qingdao, China, on October 2016 http://www.crrcgc.cc/iwshm-rs/english/.

V. Le Cam have was invited speaker at the "NDT Conference organized by Airbus Group at Pondichery, India, January 2016"

10.1.4. Scientific Expertise

10.1.4.1. Method and device for localizing faults in an electrical cable
Participants: Nassif Berrabah, Qinghua Zhang.

In modern engineering systems, fault diagnosis is frequently an integrated functionality for various components, but rarely for electrical cables. The fast development of electronic devices is accompanied by more and more connecting cables. The reliability of electrical connections becomes a crucial issue because of their large number. Moreover, some cables are operated under severe conditions, such as extreme temperature, nuclear radiation, humidity, mechanical strain, etc.. Based on the work reported in Section 7.5.1 , a patent has been registered at INPI jointly by EDF and Inria [46]. It is about a method for detecting, localizing and quantifying resistive faults in a cable, by means of estimating the series resistance per unit length distributed along the cable from reflectometry measurements made at the ends of the cable. Its fast numerical computation makes it suitable for real time applications.

10.1.4.2. Scientific Expertise in European Calls
Participant: Vincent Le Cam.

V. Le Cam : Expertise of a specific EUROPEAN SME project in the call EUROSTARS.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence Professionnelle TAM : J. Dumoulin, thermographie infrarouge active, 16h, Université Paris-Est, France

Master 2 MMMRI, (Maintenance et Maîtrise des Risques Industriels) , J. Dumoulin, contrôle non destructif par thermographie infrarouge active, 12h, Université Paris-Est, France

Master 2 ITII, J. Dumoulin, , BTP, module Maintenance et réhabilitation des ouvrages, « Transferts thermiques dans les Structures : Des principes physiques à l'application sur site réel », 12 h, Ecole Centrale de Nantes(ECN).

Master Système Communicant Mobile, V. Le Cam, embedded systems under Linux Operating System, 12h, Polytech Nantes, France

Master Civil engineering, V. Le Cam, Structural Monitoring, 4h, Université de Nantes, France

Licence 3 SEICOM, V. Le Cam, 3h, SHM and smart grids, Université de Nantes, France

Licence 3 SEICOM, V. Le Cam, 8h, TP, SHM and smart grids, Université de Nantes, France

ESEO, V. Le Cam, 16h, TP, embedded systems under Linux Operating System, France

Polytech, V. Le Cam, 14h, TP, embedded systems under Linux Operating System, France

Master 1 informatique, M. Doehler, 24 TD projet recherche, Université de Rennes 1 & ENS Rennes, France

Licence Pro Mesures physiques, X. Chapeleau, Mesures optiques, 15h, IUT de St Nazaire, Université de Nantes, France

10.2.2. Supervision

PhD : Antoine Bassil, *Fibre-optic sensor for fatigue monitoring*, D. Leduc, O. Abraham and X. Chapeleau, Ecole doctorale SPIGA, Université de Nantes, since November 2016.

PhD : Delwar Hossain Bhuyan, *Damage localisation on offshore platforms*, L. Mevel and M. Doehler, Ecole doctorale MATISSE, Université de Rennes 1, since November 2014

Guillaume Gautier's post-doctoral project on morphosense system monitoring, L. Mevel, 2015-2017.

PhD : Nassif Berrabah, Electrical cable ageing monitoring , Q. Zhang, Ecole doctorale MATISSE, Université de Rennes 1, since November 2014

PhD : Nicolas Le Touz. *Design and study of positive energy transport infrastructures: from thermomechanical modeling to the optimization of such energy systems* J. Dumoulin. at Ecole Centrale Nantes (ECN) since 2015.

PhD : Thibault Toullier. *Simultaneous characterization of the radiative properties and temperatures of envelopes of structures in natural environment by multispectral infrared thermography* L. Mevel, J. Dumoulin and M. Doehler. Ecole doctorale MATISSE, Université de Rennes 1, since November 2016.

PhD : Saeid Allahdadian, *Methods for vibration-based damage assessment*, M. Doehler, University of British Columbia, Canada, since 2015.

PhD : Eva Viefhues, *Statistical damage localization for civil structures*, L. Mevel and M. Doehler, Ecole doctorale MATISSE, Université de Rennes 1, since November 2016.

J. Dumoulin is associate professor at Laval University, Canada.

M. Doehler is associate researcher at BAM, Germany.

10.3. Popularization

J. Dumoulin was in charge of hybrid/solar road that was demonstrated at COP21 and COP22.

<h1 style="text-align:center;color:red;">IBIS Project-Team</h1>

9. Dissemination

9.1. Research

9.1.1. Scientific events: organizing committees

9.1.1.1. Member of organizing committees

IBIS members	Conference, workshop, school	Date
Eugenio Cinquemani	Fifth International Workshop on Hybrid Systems Biology (HSB 2016), Grenoble	October 2017
Hidde de Jong	CompSysBio: Advanced Lecture Course on Computational Systems Biology, Aussois	March 2017
Delphine Ropers	Séminaire de Modélisation du Vivant (SeMoVi), Lyon and Grenoble	2016

9.1.2. Scientific events: selection committees

9.1.2.1. Chair of conference program committees

IBIS member	Conference, workshop, school	Role
Eugenio Cinquemani	European Control Conference (ECC 2016)	Associate editor
Eugenio Cinquemani	Fifth International Workshop on Hybrid Systems Biology (HSB 2016)	Program chair
Hidde de Jong	International Conference on Intelligent Systems in Molecular Biology (ISMB 2016)	Area chair

9.1.2.2. Member of conference program committees

IBIS member	Conference, workshop, program
Eugenio Cinquemani	HSB 2016, SASB 2016
Hidde de Jong	ISMB 2016, ECCB 2016, HSB 2016, FOSBE 2016
Delphine Ropers	JOBIM 2017

9.1.3. Journals

9.1.3.1. Member of editorial boards

IBIS member	Journal
Johannes Geiselmann	Frontiers in Microbiology (review editor)
Hidde de Jong	Journal of Mathematical Biology
Hidde de Jong	Biosystems
Hidde de Jong	ACM/IEEE Transactions on Computational Biology and Bioinformatics

9.1.4. Scientific evaluation and expertise

IBIS member	Organism	Role
Johannes Geiselmann	BGene	Member scientific advisory board
Johannes Geiselmann	ANR	Member of selection committee
Johannes Geiselmann	INRA	Member of scientific advisory committee Microbiologie, Adaptation, Pathogénie
Johannes Geiselmann	UMR5240 CNRS-UCBL-INSA-BayerCropScience	Member scientific council
Johannes Geiselmann	ARC1, Rhône-Alpes region	Member scientific committee
Hidde de Jong	International Human Frontier Science Program (HFSP)	Member selection and review committees
Hidde de Jong	Microbiology and Food Chain Department, Inra	Member scientific council
Hidde de Jong	BGene	Member scientific advisory board
Hidde de Jong	HCERES	Member of evaluation committee of TAGC laboratory (UMR U1090), Marseille

9.1.5. Recruitment committees

IBIS member	Organism	Recruitment
Hidde de Jong	Université Pierre et Marie Curie, Paris	Full professors in systems biology, applied to microbiology and to physiology
Delphine Ropers	Inria Lille	Chargés de recherche (jury d'admissibilité)
Delphine Ropers	Inria	Chargés de recherche (jury d'admission)
Delphine Ropers	INSA de Lyon	Assistant professor

9.1.6. Invited talks

Eugenio Cinquemani

Title	Event and location	Date
Reconstruction of promoter activity statistics from reporter protein population snapshot data	Seminar at Control theory and systems biology laboratory, D-BSSE, Basel, Switzerland	January 2016
Identifying variability of gene expression dynamics from time-course data	Seminar at IBM Research Center, Zurich, Switzerland	January 2016
Reconstruction of promoter activity statistics from reporter protein population snapshot data	Seminar at Automatic control laboratory, ETH Zurich, Switzerland	January 2016
Inference of regulatory networks from time-series reporter gene data: The case of promoter regulation in the E. coli motility network	Invited talk at workshop on Static Analysis in Systems Biology (SASB 2016), Edinburgh, UK	September 2016
On observability and reconstruction of promoter activity statistics from reporter protein mean and variance profiles	Presentation at 5th International Workshop on Hybrid Systems Biology (HSB 2016), Grenoble	October 2016

Hidde de Jong

Title	Event and location	Date
Natural and synthetic control of growth rate and gene expression in bacteria	Seminar Centre de Biologie Intégrative de Toulouse	February 2016
Natural and synthetic control of resource allocation in bacteria	Seminar MIRA institute, University of Twente, the Netherlands	July 2016
A synthetic growth switch based on controlled expression of RNA polymerase	Presentation at 17th International Conference on Systems Biology (ICSB 2016), Barcelona, Spain	October 2016
Natural and synthetic control of resource allocation in bacteria	Journée Biologie des systémes BiLille, Lille	November 2016

Johannes Geiselmann

Title	Event and location	Date
Growth control in bacteria	Seminar at CPBS Montpellier	June 2016

Nils Giordano

Title	Event and location	Date
Dynamical allocation of cellular resources as an optimal control problem: Novel insights into microbial growth strategies	Talk during annual meeting of working group GT-BIOSS, Lyon	July 2016

Stephan Lacour

Title	Event and location	Date
Direct versus indirect gene regulation by the stress response SigmaS factor	Seminar Institut de Biologie Structurale, Grenoble	February 2016
Identification of novel curli regulators in Escherichia coli	Poster at Biofilms7, Porto, Portugal	June 2016
Quantification of non-coding RNAs in bacterial cells using a Broccoli aptamer	Poster at 8th Bordeaux RNA Club Symposium & Aptamers in Bordeaux	June 2016

Aline Métris

Title	Event and location	Date
What does it take for a foodborne pathogen to survive a pinch of salt? Bioinformatics and systems biology approaches to model food safety	Invited researcher seminar Inria Grenoble - Rhône-Alpes	December 2016
Modèles et –omics pour mieux comprendre la réponse des pathogènes alimentaires au stress osmotique	INRA Avignon	December 2016

Delphine Ropers

Title	Event and location	Date
Adaptation of E. coli growth to environmental cues: global control of gene expression and post-transcriptional regulations	Institute for Food Research, Norwich, UK	March 2016
Adaptation of E. coli growth to environmental cues: global control of gene expression and post-transcriptional regulations	Journées INRA-Inria, Mallemort	October 2016

9.1.7. Research administration

IBIS member	Committee	Role
Eugenio Cinquemani	Inria Grenoble - Rhône-Alpes	Member Comité des Emplois Scientifiques (CES)
Eugenio Cinquemani	Inria Grenoble - Rhône-Alpes	Member Comité des Utilisateurs des Moyens Informatiques (CUMI)
Eugenio Cinquemani	Inria	Member Comité Administrative Paritaire (CAP)
Johannes Geiselmann	Department of Biology, Université Grenoble Alpes	Member scientific council
Hidde de Jong	Inria Grenoble - Rhône-Alpes	Member scientific council
Hidde de Jong	Inria	Member working group on International Relations of Conseil d'Orientation Scientifique et Technique (COST)
Delphine Ropers	Inria	Member of Commission d'évaluation d'Inria
Delphine Ropers	Inria Grenoble - Rhône-Alpes	Référente chercheurs
Delphine Ropers	Inria Grenoble - Rhône-Alpes	Member of Comité des études doctorales (CED)

9.2. Teaching - Supervision - Committees

9.2.1. Teaching

Four members of the IBIS team are either full professor, associate professor or assistant professor at the Université Grenoble Alpes. They therefore have a full teaching service (at least 192 hours per year) and administrative duties related to the organization and evaluation of the university course programs on all levels (from BSc to PhD). Besides the full-time academic staff in IBIS, the following people have contributed to courses last year.

Eugenio Cinquemani

Master: Stochastic modelling of gene regulatory networks, M2, BIM, INSA de Lyon (6 h)

Master: Statistics for systems biology, M1, Master Approches Interdisciplinaires du Vivant, CRI/Université Paris Descartes (24 h)

Master: Modelling and identification of metabolic networks, M1, Phelma, INP Grenoble (4 h)

Hidde de Jong

Master: Modeling and simulation of gene regulatory networks, M2, BIM, INSA de Lyon (20 h)

Master: Integrated models of the cell: metabolism, gene expression, signalling, M2, ENS Paris (6 h)

Master: Integrated models of the cell: metabolism, gene expression, signalling, M2, Institut de Technologie et d'Innovation, Paris Sciences Lettres (PSL) (6 h)

Nils Giordano

Bachelor: La bio-informatique : de l'analyse du génome à la modélisation, L2, Université Grenoble Alpes (9 h)

François Rechenmann

E-learning: MOOC Bioinformatique : algorithmes et génomes (https://www.fun-mooc.fr/courses/inria/41003S02/session02/about)

French language version of Bioinformatics MOOC published last year, including the possibility to run the algorithms by means of a dedicated Python notebook (in collaboration with Thierry Parmentelat from Inria Sophia-Antipolis - Méditerranée).

Delphine Ropers

Master: Modelling in systems biology, M1, Phelma, INP Grenoble (16 h)

Master: Modeling and simulation of genetic regulatory networks, M1, Université Grenoble Alpes (6 h)

Master: Modeling and simulation of genetic regulatory networks, M2, INSA de Toulouse (4 h)

9.2.2. Supervision

PhD in progress: **Stefano Casagranda**, Analysis and control of cell growth models. Supervisors: Jean-Luc Gouzé (BIOCORE) and Delphine Ropers

PhD in progress: **Nils Giordano**, Régulation de la croissance chez *Escherichia coli* : étude théorique et expérimentale à l'aide de modèles coûts-bénéfices. Supervisors: Hidde de Jong and Johannes Geiselmann

PhD in progress: **Bernard Chielli Ponce de Leon**, Stochasticity of gene expression in strains of *E. coli* with a controlled growth rate and number of chromosomes. Supervisors: Irina Mihalcescu (Université Grenoble Alpes) and Johannes Geiselmann

PhD in progress: **Thibault Etienne**, Analyse intégrative de la coordination entre stabilité des ARNm et physiologie cellulaire chez *Escherichia coli*. Supervisors: Delphine Ropers and Muriel Cocaign-Bousquet (INRA Toulouse)

PhD in progress: Joël Espel: RNA engineering: Design of the dynamical folding of RNA and of RNA switches. Supervisors: Alexandre Dawid (Université Grenoble Alpes) and Johannes Geiselmann

9.2.3. PhD thesis committees, PhD advisory committees, and habilitation committees

PhD thesis committees

IBIS member	Role	PhD student	University	Date
Hidde de Jong	Rapporteur	Jetse Scholma	University of Twente, the Netherlands	July 2016
Hidde de Jong	Rapporteur	Jean-Baptiste Lugagne	Université Paris Descartes	December 2016
Hidde de Jong	Président	José Morales Morales	Université de Grenoble	December 2016
Hidde de Jong	Rapporteur	Sébastien Raguideau	AgroParisTech	December 2016
Johannes Geiselmann	Président	Jessica Penin	Université de Grenoble	April 2016
Johannes Geiselmann	Rapporteur	Minyeong Yoo	Université Paul Sabatier Toulouse	May 2016
Johannes Geiselmann	Président	Ramachandran Boopathi	ENS de Lyon	May 2016
Johannes Geiselmann	Rapporteur	Ayyappasamy Sudalaiyadum Perumal	Université de Montpellier	June 2016
Stéphan Lacour	Examinateur	Simon Léonard	Université de Lyon	September 2016
Stéphan Lacour	Examinateur	Alice Berry	Université de Grenoble	November 2016

Habilitation (HDR) committees

IBIS member	Role	PhD student	University	Date
Hidde de Jong	Examinateur	Morgan Magnin	Université de Nantes	Avril 2016
Johannes Geiselmann	President	Jan Bednar	Université de Grenoble	December 2015

PhD advisory committees

IBIS member	PhD student	University
Johannes Geiselmann	Jean-Baptiste Lugagne	Université Paris Descartes

9.2.4. Teaching adminstration

Yves Markowicz is director of the BSc department at Université Grenoble Alpes.

Michel Page is coordinator of the master Systèmes d'information et d'organisation at the Institut d'Adminstration des Entreprises (IAE), Université Grenoble Alpes.

Eugenio Cinquemani organizes a module on statistics in systems biology at CRI/Université Paris Descartes.

Delphine Ropers organizes a module on the mathematical modeling of biological systems at PHELMA, INP Grenoble.

Hidde de Jong organizes with Daniel Kahn a module on the modeling of genetic and metabolic networks at INSA de Lyon.

9.3. Science education

Delphine Ropers gave a course on bacteria and antibiotic resistance at the primary school Ecole Bizanet in Grenoble (December 2016).

<p align="center" style="color:red">ILDA Project-Team</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. General chair, scientific chair

- CHI 2017, 35th ACM SIGCHI Conference on Human Factors in Computing Systems: Caroline Appert (papers and notes co-chair)

10.1.2. Scientific events selection

10.1.2.1. Chair of conference program committees

- CHI 2017, 35th ACM SIGCHI Conference on Human Factors in Computing Systems: Emmanuel Pietriga (SC - subcommittee chair)

10.1.2.2. Member of the conference program committees

- CHI 2017, 35th ACM SIGCHI Conference on Human Factors in Computing Systems: Anastasia Bezerianos (AC - associate chairs)
- CHI 2016, 34th ACM SIGCHI Conference on Human Factors in Computing Systems: Anastasia Bezerianos, Emmanuel Pietriga (AC - associate chairs)
- UIST 2016, 29th ACM ACM User Interface Software and Technologies Symposium: Caroline Appert, Anastasia Bezerianos (AC - associate chairs)
- InfoVis 2016, IEEE Information Visualization Conference: Anastasia Bezerianos (AC - associate chair)
- EICS 2016, 8th ACM SIGCHI Symposium on Engineering Interactive Computing Systems: Emmanuel Pietriga
- VOILA @ ISWC 2016, Visualizations and User Interfaces for Ontologies and Linked Data, workshop co-located with ISWC 2016: Emmanuel Pietriga
- SSDBM 2016: 28th International Conference on Scientific and Statistical Database Management: Emmanuel Pietriga
- Immersive Analytics @ ISS 2016: Exploring Future Interaction and Visualization Technologies for Data Analytics, workshop co-located with ACM ISS 2016: Emmanuel Pietriga
- IHM 2016 – Conference of the Association Francophone d'Interaction Homme-Machine: Olivier Chapuis (AC - associate chair)

10.1.2.3. Reviewer

- ACM CHI 2016, Conference on Human Factors in Computing Systems: Olivier Chapuis, María-Jesús Lobo, Arnaud Prouzeau
- ACM UIST 2016, Symposium on User Interface Software and Technology: Olivier Chapuis, Emmanuel Pietriga
- EuroVis EG/VGTC 2016, Conference on Data Visualization: Caroline Appert
- ACM ISS 2016, International Conference on Interactive Surfaces and Spaces: Caroline Appert, Olivier Chapuis
- ACM MobileHCI 2016, International Conference on Human-Computer Interaction with Mobile Devices and Services: Caroline Appert
- ACM IUI 2017, International Conference on Intelligent User Interfaces: Caroline Appert

- IEEE VR 2016, Virtual Reality: Olivier Chapuis
- ACM EICS 2016, Symposium on Engineering Interactive Computing Systems: Olivier Chapuis

10.1.3. Journal

10.1.3.1. Member of the editorial boards

- Semantic Web Journal: Emmanuel Pietriga (guest editor, special issue on Visual Exploration and Analysis of Linked Data)

10.1.3.2. Reviewer - Reviewing activities

- ACM ToCHI, Transactions on Computer-Human Interaction: Olivier Chapuis
- IJHCI, International Journal of Human-Computer Interaction: Olivier Chapuis, Emmanuel Pietriga
- IEEE TVCG, Transactions on Visualization and Computer Graphics: Anastasia Bezerianos

10.1.4. Invited talks

- Olivier Chapuis, L'équipement d'excellence Digiscope: un réseau de plateformes pour la visualisation interactive, CNRS Innovatives Big Data Forum, October 2016, Paris France.
- Anna Gogolou, Visualization and human-computer interaction methods: Challenges in Interactive Visual Exploration of Large Data Series, 2nd Interdisciplinary Time Series Workshop, December 2016, Paris France.
- Anastasia Bezerianos, Hands-on session on visualization and human-computer interaction methods: Designing interactive visualization techniques for large data series, 2nd Interdisciplinary Time Series Workshop, December 2016, Paris France.

10.1.5. Scientific expertise

- Evaluator for the Sponsored Program for Industrial Data Science (EDF & Thales) - Fondation Mathématique Jacques Hadamard/IRSDI: Emmanuel Pietriga

10.1.6. Research administration

- Executive committee of the Laboratoire de Recherche en Informatique (LRI): Olivier Chapuis
- President of Inria Saclay - Île de France's Commission for Technological Development (CDT): Emmanuel Pietriga

10.1.7. Learned societies

- Association Francophone d'Interaction Homme-Machine (AFIHM): Olivier Chapuis (board member, vice-president).

10.1.8. Hiring committees

- Univ. Paris-Sud hiring committee, Commission Consultative des Spécialistes de l'Université 27ème section (computer science), members: Caroline Appert.
- Univ. Paris-Sud hiring committee, Comités de Sélection PRCE/PRAG 1195 (english language), members: Anastasia Bezerianos.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: Anastasia Bezerianos, Co-Head of EIT masters M1 & M2 HCID, Univ. Paris-Sud

Master: Anastasia Bezerianos, Co-Head of M2 Interaction, Univ. Paris-Sud, Université Paris-Saclay

Master: Anastasia Bezerianos, Programming of Interactive Systems – 21h CM, M1/M2 HCID + M2R Interaction, Univ. Paris-Sud

Master: Anastasia Bezerianos, Mixed Reality and Tangible Interaction – 11h CM, M1/M2 HCID + M2R Interaction, Univ. Paris-Sud

Master: Anastasia Bezerianos, Career Seminar, – 12h CM, M2 HCID + M2R Interaction, Univ. Paris-Sud

Master: Anastasia Bezerianos, Design Project in HCI, – 21h CM, M1 HCID, Univ. Paris-Sud

Master: Anastasia Bezerianos, HCI Project, – 21h CM, M2 HCID + M2 Interaction, Univ. Paris-Sud

Master: Anastasia Bezerianos, Introduction to Java – 18h CM, M1/M2 HCID + M2R Interaction, Univ. Paris-Sud

Master: Caroline Appert, Evaluation of Interactive Systems – Intro, 21h CM, M1/M2 HCID + M2R Interaction, Univ. Paris-Sud

Master: Caroline Appert, Evaluation of Interactive Systems – Advanced, 21h CM, M1/M2 HCID + M2R Interaction, Univ. Paris-Sud

Master: Emmanuel Pietriga, Data Visualization, 24h CM, M2 Informatique Décisionelle, Univ. Paris-Dauphine.

Licence: María-Jesús Lobo, Informatique Graphique, 28h, L3 Univ. Paris-Sud

Licence: María-Jesús Lobo, Programmation d'Interfaces Interactives avancées, 29h, L3 Univ. Paris-Sud

Master: Arnaud Prouzeau, Programming of Interactive Systems: 27h, Univ. Paris-Sud.

Licence: Arnaud Prouzeau, Programmation Impérative en C++, 22.4h, Univ. Paris-Sud.

Licence: Arnaud Prouzeau, Programmation Impérative Avancée en C++, 16.5h, Univ. Paris-Sud.

Licence: Arnaud Prouzeau, Interaction Homme-Machine, 12h, olytech Paris-Sud.

Licence: Bruno Fruchard, Développement d'Applications Mobiles, 13h, Télécom Paristech.

Licence: Bruno Fruchard, Paradigmes de programmation, 24.5h, Télécom Paristech.

10.2.2. Supervision

PhD in progress : Anna Gogolou, Iterative and expressive querying for big data series, October 2016, Advisors: Anastasia Bezerianos, Themis Palpanas

PhD in progress : María-Jesús Lobo, Interaction Techniques for Map Multiplexing, since October 2014, Advisors: Caroline Appert, Emmanuel Pietriga

PhD in progress : Rafael Morales Gonzalez, Surface Gestures for Advanced Graphical Interfaces: Which Gesture for What, since November 2014, Advisors: Caroline Appert, Gilles Bailly, Emmanuel Pietriga

PhD in progress : Arnaud Prouzeau, Collaboration around Wall-Displays in Time Critical and Command and Control Contexts, since October 2014, Advisors: Anastasia Bezerianos, Olivier Chapuis

PhD in progress : Hugo Romat, Nouvelles techniques de visualisation et de manipulation interactive de collections de documents et données hétérogènes, since June 2016, Advisors: Caroline Appert, Emmanuel Pietriga

PhD in progress : Evanthia Dimara, Merging Interactive Visualization and Automated Analysis for Group Decision-Making Involving Large Datasets, since October 2014, Advisors: Pierre Dragicevic, Anastasia Bezerianos

PhD in progress : Bruno Fruchard, Techniques d'interaction exploitant la mémoire spatiale pour faciliter l'accès rapide aux commandes et aux données, since October 2015, Advisors: Eric Lecolinet, Olivier Chapuis

Master: Dylan Lebout, Indirect vs Direct surface gestures for wall-sized displays, May - August 2016, Advisors: Caroline Appert, Olivier Chapuis

10.2.3. Juries

PhD: Rémy Dautriche, Université Grenoble-Alpes: Emmanuel Pietriga (rapporteur)

PhD: Pascal Goffin, Inria / Université Paris-Saclay: Emmanuel Pietriga (président du jury)

10.3. Popularization

- SPIE Newsroom: E. Pietriga, F. del Campo, A. Ibsen, R. Primet, C. Appert, O. Chapuis, M. Hempel, R. Muñoz, S. Eyheramendy Duerr, A. Jordan, H. Dole, Ultra-high-resolution walls for visualizing very large datasets, May 2016. http://spie.org/newsroom/6505-ultra-high-resolution-walls-for-visualizing-very-large-datasets

<p style="text-align:center; color:red;">**IMAGINE Project-Team**</p>

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. Member of the Organizing Committees

Remi Ronfard was

- co-organizer of the Eurographics workshop on intelligent cinematography and editing (WICED) in Lisbon, Portugal in May 2016.
- co-organizer of the Computational Modeling of Narrative (CMN) conference in Cracow, Poland in July 2016.

8.1.2. Scientific Events Selection

8.1.2.1. Chair of Conference Program Committees

- Marie-Paule Cani was chosen as Technical Paper Chair of Siggraph 2017 and started working on this since January 2016, with several meetings in the US throughout the year.
- Stefanie Hahmann was Paper Chair of Symposium on Solid and Physical Modeling (SPM) 2016.

8.1.2.2. Member of the Conference Program Committees

- Marie-Paule Cani served in the Papers Committees of Eurographics 2016 and Siggraph 2016.
- Frédéric Devernay served as a member of the program committee for IEEE CVPR 2016, ECCV 2016, 3DV 2016, CVMP 2016, RFIA 2016.
- Damien Rohmer was member of the International Program Committee for Symposium on Solid and Physical Modeling (SPM) and Shape Modeling International-Sculpting Event (SMI-FASE). He was also member of the jury of the best paper for AFIG-EGFR.
- Remi Ronfard was a member of the Program Committees for Motion in Games (MIG 2016), International Conference on Interactive Storytelling (ICIDS 2016) and Intelligent Narrative Technology (INT 2016).
- Stefanie Hahmann serves in the International Program Committee for Eurographics 2016 and Shape Modeling International (SMI) 2016.
- Jean-Claude Léon was member of the International Program Committee for Symposium on Solid and Physical Modeling (SPM) and Shape Modeling International-Sculpting Event (SMI-FASE)

8.1.2.3. Reviewer

- Damien Rohmer was reviewer for ACM SIGGRAPH Asia.
- Remi Ronfard was a reviewer for Computer Vision and Pattern Recognition (CVPR) and Computer Human Interface (CHI) conferences in 2016.

8.1.3. Journal

8.1.3.1. Member of the Editorial Boards

- Marie-Paule Cani is an Associate Editor of ACM Transactions on Graphics (TOG).
- Stefanie Hahmann was a guest Editor of the journal CAD Vol. 78 (Elsevier): Special Issue on Solid and Physical Modeling SPM'16, (eds.) Mario Botsch (Allemagne), Stefanie Hahmann, Scott Schaefer (USA).
- Jean-Claude Léon is an Associate Editor of CAD (Elsevier)

8.1.3.2. Reviewer - Reviewing Activities

- Remi Ronfard was a reviewer for the « Computers and Graphics » and « Graphical Models » journals in 2016.
- Stefanie Hahmann was a reviewer for the journals CAGD and CAD
- Jean-Claude Léon was a reviewer for the journal ASME JCISE

8.1.4. Invited Talks

Marie-Paule Cani gave the following invited talks

- Towards the Expressive Design of Virtual Worlds: Combining Knowledge and Control. Key-note talk, Eurographics'2016, Lisbon, Portugal, May 2016.
- Expressive 3D Modeling: User-centered models for seamless creation through gestures. Key-note talk, Graphics Interface'2016, Victoria, Canada June 2016
- Modélisation 3D expressive: du design numérique à la création de mondes virtuels animés. 3h talks for the Computer Science students of ENS Paris-Saclay (previously called ENS Cachan)
- Towards the Expressive Design of Virtual Worlds: Combining Knowledge and Control. Inria Sophia Antipolis colloquium series, September 2016.
- Modélisation 3D Expressive : du design numérique à la création de mondes virtuels animés. Invited lecture. l'Université de Corse, Corte, Octobre 2016.
- Expressive 3D modeling: from digital design to the creation of animated virtual worlds. Computer Science colloquium, University Paris VI, November 2016.

Rémi Ronfard gave the following invited talks

- Directing virtual worlds, Xerox Research Center Europe, Meylan.
- The prose storyboard language, a tool for annotating and directing movies, Research seminar on digital images, ENS Ulm, February 11, 2016.
- Directing virtual worlds, Disney Research, Zurich.
- Génération et montage de rushes cinématographiques par analyse vidéo et application aux captations de théâtre. Séminaire en humanités numériques: Valoriser la recherche en arts performatifs par le numérique, Maison des Sciences de l'Homme, Lille, April 18, 2016.
- Can computers pay attention ? Journée d'étude sur Attention humaine / Exo-attention computation-nelle (Human Attention / Computational Exo-Attention) at University Grenoble Alpes, October 13, 2016.

8.1.5. Scientific Expertise

- Marie-Paule Cani
  - was a reviewer for a consolidator and a starting ERC project.
  - did some consulting for Disney Research, Zurich.
- Remi Ronfard
  - was a reviewer for the AXIOM GAMMA project at the European Commission (review meetings in March and July 2016).
  - was a member of the scientific committee at IMAGINOVE in 2016.
- Stefanie Hahmann
  - was an expert for the Netherlands Organisation for Scientific Research.
  - serves as a member of the Advisory Board (2014-2018) for the Européen Marie-Curie Training Network ARCADES.

8.1.6. Research Administration

- Marie-Paule Cani served as first Vice-Chair and chair of the Steering Committee of the Eurographics association.

- Marie-Paule Cani and Rémi Ronfard are elected members of the executive board (CA) of EG-France, the french chapter of Eurographics.

- Marie-Paule Cani became joint director of Laboratoire Jean Kuntzmann from July 2016.

- Damien Rohmer is member of the Conseil d'Administration of Association Française d'Informatique Graphique (AFIG).

- Rémi Ronfard

    – was the Head of the Image and Geometry Department at Laboratoire Jean Kuntzmann until July 2016.

    – is the co-organizer of the action « Visage, geste, action et comportement » at GDR ISIS.

    – has been the head (by interim) of the Imagine team from April 2016.

- Stefanie Hahmann

    – is an elected member of the Executive Committee of SMA (Solid Modeling Association) since 2013.

    – is the head of the French working group "GTMG" (Groupe de travail en Modélisation Géométrique) part of the CNRS GDR IM and GDR IGRV.

    – was member of the Conseil de laboratoire of the LJK lab.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Marie-Paule Cani is responsible for two courses at Ensimag/Grenoble-INP: 3D Graphics (a course that attracts about 80 master 1 students per year) and IRL (Introduction à la recherche en laboratoire), a course enabling engineering students to work on a personal project in a research lab during one semester, to get an idea of what academic research is.

- Stefanie Hahmann is co-responsible of the department MMIS (Images and Applied Maths) at Grenoble INP with 120 students. (http://ensimag.grenoble-inp.fr/cursus-ingenieur/modelisation-mathematique-images-simulation-124674.kjsp)

    Stefanie Hahmann had teaching load of 192h per year. She is responsible of 3 courses at Ensimag/Grenoble INP: Numerical Methods (240 students, 3rd year Bachelor level), Geometric Modeling (60 students, Master 1st year) and Surface Modeling (30 students, Master 2nd year).

- Olivier Palombi is responsible of the French Campus numérique of anatomy. He is responsible and national leader of the project SIDES (http://side-sante.org/). All the French medical schools (43) have planed to use the same e-learning framework (SIDES) to manage evaluations (examen) and to create a large shared database of questions.

- François Faure was responsible of the GVR-(Graphics, Vision and Robotic) program in the MOSIG Master.

- Damien Rohmer is coordinator of the Math, Signal, Image program at the engineering school CPE Lyon in supervising the scientific and technical content of the program. He is also co-responsible of the *Image, Modeling & Computing* specialization program attracting 35 students per year. He gives, and is responsible, for of one Computer Science class (130 student, 3rd year Bachelor level), an introductory Computer Graphics class (110 students, Master 1st year), and 5 specialization classes on C++ programming, OpenGL programming, 3D modeling, animation and rendering (35 students, Master 1st and 2nd year). He coordinates the association between CPE and the new computer graphics master program ID3D (Image, Développement et Technologie 3D) from University Lyon1. He also coordinates the association between CPE and the Gamagora computer game project.

- Rémi Ronfard taught courses in Computational modeling of narrative texts, movies and games, MSTII Doctoral School, University Grenoble Alpes (18 hours in March-April 2016); Game Engine Programming, M2R IMAGINA, University of Montpellier (36 hours in October-December 2016) and Advanced 3D animation, M2R MOSIG, University of Grenoble Alpes (12 hours in December 2016).
- Jean-Claude Léon is in charge of the module Mechanical Systems at Grenoble-INP ENSE3 (300 students, 64h, coordination of three courses)
- Frédéric Devernay teaches Computer Science and Algorithmics to L1 and L2 students (Cycle Préparatoire Polytechnique : CPP) at INP Grenoble (50h).

Note that MOSIG is joint master program between University Joseph Fourier (UJF) and Institut Polytechnique de Grenoble (INPG) taught in English since it hosts a number of internal students. It belongs to the doctoral school MSTII.

Most of the members of our team are Professor or Assistant Professor in University where the common teaching load is about 200h per year. Rémi Ronfard who is only researcher usually perform some teaching in vacations.

8.2.2. *Supervision*

- PhD: Léo Allemand-Giorgis. *Reconstruction de surfaces à partir de complexes de Morse-Smale*. Thèse MENRT. October 2012-Juin 2016. Stefanie Hahmann and GP Bonneau (Maverick team).
- PhD: Pierre-Luc Manteaux. *Simulation et contrôle de phénomènes physiques*. Grenoble University. October 2012-September 2016. Marie-Paule Cani and François Faure.
- PhD: Camille Schreck. *Interactive deformation of virtual paper*. Grenoble Université, October 2013 - October 2016. Stefanie Hahmann, Damien Rohmer.
- PhD: Ulysse Vimont. *Novel Methods for the Interactive Design of Complex Objects and Animations* October 2013 - November 2016. Marie-Paule Cani, Damien Rohmer.
- PhD in progress: Romain Brégier (Université de Grenoble Alpes), *Dévracage d'objets à l'aide de bras robotisés*, encadrée par Frédéric Devernay et dirigée par James Crowley (LIG, Grenoble), soutenance prévue en octobre 2017.
- PhD in progress: Guillaume Cordonnier. *Graphical simulation of mountains based on geology*. Grenoble university. October 2015-September 2018. Marie-Paule Cani and Eric Galin.
- PhD in progress: Pablo Coves, *From Point Cloud Data to Functional CAD Model*. Grenoble Universit. Jean-Claude Léon, Damien Rohmer, Raphaëlle Chaine (LIRIS), Julie Digne (LIRIS).
- PhD in progress: Sébastien Crozet, *Calcul de distance minimale entre solides B-Rep CAO pour des applications de simulations mécaniques temps réelles*, Janvier 2015- Décembre 2017. Frédéric Devernay.
- PhD in progress: Even Entem. *3D modelling from a sketch*. Grenoble University. November 2013-March 2017. Marie-Paule Cani and Loic Barthe (IRIT Toulouse).
- PhD in progress: Amélie Fondevilla. *Sculpting and animating developable surfaces with video embedding*, Thèse MENRT. October 2016 - September 2021. Stefanie Hahmann.
- PhD in progress: Geoffrey Guingo. *Synthesis of animated textures*. Grenoble university. October 2015-September 2018. Marie-Paule Cani, Jean-Michel Dischler and Basile Sauvage.
- PhD in progress: Sandra Nabil (Université de Grenoble Alpes), *Vidéo panoramique 360 dégrés à très haute résolution*, encadrée par Frédéric Devernay et dirigée par James Crowley (LIG, Grenoble), soutenance prévue en octobre 2018.
- PhD in progress: Grégoire Niéto (Université de Grenoble Alpes), *Dispositifs de capture de type «caméra plénoptique» pour la vision à grande distance, et algorithmes de traitement et de visualisation*, encadrée par Frédéric Devernay et dirigée par James Crowley (LIG, Grenoble), soutenance prévue en octobre 2017.

- PhD in progress: Robin Roussel. *Function-aware design for objects to be fabricated.* UCL London. Octber 2015-September 2018.Niloy Mitra, Marie-Paule Cani and Jean-Claude Léon.
- PhD in progress: Tibor Stanko. *Modélisation de surfaces lisses maillées à partir de capteurs inertiels.* Thèse CEA. October 2014- September 2017. Stefanie Hahmann and GP Bonneau.
- M2R: Thibault Blanc-Beyne, Ensimag, Géraldine Morin (ENSEEIHT), Stefanie Hahmann
- M2R: Amélie Fondevilla, Ensimag, Stefanie Hahmann, Damien Rohmer
- M2R Maxime Garcia, ENSIMAG/MOSIG, Rémi Ronfard
- M2R: Thibault Lejemble, Ensimag, Stefanie Hahmann, Damien Rohmer
- M2R: Kevin Le Run, L3, ENS Cachan, Rémi Ronfard
- M2R: Estelle Noé, ParisTech et KTH, Damien Rohmer, Stefanie Hahmann, Marie-Paule Cani
- M2R: Aymeric Séguret, M2GICAO, Jean-Claude Léon,

8.2.3. Juries

- Marie-Paule Cani was member of the PhD committees of Elisabeth Rousset (Equipe IIHM, UGA), Yoann Weber (Université de Limoges), and Hamza Chouh (CEA Saclay - Université de Lyon).
- Remi Ronfard was a reader (rapporteur) for the PhD thesis of Fabio Zund, Augmented reality storytelling, ETH Zurich, October 2016.
- Stefanie Hahmann was a reviewer (rapporteur) for the PhD thesis of Florian Canezin (Univ. Toulouse), Hoang Ha Nguyen (Université Aix-Marseille) and Ngels Cervero (UPC Universitat Politènica de Catalunya, Barcelona).
- Jean-Claude Léon was reviewer (apporteur) for the PhD thesis of Lei Zhang (Ecole Centrale Marseille)

8.3. Popularization

Marie-Paule Cani

- "Façonner l'Imaginaire. . .": Towards the Expressive Design of Animated Virtual Worlds "Imagination Week de l'ESSEC, Paris, Janvier 2016.
- Formes, mouvements, et mondes virtuels. . . Quel média pour façonner l'imaginaire ? Forum des savoirs, Rouen, 2016. Exposé également donné à l'Institut de Biologie de Paris VI, octobre 2016.
- participation to a Round Table within the conference:"Mathématiques Oxygène du Numérique", Paris, November 2016.

Damien Rohmer gave a presentation on

- Researches and applications in Computer Graphics to ENS Lyon students.
- Scientific image production to mathematiciens scientists at the MMI (Maison des Mathématiques et de l'Informatique) in Lyon.
- Garment and developable surface modeling at the R3iLab (Réseau innovation immatérielle pour l'industrie).

Rémi Ronfard

- Eye tracking and the arts. Invited talk at Experimenta, Grenoble, October 2016.
- Artificial Intelligence and the arts. Invited talk at Atelier Arts et Science, CEA/Hexagone, Grenoble, October 2016.

INDES Project-Team

7. Dissemination

7.1. Promoting Scientific Activities

7.1.1. Scientific Events Organisation

7.1.1.1. General Chair, Scientific Chair

- Ilaria Castellani co-organised (with Mohammad Reza Mousavi) the workshop TRENDS 2016, which took place in Québec City in association with the CONCUR conference.

7.1.1.2. Member of the Organizing Committees

- Ilaria Castellani participated in the organisation of the 2nd Summer School of the BETTY project, which took place in Cyprus.

7.1.2. Scientific Events Selection

7.1.2.1. Member of the Conference Program Committees

- Ilaria Castellani served in the programme committee of the workshop EXPRESS/SOS 2016.
- Tamara Rezk served in the programme committee of POST, SEC@SAC, PLAS, IEEE SecDev, and APLAS 2016.

7.1.2.2. Reviewer

The team members have been reviewers for FSTJCS conference, SEC@SAC conference, USENIX Security 2016, POST 2016, NDSS 2016, and CCS 2016.

7.1.3. Journal

7.1.3.1. Member of the Editorial Boards

- Ilaria Castellani is a member of the editorial board of the french journal *Technique et Science Informatiques*.
- Tamara Rezk is a member of the editorial board of the french journal *Interstices*.

7.1.3.2. Reviewer - Reviewing Activities

The team members have been reviewers for the international journals JLAMP (*Journal of of Logical and Algebraic Methods in Programming*), LMCS (*Logical Methods in Computer Science*), International Journal of Information Security (IJIS), EEE TDCS, and ACM TISSEC.

7.1.4. Invited Talks

Manuel Serrano gave a presentation on "Diffuse Web programming" at The Open Source Innovation Spring 2016 (http://open-source-innovation-spring.org/techniques-de-programmation-web-letat-de-lart-date-conf/).

Nataliia Bielova has been invited to give a talk on Price discrimination of Online Airline Tickets at the Collaborative Action on the Protection of Privacy Rights in the Information Society (CAPRIS) project meeting, Sophia Antipolis, France.

7.1.5. Leadership within the Scientific Community

- Ilaria Castellani is the chair of the IFIP TC1 WG 1.8 on Concurrency Theory since May 2014. In this quality, she co-organises every year (together with the WG Secretary Mohammad Reza Mousavi) the annual business meeting of the working group as well as the workshop TRENDS, which is always affiliated with the CONCUR conference. Ilaria Castellani was a member of the european COST Action IC1201 BETTY on Behavioural Types (October 2012-October 2016). She also belonged to the Management Committee of BETTY and was the chair of its working group on security. Ilaria Castellani is a member of the COST Action IC1405 on Reversible Computation (November 2014-November 2018). She is also a deputy Management Committee member of this action.

- Nataliia Bielova has co-organised a Dagstuhl Seminar on Online Privacy and Web Transparency [0] with researchers from Telefonica (Spain), Stony Brook University (USA) and Princeton University (USA).

- Nataliia Bielova is a member of the W3C Tracking Protection Working Group. This group works towards creating a "DoNotTrack" specification. Its goal is to help users express their preferences on third-party tracking and help companies ensure their compliance with the specification.

7.1.6. Scientific Expertise

During 2016, Tamara Rezk has been an international research proposal evaluator for the following research agencies: Ministerio de Ciencia y Tecnología e Innovación Productiva (Foncyt, Argentina), Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI, Romania).

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Licence : Vincent Prunet, Algorithms and Data Structures, 8 ETD, L2, Lycée International de Valbonne Sophia Antipolis (within the scope of the national Inria action to promote early CS courses in all scientific curricula), France

Master : Nataliia Bielova, Information Flow Security in Web Applications, 15 ETD, University of Pierre et Marie Curie, France

Master : Tamara Rezk, Web Application Security, 28H ETD, University of Nice Sophia Antipolis, France

Master : Tamara Rezk, Proofs of Cryptography, 28H ETD, University of Nice Sophia Antipolis, France

Master : Tamara Rezk, Information Flow Security in Web Applications, 15 ETD, University of Pierre et Marie Curie, France

7.2.2. Supervision

PhD in progress : **Colin Vidal**, *Programmation Web réactive*, University of Nice, 1/07/2015, **Manuel Serrano** and **Gérard Berry**.

PhD in progress : **Dolière Francis Some**, *Web Tracking Prevention*, University of Nice, 1/11/2015, **Nataliia Bielova** and **Tamara Rezk**.

PFE Master in progress: Leila Kuntar, Analysis of web tracking technologies that use 1x1 pixel image, University of Nice, Nataliia Bielova

7.2.3. Juries

- Nataliia Bielova was an examiner of the PhD thesis of Willem De Groef, KU Leuven, Belgium.
- Ilaria Castellani was a member of the "Comité de sélection " for a position of Maître de conférences at the University of Paris Diderot (Paris 7), IRIF Laboratory.

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[0]https://www.dagstuhl.de/en/program/calendar/semhp/?semnr=17162

- Ilaria Castellani was a reviewer of the PhD thesis of Saverio Giallorenzo, University of Bologna. She took part in the jury of this PhD thesis, as well as of ten other PhD theses defended in the same round.

- Ilaria Castellani was an examiner for the PhD thesis of Aurélien Deharbe, Université Pierre et Marie Curie (Paris 6).

- Tamara Rezk was an examiner of the PFE juries for Security and Privacy and Mobile Cloud and IoT at Univesity of Nice Sophia Antipolis.

- Manuel Serrano was an examiner of the PhD thesis of Rabah Laouadi, Université de Montpellier.

- Manuel Serrano was an examiner of the PhD thesis of Julien Pagès, Université de Montpellier.

7.3. Popularization

- Web users are continuously tracked as they browse the Web. One of the techniques for tracking is device fingerprinting that distinguishes users based on their Web browser and operating system properties. Together with Inria Celtique team, we have proposed solutions to detect and prevent device fingerprinting via runtime monitoring of JavaScript programs. We have published an article in a general public ERCIM News magazine [0] about prevention of device fingerprinting via program monitoring [10].

- We have implemented the *WebStats* website [0]. This website collects, on a monthly basis, a number of JavaScript and security statistics about top 10 000 webpages: the usage of popular JavaScript libraries; the usage of different language constructs in these libraries; use of Content Security Policies and secure cookies, etc. The *WebStats* website can be used by programmers (to understand which JavaScript libraries are more popular), researchers in programming languages (when designing a subset of JavaScript, to safely exclude the language constructs that are rarely used according to *WebStats*), and researchers in privacy (to analyse which tracking libraries are the most prevalent).

7.4. Transfer

7.4.1. *WebRobotics*

The WebRobotics initiative aims at developing collaborations with partner academic and industry teams to jointly prototype and experiment end user applications involving assistive robots and sensor devices (depending on the size and number of the embedded components, applications may be either classified as robotic or IoT ones). Each WebRobotics project is structured around partner medical institutions that provide key requirements to specifications and use the actual prototype throughout their daily activity. WebRobotics Applications all use Hop.js as their core framework, natively supporting web protocols for communication and distribution of tasks, and any web enabled device such as a smartphone or tablet to drive the robots and applications. In 2016, the initiative accounted to two full time engineers until the completion of the project, mid year.

The Top Three Benefits of WebRobotics:

- WebRobotics focuses on key societal issues, developing real applications for demanding users.

- Application developers and users feedback to Hop.js framework developers, helping identify and prioritize key requirements.

- The WebRobotics application portfolio fosters the dissemination and transfer of the Hop.js technology to the Industry.

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[0] http://ercim-news.ercim.eu/en106/special/using-javascript-monitoring-to-prevent-device-fingerprinting
[0] http://webstats.inria.fr/

The WebRobotics initiative now encompasses several prototypes in use by medical foundations and hospitals.

- RAPP. The WebRobotics project is part of the RAPP FP7 european project, to be completed in December 2016, where Hop.js technology is used by several academic and SME R&D teams to develop a distributed software platform and applications for assistive robotics. Two prototypes have been developed, the first one is a personal coach robot (a Nao humanoid robot embedding Hop.js distributed applications), and the second one is a smart rollator (a walking aid with additional hardware and software services for rehabilitation, training and activity monitoring. The rollator hardware and robotic components are provided by Inria Hephaistos). Both prototypes are being evaluated by partner medical institutions.

- Hopcare. Indes collaborates with other research teams (Inria STARS, Nice University Cobtek Project) and local institutes and SMEs to foster the development distributed monitoring and supervision applications with the Hop.js technology. An expert engineer is dedicated to this project (grant from UCN@Sophia Labex, until April 2016).

  - ICP (Institut Claude Pompidou Hospital, in Nice) is now using the Alzheimer diagnosis tool developed using Hop.js. User Data generated from Inria/Stars sensors and image analysis software are collected by a Hop.js server and processed before being delivered to the Physician's web tablet, as an editable web report, or paper ready PDF reports.

  - The activity monitoring application enables real-time monitoring of various events generated by hardware/software monitoring tools (such as the video monitoring applications from Inria/Stars) as well as user defined events. Hop.js is the common framework for the whole application (communications with remote information servers, processing of input data, database management, user authentication and authorization, custom views for web clients). The application will soon be deployed at the Nice Valrose EHPAD (a specialized institution for elderly who need medical care), where Inria runs an experimentation lab.

  - A third application has been developed to enable the configuration and use of Inria/Stars video analysis tools through a web interface. The application is used by researchers to tune their data processing algorithms.

7.4.2. *Hop.js for IoT*

As more and more software developers come to IoT, teams are facing critical challenges due to the inherent complexity of multi-platform distributed development, leading to team building issues, long and costly development cycles to deliver products with the highest quality, usability, and security standards

The Hop.js software suite enables agile software teams to build flexible, robust and secure end-to-end IoT applications with a single language and a consistent set of API and built-in software components.

Building on the Hop.js technology and the successful WebRobotics experiments, a startup project has been launched in 2016 as a spin-off of the Indes team, with the support of Inria DGD-T, funding two engineers from July 2016.

The team has initiated partnerships with IoT hardware vendors, adapted Hop.js to highly constrained execution environments on microcontrollers, and participated to a number of public and business events to promote the solution and meet future customers. The startup company is expected to launch in 2017.

<h1 style="text-align:center; color:red">INFINE Project-Team</h1>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- In 2016, Emmanuel Baccelli was general chair of the RIOT Summit.

9.1.1.2. Member of the Organizing Committees

- In 2016, Aline Viana was on the conference program committee for IEEE International Conference on Advanced Information Networking and Applications (IEEE AINA-2017).
- In 2016, Emmanuel Baccelli was in the conference programm committee of the ACM Mobile-Health'16.

9.1.2. Scientific Events Selection

9.1.2.1. Reviewer

- In 2016, Cédric Adjih was reviewer for WINCOM'16, and Globecom 2016.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- In 2016, Aline Viana was Associate Editor of ACM Computer Communication Review (ACM CCR) and Editorial Board member of "Wireless Communications and Mobile Computing Open Access Journal" of John Wiley&Sons and Hindawi.

9.1.3.2. Reviewer - Reviewing Activities

- In 2016, Aline Viana was reviewer for IEEE Transaction on Mobile Computing (TMC), Elsevier Pervasive and Mobile Computing, Elsevier AdHoc Networks, Elsevier Computer Networks.
- In 2016, Emmanuel Baccelli was member of the IETF Routing Directorate, and as such was reviewing RFCs in the making.

9.1.4. Invited Talks

- In 2016, Emmanuel Baccelli gave a number of invited talks on the topic of RIOT, including at the IoT Meetup (April 2016 in Athens, Greece), at the RIOT Summit (July 2016 in Berlin, Germany), at TelecomParisTech for ICSSEA'16 (June 2016, Paris, France), at EclipseCon'16 (October 2016 in Ludwigsburg, Germany), at Fraunhofer FOKUS for ASQF Day (December 2016 in Berlin, Germany)
- In 2016, Cédric Adjih gave a talk on RIOT at IFSSTAR (November 2016 in paris, France).
- In 2016, we also gave several invited talks at: Stochastic Networks Conference, UCSD; CIRM workshop on random matrices; Institut Henri Poincaré's "Nexus" of Information and Computation Theories; EPFL workshop for birthdays of Shannon, Urbanke and Telatar (see: http://www.etru50.com/invited-speakers/) ; LINCS scientific advisory board.

9.1.5. Scientific Expertise

- In 2016, Cédric Adjih served as a expert reviewer for one ANR call for proposals.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- **Masters**
- Engineering school, third year students at Ecole Polytechnique: Laurent Massoulié taught a course on "Networks: distributed control and emerging phenomena".
- Course for Corps des Mines: Emmanuel Baccelli gave a half day course on "Communication Protocols and Operating Systems for the Internet of Things" in the context of the formation PESTO.
- Engineering school, third year students at Telecom ParisTech: Aline Carneiro Viana taught an 1 hour lesson on "Wireless Network" course.
- Engineering school, third year students at Telecom SudParis: Aline Carneiro Viana taught an 6 hour lessons on "Wireless Network" course.

9.2.2. Supervision

- Laurent Massoulie currently advises 2 PhD students: Lennart Gulikers and Remi Varloot.
- Cedric Adjih currently advises Fatma Somaa, on "handling mobility in routing in wireless sensor networks", thesis started in 2013 and co-advised with Inès El Korbi (Institut Supérieur d'Informatique et de Gestion de Kairouan, Tunisie).
- Emmanuel Baccelli and Cédric Adjih are advising: Loïc Dauphin on "Robotics meets the Internet of Things", (June 2016-).
- Aline Viana currently advises 2 PhD students: Roni Shigueta, on "Resource allocation in highly mobile wireless networks" (January 2012-2017). Guangshuo Chen, on "Understanding and predicting human demanded content and mobility" (September 2014-).
- PhD completed: Felipe Domingos on "identifying social attributes in VANETs" (January 2013-June 2016). Advisor: Aline Carneiro Viana.
- PhD completed: Oliver Hahm, "Enabling Energy Efficient Smart Object Networking at Internet-Scale", 2012-2016. Advisor: Emmanuel Baccelli.

9.2.3. Juries

- Laurent Massoulié was on the PhD jury as reviewer for the PhD theses of Anna Benhamou and Alaa Saade, and he presided the PhD thesis committee of Kevin Scaman.
- Aline Viana was on the PhD jury as reviewer of Wenjing Shuai, "Management of electric vehicle systems with self-interested actors" Telecom Bretagne, September 2016.
- Aline Viana was on the PhD jury as examiner of Mouna Rekik, "Protocols for Smart Girds", Universite de Lille, France July 2016.
- Aline Viana was on the Master jury of Fausto Silva Moraes "Explorando Interações em Redes Sociais Online, Comunicação D2D e Estratégias de Cache para Uso Eficiente de Recursos em Redes Celulares", Brazil November 2016.
- Emmanuel Baccelli was on the PhD jury of Francisco Acosta, "Self-adaptation for Internet of Things applications", Universite de Rennes 1, Dec. 2016.
- Emmanuel Baccelli was on the PhD jury of Kevin Roussel, "Évaluation et amélioration des plates-formes logicielles pour réseaux de capteurs sans-fil, pour optimiser la qualite de service et l'énergie," Université de Lorraine, June 2016.

9.3. Popularization

- Publication of "RIOT, le Systeme d'Exploitation pour l'Internet des Objets" in the magazine Open Silicium, Mars 2016. Co-authors: Alexandre Abadie, Cedric Adjih, Emmanuel Baccelli, Francisco Acosta, Hauke Petersen.
- Francisco Padilla and Loïc Dauphin participated to the "Fête de la Science 2016".

<p style="text-align: center; color: red; font-weight: bold;">INOCS Team</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

Luce Brotcorne:

– Meeting of the EURO Working group on Pricing and Revenue Management, Hamburg, Germany, April 2016.

Bernard Fortz:

– Winter School on Network Optimization, Estoril, Portugal, January 2016.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Bernard Fortz:

– INFORMS Telecommunications conference, Boca Raton, FL, USA, March 2016.

9.1.2.2. Member of the Conference Program Committees

Luce Brocorne:

– ROADEF 2016, Compiègne, France, February 2016.
– EURO 2016, Stream Organizer, Poznan, Poland, July 2016.

Bernard Fortz:

– ORBEL 30, Louvain-la-Neuve, Belgium, January 2016.

Martine Labbé:

– DRCN, Paris, France, March 2016.
– International Symposium on Combinatorial Optimization (ISCO), Vietri sul Mare, Italy, May 2016.
– Ninth Triennal Symposium on transportation analysis (TRISTAN IX), June 2016.
– Meeting of the EURO working group on Locational Decisions (EWGLA), Malaga, Spain, September 2016.
– XLVIII Brazilian Symposium on Operational Research (XLVIII SBPO), Vitória, Brazil, September 2016.
– Matheuristics 2016, Brussels, Belgium, September 2016.

Frédéric Semet:

– Ninth Triennal Symposium on transportation analysis (TRISTAN IX), June 2016.
– National Conference of the Tunisian Operations Research Society (TORS), December 2016.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Luce Brotcorne:

– Associate editor: Computers and Operations Research

Bernard Fortz:

– Associate editor: INFORMS Journal on Computing

– Guest editor of special issues of Networks and EURO Journal on Computational Optimization

Martine Labbé:

– Editor in chief: EURO Journal on Computational Optimization

– Associate editor: International Transactions in Operations Research

– Member of the Advisory Board: Transportation Science

9.1.4. Invited Talks

Luce Brotcorne:

– CESO 2016, Plenary speaker, Paris, France, May 2016

– EDF Lab Seminar, Paris, France, France, September 2016

– RIM seminar, Erasmus, Rotterdam, Netherlands, December 2016.

Diego Cattaruzza:

– Invited seminar, HEC-École de gestion de l'université de Liège, Liège, Belgium, February 2016.

Bernard Fortz:

– OMOR seminar, ESSEC, Cergy, France, December 2016.

– SDN day 2016, Orange Gardens, Paris, France, November 2016.

Martine Labbé:

– Winter School on Network Optimization, Invited Lecturer, Lisbon, Portugal, January 2016.

– First International Workshop in Bilevel Programming, Monterrey, Plenary Speaker, Mexico, March 2016.

– ROADEF Conférence, Plenary Speaker, Compiègne, France, February 2016.

– European Study Group with Industry, Plenary Speaker, Avignon, France, May 2016

– Graphs and Optimization (GO) Meeting, Plenary Speaker, Rigi Kaldbad, Switzerland, July 2016.

– Séminaire POC15, Plenary Speaker, Paris, France, October 2016 .

Frédéric Semet

– Symposium in honor of G. Laporte, Eindhoven, Netherlands, April 2016.

– AIRO Conference, Plenary Speaker, Trieste, Italy, September 2016.

9.1.5. Leadership within the Scientific Community

Luce Brotcorne:

– Coordinator of EURO Working Group: "Pricing and Revenue Management".

Bernard Fortz:

– Member of the board of administration and treasurer of ORBEL (Belgian OR Society).

– ORBEL representative for EURO and IFORS.

– Coordinator of EURO Working Group: "European Network Optimization Group (ENOG)".

Martine Labbé:

– Vice-chair of the SIAM Activity Group on Optimization (SIAG/OPT).
– Chair of the SIAG/Optimization Prize committee.

Frédéric Semet:

– Member of the board of EURO Working Group:"Vehicle routing and logistics optimization (VEROLOG)".
– Member of the steering committee of CNRS GdR 3002 : Operations Research.
– Coordinator of GdR Working Group: "Transportation and Logistics (GT2L)".

9.1.6. Scientific Expertise

Luce Brotcorne:

– Member of the scientific committee of France-Netherlands Exchange Program.
– Member of the evaluation committee for Inria/MITACS Exchange Program.

Bernard Fortz:

– President of the FRIA PE1 - jury 1.
– Member of the CIRRELT scientific orientation committee.

Martine Labbé:

– Member of the Scientific Advisory Board of IWR and its Graduate school HGS Math-Comp, Heidelberg University.
– Member of the Centro de Matemática, Aplicaçoes Fundamentais e Investigaçao Operacional, University of Lisbon.
– Member of the 2016 selection jury for the research program "Mathematics and ..." of the Vienna Science and Technology Fund.

Frederic Semet:

– Member of the CIRRELT scientific orientation committee.
– Scientific board member of PICOM competitiveness cluster.
– Reviewer for Agence Nationale de la Recherche (ANR), Fond de Recherche Nature et Technologie du Québec.

9.1.7. Research Administration

Luce Brotcorne:

– Scientific Manager (correspondant scientifique) for international relations department
– Member of the International Relations working (COST-GTRI).
– Member of the committee for the Technological Development (CDT).
– Member of the committee for the recruitment of Junior Research Scientist (CR1/CR2) at Inria Bordeaux and Inria Lille in 2016
– Member of the committee for the recruitment of assistant professor at University of Valenciennes in 2016

Frédéric Semet:

– Deputy director of CRIStAL.
– Elected member of the scientific council of Centrale Lille

9.2. Teaching - Supervision - Juries

9.2.1. Supervision

PhD : Lijuan Zhang, Optimisation and Simulation of a cross-dock facility, 18/03/2016, Frédéric Semet, Benoit Trouillet

PhD : Diego Ponce Lopez, The Discrete Ordered Median Problem revisited: new formulations, properties and algorithms, Université Libre de Bruxelles, 18/07/2016, Martine Labbé, Justo Puerto

PhD : Martim Joyce Moniz, Models and methods for Traffic Engineering problems with single-path routing, Université Libre de Bruxelles, 06/10/2016, Bernard Fortz, Luis Gouveia

PhD : Sezin Afsar, Revenue Optimization and Demand Response Models using Bilevel Progamming in Smart Grid Systems, 07/12/2016, Luce Brotcorne, Gilles Savard

PhD : Bayrem Tounsi, Contributions in E-commerce supply chain : Integration in E-fullfilment and delivery services pricing,19/12/2016, Luce Brotcorne, Yezekael Hayel

PhD : Kacem Danach, Hyperheuristics in logistics 21/12/2016, Shahin Gelareh, Frédéric Semet

PhD in progress : Burak Celik, Models and methods for Stackelberg games using bilevel optimization and mixed integer linear programming, from Nov 2016, Luce Brotcorne, Martine Labbé

PhD in progress : Yaheng Cui, Models and methods for decentralized decision in logistics networks, from Oct 2016, Luce Brotcorne, Eric Ballot

PhD in progress : Wenjuan Gu, Location routing for short and local fresh food supplu chain, from Oct 2016, Maxime Ogier, Frédéric Semet

PhD in progress : Léonard Von Niederhausern, Design and pricing of new services in energy in a competitive environment, from Oct 2015, Luce Brotcorne, Didier Aussel

PhD in progress : Yuan Yuan, Vehicle Routing Problems with Synchronization for City Logistics, from Oct 2016, Diego Cattaruzza, Frédéric Semet

PhD in progress : Carlos Casorrán Amilburu, Models and algorithms for Solving Bimatrix Stackelberg games, from October 2014, Martine Labbé.

PhD in progress : Jérôme De Boeck, Optimization problems in energy, from October 2015, Bernard Fortz.

PhD in progress : Luciano Porretta, Models and methods for the study of genetic associations, from May 2011, Bernard Fortz.

PhD in progress : Fabio Sciamannini, Comumn generatin approaches for solving variants of node coloring problems, from October 2014, Bernard Fortz, Martine Labbé.

9.2.2. Juries

Luce Brotcorne:

– PhD : "Design, Planning and Execution of Sustainable Intermodal Port-Hinterland Transport Networks", Ypsilantis Panagiotis, Erasmus University, Rotterdam. Rob Zuidwijk.

Bernard Fortz:

– PhD : "Revenue Optimization and Demand Response Models using Bilevel Progamming in Smart Grid Systems", Sezin Afşar, Inria Lille-Nord Europe. Luce Brotcorne and Gilles Savard.

– HdR : "Problèmes d'optimisation en milieu urbain : modèles, méthodes et défis", Andréa Cynthia Santos, Université de Technologie de Troyes.

– PhD : "The discrete ordered median problem revisited: new formulations, properties and algorithms", Diego Ponce, Université Lire de Bruxelles and Université de Séville. Martine Labbé and Justo Puerto.

– PhD : "Optimization of information flows in telecommunication networks" (rapporteur), Thibaut Lefebvre, CNAM. Sourour Elloumi, Eric Gourdin, Cédric Bentz.

Martine Labbé:

– PhD : "Recherche de flots stables dans des réseaux de transport multi-agents" (rapporteur), Nadia Chaabane, IUniversité de Toulouse. Cyril Briant and Marie-José Huguet.

– PhD : "Models and methods for Traffic Engineering problems with single-path routing", Martim Joyce Moniz, Université Libre de Bruxelles, Bernard Fortz and Luis Gouveia.

– HdR : "Network Optimization: Algorithmic Approaches and Polyhedral Investigations:", Markus Leitner, University of Vienna.

Frédéric Semet:

– PhD : "Design, Planning and Execution of Sustainable Intermodal Port-Hinterland Transport Networks", Juliette Médina, Ecole des Mines de Nantes. Fabien Le Huédé, Olivier Peton.

9.3. Popularization

- PICOM workshop on Logistics, May 2016.

- Rendez-vous du Plateau Meetings: Prescriptive analytics for an agile logistics, December 2016.

<p style="text-align:center; color:red;">**IPSO Project-Team**</p>

6. Dissemination

6.1. Promoting Scientific Activities

6.1.1. Scientific Events Organisation

6.1.1.1. Member of the Organizing Committees

- François Castella and Philippe Chartier organized the workshop "Multiscale methods for Schödinger and kinetic equations", Saint-Malo (France), december 12-14, 2016.
- Arnaud Debussche organized the conference "Stochastic Partial Differential Equations and Applications-X, Levico Terme (Italy), may 30-june 4, 2016.
- Erwan Faou organized the workshop "Geometric Numerical Integration", Oberwolfach (Germany), march 20-26, 2016. Co-organized with E. Hairer, M. Hochbruck and C. Lubich.

6.1.2. Journal

6.1.2.1. Member of the Editorial Boards

- Philippe Chartier is member of the editorial board of "Mathematical Modelling and Numerical Analysis" (2007-).
- Arnaud Debussche is editor in chief of the journal "Stochastics and Partial Differential Equations: analysis and computations".
- Arnaud Debussche is member of the editorial board of Potential Analysis (2011-).
- Arnaud Debussche is member of the editorial board of Differential and Integral Equations (2002-).
- Arnaud Debussche is member of the editorial board of ESAIM:PROC (2012-).
- Arnaud Debussche is member of the editorial board of Journal of Evolution Equation (2014-).
- Arnaud Debussche is member of the editorial board of Applied Mathematics & Optimization (2014-).
- Arnaud Debussche is member of the editorial board of the collection : "Mathématiques & Applications" (Springer).
- Erwan Faou was editor of the Oberwolfach reports [31] (2016).

6.1.2.2. Reviewer - Reviewing Activities

Members of IPSO are reviewers for almost the journals in which they publish.

6.1.3. Invited Talks

- Philippe Chartier was invited speaker at the workshop "Mould calculus, from multiple zeta values to B-series", Pau (France), december 1-2, 2016.
- Philippe Chartier was plenary speaker at the international conference ICNAAM, Rhodes (Greece), september 2016.
- Philippe Chartier was invited speaker at the workshop "GAMPP", IPP Garching (Germany), september 12-16, 2016.
- Philippe Chartier was invited speaker at the workshop "Stability and discretization issues in differential equations", Trieste (Italy), june 2016.
- Philippe Chartier gave a seminar at the university of Lille (France), june 9, 2016.
- Philippe Chartier was invited speaker at Meeting ANR Moonrise, Toulouse (France), june 2-3, 2016.

- Philippe Chartier gave a seminar at the university of Geneva (Switzerland), may 26-june 1, 2016.
- Philippe Chartier was invited at the workshop "Geometric Numerical Integration", Oberwolfach (Germany), march 20-26, 2016.
- Nicolas Crouseilles was invited at the workshop "Geometric Numerical Integration", Oberwolfach (Germany), march 20-26, 2016.
- Nicolas Crouseilles gave a seminar at the university of Geneva (Switzerland), may 13, 2016.
- Nicolas Crouseilles gave a seminar at the university of Paris Sud, Orsay (France), november 17, 2016.
- Nicolas Crouseilles was invited speaker at the workshop "NumKin", Strasbourg (France), october 17-21, 2016.
- Nicolas Crouseilles was invited speaker at the workshop "Kinet", Madison (US), april 21-25, 2016.
- Arnaud Debussche was invited speaker at the workshop "Probabilistic models-from discrete to continuous", university of Warwick (UK), march 29-april 2, 2016.
- Arnaud Debussche was invited speaker at the workshop "Stochastic Analysis and Related Fields", Humboldt university Berlin (Germany), july 28-30, 2016.
- Arnaud Debussche was invited speaker at the workshop "Nonlinear Wave and Dispersive Equations", Kyoto university (Japan), september 6-8, 2016.
- Arnaud Debussche was invited speaker at the workshop "Nonlinear Stochastic Evolution Equations: Analysis and Numerics", TU Berlin (Germany), november 3-5, 2016.
- Erwan Faou gave a seminar at the CERMICS, Marne-La-Vallée (France), december 2016.
- Erwan Faou was invited at the workshop "Structure and scaling in computational field theories", Oslo (Norway), november 2016.
- Erwan Faou was invited at the conference "Nonlinear waves", IHES (France), may 2016.
- Erwan Faou was invited at the workshop "Nonlinear Evolution Problems", Oberwolfach (Germany), march 2016.
- Erwan Faou was invited at the workshop "Recent trends in nonlinear evolution equations", CIRM-Luminy (France), april 4-8, 2016.
- Mohammed Lemou was plenary speaker at the workshop "Asymptotic behavior of systems of PDE arising in physics and biology: theoretical and numerical points of view", Lille (France), june 2016.
- Mohammed Lemou was invited speaker at the workshop "NumKin", Strasbourg (France), october 17-21, 2016.
- Mohammed Lemou was invited speaker at the workshop "Kinet", Madison (US), april 21-25, 2016.
- Mohammed Lemou was invited speaker at the ANR Moonrise Meeting, Toulouse (France), june 2016.
- Florian Méhats was plenary speaker at the workshop "Journée des jeunes EDPistes français", Bordeaux (France).
- Florian Méhats gave a seminar of the university of Paris Sud, Orsay (France).
- Florian Méhats gave a seminar of the university of Nice (France).
- Florian Méhats gave a seminar of the university of Lille (France).

6.1.4. Scientific Expertise

- Philippe Chartier was member of the hiring committee of an associate professor, university of Trondheim (Norway).
- Philippe Chartier was member of the hiring committee CR2-Inria (Bordeaux).
- Nicolas Crouseilles was member of the CORDI-S committee at Inria-Rennes.
- Arnaud Debussche was a member of the hiring committee of a professor, university of Rennes 1

- Arnaud Debussche was a member of the hiring committee of a "Maître de conférence", university of Orléans.
- Mohammed Lemou was member of the hiring committee of a professor, university of Rennes 1.
- Mohammed Lemou was was a member of the hiring committee of a "Maître de conférence", university of Nantes.

6.1.5. Research Administration

- François Castella is member of the IRMAR laboratory council.
- Philippe Chartier is the vice-head of science (DSA) of the Rennes Inria-Center.
- Philippe Chartier is member of the direction committee (ED) of the Rennes Inria-Center.
- Philippe Chartier is member of the national evaluation committee (CE) of Inria.
- Nicolas Crouseilles is member of the Scientific Council of the ENS Rennes.
- Nicolas Crouseilles is member of the committee of the Fédération de Fusion".
- Arnaud Debussche is vice president in charge of research and international relations of the Ecole Normale Supérieure de Rennes.
- Arnaud Debussche is member of the executive board of the Lebesgue Center.
- Arnaud Debussche is director of the "Agence Lebesgue de Mathématiques pour l'Innovation".
- Erwan Faou was member of the COST-GTRI (Comité d'orientation scientifique et technologique, groupe de travail pour les relations internationales) at Inria.
- Erwan Faou is member of the Scientific Council of the Pôle Universitaire Léonard de Vinci.
- Erwan Faou is member of the CNU 26.
- Mohammed Lemou is member of the Scientific Council of the ENS Rennes.
- Mohammed Lemou is member of the Scientific Council of the Lebesgue Center.
- Mohammed Lemou is head of the team "analyse numérique" of IRMAR laboratory.
- Florian Méhats is head of the IRMAR laboratory.

6.2. Teaching - Supervision - Juries

6.2.1. Teaching

- François Castella gave a course in M1 on kinetic equations, university of Rennes 1 (60 hours).
- Philippe Chartier gave a course in L3 on ordinary differential equations, Ecole Normale Supérieure de Rennes (24 hours).
- Philippe Chartier gave a course in M2 on geometric numerical integration and averaging methods, university of Rennes 1 (24 hours).
- Nicolas Crouseilles gave a course in M2 on numerical methods for kinetic equations, university of Rennes 1 (12 hours).
- Arnaud Debussche gave a course in M2 on stochastic partial differential equations, university of Rennes 1 (24 hours).
- Erwan Faou gave a course in M1 on modelisation and numerical analysis of PDEs, ENS Paris, in collaboration with E. Dormy.
- Mohammed Lemou gave a course in M2 on partial differential equations, university of Rennes 1 (24 hours).
- Mohammed Lemou is head of the M2 "Analyse et Applications".

6.2.2. Supervision

- François Castella supervises the PhD thesis of Valentin Doli, *Mathematical and ecological study of the propagation of a specific virus attacking plants*, (2014-). Co-advisor: Frédéric Hamelin (Agro-Rennes).

- François Castella and Philippe Chartier supervised the PhD thesis of Julie Sauzeau, *Highly-oscillatory central manifold and application to ecology* (2013-2016). Julie Sauzeau is now teacher.

- Nicolas Crouseilles and Erwan Faou supervise the PhD thesis of Joackim Bernier, *Mathematical and numerical anaysis of nonlinear transport equations*, (2016-).

- Nicolas Crouseilles and Mohammed Lemou supervised the PhD thesis of Hélène Hivert *Mathematical and numerical study of kinetic model and their asymptotics: diffusion and anomalous diffusion limit*, (2013-2016). Hélène Hivert is now post-doc at ENS Lyon.

- Erwan Faou supervises the PhD thesis of Romain Horsin, *Mathematical and numerical analysis of the Vlasov-HMF model*, (2014-). Co-advisor: Frédéric Rousset (university Paris Sud Orsay).

- Arnaud Debussche supervizes the PhD thesis of Mac Jugal Nankep *PDMP with spatial dependency for the dynamics of gene networks*, (2014-).

- Arnaud Debussche and Florian Méhats are supervisors of the PhD thesis of Maxime Tusseau. *Highly oscillatory nonlinear Schrödinger equation with stochastic potential*, (2013-).

- Mohammed Lemou and Florian Méhats are supervisors of the PhD thesis of Marine Malo *Collisionless kinetic equations: stability, oscillations*, (2015-).

6.2.3. Juries

- Erwan Faou was referee of the PhD thesis of Ahmed-Amine Homman (CEA and ENPC), june 2016.

- Nicolas Crouseilles was referee of the PhD thesis of Mehdi Badsi (university Paris 6), october 2016.

- Nicolas Crouseilles was referee of the PhD thesis of Nhung Pham (university of Strasbourg), december 2016.

- Nicolas Crouseilles was member of the jury of the PhD thesis of Julie Sauzeau (university of Rennes 1), june 2016.

- Arnaud Debussche was referee of the PhD thesis of Nathalie Ayi (university of Nice), june 2016.

- Arnaud Debussche was member of jury of the PhD thesis of Vincent Renault (university of Paris 6), september 2016.

- Mohammed Lemou was referee of the PhD thesis of Thomas Le Roy (university Paris 6), january 2016.

- Mohammed Lemou was referee of the PhD thesis of Ankit Ruhi (IIS, Bangalore, India), december 2016.

- Mohammed Lemou was member of the jury of the PhD thesis of Sébastien Guisset (university of Bordeaux 1), september 2016.

<p style="text-align:center; color:red;">**KERDATA Project-Team**</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- Luc Bougé: Vice-Chair of the Steering Committee of the Euro-Par Series of conferences.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Gabriel Antoniu: Vice-Chair of the Program Committee of the ACM/IEEE CCGrid 2016 international conference (Hybrid and Mobile Clouds Tracks), Cartagena, May 2016.
- Alexandru Costan: Program Co-Chair of the ScienceCloud 2016 international workshop held in conjunction with HPDC 2016, Kyoto, June 2016.

10.1.2.2. Member of the Conference Program Committees

- Gabriel Antoniu: ACM HPDC 2016, IEEE Cluster 2016, PDSW-DISCS workshop (held in conjunction with ACM/IEEE SC16 conference), ARMS-CC 2016 workshop (held in conjunction with the PODC 2016 conference).
- Luc Bougé: Euro-Par 2016, IPDPS 2017, ICDE 2017, Euro-Par 2017, ISPDC 2017.
- Alexandru Costan: ACM/IEEE SC'16 BoF Applications Track, ACM/IEEE CCGrid 2016, IEEE BigData 2016, ICPP 2016, ARMS-CC 2016 workshop (held in conjunction with PODC 2016), FiCLOUD 2016, ScienceCloud 2016 workshop (held in conjunction with HPDC 2016).
- Shadi Ibrahim: IEEE Cluster 2016, IEEE/ACM CCGrid 2016, IEEE ICPADS 2016, IEEE CloudCom 2016, IEEE ICA3PP 2016, SCRAMBL 2016 (held in conjunction with Euro-Par 2016).

10.1.2.3. Reviewer

- Alexandru Costan: ACM/IEEE SC16, ACM HPDC 2016, IEEE Cluster 2016.
- Shadi Ibrahim: ACM HPDC 2016, Euro-Par 2016.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Gabriel Antoniu: Future Generation Computer Systems, Special Issue on Resource Management for Big Data Platforms.
- Luc Bougé: Concurrency and Computation: Practice and Experience, Special Issues on the Euro-Par conference.
- Alexandru Costan: Soft Computing Journal, Special Issue on Autonomic Computing and Big Data Platforms

10.1.3.2. Reviewer, Reviewing Activities

- Alexandru Costan: IEEE Transactions on Parallel and Distributed Systems, Future Generation Computer Systems, Concurrency and Computation Practice and Experience, IEEE Communications, IEEE Transactions on Storage, Information Sciences
- Shadi Ibrahim: IEEE Transactions on Parallel and Distributed Systems, Future Generation Computer Systems, IEEE Transactions on Big Data, IEEE Transactions on Cloud Computing, Springer Parallel Computing, Computers and Electrical Engineering, Journal of Healthcare Engineering

10.1.4. Invited Talks

- Gabriel Antoniu:
  - BDEC 2016: Invited keynote talk at the *4th Big Data and Exascale Computing (BDEC) workshop*, Frankfurt, June 2016.
  - First Chinese-French Workshop on Extreme Computing: *Damaris: Jitter-Free I/O Management and In Situ Visualization of HPC Simulations using Dedicated Cores*, Guangzhou, May 2016.
  - 5th JLESC workshop: *Spark versus Flink: Understanding Performance in Big Data Analytics Frameworks*, Lyon, June 2016.
  - Inria/CIC-IPN workshop: *Scalable Big Data Processing on Clouds: A-Brain and Z-CloudFlow*, Mexico City, November 2016.
  - Inria/Technicolor workshop: *Spark versus Flink: Understanding Performance in Big Data Analytics Frameworks*, Rennes, November 2016.
  - 6th JLESC workshop: *Storage-Based Convergence Between HPC and Big Data*, Kobe, Japan, December 2016.
- Luc Bougé:
  - Comin Labs-DGA-ENSAI BigData day: *Support logiciel pour la gestion de données distribuées à très grande échelle*, IRISA, January 2016.
  - Société des agrégés: *Teaching informatics as a first-class subject*, annual meeting of the Regional Section, April 2016.
  - Luminy Algorithmics and Programming School: *Big Data: Tremendous challenges, great solutions*, Preparatory school teachers in Mathematics and Informatics, May 2016.
- Alexandru Costan:
  - UPB Scientific Days: *Big Data and Extreme Computing: A Storage-Based Pathway to Convergence*, The UPB Research Workshop on Distributed Systems, University Politehnica of Bucharest, June 2016.
  - Inria/CIC-IPN workshop: *Science Driven, Scalable Data-Intensive Processing on Clouds*, Mexico City, November 2016.
- Shadi Ibrahim:
  - Inria Scientific Days: *Big Data management at scale*, Rennes, June 2016.
- Chi Zhou:
  - 5th JLESC workshop: *Incorporating Probabilistic Optimizations for Resource Provisioning of Cloud Workflow Processing*, Lyon, June 2016.
- Nathanaël Cheriere:
  - 6th JLESC Workshop: *Accelerating the Scatter Operation on Dragonfly Networks*, Kobe, Japan, December 2016.
- Orçun Yildiz:
  - Grid'5000 Winter School: *Investigating the Root Causes of I/O Interference on Grid'5000*, Grenoble, February 2016.
  - 6th JLESC Workshop: *Towards Efficient Big Data Processing in HPC Systems*, Kobe, Japan, December 2016.
- Luis Eduardo Pineda Morales:
  - 5th JLESC workshop: *Exploring Elastic Scaling on Chameleon Cloud*, Lyon, June 2016.
  - Inria / CIC-IPN workshop: *Metadata Management for Geo-distributed Cloud Workflows*, Mexico City, November 2016.

10.1.5. Leadership within the Scientific Community

- Gabriel Antoniu: Scientific leader of the KerData project-team.
- Gabriel Antoniu: Topic leader for Inria for the *Data storage, I/O and in situ processing* topic, supervising collaboration activities in this area within the JLESC, Joint Inria-Illinois-ANL-BSC-JSC-RIKEN/AICS Laboratory for Extreme-Scale Computing.
- Luc Bougé: serves as a Vice-President of the *French Society for Informatics* (SIF), in charge of the teaching department.
- Gabriel Antoniu: Work package leader within the BigStorage H2020 ETN project for the *Data Science* work package.
- Alexandru Costan: Leader of the *Smart Cities* Working Group within the BigStorage H2020 ETN project.
- Shadi Ibrahim: Leader for the *Resource Management and Scheduling for Data-Intensive HPC Workflows* activity within the JLESC, Joint Inria-Illinois-ANL-BSC-JSC-RIKEN/AICS Laboratory for Extreme-Scale Computing.

10.1.6. Scientific Expertise

- Gabriel Antoniu served as a project evaluator for the ANR 2016 call (Phase 1).
- Luc Bougé: Member of the jury for the *Agrégation de mathématiques* and the *CAPES of mathématiques*. These national committees select high-school mathematics teachers in secondary schools and high-schools, respectively.
- Luc Bougé has been solicited by the Ministry of Education to participate to the committee in charge of designing and preparing the new *Informatics track* in the CAPES of mathematics. It will be offered for the 2017 session.
- Shadi Ibrahim served as a project evaluator in the DOE-ECP Program 2016: The research and development in Software Technology of the US Department of Energy's (DOE's) *Exascale Computing Project* (ECP).

10.1.7. Research Administration

- Luc Bougé: Nominated to seat at the CNU (*National University Council*) in the *Informatics* Section (27). His term ended in November 2016.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Gabriel Antoniu

- Master (Engineering Degree, 5th year): Big Data, 24 hours (lectures), M2 level, ENSAI (*École nationale supérieure de la statistique et de l'analyse de l'information*), Bruz, France.
- Master : Cloud Computing, 15 hours (lectures and lab sessions), M2 level, ENSAI (*École nationale supérieure de la statistique et de l'analyse de l'information*), Bruz, France.
- Master: Distributed Systems, 8 hours (lectures), M2 level, ALMA Master, Distributed Architectures module, University of Nantes, France.
- Master: Scalable Distributed Systems, 12 hours (lectures), M1 level, SDS Module, EIT ICT Labs Master School, France.

Luc Bougé

- Bachelor: Introduction to programming concepts, 36 hours (lectures), L3 level, Informatics program, ENS Rennes, France.

- – Master: Introduction to compilation, 24 hours (exercice and practical classes), M1 level, Informatics program, Univ. Rennes I, France.

Alexandru Costan

- – Bachelor: Software Engineering and Java Programming, 28 hours (lab sessions), L3, INSA Rennes.

- – Bachelor: Databases, 68 hours (lectures and lab sessions), L2, INSA Rennes, France.

- – Bachelor: Practical case studies, 24 hours (project), L3, INSA Rennes.

- – Master: Big Data and Applications, 36h hours (lectures, lab sessions, project), M1, INSA Rennes.

Shadi Ibrahim

- – Master (Engineering Degree, 5th year): Big Data, 24 hours (lectures and lab sessions), M2 level, ENSAI (*École nationale supérieure de la statistique et de l'analyse de l'information*), Bruz, France.

- – Master : Cloud Computing and Hadoop Technologies, 16.5 hours (lectures and lab sessions), M2 level, ENSAI (*École nationale supérieure de la statistique et de l'analyse de l'information*), Bruz, France.

- – Master: Cloud and Big data, 24 hours (lectures and lab sessions), M1 level, ENS Rennes, France.

- – Master: Cloud1, Map-Reduce, (lectures, lab sessions), 15 hours (lectures and lab sessions), M2 level, Ecole des Mines de Nantes (EMN Nantes), Nantes, France.

10.2.2. *Supervision*

10.2.2.1. *PhD in progress*

Lokman Rahmani: *Big Data Management For Next Generation High Performance Computing Systems*, thesis started in October 2013, co-advised by Gabriel Antoniu and Luc Bougé.

Luis Eduardo Pineda Morales: *Efficient Big Data Management for Geographically Distributed Workflows*, thesis started in January 2014, co-advised by Alexandru Costan and Gabriel Antoniu. Defense planned in Spring 2017.

Orçun Yildiz: *Energy-Efficient Big Data Management in Petascale Supercomputers and Beyond*, thesis started in September 2014, co-advised by Shadi Ibrahim and Gabriel Antoniu.

Tien-Dat Phan: *Green Big Data Processing in Large-scale Clouds*, thesis started in October 2014, co-advised by Shadi Ibrahim and Luc Bougé.

Pierre Matri: *Predictive Models for Big Data*, thesis started in March 2015, co-advised by María Pérez and Gabriel Antoniu.

Mohammed-Yacine Taleb: *Energy-impact of data consistency management in Clouds and Beyond*, thesis started in August 2015, co-advised by Shadi Ibrahim and Gabriel Antoniu.

Ovidiu-Cristian Marcu: *Efficient data transfer and streaming strategies for workflow-based Big Data processing*, thesis started in October 2015, co-advised by Alexandru Costan and Gabriel Antoniu.

Nathanaël Cheriere: *Resource Management and Scheduling for Big Data Applications in Large-scale Systems*, thesis started in September 2016, co-advised by Shadi Ibrahim and Gabriel Antoniu.

Paul Le Noac'h: *Workflow Data Management as a Service for Multi-Site Applications*, thesis started in November 2016, co-advised by Alexandru Costan and Luc Bougé.

10.2.3. *Juries*

Gabriel Antoniu: Referee for the PhD thesis of Ms. Zhou Chi at the Nanyang Technological University (NTU), Singapore (January 2016).

Luc Bougé: Referee for the PhD thesis of Matthieu Perrin, LINA, Univ. Nantes (June 2016). Member of several PhD and HDR thesis juries in France.

10.2.4. Miscellaneous

10.2.4.1. Responsibilities

Luc Bougé: Co-ordinator between ENS Rennes and the Inria Research Center and the IRISA laboratory.

Luc Bougé: In charge of the Bachelor level (L3) and of the student seminar series at the Informatics Departement of ENS Rennes.

Alexandru Costan: In charge of communication at the Computer Science Department of INSA Rennes.

Alexandru Costan: In charge of the organization of the IRISA D1 Department Seminar.

Shadi Ibrahim: Member of Grid'5000 Sites Committee: Responsible for the Rennes site.

10.2.4.2. Tutorials

Gabriel Antoniu and Shadi Ibrahim   gave tutorials on *Big Data technologies and Hadoop* at the BigStorage Winter School in Barcelona (March 2016).

Shadi Ibrahim   gave a Tutorial on *Green Big Data Processing using Hadoop* at the at the Euro-Par 2016 conference, Grenoble, France (with Anne-Cécile Orgerie).

10.3. Popularization

Luc Bougé:

Master Program, Rennes.   Invited presentation to the M2 students about *Informatics as a scientific activity: Toward a responsible research* (December 2016).

Alexandru Costan:

Master Program, Rennes.   Invited presentation to the M2 students about *Big Data Analytics* (November 2016).

LACODAM Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- Local chair of the Mini-symposium on instant data mining, interactive data mining, preference-based pattern mining, Rennes, October 26-28, 2016 (A. Termier)
- Organization chair (T. Guyet) and program committee members (T. Guyet, R. Quiniou) of GAST workshop at EGC 2017 and at EGC 2016.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

EGC 2017 (T. Guyet, R. Quiniou, A. Termier).

ICDM 2016 (A. Termier)

KDD 2016 (A. Termier)

IJCAI 2016 (T. Guyet, B. Negrevergne)

ECAI 2016 (T. Guyet)

KR 2016 (T. Guyet)

RFIA/CNIA 2016 (T. Guyet)

APIA 2016 (C. Largouët)

10.1.2.2. Reviewer

R. Quiniou: KDD 2016, ECAI 2016, IJCAI 2016, ICDM 2016, CNIA 2016, AKDM7

T. Guyet: KDD 2016, ECAI 2016, IJCAI 2016, ICDM 2016, RFIA/CNIA 2016, KR 2016, AALTD16, SimBig 2016

A. Termier: IJCAI 2016

Y. Dauxais, C. Gautrais: IJCAI 2016, ICDM 2016, KDD 2016, EGC 2016

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

T. Guyet: RIA (Revue d'Intelligence Artificielle)

10.1.3.2. Reviewer - Reviewing Activities

A. Termier: Data Mining and Knowledge Discovery, Knowledge and Information Systems, Discrete Applied Mathematics

T. Guyet: Journal of Biomedical Informatics, AI Communications, ACM Computing Surveys, TKDE

C. Gautrais: Data Mining and Knowledge Discovery

10.1.4. Invited Talks

A. Termier gave an invited talk at the SMiLe 2016 workshop.

C. Largouët gave a invited talk at the UMR-AMURE Seminar on the 15th september 2016,

10.1.5. Leadership within the Scientific Community

A. Termier is the representative of Inria for the #DigitAg Convergence Institue

T. Guyet is member of the AFIA board (since october 2011). AFIA is the french chapter of ECCAI, the European Association for Artificial Intelligence.

10.1.6. Scientific Expertise

Evaluation of a project proposal for the ANR: R. Quiniou

Evaluation of a project proposal for the Medicen competitive cluster: T. Guyet

10.1.7. Research Administration

Member of INRA CEI (Engineers Evaluation Committee): T. Guyet

Member of the scientific board of department EA of INRA: A. Termier

Member of the scientific board of Agrocampus Ouest - COREGE: C. Largouët.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Many members of the project-team Lacodam are also faculty members and are actively involved in computer science teaching programs in ISTIC, INSA and Agrocampus-Ouest. Besides these usual teachings Lacodam is involved in the following programs:

Master 2 Module DSS: Apprentissage sur des données séquentielles symboliques, 10 h, M2, Istic University of Rennes 1 (R. Quiniou)

Master 2 Géoinformation, Agrocampus Ouest Rennes (L. Bonneau, T. Guyet)

Master 2 Artificial Intelligence, Agrocampus Ouest Rennes (Louis Bonneau, C. Largouët)

Master 1 Scientific Programming, Data Management, Python Programming, Agrocampus Ouest Rennes (C. Largouët)

10.2.2. Supervision

PhD in progress: Maël Guillemé, "New data mining approaches for improving energy consumption in factory"", october 3rd 2016, Alexandre Termier, Véronique, Masson and Laurence Rozé

PhD in progress: Clément Gautrais, "Mining massive data from client purchases", october 1st 2015, Alexandre Termier, Peggy Cellier, Thomas Guyet and René Quiniou

PhD in progress: Yann Dauxais, ""Query-language for care-pathway mining and analysis", february 1st 2015, David Gross-Amblard, Thomas Guyet, André Happe

PhD in progress: Alban Siffer, "DataMining approaches for cyber attack detection", mars 2016, Pierre-Alain Fouque, Alexandre Termier, Christine Largouët

10.2.3. Juries

Committee member of Rémy Dautriche Phd defense (Université de Grenoble Alpes): A. Termier

Reviewer of Olivier Cavadenti Phd (INSA Lyon): A. Termier

Committee member of Samir Loudni HDR (Université de Caen): A. Termier

Thesis advisory committee member of Jean Coquet (Univ. Rennes 1): A. Termier

Thesis advisory committee member of Benoit Bellot (INRA/IGEPP): T. Guyet

Thesis advisory committee member of Zhi Cheng (UNC/PPME): T. Guyet

10.3. Popularization

M.-O. Cordier is editorial board member of Interstices webzine.

<h1 style="text-align:center; color:red">LAGADIC Project-Team</h1>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organization

10.1.1.1. General Chair, Scientific Chair

- Marie Babel was the Scientific Chair of the workshop "Innovation Robotique et Santé : Assistance à la conduite de fauteuil roulant" organized in Inria Rennes on December 2016 (150 participants).

10.1.1.2. Member of the Organizing Committees

- François Chaumette was in charge of organizing a Tutorial on Vision for Robotics at ICRA'2016: http://www.icra2016.org/conference/tutorials. The plenary speakers were Peter Corke (QUT, Australia), Jana Kosecka (George Mason University, US), Eric Marchand [45] and François Chaumette [44]. Around 200 participants attended this tutorial.

- Patrick Rives was in charge of co-organizing the "Journée Transports Intelligents " on behalf of the RFIA'2016 conference in Clermont-Ferrand: http://rfia2016.iut-auvergne.com/index.php/rfp-ia

- Paolo Robuffo Giordano has co-organized the Invited Session "Rigidity Theory for Problems in Multi-Agent Coordination" at the 54th IEEE Conf. on Decision and Control (CDC 2015), together by D. Zelazo (Technion, Israel) and A. Franchi (LAAS, France).

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Paolo Robuffo Giordano: Workshop/Tutorial Session Chair for IROS 2016, Daejeon, Korea

10.1.2.2. Member of the Conference Program Committees

- François Chaumette: ICRA'2016
- Eric Marchand: ICRA 2016
- Patrick Rives: ICRA'2016, CVPR'2016
- Paolo Robuffo Giordano: ICRA'2016

10.1.2.3. Reviewer

- Marie Babel: IROS'2016 (2), ICIP'2016 (4)
- François Chaumette: IROS'2016 (1), ICRA'2017 (1)
- Vincent Drevelle: IFAC 2017 World Congress (1).
- Alexandre Krupa: IROS'2016 (1), ICRA'2017 (1)
- Eric Marchand: IROS 2016, ICRA 2017 (1), RFIA 2016 (2)
- Julien Pettré: SIGGRAPH 2016 (3), Collective Dynamics (1), CASA 2016 (3), IROS 2016 (3), ALIFE 2016 (2), ACM SCA 2016 (1), ACM CIE (1), TVCG (1), SIGGRAPH ASIA 2016 (1), Elsevier CAG (1), Pacific Graphics 2016 (1), Plos ONE (1), ACM MIG 2016 (2), IEEE VR 2017 (1), IEEE TBME (1), Taylor and Francis JMB (1), Eurographics 2017 (4), Elsevier TRB (1).
- Patrick Rives: ICRA'2016, ITSC'2016, CVPR'2016, ECCV'2016, IV'2016, ICINCO'2016, RFIA'2016, ICRA'2017
- Paolo Robuffo Giordano: ACC'2017 (1), DARS'2016 (2), ICRA'2017(2), IROS'2016 (3), RSS'2016 (1)

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- François Chaumette: Editorial Board of the Int. Journal of Robotics Research, Senior Editor of the IEEE Robotics and Automation Letters, Editorial Board of the Springer Tracts in Advanced Robotics, Board Member of the Springer Encyclopedia of Robotics.
- Alexandre Krupa: Associate Editor of the IEEE Robotics and Automation Letters
- Eric Marchand: Associate Editor of the IEEE Robotics and Automation Letters
- Julien Pettré: Associate Editor for Computer Animation and Virtual Worlds, Associate Editor for Collective Dynamics
- Paolo Robuffo Giordano: Associate Editor of the IEEE Transactions on Robotics

10.1.3.2. Reviewer - Reviewing Activities

- Marie Babel: IEEE Trans. on Human-Machine Systems (1)
- François Chaumette: IEEE Trans. on Robotics (2), IEEE/ASME Trans. on Mechatronics (1), Robotics and Autonomous Systems (1), Journal of Intelligent and Robotic Systems (1), Control Engineering Practice (1)
- Vincent Drevelle: Transportation Research Part C (1)
- Eric Marchand : Int. Journal of robotics Research (1), Software, Practice and Experience (1), IEEE Trans. on Visualization and Computer Graphics (1), Visual Computer (1)
- Patrick Rives: IEEE Robotics and Automation Letters (1), Robotics and Autonomous Systems (1)
- Paolo Robuffo Giordano: IEEE Robotics and Automation letters (2), IEEE Trans. on Control of Network Systems (1), IEEE Trans. on Haptics (1)

10.1.4. Invited Talks

- François Chaumette: Plenary talk at RCAR'2016, Angkor Wat, Cambodia [43].
- Paolo Robuffo Giordano. Invited Talk: Collective Control, State Estimation and Human Interaction for Quadrotors in Unstructured Environments. 2016 GIS Micro-Drones Day, ENAC, Toulouse, France, October 2016
- Paolo Robuffo Giordano. Invited Seminar: Estimation and Control for Multi-Robot Systems. 2016 IEEE RAS Summer School on Multi-Robot Systems, Singapore, June 2016

10.1.5. Leadership within the Scientific Community

- François Chaumette is a 2016-2019 elected member of the Administrative Committee of the IEEE Robotics and Automation Society. He is also a member of the Scientific Council of the CNRS INS2I.
- François Chaumette and Patrick Rives are members of the scientific council of the "GdR Robotique".

10.1.6. Scientific Expertise

- François Chaumette is vice-president of the ANR Tremplin-ERC program (in charge of providing grants to recipients of non-funded A and B Starting and Consolidator ERC proposals). He was also a member of the "Institut Universitaire de France (IUF)" selection committee in charge of evaluating senior proposals, and served in the jury to select an Irstea senior researcher (DR2).
- Julien Pettré is project proposal reviewer for the Netherlands Organisation for Scientific Research.
- Paolo Robuffo Giordano is a reviewer for EU FP7 projects, for the ANR (French National Research Agency) ASTRID 2016 Program, for the "Comité ECOS Nord" of the "Ministère des affaires étrangères et du développement international" and the "Ministère de l'Enseignement supérieur et de la Recherche", and for the DGA as expert on algorithms and sensors for drones.

10.1.7. *Research Administration*

- François Chaumette serves as the president of the committee in charge of all the temporary recruitments ("Commission Personnel") at Inria Rennes-Bretagne Atlantique and Irisa. He is also a member of the Head team of Inria Rennes-Bretagne Atlantique.

- Alexandre Krupa and Julien Pettré are members of the CUMIR ("Commission des Utilisateurs des Moyens Informatiques pour la Recherche") of Inria Rennes-Bretagne Atlantique.

- Eric Marchand served as secretary in the board of the "Association Française pour la Reconnaissance et l'Interprétation des Formes (AFRIF)". He is also in charge of the Irisa Ph.D. students in the committee in charge of all the temporary recruitments ("Commission Personnel") at Inria Rennes-Bretagne Atlantique and Irisa. He is in the board of the "Pôle Images et Réseaux" and in the board of "Ecole doctorale Matisse".

- Julien Pettré is an elected member of the "Comité de Centre" at Inria Rennes-Bretagne Atlantique.

- Patrick Rives is a member of the "Comité des projets" and "Comité de Centre" at Inria Sophia Antipolis-Méditerranée.

10.2. Teaching - Supervision - Juries

10.2.1. *Teaching*

Marie Babel:

Master INSA2: "Robotics", 26 hours, M1, INSA Rennes

Master INSA1: "Architecture", 30 hours, L3, INSA Rennes

Master INSA2: "Computer science project", 30 hours, M1, INSA Rennes

Master INSA2: "Image analysis", 18 hours, M1, INSA Rennes

Master INSA1: "Remedial math courses", 50 hours, L3, INSA Rennes

François Chaumette:

Master ESIR3: "Visual servoing", 8 hours, M2, Ecole supérieure d'ingénieurs de Rennes

Vincent Drevelle:

Master ESIR2: "Real-time systems and RTOS", 24 hours, M1, Esir Rennes

Master GLA: "Terrain information systems", 14 hours, M2, Université de Rennes 1

Master Info: "Artificial intelligence", 12 hours, M1, Université de Rennes 1

Licence Info: "Computer systems architecture", 20 hours, L1, Université de Rennes 1

Licence Miage: "Computer programming", 78 hours, M1, Université de Rennes 1

Master CTS: "Instrumentation, localization, GPS", 4 hours, M2, Université de Rennes 1

Licence and Master ET: "Electronics project", 23 hours, L3 and M1, Université de Rennes 1

Alexandre Krupa:

Master SIBM (Signals and Images in Biology and Medicine): "Medical robotics guided from images", 4.5 hours, M2, Université de Rennes 1, Brest and Angers

Master FIP TIC-Santé: "Ultrasound visual servoing", 6 hours, M2, Télécom Physique Strasbourg

Master INSA3: "Modeling and engineering for Biology and Health applications", 12 hours, M2, INSA Rennes

Master ESIR3: "Ultrasound visual servoing", 9 hours, M2, Esir Rennes

Eric Marchand:

> Master Esir2: "Colorimetry", 24 hours, M1, Esir Rennes
>
> Master Esir2: "Computer vision: geometry", 24 hours, M1, Esir Rennes
>
> Master Esir3: "Special effects", 24 hours, M2, Esir Rennes
>
> Master Esir3: "Computer vision: tracking and recognition", 24 hours, M2, Esir Rennes
>
> Master MRI: "Computer vision", 24 hours, M2, Université de Rennes 1
>
> Master MIA: "Augmented reality", 4 hours, M2, Université de Rennes 1

Julien Pettré:

> Licence Info : "Programmation Informatique", 40, LI1, Université de Rennes 1, Rennes
>
> INSA1: "Programmation Informatique", 40 hours, INSA Rennes

10.2.2. Supervision

- Ph.D.: Le Cui, "Robust micro/nano-positioning by visual servoing", defended on January 2016, supervised by Eric Marchand [15]

- Ph.D.: Vishnu Karakkat Narayanan, "Semi-autonomous navigation of a wheelchair by visual servoing and user intention analysis", defended in November 2016, supervised by Marie Babel and Anne Spalanzani (Chroma group at Inria Rhône-Alpes) [16]

- Ph.D.: Nicolas Cazy, "Commande prédictive pour la réalisation de tâches d'asservissement visuel successives", defended in November 2016, supervised by Paolo Robuffo Giordano, François Chaumette and Pierre-Brice Wieber (Bipop group at Inria Rhône-Alpes) [13]

- Ph.D.: Julien Bruneau, "Studying and modeling complex interactions for crowd simulation", defended in November 2016, supervised by Julien Pettré and Anne-Hélène Olivier (Mimetic group at Inria Rennes-Bretagne Atlantique and Irisa) [12]

- Ph.D.: Aly Magassouba, "Aural servo: towards an alternative approach to sound localization for robot motion control", defended in December 2016, supervised by François Chaumette and Nancy Bertin (Panama group at Inria Rennes-Bretagne Atlantique and Irisa)

- Ph.D.: Lucas Royer, "Real-time tracking of deformable targets in 3D ultrasound sequences", defended in December 2016, supervised by Alexandre Krupa, Maud Marchal (Hybrid group at Inria Rennes-Bretagne Atlantique and Irisa) and Guillaume Dardenne (IRT b<>com)

- Ph.D.: Pierre Chatelain, "Quality-driven control of a robotized ultrasound probe", defended in December 2016, supervised by Alexandre Krupa and Nassir Navab (Technische Universität München) [14]

- Ph.D.: Suman Raj Bista, "Indoor Navigation of Mobile Robots based on Visual Memory and Image-Based Visual Servoing", defended in December 2016, supervised by Paolo Robuffo Giordano and François Chaumette [11]

- Ph.D. in progress: Renato José Martins, "Robust navigation and control of an autonomous vehicle", started in November 2013, supervised by Patrick Rives and Samuel Siqueira Bueno (CTI)

- Ph.D. in progress: Jason Chevrie, "Control of a flexible needle by visual servoing using B-mode ultrasound images", started in September 2014, supervised by Alexandre Krupa and Marie Babel

- Ph.D. in progress: Quentin Bateux, "Visual servoing from global descriptors", started in October 2014, supervised by Eric Marchand

- Ph.D. in progress: Fabrizio Schiano, "Collective control with onboard sensors for multiple quadrotor UAVs", started in October 2014, supervised by Paolo Robuffo Giordano

- Ph.D. in progress: Pedro Patlan-Rosales, "Enhancement of ultrasound elastography by visual servoing and force control", started in October 2014, supervised by Alexandre Krupa

- Ph.D. in progress: Noël Mériaux, "Landing by visual servoing", started in October 2014, supervised by François Chaumette, Eric Marchand and Patrick Rives

- Ph.D. in progress: Lesley-Ann Duflot, "Visual servoing using shearlet transform", started in November 2014, supervised by Alexandre Krupa and Brahim Tamadazte (Minarob group at FEMTO-ST, Besançon)

- Ph.D. in progress: Firas Abi Farraj, "Shared Control Architectures for Visual Servoing Tasks", started in October 2015, supervised by Paolo Robuffo Giordano

- Ph.D. in progress: Salma Jiddi, "Analyses géométrique et photométrique pour des applications de réalité mixte", started in October 2015, supervised by Eric Marchand and Philippe Robert (Technicolor)

- Ph.D. in progress: Ide Flore Kenmogne Fokam, "Cooperative localization in multi-robot fleets using interval analysis", started in October 2015, supervised Vincent Drevelle and Eric Marchand

- Ph.D. in progress: Bryan Penin "Model predictive visual servoing for UAVS", started in October 2015, supervised by Paolo Robuffo Giordano and François Chaumette

- Ph.D. in progress: Guillaume Cortes, "Motion Capture", started in October 2015, supervised Eric Marchand and Anatole Lecuyer.

- Ph.D. in progress: Muhammad Usman, "Robust Vision-Based Navigation for Quadrotor UAVs", started in October 2015, supervised by Paolo Robuffo Giordano

- Ph.D. in progress: Louise Devigne, "Contribution d'une aide technique robotique à l'évaluation de pathologies neurologiques : Application à la navigation d'un fauteuil roulant", started in November 2015, supervised by Marie Babel and Philippe Gallien (Pôle Saint Hélier)

- Ph.D. in progress: Quentin Delamare, "Algorithmes d'estimation et de commande pour des quadrirotors en interaction physique avec l'environnement", started in September 2016, supervised by Paolo Robuffo Giordano

- Ph.D. in progress: Axel Lopes, "Data assimilation for synthetic vision-based crowd simulation algorithms", started in October 2016, supervised by Julien Pettré and François Chaumette

- Ph.D. in progress: Aline Baudry, "Contribution à la modélisation des fauteuils roulants pour l'amélioration de leur navigation en mode semi-autonome", started in October 2016, supervised by Marie Babel and Sylvain Guégan (Mechanical Engineering Dpt/LGCGM at Insa Rennes)

- Ph.D. in progress: Hadrien Gurnel, "Shared control of a biopsie needle from haptic and ultrasound visual feedback", started in October 2016, supervised by Alexandre Krupa and Maud Marchal (Hybrid group at Inria Rennes-Bretagne Atlantique and Irisa)

- Ph.D. in progress: Dayana Hassan, "Plate-forme robotisée d'assistance aux personnes à mobilité réduite", started in November 2016, supervised by Paolo Salaris, Patrick Rives and Frank Anjeaux (Axyn robotique)

- Internship: Valentin Bureau from May 2016 until Sep 2016 (2 months in mobility in University College of London within ISI4NAVE associated team), M1/Second year of Computer Science department, INSA Rennes, supervised by Marie Babel

- Internship: Timothée Collard "Adapting a localization application to ROS and MAV navigation" from Jun 2016 until Aug 2016, M1, Université de Rennes 1, supervised by Vincent Drevelle

- Internship: Benjamin Fasquelle from May 2016 until Aug 2016, M1, ENS Rennes, supervised by Eric Marchand

- Benoit Heintz from Mar 2016 until Jul 2016, L2 level, ENSIL Limoges, supervised by Fabien Spindler and Giovanni Claudio

- Internship: Manutea Huang from Jun 2016 until Sep 2016, L3/First year of Computer Science department, INSA Rennes, supervised by Marie Babel

- Internship: Daniel Huc from May 2016 until Sep 2016, M2, IM2AG Grenoble, supervised by Julien Pettré

- Internship: Valentin Limantour from Sep 2016 until December 2016, M1, ENIB Brest, supervised by Paolo Robuffo Giordano
- Internship: Etienne Moisdon from May 2016 until Jun 2016, M, Univ. Rennes 1, supervised by Julien Pettré

10.2.3. External Ph.D. and HdR Juries

- François Chaumette: Julien Bruneau (Ph.D., president, Inria Rennes), Andrea Cherubini (HdR, president, Lirmm, Montpellier)
- Alexandre Krupa: Laure-Anais Chanel (Ph.D., reviewer, ICube, Strasbourg), Mouloud Ourak (Ph.D., reviewer, FEMTO-ST, Besançon), Paul Mignon (Ph.D., reviewer, TIMC-IMAG, Grenoble)
- Eric Marchand: Vishnu Karakkat Narayanan (Ph.D., president, Inria Rennes), Suman Raj Bista (Ph.D., president, Inria Rennes), Limming Yang (Ph.D., reviewer, EC Nantes), Tu-Hoa Pham (Ph.D., reviewer, Lirmm, Montpellier).
- Julien Pettré: Christian Vassallo (Ph.D., Laas, Toulouse), Fabien Cissé (Ph.D., UPMC, Paris), Thomas Pitiot (PH.D., ICube, Strasbourg)
- Patrick Rives: Zui Tao (Ph.D., president, UTC, Compiègne), Bruno Ricaud (Ph.D., reviewer, Ecole des Mines, Paris), Victor Gibert (Ph.D., member, IRCCyN, Nantes), Yue Kang (Ph.D., reviewer, UTC, Compiègne), Abdelhamid Dine (Ph.D., president, ENS-Cachan, Paris-Saclay), Pierre Merriaux (Ph.D., reviewer, Esigelec, Rouen), Fabrice Mayran de Chamiso (Ph.D., member, CEA-LIST, Paris-Saclay), Bruno Vallet (HdR, member, IGN, Paris).
- Paolo Robuffo Giordano: Osamah Saif (Ph.D., UTC, Compiègne, France), Marco Aggravi (Ph.D., University of Siena, Italy), Leonardo Meli (Ph.D., University of Siena, Italy).

10.3. Popularization

- Due to the visibility of our experimental platforms, the team is often requested to present its research activities to students, researchers or industry. Our panel of demonstrations allows us to highlight recent results concerning the positioning of an ultrasound probe by visual servoing, grasping and dual arm manipulation by Romeo, vision-based shared control using our haptic device for object manipulation, the control of a fleet of quadrotors, vision-based detection and tracking for space navigation in a rendezvous context, the semi-autonomous navigation of a wheelchair, and augmented reality applications. Some of these demonstrations are available as videos on VispTeam YouTube channel (https://www.youtube.com/user/VispTeam/videos). This year there were among others, demonstrations organized for the HCERES expert committee that evaluated IRISA, about twenty people affiliated to the CNRS electronics network, students of the "Innovation et entreprenariat" Master, those of the L3 R&I at ENS Rennes, about twenty students from the "Ecole des Mines de Nancy", several classes of high school students around Rennes, without forgetting the members of the Ph.D. thesis juries.
- Fabien Spindler and Giovanni Claudio were interviewed by TV Rennes about Pepper robot (https://www.facebook.com/166100743494694/videos/vb.166100743494694/959489554155805/?type=2&theater).
- Marie Babel participated to "15$^{\text{e}}$ Journée nationale des pôles de compétitivité" in March 2016 (Paris): HandiViz project was selected by the French Ministry of Finance
- Marie Babel participated to the Science Festival in October 2016 with an interview at "Village des Sciences" and a workshop for general public organized in Acigné near Rennes.
- Marie Babel participated to the "Convention Nationale des SATT" (October 2016, Paris).
- Marie Babel gave a talk on "HandiViz: a new driving experience" in October 2016, during the "Semaine des Technologies - Robotique et santé" organized at Insa Rennes.

- Vincent Drevelle participated to the "Journée science et musique" in Rennes, with an interactive demonstration of sound-based tracking of a micro aerial vehicle with a beam projector (in cooperation with the Panama team).

- An article related to the research activity of Alexandre Krupa on robotic needle steering entitled "Un robot qui apprend à viser" has been published in March 2016 in the general-audience magazine "Sciences Ouest": http://www.espace-sciences.org/sciences-ouest/340/dossier/un-robot-qui-apprend-a-viser.

- Paolo Robuffo Giordano has given press releases on the activities involving formation control for multiple quadrotor UAVs to Émergences Inria, Sciences Ouest, and "Industrie & Technologies".

<p style="text-align:center; color:red;">**LARSEN Team**</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- Amine Boumaza co-organized "Projections, Interactions, Emotions - Journées PsyPhINe 2016", the second workshop of the PsyPhINe project (http://poincare.univ-lorraine.fr/fr/manifestations/psyphine-2016).

- François Charpillet co-organized and co-chaired the Workshop on On-line decision-making in multi-robot coordination, June 19, 2016, Ann Arbor, Michigan, USA, organized in conjuction of the 2016 Robotics: Science and Systems Conference (RSS 2016).

- Serena Ivaldi co-organized the Workshop "Human-Robot collaboration: towards co-adaptive learning though semi-autonomy and shared control" at IROS 2016 (http://www.ausy.tu-darmstadt.de/Workshops/IROS2016).

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

- Amine Boumaza was a PC member of GECCO'2016 (Genetic and Evolutionary Computation Conference), ALIFE'2016 (International Conference on the Synthesis and Simulation of Living Systems), CEC'2016 (Congress on Evolutionary computation).

- Francis Colas was a Technical PC member for the EAI International Conference Track on Smart Cities and the Future Internet (SCiFI).

- Serena Ivaldi was an Associate Editor for the 2016 IEEE/RAS International Conference on Robotics and Automation (ICRA), the 2016 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), the 2016 IEEE/RAS International Conference on Humanoid Robots (HU-MANOIDS), the 2016 IEEE International Conference on Development and Learning (ICDL).

- Jean-Baptiste Mouret was a PC member of GECCO'2016 (Genetic and Evolutionary Computation Conference), ALIFE'2016 (International Conference on the Synthesis and Simulation of Living Systems), EVO*2016 (EvoStar), SAB'2016 (Conference on System and Adaptive Behaviors – from animals to animats).

- Vincent Thomas was a member of the program committee for "Journées Francophones sur la Planification la Décision et l'Apprentissage pour la conduite de systèmes 2016" (JFPDA 2016).

9.1.2.2. Reviewer

- François Charpillet was a reviewer for the 2016 IEEE International Conference on Robotics and Automation (ICRA), The 2016 europeen conference on artificial intelligence (ECAI), Rob&IA2016, RFP-IA 2016, WACAI2016, DEMUR, and the 2016 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).

- Francis Colas was a reviewer for the 2016 IEEE International Conference on Robotics and Automation (ICRA), the EAI International Conference on Smart Cities and the Future Internet (SCiFI), and the 2016 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).

- Serena Ivaldi was a reviewer for the ACM International Conference on Human-Robot Interaction (HRI), the IEEE International Conference on Human-Robot Communication (RO-MAN), the International Conference Robotics: Science and Systems (RSS).

- Jean-Baptiste Mouret was a reviewer for the 2016 IEEE International Conference on Robotics and Automation (ICRA), and the 2016 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).
- Vincent Thomas was a reviewer for "Journées Francophones sur la Planification la Décision et l'Apprentissage pour la conduite de systèmes 2016" (JFPDA 2016).

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- Serena Ivaldi is an editorial board member for the Journal "Intelligent Service Robotics", Springer. She was also Guest Editor for Springer Autonomous Robots for the Special Issue "Whole-body control of contacts and dynamics for humanoid robots".

9.1.3.2. Reviewer - Reviewing Activities

- Amine Boumaza is a Review Editor for Frontiers in AI and Robotics.
- Francis Colas was a reviewer for the Journal of Field Robotics, and the IEEE Transactions on Automation Science and Engineering.
- Serena Ivaldi was a Review Editor and reviewer for Frontiers in AI and Robotics, and a reviewer for IEEE Transactions on Cognitive and Developmental Systems.
- Jean-Baptiste Mouret is Review Editor for Frontiers in AI and Robotics. He was a reviewer for Nature Communications, Frontiers in Neurobotics, Artificial Life.
- Vincent Thomas was a reviewer for the IEEE Transactions on Cybernetics.

9.1.4. Invited Talks

- Jean-Baptiste Mouret was invited to talk at:
  The Origins Workshop (Arizona State University, USA),
  The cross-disciplinary symposium on Machine Learning and Architecture (Copenhague, Dannemark),
  9th SIG on Design Theory of the International Design Society (Keynote, Paris, France),
  Journée des Jeunes Chercheuses et Chercheurs organisée de l'ANR (Paris, France),
  Ministère des finances (Conseil Général de l'Economie / mission de réflexion sur les armes autonomes, Paris, France),
  Journée "Apprentissage et IA" organized by CERNA (Commission de réflexion sur l'Éthique de la Recherche en sciences et technologies du Numérique d'Allistene),
  Journée Scientifiques Inria (Rennes, France),
  Journée Intelligence Artificielle et Voiture Autonomes (Institut VEDECOM, Versailles, France),
  HLR 2016 (German-French Winter School on Humanoids and Legged robots).
- Serena Ivaldi gave the following invited talks:
  06/2016: *Humanoid robotics and human-robot interaction*. Invited talk at Journée Robotique et IA, RFIA 2016, by Olivier Simonin.
  10/2016: *Grasping, vision and interaction for object manipulation with iCub*. Invited talk at IEEE-RAS IROS 2016 Workshop on Grasping and Manipulation, by Yasemin Bekiroglu.
  11/2016: *Exploiting tactile information for whole-body dynamics, learning and human-robot interaction*. Invited talk at IEEE-RAS Humanoids 2016 Workshop on Tactile Manipulation, by Qiang Li.
  11/2016: *Studying human behavior during human-robot collaborative tasks*. Invited talk at IEEE-RAS Humanoids 2016 Workshop on Human Movement Understanding, by Emel Demircan.
  11/2016: *Les robots humanoides: de l'acceptabilité à l'interaction*. Invited talk at the Forum de Sciences Cognitives, Nancy, by Christine Bourjot.
  12/2016: *Learning and interaction with iCub*. Invited talk at the German-French Conference on Humanoid and Legged Robots 2016, by Olivier Stasse.

9.1.5. Leadership within the Scientific Community

- Jean-Baptiste Mouret is the chair of the "evo-devo-robot" task force of the IEEE technical committee "Developmental and Cognitive Systems".

9.1.6. Scientific Expertise

- Serena Ivaldi was appointed vice-president of the CES 33 panel Interaction and Robotics of the ANR. She was an invited member of the CNRS for the "Groupe de Discussion pour le renouvellement de la liste des candidats" section 07 CNRS (Specif Campus, GRETSI & Club EEA) - invited by Specif Campus, 2016.

9.1.7. Research Administration

- Amine Boumaza is a board member of the Évolution Artificielle association.
- Serena Ivaldi was member of the hiring committees:
  - CNRS: Committee member for jury n.29 - IR2 - BAP, sept.-oct. 2016.
  - Maitre de conference: Committee member for jury 27MCF1744 (4335) at UPMC, Paris, apr.-may 2016.
- Francis Colas was member of the hiring committee 27-MCF-0762 at ESSTIN, Université de Lorraine.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Master: Karim Bouyarmane, "Programmation C/C++", 20h eq. TD, M1/M2, ESSTIN, France.
- Master: Francis Colas, "Robotique Autonome", 18h eq. TD, M2 "Systèmes Interactifs et Robotiques", CentraleSupélec, France.
- Master: Francis Colas, "Introduction à ROS", 6h eq. TD, M1, Mines de Nancy, France.
- Master: Serena Ivaldi, "Analyse du comportement", 15h eq. TD, M2 "Science Cognitive", Université de Lorraine, France.
- Master: Jean-Baptiste Mouret, "Disruptive technologies: Robotics", 3h eq. TD, M2 (School of Public Affairs), Sciences Po Paris, France.
- Master: Vincent Thomas, "Modèles probabilistes et Apprentissage par renforcement", 15h eq. TD, M2 "Informatique - Image Perception Raisonnement Cognition", Univ. Lorraine, France.
- Master: Vincent Thomas, "Game Design", 20h eq. TD, M1 "Sciences Cognitives", Univ. Lorraine, France.
- Master: Vincent Thomas, "Agent intelligents et collectifs", 20h eq. TD, M1 "Sciences Cognitives", Univ. Lorraine, France.
- Master: Vincent Thomas, "Serious Game", 12h eq. TD, M2 "Sciences Cognitives", Univ. Lorraine, France.

9.2.2. Supervision

- PhD: Abdallah Dib, "*Assistance à la personne en perte d'autonomie : étude de l'apport d'un robot compagnon*", 24 May 2016, François Charpillet (advisor).
- PhD in progress: Adrian Bourgaud, "*Multi-sensor Fusion and Active Sensing*", started in Jul. 2015, François Charpillet (advisor).
- PhD in progress: Konstantinos Chatzilygeroudis, "*Diagnosis-free Damage Recovery in Robotics with Machine Learning*", started in Oct. 2015, Jean-Baptiste Mouret (advisor).
- PhD in progress: Oriane Dermy, "*Learning to control the physical interaction of a humanoid robot with humans*", started in Nov. 2015, François Charpillet (advisor), Serena Ivaldi.

- PhD in progress: Yassine El Khadiri, "Apprentissage automatique pour l'assistance à l'autonomie à domicile", started in Nov. 2016, François Charpillet (advisor).
- PhD in progress: Iñaki Fernández Pérez, "*Apprentissage incrémental évolutionnaire*", started in Oct. 2013, F. Charpillet (advisor), Amine Boumaza.
- PhD in progress: Nassim Kaldé, "*Exploration et reconstruction d'un environnement inconnu par une flottille de robots*", started in Oct. 2012, François Charpillet (advisor), Olivier Simonin.
- PhD in progress: Rituraj Kaushik, "Fast adaptation to damage by exploiting trajectory data", started in Oct. 2016, Jean-Baptiste Mouret (advisor).
- PhD in progress: Van Quan Nguyen, "Mapping of a sound environment by a mobile robot", started in Dec. 2014, Emmanuel Vincent (advisor), Francis Colas, François Charpillet.

9.2.3. *Juries*

- François Charpillet was reviewer and member of the PhD committee of :
  - Hendry Ferreira Chame, "Egocentric Representations for Autonomous Navigation of Humanoïd Robots", école centrale de Nantes, IRCCYN.
  - Patrick Béchon, "Planification multi-robot pour des missions de surveillance avec contraintes de communication", Université de Toulouse, ISAE, LAAS, ONERA.
  - Raphael Lallemand, "Symbolic and Geometric Planning for teams of Robots and Humans", Université de Toulouse, INSA Toulouse, LAAS.
  - Loïc Sevrin, "Mesure et suivi d'activité de plusieurs personnes dans un Living Lab en vue de l'extraction d'indicateurs de santé et de bien être", Université de Claude Bernard Lyon 1, Institut des nanotechnologies de Lyon;
  - Vishnu Karakkat Narayanan, "Characterizing assistive shared control through vision-based and human-aware designs for wheelchair navigation assistance", Université Bretagne Loire, INSA Rennes, Team Project Lagatic and Chroma.
  - Haïfa Rabai, "Réseau dynamique d'applications chaotiques couplées pour l'étude de la mobilité urbaine", Université du Havre.
- François Charpillet was member and chair of the PhD committee of :
  - Coralie Angeletti, "Stratégie de Perception Active pour l'Interprétation de Scènes", University Blaise Pascal, Clermont Ferrand.
  - Kevin Roussel, "Évaluation et amélioration des plates-formes logicielles pour réseaux de capteurs sans-fil, pour optimiser la qualité de service et l'énergie", Université de Lorraine.
- François Charpillet was member of the Phd committee of :
  - Abdallah Dib, "Vers un système de capture du mouvement humain en 3D pour un robot mobile évoluant dans un environnement encombré", Lorraine University.
  - Seifallah Ben Saad, "Conception d'un algorithme de coordination hybride de groupes de robots sous-marins communicants Application : acquisition optique systématique et détaillée des fonds marins", Université de bretagne occidentale, ENSTA Bretagne.

9.3. Popularization

- Amine Boumaza is a member of the editorial board of "Interstice".
- Vincent Thomas gave proposed tutorials on "physics simulation" and "reinforcement learning" during "journées ISN-EPI" (24th of Mars 2016).
- Vincent Thomas participated in the preparation of "Computer Science Exporoute" (conducted by Inria Nancy Grand-Est) planned for 2017.
- Jean-Baptiste Mouret wrote an article for "Interstices" (" Des robots qui s'adaptent aux dommages en seulement quelques minutes").

- Jean-Baptiste Mouret helped Pierre Vandeginste (journalist) to write an article about his work in "La Recherche" (Dec. 2016); he also appeared in Science et Avenir, Arte Future Mag, Socialter, Telerama.

- Serena Ivaldi appeared in the following articles / gave the following interviews:
07/2016: Humanité Dimanche, Homme/robot. Le trouble au rendez-vous. http://www.humanite.fr/hommerobot-le-trouble-au-rendez-vous-612149
06/2016: Inriality, Robots humanoides : une inquiétante étrangeté. http://www.inriality.fr/culture-loisirs/relations-homme-robot/robophobie/robots-humanoides-une/
06/2016: Les Inrockuptibles, n.1070, Comment les robots ont conquis nos coeurs. http://www.lesinrocks.com/2016/06/01/actualite/dossier-high-tech-androides-ont-conquis-coeurs-11832819/
03/2016: Interstices, Des robots au service de l'homme. https://interstices.info/jcms/p_88305/des-robots-au-service-des-hommes
03/2016: La semaine, Têtes chercheuses. http://www.lasemaine.fr/2016/03/17/tetes-chercheuses
03/2016: Pour la science, Quels obstacles à l'insertion des robots en société ? https://pbs.twimg.com/media/CceuEH3W4AEoNx-.jpg:large

<div align="center">**LEMON Team**</div>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Journal

10.1.1.1. Member of the editorial board

Vincent GUINOT : Journal of Hydroinformatics.

Antoine ROUSSEAU : Discrete and Continuous Dynamical Systems, Series S.

10.1.1.2. Reviewer

Fabien MARCHE : Advances in Applied Mathematics and Mechanics, International Journal for Numerical Methods in Fluids, Journal of Applied and Computational Mathematics, Journal of Computational Physics, Journal of Scientific Computing and SIAM Journal on Scientific Computing.

Vincent GUINOT : Journal of Hydrology and Journal of Hydroinformatics.

Antoine ROUSSEAU : Applied Numerical Mathematics, International Journal for Numerical Methods in Fluids.

10.1.2. Invited talks

Carole DELENNE workshop « Modelling the flood peril » Paris, May 30th and 31st, Université Pierre et Marie Curie

Antoine ROUSSEAU : Café Scientifique (Institut Français de Santiago, Ambassade de France), August 6th, 2016

Antoine ROUSSEAU : 4th French-Chilean workshop on Bioprocess Modeling, Santiago, Sept. 2016

10.1.3. Research administration

Antoine ROUSSEAU belongs to the workgroup dedicated to the development of SELECT, an Inria internal software to manage scientific recruitment. Carole DELENNE responsable d'année EGC3, direction des études EGC et tutorat de 5 apprentis (je sais pas où ca se met...)

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

F. Campillo, Stochastic modelling of ecosystems, 20 h, M2R Biostatistics, Univ. Montpellier

F. Campillo, Object oriented programming: probabilistic modeling and statistical numerics for biology, 20 h, Doctoral lectures, Univ. Montpellier

C. Delenne, Méthodes mathématiques pour l'ingénieur, 10.5H CM, 22.5hTD, L3, Polytech Montpellier

C. Delenne, Hydraulique, 60hTP, M1, Polytech Montpellier

C. Delenne, Hydraulic transients, 27hTD, M1, Polytech Montpellier

C. Delenne, Modélisation hydraulique à surface libre 2D, 6h TD, M2, Polytech Montpellier

C. Delenne, Tutorat de stages et projets, 77hETD, L3-M2, Polytech Montpellier

C. Delenne, Mathématiques, 15h CM, 15hTD, L3 (apprentissage), Polytech Montpellier

C. Delenne, Hydraulique, 28hTD, L1, IUT Génie Civil, Nîmes

V. Guinot, Mécanique des fluides, 72h ETD, L3, Polytech'Montpellier

V. Guinot, Hydraulique à surface libre, 60h ETD, L3, Polytech'Montpellier

V. Guinot, Méthodes Mathématiques pour l'Ingénieur, 18h ETD, M1, Polytech'Montpellier

V. Guinot, Hydraulique des Réseaux, 30h ETD, M1, Polytech'Montpellier

V. Guinot, Mécanique des Fluides, Master SPAE, 36h ETD, M1, UMontpellier

V. Guinot, Transitoires hydrauliques, 54 h ETD, M1, Polytech'Montpellier

V. Guinot, tutorat de stages ingénieur, 15h ETD, M1, Polytech'Montpellier

V. Guinot, Modélisation hydraulique à surface libre 2D, 6h ETD, M2, Polytech'Montpellier

V. Guinot, Projet Industriel de Fin d'Etudes (PIFE), 30h ETD, M2, Polytech'Montpellier

V. Guinot, Tutorat de Stage de fin d'études ingénieur, 18h ETD, M2, Polytech'Montpellier

F. Marche, Biomaths, 72h TD., L1, Université Montpellier

F. Marche, Analyse numérique des EDP, 24H CM, 12H TD, 15H TP., M1, Université Montpellier

F. Marche, Calcul scientifique avancé, 26H CM, M2R, Université Montpellier

A. Rousseau, Towards Coupling Coastal and Large Ocean Models, 6h, Master, PUC, Santiago, Chile

A. Rousseau, Introduction to numerical methods in CFD, 6h, Master, Inria Chile, Santiago, Chile

A. Rousseau, Introduction to ROMS, 12h, Master, Inria Chile and CIGIDEN, Santiago, Chile

10.2.2. Supervision

PhD: Mehdi Pierre Daou, *Développement d'une méthodologie de couplage multi-modèles avec changements de dimension. Validation sur un cas-test réaliste en dynamique littorale*, Univ. Grenoble, Sept. 2016, Eric Blayo (EPI MOISE) and Antoine Rousseau

PhD in progress: Mohsen Chebbi, Modélisation stochastique de procédés membranaires de traitement des eaux usées. September 2014, S. Toumi (ENIT, Tunis) and F. Campillo

PhD in progress: Oussama Hadj-Abdelkader, Filtrage particulaire pour le chemostat. September 2014, A. Hadj-Abdelkader (Univ. Tlemcen) and F. Campillo

10.2.3. Juries

Carole DELENNE : Jury member: Andriarimina Daniel Rakotonirina, *Fluid-solid interactions in a non-convex granular media: application to rotating drums and packed bed reactors*, december 2016, ENS Lyon

Antoine ROUSSEAU : Referee and jury member: Mrs Souad Khiari, *Problèmes Inverses de Points Sources dans les Modèles de Transport Dispersif de Contaminants Identifiabilité et Observabilité*, October 2016, Université de Technologie de Compiègne & Université de Tunis El-Manar / ENIT

Antoine ROUSSEAU : Jury member: M. Mehdi Pierre Daou, *Développement d'une méthodologie de couplage multi-modèles avec changements de dimension. Validation sur un cas-test réaliste en dynamique littorale*, September 2016, Univ. Grenoble

Antoine ROUSSEAU : Jury member: M. Victor Riquelme, *Problemas de control óptimo para la bioremediación de recursos acuíferos*, September 2016, Univ. de Chile, Santiago & Univ. Montpellier

Fabien MARCHE : Jury member: Mrs Nora Aissiouene, *Analyse numérique et approximation discrète d'un modèle dispersif en eau peu profonde*, December 2016, Univ. Pierre et Marie Curie, Paris

Antoine ROUSSEAU : Jury member: Mrs Carine Lucas, *Modélisation de problèmes de mécanique des fluides : approches théoriques et numériques*, December 2016, Université d'Orléans

Teaching manager of the department "Water and Civil Engineering", Polytech Montpellier, in charge of the first year of the training. Academic supervisor of 5 apprentices.

10.3. Popularization

Antoine ROUSSEAU gave several conferences for highschool students and their teachers in France and Chile, on the topics of mathematical modeling for environmental sciences:

Fête de la Science, Oct. 2016, Genopolys Montpellier

Café Cientificó, Aug. 2016, Instituto Francés, Santiago, Chile

Antoine ROUSSEAU is member of the national Inria network for scientific outreach *Médiation scientifique*

Antoine ROUSSEAU is member of the editorial board of Interstices

Antoine ROUSSEAU co-authored the Calendrier Mathématique 2017

<p style="text-align:center; color:red;">**LFANT Project-Team**</p>

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Selection

8.1.1.1. Member of the Conference Program Committees

A. Enge: 20th Workshop on Elliptic Curve Cryptography ECC 2016, İzmir

D. Robert was a member of the scientific committee for the Ecole Mathematique Africaine organised by Emmanuel Fouotsa at Bamenda.

F. Johansson organized the session: High-precision arithmetic, effective analysis and special functions. ICMS 2016, The 5th International Congress on Mathematical Software, ZIB Berlin.

8.1.2. Journal

8.1.2.1. Member of the Editorial Boards

K. Belabas acts on the editorial board of *Journal de Théorie des Nombres de Bordeaux* since 2005 and of *Archiv der Mathematik* since 2006.

H. Cohen is an editorial board member of *Journal de Théorie des Nombres de Bordeaux*; he is an editor for the Springer book series *Algorithms and Computations in Mathematics (ACM)*.

J.-M. Couveignes is a member of the editorial board of the *Publications mathématiques de Besançon* since 2010.

A. Enge is an editor of *Designs, Codes and Cryptography* since 2004.

8.1.2.2. Reviewer - Reviewing Activities

F. Johansson reviewed for IEEE Transactions on Circuits and Systems I, IEEE Transactions on Computers, and ACM Transactions on Mathematical Software.

8.1.3. Invited Talks

- A. Enge: Mathematical Structures for Cryptography, Leiden: Short addition sequences for theta functions
- F. Johansson: talk at RAIM 2016, Banyuls-sur-mer on "Fast reversion of formal power series" and at FastRelax meeting, LAAS-CNRS, Toulouse on "Hypergeometric functions in Arb".

8.1.4. Scientific Expertise

J.-M. Couveignes is a member of the scientific council of the labex "Fondation Sciences Mathématiques de Paris", FSMP, Paris.

J.-M. Couveignes is a member of the 'conseil d'orientation' of the labex "Institut de Recherche en Mathématiques, Interactions et Applications", IRMIA, Strasbourg.

8.1.5. Research Administration

A. Enge: Head of COST-GTRI, responsible for the scientific evaluation of all international cooperations of Inria

Since January 2015, K. Belabas is vice-head of the Math Institute (IMB). He also leads the computer science support service ("cellule informatique") of IMB and coordinates the participation of the institute in the regional computation cluster PlaFRIM.

He is an elected member of "commission de la recherche" in the academic senate of Bordeaux University.

He is a member of the "Conseil National des Université" (25th section, pure mathematics).

J.-P. Cerri is an elected member of the scientific council of the Mathematics Institute of Bordeaux (IMB) and responsible for the bachelor programme in mathematics and informatics.

Since January 2015, J.-M. Couveignes is the head of the Math Institute (IMB).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

> Master : G. Castagnos, *Cryptanalyse*, 60h, M2, University of Bordeaux, France;
>
> Master : G. Castagnos, *Cryptologie avancée*, 30h, M2, University of Bordeaux, France;
>
> Master : G. Castagnos, *Courbes elliptiques*, 60h, M2, University of Bordeaux, France;
>
> Master : D. Robert, *Courbes elliptiques*, 60h, M2, University of Bordeaux, France;

8.2.2. Supervision

> Pinar Kiliçer: The class number one problem for genus-2 curves, Universities of Bordeaux and Leiden, supervised by A. Enge, M. Streng and P. Stevenhagen.
>
> Iuliana Ciocanea-Teodorescu, Algorithms for finite rings, Universities of Bordeaux and Leiden, supervised by K. Belabas and H. Lenstra.
>
> PhD in progress: Abdoulaye Maiga, *Computing canonical lift of genus 2 hyperelliptic curves*, University Dakar, supervised by Djiby Sow, Abdoul Aziz Ciss and D. Robert.
>
> PhD in progress: Emmanouil Tzortzakis *Algorithms for $\mathbb{Q}$-curves*, supervised by K. Belabas and P. Bruin
>
> PhD in progress: Pavel Solomatin *Topics on L-functions*, supervised by B. de Smit and K. Belabas
>
> Liu Zhengying: Height of class polynomials. Ecole Polytechnique third year internship, supervised by D. Robert.

8.2.3. Juries

- PhD report by A. Enge on Loubna Ghammam: Utilisation des couplages en cryptographie asymétrique pour la micro-électronique, University of Rennes
- PhD report and jury by D. Robert on Alina Dudeanu: Computational Aspects of Jacobians of Hyperelliptic Curves, EPFL.
- D. Robert is a member of the jury of Agregations de Mathematiques. He is also the codirector with Alain Couvreur of the option "calcul formel" of the Modelisation part of the oral examination.

8.3. Popularization

D. Robert wrote with Sorina Ionica the chapter "Pairings" of the book Guide to Pairing-Based Cryptography [16] which will be published by CHAPMAN and HALL/CRC. This book aims to help Engineers understand and implement pairing based cryptography. In the Chapter Pairings D. Robert give a self contained definition and proof of the Weil and Tate pairing; including how to handle divisors with non disjoint support (this is often skipped in scientific papers but is important for practical implementations).

H. Cohen wrote a vulgarisation article [17] on Fermat's last theorem. This article explain (through the example of congruent numbers) the role of elliptic curves and algebraic number theory in the solution of Fermat's last theorem.

During the last PARIatelier four talks [19], [18], [20], [21] have been filmed and are available under a creative common licence. This will allow people from all the world to get started faster with PARI. The first two talks focus on setting up personal computers for the atelier and the new features of PARI. The next two are more technical and explain the new L-functions and modular forms features.

<h1 style="text-align:center; color:red">LIFEWARE Project-Team</h1>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Selection

9.1.1.1. Member of the Conference Program Committees

- Grégory Batt was member of the program committees of:
    - FOSBE'16 6th IFAC Conference on Foundations of Systems Biology in Engineering, Laboratory for Systems Theory and Automatic Control, Otto von Guericke University, Magdeburg, Germany, 9th - 12th October 2016.
    - CMSB'16 14th International Conference on Computational Methods in Systems Biology, Computer Laboratory, University of Cambridge, UK, 21st - 23rd September 2016.
    - HSB'16 5th international workshop on Hybrid Systems Biology, Grenoble, October 20-21, 2016.
- François Fages was member of the program committees of:
    - CIE'16 Computability in Europe, Paris, 2016.
    - CMSB'16 14th International Conference on Computational Methods in Systems Biology, Computer Laboratory, University of Cambridge, UK, 21st - 23rd September 2016.
    - CP'16 22nd International Conference on Principles and Practice of Constraint Programming, Toulouse, France, September 5-9, 2016.
    - HSB'16 5th international workshop on Hybrid Systems Biology, Grenoble, October 20-21, 2016.
    - IJCAI'16 25th International Joint Conference on Artificial Intelligence, New York, 2016.
    - SASB'16 The Seventh International Workshop on Static Analysis and Systems Biology, September 8–10, 2016, Edinburgh, UK
    - WCB'16 12th International Workshop on Constraint-Based Methods for Bioinformatics, Toulouse, 2016.
- Sylvain Soliman was member of the program committees of:
    - CP'16 22nd International Conference on Principles and Practice of Constraint Programming, Toulouse, France, September 5-9, 2016.
    - WCB'16 12th International Workshop on Constraint-Based Methods for Bioinformatics, Toulouse, 2016.
- Sucheendra K. Palaniappan was member of the program committee of Formal Methods for Biological and Biomedical Systems (FMBBS 2016), Shenzhen, China, December 2016.

9.1.2. Journal

9.1.2.1. Member of the Editorial Boards

François Fages is member of

- the Editorial Board of the Computer Science area of the Royal Society Open Science journal since 2014,
- the Editorial Board of the journal RAIRO OR Operations Research since 2004.

9.1.2.2. Reviewer - Reviewing Activities

Beyond their Editorial Board and Program Committee duties,

- Grégory Batt reviewed an article for *ACS Synthetic Biology*
- François Fages reviewed articles for *BMC Systems Biology*, *Fundamenta Informaticae*, *BioSystems*, *PLOS-One* and *Computers and Industrial Engineering*.
- Sylvain Soliman reviewed articles for *BMC Systems Biology*, *BioSystems* and *AMS Math Reviews*.

9.1.3. Invited Talks

- François Fages gave invited talks at
    - Workshop on Symbolic Computation for Biological Systems, "Biochemical Programs and Mixed Analog-Digital Algorithms in the Cell", Univ. Bonn, 22 November 2016
    - Bilille scientific day on Systems Biology, "Biochemical Programs and Mixed Analog-Digital Algorithms in the Cell", Univ. Lille, 15 November 2016,
    - Colloque de Cérisy, Sciences de la vie, science de l'information, "Biochemical Programs and Mixed Analog-Digital Algorithms in the Cell", 20 September 2016,
    - Workshop on Formal Verification of Real-Time Systems, "Continuous Valuations of Temporal Logic Specifications with applications to Parameter Optimization and Robustness Measures", ENSTA Brest, 28 June 2016,
    - Workshop on Verification of Biological Systems, "Hybrid Analog/Digital Computation with Biochemical Reaction Systems", ENS Cachan, 17 May 2016,
    - International Worskhop on Entropy and Information, "Digital/Analog Computation in the Cell", Univ Paris-Diderot, 9 May 2016.
    - GT TheorBio, "Computational Systems Biology and Optimization", Orsay, 9 Février 2016.
- Grégory Batt gave invited talks at
    - Seminar at Systems Biology group, Clinical Pharmacology, Roche Pharma Research, on "Multi-scale modeling of TRAIL-induced apoptosis", March 2016, Basel
    - Seminar at Control Theory and Systems Biology Lab, Department of Biosystems Science and Engineering, ETHZ, on "Multi-scale modeling of TRAIL-induced apoptosis", March 2016, Basel
    - Journées Inria Cancer, Modeling dynamics of cell-to-cell variability in TRAIL-induced apoptosis explains fractional killing and predicts reversible resistance, March 2016, Paris
    - Third International Workshop on Synthesis of Complex Parameters, "What population reveals about individual cell identity: Single-cell parameter estimation of models of gene expression in yeast", April 2016, Eindhoven
    - Open University: systèmes hybrides et systèmes biologiques, "Predicting long-term effects of apoptosis-inducing drug treatments", May 2016, ENS Cachan, France
    - Journées scientifiques Inria, "What population reveals about individual cell identity: Single-cell parameter estimation of models of gene expression in yeast", June 2016, Rennes
    - Second Conference of the French Research Group on Synthetic Biology, "Balancing a genetic toggle switch by real-time control or periodic stimulations", June 2016, Bordeaux
    - Second Conference of the French Research Group on Symbolic Systems Biology, "Multi-scale modeling of TRAIL-induced apoptosis", July 2016, Lyon
    - Pasteur Quantitative Biology Symposium, "Balancing a genetic toggle switch by real-time control or periodic stimulations", Oct 2016, Paris

- Bilille scientific day on Systems Biology, "Balancing a genetic toggle switch by real-time control or periodic stimulations", Nov 2016, Lille
- Jakob Ruess gave invited talks at
  - Dracula seminar, "Towards real-time in vivo mathematical biology at the level of single cells", Nov 2016, Lyon

9.1.4. Leadership within the Scientific Community

- Grégory Batt is a member of
  - the IEEE/CSS Technical Committee on Systems Biology,
  - the scientific board of the GDR de Biologie de Synthèse et des Systèmes
  - the GDR de Bioinformatique Moléculaire, in charge of the axis on Biological network modelling, systems biology and synthetic biology
  - co-animator of the French working group on Symbolic Systems Biology GT BIOSS
- François Fages is a member of
  - the Steering Committee of the International Conference on Computational Methods for Systems Biology since 2008,
  - the Scientific Council of the *Doctorate School "Frontières Du Vivant"* at *Center for Research and Interdisciplanirity*, Universities Paris Descartes and Paris Diderot, since 2010,
  - The Scientific Commmittee of the Summer School Ecole Thématique Modélisation Formelle des Réseaux de Régulation Biologique since 2010.

9.1.5. Scientific Expertise

François Fages

- is a member of the jury for the *Prix de thèse Gilles Kahn* of the *Société Informatique de France*, since 2015,
- reviewed one research project for the **Israel Science Foundation**.

Grégory Batt has been a member of the selection committee for Junior research scientists (CR2) at Inria Rennes - Bretagne Atlantique in 2016.

9.1.6. Research Administration

François Fages is member of the "Bureau du Comité des Projets" of Inria Saclay-IdF.

Sylvain Soliman is member of

- the "Commission Scientifique" of Inria Saclay-IdF
- and of the AAP Digiteo/Digicosme Ph.D. grant jury.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: Grégory Batt (coordinator and teacher: 48h) and Jakob Ruess (24h), *Computational Biology*, M1, Master Approches Interdisciplinaires du Vivant (AIV).

Master: Grégory Batt (6h) and Denis Thieffry (coordinator), *Dynamical Modelling of Cellular Regulatory Networks*, M2, Interdisciplinary Master in Life Science at the Ecole Normale Supérieure, Paris.

Master/PhD: Grégory Batt (co-coordinator 80h, teacher 8h) and Jakob Ruess (8h), *Modeling and engineering of biological systems*, M2/PhD, Institut de Technologie et d'Innovation of Paris Sciences et Lettres (PSL-ITI), Paris.

Master: Chiara Fracassi (48h), *Experimental Methods in Biophysics*, M1, Master Approches Interdisciplinaires du Vivant (AIV).

Master: François Fages (coordinator module 48h, teaching 12h), Grégory Batt (12h), and Denis Thieffry (12h), C2-19 *Computational Methods for Systemic and Synthetic Biology*, Master Parisien de Recherche en Informatique (MPRI), Paris.

Doctorate: François Fages (6h), *Méthodes formelles pour la biologie des systèmes*, Ecole Thématique Modélisation Formelle des Réseaux de Régulation Biologique, Ile de Porquerolles, 6-10 June 2016

Master: Chiara Fracassi, *Dynamics of Living Systems*, 24h, M1, Master Approches Interdisciplinaires du Vivant (AIV).

Master: Thierry Martinez, *Développement logiciel*, 17h, M1, Ecole des Ponts et Chaussée, Champs-sur-Marne.

Master: Sylvain Soliman, C2-35-1 *Constraint Programming*, coordinator and teaching 24h, M2, Master Parisien de Recherche en Informatique (MPRI), Paris.

Master: Pauline Traynard, *Introduction to Linux and Programming with Python and R*, M1, M2, 30h, master IMaLiS du département de biologie de l'ENS,

9.2.2. Supervision

PhD : Pauline Traynard, *Model Building by Temporal Logic Constraint Solving: Investigation of the Coupling between the Cell Cycle and the Circadian Clock*, Université Paris Diderot, Paris (Oct 2012), Dir. François Fages and Denis Thieffry (ENS), 10 May 2016.

PhD : François Bertaux. *Cell-based multi-scale modeling for systems and synthetic biology: from stochastic gene expression in single cells to spatially organized cell populations*. Université Paris - Diderot, Dir. Dirk Drasdo (EPI MAMBA) and Grégory Batt, 15 May 2016.

PhD : Jean-Baptiste Lugagne, Université Paris Diderot, Paris (Oct 2012), Dir. Grégory Batt and Pascal Hersen (CNRS, MSC), 13 Dec 2016.

PhD in progress: Jonas Sénizergues, Université Paris Diderot, Paris (Oct 2015, until August 2016), Dir. François Fages and Sylvain Soliman.

PhD in progress (Sept 2016-): Virgile Andréani, Ecole Polytechnique, Paris , Dir. Grégory Batt and Lingchong You (Duke U.).

PhD in progress (Dec 2016-): Jean-Baptiste Caron, relais thèse Inria, Dir. Grégory Batt.

9.2.3. Juries

- HDR: Morgan Magnin, "Contributions à l'élaboration de connaissances qualitatives en bio-informatique", Ecole Centrale de Nantes, *François Fages, Reviewer*, 28 avril 2016.

- Ph.D.: Simona Catozzi, "Retroactivity in Signal Transduction", Univ. Nice Sophia-Antipolis, *François Fages, Examiner*, 15 Dec. 2016.

- Ph.D.: Alexandre Temperville, "Bases creuses en algèbre linéaire exacte et simplification algorithmique de modèles biologiques", Université de Lille, *François Fages, Reviewer*, 11 juillet 2016.

- Ph.D.: Ignacio Salas, "Packing Curved Objects with Interval Methods", Ecole des Mines de Nantes, *François Fages, Reviewer, Chairman of the Jury*, 29 avril 2016.

- Ph.D.: Louis Fippo Fitime, "Modélisation hybride, Analyse et Vérification Quantitative des grands réseaux de régulation biologique", École Centrale de Nantes, *Sylvain Soliman, Examiner*, November 28, 2016.

- Ph.D.: Adel Mezine, "Conduite d'expériences par apprentissage actif pour l'identification de systèmes dynamiques biologiques", Paris-Saclay University, *Grégory Batt, Reviewer*, October 11, 2016.

9.3. Popularization

François Fages

- wrote a book chapter "AI and Biological Modeling" [17], for an encyclopedic book entitled "A guided tour to Artificial Intelligence Research" to appear next year,

- participated in the **Colloque de Cérisy** "Sciences du vivant, sciences de l'information", 20 Septembre 2016, with a conference and an article [18] to appear in a book next year,

- wrote an article for ERCIM news [16],

- and received a schoolgirl for one afternoon in our research team.

<h1 style="text-align:center; color:red">LINKMEDIA Project-Team</h1>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Laurent Amsaleg was the technical program chair of the Intl. Conf. on Similarity Search and Applications 2016.

Laurent Amsaleg and Vincent Claveau, with X. Tannier (LIMSI-CNRS), D. Nouvel (Inalco) organized a workshop about Computational Journalism. More than 50 persons (computer scientists, sociologists, and news/media compan fellows) attented. Program available at http://compjournalism2016.irisa.fr.

Pascale Sébillot is a member of the permanent steering committee of Conf. Francophone en Traitement Automatique des Langues Naturelles.

10.1.1.2. Member of the Organizing Committees

Simon Malinowski was in the organizing committee of the Workshop on Advanced Analysis and Learning on Temporal Data (AALTD 16) held in Riva del Garda, colocated with ECML/PKDD 2016.

Guillaume Gravier was co-chair of a special session at The Speaker and Language Recognition Workshop Odyssey 2016.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

Vincent Claveau was area chair of the French-speaking conference Traitement Automatique du Langage Naturel 2016.

Guillaume Gravier was technical program chair of the International Workshop on Content-Based Multimedia Indexing 2016.

Guillaume Gravier was area chair of the ACM Intl. Conf. on Multimedia 2016.

Guillaume Gravier was technical program chair of the French-speaking international conference Journées d'Études sur la Parole 2016.

Pascale Sébillot was area chair of the French-speaking conference Traitement Automatique du Langage Naturel 2016.

10.1.2.2. Member of Conference Program Committees

Laurent Amsaleg was a PC member of: Intl. Conf. on Similarity Search and Applications; ACM Intl. Conf. on Multimedia Retrieval; IEEE Intl. Conf. on Multimedia and Exhibition.

Yannis Avrithis was a PC member of: IEEE Conference on Computer Vision and Pattern Recognition; European Conference on Computer Vision; British Machine Vision Conference; ACM Multimedia Conference on Multimedia; European Signal Processing Conference; Intl. Conference on Multimedia and Expo; IEEE Intl. Conference in Image Processing; IEEE Intl. Conference on Acoustics, Speech, and Signal Processing; Intl. Workshop on Content-Based Multimedia Indexing.

Vincent Claveau was a PC member of: ACL demonstration track; Workshop on Content-Based Multimedia Indexing; Conf. Traitement Automatique du Langage Naturel; CORIA; Language Resources and Evaluation Conf.

Teddy Furon was a PC member of ACM Information Hiding and Multimedia Security.

Guillaume Gravier was a PC member of: ACM Intl. Conf. on Multimedia; IEEE Intl. Conf. on Multimedia and Exhibition; Annual Conf. of the Intl. Speech Communication Association; IEEE Intl. Workshop on Multimedia Signal Processing; European Conf. on Information Retrieval; Conf. on Knowledge and Information Management; IEEE Intl. Conf. on Acoustics, Speech and Signal Processing; Intl. Conf. on Statistical Language and Speech Processing; Language Resources and Evaluation Conf.

Ewa Kijak was a PC member of Intl. Workshop on Content-Based Multimedia Indexing.

Pascale Sébillot was a PC member of: ACM International Conference on Information and Knowledge Management; European Conference on Information Retrieval; Conférence nationale en intelligence artificielle; Conf. Traitement Automatique des Langues Naturelles; Colloque international sur l'écrit et le document

10.1.2.3. Reviewer

Ewa Kijak reviewed for ACM Conf. on Multimedia.

Pascale Sébillot was a scientific committee member of: Language Resources and Evaluation Conference

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Vincent Claveau is member of the editoral board of the journal Traitement Automatique des Langues.

Vincent Claveau was guest editor of the special issue on Information Retrieval and Natural Language Processing of the journal Traitement Automatique des Langues (published in 2016).

Guillaume Gravier was appointed associate editor of IEEE Trans. on Multimedia in Sep. 2016.

Guillaume Gravier is guest editor of the special issue of Multimedia Tools and Applications on content-based multimedia indexing (to appear in 2017).

Guillaume Gravier was editor of the Working Notes Proc. of the MediaEval Multimedia Benchmark.

Pascale Sébillot is editor of the Journal Traitement Automatique des Langues.

Pascale Sébillot is member of the editorial board of the Journal Traitement Automatique des Langues.

10.1.3.2. Reviewer - Reviewing Activities

Laurent Amsaleg was a reviewer for: IEEE Trans. on Circuits and Systems for Video Technology, IEEE Trans. on Multimedia, Pattern Recognition Letters, IEEE Trans. on Information Forensics & Security, IEEE Trans. on Image Processing.

Yannis Avrithis was a reviewer for Multimedia Tools and Applications, Elsevier Neurocomputing.

Vincent Claveau reviewed for Multimedia Tools and Applications, Elsevier Knowledge-Based Systems, Elsevier Information Sciences, Traitement Automatique des Langues.

Teddy Furon is a reviewer for IEEE Trans. on Information Forensics and Security, Elsevier Digital Signal Processing, EURASIP Journal of Information Security, IEEE Trans. on Image Processing, IEEE Trans. on Signal Processing.

Guillaume Gravier reviewed for Computer Speech and Language.

Pascale Sébillot was member of the reading committee for several issues of the Journal Traitement Automatique des Langues.

10.1.4. Invited Talks

Yannis Avrithis gave an invited talk at Pattern Recognition and Computer Vision Colloquium on March 31 in Prague, http://cmp.felk.cvut.cz/cmp/events/colloquium-2016.03.31.

Vincent Claveau gave an invited talk at Congrès de l'ACFAS, colloque Documents et ressources pour leur traitement : un couplage crucial, Montreal.

Vincent Claveau gave an invited talk at Séminaire D2K du labex Digicosme, Paris.

Vincent Claveau gave an invited talk at Séminaire commun RALI-OLST, Montréal.

Guillaume Gravier gave an invited talk at the ACM Multimedia 2016 TPC workshop.

Guillaume Gravier was invited as a panelist at the Intl. Workshop on Content-Based Multimedia Indexing.

Guillaume Gravier gave an invited talk at the Journées de Statistique de Rennes (JSTAR).

Guillaume Gravier animated a round-table on 'Jeux de données et données en jeu : l'accès des données à des fins de recherche' at the Rencontres du Numérique organized by the National Research Agency (ANR).

Simon Malinowski gave an invited talk on time series classification at PUC Minas, Brazil.

Pascale Sébillot gave an invited tutorial (8h) about NLP at Institut de l'information scientifique et technique (INiST) Nancy.

10.1.5. Leadership within the Scientific Community

Laurent Amsaleg was nominated to be part of the Steering Committee of SISAP for a 2016–2020 term.

Vincent Claveau is finance head of the Association pour la Recherche d'Informations et ses Applications (ARIA).

Guillaume Gravier is president of the Association Francophone de la Communication Parlée (AFCP), French-speaking branch of the Intl. Speech Communication Association.

Guillaume Gravier is co-founder and general chair of the ISCA SIG Speech, Language and Audio in Multimedia.

Guillaume Gravier is member of the Community Council of the Mediaeval Multimedia Evaluation series.

Guillaume Gravier is the technical representative of Inria in the cPPP Big Data Value Association, actively working on technical aspects of data analytics.

10.1.6. Scientific Expertise

Laurent Amsaleg was an Expert Evaluator for the Luxembourg National Research Fund, 2016.

Vincent Claveau was an expert for the FNRS (Belgian funding agency).

Vincent Claveau was an expert for GIFAS - Groupement des Industries Françaises Aéronautiques et Spatiales.

Vincent Claveau was an expert for the Programme Hubert Curien (funding program for bilateral projects).

Teddy Furon is scientific adviser for the company LAMARK.

Guillaume Gravier was vice-president of the Scientific Evaluation Committee of the National Research Agency for the theme 'Interaction, Robotic, Content, Automatic' up to July 2016.

Since September 2016, Guillaume Gravier is president of the Scientific Evaluation Committee of the National Research Agency for the theme 'Knowledge, data, content, big data, HPC, simulation'.

10.1.7. Research Administration

Vincent Claveau is deputy head of the GdR MaDICS, a CNRS inter-lab initiative to promote research about Big Data and Data Science.

Guillaume Gravier is a member of the Board of the technology cluster Images & Réseaux.

Guillaume Gravier is a member of the Board of the Comité des Projets of Inria - Rennes Bretagne Atlantique.

Pascale Sébillot is a member of the Conseil National des Universités 27th section (computer science).

Pascale Sébillot is the director of the Computer Science Laboratory, INSA Rennes.

Pascale Sébillot is the deputy director of the Scientific Advisory Committee of IRISA UMR 6074.

Pascale Sébillot is a member of the theses advisory committee of the Matisse doctoral school.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

For reseachers, all activities are given. For professors and assistant professors, only courses at the M. Sc. level are listed.

Licence: Teddy Furon, Probabilities, 40h, L1, Agrocampus Rennes, France

Licence: Guillaume Gravier, Databases, 30h, L2, INSA Rennes, France

Licence: Guillaume Gravier, Probability and statistics, 16h, L3, INSA Rennes, France

Licence: Guillaume Gravier, Natural Language Processing, 12h, L3, INSA Rennes, France

Master: Laurent Amsaleg, Multidimensional indexing, 13h, M2, University Rennes 1, France

Master: Vincent Claveau, Information retrieval, 7h, M2, ENSAI, Rennes, France

Master: Vincent Claveau, Data-Based Knowledge Acquisition: Symbolic Methods, 20h, M1, INSA de Rennes, France

Master: Vincent Claveau, Text Mining, 36h, M2, Univ. Rennes 1, France

Master: Vincent Claveau, Machine Learning for symbolic and sequential data, 7h, M2, Univ. Rennes 1, France

Master: Vincent Claveau, Information Retrieval, 15h, M2, ENSSAT, France

Master: Vincent Claveau, Information Retrieval, 13h, M2, Univ. Rennes 1, France

Master: Teddy Furon, Rare events, 20h, M2, Insa Rennes, France

Master: Guillaume Gravier, Data analysis and probabilistic modeling, 30h, M2, University Rennes 1, France

Master: Ewa Kijak, Image processing, 64h, M1, ESIR, France

Master: Ewa Kijak, Supervised learning, 15h, M2R, University Rennes 1, France

Master: Ewa Kijak, Supervised learning, 45h, M1, ESIR, France

Master: Ewa Kijak, Statistical data mining, 14h, M2, University Rennes 1, France

Master: Ewa Kijak, Indexing and multimedia databases, 15h, M2, ENSSAT, France

Master: Ewa Kijak, Computer vision, 15h, M2, ESIR, France

Master: Simon Malinowski, Short-term time series prediction, 29h, M1, Univ. Rennes 1

Master: Simon Malinowski, Supervised Learning, 10h, M2, Univ. Rennes 1

Master: Pascale Sébillot, Data-Based Knowledge Acquisition: Symbolic Methods, 14h, M1, INSA Rennes, France

Master: Pascale Sébillot, From multimedia documents structuring to multimedia collections structuring, 2h, M2 Language Industry, Université Grenoble-Alpes, France

Master: Pascale Sébillot, Advanced Databases and Modern Information Systems, 70h, M2, INSA Rennes, France

Master: Pascale Sébillot, Logic Programming, 12h, M1, INSA Rennes, France

10.2.2. Supervision

PhD: Raghavendran Balu, Privacy-preserving data aggregation and service personalization using highly-scalable data indexing techniques, defended Nov. 2016, Teddy Furon and Laurent Amsaleg

PhD: Petra Bosilj, Content based image indexing and retrieval using hierarchical image representations, defended Jan. 2016, Ewa Kijak and Sebastien Lefèvre (with OBELIX, IRISA team)

PhD: Thomas Gaillat, Reference in interlanguage: The case of this and that, defended Jun. 2016, Nicolas Ballier and Pascale Sébillot (with Université Paris Diderot)

PhD in progress: Rémi Bois, Navigable directed multimedia hypergraphs: construction and exploitation, started October 2014, Guillaume Gravier and Pascale Sébillot

PhD in progress: Ricardo Carlini Sperandio, Unsupervised motif mining in multimedia time series, started August 2015, Laurent Amsaleg and Guillaume Gravier

PhD in progress: Ahmet Iscen, Continuous memories for representing sets of vectors and image collections, started September 2014, Teddy Furon

PhD in progress: Grégoire Jadi, Opinion mining in multimedia data, started October 2014, Vincent Claveau, Béatrice Daille (LINA, Nantes) and Laura Monceaux (LINA, Nantes)

PhD in progress: Raheel Kareem Qader, Phonology modeling for emotional speech synthesis, started January 2014, Gwénolé Lecorvé and Pascale Sébillot (with EXPRESSION, IRISA Team)

PhD in progress: Mathieu Laroze, Active learning on adaptive representations for object detection in high-resolution imaging, started June 2016, Romain Dambreville, Chloe Friguet, Ewa Kijak and Sebastien Lefevre (with OBELIX, IRISA team)

PhD in progress: Cédric Maigrot, Detecting fake information on social networks, started October 2015, Laurent Amsaleg, Vincent Claveau and Ewa Kijak

PhD in progress: Vedran Vukotič, Deep neural architectures for automatic representation learning from multimedia multimodal data, started October 2014, Guillaume Gravier and Christian Raymond

PhD in progress: Oriane Simeoni, Invariance and supervision in visual learning, started Oct. 2016, Yannis Avrithis and Guillaume Gravier

PhD in progress: Mikail Demirdelen, User-adapted multi-document multimedia synthesis, started Oct. 2016, Guillaume Gravier and Pascale Sébillot

PhD in progress: Clément Dalloux, Clinical Text Mining and Indexing, started Dec. 2016, Olivier Dameron and Vincent Claveau (with DYLISS projet-team)

10.2.3. Juries

Vincent Claveau

PhD, reviewer, Gabriel Bernier-Colborne, Université de Montréal, Canada

Teddy Furon

PhD, reviewer, Thijs Laarhoven, Eindhoven University

PhD, jury member, Julien Lolive, Télécom-Bretagne Brest

Guillaume Gravier

PhD, reviewer and president, Xavier Bost, Université d'Avignon et des Pays du Vaucluse

Ewa Kijak

PhD, Hassan Wehbe, Université Toulouse III

Pascale Sébillot

PhD, reviewer, Jean-Philippe Fauconnier Biard, Université Toulouse 3

PhD, member, Abdessalam Bouchekif, Université du Maine

PhD, member, Sana Ben Nasr, Université de Rennes 1

HDR, member, Olivier Ferret, Université Paris Sud 11

10.3. Popularization

Vincent Claveau

> An article entitled 'Vélos, bicyclettes et moteur de recherche', was published by ACFAS on its website

> An article entitled 'Détecter l'intox sur Twitter' was published in a special issue of the Dossiers de l'Université de Rennes 1

<p style="text-align:center">**LINKS Project-Team**</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Selection

9.1.1.1. Member of the Conference Program Committees

J. Niehren was member of the program committees of LPAR (International Conference on Logic Programming and Automatic Reasoning) 2016.

S. Tison is member of the program committees of FSCD (First International Conference on Formal Structures for Computation and Deduction) 2016.

S. Staworko is member of the program committes of PODS (ACM Symposium on Principles of Database Systems) 2016.

I. Boneva was member of program committee of EDBT (International Conference on Extending Database Technology) 2016 Vision Track.

P. Bourhis was member of program committee of Provenance week 2016, IJCAI (International Joint Conference on Artificial Intelligence) 2016.

9.1.2. Journal

9.1.2.1. Member of the Editorial Boards

S. Tison is in the editorial committee of RAIRO-ITA (Theoretical Informatics and Applications).

J. Niehren is in the editoral board of Fundamenta Informaticae.

9.1.2.2. Reviewer - Reviewing Activities

Too many to be enumerated.

9.1.3. Leadership within the Scientific Community

S. Tison has been member of the "Comité National de la Recherche Scientifique (CoNRS)" (Section 6) until June 2016.

9.1.4. Scientific Expertise

P. Bourhis has expertised a project in the 'Recherche Formation Innovation Atlanstic' program of Pays de la Loire Region.

S. Tison has been a member of the scientific board of the company See-d

9.1.5. Research Administration

S. Tison is an elected member of the academic council of "ComUE Lille Nord de France " since November 2015.

S. Tison is a vice president of the University of Lille 1 since October 2015, where she is responsible for industrial partnerships, innovation, and valorisation.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Bachelor : S. Tison, Discrete Mathematics, 36h, Université Lille 1, France

Bachelor : S. Salvati, Computer Science Info, L1, 96h, Université de Lille 1, France

Bachelor : S. Salvati, Automata and Languages, L3, 36h, Université de Lille 1, France

Bachelor : S. Salvati, Algorithmic and Operational Research, L3, 36h, Université de Lille 1, France

Master 2 (MOCAD): P. Bourhis and J. Niehren Information extraction, 20h30, M2, Université Lille 1, France

Master 2 (MOCAD) : I. Boneva and P. Bourhis, Algorithms for Database, 21h, M1, Université Lille 1, France

Master 1 : S. Tison, Advanced algorithms and complexity, M1, 54h, Université Lille 1, France

Master 1 : S. Tison, Business Intelligence, M1, 28h, Université Lille 1, France

Master 1 : A. Lemay, XML Technologies, 16h, M2, Université Lille 3, France

Master 1 : S. Staworko is co-head of the master 'Web Analyst' in Université Lille 3, France

DUT : I. Boneva, 100h, Université Lillle 1, France

A. Lemay is pedagogical responsable for Computer Science and numeric correspondant for UFR LEA Lille 3.

9.2.2. Supervision

PhD defended : T. Sebastian, Streaming algorithms for XPath. 2011-2016. Supervised by Niehren.

PhD defended: A. Boiret. Normalization and Learning of Transducers on Trees and Words. 2011-2016. Supervised by Niehren and Lemay.

PhD in progress: D. Gallois. Since 2015. Recursive Queries. Supervised by Bourhis and Tison.

PhD in progress: M. Sakho. Hyperstreaming Query answering on graphs. Since 2016. Supervised by Niehren and Boneva.

PhD in progress: J.M. Lozano. On data integration for mixed database formats. Supervised by Boneva and Staworko.

9.2.3. Juries

P. Bourhis was a member of PhD committee for Antoine Amarilli (ParisTech)

S. Tison was a member of the PhD committees for Yoann Dufresne and A. Boiret and reviewer for the PhD of Carles Creus (Universitat Politecnica de Catalunya).

A. Lemay was a member of the PhD committee for A. Boiret

J. Niehren was a member of PhD committees for A. Boiret, T. Sebastian and Louis Gallaraga (ParisTech).

9.2.4. Internships

A. Durey, University of Lille I. On Implemetation of a Shex validator, from Jun 2016 until Sep 2016. Supervison I. Boneva.

R. Li, Ecole Centrale de Lille, from May 2016 until Aug 2016. On aggregate queries for data mining. Supervisors J. Niehren and P. Bourhis.

9.2.5. Selection Committies

I. Boneva was member of the selection committee for an assistant professorship at the University of Lille I.

S. Tison was member of the selection committee for a professorship at the University of Rouen.

9.3. Popularization

I. Boneva has supervised second year students from DUT while they conducted activities on introduction to programming to 9-10 years old students in Villeneuve d'Ascq.

9.4. Standardization

I. Boneva is a member of the Data Shapes Working Group of the W3C which the mission is to produce a language for defining structural constraints on RDF graphs. http://www.w3.org/2014/data-shapes/charter

M3DISIM Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the organizing committees
   Philippe Moireau

   P. Moireau, Member of the CEMRACS-2016 organizing committee

   M. Genet, Member of the GIENS-2017 organizing committee

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Editorial Boards

   D. Chapelle, Member of the editorial board of journal *Computers & Structures*

   D. Chapelle, Member of the editorial board of journal *ESAIM: M2AN*

9.1.2.2. Reviewer - Reviewing Activities

   J-M. Allain, Reviewer for "Journal of the Royal Society Interface", "Physica D" and "Journal of the Mechanical Behavior of Biomedical Materials".

   R. Chabiniok, reviewer for "Journal of Biomechanical Engineering and Computational" and "Mathematical Methods in Medicine".

   M. Genet, reviewer for "Journal of Elasticity".

   S. Imperiale, reviewer for "Journal of Computational Physics" and "Journal of Differential Equations".

9.1.3. Invited Talks

   J.-M. Allain, "Caractérisation in vitro de tissus mous à l'échelle microscopique", Colloque Mecamat, Aussois.

   J.-M. Allain, "Multiscale characterization of skin biomechanics", Workshop constitutive behaviour of soft tissue, Manchester, UK.

   R. Chabiniok, "Biophysical modeling of cardiac function for clinical applications" at University Southwestern, Dallas, Texas (Seminar series of Biomedical Engineering Department, and at regular clinical echocardiography meeting of Dept. of Pediatrics, UT Southwestern Medical Center).

   D. Chapelle, seminar at CEMRACS-16.

   M. Genet, "Modélisation et simulation en biomécanique cardiaque", Département de Génie Mécanique, École Normale Supérieure de Cachan.

9.1.4. Leadership within the Scientific Community

   J.-M. Allain, Member of Society of Experimental Mechanics and of Biophysical Society

   J.-M. Allain, Member of the Academic Council of Université Paris-Sacaly, France

   D. Chapelle, Member of the board of directors of the VPH Institute

9.1.5. Research Administration

   J.-M. Allain, Responsability of the teaching experimental center (mechanics), 32h, Ecole Polytechnique, France

   J.-M. Allain, Scientific Advisory Board, chair BioMecAM, ENSAM, Paris, France

D. Chapelle, VP research of Inria Saclay-Ile-de-France

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Bachelor: J.-M. Allain, co-supervision of the new program for the Polytechnique Bachelor, 15h, Ecole Polytechnique, France

Bachelor: F. Caforio, "Math 255 – Differential calculus for physics (mathematical analysis in two and three dimensions)", 42h, (L2), Université d'Orsay, France

Bachelor: M. Genet, "MEC431 – Modélisation et Simulation en Mécanique Industrielle", 32h, (L3), École Polytechnique, France

Bachelor: M. Genet, "MEC431 – Mécanique des Milieux Continus", 16h, (L3), École Polytechnique, France

Bachelor: S. Imperiale, "MA102 – Analyse pour les EDP", 24h, (L3), ENSTA ParisTech, France

Bachelor: S. Imperiale, "MA104 – Analyse complexe", 12h, (L3), ENSTA ParisTech, France

Bachelor: P. Moireau, "MA103 – Introduction aux EDP et à leur approximation numérique", 14h, (L3), ENSTA ParisTech, France

Master : J.-M. Allain, "Computational fluid dynamics", 36h, (M1), Ecole Polytechnique, France

Master : J.-M. Allain, "Cellular Motility", 32h, (M2), Ecole Polytechnique, France

Master: D. Chapelle, "Biomechanical Modeling of Active Tissues", 23h, (M2), Université Paris-Saclay, France

Master : M. Genet, "MEC551 – Plasticité & Rupture", 18h, (M1), École Polytechnique, France

Master: S. Imperiale, "MA2610 Calcul Scientifique – Mécanique des solides", 6h, (M1), Central/Supelec, France

Master: S. Imperiale, "Simnum – Programmation C++", 18h, (M1), ENSTA ParisTech, France

Master: S. Imperiale, "MAP-Ann1 – La méthode des éléments finis", 12h, (M1), ENSTA ParisTech, France

Master: P. Moireau, "MAP-Ann1 – La méthode des éléments finis", 21h, (M1), ENSTA ParisTech, France

Master: P. Moireau, "MAP 431 – Analyse variationnelle des équations aux dérivées partielles", (M1), Ecole Polytechnique, France

Master: P. Moireau, "Biomechanical Modeling of Active Tissues", 12h, (M2), Université Paris-Saclay, France

Master: P. Moireau, "Méthodes et problèmes inverses en dynamique des populations", 24h, (M2), UPMC, France

9.2.2. Supervision

HdR : Philippe Moireau, Observers for data assimilation – Applications to cardiac modeling, Université Paris-Saclay, November 28th

PhD : Bruno Burtschell, Mechanical modeling and numerical methods for poromechanics – Application to myocardium perfusion, Université Paris-Saclay, September 30th, supervisors: D. Chapelle and P. Moireau

PhD in progress : Aurora Armiento, Inverse problems and data assimilation methods applied to protein depolymerisation, started: Nov 2013, supervisors: M. Doumic and P. Moireau

PhD in progress : Federica Caforio, "Modélisation mathématique et numérique de la propagation d'ondes élastique dans le coeur", started: Nov 2015, supervisors: D. Chapelle and S. Imperiale

PhD in progress : Florent Wijanto, Modélisation multi-échelle des fibres de collagènes, started: Sept 2015, supervisors:, Jean-Marc Allain and Mathieu Carruel

PhD in progress : Arthur Le Gall, "Application of biomechanical heart modeling in hemodynamic monitoring of increased risk patients during aneshesia using clinical data", started: Nov 2016, supervisors: Dominique Chapelle, Etienne Gayat, Radomir Chabiniok

PhD in progress : François Kimmig, "Multi-scale modeling of muscle contraction", started: Sept 2016, supervisors: Dominique Chapelle, Matthieu Caruel

9.2.3. *Juries*

J.-M. Allain, Reviewer for Laure Laforgue's PhD Thesis, LiPhy Grenoble.

P. Moireau, Reviewer for Stefano Pagani's PhD Thesis, Politecnico di Milano.

9.3. Popularization

D. Chapelle, Debate on "Data sciences and personalized medicine" at Cité des Sciences (also on web-TV), Oct 9th

D. Chapelle, Roundtable in workshop "Mathématiques Oxygène du Numérique" (UPMC, Oct 21st)

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MADYNES Project-Team

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9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

Rémi Badonnel was member of the organizing committee for the following conferences: IEEE International Conference on Network Softwarization (IEEE NetSoft 2016), IEEE/IFIP/In Assoc. with ACM SIGCOMM International Conference on Network and Service Management (IEEE/IFIP/In Assoc. with ACM SIGCOMM CNSM 2016), IEEE/IFIP International Symposium on Integrated Network Management (IEEE/IFIP IM 2017).

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Rémi Badonnel was TPC co-chair for the following conferences: the Experience Track of the IFIP/IEEE Network Operations and Management Symposium (IFIP/IEEE NOMS 2016), IFIP/IEEE International Workshop of Management of the Future Internet (IFIP/IEEE ManFI 2016), IFIP International Conference on Autonomous Infrastructure, Management and Security (IFIP AIMS 2016).

Isabelle Chrisment was TPC co-chair of the first IFIP Internet of People Workshop co-located with IFIP Networking 2016. She was member of the steering committee for RESSI'16 (Rendez-vous de la Recherche et de l'Enseignement de la Sécurité des Systèmes d'Information).

Olivier Festor was TPC co-chair of ACM/IEEE/IFIP Conference on Netwrk and Service Management (CNSM) 2016. He is also member of the steering committee (NISC) that coordinates the main conferences in network and service management (IM, NOMS, CNSM and AIMS). He was also Tutorial chair of IEEE Netsoft 2016 and workshop co-chair at IEEE/IFIP NOMS'2016.

9.1.2.2. Member of the Conference Program Committees

Rémi Badonnel: IFIP International Conference on Autonomous Infrastructure, Management and Security (IFIP AIMS 2016) ; IFIP/IEEE International Conference on Network and Service Management (IFIP/IEEE CNSM 2016) ; IEEE Global Information Infrastructure and Networking Symposium (IEEE GIIS 2016) ; IEEE Global Communications Conference (IEEE GLOBECOM - SAC 2016) ; IFIP/IEEE International Symposium on Integrated Network Management (IFIP/IEEE IM 2017).

Thibault Cholez: 2nd IEEE International Workshop on Security Testing and Monitoring (STAM 2016, IEEE ICDCS Workshop)

Isabelle Chrisment: IFIP International Conference on Autonomous Infrastructures, Management and Security (IFIP AIMS'16) ; Rencontres Francophones sur la Conception de Protocoles, l'évaluation de Performance et l'Expérimentation Aspects Algorithmiques de Télécommunications (CoResl'16) ; IEEE/IFIP International Workshop on Analytics for Network and Service Management (AnNet 2016) ; IEEE/IFIP International Symposium on Network Operations and Management (IEEE/IFIP NOMS'16).

Oliver Festor: IFIP/IEEE International Symposium on Integrated Network Management (IFIP/IEEE IM'2017) ; IEEE/IFIP Network Operations and Management Symposium 2016 ; IEEE Netsoft 2016 ; IEEE Asia Pacific NOMS'2016.

Jérôme François: IFIP International Conference on Autonomous Infrastructure, Management and Security (IFIP AIMS 2016) ; IEEE Global Information Infrastructure and Networking Symposium (IEEE GIIS 2016) ; Principles, Systems and Applications of IP Telecommunications (IPTComm'16) ; IFIP/IEEE International Workshop on Management of SDN and NFV Systems (IFIP/IEEE ManSDN 2016) ; Asia-Pacific Network Operations and Management Symposium (APNOMS 2016); IFIP/IEEE International Symposium on Integrated Network Management (IFIP/IEEE IM 2017).

Abdelkader Lahmadi: IFIP International Conference on Autonomous Infrastructure, Management and Security (IFIP AIMS 2016), PhD workshop ; Asia-Pacific Network Operations and Management Symposium (APNOMS 2016); IFIP/IEEE International Symposium on Integrated Network Management (IFIP/IEEE IM 2017); IEEE/IFIP International Workshop on Management of the Future Internet (ManFI 2016, held as part of IEEE/IFIP NOMS 2016); IEEE Conference on Network Softwarization (IEEE NetSoft 2016).

Ye-Qiong Song: IEEE International Workshop on Factory Communication Systems (WFCS 2016); IEEE International Conference on Communications and Networking (ComNet 2016) ; IEEE International Conference on Emerging Technologies and Factory Automation (ETFA 2016) ; 24th International Conference on Real-Time Networks and Systems (RTNS 2016) ; IEEE International conference on Telecommunications (ICT-2016) ; IFIP Wireless and Mobile Networking Conference (WMNC 2016).

Laurent Ciarletta: International Program Comittee, IEEE CSS / RAS International Conference on Unmanned Aircraft Systems ICUAS 2016.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Rémi Badonnel is Associate Editor for the Wiley International Journal of Network Management (IJNM).

Olivier Festor is an associate editor of IEEE Transactions on Networks and Systems Management (TNSM).

Ye-Qiong Song is an Associate Editor for the Elsevier Computers and Electrical Engineering journal, and for the Journal of Multimedia Information System.

9.1.3.2. Reviewer - Reviewing Activities

The following reviews for journals has been made by team members:

Rémi Badonnel: IEEE Transactions on Network and Service Management (IEEE TNSM), Springer Journal of the Network and Systems Management (JNSM), Wiley International Journal of Network Management (IJNM), IEEE Communications Magazine (COMMAG).

Thibault Cholez: Journal of Communications and Networks, Elsevier Computer Networks, IEEE Transactions on Network and Service Management, Elsevier Computers & Security, IEEE Global Communications Conference, IFIP/IEEE International Symposium on Integrated Network Management

Isabelle Chrisment: IEEE Transactions on Network and Service Management (IEEE TNSM), IEEE Communications Magazine (COMMAG), Wiley Security and Communication Networks (SCN).

Jérôme François: IEEE Transactions on Network and Service Management (IEEE TNSM), Springer Journal of Network and Systems Management, Elsevier Computer Networks Journal

Abdelkader Lahmadi: IEEE Transactions on Network and Service Management (IEEE TNSM); IEEE Communications Magazine (COMMAG); Springer Journal of Network and Systems Management (JNSM); Elsevier Journal of Computer Communications (COMCOM); Elsevier Journal of Engineering Applications of Artificial Intelligence (EAAI).

Ye-Qiong Song: Elsevier Computers and Electrical Engineering journal, Elsevier Ad hoc network journal, Journal of Real-time systems (Springer), IEEE Transactions on Industrial Informatics.

9.1.4. Invited Talks

Thibault Cholez:

- RESSI 2016, Toulouse: "Efficiently Bypassing SNI-based HTTPS Filtering"
- IRTF ICNRG, Paris: "Challenges and directions for the security management of ICN services"

Isabelle Chrisment:

- US-EU Workshop on the Next Generation Internet of Things, March 30-April, 2016, USC, Los Angeles, USA. "Security and Monitoring of (Every)Things"

Jérôme François:
- IRTF NMLRG (IETF 95), Buenos Aires, Argentina: "HTTPS Traffic Classification"
- IRTF NMLRG (colocated with EuCNC), Athens, Greece, " NML in Inria High Security Lab: overview and datasets"
- IRTF NMLRG (IETF 96), Berlin, Germany: "Malicious Domains: Automatic Detection with DNS Traffic Analysis"

Abdelkader Lahmadi:
- i-NOVIA (Salon of Nouvelle Technologies), Strasbourg, "Cybersecurity: monitoring and defense", 5 October 2016

9.1.5. *Scientific Expertise*

Laurent Ciarletta serves as expert for the 2016 ANR Generic call.

Jérôme François serves as reviewer for ANRT to evaluate a CIFRE PhD proposition

Ye-Qiong Song serves as reviewer for ANRT to evaluate a CIFRE PhD proposition.

Ye-Qiong Song serves as expert for "Fonds de recherche nature et technologies, Quebec".

9.2. Teaching - Supervision - Juries

9.2.1. *Teaching*

Rémi Badonnel is heading the Telecommunications, Networks and Services specialization of the 2nd and 3rd years at the TELECOM Nancy engineering school, and is coordinating the Security Pathway Program at the same school, elaborated in the context of the International Master of Science in Security of Computer Systems built with the Mines Nancy and ENSEM engineering schools.

Laurent Ciarletta is co-heading the specialization Safe Systems Architecture of the Computer Science and IT department of the Ecole des Mines de Nancy ("Grande Ecole", Engineering School, Master degree level).

Olivier Festor is the Director of the TELECOM Nancy Engineering School.

Team members are teaching the following courses:

Rémi Badonnel 242 hours - L3, M1, M2 - Networks, Systems and Services, Software Design and Programming, Cloud Computing, Network and Security Management - TELECOM Nancy, Université de Lorraine

Thibault Cholez 300 hours - L3, M1, M2 - Techniques and Tools for Programming, Computer Networks, Object-Oriented Programming, C and Shell Programming, Network Services, Constraint development on small Connected Objects, Mobile applications and Internet of Things - TELECOM Nancy, Université de Lorraine

Isabelle Chrisment 220 hours -L3, M1, M2 -C and Shell Programming, Computer Networking, Operating Systems, Network Security. - TELECOM Nancy, Université de Lorraine

Laurent Ciarletta 250 hours - M1, M2 - Networks and Services, Interactive Computing, Pervasive Comuting, Software Design and Programming, ARTEM - Mines Nancy - Ecole Nationale Superieure des Mines de nancy - Engineering school, Université de Lorraine, France

Jérôme François 70 hours - M1, M2 -Network security, Big Data - TELECOM Nancy, Université de Lorraine

Abdelkader Lahmadi 280 hours - L1, M1, M2 and Master Degree in Computer Science - Algorithms and Java programming, C language programming, Distributed algorithms, Sensor networks programming -ENSEM Engineering school, Université de Lorraine, France.

Ye-Qiong Song 230 hours - L1, M1, M2 Engineering degree and Master Degree in Computer Science - Algorithms and Java programming, Databases, Networking, Sensor networks - ENSEM - Engineering school, Université de Lorraine, France.

9.2.2. Supervision

9.2.2.1. PhD in progress in team

Elian Aubry, *Using Software Defined Network to manage Content Centric Networks*, since October 2013, supervised by Isabelle Chrisment & Thomas Silverston.

Pierre-Olivier Brissaud, *Anomaly detection in encrypted traffic*, since July 2016, supervised by Isabelle Chrisment, Jérôme François & Olivier Bettan (Thales)

Paul Chaignon, *Monitoring of SDN networks*, since July 2016, supervised by Olivier Festor, Jérôme François & Kahina Lazri (Orange Labs)

Maxime Compastie, *Software-Defined Security for the Cloud*, since Dec 2015, supervised by Olivier Festor & Rémi Badonnel.

Giulia De Santis, *Modelling and Analysis of Complex and Targeted Cyberattacks*, since October 2015, Olivier Festor & Abdelkader Lahmadi.

Meihui Gao, *Optimization models and methods for Network Functions Virtualization architectures*, since Nov 2015, supervised by Ye-Qiong Song & Bernardetta Addis.

Florian Greff, *QoS and fault-tolerance of distributed real-time systems over mesh networks*, since Feb. 2015, supervised by Ye-Qiong Song & Laurent Ciarletta.

Julien Vaubourg, *IP network models and simulators integration with DEVS for co-simulation of CPS*, since Oct. 2013, supervised by Vincent Chevrier & Laurent Ciarletta.

Thomas Paris, *Complex systems modeling using composition*, since Oct. 2015, supervised by Vincent Chevrier & Laurent Ciarletta.

Petro Aksonenko, *Optilized method of Calibration, Alignement and Advanced Attitude Algorithms for Strapdown Inertial Navigation Systems*, since Oct. 2016, supervised by Patrick Henaff, Anton Popov (KPI University) & Laurent Ciarletta

Patrick-Olivier Kamgue, *Routing management in WSNs*, since Jun 2012, supervised by Emmanuel Nataf & Olivier Festor in France, Thomas Djotio in Cameroun.

Daishi Kondo, *New Networking Architecture through Virtualization*, since September 2015, supervised with Olivier Perrin (EPI COAST) & Thomas Silverston.

Xavier Marchal, *Secure operation of virtualized Named Data Networks traffic*, since December 2015, supervised by Olivier Festor & Thibault Cholez.

Abdulqawi Saif, *Open Science for the scalability of a new generation search technology*, since December 2015, supervised by Ye-Qiong Song & Lucas Nussbaum.

Evangelia Tsiontsiou, *Multiconstrained QoS routing for wireless sensors networks with applications to smart space for ambient assisted living*, since Oct 2013, supervised by Ye-Qiong Song & Bernardetta Addis.

Shbair Wazen, *Service-level Monitoring of HTTPS*, since December 2013, supervised by Isabelle Chrisment & Thibault Cholez.

Nicolas Schnepf, *Orchestration and Verification of Security Functions for Smart Environments*, since October 2016, supervised by Stephan Merz, Rémi Badonnel & Abdelkader Lahmadi.

9.2.2.2. PhD defended in team

- [1] Tomasz Buchert, *Managing large-scale, distributed systems research experiments with control-flows*, *Université de Lorraine*, January 2016, supervised by Jens Gustedt & Lucas Nussbaum.

- Anthea Mayzaud, *Monitoring and Security for the Internet of Things*[0], *Université de Lorraine*, October 2016, supervised by Isabelle Chrisment & Rémi Badonnel.

- Kévin Roussel, *Dynamic management of QoS and energy in heterogeneous sensor networks for e-health applications*[0], June 2016, supervised by Ye-Qiong Song & Olivier Zendra.

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[0]registration not fully completed

[0]http://www.theses.fr/2016LORR0051

9.2.3. *Juries*

Team members participated to the following Ph.D. defense committees in Computer Science if no other indication:

- Femke De Backere, in Computer Science from Ghent University, Belgium. Title: Design and Management of Pervasive eCare Services, June 2016 – (Rémi Badonnel as reviewer).

- Pasquale Puzio, PhD in Computer Science from TELECOM ParisTech, Sophia Antipolis, France. Title: Deduplication of Encrypted Data in Cloud Computing, February 2016 – (Isabelle Chrisment as examiner).

- Ziad Ismail, PhD in Computer Science from TELECOM ParisTech, Paris, France. Title: Optimal Defense Strategies to Improve the Security and Resilience of Smart Grids, April 2016 – (Isabelle Chrisment as reviewer).

- Erwan Godefroy, PhD in Computer Science from CentraleSupélec, Rennes, France. Title: *Définition et évaluation d'un mécanisme de génération de règles de corrélation liées à l'environnement*, September 2016 – (Isabelle Chrisment as president).

- Hiep Huu Nguyen, PhD in Computer Science from Université de Lorraine, Nancy, France. Title: Social Graph Anonymization, November 2016 – (Isabelle Chrisment as president).

- Chakadkit Thaenchaikun, PhD in Computer Science from Université de Toulouse, France. Title: Economie d'énergie en réseau filaire: Ingéniérie de trafic et mise en veille, November 2016 – (Isabelle Chrisment as reviewer).

- Kim Thuat Nguyen, PhD in Computer Science from Télécom SudParis, France. Title: Protocoles de sécurité efficaces pour les réseaux de capteurs IP sans-fil et l'Internet des Objets, December 2016 – (Isabelle Chrisment as reviewer).

- Mohamed Sabt, PhD in Computer Science from Université de Technologie de Compiègne, France. Title: Outsmarting Smartphones - Trust based on Provable Security and Hardware Primitives in Smartphones Architectures, December 2016 – (Isabelle Chrisment as examiner).

- Michal Krol, PhD. in Computer Science from University of Grenoble, Frace. Title: Routing in wireless sensor networks, March 2016 – (Olivier Festor as reviewer).

- Marc Bruyère, PhD. in Computer Science from University of Toulouse 3 - Paul Sabatier, France. Title: An outright open source approach for simple andpragmatic Internet eXchange, July 2016 – (Olivier Festor as reviewer).

- Ahmed Bouchami, PhD. in Computer Science from Universié de Lorraine. Title: Sécurité des ressources collaboratives dans les réseaux sociaux d'entreprise, July 2016. – (Olivier Festor as President).

- Benjamin Baron, PhD. in Computer Science from Pierre et Marie Curie Paris VI - Sorbonne Universités, France. Title: *Transport intermodalde données massives pour le délestage des réseaux d'infrastructure*, October 2016 – (Olivier Festor as examiner).

- Messaoud Aouadj, PhD. in Computer Science from University of Toulouse 3 - Paul Sabatier, France. Title: *AirNet: le modèle de virtualisation Edge-Fabric comme plan de contrôle poru les réseaux programmables*, November 2016. – (Olivier Festor as reviewer).

- Tiphaine Viard, PhD. in Computer Science from Pierre et Marie Curie - Sorbonne Universités, France. Title: *Flots de liens pour la modélisation d'interactions temporelles et application à l analyse de trafic IP*, September 2016 – (Olivier Festor as reviewer).

- Christoph Neumann, HDR in Computer Science from University of Rennes 1, France. Title: Contributions to Content Placement,Load-balancing and Caching: System Design and Security, November – 2016 (Olivier Festor as reviewer).

- Nadjib Ait Saadi, HDR in COMputer Science from University Paris Est Créteil, France. Title: From Sensors to Data Centers: Optimization of Deployment, Resource Allocation and Reliability, July 2016 – (Olivier Festor as President).

- Promethee Spathis, HDR in Computer Science from Pierre et Marie Curie - Sorbonne Universités, France. Title: Information DeliveryPast Struggles and New Directions, December 2016 – (Olivier Festor as reviewer).

- Hassan Said MOUSTAFA HARB, PhD. Université de Franche-Comté, France. Title: Energy Efficient Data Handling and Coverage for Wireless Sensor Networks, July 2016 – (Ye-Qiong Song as examiner).

- d'Abderrahmen Belfkih, PhD. Université du Havre, Title Contraintes temporelles dans les bases de données de capteurs sans fil, October 2016 – (Ye-Qiong Song as reviewer).

- Kawther Hassine, Ph.D. in ICT from Université de Carthage - SUPCOM Tunis. Title: Performance study of future wireless networks IEEE802.11 xy, December 2016 – (Ye-Qiong Song as reviewer).

- Lemia Louail, PhD. Université de Franche-Comté, Title: Approches cross-layer pour l'optimisation de la latence des communications dans les réseaux de capteurs sans fil, December 2016 – (Ye-Qiong Song as reviewer).

- Ahlem Mifdaoui, HDR. Université de Toulouse, Title: Contributions to Performance Analysis of Networked Cyber-Physical Systems, December 2016 – (Ye-Qiong Song as reviewer).

MAESTRO Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- S. Alouf and A. Jean-Marie are the general chairs of the 13th SIGMETRICS/PERFORMANCE Joint International Conference on Measurement and Modeling of Computer Systems (ACM SIG-METRICS/IFIP PERFORMANCE 2016, Antibes Juan-les-Pins, France).

10.1.1.2. Member of the Organizing Committees

- A. Kadavankandy, J. Kazhuthuveettil Sreedharan, H. Mykhailenko, D. Politaki, and D. Tsigkari, were in the local organization committee of the 13th SIGMETRICS/PERFORMANCE Joint International Conference on Measurement and Modeling of Computer Systems (ACM SIGMETRICS/IFIP PERFORMANCE 2016, Antibes Juan-les-Pins, France).

- A. Kadavankandy, H. Mykhailenko, D. Politaki, D. Tsigkari, and A. Tuholukova were volunteer students at the 13th SIGMETRICS/PERFORMANCE Joint International Conference on Measurement and Modeling of Computer Systems (ACM SIGMETRICS/IFIP PERFORMANCE 2016, Antibes Juan-les-Pins, France).

- D. Politaki was a volunteer student at the Journées Cloud 2016, Nice, France.

- D. Politaki and E. Vatamidou are members of the organizing committee of the workshop "Monde des mathématiques industrielles (MOMI)", to be held on 27-28 February 2017 at Inria, Sophia Antipolis. Additional information:

- L. Vermeersch was the local organization chair of the 13th SIGMETRICS/PERFORMANCE Joint International Conference on Measurement and Modeling of Computer Systems (ACM SIGMETRICS/IFIP PERFORMANCE 2016, Antibes Juan-les-Pins, France).

10.1.1.3. Member of Conference Steering Committees

- E. Altman chairs the Steering Committee of the Intl. Conference on NETwork Games, COntrol and OPtimization (this year: NETGCOOP 2016, Avignon, France).

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- 13th European Workshop on Performance Engineering (EPEW 2016, Chios, Greece) (**A. Jean-Marie**);

- IEEE Intl. Conference on Computer Communications (INFOCOM 2017, Atlanta, GA, USA) (**G. Neglia**);

- Intl. Conference on NETwork Games, COntrol and OPtimization (NETGCOOP 2016, Avignon, France) (**K. Avrachenkov**);

- 16th Intl. Conference on Next Generation Wired/Wireless Networking (NEW2AN 2016, St. Petersburg, Russia) (**K. Avrachenkov**);

- 10th Intl. Conference on Performance Evaluation Methodologies and Tools (VALUETOOLS 2016, Taormina, Italy) (**K. Avrachenkov**);

- 31st Intl. Symposium on Computer and Information Sciences (ISCIS 2016, Krakow, Poland) (**A. Jean-Marie**);

- 17th Intl. Symposium of Dynamic Games and Applications (ISDG 2016, Urbino, Italy) (**E. Altman**);
- Intl. Workshop on Bio-inspired Security, Trust, Assurance and Resilience (BioSTAR 2016, Fairmont, San Jose, CA, USA) (**E. Altman**);
- 9th Intl. Workshop on Multiple Access Communications (MACOM 2016, Aalborg, Denmark) (**K. Avrachenkov**);
- 5th International Conference on Computational Social Networks (CSoNet 2016, Ho Chi Minh City, Vietnam) (**K. Avrachenkov**);
- 1st Mini-Symposium on Stochastic Models: Methods and Applications (SAMMA 2016, Rhodes, Greece) (**E. Vatamidou**);
- 13th Workshop on Algorithms and Models for the Web Graph (WAW 2016, Montreal, Canada) (**K. Avrachenkov**).

10.1.2.2. Session organizer

- Session on Stochastic Modeling at the 17th Conference of the Société Française de Recherche Opérationnelle et d'Aide à la Décision (ROADEF 2016, Compiègne, France) (**A. Jean-Marie**).

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- *ACM Transactions on Modeling and Performance Evaluation of Computing Systems* (ToMPECS) (**K. Avrachenkov** since 2015).
- *Dynamic Games and Applications* (DGAA) (**E. Altman** since 2011);
- *Elsevier Computer Communications* (COMCOM) (**G. Neglia** since 2014);
- *IEEE/ACM Transactions on Networking* (ToN) (**E. Altman** since 2013);
- AIMS (American Institute of Mathematical Sciences) *Journal of Dynamics and Games* (JDG) (**E. Altman** since 2015);
- *Performance Evaluation* (PEVA) (**K. Avrachenkov** since 2008);
- *Wiley Transactions on Emerging Telecommunications Technologies* (ETT) (**S. Alouf** since July 2016).

10.1.3.2. Member of Advisory Boards

- E. Altman is Member of the advisory board of the international journal *IRAN Journal of Computer Science* published by University of Tabriz. Since 2016.

10.1.4. Invited Talks

MAESTRO members gave the following keynote lectures/plenary speeches (in alphabetical order):

- Eitan Altman gave a keynote talk at *The International Symposium on Ubiquitous Networking, UNet 2016*, Casablanca, May 30 – June 1st, 2016. Title: Game theory applied to SIS Epidemics in Networks.
- Eitan Altman gave a keynote lecture at *ITC 28* in Würzburg on 15 September 2015. Title: Dynamic Games for Analyzing Competition in the Internet.
- Alain Jean-Marie gave a keynote lecture at the *11th Workshop on Retrial Queues (WRQ11)*, in Amsterdam, 31 August – 2 September, 2016. Title: Impatient Customers and Optimal Control.

and the following invited talks (in alphabetical order):

- *Access-time aware cache algorithms*, at UCN'16 Workshop on Future challenges in User-Centric Networks, Antibes Juan-les-Pins, France, 14 June a workshop of ACM Sigmetrics / IFIP Performance 2016 (**G. Neglia**);
- *Distributed spectral decomposition and quantum random walk*, at Workshop on critical and collective effects in graphs and networks, MIPT, Moscow, April 2016 (**K. Avrachenkov**);
- *Distributed spectral decomposition and quantum random walk*, at the 20th Conference of the International Linear Algebra Society (ILAS), Leuven, Belgium, July 2016 (**K. Avrachenkov**);
- *Overview and comparison of random walk based techniques for estimating network averages*, at COSTNET Conference, Ribno, Slovenia, September 2016 (**K. Avrachenkov**);
- *Hitting Times in Markov Chains with Restart and their Applications to Ranking*, at Workshop dedicated to W. Stadje, Osnabruck, Germany, October 2016 (**K. Avrachenkov**).

10.1.5. Leadership within the Scientific Community

- E. Altman is a fellow member of IEEE (Class of 2010).
- E. Altman, A. Jean-Marie and P. Nain are (elected) members of IFIP WG7.3 on "Computer System Modeling". E. Altman is also Member of WG 6.3 of IFIP on Performance of Communication Systems.

10.1.6. Research Administration

E. Altman

- – is co-responsible of one of the five themes of the SFR (Structure Fédérative de Recherche) AGORANTIC (in which Inria is a founding member) entitled "Digital Culture and Virtual Societies".

S. Alouf

- – was member of the recruitment committee for junior Inria researchers (CR1, CR2);
- – is member of the scientific committee of the joint laboratory Inria-Alstom since May 2014.

K. Avrachenkov

- – together with Arnaud Legout (DIANA team) and Fabien Gandon (WIMMICS team) is co-responsible of the multi-disciplinary research theme (Action Transversale) "Semantic and Complex Networks" at Inria Sophia Antipolis - Méditerranée.

A. Jean-Marie

- – is the scientific coordinator of Inria activities in Montpellier (since 2008); as part of this duty, he represents Inria at the Scientific Council of the Doctoral School "Sciences and Agrosciences" of the Univ. of Avignon, at the Regional Conference of Research Organisms (CODOR);
- – is a member of the Steering Committee of the GDR RO, a national research initiative on Operations Research sponsored by the CNRS;
- – is Head of project-team MAESTRO since October 2014;

G. Neglia

- – is the scientific delegate for European partnerships for Inria Sophia Antipolis – Méditerranée since 2014;
- – is member of the Inria COST GTRI (International Relations Working Group of Inria's Scientific and Technological Orientation Council since 2016.

MAESTRO members are in the following committees of Inria Sophia Antipolis-Méditerranée

- CLFP: Training Committee (**S. Alouf**, since November 2014);
- CSD: Doctoral Committee (**S. Alouf**, since February 2006);
- MASTIC: a commission in charge of popularization and regional and internal scientific animation (**D. Politaki**, since July 2016);
- NICE: Invited Researchers Committee (**K. Avrachenkov**, since 2010).

MAESTRO members are in charge of the following tasks for the research center and the project-team:

- Supervision and validation of the project-teams' yearly activity reports (**K. Avrachenkov**, since 2010);
- Organizing the fortnightly PhD seminars of the research center (**D. Politaki**, since November 2016);
- Organizing the fortnightly MAESTRO internal meetings (**J. K. Sreedharan**, since November 2013).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence:

G. Neglia, "Probability", 50.5H, 1st year Water Engineering degree (L3), niv. of Nice Sophia Antipolis (UNS), France.

D. Politaki, "Intro Web", 36H, (L1), UNS, France.

Master:

S. Alouf, "Performance Evaluation of Networks", 31.5H, M2 IFI Ubinet, UNS, France.

A. Jean-Marie, "Foundations of Network Modeling", 12H, MPRI, Univ. Paris Diderot/ENS Ulm/Univ. Paris Saclay, France.

G. Neglia, "Distributed Optimization and Games", 31.5H, M2 IFI Ubinet, UNS, France.

G. Neglia, responsible for the "Winter School on Complex Networks", 22.5H, M1 Computer Science, UNS, France.

K. Avrachenkov, "Random-walk based algorithms for complex network analysis" at "Winter School on Complex Networks", 2H, M1 Computer Science, UNS, France.

10.2.2. Supervision

- PhD defended:

  Alexandre Reiffers-Masson, "Competition over visibility and popularity in on line social networks", UAPV, 12 January 2016, advisors: Eitan Altman and Yezekael Hayel.

  Jithin Kazhuthuveettil Sreedharan, "Sampling and Inference in Complex Networks", Univ. Côte d'Azur, 2 December 2016, advisor: Konstantin Avrachenkov.

  Nessrine Trabelsi, "A Generic Framework for User Association and Interference Management in LTE Cellular Networks", UAPV, 20 December 2016, advisors: Eitan Altman and Rachid El Azouzi.

- PhD in progress:

  Zaid Allybokus, 1 July 2016, advisors: Konstantin Avrachenkov and Lorenzo Maggi (Huawei).

  Arun Kadavankandy, "Random Matrix Theory and Complex Networks," 5 March 2014, advisors: Konstantin Avrachenkov and Laura Cottatellucci (Eurecom).

  Hlib Mykhailenko, "Probabilistic approaches for big data analysis," 1 May 2014, advisors: Fabrice Huet (SCALE team) and Philippe Nain.

  Dimitra Politaki, "Greening data center," 1 February 2016, advisors: Sara Alouf and Fabien Hermenier (UNS).

  Alina Tuholukova, "Caching at the Edge: Distributed Phy-aware Caching Policies for 5G Cellular Networks," 1 July 2016, advisors: Petros Elia (Eurecom) and Giovanni Neglia.

10.2.3. Juries

MAESTRO members participated in the Habilitation (HDR) thesis committees of (in alphabetical order):

- Patrick Loiseau, "Game theory and statistical learning in security, privacy and networks", Univ. Pierre et Marie Curie (Paris), 8 December 2016 (**E. Altman** as reviewer and jury president);

and in the Ph.D. committees of (in alphabetical order):

- Alexandre Reiffers-Masson, "Competition over visibility and popularity in on line social networks", UAPV, 12 January 2016 (**E. Altman** as advisor);
- Nesrine Ben Khalifa, "Evolutionary games with non-uniform interactions and delays", UAPV, 16 December 2016 (**E. Altman** as examiner).
- Mikael Touati, "Cooperative Game Theory and Stable Matchings in Networks", Telecom ParisTech, 1st December 2016 (**E. Altman** as advisor);
- Jithin Kazhuthuveettil Sreedharan, "Sampling and Inference in Complex Networks", Univ. Côte d'Azur, 2 December 2016 (**K. Avrachenkov** as advisor, **A. Jean-Marie** as jury president);
- Nessrine Trabelsi, "A Generic Framework for User Association and Interference Management in LTE Cellular Networks", UAPV, 20 December 2016 (**E. Altman** as advisor);
- Osti Prajwal, "Resource allocation in wireless access network: A queueing theoretic approach", Aalto Univ., Helsinki, Finland, 11 August 2016 (**K. Avrachenkov** as opponent).

10.3. Popularization

Activities are presented in chronological order:

- S. Alouf delivered a conference titled "Comment marche le Web ?" at Lycée Pierre et Marie Curie, Menton, for one classe of high school students (25 November 2016).
- D. Politaki participated to the "Fête de la science" at the Campus Valrose, Nice (13 October 2016) and at the Congress Center, Antibes Juan-les-Pins (22 October 2016). She animated the game "Datagramme" and the programming of Thymio.
- D. Politaki managed two sessions MEDITES in two middle schools (22 November 2016).
- D. Politaki participated to the Thymio competition (26 November 2016) which was organized by Hackathon Women Creativity 2016 in Nice.

D. Politaki is a member of MASTIC, a commission in charge of popularization and regional and internal scientific animation (since July 2016).

10.4. Participation in scientific events

10.4.1. *Conferences and workshops*

MAESTRO members gave presentations at the following scientific events (in alphabetical order):

- 9th International Conference on Matrix Analytic Methods in Stochastic Models (MAM9), Budapest, Hungary, 28–30 June 2016 (**E. Vatamidou**).
- 4th International workshop on Big Data and Social Networking Management and Security (BDSN), Barcelona, Spain, 5-7 December 2016 (**H. Mykhailenko**).
- 1st International Conference on Reliability, Safety and Security of Railway Systems (RSSR 2016), Paris, France, 28-30 June 2016, (**A. Tuholukova**).
- 2016 Americal Control Conference (ACC 2016), Boston, USA, July 6-8 2016, (**G. Neglia**).

10.4.2. *Schools and doctoral courses*

MAESTRO members have attended the following events (list in alphabetical order):

- E3-RSD Summer School on "Efficacité Energétique des Réseaux et Systèmes Distribués" (20H), Dinard, France, 23-27 May 2016 (**S. Alouf**, **D. Politaki**);
- WAW 2015 School on complex networks and graph models (16H), Eindhoven, Netherlands, 7-8 December 2015 (**A. Kadavankandy** and **J. K. Sreedharan**).

MAGIQUE-3D Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Hélène Barucq organized the Fourth Workshop of Strategic Action DIP in Houston, October 10-11, 2016, http://dip.inria.fr/workshops/fourth-workshop-of-the-strategic-action-dip/ and JOSO 2016 (Wave days in South-West) in Pau, March 9-11 https://team.inria.fr/magique3d/conference-and-workshops/joso-2016-wave-days-in-south-west/

9.1.1.2. Member of the Conference Program Committees

Victor Péron was member of the Program Committee of the Conference JOSO 2016 (Wave days in South-West) in Pau, March 9-11 https://team.inria.fr/magique3d/conference-and-workshops/joso-2016-wave-days-in-south-west/

9.1.2. Journal

9.1.2.1. Reviewer - Reviewing Activities

Members of Magique 3D have been reviewers for the following journals:

- Annales de l'Institut Henri Poincare / Analyse non linéaire
- Applied Mathematics and Computation
- ESAIM : Mathematical Modelling and Numerical Analysis
- Geophysical Journal International
- IMA Journal of Numerical Analysis
- International Journal for Numerical Methods in Engineering
- Journal of Computational Physics
- Journal of Scientific Computing
- Journal of Sound and Vibration
- Journal of the Acoustical Society of America
- Siam Journal on Scientific Computing
- Zeitschrift fuer Angewandte Mathematik und Physik

9.1.3. Scientific Expertise

- Julien Diaz was expert for the evaluation of Millennium Science Initiative project for the government of Chile.

9.1.4. Research Administration

- Hélène Barucq has been the chairwoman of the local jury of Inria competitive selection for Young Graduate Scientists (CR2) in Bordeaux. She participated to the selection committee for an Assistant Professor position at the University of Nantes and Paris 13. She was also part of the hiring commity for a Professor position at the University of Rennes 1. She is member of the local bureau of Inria Bordeaux Sud-Ouest focusing on scientific questions arising from research teams and of the Center Committee dealing with general questions related to the whole Research Center. She is the scientific head of the project DIP since its creation in 2009.

- Juliette Chabassier is member of the Workgroup for sustainable development at Inria Bordeaux Sud-Ouest.
- Julien Diaz is elected member of the Inria Technical Committee and of the Inria Administrative ans Scientific Boards. He is appointed member of the CDT (Commission de Développement Technologique)
- Mamadou N'Diaye is member of the Center Committee of Inria Bordeaux Sud-Ouest.
- Victor Péron is appointed member of the CJC (Commission Jeunes Chercheurs) of Inria Bordeaux Sud-Ouest.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Izar Azpiroz, Fonctions et intégrales, 19.5 heures, MATH L1, UPPA, France

Master : Julien Diaz, Transformées, 24h Eq. TD, M1, EISTIA, France

Master : Marc Duruflé, Calcul scientifique en C++, 96h Eq. TD, M1, Bordeaux INP, France

Licence : Marc Duruflé, Equations Différentielles, 20h Eq. TD, L3, Bordeaux INP, France

Licence : Marc Duruflé, Calcul scientifique en Fortran 90, 20h Eq. TD, L3, Bordeaux INP, France

Licence : Marc Duruflé, Algorithmique numérique, 30h Eq. TD, L3, Bordeaux INP, France

Licence : Mamadou N'Diaye, Compléments d'algèbre, 19,5h Eq. TD, L1, UPPA, France

Licence : Mamadou N'Diaye, Fonction de la variable réelle, 19,5h Eq. TD, L1, UPPA, France

Licence : Mamadou N'Diaye, Développements limités - suites et séries, 19,5h Eq. TD, L2, UPPA, France

Licence : Mamadou N'Diaye, Analyse 3A et Analyse 3B, 19,5h Eq. TD, L2, UPPA, France

Master : Victor Péron, Analyse des EDP, 9 Eq. TD, M1, EISTI, France

Master : Victor Péron, Analyse numérique fondamentale, 70 Eq. TD, M1, UPPA, France

Master : Victor Péron, Analyse, 23 Eq. TD, M1, UPPA, France

Master : Victor Péron et Sébastien Tordeux, Analyse Numérique 1: différences finies, 87 eq. TD, Master1, UPPA, FRANCE

Master : Victor Péron et Sébastien Tordeux, Introduction aux phénomènes de propagation d'ondes, 38 eq. TD, Master 2, UPPA, FRANCE

Licence : Sébastien Tordeux, Statistique descriptive, 55 eq. TD, L1, UPPA, FRANCE

Licence : Sébastien Tordeux, Analyse complexe , 20 eq. TD, niveau (M1, M2), L3, UPPA, France

9.2.2. Supervision

HDR : Julien Diaz, Modelling and advanced simulation of wave propagation phenomena in 3D geophysical media, Université de Pau et des Pays de l'Adour, April 7th, 2016 [9].

PhD : Aralar Erdozain, Fast inversion of 3D Borehole Resistivity Measurements using Model Reduction Techniques based on 1D Semi-Analytical Solutions, Université de Pau et des Pays de l'Adour, December 15th 2016, Hélène Barucq, David Pardo (BCAM) and Victor Péron. [10].

PhD : Vincent Popie, Modélisation asymptotique de la réponse acoustique de plaques perforées dans un cadre linéaire avec étude des effets visqueux, ISAE, January 14th 2016 , Estelle Piot (ONERA) and Sébastien Tordeux. [11].

PhD in progress : Izar Azpiroz Iragorri, Approximation des problèmes d'Helmholtz couplés sur maillages virtuels , October 2014, Hélène Barucq, Julien Diaz and Rabia Djellouli (CSUN).

PhD in progress : Vincent Darrigrand, Etude d'erreur pour des problèmes d'Helmholtz approchés par des techniques de Petrov-Galerkin , October 2013, Hélène Barucq and David Pardo.

PhD in progress : Aurélien Citrain, Déformation 3D de maillages en imagerie sismique, Méthodes d'inversion sismique dans le domaine fréquentiel , October 2016, Hélène Barucq and Christian Gout.

PhD in progress : Florian Faucher, Méthodes d'inversion sismique dans le domaine fréquentiel , October 2014, Hélène Barucq.

PhD in progress : Hamza Alaoui Hafidi, Imagerie ultrasonore tridimensionnelle dans les milieux hétérogènes complexes, October 2015, Encadrement : Marc Deschamps, Michel Castaings, Eric Ducasse, Samuel Rodriguez (I2M), Hélène Barucq, Marc Duruflé, Juliette Chabassier (Magique 3D).

PhD in progress : Justine Labat, Diffraction d'une onde par des petits obstacles dans des milieux complexes, October 2016, Victor Péron and Sébastien Tordeux.

PhD in progress : Mamadou N'Diaye, Analyse et développement de schémas temporels hybrides pour les équations hyperboliques du premier ordre, January 2015, Hélène Barucq and Marc Duruflé.

PhD in progress : Chengyi Shen, Approches expérimentale et numérique de la propagation d'ondes sismiques dans les roches carbonatées, October 2016, Julien Diaz and Daniel Brito (LFC).

PhD in progress : Elvira Shishenina, Approximations hybrides par éléments finis et éléments virtuels discontinus pour l'élasto-acoustique, October 2015, Hélène Barucq and Julien Diaz.

Master thesis : Aurélien Citrain, 2D hybrid meshes for a DG code, Insa de Rouen, Sept. 2016.

Master thesis : Alain Ha, High order time discretization for dissipative wave equations, Université de Rennes, Sept. 2016.

Master thesis : Justine Labat, Diffraction of an electromagnetic wave by small obstacles, Université de Pau et des Pays de l'Adour, Sept. 2016.

Master 1 internship : Baptiste Olivier, Modeling wave propagation in musical instruments, MatMeca, Sept. 2016.

9.2.3. *Juries*

- Hélène Barucq : Julien Diaz (Université de Pau et des Pays de l'Adour) " Modelling and advanced simulation of wave propagation phenomena in 3D geophysical media", HDR, April 7th 2016
- Hélène Barucq : Vincent Deymier (ONERA Toulouse) "Etude d'une méthode d'éléments finis d'ordre élevé et de son hybridation avec d'autres méthodes numériques pour la simulation électromagnétique instationnaire dans un contexte industriel", PhD thesis, December 8th 2016
- Hélène Barucq : Asma Toumi (Université Paul Sabatier Toulouse III) "Méthodes numériques asynchrone pour la modélisation de phénomènes multi-échelles", PhD thesis, September 21th 2016
- Hélène Barucq : Romain Brossier (Université de Grenoble) "Contributions to developments and applications of Full Waveform Modeling and Inversion", HDR, November 18th 2016
- Julien Diaz : Azba Riaz (Université de Cergy Pontoise) "A new discontinuous Galerkin formulation for time dependent Maxwell's equations: a priori and a posteriori error estimation", PhD thesis, April 4th 2016
- Julien Diaz : Valentin Vinoles (Université de Paris Saclay) " Problèmes d'interface en présence de métamatériaux : modélisation, analyse et simulations", PhD thesis, September 8th 2016
- Julien Diaz (reviewer): Asma Toumi (Université Paul Sabatier Toulouse III) "Méthodes numériques asynchrone pour la modélisation de phénomènes multi-échelles", PhD thesis, September 21th 2016

9.3. Popularization

- Juliette Chabassier took part in a round table around science professions in the high school of Valence d'Agen in March 2016.
- Juliette Chabassier shared her experience as a scientist during "Printemps de la Mixité" in May 2016.
- Juliette Chabassier participated in scientific "speed datings" during the "Filles et Maths" day in May 2016.
- Juliette Chabassier was co-responsible for a workshop around "Women in science" during Inria "Fête de la science" in October 2016.

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MAGNET Project-Team

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10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

AURÉLIEN BELLET co-organized the workshop Private Multi-Party Machine Learning @ NIPS 2016. [0]

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

PASCAL DENIS served as co-chair of the Polaris Colloquium, a monthly Guest Lecture series in Computer Science and Signal Processing, co-sponsored by Inria Lille–Nord Europe and University of Lille CRIStAL Lab.

10.1.2.2. Member of the Conference Program Committees

AURÉLIEN BELLET served as PC member for IJCAI 2016, ICML 2016, NIPS 2016 and AISTATS 2017.

PASCAL DENIS served as Senior PC member for IJCAI 2016. He was PC member for ACL 2016, AAAI 2016, CAp 2016, EMNLP 2016, and NAACL 2016.

RÉMI GILLERON served as PC member for NIPS 2016 and AISTATS 2017.

JAN RAMON served as PC member for AISTATS 2016 and 2017, BAI workshop @ IJCAI 2017, ieee big data 2016, BNAIC 2016, DS 2016, ECAI 2016, ECML-PKDD 2016, IEEE ICDM 2016, ICHI 2016, IJCAI 2016, ILP 2016, ISMIS 2017, KDD 2016, MLG 2016, NIPS 2016, PMPML workshop @ NIPS 2016, SSDM workshop @ ECML-PKDD 2016.

MARC TOMMASI served as PC member for NIPS 2016, ICML 2016, IJCAI 2016, EGC 2017.

FABIEN TORRE served as PC member for EGC 2017, workshop CluCo 2017, AAFD & SFC 2016, CNIA 2016

FABIO VITALE served as PC member for AISTATS 2017 and ECMLPKDD 2016, NIPS 2016.

10.1.2.3. Reviewer

GÉRAUD LE FALHER was reviewer for ECMLPKDD 2016, NIPS 2016 and IJCAI 2016. MIKAELA KELLER was a reviewer for ICLR 2016 and ICML 2016.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

JAN RAMON is member of the editorial boards of data mining and knowledge discovery, machine learning and guest editorial board of ECML-PKDD 2016.

10.1.3.2. Reviewer - Reviewing Activities

AURÉLIEN BELLET was reviewer for IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) and IEEE Transactions on Cybernetics (TCYB).

JAN RAMON: data mining and knowledge discovery (dami) 5; knowledge and information systems (kais): 4; machine learning :3; neurocomputing: 2; artificial intelligence: 2; plos one : 1

FABIO VITALE was reviewer for the journal EJOR (European Journal of Operational Research - Elsevier), and the journal Internet Mathematics.

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[0]https://pmpml.github.io/PMPML16/

GÉRAUD LE FALHER was reviewer for the International Journal of E-Planning Research.

10.1.4. Invited Talks

AURÉLIEN BELLET was invited the Learning, Privacy, and Mobile Data Workshop at Google Research Seattle, [0] the Statistical Machine Learning (SMILE) seminar in Paris, [0] the Workshop on Distributed Machine Learning (Télécom ParisTech), [0] and at the company EURA NOVA. [0]

PASCAL DENIS was invited to the STL seminar, Université Lille 3 (February 2016).

10.1.5. Scientific Expertise

PASCAL DENIS was reviewer for Flanders Research Foundation (FWO, Belgium) and the Brussels Institute for Research and Innovation (Innoviris).

JAN RAMON was reviewer of H2020 projects.

10.1.6. Research Administration

FABIEN TORRE is in the board of the national evaluation committee for teaching and research in computer science (CNU 27)

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence MIASHS: FABIO VITALE, Introduction à l'algorithmique, 66h, L2, Université Lille 3.

Licence MIASHS: MARC TOMMASI, Réseaux, 28h, L1, Université Lille 3.

Licence MIASHS: RÉMI GILLERON, Traitement de données, 24h, L1, Université Lille 3.

Licence MIASHS: GÉRAUD LE FALHER, Traitement de données, 36h, L1, Université Lille 3.

Licence MIASHS: MATHIEU DEHOUCK et THIBAULT LIÉTARD, Projet informatique de traitement de données en SHS, 20h, L2, Université Lille 3.

Licence MIASHS: MIKAELA KELLER, Codage et représentation de l'information, 24h, L1, Université Lille 3.

Licence SoQ (SHS): FABIEN TORRE, Traitement de contenus textuels, 24h, L3, Université Lille 3.

Licence SoQ (SHS): RÉMI GILLERON, Algorithmique de graphes, 24h, L3, Université Lille 3.

Licence SHS: MIKAELA KELLER, Langages du Web, 24h, L3, Université Lille 3.

Licence SHS: MIKAELA KELLER, Représentation numérique de l'information, 24h, L3, Université Lille 3.

Licence économie gestion: RÉMI GILLERON, Traitement de données et documents, 24h, L1, Université Lille 3.

Licence MARC TOMMASI, MIKAELA KELLER C2i, université Lille 3.

Master MOCAD: PASCAL DENIS co-taught the Machine Learning and Decision under Uncertainty class, 37,5h, Université Lille 1.

Master MIASHS: RÉMI GILLERON et FABIEN TORRE, Web et référencement, 24h, M1, Université Lille 3.

Master MIASHS: GÉRAUD LE FALHER, Web et réseaux, 24h, M1, Université Lille 3.

Master MIASHS: MIKAELA KELLER, Programmation et bases de données, 24h, M1, Université Lille 3.

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[0] https://sites.google.com/site/learningprivacymobiledata/
[0] https://sites.google.com/site/smileinparis/
[0] http://machinelearningforbigdata.telecom-paristech.fr/fr/article/workshop-friday-novembre-25-distributed-machine-learning
[0] http://euranova.eu

Master LTTAC: FABIEN TORRE, Algorithmique des textes – Javascript, 36h, M1, Université Lille 3.

Master ID: FABIEN TORRE, information structurée, 20h, M2, Université Lille 3.

Master ID: FABIEN TORRE, programmation Web, 20h, M2, Université Lille 3.

Master / Master Spécialisé Big Data: AURÉLIEN BELLET, Advanced Machine Learning, 25.5h, Télécom ParisTech.

Formation continue (Certificat d'Études Spécialisées Data Scientist): AURÉLIEN BELLET, Supervised Learning and Support Vector Machines, 10h, Télécom ParisTech.

Formation continue: AURÉLIEN BELLET, Graph Mining, 3h, Télécom ParisTech pour Allianz.

E-learning

SPOC: MARC TOMMASI, RÉMI GILLERON and ALAIN PREUX: Culture numérique, 5 semesters at the bachelor level, Moodle, Lille 3 university, more than 7000 students.

Pedagogical resources: texts, videos, quizz and exercices available on http://culturenumerique.univ-lille3.fr/, creative commons.

10.2.2. Supervision

PhD in progress: GÉRAUD LE FALHER, Machine Learning in Signed Graphs, Inria Lille – Nord Europe, since Oct. 2014, MARC TOMMASI, FABIO VITALE and CLAUDIO GENTILE (University of Insubria, Italy).

Phd in progress: DAVID CHATEL, Semi-supervised spectral clustering since Sep 2012, MARC TOMMASI and PASCAL DENIS.

Phd in progress: MATHIEU DEHOUCK, Graph-based Learning for Multi-lingual and Multi-domain Dependency Parsing, since Oct 2015, PASCAL DENIS and MARC TOMMASI.

Phd in progress: PAULINE WAUQUIER, Recommendation in Information Networks, since Dec 2013, MIKAELA KELLER and MARC TOMMASI.

Phd in progress: THIBAULT LIÉTARD, Adaptive Graph Learning with Applications to Natural Language Processing, AURÉLIEN BELLET, PASCAL DENIS and RÉMI GILLERON.

Master: THIBAULT LIÉTARD, Metric learning for Graph-based coreference resolution, ENS Rennes, co-supervised by AURÉLIEN BELLET and PASCAL DENIS.

Master: PAUL VANAESEBROUCK, Decentralized Machine Learning on Graphs, Ecole Polytechnique, co-supervised by AURÉLIEN BELLET and MARC TOMMASI.

Master: PIERRE DELLENBACH, Private learning of heavily distributed data, Ecole Polytechnique, co-supervised by AURÉLIEN BELLET and JAN RAMON.

Master: ROBIN VOGEL, Learning to Rank Rare Instances, ENSAE, co-supervised by AURÉLIEN BELLET, STÉPHAN CLÉMENÇON et ANNE SABOURIN (Télécom ParisTech), et STÉPHANE GENTRIC (Morpho).

10.2.3. Juries

- AURÉLIEN BELLET was member of the recruitment committee for MdC in Computer Science at Télécom Saint-Etienne.

- PASCAL DENIS et MARC TOMMASI were members of the recruitment committee for MdC in Computer Science at Université Lille 3.

- PASCAL DENIS was member of the Commission Emploi Rechercher (CER) at Inria Lille – Nord Europe.

- RÉMI GILLERON was member of the PhD committees of HUGO LOUCHE (Examinateur) and TOM SEBASTIAN (Président).

- MARC TOMMASI was member of the habilitation committee of ALBERT BIFFET (Rapporteur).

- MARC TOMMASI was member of the PhD committees of GUILLAUME RABUSSEAU (Rapporteur), RAPHAËL PUGET (Rapporteur), MICHAËL PERROT (Examinateur), HADRIEN GLAUDE (Examinateur).

- MARC TOMMASI was head of the jury for the recruitment committee of Junior Research Scientists (CR1/CR2) at Inria Lille.

10.3. Popularization

MARC TOMMASI presented the MAGNET team at the EuraTechnologies ICT innovation ecosystem (https://www.inria.fr/centre/lille/agenda/r-dv-du-plateau-inria-apprentissage-automatique-et-reseaux-d-information).

AURÉLIEN BELLET presented some of his work at the popularization seminar "30 minutes de sciences" and at an Assemblée Générale of Inria Lille - Nord Europe.

THIBAULT LIÉTARD has participated to the "chercheur itinérant" initiative (https://www.inria.fr/centre/lille/recherche/sciences-pour-tous2/mediation/chercheurs-itinerants-au-lycee-2016).

RÉMI GILLERON has participated at the forum "F O O R <: Forum Ouvert Oeuvres et Recherches" where he presented the research work done with PASCAL DENIS for the artwork "This is Major Tom to Ground Control"

<p style="text-align: center; color: red;">**MAGRIT Project-Team**</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Selection

9.1.1.1. Member of the Conference Program Committees

- M.-O. Berger was member of the program committee of: International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI 2016), International Conference on Pattern recognition (ICPR 2016), International Conference on Robotic and automation (ICRA 2016), International Conference on Information Processing in Computer assited interventions (IPCAI 2017)
- Erwan Kerrien was a member of the program committee of MICCAI 2016 and of IPCAI 2017.
- F. Sur was a member of the program committe of RFIA 2016 (Reconnaissance des formes et intelligence artificielle).
- P.-F. Villard was member of the program committe of MICCAI 2016, International Conference on Computer Graphics, Visualization, Computer Vision and Image Processing 2016, Eurographics Workshop on Visual Computing for Biology and Medicine 2016.

9.1.1.2. Reviewer

M.-O. Berger was a reviewer for IROS 2016.

9.1.2. Journal

9.1.2.1. Reviewer - Reviewing Activities

The members of the team reviewed articles in Computers in Biology and Medicine (Elsevier), Digital Signal Processing, IEEE Transactions on Biomedical Engineering.

9.1.3. Invited Talks

- Pierre-Frédéric Villard gave a seminar on "Mitral Valve Biomechanical Model Construction" at the Department of Cardiac Surgery at Boston Children's Hospital, Boston (USA) on the 08/01/2016

9.1.4. Scientific Expertise

- Marie-Odile Berger was a member of the HCERES visiting commitee of LTSI (Rennes)
- Marie-Odile Berger was president of the AFRIF thesis prize and member of the GDR Robotique thesis prize.
- Marie-Odile Berger is president of the Association française pour la reconnaissance et l'interprétation des formes (AFRIF)

9.1.5. Research Administration

- Marie-Odile Berger is a member of the Inria evaluation committee.
- Gilles Simon is Chargé de Mission Loria to take part in an EIT's KIC (Knowledge and Innovation Communities) proposal in the thematic of manufacturing (KIC Added-value Manufacturing).

9.2. Teaching - Supervision - Juries

9.2.1. *Teaching*

The four associate professors of the MAGRIT team actively teach at Université de Lorraine with an annual number of around 200 teaching hours in computer sciences, some of them being accomplished in the field of image processing. Inria researchers have ponctual teaching activities in computer vision and shape recognition mainly in the computer science Master of Nancy and in several Engineering Schools near Nancy (ENSMN Nancy, SUPELEC Metz, ENSG). Our goal is to attract Master students with good skills in applied mathematics towards the field of computer vision. The list of courses given by staff members which are tightly related to image processing and computer vision is detailed below:

- Licence: Graphic and haptic rendering, 30h, IUT Saint-Dié des Vosges.
- Licence: Image processing, 30h, IUT Saint-Dié des Vosges.
- Licence: 3D programming, 30h, IUT Saint-Dié des Vosges.
- Game design with Unity3D , 15h, IUT Saint-Dié des Vosges.
- Introduction to augmented reality, 6h, IUT Saint-Dié des Vosges.
- Master: Signal analysis, 50 h, Université de Lorraine.
- Master: Augmented reality, 24 h, Télécom-Nancy, Université de Lorraine.
- Master : Introduction to computer vision, 12h, Université de Lorraine.
- Master : Shape recognition, 15 h, Université de Lorraine.
- Master : Computer vision: foundations and applications, 15 h, Université de Lorraine.
- Master : Introduction to image processing, 21 h, École des Mines de Nancy
- Master : Image processing for Geosciences, ENSG, 12h.
- Master : Introduction to signal processing and applications, 21 h, Ecole des Mines de Nancy
- Master : Augmented reality, 24h, M2 IHM Metz
- Master : Augmented reality, 3 h, SUPELEC Metz.

In addition, G. Simon was interim director of the CESS (Centre d'Études Supérieures et Scientifiques) in Epinal, a branch of the science faculty of Nancy, from january to april 2016. He is also head of the Licence professionnelle Infographie Paysagère of the faculty of Nancy.

A software, named artEoz, has been co-designed by B. Wrobel-Dautcourt [21]. It aims at supporting students in learning computer programming. artEoz original design stems from the author's long term experience in teaching object oriented programming. It offers the students a pedagogical view of the memory state, that is dynamically updated while the user's program runs. artEoz can be freely downloaded for academic use only. This year, we have proposed an on-line version of the software. Documentation, tutorials, on-line tools and download are available on the website http://arteoz.loria.fr. Tutorials can be customized to fit different students' needs.

9.2.2. *Supervision*

PhD in progress: Pierre Rolin, Calcul de pose par simulation de points de vue pour la réalité augmentée, octobre 2013, Marie-Odile Berger, Frédéric Sur.

PhD in progress: Charlotte Delmas, Reconstruction 3D des outils chirurgicaux en radiologie interventionnelle, avril 2013, Marie-Odile Berger, Erwan Kerrien.

PhD in progress: Antoine Fond, Introduction de sémantique dans la modélisation urbaine dans un contexte de calcul du point de vue, octobre 2014, Marie-Odile Berger, Gilles Simon.

PhD in progress: Jaime Garcia Guevara, Vers une utilisation clinique de la réalité agmentée pour la chirurgie hépatique, octobre 2015, Marie-Odile Berger, Stéphane Cotin (MIMESIS).

PhD in progress: Raffaella Trivisonne, Image-guided real-time simulation using stochastic filtering, novembre 2015, Erwan Kerrien, Stéphane Cotin (MIMESIS).

PhD in progress: Vincent Gaudillière, Reconnaissance de lieux et d'objets pour la réalité augmentée en milieux complexes, décembre 2016, Marie-Odile Berger, Gilles Simon.

9.2.3. *Juries*

Marie-Odile Berger was external reviewer of the PhD of A. Bauer and A. Agustinos and of the HDR of R. Grompone. Gilles Simon was a member of the PhD committee of Liming Yang.

9.3. Popularization

Members of the team participate on a regular basis, to scientific awareness and mediation actions.

- Marie-Odile Berger and Gilles Simon wrote an article about augmented reality in Interstices [27].

- Erwan Kerrien is Chargé de Mission for scientific mediation at Inria Nancy-Grand Est. As such, he is a member of the steering committee of "la Maison pour la Science de Lorraine" [0], and member of the IREM [0] steering council. He also serves as the academic referent of an IREM working group aiming at introducing computer science in middle and high school curricula. Among other activites, he was also an associate researcher to a MATh.en.JEANS workshop, and he participated in the creation of a MOOC for teachers of the new ICN option (Informatique et Création Numérique - *Computer Science and Digital Creation*) at the beginning of high school curriculum.

- Gilles Simon participated to the "Fête de la science" (unplugged activities in computer science).

- Pierre-Frédéric Villard participated to open days and science festival in the IUT of Saint-Dié des Vosges. He presented augmented and virtual reality demos and their link to the high school mathematics program.

- Pierre-Frédéric Villard has been involved in the conception of the virtual visit for the Homo Numericus Exhibition (http://homonumericus.inria.fr).

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[0]"Houses for Science" project, see http://maisons-pour-la-science.org/en

[0]Institut de Recherche sur l'Enseignement des Mathématiques - *Research Institute for Teaching Mathematics*

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MAMBA Project-Team

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9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

Pierre-Alexandre Bliman: Chairman of the Conference on Mathematical Modeling and Control of Communicable Diseases, Fundação Getulio Vargas, Rio de Janeiro (RJ), Brazil, January 11-15, 2016
Marie Doumic: Chair at the Summer School PDE and Probability for Life Sciences, CIRM, Luminy, July 4-8, 2016.

9.1.1.2. Member of the Organising Committees

Luis Almeida, Benoît Perthame and Nicolas Vauchelet: Co-organisers of the "Second meeting on mathematical modeling and control in epidemic spread", Laboratoire Jacques-Louis Lions, UPMC, Paris, May 23, 2016
Jean Clairambault: co-organiser of the mini-symposium "Heterogeneity, evolution and drug resistance in cancer", ECMTB, Nottingham, England, July 12, 2016
Marie Doumic: co-organiser of the workshop on "Models in Cancer Therapy", WPI, Vienna, 1-2 july, 2016; mini-symposium organisation at the ECMTB, Nottingham, England, July 2016; mini-course and chair at CIMPA school in Moka, Mauritius, December 2016
Dirk Drasdo: co-coordinator of the modelling workpackage in ANR RHU project iLITE (coordinator: Jean-Charles Duclos-Vallée, Paul Brousse Hospital, Villejuif)
Dirk Drasdo: member of the scientific leadership team of the Liver Systems Medicine grant composed of three subprojects and three junior research groups, each subproject composed of about 10 PIs

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Pierre-Alexandre Bliman: Program chairman of the 1st meeting of the STIC AmSud project MOSTICAW, Asunción, Paraguay, October 5–9 2016

9.1.2.2. Member of the Conference Program Committees

Pierre-Alexandre Bliman: Member of the Conference Editorial Board of European Control Association (EUCA), actuating for 15th European Control Conference, Aalborg, Denmark, June-July 2016

9.1.2.3. Reviewer

Pierre-Alexandre Bliman: Reviewer for the 55th IEEE Conference on Decision and Control, Las Vegas, USA, December 2016.
Dirk Drasdo: member of the reviewing committee for foundation of "Einstein Center for Regeneration in Compromised Patients Medicine", Berlin, April 2016

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Dirk Drasdo is member of the boards of *TheScientificWorldJOURNAL* and *Royal Society open science* (UK) and was guest editor for *PloS Comput. Biol.* (2016)
Benoît Perthame is member of the boards of *Communications in PDEs, M3AS, NoDEA, Mathematical Medicine and Biology*

9.1.3.2. Reviewer - Reviewing Activities

Pierre-Alexandre Bliman: Reviewer for the journals *Automatica, IET Control Theory & Applications, Memórias do Instituto Oswaldo Cruz*

Jean Clairambault: Reviewer for the journals *Evolutionary Applications, Bulletin of Mathematical Biology, Mathematical Modelling of Natural Phenomena, Journal of Inorganic and Organometallic Polymers and Materials, Journal of Theoretical Biology, British Journal of Cancer, PLoS Computational Biology, BMC Cancer*

Marie Doumic: Reviewer for the journals *Inverse Problems, Analytical Biochemistry, European Journal of Applied Mathematics, Bull. of Math. Biology, Comm. in Math. Sciences*

Dirk Drasdo: Reviewer for *Nature, Scientific Reports* and other journals

Nicolas Vauchelet: Reviewer for Transaction AMS, SIAM J. Numer. Anal., M3AS, J. Optim. Theory Appl., Math. Reviews

9.1.4. Invited Talks and Courses

Luis Almeida: EMS (European Mathematical Society) Diderot Mathematical Forum, Paris, March 15, 2016

Luis Almeida: IWorkshop "Models in cancer therapy", WPI, Vienna, Austria, July 1-2, 2016

Luis Almeida: Master course on Reaction-Diffusion Equations Arising in the Mathematical Modelling of Population Dynamics, Univ. Verona, October 2016

Pierre-Alexandre Bliman: Keynote speaker at the International conference on Digital Sciences and Technologies for Health, Paris, France, June 10, 2016

Pierre-Alexandre Bliman: Seminars at UMR ESPACE-DEV, Université de Guyane, Cayenne, France, December 2016

Pierre-Alexandre Bliman: Seminars at Laboratoire de Mathématiques et Dynamique de Populations, Université Cadi Ayyad, Marrakesh, Morocco, December 2016

Jean Clairambault: 2h course at the Winter School and Workshop "Nonlocal aspects in mathematical biology", Bedlewo, Poland, January 27, 2016

Jean Clairambault: French-Serbian Novi Sad Oncology Congress, Novi Sad, Serbia, March 18-19, 2016

Jean Clairambault: Journées du département ONCO, Nantes, May 3-4, 2016

Jean Clairambault: Workshop "Le cancer en équations", Rabat, Morocco, May 5-6, 2016

Jean Clairambault: First Waterloo University - Sorbonne Universités Seminar, Waterloo, Ontario, Canada, May 9-11, 2016

Jean Clairambault: 3h course at the BIOMAT Summer school "Cell dynamics and polymerization", Granada, Spain, June 1-3, 2016

Jean Clairambault: 4.5h course at the CIMPA Summer school "Mathematical modeling in Biology and Medicine", Santiago de Cuba, June 14-15-16, 2016

Jean Clairambault: Workshop "Models in cancer therapy", WPI, Vienna, Austria, July 1-2, 2016

Jean Clairambault: International conference "Mathematical models in biology and medicine", Moscow, October 31-November 3, 2016

Jean Clairambault: 4h course at the Winter school "Mathematical Models of Tumour and Disease", Jiaotong University, Shanghai, December 5-6-7-8, 2016

Jean Clairambault: Workshop on mathematical biology, Jiaotong University, Shanghai, December 10, 2016

Jean Clairambault: Workshop on Mathematical Modelling and Computation in Medicine/Biology, Tsinghua International Mathematics Forum (TSIMF), Sanya, Hainan, China, December 12-16, 2016

Marie Doumic: Plenary Speaker at the Diderot Mathematical Forum, March 15; seminar at the Polish Academy of Sciences (Warsaw), March 2016

Marie Doumic: 3h course at the BioMat2016 Conference in Granada, Spain, 1-3 June 2016; seminar in Orsay, June 16, 2016

Marie Doumic: Workshop on fragmentation processes, November 17, Villetaneuse; workshop on "Recent contributions of women in PDEs", Vienna, November 28-30, 2016

Marie Doumic: 4.5h course at the CIMPA Winter school, Moka, Mauritius, December 4-16, 2016

Dirk Drasdo: Workshop OPENTOX Basel, March 2016

Dirk Drasdo: Workshop Biomath/Bioinfo/BioStat of Cancer, Lyon, June 2016

Dirk Drasdo: CMBBE (14th international Symposium on Computational Methods in Biomechanics and Biomedical Engineering), Tel Aviv, September 2016

Benoît Perthame: Seminar, University of Chicago, January 2016

Benoît Perthame: Distinguished lecture, Hong Kong Polytechnic University, February 2016

Benoît Perthame: Seminar, Basel, Switzerland, March 2016

Benoît Perthame: Seminar, Padova, April 2016

Benoît Perthame: Course in mathematical biology, Edmonton, Alberta, Canada, May 2016

Benoît Perthame: Course on "Kinetic equations for cell motility", Porto Ercole, Italy, June 2016

Benoît Perthame: Conference in honour of Peter Markowich's 60th birthday, Beijing, July 2016

Benoît Perthame: Conference on "Kinetics and quantum dynamics", Shanghai, July 2016

Benoît Perthame: Course on "Adaptive evolution", Valparaiso, September 27-30, 2016

Benoît Perthame: Conference on "SCL with rough fluxes", Mittag-Leffler Institute, Stockholm, September 12-15, 2016

Benoît Perthame: Seminar, ETH Zürich, October 18-19, 2016

Benoît Perthame: Conference in honour of Peter Markowich's 60th birthday, KAUST, Saudi Arabia, October 31-November 3, 2016

Benoît Perthame: Conference on "Networks and collective behaviours", Seoul, November 7-10, 2016

Benoît Perthame: Courses, Analysis school, Cotonou, Benin, December 5-9, 2016

Camille Pouchol: Winter School and Workshop "Nonlocal aspects in mathematical biology", Bedlewo, Poland, January 27, 2016

Camille Pouchol: International conference "Mathematical models in biology and medicine", Moscow, October 31-November 3, 2016

Nicolas Vauchelet: 4h course at Imperial College, London, October 2016, UK

Nicolas Vauchelet: 3h course at the CIMPA Summer school "Mathematical modeling in Biology and Medicine", Santiago de Cuba, June 2016, Cuba

Nicolas Vauchelet: INdAM Workshop "Interactions between Analysis and Innovative Algorithmics", Rome, May 2016, Italy

9.1.5. *Scientific Expertise*

Pierre-Alexandre Bliman: Member of the Scientific committee of the ANR program "Environnement, pathogènes et maladies émergentes ou ré-émergentes - One health"

Pierre-Alexandre Bliman: Expert for the Belgium agency FNRS, for the Dutch agency NWO

Pierre-Alexandre Bliman: Reviewer for the European PhD Award on Control for Complex and Heterogeneous Systems

Pierre-Alexandre Bliman: Member of the National network of specialists of Zika and related diseases (Rede Nacional de Especialistas em Zika e doenças correlatas, RENEZIKA), Health Ministry of Brazil

Pierre-Alexandre Bliman: Member of the Brazilian National Institute for Science and Technology (INCT)

Jean Clairambault: Expert for Belgian FNRS, for the Moffitt Center (Tampa, FL), for the University of Yaoundé (Cameroon), for the BBSRC (UK), for the ERC (Consolidator Grant 2016), for the Royal Society of Edinburgh

Dirk Drasdo: Member of the program committee for SBMC 2016 (Conference on Systems Biology of Mammalian Cells) in Munich

9.1.6. *Research Administration*

Luis Almeida: Member of the bureau of CID 51 of the Comité National de la Recherche Scientifique

Luis Ameida: in charge of the Major MathBio of the speciality "Mathematics of modelling", M2 level, UPMC

Jean Clairambault: member of the bureau of the IPV (Interfaces pour le Vivant) doctoral funding programme of UPMC, representative of ED 386 (since 2014)

Jean Clairambault: member of the expert group of ITMO Cancer, representative of Inria (since 2008)

Marie Doumic: member of the selection committee for an assistant professor position in Grenoble

9.2. Teaching - Supervision - Juries

9.2.1. *Teaching*

Pierre-Alexandre Bliman: *Análise*, Escola de Matemática Aplicada, Fundação Getulio Vargas, Rio de Janeiro, Brazil (60 h)

Pierre-Alexandre Bliman: *Introdução à Teoria do controle*, Escola de Matemática Aplicada, Fundação Getulio Vargas, Rio de Janeiro, Brazil (60 h)

Marie Doumic: Master course on inverse problems and applications in population dynamics (24 h)

Dirk Drasdo: Master M2, Mathematical biology, on "Agent-based models of tissue organization", from January 2016 to April 2016 at Paris VI (Mathematics department, in 10 units per semester, total 24h)

9.2.2. *Supervision*

9.2.2.1. PhD defences in 2016

- PhD defence: François Bertaux, " Cell-based multi-scale modeling for systems and synthetic biology: from stochastic gene expression in single cells to spatially organized cell populations" [1], UPMC, June 2016, supervision by G. Batt (Lifeware, Inria Saclay) and D. Drasdo

- PhD defence: Youssef Bourfia, "Modélisation et Analyse de Modèles en Dynamique Cellulaire avec Applications à des Problèmes Liés aux Cancers" [2], Cadi Ayyad University, Marrakesh, December 28, 2016, supervision by M. Adimy (Lyon), J. Clairambault and H. Hbid (Marrakesh)

- PhD defence: Géraldine Cellière: "Multi-scale modeling of drug and detox-metabolism in liver" [3], Ecole du Vivant, Univ. Paris-Diderot, July 2016, supervision by D. Drasdo

- PhD defence: Casimir Emako, "Study of two-species chemotaxis model" [4], March 17, 2016, supervision by L. Almeida and N. Vauchelet

- PhD defence: Sarah Eugène, "Stochastic modelling in molecular biology: a probabilistic analysis of protein polymerisation and telomere shortening" [5], September 30, 2016, supervision by M. Doumic and Ph. Robert (Inria Paris, RAP team)

9.2.2.2. Ongoing PhD theses

- PhD in progress: Aurora Armiento, "Inverse problems for aggregation kinetics", UPMC, begun September 2013, supervision by M. Doumic and Ph. Moireau (Inria Saclay, M3DISIM team)

- PhD in progress: Noémie Boissier (since November 2013), supervision by D. Drasdo and I. Vignon-Clementel

- PhD in progress: Walid Djema, "Analysis of an AML model enabling evaluation of polychemotherapies delivered in the case of AML which have a high level of Flt-3 duplication (Flt-3-ITD)", supervision by C. Bonnet (DISCO, Saclay), J. Clairambault, and F. Mazenc (DISCO, Saclay)

- PhD in progress: Adrian Friebel, "Software of image processing and analysis of liver tissue at histological scales.", supervision by D. Drasdo and S. Hoehme

- PhD in progress: Ghassen Haddad, "Optimisation of cancer treatments: application to bladder cancer", UPMC in co-tutela with ENIT Tunis, begun October 2015, supervision by J. Clairambault and S. Ben Miled (Tunis)

- PhD in progress: Shalla Hanson, "Modelling evolution of interactions between cancer and immune cells in solid tumours", UPMC in co-tutela with Duke University, begun October 2015, supervision by J. Clairambault and M. Reed (Duke)

- PhD in progress: Hugo Martin, "New structured population models for bacterial growth", begun October 2016, supervision by M. Doumic in co-tutela with Pierre Gabriel (Versailles)

- PhD in progress: Mathieu Mézache, begun October 2016, , "Oscillatory dynamics in protein aggregation", supervision by M. Doumic in co-tutela with Human Rezaei (INRA)

- PhD in progress: Johannes Neitsch, "Growth and regeneration modeling based on an agent-based model with deformable cells", (since June 2011) supervision by D. Drasdo and P. Van Liedekerke

- PhD in progress: Pastor Pérez-Estigarribia, Universidad Nacional de Asunción, Paraguay, supervision by C. Schaerer and P.-A. Bliman
- PhD in progress: Camille Pouchol, "Modelling interactions between tumour cells and adipocytes in breast cancer", UPMC, begun September 2015, supervision by J. Clairambault, M. Sabbah, and E. Trélat
- PhD in progress: Antonin Prunet, UPMC, begun October 2014, supervision by L. Almeida and M. Sabbah
- PhD in progress: Andrada Quillas Maran, "Modelling early leukaemogenesis", UPMC, begun March 2014, supervision by J. Clairambault, F. Delhommeau and B. Perthame
- PhD in progress: Martin Strugarek, "Structured population dynamics for transmissible diseases", UPMC, begun October 2015, supervision by N. Vauchelet and B. Perthame
- PhD in progress: Cécile Taing, UPMC, begun October 2014, supervision by A. Lorz and B. Perthame

9.2.2.3. Graduate thesis defences in 2016

- Graduate thesis defence: Bettina D'Avila Barros, Escola de Matemática Aplicada, Fundação Getulio Vargas, Brazil, advisor P.-A. Bliman
- Graduate thesis (ENSAE 2nd year internship) defence: Hicham Janati [46], Malakoff, France, December 2016, supervision by J. Clairambault and M. Doumic
- Graduate thesis defence: Tales Amazonas Rands, Escola de Matemática Aplicada, Fundação Getulio Vargas, Brazil, advisor P.-A. Bliman

9.2.3. Juries

- Luis Almeida: Casimir Emako, UPMC 17/03/2016
- Luis Almeida (reviewer): Perrine Berment, Univ. Bordeaux 06/07/2016
- Luis Almeida: Thibault Liard, UPMC 04/11/2016
- Pierre-Alexandre Bliman: Hafiz Ahmed, Université de Lille, 22/09/2016
- Pierre-Alexandre Bliman: Youssef Bourfia, Université Cadi Ayyad, Maroc & UPMC, 28/12/2016
- Jean Clairambault (reviewer): Douglas Friesen, University of Edmonton, remote defence committee member, 23/02/2016
- Jean Clairambault: Tiphaine Obara, Nancy, 07/10/2016
- Jean Clairambault: Youssef Bourfia, Université Cadi Ayyad, Maroc & UPMC, 28/12/2016
- Marie Doumic (reviewer): Etienne Baratchart, Université de Bordeaux, 2016
- Marie Doumic: Casimir Emako, UPMC, 2016
- Marie Doumic: Sarah Eugène, UPMC, 2016
- Dirk Drasdo: François Bertaux, UPMC, 2016
- Dirk Drasdo: Geraldine Cellière, Ecole du Vivant, Univ. Paris-Diderot, 2016
- Benoît Perthame (reviewer): Thierry Pichard, Université de Bordeaux
- Benoît Perthame: Vincent Renault, UPMC
- Benoît Perthame: Julien Chevalier, Université de Nice-Sophia Antipolis
- Benoît Perthame: Thibault Balois, LPS-ENS
- Nicolas Vauchelet: Casimir Emako, UPMC, March 2016
- Nicolas Vauchelet: Pierre-Louis Colin, Université Lille 1, June 2016

9.3. Popularisation

Marie Doumic: Invited talk in the "Science et société" dissemination conference (http://www.iecl.univ-lorraine.fr/Cycle-Conferences-Sciences-et-Societe/lanceur.php?action=accueil) in Nancy, May 26, 2016
Nicolas Vauchelet : talks for Animath (http://www.animath.fr/) in two high schools : Lycée Racine and Lycée Notre-Dame de Bourg-la-Reine, March 2016

<p style="text-align:center">**MANAO Project-Team**</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

Expressive 2016 (NPAR-SBIM-CAe), Workshop on NanoAppearance

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

ACM Siggraph 2016, ACM Siggraph Asia 2016, Symposium on Geometry Processing (SGP) 2016, Geometric Modeling and Processing (GMP) 2016, SIBGRAPI (Conference on Graphics, Patterns and Images) 2016

10.1.2.2. Reviewer

Eurographics 2016, Pacific Graphics 2016, High Performance Graphics 2016

10.1.3. Journal

10.1.3.1. Reviewer - Reviewing Activities

ACM Transactions on Graphics (TOG), IEEE Transactions on Visualization and Computer Graphics (TVCG), Computer Graphics Forum (CGF),

10.1.4. Invited Talks

Implicit Skinning : une méthode d'animation de personnages interactive avec contacts et étirements de la peau. Rencontres Animation Développement Innovation (RADI).

10.1.5. Research Administration

Inria Evaluation Committee

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

The members of our team are involved in teaching computer science at University of Bordeaux, ENSEIRB Engineering School, and Institut d'Optique Graduate School (IOGS). General computer science is concerned, as well as the following graphics related topics:

Master : Pierre Bénard, Gaël Guennebaud, Romain Pacanowski, Advanced Image Synthesis, 60 HETD, M2, Univ. Bdx, France.

Master : Gaël Guennebaud, Numerical Techniques, 45 HETD, M1, IOGS, France

Master : Xavier Granier, Image Synthesis, 14 HETD, M2, IOGS, France

Master : Gaël Guennebaud, Geometric Modeling, 22 HETD, M2, IOGS, France

Master : Romain Pacanowski, Thibaud Lambert, Antoine Lucat & Brett Ridel, Algorithmic and Object Programming, 60 HETD, M1, IOGS, France

Master : Xavier Granier, Romain Pacanowski, Colorimetry and Appearance Modeling, 20 HETD, M1, IOGS, France.

Master : Gaël Guennebaud and Pierre Bénard, High-performance 3D Graphics, 60 HETD, M1, Univ. Bdx and IOGS, France.

Master : Pierre Bénard, Virtual Reality, 24 HETD, M2, Univ. Bdx, France.

Master : Ivo Ihrke, Advanced Display Technology, 12 HETD, M1, IOGS, France

Master : Pierre Bénard, Image Synthesis and 3D modeling, 60 HETD, M2, ENSEIRB, France

Licence : Patrick Reuter, Digital Imaging, 36 HETD, L3, Univ. Bdx, France.

Some members are also in charge of some fields of study:

Master : Xavier Granier, M2, IOGS (Bordeaux), France.

License : Patrick Reuter, Science and Modeling, L2, Univ. Bdx, France.

10.2.2. Supervision

PhD : Boris Raymond, Rendering and manipulation of anisotropic materials, Univ. Bordeaux, P. Barla & G. Guennebaud & X. Granier

PhD : John Restrepo, Plenoptic Imaging and Computational Image Quality Metrics, Inria & Univ. Bordeaux, I. Ihrke

PhD : Brett Ridel, Interactive spatial augmented reality, Inria & Univ. Bordeaux, P. Reuter & X. Granier

PhD : Carlos Zubiaga Pena, Image-space editing of appearance, Inria & Univ. Bordeaux, P. Barla & X. Granier

PhD : Florian Canezin, Implicit Modeling, Univ. Toulouse III, G. Guennebaud & Loïc Barthe

PhD : Arthur Dufay, Adaptive high-quality of virtual environments with complex photometry, Technicolor & Univ. Bordeaux, J.-E. Marvie R. Pacanowski & X. Granier

PhD : Thibaud Lambert, Real-time rendering of highly detailed 3D models, Inria & Univ. Bordeaux, G. Guennebaud & P. Bénard

PhD : Loïs Mignard-Debize, Plenoptic function and its application to spatial augmented reality, Inria & Univ. Bordeaux, P. Reuter & I. Ihrke

PhD : Antoine Lucat, Appearance Acquisition and Rendering, IOGS & Univ. Bordeaux, R. Pacanowski & X. Granier

PhD : David Murray, Expressive Rendering of Volumetric Data, FEI & Univ. Bordeaux, J. Baril & X. Granier

<h1 style="text-align:center; color:red;">MARELLE Project-Team</h1>

7. Dissemination

7.1. Promoting Scientific Activities

7.1.1. Scientific Events Selection

7.1.1.1. Chair of Conference Program Committees

Yves Bertot is program co-chair, with Viktor Vafeiadis from MPI-SWS in Germany for the ACM conference *Certified Programs and Proofs* (CPP) to be held in Paris in January 2017. Most of the editorial activities took place in 2016.

7.1.1.2. Member of the Conference Program Committees

- Yves Bertot and Laurent Théry were members of the conference program committee for the conference *Interactive Theorem Proving* (ITP) and *User-Interfaces for Theorem Provers* (UITP).
- Cyril Cohen was a member ot the program committee for the 8th Coq workshop.

7.1.1.3. Reviewer

Cyril Cohen was reviewer for the conferences CSL 2016 and ITP 2016. Laurent Théry was a reviewer for the conferences TACAS'17 and CPP'17. Benjamin Grégoire was a reviewer for TACAS. Benjamin Grégoire was a reviewer for PoPL 2017.

7.1.2. Journal

7.1.2.1. Reviewer - Reviewing Activities

Cyril Cohen was a reviewer for *Journal of Automated Reasoning*. Laurent Théry was a reviewer for *Journal of Automated Reasoning* and *Journal of Symbolic Computation*. Yves Bertot was a reviewer for *Journal of Automated Reasoning* and *Computational Geometry: Theory and Applications*.

7.1.3. Invited Talks

Laurent Théry gave an invited talk at MAP'16 (*Mathematics, Algorithms, and Proofs*).

Cyril Cohen gave an invited talk at the ELFIC seminar on the Paris-Saclay campus (Elfic stands for *Éléments finis formellement vérifiés*).

7.1.4. Leadership within the Scientific Community

Yves Bertot and Maxime Dénès have been working on setting up a Consortium of users for the Coq system. The consortium should start in the early days of 2017. Yves Bertot, Enrico Tassi, and Maxime Dénès were invited to the kick-off meeting of the *Expedition in Computing* entitled "the science of deep specification" funded by the NSF foundation, along with three other developers from the pi.r2 project-team, as expert developers of the Coq system. This kick-off meeting took place in June.

7.1.5. Scientific Expertise

- Laurent Théry evaluated projects for the French national agency for research funding (ANR),

7.1.6. Research Administration

- José Grimm is a member of the local committee for Hygiene and Work safety,
- Cyril Cohen served several times as secretary for the local committee of project-team leaders,
- Benjamin Grégoire is a member of the committee on computer tools usage (CUMI) for the Sophia-Antipolis Méditerranée Inria center.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Licence : Cyril Cohen, mathematics oral exam, 30 hours, Classes préparatoires aux grandes écoles

Master : Laurent Théry gave a course at ENS Lyon (9 hours), a course at École des Mines (3 hours), and a course at University de Marseille (3 hours). Yves Bertot gave a one-week introductory course on Coq at University of Nice (21 hours). Enrico Tassi organized a one-week advanced course on Coq and Mathematical Components for students of ENS Lyon and University of Nice (30 hours). There were two instances of this school, in January and in November, teachers for this course were Enrico Tassi, Yves Bertot, Cyril Cohen, Laurence Rideau, and Laurent Théry.

7.2.2. Supervision

PhD in progress : Boris Djalal, started in October 2015, supervised by Yves Bertot and Cyril Cohen

PhD in progress : Cécile Baritel-Ruet, started in October 2016, supervised by Yves Bertot and Benjamin Grégoire

PhD in progress : Sophie Bernard, started in October 2016, supervised by Yves Bertot and Laurence Rideau

PhD in progress : Damien Rouhling, started in October 2016, supervised by Yves Bertot and Cyril Cohen.

7.2.3. Juries

Yves Bertot was member of the defense committee for the thesis of Jacques-Henri Jourdan.

7.3. Popularization

Laurent Théry gave talks in the context of "Fête de la science".

<p style="text-align:center; color:red;">**MATHERIALS Project-Team**</p>

9. Dissemination

9.1. Promoting Scientific Activities

E. Cancès

- is a member of the editorial boards of Mathematical Modelling and Numerical Analysis (2006-), SIAM Journal of Scientific Computing (2008-), Communications in Mathematical Sciences (2011-), and SIAM MMS (2012-),
- is a member of the executive committee of the CEA-EDF-Inria schools in applied mathematics and computer science.

He has organized or co-organized:

- a CECAM workshop on the mathematical and numerical analysis of electronic structure models, Roscoff, Jul. 8-12, 2016,
- the MMM 2016 conference (Multiscale Modelling of Materials), Dijon, Oct. 10-14, 2016,
- an IPAM workshop on collective variables in quantum mechanics, Los Angeles, Nov. 14-18, 2016.

L. Chamoin has organized the mini-symposium "Verification of reduced models in computational mechanics" within the ECCOMAS 2016 conference, Greece, June 2016.

V. Ehrlacher has co-organized with A. Cousin the semester on "Uncertainty Quantification" in the framework of the IHP thematic semester on "Monte-Carlo methods" organized by B. Bouchard, E. Gobet and B. Jourdain.

C. Le Bris is editor-in-chief of Applied Mathematics Research Express (2003-). He is a managing editor of Networks and Heterogeneous Media. He is a member of the editorial boards of Annales mathématiques du Québec (2013-), Archive for Rational Mechanics and Analysis (2004-), COCV (Control, Optimization and Calculus of Variations) (2003-), Mathematics in Action (2008-), Nonlinearity (2005-) and Journal de Mathématiques Pures et Appliquées (2009-).

He is a member of the editorial boards of the monograph series Mathématiques & Applications, Series, Springer (2008-), Modelling, Simulations and Applications, Series, Springer (2009-), Springer Monographs in Mathematics, Springer (2016-).

He is a member of

- the Cabinet of the High Commissioner for Atomic Energy,
- the "Comité d'experts" for the Fondation de Recherche pour l'Aéronautique et l'Espace,
- the "International Scientific Advisory Committee" of the Centre de Recherche Mathématique, Université de Montréal,
- the "Advisory Board" of the DFG Cluster of Excellence Engineering of Advanced Materials, Erlangen,
- the "International Scientific Advisory Board" of the DFG research center Matheon, Berlin,
- the "Conseil scientifique de la SMAI" (Scientific Council of the French Applied Maths Society),
- the International Mathematical Union Circle.

He has held a regular position of Visiting Professor at the University of Chicago.

F. Legoll

- is a member of the editorial board of SIAM MMS (2012-) and of ESAIM Proc (2012-),
- has co-organized the mini-symposium "Mathematical theory and computational techniques for multiscale materials modelling" within the MMM 2016 conference, Dijon, October 10-14, 2016 (with W. Curtin, C. Garcia-Cervera, J. Kermode, X. Li, A. Lozinski, M. Luskin and C. Ortner).

T. Lelièvre

- is editor-in-chief of ESAIM: Proceedings (with D. Chafai, P. Lafitte and C. Mouhot),

- is a member of the "Conseil d'Administration" of SMAI and Ecole des Ponts,

- has been a member of the ANR committee CES-40 "mathématiques et informatique",

- has co-organized the Journées EDP-Probas at Institut Henri Poincaré (with F. Malrieu),

- has co-organized the workshop "COmputational Statistics and MOlecular Simulation" in Paris, February 2-5th, 2016 (with A. Guyader and G. Stoltz),

- has co-organized the IHP conference on "Recent developments in numerical methods for model reduction", November 7-10th 2016. (with S. Perotto and G. Rozza),

- will co-organize the IPAM Long Program on "Complex High-Dimensional Energy Landscapes", September 11th - December 15th 2017 (with C. Clementi, G. Henkelman, R. Hennig, M. Luskin, N. Marom, P. Plechac and C. Schuette),

- will co-organize the ICTS program on "Large deviation theory in statistical physics: Recent advances and future challenges", August 14th - October 13th 2017 (with A. Ayyer, F. den Hollander, A. Dhar, J.P. Garrahan, C. Jarzynski, M. Krishnapur, S. Sabhapandit and H. Touchette).

G. Stoltz

- is a member of the scientific council of UNIT (Université Numérique Ingénierie et Technologie),

- will co-organize the IHP trimester "Stochastic Dynamics Out of Equilibrium", Spring 2017 (with G. Giacomin, S. Olla, E. Saada and H. Spohn).

9.2. Teaching - Supervision - Juries

The members of the project-team have taught the following courses:

- Licence: Outils mathématiques pour l'ingénieur, 15h, L3, École des Ponts (E. Cancès, V. Ehrlacher, M. Josien, F. Legoll, T. Lelièvre),

- Licence: Équations aux dérivées partielles et éléments finis, 15h, L3, École des Ponts (T. Hudson, F. Legoll, A. Levitt),

- Licence: Hydrodynamique numérique, 15h, L3, École des Ponts (S. Boyaval),

- Licence: Maths 1 et 2, 9h, L3, École des Mines (G. Stoltz),

- Licence: Mathématiques pour l'économie, 36h, L1, Dauphine (J. Roussel),

- Licence: Analyse et calcul scientifique, 30h, L3, Ecole des Ponts (T. Hudson, M. Josien, B. Nectoux, G. Stoltz),

- Master: Mécanique des milieux continus - partie solides, 14h, M1, ENS Cachan (L. Chamoin),

- Master: Ondes et chocs dans les structures, 8h, M1, ENS Cachan (L. Chamoin),

- Master: Mathématiques des modèles multiéchelles, 39h, M1, École des Ponts (F. Legoll),

- Master: Analyse et équations aux dérivées partielles, 36 h, M1, École des Ponts (T. Lelièvre),

- Master: Projet de département IMI, 12h, M1, École des Ponts (J. Roussel),

- Master: Projets de physique, 10h, M1, École des Ponts, France (A. Levitt, G. Stoltz),

- Master: Modélisation mathématique des vagues, 3h, École des Ponts (S. Boyaval),

- Master: Analyse de Fourier et applications, 16h, M1, École des Ponts (V. Ehrlacher, A. Levitt, G. Stoltz),

- Master: Approximation numérique et optimisation, 32h, École Polytechnique (E. Cancès, T. Lelièvre) ,

- Master: Analyse variationnelle des équations aux dérivées partielles, 32h, École Polytechnique (E. Cancès),

- Master: Contrôle des modèles et dualité, 24h, M2 Mathématiques et Applications, ENS Cachan (L. Chamoin),
- Master: Problèmes multi-échelles, 24h, M2 Mathématiques et Applications, Paris 6 (F. Legoll),
- Master: Méthodes variationnelles et théorie spectrale, 10h, M2 Mathématiques et Applications, Paris 6 (E. Cancès),
- Master: Méthodes numériques probabilistes, 24 h, M2 Mathématiques et Applications, Paris 6 (T. Lelièvre),
- Master: Introduction to computational statistical physics, 20h, M2 Mathématiques et Applications, Paris 6 (G. Stoltz).

The following PhD theses have been defended in the group at École des Ponts:
- Eddy Bernard, Université Paris-Est, defended on Nov. 25, 2016, supervised by G. Chambaud (Université Paris-Est) and E. Cancès,
- Jean-Léopold Vié, Université Paris-Est, École des Ponts and Ecole Polytechnique, defended on Dec. 16, 2016, supervised by G. Allaire (Polytechnique) and E. Cancès,
- Ahmed-Amine Homman, Multiscale methods for the simulation of shock and detonation waves, Université Paris-Est, École des Ponts and CEA/DAM, defended on June 16, 2016, supervised by G. Stoltz and J.-B. Maillet (CEA),
- François Madiot, Multiscale finite element methods for advection diffusion problems, Université Paris-Est, Ecole des Ponts ParisTech, defended on December 8, 2016, supervised by C. Le Bris and F. Legoll,
- Rémi Sainct, Study of instabilities in traffic models, defended on September 22, 2016, supervised by T. Lelièvre and X. Louis (IFSTTAR),

The following PhD theses are ongoing in the group at École des Ponts:
- Athmane Bakhta, Modélisation and simulation for photovoltaic applications, Université Paris-Est, École des Ponts, started October 1st, 2014, supervised by E. Cancès and T. Lelièvre, co-supervised by V. Ehrlacher,
- Amina Benaceur, Thèse CIFRE EDF, started January 1st, 2016, supervised by A. Ern, co-supervised by V. Ehrlacher, in collaboration with G. Blatman (EDF) and S. Meunier (EDF),
- Lingling Cao, Mathematical analysis of models of thermo-electronic transport, Université Paris-Est, École des Ponts, started November 1st, 2016, supervised by E. Cancès and G. Stoltz,
- Qiming Du, Mathematical analysis of splitting methods, École Doctorale Sciences Mathématiques de Paris Centre, started September 1st, 2016, supervised by A. Guyader (UPMC) and T. Lelièvre,
- Gérôme Faure, Multiscale methods for the simulation of shock and detonation waves, Université Paris-Est, École des Ponts and CEA/DAM, started November 1st 2014, supervised by G. Stoltz and J.-B. Maillet (CEA),
- Grégoire Ferré, Efficient sampling methods for nonequilibrium systems, Université Paris-Est, École des Ponts, started October 1st, 2016, supervised by G. Stoltz,
- Marc Josien, Multiscale approaches for materials science, started September 1st, 2015, supervised by C. Le Bris,
- Henri Louvin, Splitting methods and radioprotection, Ecole Doctorale PHENIICS, started September 1st, 2014, supervised by Check Diop (CEA) and T. Lelièvre,
- Boris Nectoux, Metastability and quasi stationary distribution, started November 1st, 2014, supervised by T. Lelièvre and E. Cancès,
- Julien Roussel, Variance reduction techniques for nonequilibrium systems, Université Paris-Est, École des Ponts, started September 1st, 2015, supervised by G. Stoltz,
- Pierre-Loik Rothé, Numerical methods for the estimation of fluctuations in multi-scale materials and related problems, started October 1st, 2016, supervised by F. Legoll,
- Laura Silva Lopes, Rare event simulation and applications to biological systems, started October 1st, 2016, supervised by J. Hénin (IBPC) and T. Lelièvre,
- Pierre Terrier, Reduced models for defect migration in metals, Université Paris-Est, École des Ponts and CEA Saclay, started September 1st, 2015, supervised by G. Stoltz and M. Athènes (CEA),

Project-team members have participated in the following PhD juries:

- S. Boyaval was in the jury for the PhD of Viljami Laurmaa ("An octree-based adaptive semi-Lagrangian free surface flow solver"), defended at EPFL in May 2016.
- S. Boyaval was in the jury for the PhD of Joubine Aghili ("Méthodes de discrétisation et de réduction de modèle pour des EDP à coefficients variables"), defended in Montpellier in December 2016.
- E. Cancès was a referee of the PhD of Maxime Morinière ("États résonants en théorie de perturbation à plusieurs corps"), defended in Grenoble in December 2016.
- V. Ehrlacher was in the jury for the PhD of Luca Nenna ("Numerical methods for Multi-Marginal Optimal Transport"), defended at Paris Dauphine in December 2016.
- V. Ehrlacher was in the jury for the PhD of Jean-Léopold Vié ("Second-order derivatives for shape optimization with a level-set method"), defended at CERMICS in December 2016.
- V. Ehrlacher was in the jury for the PhD of Faizan Nazar ("Electronic Structure of Defects in the Thomas-Fermi-von Weiszäcker Model"), defended at Warwick in December 2016.
- F. Legoll was in the jury for the PhD of Dena Kazerani ("Études mathématiques de fluides à frontières libres en dynamique incompressible"), defended at UPMC in November 2016.
- T. Lelièvre was a referee for the PhD of Tomasz Badowski on "Adaptive importance sampling via minimization of estimators of cross-entropy, mean square and inefficiency constants" defended at Freie Universität Berlin.
- T. Lelièvre was a referee for the PhD of Arthur Talpaert on "Direct Numerical Simulation of bubbles with Adaptive Mesh Refinement with distributed algorithms" defended at École Polytechnique.
- T. Lelièvre was in the jury for the PhD of Ahmed-Amine Homman ("Développement de schémas numériques d'intégration de méthodes multi-échelles"), defended at CERMICS in June 2016.
- T. Lelièvre was in the jury for the PhD of Gang Liu on "Rare event simulation by shaking transformation and Non-intrusive stratified resampling method for dynamic programming", defended at École Polytechnique in November 2016.

Project-team members have participated in the following habilitation juries:

- E. Cancès was a referee of Stéphane Redon's HdR, defended in Grenoble in May 2016.
- E. Cancès participated in the HdR jury of Nicolas Rougerie, defended in Grenoble in November 2016.
- T. Lelièvre was a referee of Pierre Etoré's HDR ("Quelques contributions à l'étude et à la simulation des diffusions asymétriques"), defended in Grenoble in December 2016.

9.3. Conference participation

Members of the project-team have delivered lectures in the following seminars, workshops and international conferences:

- S. Boyaval, Atelier Sillage et ondes de surface, Orsay, April 2016,
- S. Boyaval, Séminaire Modélisation mathématique et calcul scientifique, ENS Lyon and Institut Camille Jordan, May 2016,
- S. Boyaval, Workshop on Stochastic Partial Differential Equations, Pau, June 2016,
- S. Boyaval, Symposium on shallow-water flows at HYP 2016, Aachen, August 2016,
- S. Boyaval, Symposium on network models in PDEs at SIMAI 2016, Milan, September 2016,
- E. Cancès, seminar, Groupe de travail numérique, Laboratoire Jacques-Louis Lions, UPMC, January 2016,
- E. Cancès, workshop on computation of quantum systems in cold-matter physics and chemistry, Fields Institute, Toronto, February 2016,

- E. Cancès, Colloquium, University of Delaware, May 2016,
- E. Cancès, SIAM MS conference (invited lecture), May 2016,
- E. Cancès, KiNet workshop on mathematical and computational methods in quantum chemistry, Yale, New Haven, May 2016,
- E. Cancès, Solid Math workshop, Aalborg, May 2016,
- E. Cancès, KiNet workshop on quantum and kinetic transport, Jiatong University, Shanghai, June 2016,
- E. Cancès, workshop on coupled mathematical models for physical and nanoscale systems and their applications, Banff, Canada, August 2016,
- E. Cancès, Multiscale Modelling of Materials (MMM 2016) conference (invited lecture), Dijon, October 2016,
- L. Chamoin, Séminaire de l'équipe MISES, UPMC, Paris, April 2016,
- L. Chamoin, SIAM Conference on Uncertainty Quantification, Lausanne, April 2016,
- L. Chamoin, Workshop "New Challenges in Computational Mechanics", Cachan, May 2016,
- L. Chamoin, ECCOMAS conference, Hersonissos, Greece, June 2016,
- G. Di Gesù, IST Austria, Vienne, June 2016,
- G. Di Gesù, Eurandom YEP Workshop on Large Deviations for Interacting Particle Systems and Partial Differential Equations, Eindhoven, March 2016,
- V. Ehrlacher, Workshop on "Challenges in High-Dimensional Analysis and Computation", San Servolo, Italy, May 2016,
- V. Ehrlacher, Séminaire du CEREMADE, Université Paris-Dauphine, September 2016,
- V. Ehrlacher, Institute for Computational and Applied Mathematics seminar, University of Münster, Germany, October 2016,
- V. Ehrlacher, MATHCCES seminar, RWTH Aachen University, Germany, October 2016,
- V. Ehrlacher, EMI 2016 conference, Metz, France, October 2016,
- V. Ehrlacher, MMM 2016 conference, Dijon, France, October 2016,
- V. Ehrlacher, Workshop on "Recent developments in numerical methods for model reduction", Institut Henri Poincaré, France, November 2016,
- V. Ehrlacher, Séminaire "Problèmes spectraux en physique mathématique", December 2016,
- G. Ferré, seminar of the IPAM program 'Understanding Many Particle Systems with Machine Learning, Los Angeles, November 2016,
- G. Ferré, workshop 'Collective Variables in Quantum Mechanics', Los Angeles, November 2016,
- T. Hudson, 7th European Congress of Mathematics, Berlin, July 2016,
- T. Hudson, Applied Math Seminar, UNC Charlotte, May 2016,
- M. Josien, CANUM 2016, Obernai, France, May 2016,
- M. Josien, MMM 2016 conference, Dijon, France, October 2016,
- C. Le Bris, Edinburgh Mathematical Society Lecturer, Dundee, UK, March 18, 2016,
- C. Le Bris, Sissa workshop on Homogenization, SISSA, Trieste, June 6-10, 2016,
- C. Le Bris, PDE Seminar of the University of Chicago, February and November 2016,
- C. Le Bris, Seminar at the Applied Mathematics Department of the University of Washington at Seattle, October 2016,
- F. Legoll, EMI-PMC 2016 conference, Nashville, USA, May 2016,
- F. Legoll, ECCOMAS conference, Hersonissos, Greece, June 2016,
- F. Legoll, Weekly seminar of the LMS laboratory, Ecole Polytechnique, June 2016,

- F. Legoll, AIMS conference, Orlando, USA, July 2016,
- F. Legoll, WCCM conference, Seoul, South Korea, July 2016,
- F. Legoll, ECCM conference, Brussels, Belgium, Sept. 2016,
- F. Legoll, MMM 2016 conference, Dijon, France, October 2016,
- F. Legoll, Workshop on "Recent developments in numerical methods for model reduction", Paris, France, November 2016,
- F. Legoll, CASA weekly seminar, Eindhoven, the Netherlands, November 2016,
- F. Legoll, IFPEn weekly seminar, Paris, France, December 2016,
- T. Lelièvre, Plenary speaker at MCMSKI 2016, Lenzerheide, January 2016,
- T. Lelièvre, Séminaire Laboratoire Jacques-Louis Lions, February 2016,
- T. Lelièvre, Séminaire "Incertitudes" à EDF, March 2016,
- T. Lelièvre, Séminaire Institut de Biologie Physico-Chimique, March 2016,
- T. Lelièvre, Workshop "Particle methods for the management of risks", Paris, April 2016,
- T. Lelièvre, Séminaire équipe Inria ABS, April 2016,
- T. Lelièvre, SIAM Uncertainty Quantification, Lausanne, April 2016,
- T. Lelièvre, Workshop "Challenges in High-Dimensional Analysis and Computation", San Servolo, May 2016,
- T. Lelièvre, CANUM, May 2016,
- T. Lelièvre, Séminaire du laboratoire MICS, Centrale Supélec, June 2016,
- T. Lelièvre, Warwick Mathematics Colloquium, June 2016,
- T. Lelièvre, Workshop "Extreme events in the Earth and planetary sciences", Warwick, July 2016,
- T. Lelièvre, Faraday discussion "Reaction rate theory", Cambridge, September 2016,
- T. Lelièvre, Workshop MMM2016, October 2016,
- A. Levitt, Workshop on computation of quantum systems in cold-matter physics and chemistry, Toronto, Canada, February 2016,
- A. Levitt, Parallel Processing '16, Paris, April 2016,
- A. Levitt, Remise de prix Bull-Fourier 2015, Paris, April 2016,
- A. Levitt, GDR REST (rencontres de spectroscopie théorique) meeting, Roscoff, May 2016,
- A. Levitt, PASC 2016, Lausanne, May 2016,
- A. Levitt, 2016 ECMI Congress, Santiago de Compostela, May 2016,
- A. Levitt, Mathematical and numerical analysis of electronic structure models, Roscoff, July 2016,
- A. Levitt, Mathematics seminar, Aachen, March 2016,
- A. Levitt, Mathematical physics seminar, Texas A&M, November 2016,
- A. Levitt, Séminaire de mathématiques appliquées, Collège de France, December 2016,
- F. Madiot, CANUM 2016, Obernai, France, May 2016,
- P. Monmarché, Inria junior seminar, September 2016,
- B. Nectoux, groupe de travail "chimie quantique", Université Pierre et Marie Curie, January 2016,
- G. Stoltz, IPAM workshop "Collective Variables in Classical Mechanics", Los Angeles, October 2016,
- G. Stoltz, The 8th Multiscale Materials Modelling international conference, Dijon, November 2016,
- G. Stoltz, SIAM Conference on Mathematical Aspects of Materials Science 2016, Philadelphie, May 2016,
- P. Terrier, The 8th Multiscale Materials Modelling international conference, Dijon, November 2016.

Members of the project-team have delivered the following series of lectures:

- E. Cancès, Optical and electronic excitations in molecules and solids, 3h, Physics department, Harvard University, April 2016,
- E. Cancès, First-principle molecular simulation, 4h, French-Spanish Jacques-Louis Lions Summer School, Gijon, June 2016,
- E. Cancès, Density Functional Theory: models and numerical methods, 4h, KiNet summer school, Santa Barbara, June 2016,
- E. Cancès, Mathematical representations of quantum states, 2h, IPAM tutorial, Los Angeles, September 2016,
- E. Cancès, Mathematical techniques for quantum chemistry, 3h, Modern wavefunction methods in electronic structure theory, Gelsenkirchen, October 2016,
- V. Ehrlacher, Lecture on "Theoretical results on the Progressive Generalized Decomposition algorithm", 2h, cours GdR AMORE, IHP, December 2016,
- C. Le Bris, Series of 6 one-hour lectures on Nonperiodic multiscale problems, Winter school on Calculus of Variations in Physics and Materials Science, Würzburg, Germany, 14 -19 February 2016,
- C. Le Bris, Series of 4 one-hour lectures on Stochastic homogenization, INI Workshop on "From the Grain to the Continuum: Two Phase Dynamics of a Partially Molten, Polycrystalline Aggregate", Cambridge, UK, 14 -15 March 2016,
- T. Lelièvre, Lectures on "Numerical methods in molecular dynamics" (4h30), Winterschool Universität Basel, Engelberg, February 2016,
- T. Lelièvre, Lectures on "Model reduction techniques for stochastic dynamics" (4h), Ecole GDR EGRIN, May 2016,
- T. Lelièvre, Lectures on "Stochastic differential equations in large dimension and numerical methods" (4h), RICAM Winterschool, Linz, December 2016,
- G. Stoltz, "A mathematical introduction to steady-state nonequilibrium systems", Spring school on Molecular Dynamics, Bad Belzig, April 2016.

Members of the project-team have presented posters in the following seminars, workshops and international conferences:

- A. Levitt, COSMOS workshop, Paris, February 2016,
- J. Roussel, NESC, Sheffield, July 2016.

Members of the project-team have participated (without giving talks nor presenting posters) in the following seminars, workshops and international conferences:

- T, Hudson, SIAM Conference on Mathematical Aspects of Materials Science 2016, Philadelphie, May 2016,
- M. Josien, Winterschool on Stochastic Homogenization, Augsburg, Germany, February 2016,
- A. Levitt, IPAM semester "Understanding many-particle systems with machine learning", Los Angeles, September and November 2016,
- P.-L. Rothé, Workshop on "Recent developments in numerical methods for model reduction", Paris, France, November 2016,
- J. Roussel, MCMSki Conference, Lenzerheide, January 2016,
- J. Roussel, COSMOS Workshop, Paris, February 2016,
- J. Roussel, CEMRACS, CIRM, Marseille, July 2016,
- J. Roussel, IPAM Tutorial, Los Angeles, September 2016,
- P. Terrier, Summer school PISACMS, Paris, September 2016.

9.4. Popularization

- É. Cancès has delivered a conference in Nancy in November 2016, in the framework of the series of lectures "Sciences et société".
- A. Levitt participated in the "Young doctors" session of the Salon Culture & Jeux Mathématiques in May 2016.

MATHNEURO Team

7. Dissemination

7.1. Promoting Scientific Activities

7.1.1. Scientific Events Organisation

7.1.1.1. General Chair, Scientific Chair

Romain Veltz was the General Chair of the 2nd International Conference on Mathematical Neuroscience, held in Antibe-Juan les Pins, May 30 - June 1 2016.

7.1.1.2. Member of the Organizing Committees

Mathieu Desroches was on the Organizing Committee of the MURPHYS-HSFS 2016 Workshop on Hysteresis and Slow-Fast Dynamics held at the Centre de Recerca Matemàtica (CRM) in Barcelona, June 13-17, 2016.

7.1.2. Scientific Events Selection

7.1.2.1. Member of the Conference Program Committees

Pascal Chossat and Martin Krupa were on the Program Committee of the 2nd International Conference on Mathematical Neuroscience, held in Antibe-Juan les Pins, May 30 - June 1 2016.

7.1.3. Journal

7.1.3.1. Member of the Editorial Boards

Olivier Faugeras is the co-editor in chief of the open access Journal of Mathematical Neuroscience.

7.1.3.2. Reviewer - Reviewing Activities

Mathieu Desroches acts as a reviewer for Physica D, SIAM Journal on Applied Dynamical Systems (SIADS), PLoS Computational Biology, Journal of Nonlinear Science, IMA Journal of Applied Mathematics, Journal of Mathematical Neuroscience.

Olivier Faugeras acts as a reviewer for the Journal of Mathematical Neuroscience, the Journal of Computational Neuroscience, the SIAM Journal on Applied Dynamical Systems (SIADS).

Martin Krupa acts as a reviewer for Nonlinearity, Proceedings of the National Academy of Sciences of the USA (PNAS), the SIAM Journal of Applied Dynamical Systems (SIADS).

Romain Veltz acts as a reviewer for Neural Computation, Elife, SIADS, Journal of the Royal Society Interface.

7.1.4. Invited Talks

R. Veltz, "Some applications of hybrid systems in neurosciences", University of Bristol, April 2016

M. Desroches, "Simplifying singular perturbation theory in the canard regime with piecewise-linear dynamics; application to neuronal models", Invited Plenary talk, *10th NoLineal Conference*, University of Seville (Spain), June 2016.

M. Desroches, "Canards, folded singularities and bursting", Invited talk in the mini-symposium *Slow-fast dynamics in neuroscience* at the *10th ECMTB Conference*, Nottingham (UK), July 2016.

M. Desroches, "Spike-adding in parabolic bursters: the role of folded-saddle canards", Invited talk in the workshop *Dynamics in Life Science, Neuroscience* at the *Volga Neuroscience meeting 2016*, St-Petersburg/Nizhny-Novgorod (Russia), July 2016.

M. Desroches, "Canards in piecewise-linear slow-fast systems", Invited seminar talk, *Applied Mathematics Seminar*, University of Sydney (Australia), August 2016.

M. Desroches, "Canards in planar piecewise-linear slow-fast systems", Invited seminar talk, *Applied Mathematics Seminar*, University of Auckland (New Zealand), September 2016.

M. Desroches, "Understanding synaptic mechanisms: why a multi-disciplinary approach is important", Invited talk in the Symposia meeting *New Techniques in Electro- and Optophysiology*, SFN conference, San Diego (USA), November 2016.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Chalk-learning

Master 2 MVA/UPMC: Romain Veltz, Mathematical Methods for Neurosciences, 20 hours, Paris, France.

Master 1 BIM/UPMC: Mathieu Desroches, Modèles Mathématiques et Computationnels en Neuroscience, 30 hours, Paris, France.

7.2.2. Supervision

PhD in progress: Pascal Helson, "Study of plasticity laws with stochastic processes", started in September 2016, co-supervised by Romain Veltz and Etienne Tanré (Inria TOSCA).

PhD in progress: A. Dolcemascolo, "All optical neuromimetic devices", started in January 2016, co-supervised by Romain Veltz and S. Barland (INLN).

PhD completed: Lucile Mégret, "Explosions de cycles: Analyse qualitative, simulations numériques et modèles", defended on 25 November 2016, co-supervised by Mathieu Desroches and J.-P. Françoise (UPMC).

PhD completed: Giovanni Carmantini, "Dynamical Systems Theory for Transparent Symbolic Computation in Neuronal Networks", defended on 28 November 2016, co-supervised by Mathieu Desroches and S. Rodrigues (Plymouth University, UK).

PhD completed: Elif Köksal-Ersöz, "A mathematical study on coupled multiple timescale systems, synchronization of populations of endocrine neurons", defended on 13 December 2016, co-supervised by Mathieu Desroches, J.-P. Françoise (UPMC) and F. Clément (Inria Paris).

7.2.3. Juries

Mathieu Desroches was a jury member for the PhD defence of Catalina Vich (University of the Balearic Islands, Spain) on 4 July 2016. He was also jury member for the PhD defence of Lucile Mégret (UPMC, France) on 25 November 2016 and that of Elif Köksal-Ersöz (Inria Paris / UPMC, France) on 13 December 2016.

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MATHRISK Project-Team

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10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

- B. Jourdain (with B. Bouchard and E. Gobet): organization of the 2015-2016 thematic semester on Monte Carlo methods financed by the Institute Louis Bachelier, and the closing conference.
- A. Alfonsi: Co-organizer of the working group seminar of MathRisk "Méthodes stochastiques et finance". http://cermics.enpc.fr/~alfonsi/GTMSF.html
- A.Sulem : Co-organiser of the joint working group seminar MathRisk/LPMA, University Paris-Diderot :"Mathematical finance and numerical probability".

10.1.1.1. Member of the Organizing Committees

J. Lelong:

- journées MAS 2016, Grenoble.
- CEMRACS 2017
- Les Journées de Probabilités 2017
- session organizer at CANUM 2016
- Session organizer at "The International Conference on Monte Carlo techniques", 2016, Paris

10.1.2. Scientific Events Selection

10.1.2.1. Reviewer

A. Sulem is Reviewer for *Mathematical Reviews*

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- R. Elie

  Associate editor of *SIAM Journal on Financial Mathematics (SIFIN)* (since November 2014)

- D. Lamberton

  Associate editor of

  – Mathematical Finance,

  – Associate editor of ESAIM Probability & Statistics

- A. Sulem

  Associate editor of

  – 2011- Present: *Journal of Mathematical Analysis and Applications (JMAA)*

  – 2009- Present: *International Journal of Stochastic Analysis (IJSA)*

  – 2008- Present: *SIAM Journal on Financial Mathematics (SIFIN)*

10.1.3.2. Reviewer - Reviewing Activities

The members of the team reviewed numerous papers for numerous journals .

10.1.4. Invited Talks

- A. Alfonsi
    - January 15th 2016: "Wishart processes: MLE estimation and interest rate modelling", North British Probability seminar, Edinburgh.
    - February 5th 2016: "Dynamic optimal execution in a mixed-market-impact Hawkes price model", Frontiers in Stochastic Modeling for Finance, Padua, Italy
    - October 7th 2016: "Maximum Likelihood Estimation for Wishart processes" WORKSHOP USPC-NUS Models and numerical methods for financial risk management, Paris Diderot.
    - November 17th 2016: "Extension and calibration of a Hawkes-based optimal execution model", SIAM Conference on Financial Mathematics & Engineering, Austin.
    - December 9th 2016: "Optimal Execution in a Hawkes Price Model and Calibration", Market Microstructure Confronting many viewpoints #4, Paris.

- B. Jourdain
    - Seminar of the chair"financial risks", June 3rd 2016 : Strong convergence properties of the Ninomiya-Victoir scheme and applications to multilevel Monte Carlo
    - Seminar Mathrisk P7, September 22th 2016 : Existence for a calibrated regime-switching local volatility model

- C. Labart
    - Frontiers in stochastic modelling for finance, Padua and Venice, Italy, February 2016.
    - Closing International Conference of Thematic cycle on Monte-Carlo techniques, Paris, July 2016.

- J. Lelong
    - CANUM 2016
    - Seminar on Insurance Mathematics and Stochastic Finance at ETH Zurich, May 2016.
    - Journées MAS 2016.
    - Closing International Conference of Thematic cycle on Monte-Carlo techniques, Paris, July 2016
    - Frontiers in stochastic modelling for finance, Padua and Venice, Italy, February 2016

- A. Sulem
    - Stochastic analysis, control and games with applications to financial economics, University of Leeds, November 2016.
    - National University of Singapore/ Université Paris-Diderot workshop on quantitative finance, October 2016, Paris.
    - Abel Symposium 2016 "Computation and Combinatorics in Dynamics, Stochastics and Control", August 2016, Barony Rosendal, Norway. http://hans.munthe-kaas.no/AbelSymp2016/
    - Simulation of Stochastic graphs and applications, closing conference on " Monte-Carlo techniques", Paris, July 2016
    - Conference "Frontiers in Stochastic Modelling for Finance", Padua and Venice, Italy, February, 2016. https://www.maths.univ-evry.fr/conferences/padova2016/index_ws.htm
    - "Actuarial and Financial Mathematics Conference" (Plenary talk) , February 2016, Brussels, Belgium.
      http://www.afmathconf.ugent.be

- A. Zanette

    "Hybrid tree-finite difference methods for the Heston, Bates and Heston Hull-White models". SIMAI Politecnico di Milano 2016.

10.1.5. Research Administration

- A. Sulem : Member of the Committee for technology development, Inria Paris
- B. Jourdain : Head of the doctoral school MSTIC, university Paris-Est

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Undergraduate programs

A. Alfonsi: 'Probabilités", first year course at the Ecole des Ponts.

B. Jourdain :

- course "Mathematical finance", 2nd year ENPC

- course "Introduction to probability theory", 1st year, Ecole Polytechnique

B. Jourdain, B. Lapeyre course "Monte-Carlo methods", 3rd year ENPC and Master Recherche Mathématiques et Application, Université Paris-Est Marne-la-Vallée

Graduate programs

A. Alfonsi:

- "Traitement des données de marché : aspects statistiques et calibration", lecture for the Master at UPEMLV.

- "Mesures de risque", Master course of UPEMLV and Paris VI.

- Professeur chargé de cours at Ecole Polytechnique

J.-F. Delmas, B.Jourdain course "Jump processes with applications to energy markets", 3rd year ENPC and Master Recherche Mathématiques et Application, Université Paris-Est Marne-la-Vallée

B.Jourdain

- course "Stochastic numerical methods", 3rd year, Ecole Polytechnique

- projects in finance and numerical methods, 3rd year, Ecole Polytechnique

A. Sulem

- "Finite difference for PDEs in Finance", Master 2 MASEF, Université Paris IX-Dauphine, Département Mathématiques et Informatique de la Décision et des Organisations (MIDO), 18h.

- Master of Mathematics, University of Luxembourg, 22 h lectures and responsible of the module "Numerical Methods in Finance".

Doctoral programs

A. Sulem: International summer school in mathematical finance, University of Alberta in Edmonton, Canada "Informational and Imperfect Financial Markets", https://www.pims.math.ca/scientific-event/160625-pssmf (5 lectures)

10.2.2. Supervision

- PhD :

  Anis Al Gerbi : "Ninomiya-Victoir scheme: strong convergence, asymptotics for the normalized error and multilevel Monte Carlo methods", Université Paris-Est supervised by B. Jourdain and E. Clément, defended on October 10 2016

- PhD in progress :

  Rui Chen (Fondation Sciences Mathématiques de Paris grant), "Stochastic Control of mean field systems and applications to systemic risk, from September 2014, Université Paris-Dauphine, Superviser: A. Sulem

Marouen Iben Taarit , " On CVA and XVA computations ", CIFRE Natixis/ENPC, Adviser: Bernard Lapeyre

Giulia Terenzi , "American options in complex financial models", Université Paris-Est Marne-la-Vallée, Supervisors: Damien Lamberton and Lucia Caramellino, from University Tor Vergata, Rome

Alexandre Zhou (started November 2015) "Analysis of stochastic particle methods applied to finance", supervised by B.Jourdain

10.2.3. Juries

- B. Jourdain

  - PhD of Khaled Salhi, defended on December 5, University of Lorraine

  - Reviewer for the PhD of Anthony Le Cavil, defended on December 9, University Paris-Saclay

- A. Sulem

  PhD Richàrd Fischer, *Modélisation de la dépendance pour des statistiques d'ordre et estimation non-paramétrique*, (Modelling the dependence of order statistics and nonparametric estimation), (Jury chair), defended on September 30 2016, Ecole des Ponts.

MAVERICK Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Selection

9.1.1.1. Member of the Conference Program Committees

- Nicolas Holzschuch was a member of the International Program Committee of the Eurographics Symposium on Rendering (EGSR) 2016, the ACM Symposium on Interactive 3D Graphics (I3D) 2016 and 2017, and SIBGRAPI 2016.
- Cyril Soler was a member of the International Program Committee of the Eurographics Symposium on Rendering (EGSR) 2016
- Joëlle Thollot was a member of the International Program Committee of Expressive'2016

9.1.1.2. Reviewer

All members of the Maverick team work as reviewers for the most prestigious conferences, including Siggrah, Eurographics, the EG symposium on rendering.

9.1.2. Journal

9.1.2.1. Reviewer - Reviewing Activities

All members of the Maverick team work as reviewers for the most prestigious journals, including ACM TOG, IEEE TVCG, etc.

9.1.3. Invited Talks

- Fabrice Neyret, Feb 2, 2016. Victoria University, New-Zeland
- Cyril Soler, Nov, 2015. University of Montreal.

9.1.4. Research Administration

Nicolas Holzschuch is an elected member of Inria Evaluation Committee (CE), an elected member of Inria Comité Technique (CTI) and a reserve member of Inria Scientific Council (CS).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Joëlle Thollot and Georges-Pierre Bonneau are both full Professor of Computer Science. Romain Vergne is an associate professor in Computer Science. They teach general computer science topics at basic and intermediate levels, and advanced courses in computer graphics and visualization at the master levels. Nicolas Holzschuch teaches advanced courses in computer graphics at the Master level. In addition, Romain Vergne teached an advanced course on "perception & graphics" at the spring school of Ôkhra (Roussillon).

- Licence: Joëlle Thollot, Automates finis, 27h, L3 cursus alternance, ENSIMAG, France
- Licence: Joëlle Thollot, Théorie des langages, 18h, L3, ENSIMAG, France
- Master: Joëlle Thollot, Responsable du cursus en alternance, 48h, L3-M1-M2, ENSIMAG, France
- Master: Joëlle Thollot, Tutorat d'apprentis, 48h, L3-M1-M2, ENSIMAG, France

9.2.2. Supervision

- PhD in progress: Guillaume Loubet, *Représentations efficaces de l'apparence sous-pixel*, Université de Grenoble, October 2010, Fabrice Neyret

- PhD defended: Léo Allemand-Giorgis, *Visualisation de champs scalaires guidée par la topologie*, October 2012, Georges-Pierre Bonneau, Stefanie Hahmann. Defense

- PhD in progress : Aarohi Johal, *Algorithmes de génération automatique d'arbres de construction à partir de modèles géométriques CAO B-Rep*, September 2013, Jean-Claude Léon, Georges-Pierre Bonneau, thèse CIFRE EdR R&D.

- PhD in progress : Benoit Arbelot, Etudes statistiques de forme, de matériaux et d'environnement pour la manipulation de l'apparence, October 2013, Joëlle Thollot, Romain Vergne.

- PhD in progress: Alexandre Bleron, Stylization of animated 3D scenes in a painterly style, October 1, 2015, Joëlle Thollot, Romain Vergne, Thomas Hurtut.

9.2.3. Juries

- Nicolas Holzschuch was in the jury for the PhD defenses of Boris Raymond (Bordeaux), Thomas Subileau (Toulouse), and the "HDR" of Lionel Simonot (Physique, Poitiers).

- Joëlle Thollot has been a member of the jury for the PhD of Pierre-Luc Manteaux (Oct 2016 - UGA), Ulysse Vimont (dec 2016 - UGA), Jordane Suarez (dec 2016 - Paris 8).

9.3. Popularization

Every year, "MobiNet" (see section 4.5) classes are conducted with high school pupils of the large Grenoble area to practice initiation and intuition on Computer Science, Maths and Physics. Depending on the year, we have 2 to 4 groups in the scope of INP-Grenoble "Enginneering weeks", and 0 to 2 groups in the scope of Math-C2+ operations.

<h1 style="text-align:center; color:red;">MCTAO Project-Team</h1>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

The cut locus: A bridge over differential geometry, optimal control and transport, Bangkok, August 2016 (B. Bonnard, J.-B. Caillau, K. Kondo, L. Rifford, M. Tanaka). The conference was organized with the support of the Thai KMITL University and gathered 30 people mostly from Japan, Thailand and France.

9.1.1.2. Member of the Organizing Committees

Séminaire de géométrie hamiltonienne, Paris 6 (J.-B. Caillau). Bi-mensual seminar.

Journée McTAO, Inria Sophia, January 2016. One day event organized by the team with four invited speakers.

10th International Young Researcher Workshop on Geometry, Mechanics and Control, Paris (IHP), January 2016 (J.-B. Caillau). The workshop gathered 50 people for conferences and mini-courses.

Journées SMAI-MODE, Toulouse, March 2016 (J.-B. Caillau). The conference gathered 140 researchers, and was coupled with a series of two mini-courses co-organized with GdR MOA.

Journée MokaTAO, Inria Paris, October 2016. Two-day event co-organized by Mokaplan (Inria Paris) and McTAO teams, with talks by members of these teams. The two teams share common interests in optimization and optimal transportation.

Groupe de travail "Optimisation et applications", Inria Sophia Antipolis, November 2016 (J.-B. Caillau). One day event with four invited speakers.

9.1.2. Books

9.1.2.1. Springer briefs

B. Bonnard and J. Rouot, together with M. Chyba, have written the series of notes [28], submitted as Springer briefsPublications. They were the basis of courses at the Phd level given at the University of Burgundy and at the institute of Mathematics for industry at Fukuoka (Japan)

9.1.2.2. Springer Maths and Industry

B. Bonnard, together with M. Chyba, served as an editor of the volume [18], which gather contributions on the subject by specialists of both academics and space agencies.

9.1.2.3. Radon Series on Comput. and Applied Math.

J.-B. Caillau, together with M. Bergounioux, G. Peyré, C. Schnörr and T. Haberkorn, served as an editor for the volume [21]. With a focus on the interplay between mathematics and applications of imaging, the first part covers topics from optimization, inverse problems and shape spaces to computer vision and computational anatomy. The second part is geared towards geometric control and related topics, including Riemannian geometry, celestial mechanics and quantum control.

9.1.3. Journals

9.1.3.1. Member of the Editorial Boards

L. Rifford has been a member of the Editorial Board of the journal "Discrete and Continuous Dynamical Systems - A" since 2014.

9.1.3.2. Reviewer - Reviewing Activities

The team members have reviewed articles in 2016 for the following journals: SIAM J. Control & Optim., ESAIM Control Optim. and Calc. Var., Automatica, J. Dyn. Control Syst., J. Optim. Theory Appl., J. Math. Pures Appl., Inventiones Mathematicae, Mathematische Zeitschrift, Advances in Differential Equations, Memoirs of the American Mathematical Society, Annales Scientifiques de l'ENS, Nonlinear Analysis, Communications in Mathematical Physics

9.1.4. Invited Talks

J.-B. Caillau
03/2016: *Séminaire Géométrie et dynamique*, Nice
04/2016: *Séminaire de Géométrie hamiltonienne*, Paris
05/2016: *Emerging Trends in Applied Mathematics and Mechanics*, Perpignan
06/2016: *Alicante-Limoges-Elche Meeting on Optimization*, Cartagena
08/2016: *The cut locus: A bridge over differential geometry, optimal control and transport*, Bangkok
09/2016: *Séminaire Astrogéo*, Observatoire de la côte d'azur, Sophia

L. Giraldi
11/2016: *Controllability and hysteresis*, Trento, Italie

L. Rifford
02/2016: *Rencontre d'Analyse Mathématique et ses Applications*, Ouargla (Algeria)
02/2016: *Séminaire de Calculs des Variations et EDP*, Aix-Marseille University
03/2016: *CIMPA Research School "Géométrie et Analyse"*, Abidjan (Ivory Coast)
03/2016: *Séminaire Bourbaki*, Institut Henri Poincaré, Paris
04/2016: *Colloquium de l'Institut de Mathématiques*, University of Neuchâtel (Switzerland)
04/2016: *International Conference of the GE2MI*, Hammamet (Tunisia)
05/2016: *Colloquium du Département de Mathématiques*, University of Orsay
05/2016:*Geometric control and sub-Riemannian geometry*, Course given at the University of Isfahan (Iran)
06/2016: *Analysis, Geometry, and Optimal Transport*, KIAS, Seoul (South Korea)
08/2016: *The cut locus*, KIMTL, Bangkok (Thailand)
11/2016: *Dynamical Systems Seminar*, ETH Zurich
11/2016: *Dynamics and Geometry Seminar*, University Nice Sophia Antipolis
12/2016: *Seminar of Hamiltonian Geometry*, Paris VI
12/2016: *2016 Analysis School in Benin*, IMPS, Benin

9.1.5. Leadership within the Scientific Community

J.-B. Caillau has been head of the SMAI-MODE group (2014-2016), the group on optimization of the French Society for Applied and Industrial Mathematics.

L. Rifford has been executive director of CIMPA since September 2016.

9.1.6. Scientific Expertise

J.-B. Caillau is member of the scientific committees of the "Institut de Mécanique Céleste de Calcul des Éphémérides" and of the GdR Calcul, and corresponding member in Dijon for the Labex AMIES.

J.-B. Pomet is a member of the steering committee of "C4PO", a structuring project of the IDEX UCA[JEDI].

9.1.7. Research Administration

J.-B. Caillau is the joint head of the CNRS team Statistique, Probabilités, Optimisation & Contrôle at the Math. Institute of Univ. Bourgogne & Franche-Comté.

J.-B. Pomet has been an elected member of the Inria Evaluation Committee (commission d'évaluation) since 2014.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

J.-B. Caillau has managed L1 math and the master of applied mathematics (M2 MIGS) of Univ. Bourgogne Franche-Comté (2014-2016). He has been a designated member of the Conseil pédagogique du Département de Mathématiques at UBFC (2014-2016), and of the Conseil de l'UFR Mathématiques & Informatique at Univ. Paris I (2014-2016). His teaching duties in 2016 include:

Licence : cours d'analyse (analysis), 100 H équivalent TD, niveau L1, Univ. Bourgogne Franche-Comté, France

Master : approximation géométrique (geometric approximation), 50 H équivalent TD, niveau M1, Univ. Bourgogne Franche-Comté, France

Master : optimisation, 50 H équivalent TD, niveau M2, Univ. Bourgogne Franche-Comté, France

Master : contrôle optimal (optimal control), 20 H équivalent TD, niveau M2, ENSTA-Paristech, France

L. Giraldi is responsible of the following courses:

Licence : *"colles de mathématiques", MPSI and MP*, 4 H équivalent TD/week, L1 L2, Lycée International de Valbonne,

Licence : numerical analysis, 20 H équivalent TD, L3, Polytech Nice Sophia,

Master : numerical analysis project, 30 H équivalent TD, M1, Polytech Nice Sophia.

9.2.2. Supervision

PhD: Zheng Chen, L^1-minimization in space mechanics, Univ. Paris Saclay, defended September, 2016, J.-B. Caillau (co-supervised with Y. Chitour) [1]

PhD: Jérémy Rouot, , Univ. Nice Sophia Antipolis, Geometric and numerical methods in optimal control and application to orbit transfer and swimming at low Reynolds number. Defended November, 2016, co-supervised by B. Bonnard and J.-B. Pomet. [2]

PhD in progress: Achille Sassi, to be defended 01/2017, Numerical methods for hybrid control and chance-constrained optimization problems, Univ. Paris Saclay, J.-B. Caillau (co-supervised with M. Cerf, E. Trélat and H. Zidani)

PhD in progress: Michaël Orieux, started 10/2015, Dynamical systems and optimal control, Univ. Paris Dauphine, J.-B. Caillau (co-supervised with J. Féjoz)

PhD in progress: Zeinab Badreddine, started 09/2014, Sub-Riemannian Geometry and Optimal Transport, co-supervised by L. Rifford and B. Bonnard.

PhD in progress: Sébastien Fueyo, started 09/2016, Testing stability of nonlinear amplifier by frequency-domain methods. J.-B. Pomet (co-supervised with L. Baratchart).

PhD in progress: Alice Nolot, started 09/2016, Sub-Riemannian geometry and optimal swimming at low Reynolds number. B. Bonnard.

9.2.3. Juries

In 2016, J.-B. Caillau referee for Jiamin Zhu (Univ. Paris 6) and Maxime Chupin (Univ. Paris 6) PhD theses, for the HDR of Aude Rondepierre (Univ. Toulouse), and jury member for the PhD thesis of Clément Royer (Univ. Toulouse).

9.3. Popularization

Conference for high school students, "Ne votez pas, jugez !" (J.-B. Caillau), semaine des maths 2016, Lycée Charles de Gaulle (Dijon) and MASTIC initiative (Inria Sophia Antipolis).

MEMPHIS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Reviewer

Charles-Henri Bruneau has reviewed several papers for the 9th International Conference on Computational Fluid Dynamics, july 10th-15th, Istanbul.

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

Angelo Iollo is in the advisory board of Acta Mechanica.

10.1.2.2. Reviewer - Reviewing Activities

Journal of Computational Physics, International Journal of CFD, Journal of Non-linear Analysis B, ASME Journal of Computational and Nonlinear Dynamics, Journal of Fluid Mechanics, Acta Mechanica, AIAA Journal, International Journal Numerical Methods in Fluids, Computers & Fluids, Journal of Engineering Mathematics, European Journal of Mechanics / B Fluids, Journal Européen de Systèmes Automatisés, Applied Mathematics and Computation. Nuclear Science and Engineering, Computer Methods in Applied Mechanics and Engineering, Journal of Theoretical Biology, Computational Optimization and Applications. Applied science, Meccanica.

10.1.3. Invited Talks

The invited talks are [15], [16], [17], [18].

10.1.4. Leadership within the Scientific Community

Angelo Iollo is responsible of the scientific policy of the scientific computing departement of the LabEx CPU. This department gathers 60 researchers of the math lab IMB, of the computer science lab LaBRI, of the mechanics lab I2M and of the CEA.

10.1.5. Scientific Expertise

Michel Bergmann: reviewer of the PhD defense *Apprentissage d'estimateurs sans modèle avec peu de mesures - Application à la mécanique des fluides* de Kévin Kasper, Ecole normale supérieure de Cachan, 12/10/2016.

Michel Bergmann: member of the Inria Young Researchers Commission, which allocates PhD and Postdoc grants.

Lisl Weynans has participated to the *Comités de sélection* Cnam and Paris 5 Descarte, may 2016.

Angelo Iollo: Président du jury d'HDR de Heloise Beaugendre, Institut de Mathématiques de Bordeaux, université de Bordeaux, mars 2016.

Angelo Iollo: Membre Jury HDR de Laurent Cordier, Institut P', université de Poitiers, novembre 2016.

Angelo Iollo: Membre du Jury de thèse de Loic Lacouture « Modélisation et simulations de mouvement de structures fines » département de mathématiques, juin 2016, Université Paris Sud.

Angelo Iollo: Président du jury de thèse de Olivier Gallinato, « Modélisation du processus cancéreux et méthodes superconvergentes de résolution de problèmes d'interface sur maillage cartésien », Institut de Mathématiques de Bordeaux, université de Bordeaux, novembre 2016.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Four members of the team are Professors or Assistant Professors at Bordeaux University and have a teaching duty, which consists in courses and practical exercises in numerical analysis and scientific computing. Michel Bergmann (CR) also teaches around 64 hours per year (practical exercises in programmation for scientific computing).

10.2.2. Supervision

PhD in progress : Alice Raeli, Numerical Modelling for Phase Changing Materials, 12/06/2014, Azaiez M., Bergmann M., Iollo A.

PhD in progress : Claire Morel, Modélisation aérodynamique 3D d'une turbine éolienne, 01/01/2015, M., Bergmann M., Iollo A.

PhD in progress : Federico Tesser, Identification of dense suspensions rheology, 01/11/2014, Bergmann M., Iollo A.

PhD in progress : Baptiste Lambert, modélisation et simulations numériques des contacts dans des écoulements chargés en particules, 01/10/2015, Bergmann M., Weynans L.,

PhD in progress : Emanuela Abbate, Méthodes numériques pour problèmes stiff en mécanique des fluides et élasticité, 01/11/2015, Iollo, A.

PhD in progress : Mathias Braun, Modèles réduits et problèmes inverses pour l'étude de la résilience des réseaux d'eau potable, 01/10/2015, Iollo A. and Mortazavi I.

PhD in progress : Meriem Jedoua, Introduction d'une méthode efficace de capture d'interface permettant la localisation d'un grand nombre d'objets immergés dans un fluide. Applications à des solides rigides et des vésicules (membranes élastiques) immergés dans un fluide incompressible, 01/10/2013, Bruneau C.-H. and Maitre E.

2012-2016. Dr. Hervé Ung. Ancien ENSEIRB-MATMECA. Problèmes inverses dans les réseaux d'eau potable. Angelo Iollo, Iraj Mortazavi, Bourse Irstea.

10.2.3. Juries

Michel Bergmann has been reviewer of the PhD defense *Apprentissage d'estimateurs sans modèle avec peu de mesures - Application à la mécanique des fluides* de Kévin Kasper, Ecole normale supérieure de Cachan, 12/10/2016.

Lisl Weynans has participated to the PhD defense of Andrea Filippini, Inria Bordeaux, 14/12/2016.

Angelo Iollo: Président du jury d'HDR de Heloise Beaugendre, Institut de Mathématiques de Bordeaux, université de Bordeaux, mars 2016.

Angelo Iollo: Membre Jury HDR de Laurent Cordier, Institut P', université de Poitiers, novembre 2016.

Angelo Iollo: Membre du Jury de thèse de Loic Lacouture « Modélisation et simulations de mouvement de structures fines » département de mathématiques, juin 2016, Université Paris Sud.

Angelo Iollo: Président du jury de thèse de Olivier Gallinato, « Modélisation du processus cancéreux et méthodes super-convergentes de résolution de problèmes d'interface sur maillage cartésien », Institut de Mathématiques de Bordeaux, université de Bordeaux, novembre 2016,

10.3. Popularization

Lisl Weynans has co-organized the Journée "Filles et Maths, une équation lumineuse": may 11t 2016

Lisl Weynans has co-organized Journée Emploi Maths de l'Unité de Formation "Mathématiques et Interaction"

MEPHYSTO Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

D. Bonheure was General chair of the committee of the BRUXELLES-TORINO TALKS IN PDE'S MAY 2-5 2016 UNIVERSITÀ DEGLI STUDI DI TORINO DIPARTIMENTO DI MATEMATICA "GIUSEPPE PEANO"

9.1.2. Journal

9.1.2.1. Member of the Editorial Boards

D. Bonheure is associate editor at the Bulletin of the Belgian Mathematical Society - Simon Stevin (http://projecteuclid.org/info/euclid.bbms)

A. Gloria is associated editor at the North-Western European Journal of Mathematics (http://math.univ-lille1.fr/~nwejm/).

9.1.3. Invited Talks

D. Bonheure was invited speaker at

- 02/12/2016, Recent progress in Partial Differential Equations, Université Aix-Marseille
- 03/10/2016 au 07/10/2016, New trends in Partial Differential Equations, Centro De Giorgi, SNS Pisa
- 28/09/2016 au 30/09/2016, 3rd Conference on Recent Trends in Nonlinear Phenomena, Perugia
- 12/09/2016 au 17/09/2016, Partial Differential Equations and Related Topics – On the occasion of Giorgio Talenti's 75th birthday , Alghero

Stephan De Bièvre was invited speaker at

- Université Fourier, Grenoble, Mathematical Physics Seminar, April 2016
- Université de Nantes, Mathematical Physics Seminar, May 2016
- Spectral and Scattering theories in QFT, IV, Porquerolles, May 2016
- 11th AIMS Conference on Dynamical systems, ODE, and Applications, Orlando, July 2016
- Conference "Coherent States and their Applications: A Contemporary Panorama", CIRM Marseille, November 2016

A. Gloria was invited speaker at

- ENS Rennes, January 2016
- GAMM conference, Paris, January 2016
- Winter school on stochastic homogenization, Augsburg, February 2016
- Bristish Mathematical Colloquium, Bristol, March 2016
- Courant Institute, NYU, New York, May 2016
- 15th European Mechanics of Materials Conference, Brussels, September 2016
- Probability seminar, Warwick, October 2016
- Workshop "Functional inequalities, heat kernels, and random processes", Oberwolfach institute, December 2016

M. Simon was invited speaker at

- YEP XIII: Large Deviations for Interacting Particle Systems and Partial Differential Equations, Eindhoven (Netherlands)
- Workshop in Stochastic Analysis, Universidade Federal de Campinas, Brazil
- Tokyo University, Probability Seminar
- Workhsop "Large Scale Stochastic Dynamics", Oberwolfach institute, Germany

9.1.4. Leadership within the Scientific Community

D. Bonheure is member of the Executive board of the Belgian Mathematical Society.

S. De Bièvre is

- the scientific coordinator of the CEMPI (2012-2019),
- member of the drafting committee of the IDEX UDL, and of the delegation that presented the project to the jury in Paris (April 2015, January 2016),
- member of the Executive Committee of the International Association of Mathematical Physics (since 2012).

9.1.5. Scientific Expertise

D. Bonheure is a member of the ESF College of Expert Reviewers from 20 October 2016 to 19 October 2019

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Denis Bonheure, Integral and differential calculus, 46h, L1 (mathematics & physics), Université Libre de Bruxelles, Belgium

Licence : Denis Bonheure, Mathematics for management engineering, 30h, L1 (mathematics & physics), Université Libre de Bruxelles, Belgium

Licence : Guillaume Dujardin, Integral and differential calculus, 60h, L2 (mathematics & physics), Université Libre de Bruxelles, Belgium

Licence : Stephan De Bièvre, Probability, 15h, L2 (physics), Université Lille 1

Licence : Stephan De Bièvre, Probability, 50h, L3 (mathematics), Université Lille 1

Licence : Stephan De Bièvre, Financial mathematics, 30h, L1 (economics), Université Lille 1

Master : Denis Bonheure, Variational methods and PDEs, 30h, M2, Université Libre de Bruxelles, Belgium

Master : Antoine Gloria, Anderson localization, 30h, M2, Université Libre de Bruxelles, Belgium

Master : Antoine Gloria, Fluctuations in stochastic homogenization, 4h30, Doctoral course, YEP XIII, Eindhoven, Netherlands

9.2.2. Supervision

PhD in progress : Mitia Duerinckx, Topics in stochastic homogenization of PDEs, 01/10/2014, A. Gloria & S. Serfaty (NYU).

PhD in progress : Pierre Mennuni, Université Lille 1, 01/10/2016, S. De Bièvre, A. De Laire (Lille 1) & G. Dujardin

PhD in progress : Hussein Cheikh-Ali, Université Libre de Bruxelles and Université de Lorraine, D. Bonheure (ULB) & F. Robert (Nancy)

PhD in progress : Robson Alves do Nascimento Filho, Université Libre de Bruxelles, D. Bonheure (ULB)

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9.2.3. Juries

S. De Bièvre was in the jury of the PhD theses of A. Newman (Loughbourough, England), A. Vavasseur (Nice) and J.P. Miqueu (Rennes).

9.3. Popularization

M. Simon gave a talk at ESPE (Ecole Supérieure du Professorat et de l'Education) during the week "Semaine des mathématiques", about the mathematical properties of the official soccer ball. Marielle Simon is part of the program "MathenJeans".

MEXICO Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. LIA INFORMEL

The Indo-French Formal Methods Lab is an International Associated Laboratory (LIA) fostering the scientific collaboration between India and France in the domain of formal methods and applications to the verification of complex systems. Our research focuses on theoretical foundations of games, automata, and logics, three important tools in formal methods. We study applications to the verification of safety-critical systems, with an emphasis on quantitative aspects (time, cost, energy, etc.), concurrency, control, and security protocols. The Laboratory was founded in 2012 by a consortium of researchers from the French Centre for Scientific Research (CNRS), Ecole Normale Supérieure de Cachan (ENS Cachan), Université Bordeaux 1, the Institute of Mathematical Sciences Chennai (IMSc), the Chennai Mathematical Institute (CMI), and the Indian Institute of Science Bangalore (IISc). It is directed by Paul Gastin (ENS Cachan, MExICo team) and Madhavan Mukund (CMI). The LIA has been scientifically extremely active and productive since its creation. The LIA has supported numerous scientific exchanges and joint research papers, see here. Among many other activities, the LIA organised another edition of the ACTS workshop.

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

- Thomas Chatain was a member of the program committee of *(ACSD 2016)*.
- Matthias Függer was a member of the PCs of DDECS'16 and ASYNC'16.
- Stefan Haar was a member of the PCs of *13th International Workshop on Discrete Event Systems*WODES 2016, the *16th International Conference on Applications of Concurrency to Systems Design(ACSD 2016)*, *Int. WS on Petri Nets and Software Engineering PNSE 2016*, ATAED Workshop on Analysis of Event Data 2016, and *IEEE Int. Conf. on Emerging Technologies and Factory Automation(ETFA)* 2016.
- Serge Haddad was a member of the PC of the 10th International Workshop on Verification and Evaluation of Computer and Communication Systems (VECOS 2016),Tunis, Tunisia.
- Stefan Schwoon was a member of the PC of the 37th International Conference on Applications and Theory of Petri Nets and Concurrency (PN 2016).
- Claudine Picaronny was a PC member for the Eighth International Conference on Advances in System Simulation (SIMUL'16)

9.1.2.2. Reviewer

- Matthias Függer was a reviewer for ICALP, ASYNC, DISC, DDECS, and IPDPS.
- Stefan HAAR was a reviewer for MFCS 2016.
- Stefan Schwoon acted as a reviewer for the following conferences taking place in 2016 : TACAS, ACSD, CONCUR, FSTTCS.

9.1.3. Journal

9.1.3.1. Member of Editorial Boards

- Stefan Haar is an associate editor of the *Journal of Discrete Event Dynamic Systems: Theory and Applications*, and a guest editor (with R. Meyer) of the upcoming special issue on ACSD 2015 in *ACM Transactions on Embedded Computing Systems (TECS)*.

9.1.3.2. Reviewer - Reviewing Activities

- Matthias Függer was a reviewer for the Journal *Energies*.
- Stefan Haar was a reviewer for *LMCS*, *MSCS*, *IEEE Transactions on Automatic Control* and *Journal of Discrete Event Dynamic Systems*.
- Stefan Schwoon acted as a reviewer for the following journals in 2016 : Fundamenta Informaticae, Transactions on Software Engineering.

9.1.4. Invited Talks

- Serge Haddad gave the following invited talks:
  - at the Joint AFSEC/ANR PACS workshop on May 26, 2016, Paris, France, on "Polynomial Interrupt Timed Automata";
  - at the VECOS 2016 conference, Tunis, Tunisia, on October 6, 2016, "Active Diagnosis";
  - at IDC 2016 (10th International Symposium on Intelligent Distributed Computing), October 11, 2016, Paris, France, on "Fault Diagnosis in Probabilistic Systems".
- Benedikt Bollig gave an invited tutorial at Highlights, Brussels, Belgium, 2016, on Automata and Logics for Distributed Systems

9.1.5. Research Administration

- Paul Gastin is one of the directors of the LIA INFORMEL.
- Stefan Haar is the head of the *SCILEX* axis within the *DIGICOSME* Labex. He was the Inria center of Saclay's correspondent for european partnerships until the summer of 2017, when he stepped down from this position to accept the presidency of Inria's COST-GTRI (international relations working group).
- Serge Haddad was a member of the recruitment committee for a professorship at INSA Toulouse.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Serge Haddad and Paul Gastin are professors at ENS Cachan (now ENS Paris-Saclay), Claudine Picaronny, Thomas Chatain and Stefan Schwoon are associate professors of the same university. Serge Haddad is the head of the Computer Science Department, and Stefan Schwoon is in charge of the L3 class. Claudine Picaronny is a co-director of the ENS Paris-Saclay's Mathematics department and a member of the juries of 'l'agrégation interne de Mathématiques' and of the second 'concours de Mathématiques' of ENS Cachan; she is also the coordinator of the mathematics/computer science examination of E3A, parts MP and MC.

Master : Benedikt Bollig, Non-sequential Theory of Distributed Systems, 36, M2, MPRI, ENS Cachan, France.

9.2.2. Supervision

Defended theses:
- PhD ([3])by Salim Perchy , 'Opinions, Lies and Knowledge. An Algebraic Approach to Mobility of Information and Processes', E´cole Polytechnique, defended October 4, supervised by Stefan Haar and Franck Valencia (COMETE team).
- PhD by Simon Theissing [4], 'Supervision for Multimodal Tranport Systems', ENS Cachan, defended December 5, supervised by Stefan Haar.

PhD in progress:
- Tymofii PROKOPENKO, Ecole Polytechnique since Oct 1, 'Privacy', jointly supervised by Catuscia Palamidessi (COMETE team) and Serge Haddad;
- Engel Lefaucheux, ENS Paris-Saclay since 2015, 'controlling information in probabilistic systems', jointly supervised by Nathalie Bertrand (SUMO team) and Serge Haddad

- Yann Duplouy, ENS Paris-Saclay since 2015,'application of formal methods to the development of embedded systems for autonomous vehicles', supervised by Béatrice Bérard and Serge Haddad. Marie Fortin (ENS Paris-Saclay since Oct 1); 'Tree-automata techniques for the analysis of distributed systems', co-supervised by Benedikt Bollig and Paul Gastin.

- Hugues Mandon (ENS Paris-Saclay since Oct 1, Digicosme Grant), Computational Models and Algorithms for the Prediction of Cell Reprogramming Strategies; supervised by Stefan Haar, co-supervision by Loic Paulevé (LRI).

- Robert Najvirt (TU Wien, Austrian FWF SIC project), *realistic delay models with applications in high-speed and low-power circuits*, co-supervised by Matthias Függer and Andreas Steininger.

- Martin Perner (TU Wien, Austrian FWF SIC project), *clock generation on-chip and formalisms suitable to prove correct VLSI circuits*, co-supervised by Matthias Függer and Ulrich Schmid.

- Juergen Maier (TU Wien, Austrian FWF SIC project), *on realistic delay models with applications in high-speed and low-power circuits, with focus on noise and high-order models*, co-supervised by Matthias Függer and with Ulrich Schmid.

9.2.3. Juries

- Benedikt bollig was
  - reviewer and jury member of the PhD thesis Logics on Data Words: Expressivity, Satisfiability, Model Checking by Ahmet Kara (Supervisor: Thomas Schwentick), Universität Dortmund, Germany, 2016, and
  - Reviewer of the PhD thesis Probabilistic Logic, Probabilistic Regular Expressions, and Constraint Temporal Logic by Thomas Weidner (Supervisor: Manfred Droste), Universität Leipzig, Germany, 2016

- Thomas Chatain was a member of the jury for the PhD defense of María Martos-Salgado, Universidad Complutense de Madrid, in January 2016.

- In addition to the juries of the two supervised students, Stefan Haar was the president of the jury for the PhD of Hassan Ibrahim, on 'SAT-based Diagnosability and Predictability Analysis in Centralized and Distributed Discrete Event Systems' at Université Paris-Sud on December 16.

- Serge Haddad was
  - a member of the juries for the PhD of Amira Methni on 'Méthodes de vérification de logiciel système critique", on July 7, 2016, at CNAM,
  - the president of the PhD jury for Hadrien Bride on "Verifying Modal Specifications of Workflow Nets" on October 24, 2016, at Université de Franche-Comté, and
  - a member of the HdR jury for Yann Thierry-Mieg, "From Symbolic Verification To Domain Specific Languages", on December 7, 2016, at Université Paris 6.

9.3. Popularization

- Stefan Haar gave a talk entitled 'Post hoc sed non propter hoc, or: why you should care about causality', in the Seminar@SystemX series of IRT SystemX on September 14, 2016.

MIMESIS Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Selection

8.1.1.1. Chair of Conference Program Committees

- Igor Peterlik was chair in the Workshop on Mathematical and Engineering Methods in Computer Science, October 21 — 23, Telc, Czech Republic
- Nazim Haouchine was a co-chair of the Medical Robotics session at IROS 2016, the International Conference on Intelligent Robots and Systems

8.1.1.2. Reviewer

- Hadrien Courtecuisse made reviews for the IEEE Haptics Symposium and the conference Medical and Biological Engineering and Computing
- Nazim Haouchine made reviews for the International Symposium on Biomedical Imaging

8.1.2. Journal

8.1.2.1. Reviewer - Reviewing Activities

- David Cazier is reviewer for the Computer-Aided Design Journal and for the International Journal of Virtual Reality
- Igor Peterlik is reviewer for the following journals: IEEE Transaction on Haptics, IEEE Transaction on Industrial Electronics, IEEE Transaction on Visualization and Computer Graphics and Computer and Graphics
- Hadrien Courtecuisse is reviewer for the journal Transactions on Haptics and Visual Computer
- Nazim Haouchine made reviews for the International Journal of Computer Assisted Radiology and Surgery

8.1.3. Invited Talks

- Stéphane Cotin gave an invited talk at the 14th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (Tel Aviv, Israel, 2016)

8.1.4. Scientific Expertise

- Igor Peterlik made scientific expertises at Masaryk University for teaching, supervision of master and Ph.D. students and scientific consultations. Active participation at project funded by Grand Agency of the Czech Republic: *Development of Reliable Methods for Automated Quantitative Characterization of Cell Motility in Fluorescence Microscopy*.

8.1.5. Research Administration

- GTAS : David Cazier heads (with Marc Parenthoen) the national Workgroup on Animation and Simulation of the GDR IG-RV since 2014

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Master: Stéphane Cotin, *Medical Imaging (4h)*, M2, Arts et Métiers ParisTech - Paris, France
- Master: Stéphane Cotin, *Medical Imaging (4h)*, M2, Master of Surgical Sciences - Paris, France

- Master: Igor Peterlik, *Modélisation des Systèmes Vivants (10h)*, M2, Master TIC-Santé, Télécom Physique Strasbourg
- Master: Hadrien Courtecuisse, *Real time simulation (30h)*, M2, Master TIC-Santé, Télécom Physique Strasbourg
- Master: Hadrien Courtecuisse, *Real time simulation (10h)*, M1, Master IRMC, Télécom Physique Strasbourg
- Licence: David Cazier, *Web technologies and programming (96h)*, Licence, Université de Strasbourg, France

8.2.2. Supervision

- PhD : Rosalie Plantefeve, *Augmented reality and numerical simulations for resection of hepatic tumors*, Université de Lille, defended on 08/06/2016, supervised by Stéphane Cotin
- PhD in progress: Christoph Paulus, *Modélisation et simulation temps-réel pour la prise en compte des changements topologiques dans les tissus mous*, 01/01/2014, supervised by David Cazier, Stéphane Cotin
- PhD in progress: Jaime Garcia Guevara, *Augmented ultrasound imaging for hepatic surgery*, 01/09/2015, supervised by Stéphane Cotin, Marie-Odile Berger
- PhD in progress: Raffaella Trivisonne, *Computer-aided vascular interventions*, 01/09/2015, Stéphane Cotin, Erwan Kerrien
- PhD in progress: Yinoussa Adagolodjo, *Coupling between robotics and medical simulation for automated procedures*, 01/02/2015, supervised by Hadrien Courtecuisse
- PhD in progress: Fanny Morin, *Non linear simulation for intraoperative guidance for neurosurgery*, 01/10/2014, supervised by Yohan Payan, Matthieu Chabanas, Hadrien Courtecuisse (collaboration with the TIMC laboratory, Grenoble)
- PhD in progress: Lukas Rucka, *Validation and verification of soft tissue models*, 2016 - 2019, supervised by Igor Peterlik and Professor Ludek Matyska in the scope of an international collaboration with Faculty of Informatics, Masaryk University, Czech Republic.
- Master thesis in progress: Petra Ondrejkova, *Contact modeling for forward and inverse simulations of deformable objects in Matlab*, 01/09/2016 - 31/07/2017 , supervised by Igor Peterlik and Prof. Ludek Matyska in the scope of an international collaboration with Faculty of Informatics, Masaryk University, Czech Republic.

8.2.3. Juries

- HdR defense: Benoit Crespin, *Modélisation d'objets complexes, simulation de fluides et interactions*, 14/12/2016, Université de Limoges, David Cazier (reviewer)
- PhD defense: Armelle Bauer, *Modélisation anatomique utilisateur spécifique et animation temps réel : Application à l'apprentissage de l'anatomie*, 11/11/2016, Université Grenoble, Stéphane Cotin (reviewer)
- PhD defense: Yuen Law, *Real-Time Simulation of B-Mode Ultrasound Images for Medical Training*, 23/11/2016, RWTH Aachen, Germany, Stéphane Cotin (reviewer)
- PhD defense: Lucas Royer, *Real-time Tracking of Deformable Targets in 3D Ultrasound Sequences*, 12/12/2016, INSA Rennes, France, Stéphane Cotin (reviewer)

8.3. Popularization

Stéphane cotin gave invited talks at:

- the Fist European workshop on Nanomedicine, Modeling, Virtual Reality and Robotics applied to surgery (Strasbourg, 2016)
- the Business Engineering and Surgical Technologies symposium (Strasbourg, 2016)
- the OpenYourMind seminar (Paris, 2016)
- IHU Scientific meeting on registration and augmented reality (Strasbourg)

Members of the MIMESIS team contributed to the following events:

- presentation of our research activities during several IHU fellow meetings
- demonstration of our prototype of retina surgery training system during the national congress of ophthalmology (May 2016, Paris)
- demonstration of our prototype of retina surgery training system during the DMLA meeting (September 2016, Paris)
- demonstration of our prototype of retina surgery training system during the regional ophthalmology meeting (November 2016, Strasbourg)

<p style="text-align:center;color:red;font-weight:bold;">MIMETIC Project-Team</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

> Marc Christie, Program chair of Motion in Games 2015 (but held in 2016)

10.1.1.2. Member of the Organizing Committees

> Antonio Mucherio, organiser of Distance Geometry Day 2016, Rennes, France, December 2016

> Anne-Hélène Olivier, co-chair of Workshop VHCIE 2016, IEEE VR 2016, Greenville, United-States, October 2016

> Marc Christie, steering committee of Motion in Games 2015 and 2016, co-chair of WICED 2016 (Eurographics Workshop on Intelligent Cinematography and Editing)

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

Marc Christie

> ACM Motion in Games MIG 2016, San Francisco, United-States, October 2016

> ACM Symposium on Computer Animation 2016, Zurich, Switzerland, July 2016

Ludovic Hoyet

> ACM Motion in Games MIG 2016, San Francisco, United-States, October 2016

> ACM Symposium on Applied Perception 2016, Los Angeles, United-States, July 2016

> International Conference on Computer Graphics Theory and Applications 2017, Porto, Portugal, February 2017

Richard Kulpa

> International Conference on Computer Graphics Theory and Applications 2017, Porto, Portugal, February 2017

Franck Multon

> ACM Motion in Games MIG 2016, San Francisco, United-States, October 2016

> Computer Animation and Social Agents CASA 2016, Geneva, Switzerland, May 2016

Anne-Hélène Olivier

> ACM Motion in Games MIG 2016, San Francisco, United-States, October 2016

10.1.2.2. Reviewer

Marc Christie

> Eurographics, Lyon, France, April 2017

> ACM CHI, Denver, United-States, May 2017

> ACM Siggraph, Anaheim, United-States, July 2016

> Eurographics 2017, CHI 2017, Siggraph 2017,

Ludovic Hoyet

>	ACM Siggraph, Anaheim, United-States, July 2016

>	ACM SigChi, San Jose, United-States, May 2016

>	Eurographics, Lyon, France, April 2017

>	IEEE VR 2017, Los Angeles, United-States, March 2017

>	Pacific Graphics, Okinawa, Japan, October 2016

Richard Kulpa

>	IEEE International Conference on Automatic Face and Gesture Recognition, 2017

Franck Multon

>	IEEE VR 2017, Los Angeles, United-States, March 2017

Anne-Hélène Olivier

>	IEEE VR 2017, Los Angeles, United-States, March 2017

>	ACM Siggraph, Anaheim, United-States, July 2016

>	ACM Siggraph Asia 2016, Macao, China, December 2016

Charles Pontonnier

>	ACM VRST 2016, Munich, Germany, November 2016

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

>	Marc Christie, Associate Editor of the Visual Computer

>	Armel Crétual, Editorial board of Journal of Electromyography and Kinesiology

>	Franck Multon, Presence, MIT Press

10.1.3.2. Reviewer - Reviewing Activities

Marc Christie

>	IEEE Transactions on Visualization and Computer Graphics, The Visual Computer, Computer Graphics Forum

Armel Crétual

>	Journal of Electromyography and Kinesiology, British Medical Journal open, Clinical Biomechanics, Journal of Orthopaedic Research, IEEE Computer Graphics and Applications

Ludovic Hoyet

>	IEEE Transactions on Visualization and Computer Graphics, IEEE Computer Graphics & Applications, Computer & Graphics, The Visual Computer Journal, Computer Animation and Virtual Worlds

Richard Kulpa

>	Journal of Sports Engineering and Technology, Computer

Antonio Mucherino

>	Mathematical Programming Series A and B, Springer, October 2016.

Franck Multon

>	Journal Applied Ergonomics, IEEE Transaction on Haptics, IEEE Trans. on Visualization and Computer Graphics, ACM Transactions on Applied Perception, IEEE Computer Graphics and Applications, International Journal of Computer Games Technology

Anne-Hélène Olivier

>	Journal of Experimental Psychology Human Perception and Performance

Charles Pontonnier

> Applied Ergonomics, IEEE Computer Graphics and Applications, MDPI Computers, IEEE Transactions on Visualization and Computer Graphics, ACM Computing surveys

10.1.4. Invited Talks

> Ludovic Hoyet. Perception of Biological Human Motion for Plausible Character Animation. Invited speaker at Université Bretagne Sud, team Expression, Vannes, France, June 2016

> Antonio Mucherino. Vertex Orders in Distance Geometry. Invited seminar at LIA, University of Avignon, France. Invited by R. Figueiredo. November 2016.

10.1.5. Scientific Expertise

> Marc Christie, expert for CIR (credit impot recherche – three cases in 2016)

> Georges Dumont, expert for Dutch Research Council VENI (Netherlands) project

> Franck Multon, HCERES expert for UMR 7287 AMU/CNRS "Institut des Sciences du Mouvements" in Marseille en 2016-2017, ANR expert, member of the ANR CPDS 4 "Santé Bien-être" through the Allistene national Alliance to design the next ANR call for projects, expert for international NSRC (Canada), CRSNG (Canada) and Dutch Research Council VENI (Netherlands) projects

> Charles Pontonnier, Member of the Normalization Work Group "Impact of exoskeletons on work conditions", groupe AFNOR.

10.1.6. Research Administration

> Georges Dumont is president of the elected group at scientific council of École Normale Supérieure de Rennes, member of the scientific council of École Normale Supérieure de Rennes

> Georges Dumont is scientific head of Immerstar platforms (Immersia + Immermove) jointly for Inria and Irisa Partners

> Ludovic Hoyet participated in the local MESR PhD Grant Auditions 2016

> Richard Kulpa is member of the University Rennes2 Research steering committee "commission recherche", and Academic Council "CAC"

> Fabrice Lamarche is a member of the national council of universities (Conseil National des Universités - CNU) since november 2015

> Antonio Mucherinon is the person in charge of International Relationships at ISTIC, and member of the "Commission Affaires Internationales" at Université Rennes 1

> Franck Multon, member of the "Conseil Académique" and "Commission Recherche" of University Rennes2, head of Immermove platform in the Immerstar group, member of the D6 "Media and Interactions" department in IRISA, head of MimeTIC team

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

10.2.1.1. Master

Marc Christie

> "Multimedia Mobile", Master 2, leader of the module, 32h, Computer Science, University of Rennes 1, France

> "Projet Industriel Transverse", Master 2, 32h, leader of the module, Computer Science, University of Rennes 1, France

> "Outils pour la Conception d'IHM", Master 2, 32h, leader of the module, Computer Science, University of Rennes 1, France

Armel Crétual

"Méthodologie", leader of the module, 20h, Master 1 M2S, University Rennes2, France

"Biostatstiques", leader of the module, 30h, Master 2 M2S, University Rennes2, France

Georges Dumont

Responsible of the second year of the master Mechatronics, Rennes 1 University and École Normale Supérieure de Rennes, France

"Mechanical simulation in Virtual Reality", 36h, Master Mechatronics, Rennes 1 University and École Normale Supérieure de Rennes, France

"Mechanics of deformable systems", 40h, Master FE, École Normale Supérieure de Rennes, France

"Oral preparation to agregation competitive exam", 20h, Master FE, École Normale Supérieure de Rennes, France

"Vibrations in Mechanics", 10h, Master FE, École Normale Supérieure de Rennes, France

"Multibody Dynamics", 9h, Master FE, École Normale Supérieure de Rennes, France

"Finite Element method", 12h, Master FE, École Normale Supérieure de Rennes, France

Ronan Gaugne

"VR projects", 40h, M1/M2, INSA Rennes, France

Ludovic Hoyet

"Images et Mouvement - IMO", Part "Mouvement Humain", 10h, Master 2 research in computer sciences, University Rennes1, France

Richard Kulpa

"Boucle analyse-modélisation-simulation du mouvement", 27h, leader of the module, Master 2 M2S, Université Rennes 2, France

"Méthodes numériques d'analyse du geste", 27h, leader of the module, Master 2 M2S, Université Rennes 2, France

"Cinématique inverse", 3h, leader of the module, Master 2 M2S, Université Rennes 2, France

Fabrice Lamarche

"Compilation pour l'image numérique", 29h, Master 1, ESIR, University of Rennes 1, France

"Synthèse d'images", 12h, Master 1, ESIR, University of Rennes 1, France

"Synthèse d'images avancée", 28h, Master 1, ESIR, University of Rennes 1, France

"Modélisation Animation Rendu", 36h, Master 2, ISTIC, University of Rennes 1, France

"Jeux vidéo", 26h, Master 2, ESIR, University of Rennes 1, France

Antonio Mucherino

"Parallel Computing" (in English), 30h, M1 Informatique, Université Rennes 1, France

"Introduction aux Systèmes et Réseaux", 42h, M1 BIG (SVE), Université Rennes 1, France

"Programmation Orienté à Objets", 40h, M1 BIG (SVE), Univ. Université Rennes 1, France

"Algorithmes pour les Séquences et les Structures", 12h, M2 BIG (SVE), Université Rennes 1, France

Franck Multon

"Images et Mouvement - IMO", leader of the module, 20h, Master 2 research in computer sciences, University Rennes1, France

"Santé et Performance au Travail : étude de cas", leader of the module, 30h, Master 1 M2S, University Rennes2, France

"Analyse Biomécanique de la Performance Motrice", leader of the module, 30h, Master 1 M2S, University Rennes2, France

"Modélisation et Simulation du Mouvement", leader of the module, 30h, Master 2 M2S, University Rennes2, France

"Connaissances neurophysiologiques et biomécaniques", Mastere "Excellence Operationnelle", INSA Rennes, France

Anne-Hélène Olivier

"Biostatstiques", 18h, Master 2 M2S, University Rennes2, France

"Biostatstiques", 16h, Master 1 2SEP, École Normale Supérieure de Rennes, France

"Contrôle moteur : loi de contrôle de la locomotion", 3h30, Master 1 M2S, Université Rennes 2, France

"Contrôle moteur : Boucle perceptivo-motrice", 3h30, Master 1 M2S, Université Rennes 2, France

"Analyse Biomécanique de la Performance Motrice", 15h, Master 1 M2S, University Rennes2, France

Charles Pontonnier

"Numerical methods", leader of the module, Mechanics, École Spéciale Militaire de Saint-Cyr Coëtquidan, France

"Numerical simulation of mechanical systems", leader of the module, Mechanics, École Spéciale Militaire de Saint-Cyr Coëtquidan, France

"Analytical Mechanics" , Mechanics, École Spéciale Militaire de Saint-Cyr Coëtquidan, France

"Design and control of legged robots", leader of the module, Electronics, École Spéciale Militaire de Saint-Cyr Coëtquidan, France

"Design, simulation and control of mechanical systems", leader of the module, Lecturers training in mechatronics, École Normale Supérieure de Rennes, France

"Musculoskeletal modeling and ergonomics", 30h, Master 1 M2S, University Rennes2, France

10.2.1.2. License level

Marc Christie

"Programmation Impérative 1", leader of the module, University of Rennes 1, France

Armel Crétual

"Analyse cinématique du mouvement", 100h, Licence 1, University Rennes 2, France

Richard Kulpa

"Biomécanique (dynamique en translation et rotation)", 48h, Licence 2, Université Rennes 2, France

"Méthodes numériques d'analyse du geste", 48h, Licence 3, Université Rennes 2, France

"Statistiques et informatique", 15h, Licence 3, Université Rennes 2, France

Ronan Gaugne

"VR projects", 10h, L3, INSA Rennes, France

Fabrice Lamarche

"Initiation à l'algorithmique et à la programmation", 56h, License 3, ESIR, University of Rennes 1, France

"Programmation en C++", 46h, License 3, ESIR, University of Rennes 1, France

"IMA", 24h, License 3, ENS Rennes, ISTIC, University of Rennes 1, France

Antonio Mucherino

"Programmation Impérative 1", 80h, L1, Université Rennes 1, France

Franck Multon

"Ergonomie du poste de travail", Licence STAPS L2 & L3, University Rennes2, France

Anne-Hélène Olivier

"Analyse cinématique du mouvement", 100h , Licence 1, University Rennes 2, France

"Anatomie fonctionnelle", 8h , Licence 2, University Rennes 2, France

"Effort et efficience", 12h , Licence 2, University Rennes 2, France

"Locomotion et handicap", 12h , Licence 3, University Rennes 2, France

"Biomécanique du viellissement", 12h , Licence 3, University Rennes 2, France

Charles Pontonnier

"Numerical control", leader of the module, Electronics, École Inter-Armes de Saint-Cyr Coëtquidan, France

10.2.2. Supervision

10.2.2.1. PhD (defended)

Julien Bruneau, Studying and modeling complex interactions for crowd simulation, University Rennes 1, defended in Nov. 2016, Julien Pettré (Lagadic) & Anne-Hélène Olivier

Ana Lucia Cruz Ruiz, Low-Dimensional Control Representations for Muscle-Based Characters: Application to Overhead Throwing, ENS Rennes, defended in Dec. 2016, Georges Dumont & Charles Pontonnier

Pierre Plantard, Estimation des efforts musculaires à partir de données in situ pour l'évaluation ergonomique d'un poste de travail, defended in July 2016, Franck Multon & Anne-Sophie LePierres

Cunka Sanokho, Data-driven Virtual Cinematography, University Rennes1, defended in Feb. 2016, Marc Christie

Hui-yin Wu, Cinematic discourse for Interactive 3D Storytelling, University Rennes1, defended in Oct. 2016, Marc Christie

10.2.2.2. PhD (in progress)

Yacine Bouhalia, Approche transversale pour l'analyse et la reconnaissance de gestes 2D et 3D, INSA of Rennes, September 2015, Richard Kulpa & Franck Multon & Eric Anquetil

Charles Faure, Stratégies coopératives et compétitives dans des tâches d'interactions physiques multiples, Université Rennes 2, September 2016, Benoit Bideau & Richard Kulpa

Florence Gaillard, Evaluation en situation écologique des capacités fonctionnelles des membres supérieurs d'enfants hémiplégiques, University Rennes 2, December 2015, Armel Crétual & Isabelle Bonan

Karim Jamal, Les effets des stimulations sensorielles par vibration sur les perturbations posturales secondaires à des troubles de la cognition spatiale après un Accident vasculaire Cérébrale, University Rennes 2, September 2016, Isabelle Bonan & Armel Crétual

Sean D. Lynch, Perception visuelle du mouvement humain dans les interactions lors de tâches locomotrices, M2S - University Rennes 2, September 2015, Anne-Hélène Olivier & Richard Kulpa

Marion Morel, Suivi et étude des interactions pour l'analyse des tactiques durant un match de basket-ball, UPMC - University Rennes 2, September 2014, Catherine Achard & Séverine Dubuisson & Richard Kulpa

Antoine Muller, Design of a modular and multiscale musculoskeletal library as a support to motion analysis-synthesis, Ecole normale supérieure, September 2014, Georges Dumont & Charles Pontonnier

Camille Pouliquen, Optimization of musculoskeletal models during the sporting gesture: Cycling application, University Rennes 2, September 2013, Paul Delamarche & Nicolas Bideau

Pierre Touzard, Suivi longitudinal du service de jeunes joueurs de tennis élite : identification biomécanique des facteurs de performance et de risque de blessures, University Rennes 2, September 2014, Benoit Bideau & Richard Kulpa & Caroline Martin

10.2.3. Juries

PhD: Deep Seth, Contribution to the evaluation of muscle fatigue model and recovery model, Centrale Nantes, Rapporteur Franck Multon

PhD: Pamela Carreno Medrano, Analysis and Synthesis of Expressive Theatrical Movements, Université Bretagne Sud, Rapporteur Franck Multon

10.3. Popularization

Franck Multon managed a 4 days Booth to present ergonomic work in MIDEST in Paris, with a plenary session conference about penibility at work, MIDEST December 2016

Franck Multon and Richard Kulpa managed a 2 days Inria Booth to present VR and Sports in Futur en Seine in Paris, June 2016

Ludovic Hoyet, Journées Scientifiques Inria 2016, exposé court en 180s, "Perceptual Effect of Shoulder Motions on Crowd Animations".

Ludovic Hoyet, Press conference, « Six-Finger Illusion : pour mieux comprendre la perception de notre corps et de notre avatar ». With Ferran Argelaguet and Anatole Lécuyer, Inria, Paris, 12 May 2016, https://www.inria.fr/centre/rennes/actualites/six-finger-illusion

<p style="text-align:center;color:red;font-weight:bold;">MIMOVE Team</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

Valérie Issarny is co-chair of the BIS'16 workshop, which is the yearly workshop organized by Inria@SiliconValley to present the state of scientific collaborations and to work on proposals for future ambitious joint projects.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

- Valérie Issarny is PC co-chair of ICSE-SEIS'2018 - The Software Engineering in Society Track of the ICSE'18 conference.

9.1.2.2. Member of the Conference Program Committees

- Valérie Issarny is PC member of the following International Conferences: COORDINATION'2016, FASE'2016 & 2017 & 2018, ICDCS'2016, ICSE-SEIS'2016 & 2017, ICSE'2018, InterIoT'2016, ISEC'2017, Middleware'2016, MOBILESoft'2017, SEAMS'17, EUROSYS'2017.
- Nikolaos Georgantas is PC member of the following international conferences: SOSE'16&'17, WETICE'16&'17, SAC'16 &'17, AmI'17, ICSE'17 Poster Track, ANT'16.
- Nikolaos Georgantas is PC member of the following international workshops: MRT'16, SERENE'16, ARM'16, IoT-ASAP'17.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- Nikolaos Georgantas is associate editor of the International Journal of Ambient Computing and Intelligence (IJACI);
- Valérie Issarny is associate editor of the Springer JISA Journal of Internet Services and Applications.

9.1.4. Invited Talks

- Valérie Issarny, *Monitoring Urban Pollution using Mobile Crowd Sensing: The SoundCity Use Case*, Keynote at - UIC - The 13th International Conference on Ubiquitous Intelligence and Computing, July 19, 2016; Toulouse, France.
- Valérie Issarny, *Revisiting Service-oriented Architecture for the IoT: A Middleware Perspective*, Keynote at - ICSOC - The 14th International Conference on Service-Oriented Computing, October 12, 2016; Banff, Alberta, Canada.

9.1.5. Scientific Expertise

- Valérie Issarny is elected member of the *Commission d'Evaluation Inria*;
- Nikolaos Georgantas is member of the Inria PhD scholarship, Inria postdoc scholarship and Inria professor leave *(Délégation)* scholarship selection committees at Inria Paris.

9.1.6. Research Administration

- Valérie Issarny is scientific coordinator of Inria@Silicon Valley and CityLab@Inria;
- Nikolaos Georgantas is member of the PhD monitoring committee at Inria Paris.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

E-learning

Valérie Issarny, MOOC *Villes intelligentes : défis technologiques et sociétaux*

https://www.fun-mooc.fr/courses/inria/41009/session01/about

Class teaching

Master: Rachit Agarwal, "Urban data democratization and its application to access urban concepts" as part of "Gestion de données ambiantes et Internet des objets", 9 hours (équivalent TD), niveau M2, University of Versailles Saint-Quentin en Yvelines, France.

9.2.2. Supervision

In 2016, the following PhD thesis was successfully defended:

Emil Andriescu, *Dynamic Data Adaptation for the Synthesis and Deployment of Protocol Mediators*, defended in February 2016, UPMC-EDITE, CIFRE Inria-Ambientic, advised by Valérie Issarny and Roberto Speicys-Cardoso (Ambientic).

Additionally, the following PhD theses are currently in progress at the MiMove team:

Georgios Bouloukakis, *Enabling Emergent Mobile Systems in the IoT: from Middleware-layer Communication Interoperability to Associated QoS Analysis*, started October 2013, UPMC-EDITE, advised by Nikolaos Georgantas and Valérie Issarny.

Radha Pallavali, *Dynamic adaptation of middleware-layer protocols for emergent mobile systems*, started November 2016, UPMC-EDITE, advised by Nikolaos Georgantas and Valérie Issarny.

Also, Valérie Issarny is co-advising with Ansgar Radermacher from CEA-LISE, the PhD thesis of Amel Belaggoun on *Adaptabilité et reconfiguration des systèmes temps-réel embarquées*; this is a PhD from UPMC-EDITE with the research being undertaken at CEA-LISE.

9.2.3. Juries

Nikolaos Georgantas was examiner for the PhD thesis of Fatiha Houacine, *Architecture Orientée Service pour le Mobile Cloud Computing*, defended in November 2016, Conservatoire National des Arts et Métiers, France, advised by Ass. Prof. Samia Bouzefrane.

<p style="text-align:center; color:red; font-weight:bold;">MINT Project-Team</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Selection

9.1.1.1. Member of the Conference Program Committees

Laurent Grisoni : PC for VISIGRAPP (IEEE InfoViz Art Track), Computer Graphics International (CGI, computer graphics), MOCO (international workshop on gesture), ISEA (art-science), GRAPP (computer graphics)

9.1.1.2. Reviewer

Florent Berthaut: Reviewer for ACM CHI Conference and NIME conference
Laurent Grisoni: Eurohaptics, ACM UIST, ACM CHI

9.1.2. Journal

9.1.2.1. Member of the Editorial Boards

Frédéric Giraud is Associate Editor of IEEE Transactions on Haptics

9.1.2.2. Reviewer - Reviewing Activities

Florent Berthaut: Reviewer for IEEE Multimedia
Laurent Grisoni: Computer & Graphics,

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Licence: Florent Berthaut, Spreadsheets et VBA programming, LEA L3 TCI (22h), Web programming, LEA L3, Université Lille 3, France
- Licence: Frédéric Giraud, Physique pour le génie électrique (30h), Université Lille 1
- Master: Christophe Giraud-Audine: Control of electrical machines (30h), Power Electronics (30h), signal processing (30h), niveau M1, ENSAM, France
- Master: Florent Berthaut, Web programming, LEA M1 TSM (16,5h) and LEA M1 RICI (48h), Database, LEA M1 ANI (22h), Université Lille 3, France
- Master : Frédéric Giraud, Control of electrical machines (30h), Power Electronics (40h) niveau M1, Université Lille1, France
- Master : Laurent Grisoni, NIHM : nouvelles Interactions Homme-Machine, (6h), niveau M2, Université Lille 1, France
- Master: Laurent Grisoni, représentation et compression de données (24h), introduction à la programmation (38h), cryptographie (8h), Ecole Polytech'lille (dept IMA)
- Master: Laurent Grisoni: gestion de projet en Co-design interdisciplinaire, Master Sciences et Culture du Visuel, Université de Lille Sciences Humaines et Sociales, Master Sciences et Cultures du Visuel (12h)
- Master : Laurent Grisoni, IHM et Interface à Gestes, (24h), niveau M2 (IMA5), Polytech Lille, France

9.2.2. Supervision

- PhD : Ehsan Enferad, Modélisation et Commande d'une Interface Tactile à Stimulation Hybride par Modulation de Friction et Retournement Temporel, nov. 2015, F. Giraud, C. Giraud-Audine

- PhD in progress: Cagan Arslan, Fusion de données pour l'interaction homme-machine, oct. 2015, L. Grisoni/J. Martinet

- PhD in progress: Farzan Kalantari, Interaction sur dispositif à retour tactile et kinesthésique, oct. 2014, L. Grisoni, F. Giraud

- PhD Sofiane Ghenna, Contrôle multimodal d'acionneurs piézo-électriques pour applications tactiles, F.Giraud, C.Giraud-Audine, University Lille1, 30th November 2016

- PhD Thomas Sednaoui, Tactile feedback integration on mobile communication devices, B Semail, F Casset, University Lille1, 14th dec. 2016

- PhD : Eric Vezzoli, Tactile feedback devices: friction control and texture generation, University Lille1, 22 Sept 2016, B. Lemaire-Semail, F. Giraud

- PhD in progress: Hanae Rateau, l'interaction esquissée, oct. 2012, L. Grisoni

- PhD in progress: Vincent Gouezou: L'architecte et ses outils, au travers de l'histoire et dans sa relation actuelle au numérique, oct. 2014, L. Grisoni 25% (with F. Vermandel, architect, Lille school of architecture)

- PhD in progress: Charlotte Planckeel, Le sens de la lacunae en archéologie de l'Âge du bronze, archéologie et outils numériques, L. Grisoni (25%, with A. Lehoerff, Lille 3, archeologist)

- PhD in progress: Olivier Capra, Interaction de présentation, oct. 2016, L. Grisoni, F. Berthaut

9.3. Popularization

- Futur en Seine (Paris, 9-10 june 2016; http://www.futur-en-seine.paris/). Presentation of E-Vita.

- Nuit des bibliothèques (Lille, 15th october 2016, http://www.bm-lille.fr/nuit-des-bibliotheques. aspx). Presentation of the haptic book to the readers of the public library.

- Forum du CNRS (Lille, 19th November 2016, http://leforum.cnrs.fr/). Presentation of 2 demos.

- Nuit des partenaires (Lille, 29th november 2016, https://www.univ-lille.fr/soireepartenaires/). Présentation of the Haptic book.

- Salon Humanités connectées, Toulouse, dec. 2016.

- Rencontres Inria Entreprises (25 novembre 2016), imaginarium.

- journées RV en haut de france, 24 novembre 2016, imaginarium.

- tables ronde journées régionales de l'innovation, amiens, 20 novembre 2016.

- BOEUF project workshops. Introduction to PureData and digital orchestras @ La condition publique (Roubaix) and l'Imaginarium (Tourcoing) http://www.cristal.univ-lille.fr/oeuvres-et-recherches/2016/11/28/workshop-les-orchestres-numeriques-espace-recherche-scv/

MISTIS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- Stéphane Girard co-organized the workshop "Learning with functional data", held in Lille (October 2016), He was also a member of the organizing committee of "Journées MAS de la SMAI", held in Grenoble (August 2016)

- Florence Forbes and Stéphane Girard co-organized a session "Dimension reduction for regression" at the ERCIM conference in Séville, Spain (December 2016).

- Julyan Arbel organized the Bayesian nonparametric prediction session at the International Society of Bayesian Analysis Conference, June 2016. He also co-organized the StaTalk Workshop on Bayesian nonparametrics, Collegio Carlo Alberto, Moncalieri, Italy, February 19.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- Stéphane Girard was the president of the scientific committee of the CIMPA conference "Méthodes statistiques pour l'évaluation des risques extrêmes", held in Saint-Louis, Sénégal (April 2016), .

- Stéphane Girard was a member of the conference program committee of the "Mathematical Finance and Actuarial Sciences conference" organized by the AIMS (African Institute for Mathematical Sciences), Mbour, Sénégal (July 2016).

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Stéphane Girard is Associate Editor of the *Statistics and Computing* journal since 2012 and Associate Editor of the *Journal of Multivariate Analysis* since 2016. He was co-editor of the book *Statistics for astrophysics, clustering and classification*, vol. 77, EDP sciences, 2016.

  He is also member of the Advisory Board of the *Dependence Modelling* journal since december 2014.

- F. Forbes is Associate Editor of the journal Frontiers in ICT: Computer Image Analysis since its creation in Sept. 2014. Computer Image Analysis is a new specialty section in the community-run openaccess journal Frontiers in ICT. This section is led by Specialty Chief Editors Drs Christian Barillot and Patrick Bouthemy.

10.1.3.2. Reviewer - Reviewing Activities

In 2016, S. Girard has been a reviewer for *Australian and New Zealand Journal of Statistics, Extremes* and *Dependence Modelling.*

In 2016, F. Forbes has been a reviewer for *Journal of Multivariate Analysis, Statistics and Computing, Computational Statistics and Data Analysis* .

In 2016, Julyan Arbel has been reviewer for NIPS 2016, ICML 2016, AISTATS 2016, the Annals of Statistics, Bayesian Analysis, Bernoulli, Biometrics, the Canadian Journal of Statistics, the Hacettepe Journal of Mathematics and Statistics, the Journal of Agricultural, Biological, and Environmental Statistics, SoftwareX, Statistics and Computing.

10.1.4. Invited Talks

Stéphane Girard has been invited to give a talk to the following conferences:

- "Extreme value modeling and water ressources" workshop (Aussois) [29],

- 3rd conference of the International Society for Non-Parametric Statistics (Avignon) [37],

- "Extremes - Copulas - Actuarial sciences" workshop (Luminy) [40],

- Statistics workshop at Tilburg University (Netherlands)

- ERCIM CFE-CMStatistics (Seville, Spain) [39].

Florence Forbes has been invited to give talks at :

- the 23th summer session of the Working Group on Model-based Clustering, Paris, July 18-23, 2016.

- the Fédération Rhône-Alpes-Auvergne day on multivariate data analysis in Grenoble, October 2016,

- the 11th Peyresq summer school on signal and image processing (July 2016): 5 hour lecture on Bayesian Analysis and applications [67].

- a special session on Dimension reduction for regression at the ERCIM CFE-CMStatistics conference, December 2016, in Seville, Spain [35],

- at the annual meeting of the MultiPlaNet project (Defi Imag'In CNRS) in Orsay in December 2016, on the inversion of the Hapke's model from photometric measurements.

Julyan Arbel has been invited to give talks at the following seminars and conferences:

- Rencontres Statistiques Lyonnaises, Institut Camille Jordan, November 23. Invited talk: Bayesian nonparametric inference for discovery probabilities.

- Séminaire de Statistique du LJK, Université Grenoble Alpes, November 17. Invited talk: Bayesian nonparametric inference for discovery probabilities.

- The Bayes Club, Korteweg-de Vries Institute for Mathematics, University of Amsterdam, October 7. Invited talk: Bayesian nonparametric inference for discovery probabilities.

- Séminaire de Statistique, Université Lille 3, October 6. Invited talk: Bayesian nonparametric inference for discovery probabilities.

- Séminaire de Proba-Stat, Université Paris 12 Créteil, October 4. Invited talk: Bayesian nonparametric inference for discovery probabilities.

- Séminaire de Proba-Stat, Université de Franche-Comté, Besancon, September 5. Invited talk: Bayesian nonparametric inference for discovery probabilities.

- ISBA World Meeting, Sardinia, Italy, June 13-17. Invited talk: Bayesian nonparametric inference for discovery probabilities.

- Mistis Seminar, Inria Grenoble, France, February 12. Talk: Infinite mixture models in Bayesian nonparametrics.

Julyan Arbel presented at the following contributed sessions in conferences and workshops:

- NIPS Meeting, Barcelona, Spain, Poster: Truncation error of a superposed gamma process in a decreasing order representation, Poster: Advances in Approximate Bayesian Inference workshop, Dec 9.

- NIPS Meeting, Barcelona, Spain, Sequential Quasi Monte Carlo for Dirichlet Process Mixture Models, Practical Bayesian Nonparametrics workshop, Dec 9.

- Journées MAS, Grenoble, France, August 29-31. Poster: Bayesian nonparametrics, why and how?

- Third Bayesian Young Statisticians Meeting, Florence, Italy, June 19-21. Talk: A moment-matching Ferguson & Klass algorithm.

- Journées de Statistique de la SFdS, Montpellier, France, May 30 - June 3. Talk: Bayesian nonparametric inference for discovery probabilities.

- StaTalk Workshop, Collegio Carlo Alberto, Moncalieri, Italy, February 19. Talk 1: A gentle introduction to Bayesian Nonparametrics. Talk 2: Species sampling models.

- MCMSki V, Lenzerheide, Switzerland, January 5-7. Invited talk: A moment-matching Ferguson & Klass algorithm.

Emeline Perthame has been invited to give a talk at:

- the statistics seminar at University of Caen in October 2016 on an *Inverse regression approach to robust non-linear high-to-low dimensional mapping*.

Gildas Mazo has been invited to give a talk at:

- a special session on Copulas at the ERCIM CFE-CMStatistics conference, December 2016, in Seville, Spain.

Alexis Arnaud gave a talk at:

- a GdR ISIS meeting on *Méthodes d'apprentissage statistiques et applications à la santé* 2016-10-21, Telecom Paris, on Automatic segmentation and characterization of brain tumors using robust multivariate clustering of multiparametric MRI.

10.1.5. *Leadership within the Scientific Community*

Stéphane Girard is at the head of the associate team (*Statistical Inference for the Management of Extreme Risks and Global Epidemiology*) created in 2015 between IISTIS and LERSTAD (Université Gaston Berger, Saint-Louis, Sénégal). The team is part of the LIRIMA (Laboratoire International de Recherche en Informatique et Mathématiques Appliquées), http://mistis.inrialpes.fr/simerge.

10.1.6. *Scientific Expertise*

- Stéphane Girard was in charge of evaluating research projects for the Research Foundation Flanders (FWO), Belgium.
- Stéphane Girard is a Voting Member for the International Society for NonParametric Statistics (ISNPS).

10.1.7. *Research Administration*

- Stéphane Girard has been at the head of the Probability and Statistics department of the LJK (Laboratoire Jean Kuntzmann) from September 2012 to September 2016.
- Grenoble Pole Cognition. F. Forbes is representing Inria and LJK in the pole.
- PRIMES Labex, Lyon. F. Forbes is a member of the strategic committee. F. Forbes is representing Inria.

10.2. Teaching - Supervision - Juries

10.2.1. *Teaching*

Master : Stéphane Girard, *Statistique Inférentielle Avancée*, 41 ETD, M1 level, Ensimag. Grenoble-INP, France.

Master : Stéphane Girard, *Introduction à la statistique des valeurs extrêmes*, 15 ETD, M2 level, Université Gaston Berger, Saint-Louis, Sénégal.

Licence : Alexis Arnaud, *Probability and statistics*, 56 ETD, L2 level, IUT2 Grenoble, Université Pierre Mendès France.

Master: Jean-Baptiste Durand, *Statistics and probability*, 192 ETD, M1 and M2 levels, Ensimag Grenoble INP, France. Head of the MSIAM M2 programme, in charge of the statistics and data science tracks ([12]).

J.-B. Durand is a faculty member at Ensimag, Grenoble INP.

J-M. Becu, C. Albert, B. Olivier are teaching at UGA.

Master and PhD course: Julyan Arbel gave a course on Bayesian statistics, 30 ETD, Collegio Carlo Alberto, Moncalieri, Turin, Italy.

10.2.2. Supervision

Aina Frau-Pascual, "*Statistical models for the analysis of ASL and BOLD functional magnetic resonance modalities to study brain function and disease*", defended on December 19, 2016, Université Grenoble-Alpes, supervised by Florence Forbes and Philippe Ciuciu (CEA, Inria PARIETAL).

Seydou Nourou Sylla, "*Modélisation et classification de données binaires en grande dimension - Application à l'autopsie verbale*", defended on December 21, 2016, Université Gaston Berger, Saint-Louis, Sénégal, supervised by Abdou Diongue (Université Gaston Berger, Sénégal) and Stéphane Girard.

Alessandro Chiancone, "*Réduction de dimension via Sliced Inverse Regression: Idées et nouvelles propositions*", defended on October 28, 2016, Université Grenoble-Alpes, supervised by Stéphane Girard and Jocelyn Chanussot (Grenoble INP).

PhD in progress: Thibaud Rahier, "*Data-mining pour la fusion de données structurées et non-structurées*", started on November 2015, Florence Forbes and Stéphane Girard.

PhD in progress: Clément Albert, "*Limites de crédibilité d'extrapolation des lois de valeurs extrêmes*", started on January 2016, Stéphane Girard.

PhD in progress: Maïlys Lopes, "*Télédétection en écologie du paysage : statistiques en grande dimension pour la multirésolution spatiale et la haute résolution temporelle*", started on November 2014, Stéphane Girard and Mathieu Fauvel (INRA Toulouse).

PhD in progress: Alexis Arnaud "*Multiparametric MRI statistical analysis for the identification and follow-up of brain tumors* ", October 2014, Florence Forbes and Emmanuel Barbier (GIN).

PhD in progress: Pierre-Antoine Rodesch, "*Spectral tomography and tomographic reconstruction algorithms*", October 2015, Florence Forbes and Veronique Rebuffel (CEA Grenoble).

PhD in progress: Brice Olivier, "*Joint analysis of eye-movements and EEGs using coupled hidden Markov and topic models*", October 2015, Jean-Baptiste Durand, Marianne Clausel and Anne Guérin-Dugué (Université Grenoble Alpes).

10.2.3. Juries

10.2.3.1. PhD

- Stéphane Girard has been reviewer of three PhD theses in 2016:

  - Cees de Valk, "*A large deviation approach to the statistics of extreme events*", Tilburg University, Netherlands, December 2016.

  - Nicolas Goix, "*Apprentissage automatique et extrêmes et pour la détection d'anomalies*", Telecom ParisTech, november 2016.

  - Anthony Zullo, "*Analyse de données fonctionnelles en télédétection hyperspectrale : application à l'étude des paysages agri-forestiers*", Univ. Toulouse, September 2016.

- S. Girard was a member of two PhD committees in 2016:

  - Quentin Sebille, "*Modélisation spatiale de valeurs extrêmes, application à l'étude de précipitations en France*, Univ. Lyon, december 2016.

  - Khalil Said, "*Mesures de risque multivariées et applications en science actuarielle*", Univ. Lyon, december 2016.

- Florence Forbes has been reviewer of 1 PhD thesis in 2016:

  - Hong Phuong Dang, December 1st, 2016, Centrale Lille.

- F. Forbes was a member of one PhD committee in 2016:

  - Mohanad Albughdadi, September 2016, ENSHEEIT, Toulouse.

10.2.3.2. HDR

S. Girard was a member of the HDR committee of Mathieu Ribatet, Univ. Montpellier, November 2016.

F. Forbes was in the HDR committee of Sophie Achard, Univ. Grenoble Alpes, May 2016.

10.2.3.3. Other committees

- S. Girard is a member of the "Comité des Emplois Scientifiques" at Inria Grenoble Rhône-Alpes since 2015.

- F. Forbes is a member of the Committee for technological project and engineer candidate selection at Inria Grenoble Rhône-Alpes ("Commission du développement technologique ") since 2015.

- Since 2015, S. Girard is a member of the INRA committee (CSS MBIA) in charge of evaluating INRA researchers once a year in the MBIA dept of INRA.

- F. Forbes has been a member of 2 selection committees for Professors at Centrale-Supelec and Centrale Nantes and 1 selection committee for Assistant Professor at Paris-Sud University.

10.3. Popularization

- S. Girard presented his research on extreme-value analysis at the "Conférence ISN et enseignement", March 2016, video. He also gave a talk at the Institut de Maitrise des Risques (IMdR) [38] on a similar topic.

- Julyan Arbel led the Math en Jeans teams at Lycée francais Jean Giono, Turin, working on various subjects spanning from statistics, machine learning, to combinatorics and games.

Mjolnir Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- VISAP (IEEE): Fanny Chevalier (general co-chair)
- Rencontre Inria Industrie "Interactions avec les objets et services numériques": Nicolas Roussel (scientific chair)

10.1.1.2. Member of the Organizing Committees

- IHM: Fanny Chevalier (Work-in-Progress co-chair), Stéphane Huot (AFIHM's 20th anniversary co-chair)

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- CHI (ACM): Géry Casiez (associate chair), Nicolas Roussel (associate chair)
- UIST (ACM): Fanny Chevalier (associate chair), Géry Casiez (associate chair)
- Infovis (IEEE): Fanny Chevalier (PC member)
- MobileHCI (ACM): Sylvain Malacria (associate chair)
- IHM: Fanny Chevalier (PC member)

10.1.2.2. Reviewer

- SIGGRAPH (ACM): Fanny Chevalier
- UIST (ACM): Sylvain Malacria, Thomas Pietrzak
- IHM: Sylvain Malacria
- GI (ACM): Sylvain Malacria
- TEI (ACM): Thomas Pietrzak
- MobileHCI (ACM): Thomas Pietrzak
- Haptic Symposium (IEEE): Thomas Pietrzak

10.1.3. Journal

10.1.3.1. Reviewer - Reviewing Activities

- *Transactions on Computer Human Interaction* (ACM): Sylvain Malacria, Géry Casiez, Thomas Pietrzak
- *Transactions on Visualization and Computer Graphics* (IEEE): Fanny Chevalier
- *Information Design Journal* (John Benjamins Publishing Company): Fanny Chevalier
- *Interacting with Computers* (Oxford Journals): Thomas Pietrzak

10.1.4. Invited Talks

- *Direct spacetime sketching and editing of visual media*, Microsoft Research, Redmond: Fanny Chevalier
- *Opportunities and limits of Adaptive User Interfaces*, Technology and Routines workshop, Bavarian Academy of Sciences and Humanities, Munich, Germany: Sylvain Malacria

- *Towards the full experience of playing drums on a virtual drumkit*, Symposium on Haptic and Music, McGill University, Montréal, Canada: Thomas Pietrzak

10.1.5. Scientific Expertise

- PICOM competitiveness cluster: Nicolas Roussel (scientific board member)
- Agence Nationale de la Recherche: Fanny Chevalier (committee member for the *JCJC*, *PRCE* and *PRC* programs)
- European Research Council: Géry Casiez (reviewer for the Starting Grant program)

10.1.6. Research Administration

For Inria:

- Evaluation committee: Nicolas Roussel (member)
- Gender equity and equality committee: Nicolas Roussel (member)
- Strategic orientation committee for the information system (COSS scientifique): Nicolas Roussel (member)
- International relations working group (COST-GTRI): Stéphane Huot (member)

For Inria Lille – Nord Europe:

- Scientific officer (délégué scientifique): Nicolas Roussel
- Research jobs committee (CER): Fanny Chevalier (member), Nicolas Roussel (member)
- Technical development committee (CDT): Nicolas Roussel (member)
- Consultative committee (Comité de centre): Fanny Chevalier (member)
- Operational legal and ethical risk assessment committee (COERLE): Stéphane Huot (local correspondent)
- Support to researchers (accompagnement des chercheurs): Stéphane Huot (adviser)
- Activity reports (RAweb): Nicolas Roussel (local correspondents)

For the CRIStAL lab of Univ. Lille 1:

- Laboratory council: Géry Casiez (elected member)

10.1.7. Learned societies

- Association Francophone d'Interaction Homme-Machine (AFIHM): Géry Casiez (board member, president), Stéphane Huot (board member and scientific council member), Thomas Pietrzak (board member)

10.1.8. Hiring committees

- Inria's eligibility jury for senior researcher positions (DR2): Nicolas Roussel
- Inria's eligibility jury for junior researcher positions (CR2) in Saclay: Nicolas Roussel
- ENAC's hiring committee for an assistant professor position: Nicolas Roussel
- Polytech Nantes' hiring committee for a Computer Science Assistant Professor position: Fanny Chevalier (member)

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- Master Informatique *Image Vision Interaction (IVI)*: Géry Casiez (16 hrs), Fanny Chevalier (16 hrs), Thomas Pietrzak (16 hrs), *NIHM : Nouvelles Interactions Homme-Machine*, M2, Univ. Lille 1
- Master Informatique: Thomas Pietrzak (50 hrs), Sylvain Malacria (30 hrs), Nicolas Roussel (8 hrs), *IHM : Interactions Homme-Machine*, M1, Univ. Lille 1

- Master Informatique: Géry Casiez, *Multi-Touch Interaction*, 10 hrs, M1, Univ. Lille 1
- Master: Géry Casiez (6 hrs), Thomas Pietrzak (10.5 hrs), *3DETech : 3D Digital Entertainment Technologies*, M2 level, Télécom Lille
- Master Sciences Humaines et Sociales *Réseaux Sociaux Numériques (RSN)*: Fanny Chevalier, *Statistiques et visualisation de données*, 8hrs, M2, Univ. Lille 1
- Master Sciences Humaines et Sociales *Réseaux Sociaux Numériques (RSN)*: Fanny Chevalier, *Outils et pratiques numériques*, 6hrs, M1, Univ. Lille 1
- Master Computing for Medicine: Fanny Chevalier, *Information Visualization in Medicine*, 1hr, Masters, Univ. of Toronto
- Graduate course in Computer Sciences: Fanny Chevalier, *Topics in Interactive Computing: Information Visualization*, 16hrs, MSc and PhD, Univ. of Toronto
- Licence Informatique: Thomas Pietrzak (45 hrs), *Logique*, L3, Univ. Lille 1
- Licence Informatique: Thomas Pietrzak (36 hrs), *Automates et Langages*, L3, Univ. Lille 1
- Licence Sciences pour l'Ingénieur (SPI): Sylvain Malacria, *Introduction à l'Interaction Homme Machine*, 26hrs, L3, Institut Villebon Georges Charpak
- Research Masters in Computer Science & HCID Masters (EIT ICT Labs European Master in Human-Computer Interaction and Design): Stéphane Huot, *Advanced Programming of Interactive Systems*, 13.5 hrs, M1 & M2, Univ. Paris Saclay
- DUT Informatique: Géry Casiez, *IHM*, 72 hrs, 1st year, IUT A de Lille - Univ. Lille 1
- DUT Informatique: Géry Casiez, *Algorithmique*, 80 hrs, 1st year, IUT A de Lille - Univ. Lille 1
- DUT Informatique: Géry Casiez, *Modélisation mathématique*, 14 hrs, 2nd year, IUT A de Lille - Univ. Lille 1
- DUT Informatique: Géry Casiez, *Projets*, 18 hrs, 2nd year, IUT A de Lille - Univ. Lille 1

10.2.2. Supervision

PhD in progress: Hakim Si Mohammed, *Improving Interaction based on a Brain-Computer Interface*, started October 2016, advised by Anatole Lecuyer, Géry Casiez & Nicolas Roussel (in Rennes)

PhD in progress: Nicole Ke Chen Pong, *Comprendre et améliorer le vocabulaire interactionel des utilisateurs*, started October 2016, advised by Nicolas Roussel & Sylvain Malacria

PhD in progress: Thibault Raffaillac, *Languages and system infrastructure for interaction*, started October 2015, advised by Stéphane Huot & Stéphane Ducasse

PhD in progress: Amira Chalbi-Neffati, *Comprendre et mieux concevoir les animations dans le contexte des interfaces graphiques*, started October 2014, advised by Nicolas Roussel & Fanny Chevalier

PhD in progress: Jeronimo Barbosa, *Design and Evaluation of Digital Musical Instruments*, McGill University, started in 2013, advised by Marcelo Wanderley & Stéphane Huot (since 2016)

PhD in progress: Alexandre Kouyoumdjian, *Multimodal selection of numerous moving targets in large visualization platforms: application to interactive molecular simulation*, started October 2013, advised by Stéphane Huot, Patrick Bourdot & Nicolas Ferey (in Saclay)

PhD in progress: Justin Mathew, *New visualization and interaction techniques for 3D spatial audio*, started June 2013, advised by Stéphane Huot & Brian Katz (in Saclay)

PhD: Oleksandr Zinenko, *Interactive code restructuring*, Univ. Paris Saclay, defended in November 2016, advised by Stéphane Huot & Cédric Bastoul (Université de Strasbourg)

PhD: Alix Goguey, *Understanding and designing touch interaction using finger identification*, Univ. Lille 1, defended in October 2016 [11], advised by Géry Casiez.

PhD: Andéol Evain, *Optimizing the use of SSVEP-based brain-computer interfaces for human-computer interaction*, defended in December 2016, advised by Anatole Lecuyer, Géry Casiez & Nicolas Roussel (in Rennes)

10.2.3. Thesis committees

- Michael Glueck (PhD, University of Toronto): Fanny Chevalier
- Nicole Sultanum (PhD, University of Toronto): Fanny Chevalier
- Ignacio Avellino (PhD, Université Paris Saclay): Nicolas Roussel

10.2.4. Juries

- Morten Esbensen (PhD, IT University of Copenhagen): Nicolas Roussel, reviewer
- Élisabeth Rousset (PhD, Université de Grenoble): Géry Casiez, reviewer
- Sébastien Pelurson (PhD, Université de Grenoble): Géry Casiez, reviewer
- Waseem Safi (PhD, Université Cean Normandie): Thomas Pietrzak, examiner

10.3. Popularization

- *"Vers une meilleure appréciation des algorithmes qui nous entourent"*, talk for Rencontres Inria Industrie, Plaine Image, Tourcoing, November: Fanny Chevalier
- Prospective talk on HCI as part of BeyondLab's "*Aux portes du futur*" evening, November: Nicolas Roussel
- *"Chorégraphie des Transitions animées"*, talk for CRIStAL journée Recherche Innovation Création, Lille, October: Amira Chalbi-Neffati
- "*Les objets deviennent intelligents, et nous ?*", talk at Lycée Diderot (Carvin) as part of Inria Lille's "Chercheurs Itinérants" program, October: Nicolas Roussel
- *"Efficacité et performance des transitions animées"*, talk at EuraTechnologies (plateau Inria), March: Fanny Chevalier
- Presentation of the Mjolnir team, talk at EuraTechnologies (plateau Inria), January: Nicolas Roussel

<h2 style="color:red; text-align:center">MNEMOSYNE Project-Team</h2>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

X. Hinaut : Co-organiser of the 2nd Automn Day of the Working Group (GT8) "Robotique et Neurosciences" of Groupe de Recherche (GDR) Robotique (CNRS), at LaBRI, 17th November 2016.

10.1.1.2. Member of the Organizing Committees

Projections, Interactions, Emotions - Journées PsyPhINe, 2016 (http://poincare.univ-lorraine.fr/fr/manifestations/psyphine-2016, N. Rougier)

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

F. Alexandre: SAB 2016

10.1.2.2. Reviewer

F. Alexandre reviewer for AMINA 2016; X. Hinaut for CogSci 2016.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Frédéric Alexandre: Review Editor for Frontiers in Neurorobotics;
- Nicolas Rougier: Editor in chief for ReScience, review editor for Frontiers in Neurorobotics.

10.1.3.2. Reviewer - Reviewing Activities

- F. Alexandre: Frontiers in Human Neuroscience; npj Science of Learning; European Journal of Neuroscience; PLoS ONE;
- A. Garenne: Journal of Integrative Neuroscience
- X. Hinaut: PLoS ONE, Neural Networks, Intellectica, Frontiers in Neurorobotics, ReScience, Cognitive Computation.

10.1.4. Invited Talks

F. Alexandre: invited talk at the conference: "Modeling: success and limitations" (http://www.cnrs.fr/insmi/spip.php?article1876), Dec 6th and interview for the journal of the CNRS (https://lejournal.cnrs.fr/articles/modeliser-plus-pour-simuler-moins).

X. Hinaut: "Reservoir Computing for Robot Language Acquisition", at IROS Workshop on Machine Learning Methods for High-Level Cognitive Capabilities in Robotics. Daejon, South Korea, October 2016 [9].

N. Rougier:

- Open Science, AdaWeek, November 2016, Paris
- ReScience, "La loi numérique, et après ?", November 2016, Meudon
- "One actor, two critics", Robotiques et Neurosciences, November 2016, Bordeaux
- "Advanced Scientific Programming in Python", July 2016, Austin, USA.
- "Computational Neuroscience", International School of Bioelectromagnetics, Erice, April 2016, Italy.

10.1.5. Leadership within the Scientific Community

X. Hinaut:

- member of the Administration Committee of Fresco association (French Federation of students in Cognitive Science)
- member of "open citizen labs" : MindLaBdx (Bordeaux), IA*lab and CogLab (La Paillasse, Paris).

10.1.6. Scientific Expertise

F. Alexandre is the french expert for Mathematics and Computer Science of the PHC (Hubert Curien Program) Utique for scientific cooperation between France and Tunisia.

10.1.7. Research Administration

- F. Alexandre is member of the Inria Evaluation Committee; Deputy Scientific Delegate and Vice-head of the Project Committee of Inria Bordeaux Sud-Ouest; Corresponding scientist for Bordeaux Sud-Ouest of the Inria COERLE ethical committee; Member of the national Inria committee for international chairs; Member of the local Inria committee for young researchers hiring; Member of the steering committee of the regional Cluster on Information Technology and Health; of the regional Cluster on Robotics; Expert of the ITMO 'Neurosciences, Sciences Cognitive, Neurologie, Psychiatrie'
- N. Rougier is vice-head of the Mnemosyne team-project; elected member of the Inria Evaluation Committee; Responsible of the local Inria committee for invited professors; Member of the steering committee for the BioComp CNRS consortium; Editor in chief and co-founder of ReScience.
- Thierry Viéville is in charge, at the Inria national level till October 2016, of the institute science outreach actions and depends on the Direction Générale Déléguée à la Science for this part of his work. He is, for Inria, in charge of the http://classcode.fr project.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Advanced scientific python summer school, University of Reading, September 2016 (N. Rougier).

F. Alexandre: Teaching at the IBRO Advanced School in Neuroscience "Basal Ganglia, Parkinson's disease And Related Disorders", May 9-21, 2016, Faculty of Sciences, Rabat (Morocco)

Many courses are given in french universities and schools of engineers at different levels (LMD) by most team members, in computer science, in applied mathematics, in neuroscience and in cognitive science.

Thierry Viéville is since 2009 in charge of formations of high-school teachers in popular computer science.

10.2.2. Juries

We participate to many juries each year.

10.3. Popularization

For a multi-disciplinary team as Mnemosyne, science popularization is not only a nice and useful contribution to the dissemination of scientific knowledge but also a necessity since we work with colleagues from bio-sciences with whom sharing profound ideas in computer science is mandatory for a real collaboration.

- Thierry Viéville is for 80% of his time involved in popularization actions.
- Frédéric Alexandre: Article in the journal La Tribune in January 2016 about robots and emotions; Article in tribute to Marvin Minsky (Blog Binaire http://binaire.blog.lemonde.fr/2016/01/29/lintelligence-artificielle-debraillee/; Bulletin of the French Society of Computer Science http://www.societe-informatique-de-france.fr/bulletin/1024-numero-8/); Article about learning in the magazine of the University of Bordeaux (http://www.u-bordeaux.fr/Universite/U-magazine)

- Xavier Hinaut: "Apprentissage de la grammaire par un cerveau positronique". CogTalk organised by the association Ascoergo, Bordeaux, March 2016.

- Nicolas Rougier: "Le Grand Remue-Méninges", Octobrer 2016, Bordeaux; "Les neurosciences au coeur des innovations", May 2016, Lyon; Interview for the "Verge of Discovery" March 2016; Intervention for the "Artificial Intelligence forum", Bordeaux.

- For all the team: participation to the "Fête de la Science" in an exhibition in the Scientific Museum Cap Sciences: http://www.bordeaux-neurocampus.fr/fr/divers/toutes-les-communications/com-2016/fete-de-la-science.html

<p style="text-align:center">**MODAL Project-Team**</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Christophe Biernacki co-organised a one-day meeting "Introduction aux modèles statistiques scalables: Modélisation, nouveaux paradigmes, ecosystème Big Data" on December 5th 2016 at IHP (Paris). The website is here https://bigdata-stat.sciencesconf.org/ and it brought together about 40 registered people (maximum number for this session).

Christophe Biernacki, Benjamin Guedj and Sophie Dabo-Niang were in the organizing committee of the workshop "Big Data: Modelling, Estimation and Selection" at École Centrale de Lille on June 9th and 10th 2016 (https://indico.math.cnrs.fr/event/830/).

Alain Celisse and Guillemette Marot co-organized SMPGD in Lille: The Statistical Methods for Post Genomic Data workshop is an annual meeting dedicated to statistical methods for post genomic data analysis. The aim of the workshop is to present works from mathematical to applied Statistics, but also new areas in high throughput Biology that could need new statistical developments. The workshop is usually organized around 3 to 4 invited speakers, and 3 to 4 invited sessions, and one session of contributed abstracts (oral presentations and posters). As SMPGD is especially interested in the statistical, mathematical, algorithmics or modelling questions raised by modern biology, presentations are expected to focus on these points.

Benjamin Guedj co-founded and co-organised a one-day workshop called Young Statisticians and Probabilists (YSP), in Paris in January 2016. The topics were sequential learning, random trees, random maps and random matrices theory. Nearly 80 PhD students, postdocs and young researchers attended.

Benjamin Guedj is the organizer of the Modal team scientific seminar.

10.1.1.2. Member of the Organizing Committees

Benjamin Guedj has been a member of the steering committee for the FEM (Forum Emploi Maths) in Paris in December 2016. The FEM is the largest mathematics jobs fair in France and gathers universities, students, graduates, companies and institutions. Over 2,000 people attended this edition.

Sophie Dabo-Niang has been a member of the steering committees for the following events.

- CIMPA Research School: "Statistical methods for evaluation of extreme risks": April, 5-15, 2016, St-Louis, Senegal
- Worksop: "Financial and actuarial Mathematics": July 11-15, 2016, AIMS-Mbour, Senegal
- The first AWMA (African Women in Mathematics Association) regional Forum, July 8-9, 2016, AIMS-Mbour, Senegal
- Session "EO075: Quantile regression models for dependent data ", "The 9th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2016)" (Link), December 9-11, 2016, Seville, Spain.
- Session "Asymptotic properties in nonparametric spatial problems ", "Third conference of the International Society for NonParametric Statistics (ISNPS)", June, 11-16, 2016, Avignon, France.
- Workshop "Statistical methods for recurrent data ", November 7th, 2016, Link.
- Workshop, "Learning with functional data", October, 7th, 2016, Lille, France. Link

Cristian Preda has co-organized the International Workshop on Applied Probability 2016 (Link).

Vincent Vandewalle is a member of the animation team of the bilille platform (https://wikis.univ-lille1.fr/bilille/animation). He has co-organized two scientific days, one in June 2016 on metagenomic analysis and another one in November 2016 on systems biology.

Serge Iovleff, Cristian Preda and Vincent Vandewalle have organised a one day workshop at Lille in October 2016 about learning with functional data. During this workshop, a large scope of methods for learning with functional data with application to various domains has been presented (https://functional-data.univ-lille1.fr).

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

Sophie Dabo-Niang has been a member of the scientific committees of two conferences:

- STAHY 2016 Workshop, September 26-27, Quebec, Canada.
- International colloquium on financial Econometrics, November, 18 -19, 2016, Rabat, Maroc. Link

10.1.2.2. Reviewer

Alain Celisse has acted as a reviewer for AISTATS 2016.

Benjamin Guedj has acted as a reviewer for NIPS 2016 and AISTATS 2017.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Cristian Preda is a member of the editorial boards of

- Methodology and Computing in Applied Probability (Associate Editor)
- Romanian Journal of Mathematics and Computer Science" (Associate Editor)

Christophe Biernacki is an Associate Editor of the North-Western European Journal of Mathematics (NWEJM).

Sophie Dabo-Niang is a member of the editorial board of *Revista Colombiana de Estadística*.

10.1.3.2. Reviewer - Reviewing Activities

The Modal team is involved in 34 scientific outlets, among which are the most prestigious international journals related to statistics.

1. Advances in Data Analysis and Classification (Christophe Biernacki)
2. Annals of Applied Statistics (Sophie Dabo-Niang)
3. Annals of Statistics (Alain Celisse)
4. Bernoulli (Alain Celisse, Cristian Preda)
5. BMC Research Notes (Christophe Biernacki)
6. BMC Medical Research Methodology (Benjamin Guedj)
7. Canadian Journal of Statistics (Christophe Biernacki)
8. Chemometrics (Cristian Preda)
9. Computational Statistics and Data Analysis (Christophe Biernacki, Sophie Dabo-Niang, Cristian Preda, Vincent Vandewalle)
10. Data Mining and Knowledge Discovery (Christophe Biernacki)
11. Electronic Journal of Statistics (Alain Celisse, Sophie Dabo-Niang)
12. ESAIM: Probability and Statistics (Sophie Dabo-Niang)
13. Journal de la SFdS (Christophe Biernacki)
14. Journal of Classification (Christophe Biernacki)
15. Journal of Computational and Graphical Statistics (Vincent Vandewalle)
16. Journal of Machine Learning Research (Christophe Biernacki, Alain Celisse)

17. Journal of Multivariate Analysis (Sophie Dabo-Niang, Benjamin Guedj)

18. Journal of Nonparametric statistics (Sophie Dabo-Niang)

19. Journal of Statistical Planning and Inference (Christophe Biernacki)

20. Journal of Statistical Software (Christophe Biernacki)

21. Journal of the American Statistical Association (Benjamin Guedj)

22. Journal of the Royal Statistical Society, series A (Benjamin Guedj)

23. Knowledge and Information Systems (Christophe Biernacki)

24. Mathematical Reviews (Benjamin Guedj)

25. Methodology and Computing in Applied Probability (Cristian Preda)

26. Metrika (Sophie Dabo-Niang)

27. Molecular Ecology Resources (Benjamin Guedj)

28. Neurocomputing (Benjamin Guedj)

29. Statistical Inference for Stochastic Processes (Sophie Dabo-Niang)

30. Statistical Methods and Applications (Sophie Dabo-Niang)

31. Statistics (Sophie Dabo-Niang)

32. Statistics and Computing (Serge Iovleff)

33. Statistics and Probability Letters (Sophie Dabo-Niang, Benjamin Guedj)

34. The American Statistician (Christophe Biernacki)

10.1.4. Invited Talks

Christophe Biernacki's talks in 2016:

- Working Group on Model-Based Clustering Summer Session, Paris, July 17-23, 2016, https://maths. ucd.ie/~brendan/wgmbc2016.html, [28]
- Workshop on Model-based Clustering and Classification, September 5-7, 2016, Catania (Italy), http://mbc2.unict.it/, [29]
- Académie des Sciences, des Lettres et des Arts, Journée Scientifique "Big Data & Data Science", October 28th 2016, Tunis (Tunisia), http://www.beitalhikma.tn/p7536/, [26]
- 9th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2016, ERCIM 2016), 9-11 December 2016, University of Seville, Spain http:// cmstatistics.org/CMStatistics2016/, [27]
- Talk to the seminar of the "Laboratoire de Mathématiques de Besançon", February 29th 2016

Sophie Dabo-Niang's talks in 2016:

- Environmental Econometrics Day, Spatial Risk estimation and Application to environmental data, April, 24, 2016, Rabat, Marocco.
- CRoNoS FDA, satellite workshop of Compstat2016 (Link), Functional Binary Choice Models With Choice-Based Sampling, August, 26-28, Oviedo, Spain.
- AAS/AMU symposium on "Current Research Trends in Mathematical Sciences and applications", May, 17-20, 2016, UNESCO Chair of Mathematics, National Mathematical Centre (NMC), Abuja Nigeria.
- Learning with functional data, Functional Binary Choice Models With Choice-Based Sampling, October, 7, 2016, Lille, France.

Benjamin Guedj has been invited to deliver a talk to the 48èmes Journées de Statistique (JdS) of the French Statistical Society (June 2016, Montpellier, France).

Serge Iovleff gave a lightning talk entitled "MixAll: Un logiciel de classification non-supervisée" to the 5ème Rencontres R 2016.

Cristian Preda's talks in 2016:

1. International Workshop on Applied Probability (IWAP2016), 20-23 June, 2016, Toronto, Canada

2. 48e Journées de Statistique de la Société Francaise de Statistique, Montpellier, June 2016

3. 147th ICB Seminar Tenth International Seminar on statistics and clinical practice, May 15 - 18, 2016, Warsaw, Poland

4. 19-th Conference of the Romanian Society of Statistics and Probability, Universitatea Tehnica de Constructii Bucuresti, 27 mai 2016

10.1.5. Leadership within the Scientific Community

Christophe Biernacki is the president (since 2012) of the data mining and learning group of the French statistical association (SFdS, http://www.sfds.asso.fr/).

Benjamin Guedj is the president (since 2016) of the Young Statisticians group of the French Statistical Society.

Benjamin Guedj has joined the board of AMIES, the French Agency fostering collaborations between mathematicians and the private sector.

Guillemette Marot is responsible of bilille, the bioinformatics and bioanalysis platform of Lille. More information about the platform is available at https://wikis.univ-lille1.fr/bilille/

10.1.6. Scientific Expertise

Christophe Biernacki acted as an expert for two HCERES committees: one for teaching evaluation, one for research evaluation. He is also an elected member to the "Conseil National des Universités" (CNU) since October 2015.

Sophie Dabo-Niang offers expertise for Oreal's Award "Women in Science" since 2014.

10.1.7. Research Administration

Christophe Biernacki was "Délégué Scientifique Adjoint" of the Inria Lille center until June 2016. He is still member of the "Bureau du Comité des Projets" (BCP) of the Inria Lille center.

Sophie Dabo-Niang is the head of the MeQAME research team of Laboratory LEM-CNRS 9221.

Benjamin Guedj is a member of the scientific Council of the Laboratoire Paul Painlevé (maths department of the University of Lille).

Cristian Preda is a member of the Research Council of the University Lille 1.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Christophe Biernacki is the head of the M2 "Ingénierie Statistique et Numérique" http://mathematiques.univ-lille1.fr/Formation/ at University Lille 1.

Serge Iovleff is responsible for the Computer Science Licence semester.

Licence: Sophie Dabo-Niang, Probability, 24h, Lille 3, France

Licence: Serge Iovleff, Discrete Mathématics, 68H, Computer Science, IUT, Lille 1, France

Licence: Serge Iovleff, Linear Algebra 24H, Computer Science, IUT, Lille 1, France

Licence: Serge Iovleff, Analysis and Numerical Methods, 75H, Computer Science, IUT, Lille 1, France

Licence: Serge Iovleff, Graphs and languages, 36H, Computer Science, IUT, Lille 1, France

Licence: Serge Iovleff, Mathematical Modelisation, 38H, Computer Science, IUT, Lille 1, France

Licence: Serge Iovleff, Internships supervision, 15H, Computer Science, IUT, Lille 1, France

Licence: Serge Iovleff, Operational Research, 14H, Computer Science, IUT, Lille 1, France

Licence: Guillemette Marot, Biostatistics, 9h, L1, U. Lille Droit et Santé, France

Licence: Cristian Preda, Probability, 40h, L1, Polytech'Lille, France

Licence: Cristian Preda, Inferential Statistics, 50h, L1, Polytech'Lille, France

Licence: Vincent Vandewalle, Probability, 132h, L2, U. Lille 2, France

Licence: Vincent Vandewalle, Classification, 32h, L2, U. Lille 2, France

Licence: Vincent Vandewalle, Analysis, 24h, L2, U. Lille 2, France

Licence: Vincent Vandewalle, Machine Learning, 20h, L3, U. Lille 2, France

Master: Christophe Biernacki, coaching project, 10h, M1, U. Lille 1, France

Master: Christophe Biernacki, data analysis, 97.5h, M2, U. Lille 1, France

Master: Christophe Biernacki, coaching internship, 20h, M2, U. Lille 1, France

Master: Sophie Dabo-Niang, Advanced Statistics, 24h, Lille 3, France

Master: Sophie Dabo-Niang, Biostatistics Statistics, 40h, Master, Lille 1, France

Master: Sophie Dabo-Niang, Non-parametric Statistics, 24h, Master, UGB, Senegal

Master: Sophie Dabo-Niang, Spatial Statistics, 24h, Lille 3, France

Master: Benjamin Guedj, Statistical Learning: Theory and Algorithms, 18h, Lille 1, France

Master: Benjamin Guedj, Statistical Learning: Theory and Algorithms, 24h, Université Pierre & Marie Curie, France

Master: Benjamin Guedj, Statistical Learning: Theory and Algorithms, 30h, Institut de Statistique des Universités de Paris (ISUP), France

Master: Serge Iovleff, Object Oriented programming, 20H, Master Mathématiques Appliquées, Statistique - Ingénierie Mathématique, Lille 1, France

Master: Serge Iovleff, Probability and stochastic processes, AIMS (MBour-Sénégal)

Master: Guillemette Marot, Biostatistics, 44h, M1, U. Lille Droit et Santé, France

Master: Guillemette Marot, Coaching project, 12h, M1, U. Lille Droit et Santé, France

Master: Guillemette Marot, Supervised classification, 13h, M1, Polytech'Lille, France

Master: Cristian Preda, Data Analysis, 40h, M1, Polytech'Lille, France

Master: Cristian Preda, Biostatistics, 12h, M2, Polytech'Lille, France

Master: Vincent Vandewalle, Classification 60h, M1, U. Lille 1, France

Doctorat: Guillemette Marot, Data Analysis with R, 14h, U. Lille Droit et Santé, France

10.2.2. Supervision

PhD: Jérémie Kellner, "Gaussian processes and kernel methods", Université Lille 1, 12/2016, Alain Celisse.

PhD: Quentin Grimonprez, "Variable selection in high dimensional setting with correlation", Inria DGA & Université Lille 1, 12/2016, Guillemette Marot, Julien Jacques, Alain Celisse.

PHD: Florence Loingeville, "Modèle linéaire généralisé hiérarchique Gamma-Poisson pour le contrôle de qualité en microbiologie", Université Lille 1, 01/2016, Cristian Preda.

PhD: Mohamed Yayaha, Lille 3, Sophie Dabo-Niang and Aboubacar Amiri.

PhD: Aladji Bassene, Lille 3 & UGB (Sénégal), Sophie Dabo-Niang.

PhD in progress: Le Li, "PAC-Bayesian Online Clustering: theory and algorithms", iAdvize & Université d'Angers, 11/2014, Benjamin Guedj, Sébastien Loustau.

PhD in progress: Maxime Baelde, "Identification, localisation, séparation temps réel de sources sonores dans les flux audio multi-canaux", A-Volute, Inria & Université Lille 1, 01/2016, Christophe Biernacki.

PhD in progress: Anne-Lise Bedenel, "Appariement de descripteurs évoluant dans le temps", PIXEO, Inria & Université Lille 1, 06/2015, Christophe Biernacki, Laetitia Jourdan.

PhD in progress: Adrien Ehrhardt, "Modèles prédictifs pour données volumineuses et biaisées. Application à l'amélioration du scoring en risque crédit", CACF, Inria & Université Lille 1, 06/2016, Christophe Biernacki, Philippe Heinrich, Vincent Vandewalle.

PhD in progress: Maxime Brunin, "Early stopping rules in statistical learning", 09/2014, Christophe Biernacki, Alain Celisse.

PhD in progress: Emad Drwesh, Lille 3, Sophie Dabo-Niang, Jérôme Foncel.

PhD in progress: Mohamed Salem Ahmed, Lille 3, Sophie Dabo-Niang and Mohamed Attouch.

PhD in progress: H. Sarter, "Outils statistiques pour la sélection de variables et l'intégration de données cliniques et omiques : développement et application au registre EPIMAD", 12/2016, C. Gower, Guillemette Marot.

10.2.3. Juries

Christophe Biernacki participated as a reviewer to 5 PhD theses and 1 HdR committee, and as an examiner to 1 PhD thesis and 2 HdR committees. He also participated to 1 recruitment committee for a professor and was president of 1 recruitment committee for an assistant professor.

Alain Celisse has participated as an examiner to 1 PhD thesis.

Sophie Dabo-Niang has participated as an examiner to 4 PhD thesis.

Guillemette Marot was a member of two recruitment committees (MCU Univ. Nice, IE Univ. Lille). She was also an examiner to 1 PhD thesis.

Cristian Preda has participated as an examiner to 1 HdR committee.

Vincent Vandewalle has participated as an examiner to 1 PhD thesis.

10.3. Popularization

Christophe Biernacki has given about 10 talks during 2016 for institutions (Inria, universities, Ecole des Mines), companies and other related events. He gave also presentations towards students and industrials to the Xperium platform of the University of Lille about "Intelligence des données" (https://modal.lille.inria.fr/xperium/, http://learningcenters.nordpasdecalais.fr/innovation/fr/xperium). About 1,500 people came to this event during two years. He organized also a first short meeting in April 2016 in Lille for obtaining a feedback from company and academic users about the MASSICCC platform developed by the Modal and Select teams (https://massiccc.lille.inria.fr/#/). Here is the link towards this event: https://modal.lille.inria.fr/wikimodal/lib/exe/fetch.php?media=meeting_massiccc_7avril2016.pdf.

Sophie Dabo-Niang participates in the promotion of research among young children around a day of "Girls and Science, a light equation" organized in Lille (October 2016) and Senegal (Dakar, march 2016).

Benjamin Guedj has given a talk to high school students ("Terminale ISN") at Euratechnologies. The talk consisted in an overview of of machine learning impacts our everyday lives and how mathematicians contribute to learning in the big data era.

Vincent Vandewalle has given one presentation towards students to the Xperium platform of the University of Lille about "Intelligence des données" (https://modal.lille.inria.fr/xperium/, http://learningcenters.nordpasdecalais.fr/innovation/fr/xperium). He also has animated a formation on probabilities and statistics for middle School mathematics teachers through the Maison Pour la Science (http://www.maisons-pour-la-science.org/node/10641).

MOKAPLAN Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

V. Duval and F-X. Vialard have organized the CAVALIERI workshop which was held in the Inria Paris research center (October, 11th and 12th).

The team has organized the "Journées MokaTAO" together with the McTAO team on October 3rd and 4th. G. Peyré co-organized the SIGMA 2016 conference at the CIRM in Nov. 2016.

J-D. Benamou has co-organized Computational Optimal Transportation Workshop at CRM montreal (July 18-22).

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

Guillaume Carlier is in the board of Journal de l'école Polytechnique, Applied Mathematics and optimization (since 2016) and Mathematics and financial economics, with Filippo Santambrogio and Thierry Champion he co-edited a special issues of RICAM Series devoted to optimal transport. G. Peyré is editor for SIAM Journal of Imaging Sciences and Springer Journal of Mathematical Imaging and Vision. He co-edited a special issues of RICAM Series devoted to inverse problems.

10.1.2.2. Reviewer - Reviewing Activities

The members of the team are frequently reviewing papers in SIIMS (SIAM Journal on Imaging Sciences), JMAA (Journal of Mathematical Analysis and Applications), IPol (Image Processing Online), JVCI (Journal of Visual Communication and Image Representation), COCV, M2AN ... Discrete and computational geometry, Journal of the London Math Society, JOTA, JCP, "Information and Inference: A Journal of the IMA", JMIV, Optimization Letters, PAMI, SIAM optimization and control, IPMI and MICCAI (leading conferences in medical imaging).

10.1.3. Invited Talks

V. Duval was invited to give talks at: the Oberwolfach workshop on Mathematical Imaging and Surface processing (January 2016), the Séminaire Parisien de Statistique (SEMSTAT, March 2016), the McGill-Mokalien Workshop on Numerical Optimal transport (July 2016) and the Demi-heure de Science at Inria Paris (October 2016).

G. Carlier gave seminars in Grenoble, Liège, Bielefeld and NYU, was plenary speaker at Smai-Mode conference (Toulouse), gave talks at the workshop Nonlinear problems from materials science and shape optimization (Pisa), workshop computational optimal transport (Montreal), workshop New Developments in Econometrics and Time Series (Madrid), MAFE Meeting (Bielefeld) and OTT16 (Pisa).

G. Peyré was plenary speaker at : Oxford Summer School on inverse problems (Jul 2016) ; Optimization without Border, (les Houches, Feb 2016) ; UCL workshop on sparse signal processing (Sep. 2016) ; workshop computational optimal transport (Montreal, Jul 2016) ; OTT16 (Pisa, Dec 2016).

J-D. Benamou talked at the Calculus of Variation Seminar in U. Paris Diderot (Nov.), he was invited speaker at OTT16 (Pisa, Dec 2016).

F-X. Vialard gave talks in séminaire de mathématiques appliquées, Cermics, ENPC, janvier; Geometric analysis theory in vision and control conference, Voss - Bergen, May; SIAM Imaging Science, Large Scale Inverse Problems in Medical Imaging, Albuquerque, May; Mathematics of Shapes and Applications, Singapore, July; Geometric Measure Theory: Analysis and non-smooth objects, CIMI analysis semester, Toulouse, September; MokaTAO meeting, Inria Paris, October; séminaire calcul des variations, Orsay, October; Journée transport optimal, équation de Monge-Ampère et applications, IHES, December.

10.1.4. Leadership within the Scientific Community

G. Peyré is in the scientific boards of Fondation Sciences Mathématiques de Paris (since 2013) ; Chaire CFM-ENS on Data Sciences (since 2016) ; Chaire Havas-Dauphine END (since 2013); Ceremade Paris-Dauphine (2013-2016)

10.1.5. Research Administration

J-D. Benamou is an elected member of the "Conseil Académique" of the PSL COMUE.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence : V. Duval, Analyse fonctionnelle, 27h équivalent TD, niveau L3, INSA Rouen-Normandie

Master : G. Peyré, Master 2 MVA on imaging and machine learning (Cachan) $30h$.

Licence : F-X. Vialard, Algèbre linéaire 2, Université Paris-Dauphine, $30h$.

10.2.2. Supervision

Internship : Gwendoline de Bie did her master internship (2nd year at ENSAE Paris-Tech) with G. Carlier on *Entropic regularization for multivariate quantile regresssion*,

Internship : Christine Durok *Une méthode itérative pour le probléme inverse du réflecteur discret* J-D. Benamou Q. Mérigot

PhD in progress: Julien André, CIFRE PhD thesis with with the company OPTIS Grenoble-INP (co-supervision D. Attali, B. Thibert, Q. Mérigot)

PhD in progress : Jocelyn Meyron, *Extension of semi-discrete Optimal transport to other costs*, lED de Grenoble, Q. Mérigot, D. Attali and B. Thibert.

PhD in progress : Miao Yu, *Optimal Transport distances and Geophyscial imaging* J-D. Benamou (co-direction J.-P. Vilotte, IPGP).

PhD in progress : Paul Catala, *Low-rank approaches for off-the-grid superresolution*, October 2016, G. Peyré and V. Duval.

PhD in progress : Lenaic Chizat, *Unbalanced Optimal Transport* , october 2014, F-X. Vialard and G. Peyré.

PhD in progress : Aude Genevay, *Optimal Transport for Machine Learning* , october 2015, J-D. Benamou and G. Peyré.

PhD in progress : Quentin Denoyelle, *Off-the-grid super-resolution: theory, algorithms and applications in fluorescence imaging*, October 2014, G. Peyré and V. Duval.

Postdoc completed: Dario Prandi, sub-Riemannian model for imaging, Oct. 2015 – Aug. 2016, G. Peyré and J-M Mirebeau

Postdoc completed: Thomas Gallouèt, Fluid model and optimal transport, Oct. 2015 – Aug. 2016, Q. Mérigot and Yann Brenier.

Postdoc in progress: Roman Andreev, Numerical Methods for Mean Field Games , Mai 2015, Yves Achdou and J-D. Benamou.

PhD completed: Luca Nenna, Numerical Methods for Multi-Marginal Optimal Transportation, October 2013-December 2016, J-D. Benamou and G. Carlier.

PhD completed: Maxime Laborde, Systemes de particules en interaction, approche par flot de gradient dans l'espace de Wasserstein, september 2013-December 2016, G. Carlier.

PhD in progress: Jonathan Vacher, Machine learning approaches for neurosciences of the visual brain, October 2013-Jan 2017, G. Peyré and C. Monier.

Postdoc completed: Bernhard Schmitzer, fast algorithms for optimal transport, Oct. 2014-August 2016, G. Peyré.

Postdoc completed: Clarice Poon, *Support recovery using total variation and others sparse priors*, September 2015-August 2016, G. Peyré and V. Duval.

10.2.3. *Juries*

Vincent Duval was in the PhD comittee of Romain Hug (Grenoble, December, 9).

J-D. Benamou and G. Carlier were in the PhD comittee of Mathieu Laurière (Paris-Diderot, November 21), G. Carlier was on the Ph.D comittee of Guo (Ecole Polytechnique) and the HDR of Silva (Limoges, referee) and Lamboley (Dauphine, coordinateur). G. Peyré was in the PhD comittees of: Mitra Fatemi (EPFL, Feb. 2016), Morgane Henry (Grenoble, Mars 2016), Antoine Bonnefoy (Marseille, Mars 2016), Sébastien Combrexelle (Toulouse, Oct. 2016), Augustin Cosse (UCL, Aout 2016), Irène Kaltenmark (ENS Cachan, Oct. 2016), Olivia Miraucourt (Reims, Oct. 2016), Fred Maurice Ngole (CEA, Oct. 2016), Lara Raad (ENS Cachan, Oct. 2016), Emmanuel Soubies (Nice, Oct. 2016), Luc Le Magoarou (Rennes, Dec. 2016), Chen Da (Paris, Dec. 2016).

10.3. Popularization

G. Peyré wrote the large audience articles : "Claude Shannon et la compression de données" on Image des Mathematiques [0] ; "Parcimonie, problemes inverse et échantillonnage compressé" in La Gazette des Mathematiciens (SMF). G. Peyré organized the conference in the honnor of Claude Shannon in CIRM [0].

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[0] http://images.math.cnrs.fr/Claude-Shannon-et-la-compression-des-donnees
[0] http://www.fr-cirm-math.fr/hommage-claude-shannon.html

MONC Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

Thierry Colin was in the organizing committee of the *6th International Conference in Computational Surgery and Dual Training* in Bordeaux. The whole team (particularly A. Collin and C. Poignard) was involved in the organization of this event.

9.1.2. Journal

9.1.2.1. Reviewer - Reviewing Activities

- S. Benzekry - biomathematical modeling journals: Journal of Theoretical Biology, Mathematical Biosciences, Bulletin of Mathematical Biology, Theoretical Biology and Medical Modeling, Mathematical Biosciences and Engineering, Journal of Biological Informatics, Journal of Biological Systems, ESAIM:Proc, Mathematics and Computers in Simulation; and medical/biological journals about cancer: Clinical Pharmacokinetics, BMC Cancer
- A. Collin - Computer Methods in Applied Mechanics and Engineering.
- T. Colin - Too much to list...
- C. Poignard - SIAM Journal on Mathematical Analysis, IEEE Trans on Mag, J. Math. Biology, J. Theoretical Biology
- O. Saut - IEEE Trans. Med. Imaging, PLOS Computational Biology, PLOS One, Medical Image Analysis, Nature Comm.

9.1.3. Invited Talks

- Sébastien Benzekry:
  - Integrated Mathematical Oncology Department, Moffitt Cancer Center, Tampa, Florida, USA.
  - Department of Genetics, Roswell Park Cancer Institute, Buffalo, NY, USA.
  - Mathematics Department Colloquium, Ryerson University, Toronto, Canada.
  - Metronomics @ Mumbai, Mumbai, India.
- Thierry Colin:
  - Second French-Korean congress, July 2016, Bordeaux.
  - Treatment optimization for glioblastomas, Ocotber 2016, Cuenca, Spain.
  - Keio University Hospital, Japan,
  - Tokyo University of Science, Japan,
  - Osaka University, Japan.
- Olivier Saut: ALGORITMY 2016, Conference on Scientific Computing, Podbanske, Slovakia (http://www.math.sk/alg2016).

9.1.4. Leadership within the Scientific Community

- O. Saut is the head of the CNRS GDR 3471 Metice (http://metice.math.cnrs.fr).

9.1.5. Scientific Expertise

- S. Benzekry was a reviewer for research projects of the CETIC (Centre d'Excellence Africain en Technologies de l'Information et de la Communication) and for the Erwin Schroedinger-Fellowship of the Austrian Science Fund (FWF).
- O. Saut is an expert for the French Ministry of Research (for various programs including PHC and EGIDE programs).
- O. Saut was a reviewer for Research Career Development Fellowship program of Dublin City University.
- O. Saut is a reviewer for project proposals in IGSSE (International Graduate School of Science and Engineering), Technical University of Munich.

9.1.6. Research Administration

- C. Poignard is elected member of the Inria evaluation committee.
- O. Saut is a member of the Steering Committee of Labex TRAIL (http://trail.labex.u-bordeaux.fr).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: S. Benzekry, Equations différentielles ordinaires, 20h, ENSEIRB-Matmeca, France.

Master: T. Colin, Last year of Engineering school Enseirb-Matmeca: multiphysics modelling

Licence: T. Colin, First Year of the Engineering school of chemestry of Bordeaux, specilization in structures and composite material: basic mathematics.

Licence and Master: A. Collin did a full service as MdC at the Engineering school ENSEIRB-Matmeca.

Licence: Clair Poignard, Engineering school ENSCPB. L3 undergraduate course on numerical analysis (50h).

Licence: Clair Poignard, Engineering school ENSEIRB-Matmeca: undergraduate lecture on numerical analysis (18h).

Master : Olivier Saut, Outils Numériques pour la Mécanique, 20h, M1, ENSEIRB-Matmeca, France.

9.2.2. Supervision

- PhD : P. Berment, Mathematical modelling evaluating radiotherapy outcome for colorectal tumor with Pet Scan, Univ. Bordeaux, July 2016, Thierry Colin and Olivier Saut.
- PhD : E. Baratchart, Quantitative study of the dynamics and spatial aspects of metastatic development using mathematical models, Univ. Bordeaux, February 2016, S. Benzekry, Th. Colin and O. Saut.
- PhD in progress : M. Deville, Modeling of electroporation and gene transfection across tissue. Theoretical and numerical aspects., Sep 2014, C. Poignard and R. Natalini (IAC, CNR Roma).
- PhD : O. Gallinato, Invasive process modeling of the tumor metastatic cells, Univ. Bordeaux, C. Poignard and T. Suzuki (Osaka University). (PhD defended November 22, 2016)
- PhD in progress : T. Kritter, Primary tumors modelling with a view to the gliomas and adenocarcinomas study, Sep 2015, C. Poignard and O. Saut
- PhD : T. Michel, Analysis of mathematical growth tumor models, Univ. Bordeaux, C. Poignard and Th. Colin. (PhD defended November 18, 2016)
- PhD in progress : A. Perreti, Anti-angiogenic traitements modeling using medical imaging, Oct 2014, Th. Colin and O. Saut.
- PhD in progress : S. Corridore, 2016-2019, A. Collin and C. Poignard.
- PhD in progress : C. Perier, 2016-2019, B. Denis de Senneville and O. Saut.

- PhD in progress: C. Nicolò, Mathematical modeling of systemic aspects of cancer and cancer therapy, Oct 2016, S. Benzekry and O. Saut.

9.2.3. *Juries*

- O. Saut was a reviewer of the PhD of Matthieu Lê "Modélisation de la croissance de tumeurs cérébrales, application à la radiothérapie", Univ. Nice, Inria Sophia Antipolis, July 2016.

9.3. Popularization

- Popularization article in a special edition of the journal "Tangente" devoted to mathematics in medicine. (S. Benzekry).
- S. Benzekry was interviewed by the journal "Sciences et Avenir".
- A. Collin is an active member of "Femmes et Sciences" and gave several talks in this context (Printemps de la Mixité, talks in high schools...).
- O. Saut is a regular speaker at Entretien de l'Excellence (http://www.lesentretiens.org).
- O. Saut was a speaker at the "Forum des Métiers" in Collège Montaigne, Lormont.

<p align="center" style="color:red">MORPHEME Project-Team</p>

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. Member of the Organizing Committees

Florence Besse was a co-organizer of the SIgnalife Maths-Bio workshop (Sophia, Nov 2016)

8.1.2. Scientific Events Selection

8.1.2.1. Member of the Conference Program Committees

Laure Blanc-Féraud was associate editor of the workshops: New Computational Methods in Inverse Problems - NCMIP 2016 (NCMIP) in ENS Cachan, and Optimization Techniques for Inverse Problems III, Modena Italy 1-21 September 2016

Eric Debreuve: Advanced Concepts for Intelligent Vision Systems (ACIVS) and Reconnaissance des Formes et l'Intelligence Artificielle (RFIA)

Grégoire Malandain was in charge of a special session "Approches RF et vision en imagerie biologique et médicale" at RFIA.

8.1.2.2. Reviewer

Laure Blanc-Féraud was a reviewer for the conference ICIP.

Eric Debreuve was a reviewer for the conferences IEEE International Conference on Image Processing (ICIP) and International Symposium on Biomedical Imaging (ISBI)

Xavier Descombes was reviewer for the conferences ISBI, ICASSP and ICIP.

Grégoire Malandain was reviewer for the conferences EMBC, ISBI, ICPR, MICCAI, and the Second Workshop on BioImage Computing at ECCV 2016.

8.1.3. Journal

8.1.3.1. Member of the Editorial Boards

Laure Blanc-Féraud is Associate Editor of SIAM Journal Imaging Sciences and Traitement du Signal Journal.

Xavier Descombes is associated editor of DSP (Digital Signal Processing).

8.1.3.2. Reviewer - Reviewing Activities

Laure Blanc-Féraud was reviewer for the Journal Signal Processing.

Eric Debreuve was reviewer for the journals IEEE Transactions on Medical Imaging, Signal Processing: Image Communication (Elsevier), and Digital Signal Processing (Elsevier).

Xavier Descombes was reviewer for the journals IEEE on IP, Pattern Recognition and DSP.

Grégoire Malandain was reviewer for the journals CVIU NeuroImage and MedIA.

8.1.4. Invited Talks

Laure Blanc-Féraud was invited to give a talk at the workshops: NCMIP'16 in Cachan in May, AT-LAS Workshop organized by the GdR MaDICS in Grenoble in May, and Optimization Techniques for Inverses Problems III in Modena Italy in September.

Xavier Descombes was invited to give a talk at the workshop "Mathématiques et Biologie" organized within the labex Signalife programm.

8.1.5. Leadership within the Scientific Community

Florence Besse is a member of the scientific council (CAC) of the University Cote d'Azur (UCA), a member of the scientific council of the IDEX JEDI Academy 2, and a member of the scientific council of the LabeX Signalife program.

Laure Blanc-Féraud is director of GdR 720 ISIS of CNRS, a group for the animation of research at national french level on the thematics Signal Image and Vision. This group includes around 160 academic laboratories and twenty industrial partners totaling almost 3,000 members. She heads the scientific committee of academy 1 of UCA (COMUE université Côte d'Azur) and Idex UCA JEDI.

Xavier Descombes is member of the Scientific Committee of the competitivness pole Optitech, member of IEEE BISP (Biomedical Imaging Signal Processing) Technical Committee and member of the Scientific Committee of Labex SIGNALIFE.

Grégoire Malandain is member of the IEEE/EMB Technical Committee on Biomedical Imaging and Image Processing (BIIP). He is an member of the Scientific Committee of the MIA department of INRA.

8.1.6. Scientific Expertise

Laure Blanc-Féraud is part of the scientific committee of the Institut des Technologies Avancées en sciences du Vivant" (ITAV, USR CNRS 3505). She headed the HCERES expert committee (18 members) of LabSTICC Lab in Brest and headed the recruitment panel "Comité de sélection" of a MCF at University Paris Descartes in section 26. Sha was member of the scientific committee of the "rencontres du numériques" of ANR. She is expert member of the MIUR: Italian Ministry for Education, University and Research (Italy) and expert for the Fund for Scientific Research - FNRS (Belgium). She was expert for an application at a director of research position in ONERA DTIM.

Xavier Descombes is an expert for the DRRT within the CIR ("Crédit Impot Recherche") and JEI ("Jeunes Entreprise Innovantes") programs.

8.1.7. Research Administration

Laure Blanc-Féraud was member of the steering committee of the "défi 7" of the ANR. She was member of the CNRS admission for chargé de recherche at INS2I of CNRS. She is member of the academic council of UCA (COMUE université Côte d'Azur).

Xavier Descombes is member of the "comité des projets" and the "comité de centre" of Inria CRI-SAM.

Grégoire Malandain is the head of the committee "Comité de suivi doctoral" of the Inria CRI-SAM.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master: Florence Besse, Genetic control of neuronal branching, 2h, Université Côte d'Azur, France.

Master: Florence Besse, Dissection of neuronal circuits, 4h, Université Côte d'Azur, France.

Master: Florence Besse, Post-transcriptional regulation of neuronal development and maturation, 2h, Nancy, France.

Master : Laure Blanc-Féraud, Fluorescence image restoration, 18h Eq. TD, M2 Computational Biology , University Nice Sophia Antipolis, France.

Master : Laure Blanc-Féraud, Traitement numérique des images, 12h Eq. TD, M2 VIM , EPU University Nice Sophia Antipolis, France.

Master/Engineer: Eric Debreuve, Data Mining, 27.5h équivalent TD, M2/Engineer 5th year, Université Côte d'Azur, France

Master: Eric Debreuve, Introduction to Inverse Problems in Image Processing, 28.5h équivalent TD, International M2, Université Côte d'Azur, France

Master: Xavier Descombes, Traitement d'images, Analyse de données, Techniques avancées de traitement d'images, 10h Eq. TD, Niveau M2, ISAE, France.

Master: Xavier Descombes, Traitement d'images, master VIM, 12h Eq. TD, Niveau M2, Université Côte d'Azur, France.

Master: Xavier Descombes, Bio-imagerie, master IRIV, 6h Eq. TD, Niveau M2, Université de Strasbourg, France

Master: Xavier Descombes, Analyse d'images, master GBM, 9h Eq. TD, Niveau M2, Université Côte d'Azur, France.

Master: Gaël Michelin, Traitement Numérique des Images, 8h Eq. TD, Niveau M2, EPU, Université Côte d'Azur, France.

IUT : A. Razetti, initiation à la mesure du signal, 30h Eq. TD, IUT Nice Côte d'Azur, Université Côte d'Azur, France.

Licence : Emmanuel Soubies, Images et Filtres, 54h Eq.TD, Niveau L3 , EPU, Université Côte d'Azur, France.

8.2.2. Supervision

PhD: Emmanuel Soubies, Sur quelques problèmes de reconstruction en imagerie MA-TIRF et en optimisation parcimonieuse par relaxations continue exacte de critères pénalisés en norme ℓ_0, Université Côte d'Azur, 14 october 2016.

PhD: Gaël Michelin, Outils d'analyse d'images et recalage d'individus pour l'étude de la morphogénèse animale et végétale, 28 october 2016.

PhD in progress: Lola Baustista, DIC microscopy image reconstruction, 1st november 2013, Laure Blanc-Féraud.

PhD in progress: Agustina Razetti, Modelling and characterizing axon growth from in vivo data, 1st november 2014, Xavier Descombes (advisor), Florence Besse (co-supervisor).

PhD in progress: Emmanuelle Poulain, Fluoroscopy/CTA dynamic registration, 1st february 2016, Grégoire Malandain.

PhD in progress: Anca-Ioana Grapa, Characterization of the organization of the Extracellular Matrix (ECM) by Image Processing , 19 September 2016, Laure Blanc-Féraud, Xavier Descombes.

8.2.3. Internships

Nicolas Cedilnik: M1 BIM, UNS, Small particle detection. Supervisors: X. Descombes.

Simon Gazagnes: M2 INSA Lyon. Sparse 3D reconstruction for TIRF-PALM Imaging. Supervisors: L. Blanc-Féraud, E. Soubies.

Djampa Kozlowski: M2 BIM, UNS, Nuclei detection and classification in genome-wide RNAi screens. Supervisors: X. Descombes, F. Besse, F. de Graeve (iBV).

Raphaël Meunier: M1 INSA Toulouse. Classification of the extracellular matrix. Supervisors: X. Descombes, L. Blanc-Féraud.

8.2.4. Juries

Laure Blanc-Féraud participated to the PhD thesis committee of Sébastien Combrexelles (IRIT Toulouse), as reviewer of the HDR of Gabriele Facciolo (ENS Cachan) and reviewer of the 2 PhD thesis: Fred NGole MBoula (CEA Saclay), Meriem Ben Abdallah (CRAN Nancy).

Xavier Descombes participated to the PhD thesis committee of A. Sarr (Univ. de Bretagne)

Grégoire Malandain participated as chair to the PhD thesis committee of D. Chen (Paris Dauphine univ.), G. Michelin (Côte d'Azur univ.) as reviewer to the PhD thesis committee of O. Merveille (Paris Est univ.), A. Sironi (EPFL), and as committee head to the PhD thesis committee of P. Samarakoon (Grenoble Alpes univ.).

8.3. Popularization

Xavier Descombes was invited to give a talk at "La fête de la science" in Juan Les Pins.

The Morpheme team has animated a stand during the "fête de la science" in Juan Les Pins.

<p style="text-align:center">**MORPHEO Project-Team**</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Chair of Conference Program Committees

- Edmond Boyer was area chair for CVPR 2016 and BMVC 2016.

10.1.1.2. Member of the Conference Program Committees

- Franck Hétroy-Wheeler was part of the IPC for Eurographics 2016 (short papers).
- Stefanie Wuhrer was PC member for the Eurographics Workshop 3DOR

10.1.1.3. Reviewer

- Edmond Boyer has reviewed for: ECCV 2016, SIGGRAPH 2016, 3DV 2016, RFIA 2016, ORASIS 2015.
- Jean-Sébastien Franco has reviewed for: ECCV 2016, SIGGRAPH 2016, 3DV 2016, RFIA 2016
- Franck Hétroy-Wheeler has reviewed for: Eurographics 2016 (short papers), 3DV 2016.
- Stefanie Wuhrer has reviewed for CVPR 2016 and ECCV 2016

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

- Edmond Boyer is associate editor of IJCV.

10.1.2.2. Reviewer - Reviewing Activities

- Edmond Boyer has reviewed for: IEEE Transactions on PAMI.
- Franck Hétroy-Wheeler has reviewed for: Journal of Mathematical Imaging and Vision, The Visual Computer, Journal of Imaging.
- Julien Pansiot has reviewed for: MobiHealth 2016, J. 3D Research 2016, IOP SMS 2016, TPAMI 2016, IJCV 2016.

10.1.3. Invited Talks

- Edmond Boyer gave invited talks at: CVPR area chair meeting and ETH Zurich.

10.1.4. Scientific Expertise

- Edmond Boyer evaluated projects for: EPSRC (UK's agency for funding research) and FWF (Austrian Science Fund agency).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: Edmond Boyer, 3D Modeling, 18h, M2R GVR, Université Joseph Fourier Grenoble.

Master: Edmond Boyer, Introduction to Visual Computing, 30h, M1 MoSig, Université Joseph Fourier Grenoble.

Master: J.S. Franco, co-responsability of the Graphics, Vision, Robotics specialty of the Mosig Masters program, Second year Masters, Grenoble INP, Université Joseph Fourier.

Licence: F. Hétroy-Wheeler, Algorithmics and data structures, 59h, Ensimag 1st year, Grenoble INP.

Licence: F. Hétroy-Wheeler, Algorithmics and programming, 45h, Ensimag dual education through apprenticeship 1st year, Grenoble INP.

Master: F. Hétroy-Wheeler, Image projects, 25h, Ensimag 2nd year, Grenoble INP.

Master: F. Hétroy-Wheeler, Surface modelling, 24h, Ensimag 3rd year, Grenoble INP.

Master: F. Hétroy-Wheeler, 3D graphics, 11h, Master of Science in Informatics, Université Grenoble Alpes.

Master: F. Hétroy-Wheeler, Geometric modelling, 42h, Master of Science in Industrial and Applied Mathematics, Université Grenoble Alpes.

Master: F. Hétroy-Wheeler, co-responsability of the Mathematical Modeling, Image and Simulation (MMIS) track of Ensimag, Grenoble INP.

Master: J. Pansiot, Introduction to Computer Vision, 27h, Ensimag 3rd year, Grenoble INP.

Master: S. Wuhrer, 3D graphics, 13h, Master of Science in Informatics, Université Grenoble Alpes.

10.2.2. Supervision

PhD in progress : Benjamin Allain, Geometry and Appearance Analysis of Deformable 3D shapes, Université de Grenoble Alpes, started 01/10/2012, supervised by J.S. Franco and E. Boyer.

PhD in progress :Victoria Fernandez Abrevaya, 3D Dynamic Human Motion Representations, Université de Grenoble Alpes, started 01/10/2016, supervised by Stefanie Wuhrer and Edmond Boyer.

PhD: Timo Bolkart, Statistical analysis of 3D human faces is motion, Saarland University, started 01/01/2012, defended 14/06/2016, supervised by Stefanie Wuhrer.

PhD in progress: Adnane Boukhayma, 4D model synthesis, Universiteé de Grenoble Alpes, started 01/10/2013, supervised by Edmond Boyer.

PhD in progress : Vincent Leroy, 4D Multi-View Reconstruction from Photometric Information, Université de Grenoble, started 01/10/2015, supervised by J.S. Franco and E. Boyer.

PhD: Georges Nader, Calcul du seuil de visibilité d'une distorsion géométrique locale sur un maillage et ses applications, Université Claude Bernard - Lyon 1, defended 22/11/2016, supervised by Florent Dupont, Kai Wang and Franck Hétroy-Wheeler.

PhD in progress: Romain Rombourg, Digital tree: from the acquisition to a high-level geometric model, Université Grenoble Alpes, started 01/10/2015, supervised by Franck Hétroy-Wheeler and Eric Casella.

PhD in progress: Aurela Shehu, Geometric processing of near-isometrically deforming surfaces, Saarland University, started 01/04/2012, defended 14/06/2016, supervised by Stefanie Wuhrer.

PhD : Vagia Tsiminaki, Appearance Modelling and Time Refinement in 3D Videos, Université de Grenoble Alpes, started 01/10/2012, defended 14/12/2016, supervised by J.S. Franco and E. Boyer.

PhD in progress: Li Wang, Transport optimal pour l'analyse de formes en mouvement, Université de Grenoble Alpes, started 01/10/2013, supervised by Edmond Boyer and Franck Hétroy-Wheeler.

PhD in progress : Jinlong Yang, Learning shape spaces of dressed 3D human models in motion, Université de Grenoble Alpes, started 01/10/2015, supervised by Franck Hétroy-Wheeler and Stefanie Wuhrer.

10.2.3. Juries

- Edmond Boyer was reviewer of the PhD thesis of: Ludovic Blache (université de Reims Champagne Ardenne), Timo Bolkart (Saarland University) and Vincent Jantet (ETH Zurich).
- Franck Hétroy-Wheeler is a member of the PhD monitoring committee of Van Tho Nguyen (University of Lorraine, INRA Nancy and Office National des Forêts).

10.3. Popularization

Morpheo members have demonstrated the Kinovis platform to the general public on numerous occasions, and most notably for the "Fête de la Science".

MULTISPEECH Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

General co-chair, 4th CHiME Speech Separation and Recognition Challenge (E. Vincent)

General co-chair, 4th International Workshop on Speech Processing in Everyday Environments, San Francisco, USA, September 2016 (E. Vincent)

General co-chair, 14th International Conference on Auditory-Visual Speech Processing, Stockholm, Sweden August 2017 (S. Ouni)

Chair, SiSEC 2016, Signal Separation Evaluation Challenge (A. Liutkus)

Elected chair, Steering Committee of the Latent Variable Analysis and Signal Separation (LVA/ICA) conference series (E. Vincent)

Chair, Challenges Subcommittee, IEEE Technical Committee on Audio and Acoustic Signal Processing (E. Vincent)

10.1.1.2. Member of the Organizing Committees

Member of the organizing committee, 2017 IEEE Automatic Speech Recognition and Understanding Workshop, Okinawa, Japan, December 2017 (E. Vincent)

Member of the steering committee, Detection and Classification of Acoustic Scenes and Events (DCASE) challenge series (E. Vincent)

10.1.1.3. Member of the Conference Program Committees

Area chair for Analysis of Speech and Audio Signal, INTERSPEECH'2016 (D. Jouvet)

Area chair for Audio and Speech Source Separation, IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) (E. Vincent)

10.1.1.4. Reviewer

CHiME 2016 - Speech Separation and Recognition Challenge (E. Vincent)

EUSIPCO 2016 - European Signal Processing Conference (D. Jouvet)

ICECS 2016 - Conference on Environmental and Computer Science (R. Serizel)

INTERSPEECH 2016 (A. Bonneau, S.Ouni, E. Vincent, I. Illina, Y. Laprie)

IROS 2016 - International Conference on Intelligent Robots and Systems (E. Vincent)

IVA 2016 - International Conference on Intelligent Virtual Agents (S. Ouni)

JEP 2016 - Journées d'Etudes sur la Parole (D. Jouvet, A. Bonneau, E. Vincent, D. Fohr, I. Illina, O. Mella, Y. Laprie)

SLT 2016 - IEEE Spoken Language Technology Workshop (E. Vincent)

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

Computer Speech and Language, special issue on Multi-Microphone Speech Recognition in Everyday Environments (E. Vincent)

Speech Communication (D. Jouvet)

Traitement du signal (E. Vincent)

International Journal of Learner Corpus Research, special issue on "Investigating segmental, prosodic and fluency features in spoken learner corpora" (A. Bonneau, Guest Editor)

Speech Communication, special issue on Realism in Robust Speech and Language Processing (E. Vincent)

10.1.2.2. Reviewer - Reviewing Activities

Computer Speech and Language (D. Jouvet, S. Ouni, E. Vincent)

Digital Signal Processing (E. Vincent)

IEEE Transactions on Audio, Speech and Language Processing (A. Liutkus, S. Ouni, R. Serizel)

IEEE Transactions on Signal Processing (A. Liutkus)

IEEE Signal Processing Letters (A. Liutkus, R. Serizel)

Journal of the Acoustical Society of America (Y. Laprie)

JASA Express Letters (Y. Laprie)

Speech Communication (E. Vincent, Y. Laprie)

10.1.3. Invited Talks

Séparation de sources: quand l'acoustique rencontre le machine learning, keynote talk, 13e Congrès Français d'Acoustique (E. Vincent) [22]

Speech recognition, Ecole Nationale d'Ingénieurs de Tunis, May 2016 (D. Jouvet)

Les corpus acoustiques et langagiers pour la reconnaissance de la parole, Seminar about Big Data, LIA-LINOS (Laboratoire International Associé), May 2016 (O. Mella)

Parole audiovisuelle : pour faciliter la communication parlée, Praxiling, Université de Montpellier 3, October 2016 (S. Ouni)

10.1.4. Leadership within the Scientific Community

Elected chair, ISCA Special Interest Group on Robust Speech Processing (E. Vincent)

Secretary/Treasurer, executive member of AVISA (Auditory-VIsual Speech Association), an ISCA Special Interest Group (S. Ouni)

Member IEEE Technical Committee on Audio and Acoustic Signal Processing (A. Liutkus)

10.1.5. Scientific Expertise

Expertise of an ANR project proposal (D. Jouvet, Y. Laprie, E. Vincent)

Expertise of a project for the Research Foundation Flanders – FWO (S. Ouni)

10.1.6. Research Administration

Elected Member of the board of the AM2I Scientific Pole - Université de Lorraine (Y. Laprie)

Member of the HCERES visiting committee for LIUM (D. Jouvet)

Chairman of selection committee for the position of Assistant Professor (ESSTIN 0762, May 2016), Y. Laprie.

Member of a selection committee (Université d'Avignon, May 2016), E. Vincent

Member of a selection committee (Université du Maine, May 2016), D. Jouvet

Member of a selection committee (Télécom ParisTech, June 2016), E. Vincent

Member of the "Commission de développement technologique" (A. Bonneau)

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

DUT: I. Illina, Programming in Java, 150 hours, L1, University of Lorraine, France

DUT: I. Illina, Linux System, 65 hours, L1, University of Lorraine, France

DUT: I. Illina, Supervision of student projects and stages, 50 hours, L2, University of Lorraine, France

DUT: S. Ouni, Programming in Java, 24 hours, L1, University of Lorraine, France

DUT: S. Ouni, Web Programming, 24 hours, L1, University of Lorraine, France

DUT: S. Ouni, Graphical User Interface, 96 hours, L1, University of Lorraine, France

DUT: S. Ouni, Advanced Algorihms, 24 hours, L2, University of Lorraine, France

DUT: R. Serizel, Introduction to computer tools, 108h, L1, University of Lorraine – IUT Nancy Charlemagne, France

Licence: V. Colotte, C2i - Certificat Informatique et Internet, 50h, L1, University of Lorraine, France

Licence: V. Colotte, System, 115h, L3, University of Lorraine, France

Licence: O. Mella, C2i - Certificat Informatique et Internet, 28h, L1, University of Lorraine, France

Licence: O. Mella, Introduction to Web Programming, 30h, L1, University of Lorraine, France

Licence: O. Mella, Computer Networking, 80h, L2-L3, University of Lorraine, France

Licence: A. Piquard-Kipffer, Education Sciences, 36h, L1, France

Licence: A. Piquard-Kipffer, Reading and Writing, 27h, L2, Département Orthophonie, University of Lorraine, France

Licence: A. Piquard-Kipffer, Psycholinguistics, 6 hours, L2 Département Orthophonie, University Pierre et Marie Curie-Paris, France

Licence: A. Piquard-Kipffer, Reading and Writing assessment, 10h, L3, Département Orthophonie, University of Lorraine, France

Master: V. Colotte, Introduction to Speech Analysis and Recognition, 18h, M1, University of Lorraine, France

Master: Y. Laprie, Analyse, perception et reconnaissance de la parole, 32 hours, M1, University of Lorraine, France

Master: O. Mella, Computer Networking, 74h, M1, University of Lorraine, France

Master: O. Mella, Introduction to Speech Analysis and Recognition, 12h, M1, University of Lorraine, France

Master: S. Ouni, Multimedia in Distributed Information Systems, 31 hours, M2, University of Lorraine, France

Master: A. Piquard-Kipffer, Dyslexia, 25 hours, M1, Département Orthophonie, University of Lorraine, France

Master: A. Piquard-Kipffer, Reading and writing, 6 hours, M1, Département Orthophonie, University Pierre et Marie Curie-Paris, France

Master: A. Piquard-Kipffer, Deaf People and Reading, 15 hours, M2 Département Orthophonie, University of Lorraine, France

Master: A. Piquard-Kipffer, Psychology, 40 hours, M2, ESPE, University of Lorraine, France

Master: A. Piquard-Kipffer, French Language Didactics, 80 hours, M2, ESPE, University of Lorraine, France

Engineer school: V. Colotte, Conception and developpement in XML, 20h, Bac+3, Telecom Nancy, France

Ecole d'audioprothèse : A. Bonneau, Phonetics, 16 h, University of Lorraine

Doctorat: A. Piquard-Kipffer, Language Pathology - speech and language screening, 15 hours, EHESP, University of Sorbonne- Paris Cité, France

Adults: O. Mella, Computer science courses for seconday school teachers (Informatique et Sciences du Numérique courses) (21h), ESPE of Academy Nancy-Metz, University of Lorraine, France

Other: V. Colotte, Responsible for "Certificat Informatique et Internet" for the University of Lorraine, France (50000 students, 30 departments)

Other: S. Ouni, Responsible of Année Spéciale DUT, University of Lorraine, France

10.2.2. Supervision

PhD: Imran Sheikh, "Exploiting Semantic and Topic Context to Improve Recognition of Proper Names in Diachronic Audio Documents", November 2016, Irina Illina, Dominique Fohr and Georges Linares.

PhD in progress: Baldwin Dumortier, "Contrôle acoustique d'un parc éolien", September 2014, Emmanuel Vincent and Madalina Deaconu.

PhD in progress: Quan Nguyen, "Mapping of a sound environment by a mobile robot", November 2014, Francis Colas and Emmanuel Vincent.

PhD in progress: Aditya Nugraha, "Deep neural networks for source separation and noise-robust speech recognition", January 2015, Antoine Liutkus and Emmanuel Vincent.

PhD in progress: Ken Deguernel, "Apprentissage de structures musicales en situation d'improvisation", March 2015, Emmanuel Vincent and Gérard Assayag.

PhD in progress: Amal Houidhek, "Élaboration et analyse d'une base de parole arabe pour la synthèse vocale", December 2015, Denis Jouvet and Vincent Colotte (France) and Zied Mnasri (Tunisia).

PhD in progress: Imène Zangar, "Amélioration de la qualité de synthèse vocale par HMM pour la parole arabe", December 2015, Denis Jouvet and Vincent Colotte (France) and Zied Mnasri (Tunisia).

PhD in progress: Mathieu Fontaine, "Processus alpha-stable pour le traitement du signal", May 2016, Antoine Liutkus and Roland Badeau (Télécom ParisTech).

PhD in progress: Amine Menacer, "Traduction automatique de vidéos", May 2016, Kamel Smaïli and Denis Jouvet.

PhD in progress: Anastasiia Tsukanova, "Coarticulation modeling in articulatory synthesis", May 2016, Yves Laprie.

PhD in progress: Nathan Libermann, "Deep learning for musical structure analysis and generation", October 2016, Frédéric Bimbot and Emmanuel Vincent.

PhD in progress: Yang Liu, "Merging acquisition and processing of cineMRI of the vocal tract", October 2016, Pierre-André Vuissoz and Yves Laprie.

10.2.3. Participation in HDR and PhD juries

Participation in PhD thesis Jury for David Guennec (Université Rennes 1, September 2016), Y. Laprie.

Participation in PhD thesis Jury for Ugo Marchand (Université Paris 6, November 2016), E. Vincent, reviewer.

Participation in PhD thesis Jury for Joachim Flocon-Cholet (Université Rennes 1, June 2016), E. Vincent, reviewer.

Participation in PhD thesis Jury for Aly Magassouba (Université Rennes 1, December 2016), E. Vincent, reviewer.

Participation in PhD thesis Jury for Diandra Fabre (Université Grenoble Alpes, December 2016), S. Ouni, reviewer.

Participation in PhD thesis Jury for Ivana Didirková (Université Montpellier 3, December 2016), Y. Laprie, reviewer.

10.2.4. Participation in other juries

Chairman of Scientific « Baccalauréat », specialty Earth Sciences (Académie de Nancy-Metz and Université de Lorraine, July 2016), A. Piquard-Kipffer.

Participation in the Competitive Entrance Examination into Speech-Language Pathology Departement (University of Lorraine, June 2016), A. Piquard-Kipffer.

10.3. Popularization

Demonstration at Village Sciences LORIA, March 2016 (K. Deguernel, E. Vincent, S. Ouni).

Demonstration at Forum des métiers, Collège Peguy, Le Chesnay, March 2016 (A. Piquard-Kipffer).

Demonstration at EHESP-University of Sorbonne- Paris Cité, March 2016 (A. Piquard-Kipffer).

Demonstration at LORIA's 40th Anniversary, June 2016 (K. Deguernel, E. Vincent).

"Démixer la musique", Interstices, January 2016 (A. Liutkus and E. Vincent).

Intervention lors d'une action pour la Maison pour la Science en Lorraine au service des professeurs (A. Bonneau)

Démonstration lors de la journée Rencontre Inria Industrie sur le thème « Ed-Techs au service de e-Education », December 2016 (D. Jouvet)

MUSE Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. Chair of Conference Program Committees

- R. Teixeira, Co-chair of the program committee of ACM IMC 2017,

- R. Teixeira, Co-chair of the program committee of ACM/ISOC ANRW 2017,

- V. Christophides, Tutorial co-chair of the 22nd IEEE Symposium on Computers and Communications (ISCC17) 03 - 06 July 2017, Heraklion, Crete, Greece (http://www.ics.forth.gr/iscc2017/)

- V. Christophides, Area Chair for "Semi-structured, Web, and Linked Data Management" in the 18th International Conference on Data Engineering (ICDE'16), May 16-20, 2016, Helsinki, Finland (http://icde2016.fi)

- V. Christophides, Workshop co-chair of the 1st International Workshop on Big Geo Data Quality and Privacy (BIGQP) with D. Kotzinos, C. Nikolaou, and Y. Theodoridis, March 21, 2017, Venice, Italy (http://www-etis.ensea.fr/BigGeoQ-UP/BIGQP2017/).

- V. Christophides, Workshop co-chair of the 2nd International Workshop on Preservation of Evolving Big Data, co-located with EDBT 2016 with G. Papastefanatos and S. Viglas March 15, 2016 Bordeaux, France (http://www.diachron-fp7.eu/2nd-diachron-workshop.html)

8.1.1.2. Member of the Conference Program Committees

- V. Christophides, PC member of the 2nd IFIP/IEEE International Workshop on Analytics for Network and Service Management (AnNet17) May 8, 2017 in Lisbon, Portugal.

- R. Teixeira, PC Member of 2016 Internet Measurement Conference (IMC) November 14-16, 2016 Santa Monica, California, USA.

- V. Christophides, PC member of the 1st International Workshop on Keyword-based Access and Ranking at Scale (KARS), collocated with EDBT2017, Venice, Italy.

- V. Christophides, PC member of the 25th ACM International Conference on Information and Knowledge Management (CIKM16), 24-28 October, Indianapolis, USA.

8.1.2. Invited Talks

- V. Christophides, "Web-scale Blocking, Iterative and Progressive Entity Resolution", ICDE 2017 Tutorial, with K. Stefanidis, and V. Efthymiou, April 19-22, 2017 in San Diego, California, USA.

- R. Teixeira, "HostView: Measuring Internet quality of experience on end-hosts", Dagsthul Seminar 16012, January 4 – 7, 2016.

- R. Teixeira, "The Challenges of Measuring Internet Quality of Experience", Invited Keynote at the Internet-QoE workshop co-located with SIGCOMM'16.

- R. Teixeira, "Residential Internet Performance: A view from the Gateway", Invited talk at the 1st Stakeholder Consultation Workshop on Mapping of Broadband Services in Europe (SMART 2014/0016).

- T. Friedman, A.-K. Pietilainen, R. Teixeira, "Internet Measurements: A Hands-on Introduction", Invited Tutorial at the ACM SIGCOMM 2016, Florianapolis, Brazil, August 22-26 2016.

- V. Christophides, "Resolving Entities in the Web of Data: Concepts, Algorithms and Systems", Invited Tutorial at the International Summer School on Web Science and Technology (WebST 2016) Bilbao, Spain, 18-22 July 2016, co-organized by Deusto and Rovira i Virgili University.

8.1.3. Leadership within the Scientific Community

- R. Teixeira, Vice-chair of ACM SIGCOMM (Since July 2013).
- R. Teixeira, Chair of the ACM SIGCOMM Industrial Liaison Board.
- R. Teixeira, Member of the steering committee of the ACM Internet Measurement Conference (Nov. 2009–Jun. 2016).
- V. Christophides, Member of the EDBT Association (since 2014).

8.1.4. Scientific Expertise

- Reviewer of H2020 and FP7 projects: CogNet, SUPERFLUIDITY, MONROE, MAMI.
- Technical advisory board of the project "Mapping of Broadband Services in Europe".

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master: Renata Teixeira, "Methodology for research in networking", 10h eqTD, M2, UPMC, France.

Master: Timur Friedman, Renata Teixeira, "Network Metrology", 24h CM, M2, UPMC, France. Created this new master's level class.

Master: Vassilis Christophides, "Big Data Processing and Analytics", 25h M2, Ecole CentraleSupelec, France. Created this new master's level class in Spring 2016.

E-learning

Mooc: Timur Friedman, Renata Teixeira, "Network Metrology", preparation of a five-week Mooc (May 2016) in the platform FUN, supported by Inria.

8.2.2. Supervision

PhD: Giuseppe Scavo (December 2016), "Content Curation and Characterization in Communities of a Place", advisors: Z. Ben-Houidi and R. Teixeira

PhD: Sofia Kleisarchaki (November 2016): "Difference Analysis in Big Data: Exploration, Explanation, Evolution" advisors: S. Amer-Yahia and V. Christophides

PhD in progress:

- Maximiliam Bachl (Oct 2016-now), "Home network troubleshooting made easy feedback", advisor: R. Teixeira
- Sara el Aouad (May 2014-now): "Improving the quality of recommendation using semi-structured user feedback", advisors: C. Diot and R. Teixeira
- Diego da Hora (Feb 2014-now): "Crowdsourced Home Network Diagnosis", advisors: C. Diot and R. Teixeira
- Vassilis Efthimiou (Feb 2013-now): "Entity resolution in the Web of Data", advisor: V. Christophides

8.2.3. Juries

R. Teixeira: Member of Doctoral examining committee of Sheharbano Khattak (University of Cambridge, 2016),

R. Teixeira: Member of Doctoral examining committee of Zachary Scott Bischoff (Northwestern University, 2016).

V. Christophides: External evaluator of the Ph.D. Thesis of Maria Koutraki, University PARIS-SACLAY, September 2016

V. Christophides: Member of the appointment committee for the MCF 4234 position on Big Data at the University of Cergy-Pontoise, Mai 2016.

<p style="text-align:center">**MUTANT Project-Team**</p>

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Selection

8.1.1.1. Member of the Conference Program Committees

Jean-Louis Giavitto has participated in the program committee of the 42st International Computer Music Conference (ICMC), the 10th IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO 2016), the Digital Entertainment Technologies and Arts(DETA) of GECCO-2016, the 15th International Conference on the Synthesis and Simulation of Living Systems (ALIFE XV) and the 2nd International Conference on Technologies for Music Notation and Representation (TENOR 2016).

Florent Jacquemard has been involved in the Program Committees of the 2d International Conference on Technologies for Music Notation and Representation (TENOR 2016), the 8th International Symposium on Symbolic Computation in Software (SCSS 2017), the National Conference *Journées d'Informatique Musicale* (JIM 2016), and the special issue of the journal Information and Computation for the 10th International Conference on Language and Automata Theory and Applications (LATA 2016).

8.1.1.2. Member of the Editorial Boards

Jean-Louis Giavitto is associate redactor (former redactor-in-chief) of TSI (Technique et Science Informatiques) published by Lavoisier. He has coorganized with Antoine Spicher (Univ. Paris Est), Stefan Dulman (Univ. Twente) and Mirko Viroli (Univ. of Milano) a special issue of *The Knowledge Engineering Review* on Spatial Computing published in november 2016.

8.1.1.3. Reviewer - Reviewing Activities

The members of the team contributed as reviewers for the journal Information and Computation, IEEE Transactions on Multimedia, IEEE Transactions on Audio and Speech Signal Processing, ACM Transactions on Intelligent Systems, Theoretical Computer Science, IEEE ICASSP, ICMC, SMC, Formal Methods, LATA and more...

8.1.2. Invited Talks

Jean-Louis Giavitto was invited to the seminar @SystemX at Saclay.

Florent Jacquemard gave an invited talk at the 5th International Workshop on Confluence (IWC 2016), hosted by Innsbruck University Center at Obergurgl, Austria [19].

8.1.3. Leadership within the Scientific Community

Jean-Louis Giavitto was a member of the Prix de thèse du GDR GPL as well as a member of the Faust Award 2016 (the Faust Open-Source Software Competition is intended to promote innovative high-quality free audio software developed with the Faust programming language, as well as development tools build around the Faust compiler itself).

8.1.4. Scientific Expertise

Jean-Louis Giavitto is in scientific board of the GDR GPL (Genie de la programmation et du logiciel). He is also a reviewer for FET projects for the UC.

8.2. Teaching - Supervision - Juries

8.2.1. Supervision

- PhD defended: José Echeveste, *Accorder le temps de la machine et celui du musicien*, started in October 2011, supervisor: Arshia Cont and Jean-Louis Giavitto.

- PhD defended (November 2016): Clément Poncelet, Formal methods for analyzing human-machine interaction in complex timed scenario. Started in October 2013, supervisor: Florent Jacquemard.

- PhD defended (December 2016): Philippe Cuvillier, Probabilistic Decoding of strongly-timed events in realtime, supervisor: Arshia Cont.

- PhD in progress: Julia Blondeau, *Espaces compositionnels et temps multiples : de la relation forme/matériauq (thèse en art)*, supervisor: Jean-Louis Giavitto, co-director Dominique Pradelle (Philosophy, Sorbonne), started October 2015.

- PhD in progress: Maxim Sirbu, Online Interaction via Machine Listening. Supervisors: Arshia Cont (MuTant) and Mathieu Lagrange (IrCyNN), started October 2015.

- PhD in progress: Pierre Donat-Bouillud, Modeling, analysis and execution of cyber-temporal systems. Supervisor: Florent Jacquemard, co-director: Jean-Louis Giavitto, started October 2016.

8.2.2. Juries

Jean-Louis Giavitto was Chairman of the jury of Clément Poncelet. He was reviewer of the PhD thesis of Jaime Arias (University of Bordeaux, Sémantique Formelle et Vérification Automatique de Scénarios Hiérarchiques Multimédia avec des Choix Interactifs), and examiner of the PhD of Mattia Bergomi (Università di Milano and UPMC, Dynamical and Topological Tools for (Modern) Music Analysis).

Florent Jacquemard was reviewer of the PhD thesis of Etienne Dubourg (University of Bordeaux, Contributions to the theory of tile languages). He is reviewer of the PhD thesis of Nicolas Guiomard-Kagan (Université de Picardie Jules Verne, *Traitement de la polyphonie pour l'analyse informatique de partitions musicales*). He has been examiner of the PhD of Emil-Mircea Andriescu (UPMC, MiMove, Dynamic Data Adaptation for the Synthesis and Deployment of Protocol Mediators) and examiner of the PhD of Carles Creus Lo´pez (UPC Barcelona, Tree Automata with Constraints and Tree Homomorphisms).

MYCENAE Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

Colloquium on Dynamical Systems and Applications, May 19th 2016

Thematic session co-organized by Jonathan Touboul and Khashayar Pakdaman within the framework of the CIRB

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

Jonathan Touboul was member of the program committee of ICMNS 2016 (International Conference on Mathematical Neuroscience, Juan-les-Pins)

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Jonathan Touboul participates in the editorial boards of *Plos One* and *Frontiers in neuronal circuits*

9.1.3.2. Reviewer - Reviewing Activities

Annals of Applied Probability, Journal of Statistical Physics, eLife, PloS Computational Biology, SIAM Journal on Applied Dynamical Systems, SIAM Journal on Discrete Mathematics, Bulletin of Mathematical Biology

9.1.4. Invited Talks

Invited plenary conference of Frédérique Clément at ICAR2016 http://www.icar2016.org 18th International Congress on Animal Reproduction (over 900 attendees). Multiscale mathematical modeling of the hypothalamo-pituitary-gonadal axis. Tours (France) June 26-30th 2016.

9.1.5. Scientific Expertise

Frédérique Clément belongs to the expert board of the BCDE (Cell Biology, Development and Evolution) ITMO (Multi OrganizationThematic Institute) of the French National Alliance for Life and Health Sciences Aviesan.

Jonathan Touboul has been reviewer for the ANR and European Research Council in 2016.

9.2. Teaching - Supervision - Juries

9.2.1. Supervision

PhD in progress : Richard Bailleul. Modeling of the developmental mechanisms underlying the formation of color and appendage patterns in birds, since September 2015. Université Pierre & Marie Curie (ED515), supervisors: Benoît Perthame, Marie Manceau and Jonathan Touboul (funded by the ERC starting grant of Marie Manceau)

PhD in progress: Yi Cui. Role of Pax6 in neurodevelopment: experiments and models, since September 2014, Université Pierre & Marie Curie (ED158), supervisors: Jonathan Touboul, Alain Prochiantz and Alessandra Pierani

PhD in progress: Frédérique Robin. Multiscale modeling of the morphodynamics in ovarian follicles, since October 2016, Université Pierre & Marie Curie (ED386), supervisors: Frédérique Clément and Romain Yvinec (INRA)

PhD: Tanguy Cabana. Limits of randomly connected networks and their dynamics. Defended on December14th 2016, Université Pierre & Marie Curie (ED386), supervisors: Raphaël Krikorian, Jonathan Touboul

PhD: Elif Köksal Ersöz. A mathematical study on coupled multiple timescale systems, synchronization of populations of endocrine neurons. Defended on December 13th, Université Pierre & Marie Curie (ED386), supervisors: Frédérique Clément and Jean-Pierre Françoise, with the involvement of Mathieu Desroches

PhD: Lucile Megret, Explosion of limit cycles : qualitative analysis, numerical simulations and models. Defended on November 25th, Université Pierre & Marie Curie (ED386), supervisors: Jean-Pierre Françoise and Frédérique Clément, with the involvement of Mathieu Desroches

HDR: Alexandre Vidal. From qualitative analysis of complex dynamics to parameter estimation in neuronal models. Université d'Évry-Val-d'Essonne – Université Paris-Saclay, December 14th 2016

9.2.2. *Juries*

Jonathan Touboul participated in the PhD committee of Takafumi Arakaki (ED3C, supervisors: D. Hansel and A. Leblois), in the selection committee for the hiring of a professor at Technische Universitat Berlin, as well as in the Bernstein Award for Computational Neuroscience committee.

9.3. Popularization

Jonathan Touboul has given a presentation in the framework of the "demi-heure de science" : Mathematical exploration of the brain activity (January 7th).

Frédérique Clément has given a 3h lecture on "Multiscale modeling of folliculogenesis in mammals" in the M2 master "Predictive & integrative animal biology" (PRIAM) of Université Paris-Saclay.

MYRIADS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- Anne-Cécile Orgerie was the main organizer of the research school E3-RSD on energy-efficiency in networks and distributed systems held in Dinard in June 2016 (http://e3rsd.irisa.fr).
- Louis Rilling was the main organizer of the SEC2 2016 workshop on security in Clouds held in Lorient in July 2016 in conjunction with the Compas 2016 conference (https://sec2-2016.inria.fr/).
- Guillaume Pierre was co-workshop/tutorials chair of the ACM/IFIP/USENIX Middleware 2016 conference.
- Martin Quinson was the main organizer of the research school SUD gathering the SimGrid user community held in Fréjus in January.
- Nikos Parlavantzas was a member of the organizing committee for MMS 2016 (INSA Science Day) in April 2016

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Guillaume Pierre was the program chair of the Systems track of the Compas 2016 national conference.
- Guillaume Pierre was a program co-chair of CloudDP 2016 (6th International Workshop on Cloud Data and Platforms)

10.1.2.2. Member of the Conference Program Committees

- Christine Morin was a member of the program committee of the ACM/IEEE, SC'16, IEEE ICDCS 2016, ACM/IEEE CC-Grid 2016, IEEE CloudCom 2016, IEEE NFV-SDN 2016, Euromicro PDP 2016, ICCCN 2016 conferences and Resilience'16, ScienceCloud'16, CrossCloud'16 workshops.
- Anne-Cécile Orgerie was a member of the program committee of the PASA 2016 workshop and the Compas 2016 conference.
- Guillaume Pierre was a member of the program committees of IEEE IC2E 2016, ICPP 2016, DADS track of ACM SAC 2016, CloudCom 2016, and IEEE ScalCom 2016.
- Martin Quinson was a member of the program committees of SimulTech 2016.
- Nikos Parlavantzas was a member of the program committees of VHPC 16, and CLOSER 2016.
- Cédric Tedeschi was a member of the program committee of ICWS 2016, ICCS 2016, CloSer 2016 and Compas 2016 conferences. He was a member of the program committee of the ERROR 2016 workshop.

10.1.2.3. Reviewer

- Jean-Louis Pazat was a reviewer for the Compas Conference.
- Martin Quinson was a reviewer for the Compas Conference.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Christine Morin is associate editor in the IEEE's Transactions on Parallel and Distributed Systems' Editorial Board.

10.1.3.2. Reviewer - Reviewing Activities

- Cédric Tedeschi was a reviewer for the TPDS journal.

10.1.4. Invited Talks

- "Developing an Understanding of Ecosystems and Energy-Water Interactions Through Data", keynote talk, Inria@Silicon Valley BIS workshop, Paris, June 8th, 2016.
- "Infection dynamics in a metapopulation of cattle herds: models and their execution in large-scale computing infrastructure"; Christine Morin (together with Pauline Ezanno), talk for Rencontres INRA-Inria, Pont Royal en Provence, October 3rd, 2016.
- "Le coût énergétique du stockage dans le Cloud", Anne-Cécile Orgerie, talk for the scientific days of the University of Nantes, Nantes, June 10, 2016.
- "Green Computing and Sustainability", Anne-Cécile Orgerie, Keynote at the Annual Workshop of the French section of URSI (International Union of Radio Science), Rennes, France, March 2016.
- "L'axe Green IT à l'IRISA", Anne-Cécile Orgerie, talk for the HCERES evaluation of IRISA, Rennes, January 21, 2016.
- "Real-time stream data processing for hyper-interactive applications in fog computing platforms", Guillaume Pierre, invited presentation at the US-EU Invited Workshop on the Next Generation Internet of Things, Los Angeles (USA), March 31st 2016.
- "Toward hyper-interactive applications in fog computing platforms", Guillaume Pierre, invited presentation at the 9th Cloud control workshop, Friiberghs Herrgård (Sweden), 27-29 June 2016.
- "Experimental methodologies for large-scale distributed systems", Martin Quinson, research school E3-RSD on energy-efficiency in networks and distributed systems held in Dinard in June 2016.

10.1.5. Leadership within the Scientific Community

- Christine Morin was invited to participate in the CRA-W career mentoring workshop held in Washington DC on November 19-20, 2016. Together with AJ Brush she organized a panel on "Growing Research/Surviving First 2 Years" and together with Lori Pollock she organized a panel on "Networking and Finding Advocates". She also did 1-1 mentoring for junior computer scientists (postdocs, assistant-professors, junior scientists and junior R&D engineers).
- Anne-Cécile Orgerie is co-responsible for the Green axis of the CNRS GDR RSD (Network and Distributed Systems working group).
- Anne-Cécile Orgerie is secretary of the ASF: the French chapter of ACM SIGOPS.
- Cédric Tedeschi is a member of the steering committee of the Compas conference.

10.1.6. Scientific Expertise

Yvon Jégou is a member of the **Comité de Sélection et de Validation** (CSV) of the *Images & Réseaux* cluster (until June 2016).

Christine Morin was a member of the HCERES evaluation committee of the LORIA (visit in Nancy December 13-15, 2016). She was a remote reviewer for the Call 2015 of CHIST-ERA on the topic User-Centric Security, Privacy and Trust in the Internet of Things. She was a member of the Jury for the Inria - Académie des Sciences prizes 2016.

Jean-Louis Pazat is the coordinator of experts in Information Technology for the evaluation of international bilateral collaborations at the ministry of research and education.

Martin Quinson is a member of the scientific committee of the Blaise Pascal foundation for the scientific dissemination of Maths and Computer Science, and also of the 2017 forum "Vivid Maths" (mathématiques vivantes) organized by the CFEM (French commission for the teaching of maths). He acted as an expert for a project of the UNIT foundation, the technical and engineering numerical university.

Nikos Parlavantzas acted as an expert reviewer for ANR and ANRT CIFRE projects.

10.1.7. Research Administration

- Yvon Jégou is a member of the Grid 5000 executive committee (until June 2016).
- Christine Morin is a member of the board of the Project-Team Committee of Inria Rennes Bretagne Atlantique.
- Christine Morin was the scientific coordinator for the Inria evaluation seminar of the "distributed system and middleware" theme, held in Rungis in October 2016.
- Christine Morin has been a member of the University of Rennes 1 board of directors and of the International Affairs Commission and its board since March 2016.
- Anne-Cécile Orgerie is officer (chargée de mission) for the IRISA cross-cutting axis on Green IT.
- Jean-Louis Pazat was the leader of the "Large Scale Systems" department of IRISA until October 2016, after which this responsibility was taken over by Martin Quinson.
- Jean-Louis Pazat was the leader of the IRISA-INSA computing lab until October 2016

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Christine Morin is responsible for the Internet of Services: Programming Models & Things and Clouds (ISI) teaching unit of the Master in research in Computer Science of the University of Rennes 1 and of the EIT Digital Master School at the University of Rennes 1.

Christine Morin:

- Master 1: FreeRoom project (spanning the two semesters) co-supervised with Cédric Tedeschi and Paul Couderc, University of Rennes 1, France.
- Master 2: 4.5 hours ETD, Energy management in Large Scale Distributed Systems, Centrale-Supelec, Rennes, France.
- Master 2: Internet of Services: Programming Models & Things and Clouds (ISI), 12 hours ETD, EIT Digital Master School, University of Rennes 1, France.

Anne-Cécile Orgerie:

- Licence 3: ARCSYS2: Architecture and System - 24 hours of lecture at ENS Rennes
- Master 1: Cloud & Big Data - 12 hours of lecture and 12 hours of practical sessions at ENS Rennes
- Master 2: Green ICT - 5 hours of invited lecture at Telecom SudParis
- PhD students: Energy issues in HPC and Clouds - 1.5 jours of invited lecture at the research school of the ETN BigStorage

Guillaume Pierre (at the University of Rennes 1):

- License 3: Systèmes (25 hours ETD)
- License 3: Organisation et utilisation des systèmes d'exploitation 2 (67 hours ETD)
- Master 2: Techniques de développement logiciel dans le Cloud (39 hours ETD)
- Master 1: Service Technologies (24 hours ETD)
- Master 2: Approche algorithmique des applications et systèmes répartis (32 hours ETD)
- DU D$\sqrt{}$©veloppeur-Concepteur Logiciel: Systèmes (42 hours ETD)

Martin Quinson (at ENS Rennes):

- Licence 3: Programming and Software Engineering (30 hours ETD); ARCSYS2 - architecture et syst$\sqrt{}$®mes 2 (60 hours ETD); Pedagogy (15 hours ETD).
- Agregation Science Industrielle: Programming and Software Engineering (20 hours ETD); Operating Systems and C programming (20 hours ETD); Networking (20 hours ETD).
- Master 2: Pedagogy and Scientific Mediation for Computer Science (30 hours EDT)

Jean-Louis Pazat (at INSA Rennes):

- Licence 3: Parallel and Multicore Programming (36 hours ETD)
- Master 1: Parallel and Distributed Programming (36 hours ETD)
- Master 1: Scientific Parallel Programming (36 hours ETD)
- Licence 3: Networks and SOA (20 hours ETD)

Nikos Parlavantzas (at INSA Rennes):

- Master 1: Performance Evaluation (32 hours ETD)
- Master 1: Operating Systems (36 hours ETD)
- Master 1: Big Data and Applications (15 hours ETD)
- Master 1: Networks and SOA (20 hours ETD)
- Master 1: Advanced Operating Systems (20 hours ETD)
- Master 1: Parallel programming (12 hours ETD)
- Master 1: Software Development Project (30 hours ETD)
- Licence 3: Networking (16 hours ETD)
- Master 2: Component-based Software Engineering (16 hours ETD)

Cédric Tedeschi (220 hours ETD at Univ. Rennes 1):

- Master 1: Cooperation and concurrency in Systems and Networks
- Master 1: Projects (in charge of the *UE*)
- Master 1: Parallel programming
- Master 2: Internet of Services and Infrastructures

10.2.2. Supervision

PhD in progress: Arif Ahmed, "Scalable Decentralized Edge Cloud Infrastructures", started in October 2016, Guillaume Pierre.

PhD in progress: Ismael Cuadrado Cordero, Energy-efficient and network-aware resource allocation in Cloud infrastructures, started in October 2013, Christine Morin, Anne-Cécile Orgerie.

PhD in progress: Anna Giannakou, Self-adaptable security monitoring in Clouds, started in March 2014, Louis Rilling, Christine Morin, Jean-Louis Pazat.

PhD in progress: Baptiste Goupille-Lescar, Designing agile, distributed cyber-physical systems with advanced collaboration capabilities, started in January 2016, Michel Barreteau (Thales) Eric Lenormand (Thales), Christine Morin, Nikos Parlavantzas.

PhD in progress: David Guyon, Supporting energy-awareness for cloud users, started in September 2015, Anne-Cécile Orgerie, Christine Morin.

PhD in progress: Sabbir Hasan, SLA Driven Cloud autoscaling for optimizing energy footprint, started in December 2013, Thomas Ledoux (Ascola), Jean-Louis Pazat.

PhD: Ancuta Iordache, "Performance-cost tradeoffs in heterogeneous clouds", University of Rennes 1, successfully defended on September 9th 2016. Guillaume Pierre.

PhD in progress: Yunbo Li, Resource allocation in a Cloud partially powered by renewable energy sources, started in October 2013, Anne-Cécile Orgerie, Jean-Marc Menaud (Ascola).

PhD in progress: Pernelle Mensah, Security policy adaptation driven by risk evaluation in modern communication infrastructures, started in December 2015, Samuel Dubus (Alcatel-Lucent), Christine Morin, Guillaume Piolle (Cidre), Eric Totel (Cidre).

PhD in progress: Édouard Outin, A multi-objective adaptation system for the management of a Distributed Cloud, started in October 2013, Olivier Barais (Triskell), Yvon Jégou, Jean-Louis Pazat.

PhD in progress: The Anh Pham, Dynamic Formal Verification of High Performance Runtimes and Applications, started in November 2016, Martin Quinson, Thierry Jéron.

PhD in progress: Issam Rais, Multi criteria scheduling for large scale High Performance Computing environments, started in October 2015, Anne-Cécile Orgerie, Anne Benoit (ROMA), Laurent Lefèvre (Avalon).

PhD in progress: Bruno Stevant, Resource allocation strategies for service distribution at the Internet edge to optimize end-to-end latency, started in December 2014, Jean-Louis Pazat.

PhD in progress: Genc Tato, Locality-aware Lazy Overlay Networks for WANS, started in December 2015, Marin Bertier, Cédric Tedeschi, Christine Morin.

PhD in progress: Amir Teshome, Definition and enforcement of Service-Level Agreements for Cloud security monitoring, started in October 2015, Louis Rilling, Christine Morin.

10.2.3. Juries

- Christine Morin was a reviewer in the PhD committee of Maxime Lorrillere, university Pierre et Marie Curie, February 4th, 2016.
- Christine Morin was a reviewer in the PhD committee of Richard Relaza, university of Toulouse, February 12th, 2016.
- Christine Morin was a member in the PhD committee of Anca Iordache, university of Rennes 1, September 9th, 2016.
- Christine Morin chaired the PhD committee of Ji Liu, university of Montpellier, November 3rd, 2016.
- Christine Morin was a member in the PhD committee of Daniel Balouek-Thomert, ENS Lyon, December 5th, 2016.
- Christine Morin chaired the PhD committee of Violaine Villebonnet, ENS Lyon, December 6th, 2016.
- Christine Morin was a reviewer in the PhD committee of Vincente Kherbache, university of Nice, December 7th, 2016.
- Anne-Cécile Orgerie was a member in the PhD committee of Frédéric Dumont, Ecole des Mines de Nantes, 21st of September 2016.
- Anne-Cécile Orgerie was a member in the PhD committee of Maxime Colmant, University of Lille, 24th of November 2016.
- Jean-Louis Pazat chaired the PhD committee of Pierre Obame Meye, University of Rennes 1, December 1st, 2016.
- Jean-Louis Pazat chaired the PhD committee of Fran$\sqrt{}$ßois Lehericey, INSA Rennes, September 20, 2016.
- Guillaume Pierre was a reviewer in the PhD committee of Luc André, University of Lorraine, May 13th 2016.
- Guillaume Pierre was a reviewer in the HDR committee of Christoph Neumann, University of Rennes 1, November 23rd 2016.
- Guillaume Pierre was a reviewer in the PhD committee of Vincent Kherbache, university of Nice, December 7th, 2016.
- Louis Rilling was a member in the PhD committee of Allan Blanchard, University of Orléans, 6th of December 2016.
- Martin Quinson was a reviewer in the PhD committee of Dimitri Pertin, University of Nantes, April 22th, 2016.
- Martin Quinson was a member in the PhD committee of David Beniamine, University of Grenoble, December 5th, 2016.

- Cédric Tedeschi was a member of the PhD committee of Sajith Kalathingal, University of Rennes 1, December 13th, 2016.

10.3. Popularization

- Martin Quinson is a scientific expert in a teaching manual of Computer Science for primary schools, authored within the "La main à la pâte" popularization network. This manual was released this summer.

- Martin Quinson co-founded a working group of the Société Informatique de France toward the creation of new unplugged activities to teach the informatics to pupils. This group met twice in Lyon this year, in April and November.

- Martin Quinson participated and co-organized to several workshops and open events where high-school students were invited to discover Computer Science (March at ENS Rennes, November on the Beaulieu campus). He was a scientific expert to the MathC2+ event at ENS-Rennes in June.

- Martin Quinson participated to the full day meeting "Splash Education" targeting at determining the fundamental programming concepts that should be taught to every pupils, co-located with the SPLASH conference http://2016.splashcon.org/track/splash-2016-splash-e. He organized the 3-days event on instrumented teaching of computer science, co-located with the Orphee-RDV event https://apprentissageinstrumentdelinformatique.wordpress.com/.

- Martin Quinson continued the development of the PLM web platform, which is an exerciser to teach programming to beginners. He also submitted several project applications to pursue this work in the future. Unfortunately, none of these applications have been accepted so far. Prof Peter Hubwieser (Technical University of Munchen, chair of didactics of Computer Science) visited us for two weeks in November. Developing the PLM and exploiting the data already gathered were central elements of this work meeting. A joint publication is currently prepared, targeting the ItiCSE'17 conference.

<h1 style="text-align:center; color:red;">NACHOS Project-Team</h1>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. Member of the Conference Program Committees

Stéphane Lanteri, Claire Scheid and Wilfried Blanc (LPMC, Université Nice Sophia Antipolis, Nice) have co-organized the meeting "CompNano2016: Modelling and simulation for nanophotonics" that took place at Inria Sophia Antipolis-Méditerranée, October 5-7, 2016.

Stéphane Lanteri and Frédéric Valentin (LNCC, Petropolis, Brazil) have co-organized a mini-symposium on "Hybridized and multiscale methods for waves" in the framework of the Icosahom 2016 conference that took place in Rio de Janeiro, Brazil, June 27-July 1st, 2016.

9.1.2. Invited Talks

Claire Scheid, "Numerical modelling of light-matter interaction at the nanoscale", BioComp seminar, Simula, Oslo, Norway, November 9, 2016.

Claire Scheid, "A structure preserving numerical discretization framework for the Maxwell Klein Gordon equation in 2D", Workshop on Structure and Scaling in Computational Field Theories, University of Oslo, Norway, October 26-28, 2016.

Claire Scheid, "A high order discretization framework for the numerical modelling in nanoplasmonics", Colloque Couplages Numériques, LJAD, Université Nice Sophia Antipolis, Nice, France, September 27-29, 2016.

Claire Scheid, "A discontinuous Galerkin framework for the numerical modelling in nanoplasmonics" Workshop on Recent Advances in Discontinuous Galerkin Methods, University of Reading, UK, June 13, 2016.

Claire Scheid, "A discontinuous Galerkin framework for the numerical modelling of light-matter interaction at the nanoscale", 28th CEA-GAMNI Seminar on CFD, IHP, Paris, January 25-26, 2016.

Stéphane Lanteri, "Recent advances on a finite element type simulation method for nanoscale light/matter interactions", 8èmes Journées Scientifiques du C'Nano PACA, Porquerolles, France, May 25-27, 2016.

Stéphane Lanteri, "Development of finite element type simulation methods for nanoscale light/matter interactions", ONERA Palaiseau, France, June 15, 2016.

Stéphane Lanteri, "High order HDG method for frequency-domain electromagnetics", Institut fuer Physik, Humboldt-Universitaet zu Berlin, Germany, February 9-11, 2016.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Stéphane Descombes, *Scientific computing*, M1, 36 h, Université Nice Sophia Antipolis.

Stéphane Descombes, *Principal components analysis*, M2, 30 h, Université Nice Sophia Antipolis.

Stéphane Lanteri, *Computational electromagnetics*, MAM5, 20 h, Polytech Nice Sophia.

Claire Scheid, *Lectures and practical works, Analysis, Agrégation*, 27 h, Université Nice Sophia Antipolis.

Claire Scheid, *Lectures and practical works, Numerical Analysis, Agrégation*, 34 h, Université Nice Sophia Antipolis.

9.2.2. Supervision

PhD in progress: Alexis Gobé, *Multiscale hybrid-mixed methods for time-domain nanophotonics*, November 2016, Stéphane Lanteri.

PhD in progress: Nikolai Schmitt, *Numerical modeling of electron beam interaction with nanostructures*, October 2015, Stéphane Lanteri and Claire Scheid.

PhD in progress: Hao Wang, *High order DGTD method for multiscale electromagnetic wave propagation problems*, September 2015, Bin Li and Li Xu (UESTC, Chengdu, China) and Stéphane Lanteri.

NANO-D Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Selection

8.1.1.1. Reviewer

- Leonard Jaillet was a reviewer for the ICRA (International Conference on Robotics and Automation) and IROS (International Conference on Intelligent Robots and Systems) conferences, the WAFR (International Workshop on the Algorithmic Foundations of Robotics) workshop and the T-RO (Transactions on Robotics) journal.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Stephane Redon is teaching INF585 (Introduction to C++) at Ecole polytechnique
- Stephane Redon is part of the teaching team of INF442 (Big data and high-performance computing) at Ecole polytechnique

8.2.2. Supervision

- Leonard Jaillet is advising the PhD of Minh Khoa Nguyen
- Sergei Grudinin is advising the PhD of Alexandre Hoffmann
- Sergei Grudinin is advising the PhD of Guillaume Pages
- Stephane Redon is co-advising the PhD of Krishna Kant Singh in collaboration with Jean-Francois Mehaut
- Stephane Redon is advising the PhD of Francois Rousse
- Stephane Redon is advising the PhD of Semeho Edorh
- Stephane Redon is co-advising the PhD of Zofia Trstanova in collaboration with Gabriel Stoltz (defended in november 2016)

<div align="center" style="color:red">**NECS Project-Team**</div>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

C. Canudas de Wit has been appointed General Chair of the 58th IEEE Conference on Decision and Control, 2019.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

P. Frasca has been Associate Editor-at-Large in the International Program Committee of the 55th IEEE Conference on Decision and Control, 2016.

P. Frasca and F. Garin are Associate Editors in the IEEE Control System Society Conference Editorial Board. This year, they served for the 2016 American Control Conference, the 2017 American Control Conference, and the 55th IEEE Conference on Decision and Control, 2016.

P. Frasca is Associate Editor in the European Control Association (EUCA) Conference Editorial Board. This year, he served for the 2016 European Control Conference.

P. Frasca has been appointed as Associate Editor in the IEEE Robotics and Automation Society CASE Conference Editorial Board: he shall serve for 13th IEEE International Conference on Automation Science and Engineering, 2017.

Hassen Fourati was a member of the International and Scientific Program Committees of the International Conference on Control, Automation and Diagnosis (ICCAD'17), 2017, and the International Conference on Sciences and Techniques of Automatic Control and Computer Engineering STA2016, 2016.

10.1.2.2. Reviewer

Team members, and in particular faculty, have been reviewers for several conferences (including the most prestigious ones in their research area): IEEE Conference on Decision and Control CDC, European Control Conference ECC, American Control Conference ACC, European Signal Processing Conference, IEEE International Conference on Robotics and Automation ICRA, IEEE/RSJ International Conference on Intelligent Robots and Systems IROS, IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys), Indian Control Conference.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Carlos Canudas de Wit is Associate Editor of IEEE Transactions on Control of Networks Systems IEEE-TCNS (since June 2013), Associate Editor of IEEE Transactions on Control System Technology IEEE-TCST (since January 2013), and Editor of the Asian Journal of Control AJC (since 2010).

Paolo Frasca is Subject Editor of the International Journal of Robust and Nonlinear Control (Wiley) (since February 2014) and has been appointed as starting Associate Editor of IEEE Control System Letters (from February 2017).

Hassen Fourati is Associate Editor of the Asian Journal of Control AJC (since January 2016).

10.1.3.2. Reviewer - Reviewing Activities

Team members, and in particular faculty, have been reviewers for several journals (including the most prestigious ones in their research area): IEEE Trans. on Automatic Control, IEEE Trans. on Control of Network Systems, IEEE Trans. on Signal Processing, Automatica, IEEE Signal Processing Letters, Systems and Control Letters, IEEE Transactions on Information Theory, Elsevier Signal Processing, Int. Journal of Robust and Nonlinear Control, IET Communications, IET Wireless Sensor Networks. IEEE/ASME Trans. on Mechatronics, IEEE Trans. on Instrumentations and Measurements, IEEE Sensors journal, IEEE Trans. on Robotics, Networks and Heterogeneous Network (NHM), Mathematical Methods in the Applied Sciences (MMAS), Journal of Mathematical Analysis and Applications (JMMA), AMS Mathematical Reviews, Journal of Intelligent Transportation Systems.

10.1.4. Invited Talks

- C. Canudas de Wit, "Optimal Traffic Control: Eco-driving, Green-waves, Adaptive traffic lights" (plenary talk), Latin American Conference on Automatic Control 2016, Medellin, Colombia, October 2016.
- M. L. Delle Monache, "Some control strategies for conservation laws with applications to traffic flow", Séminaire de théorie du contrôle de Toulon, University of Toulon, November 2016.
- P. Frasca, "Non-smooth and hybrid systems in opinion dynamics", IEEE CDC satellite workshop on Dynamics and Control in Social Networks, Las Vegas, Nevada, December 2016.
- P. Frasca, "Non-smooth and hybrid systems in opinion dynamics", ANR Workshop "Control subject to computational and communication constraints" (CO4), Toulouse, France, October 2016.

10.1.5. Leadership within the Scientific Community

C. Canudas de Wit has been president of the European Control Association (EUCA) until June 2015, and is now (until 2017) Past-president and member of the EUCA Council.

10.1.6. Scientific Expertise

Team members participate to the following technical committees of IEEE Control Systems Society and of the International Federation of Automatic Control:
CSS Technical Committee "Networks and Communications Systems" (P. Frasca and F. Garin);
IFAC Technical Committee 1.5 on Networked Systems (P. Frasca and C. Canudas de Wit);
IFAC Technical Committee 2.5 on Robust Control (P. Frasca);
IFAC-TC7.1 Automotive Control (C. Canudas de Wit);
IFAC-TC7.4 Transportation systems (C. Canudas de Wit).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: F. Garin, Distributed Algorithms and Network Systems, 13.5h, M2, Univ. Grenoble Alpes, France.

Licence: H. Fourati, Informatique Industrielle, 105h, L1, IUT 1 (GEII), Univ. Grenoble Alpes, France;

Licence: H. Fourati, Réseaux locaux industriels, 50h, L1 et L2, IUT1 (GEII), Univ. Grenoble Alpes, France.

Licence: H. Fourati, Automatique, 61,5h, L3, UFR physique, Univ. Grenoble Alpes, France.

Licence: H. Fourati, Automatique échantillonnée, 15h, L2, IUT 1 (GEII), Univ. Grenoble Alpes, France.

Licence: A. Kibangou, Automatique, 52h, L2, IUT1(GEII1), Univ. Grenoble Alpes, France.

Licence: A. Kibangou, Mathématiques, 33h, L2, IUT1 (GEII1), Univ. Grenoble Alpes, France.

Licence: A. Kibangou, Mathématiques, 44h, L1, IUT1 (GEII1), Univ. Grenoble Alpes, France.

Licence: A.Kibangou, Automatique, 16h, L3, IUT1 (GEII1), Univ. Grenoble Alpes, France.

Doctorat: C. Canudas de Wit has organized the 37th International Summer School of Automatic Control Grenoble, France September, 12-16, 2016 on the topic "Advanced algorithms for traffic prediction and control".

10.2.2. Supervision

PhD: Aida Makni, Inertial and magnetic data fusion for attitude estimation under energetic constraint for accelerated rigid body, Univ. Grenoble Alpes, March 2016, co-advised by H. Fourati, A. Kibangou and C. Canudas de Wit.

PhD in progress: Simon Gerwig, Collaborative, reconfigurable and resilient control for hydro-electric power-plants, from Feb. 2014 until Mar. 2017, co-advised by C. Canudas de Wit, F. Garin and B. Sari (Alstom).

PhD in progress: Pietro Grandinetti, Control of large-scale traffic networks, from Apr. 2014, co-advised by C. Canudas de Wit and F. Garin.

PhD in progress: Andrés Alberto Ladino Lopez, Robust estimation and prediction in large scale traffic networks, from Oct. 2014, co-advised by C. Canudas de Wit, A. Kibangou and H. Fourati.

PhD in progress: Thibaud Michel, Mobile Augmented Reality Applications for Smart Cities, from Nov. 2014, co-advised by N. Layaïda, H. Fourati and P. Geneves.

PhD in progress: Sebing Gracy, Cyber-physical systems: a control-theoretic approach to privacy and security, from Oct. 2015, co-advised by A. Kibangou and F. Garin.

PhD in progress: Stéphane Durand, Coupling distributed control and game theory: application to self-optimizing systems, from Oct. 2015, co-advised by B. Gaujal and F. Garin.

PhD in progress: Stéphane Mollier, Aggregated Scale-Free Models for 2-D Large-scale Traffic Systems, from Oct. 2016, co-advised by C. Canudas de Wit, M. L. Delle Monache and B. Seibold.

PhD in progress: Nicolas Martin, On-line partitioning algorithms for evolutionary scale-free networks, from Dec. 2016, co-advised by C. Canudas de Wit and P. Frasca.

10.2.3. Juries

- C. Canudas de Wit was committee member of the PhD defence of Kuo-Yun Liang, KTH Stockholm. Ph.D. advisor: K.H. Johansson, June 10, 2016.

- H. Fourati was committee member of the PhD defense of Christophe Combettes, Institut Français des Sciences et Technologies des Transports, de l'Aménagement et des Réseaux (IFSTTAR), Spécialité : Automatique et Informatique appliquée, October 17, 2016.

- P. Frasca was committee member of the PhD defence of Laura Dal Col, *On distributed control analysis and design for multi-agent systems subject to limited information*, Institut National des Sciences Appliquées, Toulouse, France. Ph.D. advisors: Luca Zaccarian and Sophie Tarbouriech, October 25, 2016.

- H. Fourati was committe member of "Qualification Maître de Conferences 2016" during January 2016, Autrans, France.

10.3. Popularization

The GTL webpage (http://gtl.inrialpes.fr/status) went public in November: more generally the traffic activities have been popularized via the following public talks.

- M. L. Delle Monache. DEMO on the GTL at the "Journées des nouveaux arrivants", Inria, Paris, Dec. 2016

- M. L. Delle Monache, Traffic flow modeling, GIPSA-Lab days, Grenoble, Nov. 2016

NEUROSYS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organization

10.1.1.1. Member of the Organizing Committees

- Member of the organization committee of the second OpenViBE workshop as a satellite event of the Brain-Computer Interfaces meeting, May 30th 2016, Asilomar, CA/USA (L. Bougrain) http://openvibe.inria.fr/the-2nd-international-openvibe-workshop-2016-contents/
- Member of the organization committee of the iPAC séminar (Image, Perception, Action et Cognition) (L. Buhry)

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- French conference on machine learning CAP 2016 (L. Bougrain)
- IEEE International Conference on Systems, Man, and Cybernetics (SMC) special sessions on Brain-Machine Interfaces, Budapest, 2016 (L. Bougrain)

10.1.2.2. Reviewer

- Brain-Computer Interfaces meeting 2016 (L. Bougrain)
- IEEE International Conference on Systems, Man, and Cybernetics (SMC) special sessions on Brain-Machine Interfaces, Budapest, 2016 (L. Bougrain)
- French conference on machine learning CAP 2016 (L. Bougrain)
- IEEE International Conference on Acoustic, Speech and Signal Processing - ICASSP, 2016 (T. Tošić)
- IEEE International Conference on Image Processing - ICIP, 2016. (T. Tošić)
- International Conference on Artificial Neural Networks (M. Fedotenkova)

10.1.3. Journal

10.1.3.1. Reviewer - Reviewing Activities

- L. Buhry is a reviewer for Journal of Computational Neuroscience, Frontiers in Computational Neuroscience, Journal of Neural Engineering, IEEE TNN (Transactions on Neural Networks), Neurocomputing, CCSP (Circuits, Sys. & Signal Proc.), IEEE international NEWCAS, Hippocampus
- T. Tošić is a reviewer for IEEE Transactions on Signal Processing (TSP), ACM Transactions on Sensor Networks (TOSN), Signal Processing : Image Communication

10.1.4. Invited Talks

- Active brain-computer interfaces and motor handicap compensation, IFRATH (Institut Fédératif de Recherche sur les Aides Techniques pour personnes Handicapées) and ITMO "Neurosciences, Sciences Cognitives, Neurologie, Psychiatrie", feb. 4th 2017, INJS Paris (L. Bougrain)
- An introduction to OpenViBE, OpenViBE workshop, satellite event of the Brain-Computer Interfaces meeting, May 30th 2016, Asilomar, CA/USA (L. Bougrain) http://openvibe.inria.fr/the-2nd-international-openvibe-workshop-2016-contents/

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Engineering school: L. Bougrain, *Interfaces cerveau-ordinateur*, 4.5h, 3rd year, Supelec, France

Engineering school: T. Tošić, *Atelier Artem (Art-Technologie-Management) : ABCDWeb*, 30h, 2nd year, ICN, Ecole d'art et design, École des Mines Nancy, France

Engineering school: T. Tošić, *Parcours de recherche et Initiation à la recherche*, 11h, 2nd and 3rd year, Telecom Nancy and École des Mines Nancy, France

Engineering school: T. Tošić, *Apprentissage automatique - Modélisation avancée des connaissainces*, 58h, 3rd year, École des Mines Nancy, France

Engineering school: T. Tošić, *Tronc Commun d'Informatique - Python*, 140h, 1st year, École des Mines Nancy, France

Engineering school: T. Tošić, *Techniques et Solutions Informatiques*, 47h, 2nd year, École des Mines Nancy, France

Engineering school: T. Tošić, *Pépites Algorithmiques*, 18h, 1st year, École des Mines, France

Engineering school: T. Tošić, *Passerelle au Numérique*, 28h, 1st year, École des Mines, France

Engineering school: T. Tošić, *Model Driven Architecture and UML*, 21h, 2nd year, École des Mines, France

Engineering School: F. Giovannini, *Intelligence artificielle* (3rd year), 34h, Telecom Nancy, France

Licence: L. Buhry, *Applications en Sciences Cognitives*, 3h , niveau L1 MIASHS, University of Lorraine, France

Licence: L. Buhry, *Programmation Python*, 37h, level L1 MIASHS, University of Lorraine, France

Licence: L. Buhry *Probabilités-Statistiques*, 30h, level L1 MIASHS, University of Lorraine, France

Licence : L. Buhry, *IA et Résolution de problèmes*, 25h, level L3 MIASHS, University of Lorraine, France

Licence : L. Bougrain, *développement sur mobile*, 35h, Licence of computer science (3st year), University of Lorraine, France

Licence : L. Bougrain, *Intelligence artificielle*, 35h, Licence of computer science (3st year), University of Lorraine, France

Licence : L. Bougrain, *Optimisation*, 37.5h, Licence of computer science (3st year), University of Lorraine, France

Master : L. Buhry, *Algorithmique pour l'intelligence artificielle*, 31h, niveau Master 1 SCA (Sciences Cognitives et Applications), University of Lorraine, France

Master : L. Buhry, *IA fondamentale et fouille de données*, 18h, niveau Master 1 SCA (Sciences Cognitives et Applications), University of Lorraine, France

Master: L. Buhry, *Formalismes de Représentation et Raisonnement*, 25h, niveau Master 1 SCA (Sciences Cognitives et Applications), University of Lorraine, France

Master: L. Buhry, *Memory and Machine Learning*, 38h, niveau Master 1 SCA (Sciences Cognitives et Applications), University of Lorraine, France

Master : L. Buhry, *Neurosciences Computationnelles*, 25h, niveau Master 2 SCMN, University of Lorraine, France

Master : L. Bougrain, *Apprentissage automatique*, 18h, Master of computer science, 2st year, University of Lorraine, France

Master : L. Bougrain, *Facteurs humains*, 30h, Master of computer science 1st year, University of Lorraine, France

10.2.2. Supervision

PhD : Meysam Hashemi, Analytical and numerical studies of thalamo-cortical neural population models during general anesthesia, Univ. Lorraine, Jan. 14, 2016, A. Hutt [2]

PhD : Mariia Fedotenkova, Extraction of multivariate components in brain signals obtained during general anesthesia, Univ. Lorraine, Dec. 2, 2016, A. Hutt [1]

PhD in progress : Cecilia Lindig-Leon, Multilabel classification of EEG-based combined motor imageries implemented for the 3D control of a robotic arm, November 2013, A. Hutt and L. Bougrain

PhD in progress : Francesco Giovannini, Mathematical modelling of the memory system under general anesthesia, Oct. 2014, L. Buhry and A. Hutt

PhD in progress : Sébastien Rimbert Study of the dynamics of brain motor components during anesthesia, January 2016, A. Hutt and L. Bougrain

PhD in progress : Amélie Aussel, Extraction of electrophysiological markers and mathematical modeling of epileptic hippocampus, Oct. 2016, L. Buhry, Patrick Hénaff and R. Ranta

10.2.3. Juries

Laure Buhry was member of the PhD committee of Meysam Hashemi, University of Lorraine.

Laure Buhry was member of the PhD committee of Guillaume Viejo, Université Pierre et Marie Curie, Paris

10.3. Popularization

Interview and demo "Science on live" for the Science Festival 2016 at Cité des sciences et de l'industrie, Forum Explora about "Brain-Computer Interfaces for stroke rehabilitation" Oct. 8, 2016 (L. Bougrain, S. Rimbert). https://www.youtube.com/watch?v=cRCtGuvRW5A

Interview Huffington Post, Oct. 26, 2016 (L. Buhry) (http://www.huffingtonpost.fr/2016/10/26/la-fille-du-train-creativite-imagination/)

Interview for Inria to introduce Neurosys' research on Brain-Computer Interfaces, Oct. 2016 (L. Bougrain) https://www.youtube.com/watch?v=DBajwAI9VEw at 5:38:10

Interview for the Regional TV news (JT 19/20 France 3 Lorraine): Brain-Computer Interfaces, Sept. 29, 2016 (L. Bougrain, S. Rimbert)

Talk during the National Brain Awareness Week: Brain, consciousness and waves, Mar. 18, 2016, Bibliothèque Multimédia Intercommunale, Epinal (L. Buhry, L. Koessler)

Interview for Radio CaraibNancy: Neuroscience in Lorraine, Mar. 16, 2016 (L. Bougrain, S. Caharel and L. Koessler)

Exhibit at Loria's open day for master students and engineers: controlling a robotic arm using EEG, Apr. 9, 2015 (L. Bougrain, J. Nex)

L. Bougrain & B. le Golvan, Neuroprosthetics, Evolution Psychiatrique, Elsevier [5] published on line on Mar. 8, 2016.

NON-A Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- W. Perruquetti is the chairman of the IFAC Technical Committee "Social Impact of Automation", International Federation of Automatic Control, TC 9.2, and a member of the IFAC Technical Committees "Nonlinear Control Systems", TC 2.3, and "Discrete Event and Hybrid Systems", TC 1.3.
- A. Quadrat is a member of the IFAC Technical Committee "Linear Control Systems", International Federation of Automatic Control, TC2.2
- J.-P. Richard is a member of the IFAC Technical Committee "Linear Control Systems", International Federation of Automatic Control, TC2.2
- G. Zheng is a member of the IFAC Technical Committee "Social Impact of Automation", International Federation of Automatic Control, TC9.2
- G. Zheng is co-chair of the working group "Commande et pilotage en environnement incertain" of GRAISYHM

10.1.1.2. Member of the Organizing Committees

C. Jamroz, A. Quadrat, J.-P. Richard and G. Zheng were members of the organizing committee of "JA-MACS'16 : Journées Automatique du GDR MACS 2016", Villeneuve d'Ascq, 15-16/11/2016.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

W. Perruquetti is a member of the steering committee of IFAC CPHS'16 (7-9 December 2016, Florianopolis, Brazil), an IPC member of IEEE VSS'16 (1-4 June 2016, Nanjing, Jiangsu, China) and of IFAC HMS'16 (August 30-September 2 2016, Kyoto, Japan) and an Associate Editor of the 20th IFAC World Congress (10-14 July 2017, Toulouse, France).

W. Perruquetti and J.-P. Richard are members of the Advisory panel (NOC) of 20th IFAC World Congress, Toulouse, France, 10-14 July 2017.

10.1.2.2. Reviewer

The members of NON-A team are reviewers and contributors of all top-ranked conferences in the field of automatic control (IEEE Conference on Decision and Control, IFAC World Congress, European Control Conference, American Control Conference, etc.).

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- A. Polyakov: International Journal of Robust and Nonlinear Control
- A. Polyakov: Journal of Optimization Theory and Applications (JOTA)
- A. Polyakov: Automation and Remote Control
- A. Quadrat: Multidimensional Systems and Signal Processing (MSSP)

10.1.3.2. Reviewer - Reviewing Activities

The members of NON-A team are reviewers of all top-ranked journals in the field of automatic control (IEEE Transactions on Automatic Control, Automatica, SIAM Journal of Control and Optimization, International Journal of Robust and Nonlinear Control, etc.).

10.1.4. Invited Talks

D. Efimov gave a plenary talk at the conference "JAMACS'16 : Journées Automatique du GDR MACS 2016", Villeneuve d'Ascq, France, 15-16/11/2016.

10.1.5. Leadership within the Scientific Community

The NON-A team is the leader in the field of non-asymptotic control and estimation using homogeneity framework.

Moreover, the NON-A team is also leader in algebraic systems theory. In particular, two invited sessions "Algebraic methods and symbolic-numeric computation in systems theory" were organized at the 22nd International Symposium on Mathematical Theory of Networks and Systems (MTNS 2016), University of Minnesota, USA, 12-15/07/2016. Moreover, a mini-workshop "New trends on multidimensional systems and their applications in control theory and signal processing" was organized at Centre International de Rencontres Mathématiques (CIRM), Luminy, France, 03-07/10/2016.

10.1.6. Scientific Expertise

A. Quadrat was a member of the "jury d'admission des concours Inria CR2 & CR1". He was also a member of the "Commission des Emplois de Recherche", Inria Lille, and a member of the "Authorité de déchiffrement" for the local elections.

10.1.7. Research Administration

- W. Perruquetti is Vice-deputy of INS2I CNRS.
- J.-P. Richard is an Expert for the French Ministry of Research, MENESR/MEIRIES.
- R. Ushirobira was a Member (nominated) of the "Comité du Centre" of Inria Lille (Dec. 2013 - Sept. 2016) and a Member of the "Commission de Développement Technologique" (CDT).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence: D. Efimov, Laboratory works in automatics, 20 h, EC de Lille.

Licence: D. Efimov, Practical works in automatics, 28 h, ISEN, Lille.

Licence: D. Efimov, Laboratory works in discrete systems, 20 h, ENSAM, Lille.

Licence: R. Ushirobira, Travaux Pratiques en Automatique, 8 h, U. Lille 1, France.

Licence: R. Ushirobira, Travaux Pratiques en Automatique, 24 h, EC-Lille, France.

Licence: R. Ushirobira, Travaux dirigés/Travaux Pratiques en Automatique, 12 h+9 h, U. Lille 1.

Master: D. Efimov, Analysis of dynamical systems, 24 h, U. Lille 1.

Master: R. Ushirobira, Travaux Pratiques en Automatique, 32 h, U. Lille 1.

Master: G. Zheng, Robotic, 20 h, U. Lille 1.

Master: G. Zheng, Automatic control, 24 h, U. Lille 1.

10.2.2. Supervision

PhD: Hafiz Ahmed, "Modeling and synchronization of biological rhythms: from cells to oyster behavior", 2013-2016, supervisors: D. Efimov, R. Ushirobira and D. Tran

PhD: Zilong Shao, "Oscilatory control of robot manipulator", EC Lille, 2012-2016, supervisors: D. Efimov, W. Perruquetti, G. Zheng

PhD in progress: Haik Jan Davtjan, "Estimation in complex systems", EC Lille, 2016, UCoCoS EU project, supervisors: D. Efimov, J.-P. Richard

PhD in progress: Maxime Feingesicht, "Dynamic Observers for Control of Separeted Flows", Ecole Centrale de Lille, 2015, supervisors: J.-P. Richard, F. Kerherve, A. Polyakov

PhD in progress: Nadhynee Martinez Fonseca, "Non-asymptotic control and estimation problems in robotic system designed for manipulation of micro-organisms", National Polytechnic Institute of Mexico, 2015-now, supervisors: I. Chairez-Oria, A. Polyakov

PhD in progress: Tatiana Kharkovskaya, "Interval Observers for Distributed Parametr Systems", ITMO University-EC Lille, 2015, supervisors: D. Efimov, J.-P. Richard and A. Kremlev

PhD in progress: Langueh Désiré Kokou, "Inversion a gauche, singularités d'inversion, immersion et formes normales pour les systèmes dynamiques", 2015, supervisors: T. Floquet, G. Zheng

PhD in progress: Gabriele Perozzi, "Save exploration of aerodynamic field by microdron", Onera-Region, 2015, supervisors: D. Efimov, J.-M. Biannic and L. Planckaert

PhD in progress: Francisco Lopez-Ramirez, "Control and estimation via implicit homogeneous Lyapunov function", Inria, 2015, supervisors: D. Efimov, W. Perruquetti and A. Polyakov

PhD in progress: Guillaume Rance, "Asservissement paramétrique de systèmes flexibles à retard et application aux viseurs", CIFRE Safran Electronics & Defense, 2014, supervisors: A. Quadrat, A. Quadrat, H. Mounier

PhD in progress: Haik-Jan Silm, "Estimation in complex systems", 2016, supervisors: D. Efimov, R. Ushirobira, W. Michels, J.-P. Richard

PhD in progress: Yue Wang, "Development of a blimp robot for indoor operation", EC Lille, 2016, supervisors: D. Efimov, W. Perruquetti, G. Zheng

Master: Boussad Abci, EC Lille, 2015-2016, supervisors: D. Efimov, J.-P. Richard

Master: Rabehi Djahid, EC Lille, 2015-2016, supervisors: D. Efimov, J.-P. Richard

10.2.3. *Juries*

- A. Quadrat was an Examiner Member of the PhD Thesis of Mohamed Belhocine, "Modélisation et analyse structurelle du fonctionnement dynamique des systèmes électriques", ENS Cachan. He was also a Member of Recruiting Committee for a MCF CNU 26-27 position at the University of Limoges.

- J.-P. Richard was an Examiner Member of the PhD Thesis of Arvo Kaldmae (Estonia), "Design of discrete-time and delayed nonlinear systems", of Lucien Etienne (Italy), "Elements of observation and estimation for networked control systems", and of Zilong Shao (Centrale Lille) "Identification and control of position-controlled robot arm in the presence of joint flexibility".

- R. Ushirobira was a Member of Recruiting Committee for a MCF CNU 61 position at CNAM (Paris) and for a MCF CNU 61 position at ENSAE (Cergy).

10.3. Popularization

- Mediation: Scientific baccalaureate students. Meeting on the Inria platform EuraTechnologies (23/03/2016, Lille): "SN Lille Académie : À la découverte des sciences numériques !".

- Mediation: BeyondLab community. A co-working night event within BeyondLabon using "Living sensor" for water quality monitoring, featuring our PhD student Hafiz Ahmed (Lille, 16/03/2016).

- Contribution to the prospective report "Systems & Control for the Future of Humanity" coordinated by F. Lamnabhi-Lagarrigue, Research Agenda Task Force (to appear, special issue of Annual Reviews in Control to be distributed during the IFAC 2017).

- The book "Mathématiques pour l'ingénieur" (2009, ISBN : 978-9973-0-0852-7 (ATAN, 385 pages)) has been downloaded more than 65000 times.

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Expertise

Emmanuel Grenier has been expert for an INSERM cancer call.

8.1.2. Research Administration

Emmanuel Grenier is member of the board of the LABEX Archimede (Marseille).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Paul Vigneaux, Vincent Calvez and Emmanuel Grenier teach in L3, M1 and M2 at ENSL, including lectures on partial differential equations, modeling, analysis.

8.2.2. Supervision

Edouard Ollier and Mathilde Giacalone is supervised by Emmanuel Grenier, Arthur Marly by Paul Vigneaux and Alvaro Mateos Gonzalez by Vincent Calvez.

ORPAILLEUR Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organization, General Chairs, Scientific Chairs

- "FCA4AI 2016". Amedeo Napoli organized with Sergei O. Kuznetsov (HSE Moscow) and Sebastian Rudolph (TU Dresden) the fifth workshop FCA4AI ("What can do FCA for Artificial Intelligence") which was associated with the ECAI Conference in The Hague (Netherlands, August 2016, see http://www.fca4ai.hse.ru/2016 and http://ceur-ws.org/Vol-1703) [53].

9.1.1.1. Scientific Animation

- The scientific animation in the Orpailleur team is based on the Team Seminar which is called the "Malotec" seminar (http://malotec.loria.fr/?p=1). The Malotec seminar is held in general twice a month and is used either for general presentations of members of the team or for invited presentations of external researchers.
- Members of the Orpailleur team are all involved, as members or as head persons, in various national research groups.
- The members of the Orpailleur team are involved in the organization of conferences and workshops, as members of conference program committees (ECAI, ECML-PKDD, ICCBR, ICDM, ICFCA, IJCAI, KDD...), as members of editorial boards, and finally in the organization of journal special issues.

9.2. Teaching – Supervision – Juries

- The members of the Orpailleur team are involved in teaching at all levels of teaching, mainly at University of Lorraine. Actually, most of the members of the Orpailleur team are employed on "Université de Lorraine" positions.
- The members of the Orpailleur team are also involved in student supervision, at all university levels, from under-graduate until post-graduate students.
- Finally, the members of the Orpailleur team are involved in HDR and thesis defenses, being thesis referees or thesis committee members.

<p style="text-align:center">**PACAP Project-Team**</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

A. Seznec is member of the ACM/IEEE PACT conference steering committee.

A. Seznec is member of the ACM/IEEE ISCA symposium steering committee.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

Isabelle Puaut is Program Chair of the 2017 IEEE Real-Time Systems Symposium (RTSS).

A. Seznec was PC chair of the 2016 ACM/IEEE ISCA symposium.

10.1.2.2. Member of the Conference Program Committees

Isabelle Puaut is member of the program committees of the Euromicro Conference on Real Time Systems (ECRTS) 2016 and 2017, the IEEE Real-Time Systems Symposium (RTSS) 2016, the IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS) 2017 and the WCET workshop 2016.

A. Seznec is a member of IEEE Micro 2017 Top Picks selection committee.

A. Seznec was a member of the SAMOS 2016 conference program committee.

Damien Hardy was a member of RTNS 2016 and WCET 2016 program committees.

Pierre Michaud was a member of the program committees of the HPCA 2017 conference and of the 5th JILP Workshop on Computer Architecture Competitions (JWAC-5).

Sylvain Collange was PC member of ISCA 2016 and of Compas'2016.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Isabelle Puaut is Associate Editor for IEEE Transactions on Computers (IEEE TC).

A. Seznec is a member of the editorial boards of IEEE Micro and ACM Transactions on Architecture and Compiler Optimization.

10.1.4. Invited Talks

Damien Hardy was invited to give a tutorial on Heptane at Tutor16 (1st Tutorial on Tools for Real-Time Systems) in conjunction with the Cyber-Physical Systems week 2016.

Damien Hardy was invited from August 31st to September 2nd at the Barcelona Supercomputing Center group. He presented an invited talk.

A. Seznec presented invited talks at Intel Bangalore (compressed caches, branch prediction, value prediction) in Sept. 2016.

A . Seznec presented the PACAP work on compressed caches at the ARM research summit in Sept. 2016.

A. Seznec presented the PACAP work on compressed caches and register equality prediction at the Intel low latency ISRA workshop in Dec. 2016.

10.1.5. Scientific Expertise

Erven Rohou was an expert for the ANR review process.

10.1.6. Research Administration

Isabelle Puaut is responsible of Short Term Scientific Missions (STSM) withing the European COST action Tacle (Timing Analysis at Code LEvel) (http://www.tacle.eu).

Isabelle Puaut is member of the steering committee of RTNS (Real-Time Networks and Systems).

Isabelle Puaut is member of the steering committee of the Worst Case Execution Time (WCET) workshop, held in conjunction with the Euromicro Conference on Real Time Systems (ECRTS).

Isabelle Puaut is member of the scientific council of University of Rennes 1.

Isabelle Puaut is member of the administration council of the computer science and electrical engineering department of University of Rennes 1.

A. Seznec is an elected member of the Administration Council of Inria.

Erven Rohou is a member of the Inria CDT (Commission du Développement Technologique).

As "correspondant scientifique des relations internationales" for Inria Rennes Bretagne Atlantique, Erven Rohou is a member of the Inria COST GTRI (Groupe de Travail "Relations Internationales" du Comité d'Orientation Scientifique et Technologique).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: Isabelle Puaut, Operating systems, 1st year of master, total of 110 hours

Master: Isabelle Puaut, Damien Hardy, Real-time systems, 1st year of master, total of 58 hours

Master: Isabelle Puaut, Erven Rohou, Writing of scientific publications, 2nd year of master and PhD students, total of 24 hours

Licence: Damien Hardy, Real-time systems, L3 Université de Rennes I, total of 60 hours

Master: Damien Hardy, Operating systems, M2 Université de Rennes I, total of 60 hours

Master: Damien Hardy, Operating systems, M1 Université de Rennes I, total of 60 hours

Master: S. Collange, Programmation parallèle, 22 hours, M1, Université de Rennes I, France

10.2.2. Supervision

PhD: Sajith Kalathingal, "Transforming TLP into DLP with the Dynamic Inter-Thread Vectorization Architecture", Université Rennes 1, Dec 2016, co-advisors S. Collange and A. Seznec

PhD: Aswinkumar Sridharan, "Adaptive and Intelligent Memory Systems", Université Rennes 1, Dec. 2016, advisor A. Seznec

PhD: Arjun Suresh, "Intercepting Functions for Memoization", Université Rennes 1, May 2016, co-advisors E. Rohou and A. Seznec

PhD in progress, Viet Anh Nguyen, Worst-Case Execution Time (WCET) Estimation for Many-core Architectures, started in january 2015. Supervised by Isabelle Puaut and Damien Hardy.

PhD in progress, Benjamin Rouxel, Code optimizations for WCET calculation on many-core platforms, started in october 2015. Supervised by Isabelle Puaut and Steven Derrien from the CAIRN group.

PhD in progress: Nabil Hallou, Université Rennes 1, Feb 2013, co-advisors E. Rohou and P. Clauss (EPI Camus Inria Strasbourg)

PhD in progress: Andrea Mondelli, Université Rennes 1, Oct 2013, co-advisors P. Michaud and A. Seznec

PhD in progress: Rabab Bouziane, Université Rennes 1, Nov 2015, advisor E. Rohou and Abdoulaye Gamatié (LIRMM, Montpellier)

PhD in progress: Arif Ali Ana-Pparakkal, Université Rennes 1, Feb 2015, advisor E. Rohou

PhD in progress: Simon Rokicki, Université Rennes 1, Sep 2015, co-advisors E. Rohou and Steven Derrien (CAIRN)

PhD in progress: Kleovoulos, Kalitzidis, "Ultrawide Issue Superscalar Processors", Université Rennes 1, Dec. 2016, advisor A. Seznec

10.2.3. *Juries*

Isabelle Puaut was a member of the following committees:

- PhD: Pierre Wilke, Formally Verified Compilation of Low-Level C code, Université de Rennes 1, Nov 2016
- PhD: Guillaume Phavorin, Hard Real-Time Scheduling subjected to Cache-Related Preemption Delays, Université de Poitiers, Sep 2016 (rapporteur)
- PhD: Vincent Mussot, Automates d'annotation de flot pour l'expression et l'intégration de propriétés dans l'analyse de WCET, Université Paul Sabatier, Toulouse, Dec 2016 (rapporteur)
- HDR: Mathieu Jan, Contributions au paradigme par cadencement temporel (TT) et à l'embarquabilité des systèmes temps réel, Université Paris Sud, Dec 2016 (rapporteur)

Erven Rohou was a member of the following committees:

- PhD: Juan Manuel Martinez Caamano, Strasbourg
- PhD: Lénaïc Bagnères, Orsay
- PhD: Michele Scandale, Politecnico di Milano, Milan, Italy
- PhD: Amir Ashouri, Politecnico di Milano, Milan, Italy
- PhD: Sébastien Martinez, Télécom Bretagne, Brest
- PhD: Reem ElKhouly, Egypt-Japan University of Science and Technology, Alexandrie, Egypt

10.2.3.1. Assistant professor hiring committees

Isabelle Puaut: University of Toulouse (computer architecture and real-time systems)

Isabelle Puaut: University of Chalmers, Sweden (real-time systems)

10.2.3.2. Professor hiring committee:

Isabelle Puaut: UBO (Université de Bretagne Occidentale) - real-time systems

10.3. Popularization

Erven Rohou discussed the research axes of the team in the "émergences" newsletter http://emergences.inria.fr/2016/newsletter_n43/L42-PACAP.

Nicolas Kiss, Damien Hardy and Erven Rohou presented a poster at the "Rencontres inter-UMRs-DGA", of the "Pôle d'excellence Cyber".

Erven Rohou and Isabelle Puaut presented a poster (with ANR W-SEPT colleagues) at "Les rencontres du numérique de l'ANR".

PANAMA Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

Rémi Gribonval is a member of the IEEE Technical Committee on Signal Processing Theory and Methods (2012–2017), and a member of the Awards sub-committee.

Rémi Gribonval is a member of the program committee of the GRETSI.

Rémi Gribonval is a member of the Steering Committee of the SPARS international workshop (chairman until 2013).

Frédéric Bimbot is the Head of the "Digital Signals and Images, Robotics" department in IRISA (UMR 6074).

Frédéric Bimbot is a member of the International Advisory Council of ISCA (International Speech Communication Association).

Rémi Gribonval and Frédéric Bimbot are the scientific coordinators of the Science and Music Day (Journée Science et Musique) organized by IRISA.

Antoine Deleforge organized and co-chaired with Prof. Sharon Gannot (Bar-Ilan University) a special session on "Learning-Based Sound Source Localization and Spatial Information Retrieval" at ICASSP 2016, Shanghai, China.

N. Bertin, A. Deleforge, and R. Gribonval co-organized a special session entitled "From Source Position to Room Properties : Learning Methods for Audio Scene Geometry Estimation", at the 2017 LVA/ICA Conference, Grenoble, February 2017

R. Gribonval was the organizer of a special session on "Multiscale Factorizations and Learning", at the 2016 IEEE Information Theory Workshop, Cambridge, UK, September 2016

R. Gribonval was guest editor of a special issue of IEEE Journal on Selected Topics in Signal Processing, on Structured Matrices in Signal and Data Processing.

F. Bimbot was an invited speaker at the Dagstuhl Seminar 16092 on Computational Music Structure Analysis (February 2016, Dagstuhl, Germany)

R. Gribonval was an invited speaker at the London Workshop on Sparse Signal Processing (Imperial College, September 2016), the DALI (Data Learning and Inference) Workshop on Learning Theory (Sestri Levante, March 2016), the Workshop on Computational and Statistical Trade-offs in Learning (IHES, Bures-sur-Yvette, March 2016), and the Workshop on Low Complexity Models in Signal Processing (Hausdorff Institute, Bonn, February 2016).

R. Gribonval is a member of the jury of the GDR ISIS / GRETSI / Club EAA thesis prize in signal and image processing since 2014.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Bachelor : N. Bertin, "Discovery of selected topics in audio signal processing research", 6 hours, L3, École Supérieure de Réalisation Audiovisuelle (ESRA), France.

Master : N. Bertin, "Audio rendering, coding and source separation", 6 hours, M2, Université Rennes 1, France.

Master : N. Bertin, "Audio indexing and classification", 6 hours, M2, Université Rennes 1, France.

Master : N. Bertin, "Fundamentals of Signal Processing", 24 hours, M1, Ecole Normale Supérieure de Bretagne, Rennes, France.

Master : N. Bertin, "Sparse representations and compressive sensing", 15 hours, M2, Ecole Nationale de la Statistique et de l'Analyse de l'Information, Rennes, France.

Master : N. Bertin, "Sparsity in Signal and Image Processing", 10 hours, M1, Ecole Normale Supérieure de Bretagne, Rennes, France.

Master : N. Bertin, "Sparsity in Signal and Image Processing", 12 hours, M2, Institut National des Sciences Appliquées (INSA) de Rennes, France.

Master : R. Gribonval, "Signal and image representations", 8 hours, M2, Université Rennes 1, France.

Master: R. Gribonval, coordination of the ARD module "Acquisition et Représensation de Données", 20hours, M2, Université Rennes 1, France.

Master : R. Gribonval, "Sparsity in Signal and Image Processing", 6 hours, M2, Institut National des Sciences Appliquées (INSA) de Rennes, France.

Master : R. Gribonval, coordination of the module "Sparsity in Signal and Image Processing", 48 hours, M2, Institut National des Sciences Appliquées (INSA) de Rennes, France.

Bachelor : A. Deleforge, "Discovery of selected topics in audio signal processing research", 6 hours, L3, École Supérieure de Réalisation Audiovisuelle (ESRA), France.

Master : A. Deleforge, "Sparsity in Signal and Image Processing", 4 hours, M2, Institut National des Sciences Appliquées (INSA) de Rennes, France.

10.3. Popularization

10.3.1. Journée Science et Musique

Participants: Antoine Deleforge, Rémi Gribonval, Frédéric Bimbot, Romain Lebarbenchon, Adrien Leman, Nicolas Bellot, Clément Gaultier, Nancy Bertin, Nicolas Keriven, Ewen Camberlein, Luc Le Magoarou, Armelle Mozziconacci, Stéphanie Lemaile, Corentin Louboutin, Nicolas Tremblay, Corentin Guichaoua, Srdan Kitic.

with contributions and support from: Valérie Gouranton, Laurent Perraudeau, Nathalie Denis, Evelyne Orain, Agnès Cottais, and many more.

PANAMA coordinated the organization of a public event called "JournÃ©e Science et Musique" ("Music and Science Day"). This yearly event organized by the METISS/ PANAMA Team since 2011 aims at sharing with the wide audience the latest innovations and research projects in music. The motivation for hosting this event is to explain and promote the technology behind audio-processing that people face in their daily lives. The event is free to everyone and people have the possibility to attend talks by selected speakers or meet numerous experts that demonstrate current projects in which people can interactively participate. Edition 2016 hosted more than 500 visitors and was the official opening event of the "Festival des Sciences" week in Rennes.

PARIETAL Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- **Bertrand Thirion**: Organization for Human Brain Mapping.

9.1.1.2. Reviewer

- **Philippe Ciuciu**: IEEE ISBI (15 papers), IEEE ICASSP (10 papers), IEEE ICIP (5 papers), NIPS (4 papers), EUSIPCO (5 papers).
- **Bertrand Thirion**: IPMI, MICCAI, NIPS, ISBI, PRNI, AISTATS
- **Gaël Varoquaux**: IEEE ICASSP, MICCAI, NIPS, IPMI, ICML

9.1.2. Journal

9.1.2.1. Member of the Editorial Boards

- **Bertrand Thirion**: Medical Image Analysis, Frontiers in brain imaging
- **Gaël Varoquaux**: Frontiers in NeuroInformatics, Frontiers in brain imaging methods, NeuroImage

9.1.2.2. Reviewer - Reviewing Activities

- **Philippe Ciuciu**: Reviewer for Neuroimage, IEEE Signal Processing Letters, Signal Processing, IEEE Trans. Medical Imaging, Plos One, Plos Comput. Biology, Frontiers in Neuroscience.
- **Bertrand Thirion**: Human Brain Mapping, IEEE TMI, MedIA, NeuroImage, PNAS
- **Gaël Varoquaux**: NeuroImage, JSTSP, PNAS, HBM, PLOS Comp Bio, Gigascience
- **Olivier Grisel**: Journal of Machine Learning Research (software track).

9.1.3. Invited Talks

9.1.3.1. Bertrand Thirion

- February: invited talk at the *Imagerie du Vivant* National congress, entitled *Large-scale analyses in functional brain Imaging*.
- February: presentation at the Pasadena working group of the Digicosme Labex.
- April: invited presentation at European Neuroscience institute, Paris, entitled *Seeing it all: Convolutional network layers map the function of the human visual system*.
- April: presentation Functional connectomics, at DTU Copenhagen, entitled *from large-scale estimators to empirical validation*.
- May: Talk at Atlas workshop, Grenoble, entitled *Learning representations from functional brain imaging*.
- June: organizer of a table ronde at the *Futur en Seine* event entitled *Computational methods for neurosciences & medical imaging*.
- October: talk at MPI Psychiatry, Munich, entitled *Machine learning for neuroimaging: current challenges and solutions*.
- June: Talk at Neurostic workshop, Grenoble, entitled *Learning representations from functional brain imaging*.
- October: Invited talk by the ITMO Neuroscience, Bordeaux, entitled *Working with large data samples: the case of human brain imaging*.

9.1.3.2. Philippe Ciuciu

- 12/16: IEEE Lecture at University of British Columbia (Vancouver, Canada): *Sparkling: Novel non-Cartesian sampling schemes for accelerated 2D anatomical imaging at 7 Tesla.*
- 12/16: Pacific Parkinson's research center (Vancouver, Canada): *Impact of perceptual learning on resting-state brain dynamics in fMRI: A supervised classification study.*
- 09/16: GdR d'Analyse Multifractale (Avignon, France): *Convergence of neural activity to multifractal attractors in MEG predicts learning.*
- 08/16: invitation to the Special session entitled "Unraveling brain networks from functional neuroimaging data" at EUSIPCO'16 (Budapest, Hungary): *Impact of perceptual learning on resting-state fMRI connectivity: A supervised classification study.*
- 06/16: Journées scientifiques d'Inria (Rennes, France): *Compressive Sampling in MRI.*
- 06/16: Inria Sophia-Antipolis, équipe Athena. *New physically plausible compressive sampling schemes for MRI: First results at 7 Tesla*
- 05/16: University of Geneva (Campus BioTech, Geneva, Switzlerand): *Convergence to asymptotic Multifractal dynamics in the brain predicts learning.*
- 02/16: Grenoble Institut of Neurosciences (Grenoble, France): *Physically plausible trajectories for Compressed Sensing in MRI.*
- 02/16: Workshop on 7 Tesla scanner at NeuroSpin (Gif-sur-Yvette, France) *Compressed sensing for high resolution MRI at 7 Tesla.*
- 01/16: Cosmostat lab, IRFU/CEA. *On the generation of compressed sampling schemes in MRI.*

9.1.3.3. Loïc Estève

- EuroScipy 2016: scikit-learn tutorial
- Budapest BI 2016 : scikit-learn tutorial and talk "Recent developments in scikit-learn and joblib"

9.1.3.4. Olivier Grisel

- PyData Berlin and PyData Paris 2016: *"Predictive modeling with Python, trends and tools*
- invited talk on *Some recent developments in Deep Learning researc* at Strata London 2016.

9.1.3.5. Gaël Varoquaux

- Paris Open Source summit 2016: scikit-learn, the vision and the community
- EuroScipy 2016 (Erlangen): keynote: "On writing code the science"
- Open Data Science Conference 2017 (London): keynote: "The code of data science"
- EuroPython 2016 (Bilbao): keynote "Scientists meet web dev: how Python became the language of data"
- PiterPy 2016 (St Petersbourg): keynote: "Python for data"
- Facebook AI Research: some statistical learning problems in brain imaging
- GDR ISIS Imagerie medicale: prediction de pathologies psychiatriques à partir d'imagerie fonctionnelle de repos
- Brain network analysis workshop, MICCAI 2016 (Athenes): keynote
- Journée Graphes et neuroscience à Marseilles: Machine learning on brain graphes
- Séminaire débat sur le Big data en Neuroscience, Lyon
- Seminar Max Planck Institute Leipzig: data mining for neuroimaging
- Seminar Telecom ParisTech: randomized methods for high-dimensional statistical learning
- Séminaire d'équipe Asclepios: Quelques problèmes d'apprentissage sur des images cérébrales

9.1.4. Leadership within the Scientific Community

- Gaël Varoquaux: Chair of the steering committee, IEEE PRNI
- Bertrand Thirion: member of the *Committee on Best Practices in Data Analysis and Sharing* for the OHBM community.

9.1.5. Scientific Expertise

- Philippe Ciuciu: ANR JC, NSERC au Canada, FWO
- Bertrand Thirion: ANR, NWO, NSF
- Gaël Varoquaux: Membre de la Commission Expertises Scientifiques, (CE23) ANR
- Olivier Grisel did 3 days of consulting with the CTO of the Therapixel startup to share expertise on the use of Deep Learning for the predictive analysis of 3D imaging data.

9.1.6. Research Administration

9.1.6.1. Philippe Ciuciu

- 03/16: Involvement in the CEA visiting committee on High Performance Computing.
- 05/16: Member of a Comité de sélection for hiring an Assistant Professor in Paris-Saclay University (Section 61 of CNU).
- 06/16: Member of the Inria scientific commission in charge of ranking PhD and post-doctoral applicants as well as delegations of Assistant Professors to Inria.

9.1.6.2. Bertrand Thirion

- Leader of the Datasense axis of the Digicosme Labex
- Member of the STIC department committee Paris-Saclay University and of the bureau thereof.
- DSA Saclay.

9.1.6.3. Gaël Varoquaux

- Member of "Comité de suivi doctoral", Inria Saclay
- Member of "Comité cluster", Inria Saclay
- Member of "Commission de Développement Technologique", Inria Saclay
- Member of the directorate of the Paris-Saclay CDS (Center for Data Science)

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

9.2.1.1. Bertrand Thirion

Master : Brain Computer interface and Functional Neuroimaging, 12 heures équivalent TD, niveau M2, ENS Cachan

9.2.1.2. Philippe Ciuciu

Master 2 : "Functional MRI: From data acquisition to analysis", 3h, Univ. Paris V René Descartes & Télécom-Paristech, Master of Biomedical Engineering

Master 2 : "FMRI data analysis", 3h, Univ. Paris-Saclay, Master of medical Physics

9.2.1.3. Gaël Varoquaux

Master 2 : "Brain functional connectivity analysis", 7h, Univ. Paris V René Descartes & Télécom-Paristech, Master of Biomedical Engineering

Master 2 : "Machine learning with scikit-learn", 2h, ENSAE

Master 2 : "Advanced Machine learning with scikit-learn", 3h, Centrale Paris, MSc in data sciences & business analytics

Ecole d'été multidisciplinaire analyse de données, Rennes, 1h

OHBM 2016: course on machine learning for cognitive neuroimaging 30mn

PRNI 2016: nilearn for machine learning on brain images, 8h

Max Planck Institute Leipzig: nilearn for machine learning on brain images, 8h

9.2.2. Supervision

9.2.2.1. Bertrand Thirion

PhD in progress: Elvis Dohmatob,

PhD in progress: Arthur Mensch,

PhD in progress: Andrés Hoyos Idrobo

9.2.2.2. Philippe Ciuciu

PhD defended: Aina Frau-Pascual, "Statistical models for the analysis of BOLD and ASL Magnetic Resonance modalities to study brain function and disease", University of Grenoble-Alpes (doctoral school: Mathématiques, Sciences et Technologies de l'Information, Informatique), defense: 19/12/2016, Advisors: Florence Forbes (Dir), Philippe Ciuciu (Co-Dir)

PhD in progress: Carole Lazarus, "Physically plausible compressed sensing for high resolution MRI at 7 Tesla in Humans" starting date: October 2015 (Univ. Paris-Saclay, doctoral school: EOBE). Advisors: Philippe Ciuciu (Dir), Alexandre Vignaud (Co-Dir)

PhD in progress: Loubna El Gueddari, "Parallel proximal algorithms for compressed sensing MRI reconstruction. Applications in ultra-high magnetic field imaging", starting date: October 2016 (Univ. Paris-Saclay, doctoral school: EOBE). Advisors: Philippe Ciuciu (Dir) and Jean-Christophe Pesquet (Co-Dir, Prof. at Centrale-Supélec)

9.2.2.3. Gael Varoquaux

PhD defended: Alexandre Abraham

PhD in progress: Elvis Dohmatob,

PhD in progress: Arthur Mensch,

PhD in progress: Andrés Hoyos Idrobo

9.2.3. Juries

9.2.3.1. Bertrand Thirion

- 04/29: Reviewer of Niklas Kasenburg PhD Thesis , Univ. Copenhagen, Denmark.
- 01/12: Examiner of Simona Schiavi PhD Thesis, Univ. Paris Saclay.
- 14/12: Reviewer of Olivier Marre habilitation, Paris.
- 15/12: Reviewer of Maite Termenon PhD thesis, Univ. Grenoble.

9.2.3.2. Philippe Ciuciu

- 04/16: Reviewer of Aiping Liu's PhD thesis (ECCS Dpt, Univ. British Columbia, Vancouvern Canada) entitled *"Brain Connectivity Network Modeling using fMRI signals"*
- 05/16: Reviewer of Andrea Laruelo-Fernandez's PhD thesis (INP Toulouse-IRIT- ENSEEIHT) entitled *"Integration of magnetic resonance spectroscopic imaging into the radiotherapy treatment planning"*
- 09/16: Examinor of Mohanad Albughdadi's PhD thesis (INP Toulouse-IRIT- ENSEEIHT) entitled *" Bayesian joint detection-estimation in functional MRI with automatic parcellation and functional constraints"*
- 10/16: Reviewer of Sébastien Combrexelle's PhD thesis (INP Toulouse-IRIT- ENSEEIHT) entitled *"Multifractal analysis for multivariate data with application to remote sensing"*.
- 10/16: Co-director of Aina Frau-Pascual's PhD thesis (see above).

9.2.3.3. Gaël Varoquaux

- 06/16: Examiner of Alberto García Durán, PhD Thesis, UTC Compiegne.

9.3. Popularization

9.3.1. Gaël Varoquaux

- Unithé ou Café, Inria Saclay Ile de France
- Atelier IHEST Les mots du numérique - 17 novembre

9.3.2. Loïc Estève

Software Carpentry workshops:

- git course at UNIC in Gif-sur-Yvette March 29-30
- helper at "Scientific Programming with Python and Software Engineering Best Practices" workshop, April 28-29 at Télécom Paris
- git course at Proto 204, May 24-25

Mentor at Startup Weekend Artificial Intelligence, November 4-6.

9.3.3. Olivier Grisel

"La tête au carré" radio show on France Inter in January 2016 to share his expertise and opinion on the use and impacts of Big Data and predictive algorithms [0].

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[0]https://www.franceinter.fr/emissions/la-tete-au-carre/la-tete-au-carre-05-janvier-2016

<p align="center" style="color:red">PARKAS Project-Team</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Albert Cohen is the General Chair of PLDI 2017

9.1.1.2. Member of the Conference Program Committees

- Timothy Bourke was a member of the PC of EMSOFT 2016.
- Francesco Zappa Nardelli was a member of the PC of POPL 2017.
- Francesco Zappa Nardelli will be a member of the PC of ECOOP 2017.
- Albert Cohen was a PC member of ASPLOS, PACT, PPoPP, CGO, PLDI.

9.1.1.3. Reviewer

- Timothy Bourke was a reviewer for FM 2016 (Int. Symposium on Formal Methods).

9.1.2. Journal

9.1.2.1. Member of the Editorial Boards

- Albert Cohen is an Associate Editor of ACM TACO.

9.1.2.2. Reviewer - Reviewing Activities

- Timothy Bourke was a reviewer for IEEE Embedded Systems Letters, ACM Transactions on Embedded Computing Systems, and IEEE Transactions on Software Engineering.

9.1.3. Invited Talks

- April, T. Bourke presented "Towards the verified compilation of Lustre" in the Gallium seminar series in Paris, France.
- December, T. Bourke presented "Verifying a Lustre Compiler (Part 1)" at the SYNCHRON workshop in Bamberg, Germany.
- November, F. Zappa Nardelli presented "Shared Memory Concurrency and Compiler Optimisations" at IMDEA, Madrid, Spain.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: F. Zappa Nardelli: "A Programmer's introduction to Computer Architectures and Operating Systems" (M1), 45h, École Polytechnique, France

Master: A. Cohen & F. Zappa Nardelli, "Semantics, languages and algorithms for multicore programming", Lecture, 9h+12h, M2, MPRI: Ecole normale supéérieure and Université Paris Diderot, France

Licence: F. Zappa Nardelli: "Conception et analyse d'algorithmes" (L3), PCs, 32h, E´cole Polytechnique, France

Master : M. Pouzet & T. Bourke: "Synchronous Systems" (M2), Lectures and TDs, MPRI, France

Master: T. Bourke participated in reviewing the M1 internships of students at the ENS, France.

Licence : M. Pouzet & T. Bourke: "Operating Systems" (L3), Lectures and TDs, ENS, France.

Licence : T. Bourke, "Digital Systems" (L3), Lectures and TDs, ENS, France

Marc Pouzet is Director of Studies for the CS department, at ENS.

9.2.2. Supervision

PhD in progress : Ulyssse Beaugnon, 2nd year, supervised by A. Cohen and M. Pouzet.

PhD in progress : Chandan Reddy, 2nd year, supervised by A. Cohen.

PhD in progress : Jie Zhao, 2nd year, supervised by A. Cohen.

PhD in progress : Guillaume Baudart, 3rd year, supervised by T. Bourke and M. Pouzet. This thesis will be defended in March.

PhD in progress : Lélio Brun, 1st year, supervised by T. Bourke and M. Pouzet.

PhD in progress : Robin Morisset, 3rd year, supervised by F. Zappa Nardelli. This thesis will be defended in April 2017.

9.2.3. Juries

Francesco Zappa Nardelli was an external reviewer of the PhD thesis of Carl Leonardsson, Uppsala University, Sweden.

Francesco Zappa Nardelli was a jury member of the PhD thesis of Nhat Minh Lê, ENS, Paris, France.

Timothy Bourke was an external reviewer of the masters thesis of Shruti Saini, The University of the South Pacific.

<h1 style="text-align:center;color:red">PARSIFAL Project-Team</h1>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

D. Miller was on the Steering Committee for the FSCD series of International Conference on Formal Structures for Computation and Deduction.

D. Miller was a member of the jury for selecting the 2016 Ackermann Award (the EACSL award for outstanding doctoral dissertation in the field of Logic in Computer Science).

D. Miller was an ex officio member of the Executive Committee of the ACM Special Interest Group on Logic and Compuation (SIGLOG), from April 2014 to June 2016. He was also a member of the SIGLOG advisory board, starting November 2015.

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

D. Miller was on the Program Committee of the following meetings.

FSCD'16: First International Conference on Formal Structures for Computation and Deduction, Porto, Portugal, 22-26 June.

IJCAR 2016: International Joint Conference on Automated Reasoning, Coimbra, Portugal, 27 June - 2 July.

CPP 2016, Fifth International Conference on Certified Programs and Proofs, 18-19 January, Saint Petersburg, Florida.

B. Accattoli was one of the two Program Committee chairs of the 5th International Workshop on Confluence (IWC 2016).

N. Zeilberger served on the program committee for workshops Computational Logic and Applications (CLA 2016) and Off the Beaten Track (OBT 2016).

N. Zeilberger served on external review committee for POPL 2017

L. Straßburger was on the Program Committee for LICS 2016.

9.1.2.2. Reviewer

D. Miller was a reviewer for CONCUR 2016: the International Conference on Concurrency Theory.

B. Accattoli was a reviewer for the international conferences ICTAC 2016, FSCD 2016, LICS 2016 (twice), FOSSACS 2017.

S. Graham-Lengrand was a reviewer for the international conferences FSCD 2016 (twice), LICS 2016 (three times), Concur 2016, VSTTE 2017, HATT 2017, FSTTCS 2017.

L. Straßburger was a reviewer for the international conferences LICS 2016 (8 times), FLOPS 2016.

M. Volpe was a reviewer for the international conferences IJCAR 2016 and CSL 2016.

H. Steele was a reviewer for the internal conference LICS 2016.

9.1.3. Journal

9.1.3.1. Member of the editorial boards

D. Miller is on the editorial board of the following journals: *ACM Transactions on Computational Logic*, *Journal of Automated Reasoning* (Springer), *Theory and Practice of Logic Programming* (Cambridge University Press), and *Journal of Applied Logic* (Elsevier).

9.1.3.2. Reviewer - Reviewing Activities

S. Graham-Lengrand has been a reviewer for the journals *Fundamenta Informaticae*, *Transactions on Computational Logic*, *Journal of Logic and Computation*, *Logical Methods in Computer Science*, *Journal of Automated Reasoning*.

Danko Ilik was a reviewer for Mathematical Reviews and Zentralblatt MATH.

F. Lamarche was a reviewer for *Mathematical Structures in Computer Science*.

Lutz Straßburger was a reviewer for the journals *Theoretical Computer Science* and *Logical Methods in Computer Science*.

Marco Volpe was a reviewer for the journal *Annals of Mathematics and Artificial Intelligence*.

Beniamino Accattoli was a reviewer for the journals *Theoretical Computer Science* and *Logical Methods in Computer Science*.

9.1.4. Invited Talks

D. Miller was an invited speaker at the following conferences and workshops.

Workshop on linear logic, mathematics and computer science as part of "LL2016-Linear Logic: interaction, proofs and computation", 7-10 November 2016, Lyon. France.

Linearity 2016. Porto, 25 June 2016.

CIPPMI (Current issues in the philosophy of practice of mathematics and informatics) Workshop on Proofs, justifications and certificates. 3-4 June 2016, Toulouse, France.

TYPES 2016: 22nd International Conference on Types for Proofs and Programs. Novi Sad, Serbia, 23-26 May 2016.

D. Miller was an invited speaker at the research seminar titled "Interactions between logic, computer science and linguistics: history and philosophy", Université de Lille 3, 15 June 2016.

D. Miller was an invited speaker at the ACADIA research centre, Ca' Foscari University, Venice, 27 April 2016.

B. Accattoli was invited speaker at WPTE 2016: 3rd International Workshop on Rewriting Techniques for Program Transformations and Evaluation (Porto, 23 June 2016).

S. Graham-Lengrand gave an invited talk at CLAM 2016: 5th Latin American Congress of Mathematicians, thematic session on Logic and Computability (Barranquilla, Colombia, 15th July 2016).

N. Zeilberger was an invited lecturer at OPLSS 2016: Oregon Programming Languages Summer School on Types, Logic, Semantics, and Verification.

9.1.5. Leadership within the Scientific Community

D. Miller was a member of the ACM SIGLOG Advisory Board, the LICS Organizing Board, the CPP Steering Committee, and the ACM SIGLOG Executive Committee Nominating Committee.

S. Graham-Lengrand is the head of the National Workgroup on "Logic, Algebra, and Computation", within the Informatique Mathématique section of CNRS.

9.1.6. Research Administration

L. Straßburger serves on the "commission développement technologique (CDT)" for Inria Saclay–Île-de-France since June 2012

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: D. Miller, "*MPRI 2-1: Logique linéaire et paradigmes logiques du calcul*", 12 hours, M2, Master Parisien de Recherche en Informatique, France.

Licence: S. Graham-Lengrand, "*INF412: Fondements de l'Informatique: Logique, Modèles, Calcul*", 32 hours eq. TD, L3, École Polytechnique, France.

Master: S. Graham-Lengrand, "*INF551: Computational Logic*", 45 hours eq. TD, M1, École Polytechnique, France.

Master: S. Graham-Lengrand, "*MPRI 2-1: Logique linéaire et paradigmes logiques du calcul*", 6 hours, M2, Master Parisien de Recherche en Informatique, France.

Undergraduate: K. Chaudhuri, R. Blanco, M. Volpe, G. Reis, T. Libal all taught or tutored exercises for first and second year undergrad courses, mostly at École Polytechnique.

9.2.2. Supervision

PhD in progress: Sonia Marin, 1 Nov 2014, supervised by L. Straßburger and D. Miller

PhD in progress: Roberto Blanco, Ulysse Gérard, and Quentin Heath, supervised by D. Miller

PhD in progress: François Thiré (since 1st October 2016), supervised by S. Graham-Lengrand (joint with G. Dowek)

9.2.3. Juries

Miller was a reporter for the PhD juries of Raphaël Cauderlier (CNAM, 10 October 2016) and Gabriel Scherer (Université Paris-Diderot, 30 March 2016).

Graham-Lengrand was a reporter for the PhD juries of Pierre Halmagrand (CNAM, 10 December 2016).

PERCEPTION Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Journal

9.1.1.1. Member of the Editorial Boards

Radu Horaud is a member of the following editorial boards:

- advisory board member of the *International Journal of Robotics Research, Sage*,
- associate editor of the *International Journal of Computer Vision, Kluwer*, and
- area editor of *Computer Vision and Image Understanding, Elsevier*.

9.1.2. Invited Talks

- Xavier Alameda-Pineda gave invited talks Polytechnic University of Catalunya (May, Barcelona), Telecom ParisTech (May), Columbia University (June, New York, USA), and Carnegie Mellon University (June, Pittsburgh, USA).
- Radu Horaud gave invited talks at the Working Group on Model Based Clustering (July, Paris), at Google Research (July, Mountain View, USA), SRI International (July, Menlo Park, USA), and Amazon (July, Seattle, USA).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Tutorial: *Multimodal Human Behaviour Analysis in the Wild: Recent Advances and Open Problems* at the IEEE ICPR'16 Conference, December 2016, 4 hours. Teachers: Xavier Alameda-Pineda, Nicu Sebe and Elisa Ricci (University of Trento).

9.2.2. Supervision

PhD in progress: Israel Dejene Gebru, October 2013, Radu Horaud and Xavier Alameda-Pineda.

PhD in progress: Dionyssos Kounades-Bastian, October 2013, Radu Horaud, Laurent Girin, and Xavier Alameda-Pineda.

PhD in progress: Vincent Drouard, October 2014, Radu Horaud and Sileye Ba.

PhD in progress: Benoit Massé, October 2014, Radu Horaud and Sileye Ba.

PhD in progress: Stéphane Lathuilière, October 2014, Radu Horaud.

PhD in progress: Yutong Ban, October 2015, Radu Horaud and Laurent Girin

<p align="center" style="color:red">PERVASIVE INTERACTION Team</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. General Chair, Scientific Chair

- Sabine Coquillart has served as general co-chair for IEEE VR 2016, Greenville South Carolina.

9.1.2. Member of the Conference Program Committees

- Patrick Reignier served as a member program committee for the National Conference on Artificial Intelligence
- James L. Crowley served as a member program committee for Ubicomp 2016
- Dominique Vaufreydaz served on the program committee of the 11th IEEE International Workshop on Multimedia Technologies for E-Learning (MTEL2016).
- Dominique Vaufreydaz served on the program committee for the 8th international on Knowledge and Systems Engineering (KSE 2016)
- Thierry Fraichasd served as a member of the programme committee of the 1st Int. Workshop on Robot Learning and Planning (RLP) in conjunction with the "Robotics: Science and Systems" conference.

9.1.3. Reviewer for conferences

- Patrick Reignier served as a review for the International Journal of Datascience and Analytics
- James L. Crowley served as review for IEEE CVPR 2016
- James L. Crowley served as review for ICPR 2016
- James L. Crowley served as review for CNIA 2016
- James L. Crowley served as review for ECCV 2016
- James L. Crowley served as review for RFIA 2016
- Dominique Vaufreydaz served as review for Robotics and Autonomous Systems Journal
- Dominique Vaufreydaz served as review for UbiComp 2016
- Dominique Vaufreydaz served as review for ICSR 2016
- Thierry Fraichard served as a reviewer for the following conferences: RLP, IEEE Int. Conf. on Robotics and Automation (ICRA), and IEEE Int. Conf. on Advanced Intelligent Mechatronics (AIM).
- Thierry Fraichard reviewed articles for the following journals: Int. Journal of Aerospace Engineering, IEEE Trans. Intelligent Vehicles, and IEEE Trans. on Industrial Electronics.

9.1.4. Journals

- Thierry Fraichard reviewed articles for the Int. Journal of Aerospace Engineering, IEEE Trans. Intelligent Vehicles, and IEEE Trans. on Industrial Electronics.

9.1.4.1. Member of the Editorial Boards

- Sabine Coquillart is a member of the Editorial Board of the Advances in Human-Computer Interaction
- Sabine Coquillart is a member of the Scientific Committee of the Journal of Virtual Reality and Broadcasting.

- Sabine Coquillart is a member of the Advisory/Editorial Board for the International Journal of Computer Graphics SERSC.
- Sabine Coquillart is a Member of the Editorial Board of Peer Computer Science open access Journal in Computer Science.
- Sabine Coquillart is a member of the Editorial board (computer Sciences) of the Scientific World Journal.
- Sabine Coquillart is Review Editor for the Frontiers in Virtual Environments journal.
- Patrick Reignier is a member of the "comite de redaction" of the Modeling and Using Context journal (ISTE OpenScience)
- Thierry Fraichard is serving as an Associate Editor for IEEE Robotics and Automation Letters. He also served as an Associate Editor for IEEE/RSJ Int. Conf. on Robots and Systems (IROS).

9.1.5. Leadership within the scientific community

- Sabine Coquillart is elected member of the EUROGRAPHICS Executive Committee.
- Sabine Coquillart is member of the EUROGRAPHICS Working Group and Workshop board.
- Patrick Reignier is an elected member of the Association Française pour l'Intelligence Artificielle Executive Committee

9.1.6. Scientific expertise

- James L. Crowley served on the selection committee for Institut Universitaire de France (IUF)
- James L. Crowley served on the selection panel for the EC H2020 ICT Robotics program
- Dominique Vaufreydaz served as evaluator pour l'ANR
- Patrick Reignier served on the selection committee for an associate professor position at the University Grenoble Alps
- Thierry Fraichard served as an expert reviewer for the European Commission (H2020 FET and ICT calls).

9.1.7. Research administration

- James L. Crowley has been elected member of the Conseil d'Administration of the COMUE University Grenoble Alpes
- James L. Crowley has been elected member of the Conseil du Laboratoire of the Laboratoire Informatique de Grenoble.
- James L. Crowley serves on the Administrative Office (Bureau) for the Laboratoire Informatique de Grenoble.
- James L. Crowley Serves on the Commission d'Habilitation de Diriger la Recherche (HDR) for the Pole Informatics and Mathematics of the University Grenoble Alpes.
- James L. Crowley Serves on the Comittee Scientific (CoS) d'Inria Grenoble Rhone-Alpes Research Center
- James L. Crowley Serves on Steering Committee of the Inovallee TARMAC technology Incubator.
- James L. Crowley is director of the Amiqual4Home Equipment of Excellence (EquipEx).
- Patrick Reignier is head of the engineering support group of the Laboratoire d'Informatique de Grenoble
- Patrick Reignier serves on the Administrative Office (Bureau) for the Laboratoire Informatique de Grenoble.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

9.2.1.1. James Crowley

James Crowley is Director of the Master of Science in Informatics at Grenoble (MoSIG).

Master : Computer Vision, Course 27h EqTD, M2 year, Master of Science in Informatics at Grenoble

Master 1: Intelligent Systems, Cours 54h EqTD, ENSIMAG and UFRIM2AG

ENSIMAG 3 : Pattern Recognition and Machine Learning, Cours 27h EqTD, ENSIMAG

9.2.1.2. Sabine Coquillart

- Master : Sabine Coquillart Taught a course on Virtual Reality and 3D User Interfaces for the GVR Master 2R

- Master : Sabine Coquillart teaches a one day course on 3D User Interfaces and Augmented Reality for the Numerical Modeling and Virtual Reality Master 2 in Laval.

9.2.1.3. Thierry Fraichard

Master MOSIG 1st year: Introduction to Perception and Robotics, 22.5 hEqTD.

Master MOSIG 2nd year: Autonomous Robotics, 22.5 heqTD

9.2.1.4. Dominique Vaufreydaz

Co-responsibility of the Graphic, Vision and Robotics track of the MOSIG Master programme.

Licence: Competences Numerique, 80h eqTD,L1, Universite Grenoble Alpes, France.

Licence: Informatique appliquee a l'economie et a la gestion, enseignement a distance, Licence, Universite Grenoble Alpes, France.

Licence: Pratique avancee du Tableur, 72 h eqTD, L3, Universite Grenoble Alpes, France.

Licence Professionnelle: Enquêtes et traitement d'enquêtes avec le logiciel Sphinx, 12h eqTD, Licence pro Metiers de l'Emploi et de la Formation, Universite Grenoble Alpes, France.

Licence Professionnelle: Administration en environnement heterogene, 20h eqTD, Licence pro Administration et Securite des Systemes et des Reseaux, Universite Grenoble Alpes, France.

IUT annee speciale: Programmation C++, 18h eqTD, Annee Speciale IUT Informatique, Universite Grenoble Alpes, France.

Master: Pratique avancee du Tableur, 22 h eqTD, M1 economie internationale et strategies d'acteurs, Universite Grenoble Alpes, France.

Master: Mise a niveau Informatique pour l'economie, 22h eqTD, M1 Economie des Organisations, Universite Grenoble Alpes, France

Master: Traitement des donnees du Web, 15h eqTD, M2 Mathematiques et Informatique Appliquees aux Sciences Humaines et Sociales, Universite Grenoble Alpes, France

Master: Developpement Web Mobile, 15h eqTD, M2 Mathematiques et Informatique Appliquees aux Sciences Humaines et Sociales, Universite Grenoble Alpes, France

Master: co-responsable de l'option Graphic Vision Robotic (GVR) du Master 2 MOSIG.

9.2.1.5. Thierry Fraichard

- Master: Thierry Fraichard, Advanced Robotics, 54h eqTD, M2 MOSIG, Univ. of Grenoble, France.

9.2.1.6. Patrick Reignier

- Patrick Reignier has been elected member of the Conseil des Etudes et de la Vie Universitaire of Grenoble INP

- Patrick Reignier has been nominated as a member of the Conseil de la Formation Continue de Grenoble INP

- Patrick Reignier Supervises the industrial part of the "formation en apprentissage" of the ENSIMAG engineering school.

- Master: Patrick Reignier, Projet Genie Logiciel, 55h eqTD, M1, ENSIMAG/Grenoble INP, France.

- Master : Patrick Reignier, Developpement d'applications communicantes, 18h eqTD, M2, ENSIMAG/Grenoble - INP, France

- Master : Patrick Reignier, Introduction aux applications reparties, 18h eqTD, M2, ENSIMAG/Grenoble - INP, France

- Master : Patrick Reignier, Applications Web et Mobiles , 27h eqTD, M1, ENSIMAG/Grenoble - INP, France

- Master : Patrick Reignier, Projet Systeme, 12h eq TD, M1, ENSIMAG/Grenoble - INP, France

- Master : Patrick Reignier, Algorithmique, 50h eq TD, M1, ENSIMAG/Grenoble INP, France

- Licence: Patrick Reignier, Projet C, 20h eqTD, L3, ENSIMAG/Grenoble INP, France.

9.2.2. Juries

Thierry Fraichard served as a rapporteur for a doctoral jury at Universitat Politecnica de Valencia

Thierry Fraichard served as a rapporteur for a doctoral jury at INP Toulouse.

James Crowley served as a reporter for the doctoral jury of Ninghang Hu at the University of Amsterdam

PESTO Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

The CNIL (Commission Nationale Informatique et Liberté) has official recommendations in terms of electronic voting.[0] These recommendations influence the design of e-voting systems that are deployed in France. However, some of the recommendations seem a bit outdated and dedicated to particular classes of systems. Even more importantly, the CNIL recommendations focus on vote privacy but do not say much about verifiability. Véronique Cortier, David Galindo, and Stéphane Glondu formulated new recommendations, submitted to the CNIL. They met some CNIL members to discuss how to integrate some of the propositions to the new version of the CNIL recommendations that should appear in 2017.

Moreover, Véronique Cortier was auditioned by the AFE (Assemblée des Francais de l'étranger) on the security of electronic voting. She has also presented the Belenios protocol to the MENESR (Ministère de l'Éducation National, de l'Enseignement Supérieur et de la Recherche) and to the Open Government Summit at the Sénat. Steve Kremer gave a talk on e-voting at the "Colloque Sécurité Informatique : mythes et réalité" organised by CNRS.

10.1.1. Scientific Events Selection

10.1.1.1. General Chair, Scientific Chair

- Véronique Cortier: HotSpot 2016, 4th Workshop on Hot Issues in Security Principles and Trust. Affiliated with ETAPS 2016.
- Steve Kremer: GRSRD 2016, Grande Region Security and Reliability Day, Nancy, March 2016 (co-chair with J. Pang, U. Luxembourg).

10.1.1.2. Program Committee Chair

- Véronique Cortier: HotSpot 2016, 4th Workshop on Hot Issues in Security Principles and Trust. Affiliated with ETAPS 2016.
- Michaël Rusinowitch: ACM International Workshop on Security And Privacy Analytics, New Orleans, LA, USA, March 11, 2016. (co-chair with Rakesh Verma, U. Houston).

10.1.1.3. Program Committee Member

- Véronique Cortier: LICS 2017, CCS 2016, Concur 2016, E-VoteID 2016, MFCS 2016, EuroS&P 2016.
- Steve Kremer : Voting 2017, Euro S&P 2017, FSTTCS 2016, ESORICS 2016, CSF 2016, Voting 2016, AsiaCCS 2016, ACISP 2016.
- Christophe Ringeissen: FroCoS 2017, UNIF 2017, WRLA 2016, UNIF 2016, IJCAR 2016.
- Michaël Rusinowitch: POST 2016, CRISIS 2016, STM 2016.
- Vincent Cheval: TMPA 2017

10.1.2. Journal

10.1.2.1. Editorial Board Member

- Véronique Cortier: Information & Computation, Journal of Computer Security, ACM Transactions on Information and System Security (TISSEC), Foundations and Trends (FnT) in Security and Privacy.

10.1.2.2. Scientific Committee Member

- Laurent Vigneron: Technique et Sciences Informatiques, Lavoisier.

10.1.3. Invited Talks

- Steve Kremer: 29th IEEE Computer Security Foundations Symposium (CSF'16).

10.1.4. Research Administration

Inria evaluation committee (Steve Kremer)

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[0]https://www.legifrance.gouv.fr/affichCnil.do?id=CNILTEXT000023174487

Jury Junior Research Position Inria Rennes-Bretagne Atlantique (Steve Kremer)

Jury Senior Research Position (Steve Kremer)

Jury Junior Research Position Inria Nancy-Grand Est (Véronique Cortier, president of the committee)

Jury Professor at Université de Lorraine (Véronique Cortier)

Jury Assistant Professor at Université de Lorraine (Michaël Rusinowitch)

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- Licence:

  Vincent Cheval, Introduction to Theoretical Computer Science (Logic, Languages, Automata), 69 hours (ETD), TELECOM Nancy.

  Jannik Dreier, Introduction to Theoretical Computer Science (Logic, Languages, Automata), 146 hours (ETD), TELECOM Nancy.

- Master:

  Véronique Cortier, Security of flows, 20 hours, M2 Computer Science, Telecom Nancy and Mines Nancy, France.

  Abdessamad Imine, Security for XML Documents, 12 hours (ETD), M1, Lorraine University, France.

  Steve Kremer, Security Theory, 24 hours (ETD), M2 Computer science, Lorraine University, France.

  Christophe Ringeissen, Decision Procedures for Software Verification, 18 hours (ETD), M2 Computer science, Lorraine University, France.

  Laurent Vigneron, Security of information systems, 22.5 hours (ETD), M2 Computer science, Lorraine University, France.

  Laurent Vigneron, Security of information systems, 24 hours (ETD), M2 MIAGE – Distributed Information Systems, Lorraine University, France.

  Laurent Vigneron, Security of information systems, 16 hours (ETD), M2 MIAGE – Audit and Design of Information Systems, Lorraine University, France.

10.2.2. Supervision

- HDR defended in 2016:

  Abdessamad Imine, Data sharing in collaborative systems, defended on December 9.

- PhD defended in 2016:

  Rémy Chrétien, Decision procedures of equivalence properties, started in October 2012, Véronique Cortier and Stéphanie Delaune
  Huu Hiep Nguyen, Secure Collaboration in Mobile Social Networks, started in November 2013, Abdessamad Imine and Michaël Rusinowitch

- PhD discontinued in 2016:

  Éric Le Morvan, Secure composition of cryptographic protocols, started in October 2013, discontinued in June 2016, Véronique Cortier

- PhD in progress:

  Younes Abid, Privacy control for social networks, started in March 2015. Abdessamad Imine, Michaël Rusinowitch and Orpailleur co-advising.

  Antoine Dallon, Decision procedures for equivalence properties, started in November 2015, Véronique Cortier and Stéphanie Delaune

Alicia Filipiak, Design and validation of security services for mobile platforms: smartphones and tablets, started in March 2015, Véronique Cortier

Joseph Lallemand, Type systems for equivalence properties, started in September 2016, Véronique Cortier

Ludovic Robin, Verification of cryptographic protocols using weak secrets, started in October 2014, Stéphanie Delaune and Steve Kremer

10.2.3. Juries

Reviewer for Yang Zhang PhD, Luxembourg (Michaël Rusinowitch)

Examiner for Stefania Dumbrova, Paris-Sud (Michaël Rusinowitch)

Examiner for Jiri Marsik, LORIA (Laurent Vigneron)

Examiner for Robin David, CEA (Steve Kremer)

10.3. Popularization

- Vote Électronique. Véronique Cortier. 1024 – Bulletin de la société informatique de France. Numéro 9, Novembre 2016.

- How to Explain Modern Security Concepts to your Children. Xavier Bultel, Jannik Dreier, Pascal Lafourcade, Malika More. Cryptologia, Taylor & Francis, 2016. [13]

- Comment sécuriser les communications ? Du bon usage des protocoles et de la cryptographie. Vincent Cheval, Joseph Lallemand – Séminaire *La Pépinière 4.1*, Oct 2016, Maisons pour la science au service des professeurs, Nancy.

PHOENIX Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

Hélène Sauzéon was member of the organizing committee of the workshop "Journées d'étude du vieillissement cognitif", Bordeaux, 2016.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

Charles Consel was member in the PC of the IEEE 2nd International Conference on Collaboration and Internet Computing (CIC 2016).

Hélène Sauzéon was member in the PC of the workshop "Journées d'étude du vieillissement cognitif", Bordeaux, 2016.

10.1.3. Journal

10.1.3.1. Reviewer - Reviewing Activities

Hélène Sauzéon was solicited as a reviewer for the Journal of Cognitive Psychology and the British Journal of Psychology.

10.1.4. Invited Talks

Charles Consel gave the following invited talks:

- Invited talk on HomeAssist at ORCATECH, Oregon Health and Science University, Portland, USA. August 2016.
- Invited talk on "DiaSwarm – Orchestration of Masses of Sensors at the International Conference on Software & Systems Engineering and their Applications", Paris, France. May 2016.
- Invited talk on "DiaSwarm – Orchestration of Masses of Sensors" at Northeastern University, Boston, USA. May 2016.
- Invited talk on "DiaSwarm – Orchestration of Masses of Sensors" at Galois Inc., Portland, USA. August 2016.
- Invited talk on HomeAssist at "Journées Inria Industries" entitled "Interaction avec les objets et services numériques", Tourcoing, France. Nov 2016.

Hélène Sauzéon gave the following invited talks:

- "Assistance numérique pour la cognition sociale pour favoriser l'inclusion scolaire d'enfants avec troubles du développement" at 43èmes Entretiens de Médecine Physique et de Réadaptation (EMPR), held on March 25th 2015 in Montpellier, France.
- "La cognition sociale au-delà du cerveau : une cognition inclusive" at 43èmes Entretiens de Médecine Physique et de Réadaptation (EMPR), held on March 25th 2015 in Montpellier, France.
- "HomeAssist : An Assisted Living Platform for Aging in Place Based on an Interdisciplinary Approach", at WORRKSHOP ACCEPT16- Deuxièmes rencontres interdisciplinaires autour des aides techniques, du handicap cognitif et de la perte d'autonomie, held on October 6-7, in Nîmes, France.
- "Everyday cognition, Aging and Cognitive disorders: insights and opportunities provided by Information and Communication Technologies", at Scientific seminar of Dpt. of Psychology, University of Waterloo, on 18th Jul., 2016, Waterloo, Canada.

10.1.5. Research Administration

Hélène Sauzéon is associate director of the lab "Activité, handicap, cognition et système nerveux", since 2015, where she leads the Cognitive Handicap research axis.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence: Hélène Sauzéon, "General Cognitive Psychology", 18h, L2/L3, University of Bordeaux, France

Licence: Hélène Sauzéon, "Cognitive Neuropsychology", 7h, DU, University of Bordeaux, France

Master: Hélène Sauzéon, "Cognitive Fonctions in Context", "Technologies for Handicap and Autonomy", "Virtual Reality and Health Applications", 60h, M1/M2, University of Bordeaux, France

Master: Charles Consel, "Telephony Over IP", 43h, M2, Bordeaux INP, France.

Master: Charles Consel, "Software Engineering for Smart Spaces", 10h, M2, Bordeaux INP, France.

Master: Charles Consel, "Ubiquitous Computing", 10h, M2, Bordeaux INP, France.

10.2.2. Supervision

Charles FAGES, "Design and Experimental Validation of a Technological Assistant for School Inclusion of Children with Autism Spectrum Disorders in Mainstream Classrooms", University of Bordeaux, defended on May 30th 2016, co-directed by Hélène Sauzéon and Charles Consel.

Lucile DUPUY, "Design and validation of a home-based digital assistant for seniors with slight autonomy decline" , University of Bordeaux, defended on November 30th 2016, co-directed by Hélène Sauzéon and Charles Consel.

Cécile MAZON, "Personalization and evaluation of a digital assistant for school inclusion of college students with autism and/or intellectual disability", University of Bordeaux, started in September 2016, co-directed by Hélène Sauzéon and Charles Consel.

P.A. CINQUIN, "Design and validation of a reader accessible to persons with cognitive troubles for a e-learning system", University of Bordeaux, started in September 2016, co-directed by Hélène Sauzéon and Pascal Guitton.

10.2.3. Juries

Hélène Sauzéon was member of the thesis committee for:

- Lucile Burger, for her thesis in Psychology called "Effect of training executive functions on appropriate usage of memory strategies during ageing : a behavioural and electrophysiological study", University of Tours, on December 9 2016.
- Caroline Pigeon, for her thesis in Neuropsychology called "Mobilisation attentionnelle des piétons aveugles : Effets de l'âge, de l'antériorité de la cécité et de l'aide à la mobilité utilisée", University of Lyon 2, on December 6th 2016.

Nic Volanschi was member of the thesis committee for Milan Kabac for his thesis in Computer Science called "A Design-Driven Methodology for the Development of Large-Scale Orchestrating Applications", University of Bordeaux, on September 26th 2016.

10.3. Popularization

Hélène Sauzéon gave talks to the following events for professional or general audiences:

- "Handicaps et technologies d'assistance pour les personnes avec déficiences cognitives" at "Les outils numériques au service des personnes avec autisme", on October 7th, at Hôpital de Niort, France.

- "Présentation de la solution DomAssist et ses effets sur le fonctionnement quotidien de la personne et ses aidant professionnel" at "Territoire et solidarité entre les âges : accompagnement du bien vieillir", organised by Union Régionale des Fédérations des Centres Sociaux d'Aquitaine, on November 14th, in Lormont, France.

- "Collège + : un nouvel outil d'apprentissage", at Semaine de la mémoire, organised by Observatoire B2V, on September 21st, at Musée CapScience, Bordeaux, France.

Nic Volanschi participated on October 13th to the "Science fest" at Inria Bordeaux, where he gave 4 workshop sessions on "Manual digital sciences" for children aged 11 to 15. These workshop sessions are aimed to communicate basic notions of computer science to young students by using manual games.

<p style="text-align:center;color:red;font-weight:bold;">PI.R2 Project-Team</p>

7. Dissemination

7.1. Promoting Scientific Activities

7.1.1. Scientific Events Organisation

7.1.1.1. Member of the Organizing Committees

Yann Régis-Gianas is multimedia chair of the organizing committee of POPL 2017 that will be held in Paris in January 2017.

Yves Guiraud, Philippe Malbos and Samuel Mimram have organised the second edition of the Higher-Dimensional Rewriting and Applications (HDRA) workshop of the Formal Structures for Computation and Deduction conference (FSCD), held in Porto in June 2016. They plan to organise the third edition of HDRA, still with FSCD, in September 2017 in Oxford.

Yves Guiraud and Alexis Saurin, with Christine Tasson (IRIF), have organised the annual meeting of the Géocal and LAC working groups of the GDR Informatique Mathématique in Paris, in November 2016.

Yves Guiraud and Samuel Mimram, with Dimitri Ara (Univ. Aix-Marseille) are currently organising the Categories in Homotopy and Rewriting one-week conference, that will be held at the CIRM, in Marseille, in September 2017.

7.1.2. Scientific Events Selection

7.1.2.1. Member of the Conference Program Committees

Matthieu Sozeau was member of the program committees of FSCD'16, ITP'16 and CoqPL'16.

7.1.2.2. Member of the Conference Steering Committees

Hugo Herbelin is a member of the steering committee of the conference *Formal Structures for Computation and Deduction* (FSCD).

Pierre-Louis Curien is member of the steering committee of the international workshop Games for Logic and Programming Languages (GaLop).

Matthieu Sozeau is member of the steering committee of the Dependently Typed Programming international workshop (DTP).

7.1.3. Journal

7.1.3.1. Member of the Editorial Boards

Pierre-Louis Curien is editor in chief of the Cambridge University Press journal Mathematical Structures in Computer Science (since January 2016).

7.1.3.2. Reviewer - Reviewing Activities

The members of the team reviewed papers for numerous journals and international conferences.

7.1.4. Invited Talks

Pierre-Louis Curien and Samuel Mimram gave invited talks at the annual meeting of the Géocal and LAC working groups of the GDR Informatique Mathématique (Paris, November).

Pierre-Louis Curien gave an invited talk at the annual meeting of the international ANR project Pace (between Univ. of Bologna, ENS Lyon and Shanghai Jiaotong University) on "Categorified cyclic operads" (Shanghai, November).

Hugo Herbelin gave an invited talk on "Proving with side-effects" at the Days in Logic meeting in Lisbon, Portugal.

Jean-Jacques Lévy gave an invited talk about "Strongly connected components in graphs, Formal proof of Tarjan 1972 algorithm" at the LTP (Langages, Types et Preuves) day, Saclay [38].

Matthieu Sozeau gave invited talks at the DeepSpec kickoff meeting in Princeton, NJ, USA, June 8th 2016, on "Coq 8.6" (together with Maxime Dénès), at the International Conference on Mathematical Software in Berlin, Germany, July 14th 2016, on "Coq for HoTT", at the Categorical Logic and Univalent Foundations workshop, Leeds, UK, July 28th 2016, on "Forcing Translations in Type Theory", and at the Coq Workshop in Nancy, France, August 26th 2016, on "Coq 8.6".

7.1.5. *Scientific Expertise*

Pierre-Louis Curien has been member of the "Comité de Sélection" for a professor position in discrete mathematics at the University Paul Sabatier in Toulouse.

Yann Régis-Gianas and Hugo Herbelin have been members of the "Comité de Sélection" for an assistant professor position at CNAM in Paris.

Yann Régis-Gianas has been member of the "Comité de Sélection" for an assistant professor position at IRIF in Paris.

Hugo Herbelin has been member of the "Comité de Sélection" for a starting researcher position at Inria Saclay.

7.1.6. *Scientific expertise*

Pierre-Louis Curien is a member of the Scientific Committee of the CIRM (since June 2013).

7.1.7. *Research Administration*

Pierre-Louis Curien, Hugo Herbelin and Yves Guiraud are members of the scientific council of the Computer Science deparment of University Paris 7.

Yves Guiraud is the head of the Preuves, Programmes et Systèmes (PPS) team of the IRIF laboratory (since April 2016), and a member of the IRIF council (since January 2016).

7.1.8. *Presentation of papers*

Étienne Miquey gave a talk on a computational reduction of dependent choice in classical logic to system F at TYPES'16 (Novi Sad, Serbia, May 2016).

Étienne Miquey gave a talk on realizability games for the specification problem during the workshop Realizability in Uruguay 2016 (Piriápolis, Uruguay, July 2016).

Cyrille Chenavier gave a talk at the workshop IWC, Obergurgl, Austria (September 2016).

Cyrille Chenavier, Maxime Lucas and Jovana Obradović gave talks at the workshop Categories, Homotopy and Rewriting (Toulouse, January) and at the workshop HDRA (Porto, June).

Jovana Obradović presented her works on cyclic operads at the Types Conference 2016 (Novi Sad, Serbia, May 2016) and at the Conference Logic and Applications 2016 (Dubrovnik, Croatia, September).

Hugo Herbelin gave a talk on proving Gödel's completeness theorem with side-effects at the Mathematics for Computation workshop in Niederalteich, Germany, May 2016.

7.1.9. *Talks in seminars*

Pierre-Louis Curien gave a talk at the Séminaire de Topologie of the University of Angers on the semantics of dependent types (January).

Yves Guiraud gave a talk in the Séminaire de Combinatoire of the University Paris 7 on an introduction to Squier's theory (November).

Hugo Herbelin gave a talk on a proof-as-program interpretation of the classical axiom of dependent choice at the Séminaire "Logique et Interactions" of the "Logique de la Programmation" team of the "Institut de Mathématiques de Marseille" (University Aix-Marseille, February).

Yann Régis-Gianas gave a talk about control operators in the history of programming at the Séminaire "Code Sources" organized by Baptiste Mélès.

Yann Régis-Gianas gave a talk about the writing style in programming at the conference "Current issues in the philosophy of practice of mathematics and informatics" (University of Toulouse, April).

Thibaut Girka gave a talk about difference languages at the Gallium seminar (Paris, September 2016) and at the TLP group of the GDR GPL (Saclay, November 2016).

Yann Régis-Gianas gave a talk about difference languages at the LIMA laboratory (Nantes, October 2016) and at the Semantic Working Group of IRIF (Paris, December 2016).

Matthieu Sozeau gave a talk about Equations: a function definition toolbox for Coq at Dagstuhl in March 2016.

Cyrille Chenavier gave a talk about confluence algebras at the Algebra working group of the LMPA, Calais, in February 2016.

Jovana Obradović gave a talk about categorified cyclic operads at the Proof Theory Seminar of the Mathematical Institute of the Serbian Academy of Sciences and Arts (Belgrade, December 2016).

7.1.10. Attendance to conferences, workshops, schools,...

Pierre-Louis Curien attended the conferences Types 2016 in Novi Sad (Serbia, May) and Logic and Applications in Dubrovnik (Croatia, September).

Cyrille Chenavier, Pierre-Louis Curien, Yves Guiraud, Maxime Lucas, Philippe Malbos, Samuel Mimram and Jovana Obradović attended the Category, Homotopy and Rewriting workshop in Toulouse (January 2016).

Cyrille Chenavier, Maxime Lucas, Philippe Malbos and Samuel Mimram attended the HDRA workshop in Lisbon (June 2016).

Hugo Herbelin attended the Days in Logic meeting in Lisbon (Portugal, January), the Mathematics for Computation workshop in Niederalteich (Germany, May), the conferences Types 2016 in Novi Sad (Serbia, May), the Coq coding sprint in Sophia-Antipolis (May-June), the DeepSpec kick-off meeting in Princeton (USA, June), the FSCD conference in Porto (Portugal, June), the Coq workshop and ITP 2016 (Nancy, August), as well as the Dagstuhl seminar on universality of proofs (October).

Jean-Jacques Lévy participated to CPP and POPL 2016 conferences, Saint Petersburgh, USA, January 18-22, and the Robin Milner Award reception, the Royal Society, London, November 24 (X. Leroy (research team Gallium) was awarded).

Matthieu Sozeau attended POPL 2016, ICMS 2016, ITP 2016, the Coq coding sprint, the DeepSpec kick-off meeting in Princeton as well as the Dagstuhl seminar on proofs of functional programs (March).

Théo Zimmermann attended the conference CICM 2016 in Białystok (Poland, July). He gave a talk there to present his PhD subject. He also attended the Coq coding sprint.

7.1.11. Groupe de travail Théorie des types et réalisabilité

This is one of the working groups of PPS, jointly organised by Hugo Herbelin and Matthieu Sozeau.

7.1.12. Groupe de travail Catégories supérieures, polygraphes et homotopie

Several members of the team participate actively in this weekly working group of PPS, organised by François Métayer (IRIF) since 2009.

7.2. Teaching - Supervision - Juries

7.2.1. *Teaching*

Master: Pierre-Louis Curien teaches in the course Models of programming languages: domains, categories, games of the MPRI (together with Thomas Ehrhard and Paul-André Melliès).

Master: Hugo Herbelin teaches the course on the proof-as-program correspondence for classical logic and beyond at the LMFI.

Master: Pierre Letouzey teaches two short courses to the LMFI Master 2 students : "Models of programming" and "Introduction to computed-aided formal proofs". These two courses come in addition to Pierre Letouzey's regular duty as teacher in the Computer Science department of Paris 7 (including a course on Compilation to M2-Pro students).

Master: Yann Régis-Gianas took part in the MPRI course entitled "Type systems": he gave a 12-hour course about generalised algebraic data types, higher-order Hoare logic and dependently typed programming.

Master: Matthieu Sozeau taught the MPRI course on Advanced uses of proof assistants (12 hours + a project), together with Assia Mahboubi (Inria SpecFun).

MOOC: In collaboration with Roberto Di Cosmo and Ralf Treinen, Yann Régis-Gianas has created a MOOC about the OCaml programming language. The first edition took place in 2015, the second edition in 2016.

7.2.2. *Supervision*

Internship: Yves Guiraud has supervised the M2 internship of Amina Bendjaafar.

Internship: Hugo Herbelin has supervised the L3 internship of Meven Bertrand.

Internship: Hugo Herbelin has supervised the pre-doctoral internship of Théo Zimmermann.

Internship: Yann Régis-Gianas has supervised the M1 internship of Paul Laforgue.

Internship: Yann Régis-Gianas has supervised the M1 internship of Sylvain Ribstein.

PhD (completed): Cyrille Chenavier, supervised by Yves Guiraud and Philippe Malbos, successfully defended in December 2016

PhD in progress: Guillaume Claret, Programmation avec effets en Coq, (started in September 2012), supervised by Hugo Herbelin and Yann Régis-Gianas, defense planned in February 2017.

PhD in progress: Amina Doumane, supervised by Alexis Saurin, David Baelde and Pierre-Louis Curien.

PhD in progress: Thibaut Girka, Differential semantics (started in January 2014), supervised by Roberto Di Cosmo and Yann Régis-Gianas.

PhD in progress: Maxime Lucas, supervised by Yves Guiraud and Pierre-Louis Curien.

Phd in progress: Cyprien Mangin, Dependent Pattern-Matching, induction-induction and higher inductive types, September 2015, supervised by Matthieu Sozeau and Bruno Barras.

PhD in progress: Étienne Miquey, Réalisabilité classique et effets de bords, September 2014, supervised by Hugo Herbelin and Alexandre Miquel.

PhD in progress: Jovana Obradović, Cyclic operads: syntactic, algebraic and categorified aspects, supervised by Pierre-Louis Curien.

PhD stopped: Gabriel Lewertowski, On forcing in type theory, supervised by Matthieu Sozeau and Nicolas Tabareau. Gabriel stopped his PhD in september 2016 and is now working at la Pitié Salpêtrière as an engineer.

PhD starting: Gaëtan Gilbert, Definitional Proof Irrelevance, supervised by Nicolas Tabareau and Matthieu Sozeau.

PhD starting: Théo Zimmermann, supervised by Hugo Herbelin.

7.2.3. *Juries*

Pierre-Louis Curien was referee for the habilitations of Emmanuel Haucourt (Paris 7, September) and Samuel Mimram (Paris 7, September). He was president of the jury of the thesis of Matteo Acclavio (Univ. de la Méditerranée, December).

Pierre-Louis Curien (president), Yves Guiraud and Philippe Malbos were members of the jury of the thesis of Cyrille Chenavier (Univ. Paris 7, December).

Hugo Herbelin was referee for the habilitation of Nicolas Tabareau (Nantes, November). He was a referee of the jury of the thesis of Jirka Maršík (LORIA, December).

Matthieu Sozeau was a member of the jury of the thesis of Kevin Quirin (EMN Nantes, December).

Yann Régis-Gianas is a member of the jury of the competitive examination for the entrance to the Écoles Normales Supérieures and the École Polytechnique.

7.3. Popularization

Yann Régis-Gianas co-organised the "Journée Francilienne de Programmation", a programming contest between undergraduate students of three universities of Paris (UPD, UPMC, UPS). Yann Régis-Gianas organised, and Étienne Miquey took part in the animation of the (computer science part of the) "Fête de la Science" event at the University Paris 7. Yann Régis-Gianas gave several presentations about "What is programming?" in primary and high schools of Paris and its region.

<div align="center">

PLEIADE Team

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9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Journal

9.1.1.1. Member of the Editorial Boards

Alain Franc is member of the editorial board of BMC Evolutionary Biology.

9.1.1.2. Reviewer - Reviewing Activities

Alain Franc has been reviewing in 2016 manuscripts for BMC Evultionary Biology, Nature reports, Methods in Ecology and Evolution, Research in Microbiology, Molecular Ecology.

9.2. Teaching - Supervision - Juries

9.2.1. Juries

A. Franc has been supervisor of PhD Thesis of François Keck, UMR Carrtel, Thonon, Grenoble University, with Agnès Bouchez and Frédéric Rimet as co-supervisors. The PhD has been defended on April, 26, 2016. Reference: https://www.theses.fr/196768691. The topic is the use of phylogenetic signal for improving the assessment of water quality from inventories of diatoms. Three papers have been published by François Keck [7], [8], [9].

A. Franc has been

- member of the committee of the PhD of Cyril Noël at IPREM, University of Pau and Pays de l'Adour (PhD advisor: Cristiana Cravo-Laureau)
- reviewer of the HdR of Jean-Daniel Bontemps on large scale forest growth models, University of Nancy
- reviewer of the HdR of Benoit de Thoisy, University of Cayenne, on "from Pleistocene to likely to the dawn of the sixth extinction crisis: the tormented history of Amazonian mammals".
- member of the jury for PhD defense of Arielle Salmier, University of Cayenne, on the response of chiroptera to changing environment: viral diversity and adaptation, at Cayenne on December, 13, 2016.

D. Sherman was president of the jury for Claire Capdevieille in the Unversity of Bordeaux on Novembre 3, 2016.

D. Sherman was president of a first-year jury for the Mathematics and Computer Science Doctoral School at the University of Bordeaux.

9.2.2. Internships

Rémi Pellerin of the ENS Lyon was an intern in PLEIADE during June–July 2016, and contributed to Declic, a software package written in Python by A. Franc that provides several tools for data analysis, in the domains of multivariate data analysis, machine learning, and graph based methods. It permits users to study in depth the accuracy of the dictionary between molecular based and morphological based taxonomy.

Adrien Lopez of the Collège Henri Brisson in Talence spent a week in PLEIADE for his "stage du troisième".

9.3. Popularization

David Sherman participated in popularization activities based on Thymio-II mobile robots for education, coordinated by the Mobsya association and EPFL (Switzerland). He helped organize a team in the R2T2 event (http://r2t2.org) on November 2, 2016. He contributed code to the Aseba project for piloting Thymio-IIs from the Scratch programming language, and with Thibault Lainé of Inria Bordeaux Sud-Ouest helped improve a photo-realistic simulator for multiple robots.

POEMS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Advisory and management activities

- P. Joly is a member of the scientific committee of CEA-DAM.
- E. Lunéville is the Head of UMA (Unité de Mathématiques Appliquées) at ENSTA ParisTech.

10.1.2. Scientific events organisation end selection

- E. Bécache, A. S. Bonnet-Ben Dhia, M. Bonnet, S. Fliss, C. Hazard, P. Joly and E. Lunéville are members of the scientific committee for the 13rd international conference on mathematical and numerical aspects of wave propagation (WAVES 2017), which will take place in Minneapolis in May 2017.
- A. S. Bonnet-Ben Dhia has been a member of the organizing committee of the workshop *NEW TRENDS IN THEORETICAL AND NUMERICAL ANALYSIS OF WAVEGUIDES* (40 participants) which has been held in Porquerolles in May 2016.
- S. Fliss has been a member of the organizing committee of the workshop *METAMATH* (40 participants) which has been held in Cargese in November 2016.
- A. S. Bonnet-Ben Dhia has been a member of the organizing committee of the workshop on *Mathematical and Numerical Modeling in Optics* (70 participants) which has been held in Minneapolis in December 2016.

10.1.3. Journal

- A. S. Bonnet-Ben Dhia is associate editor of SINUM (SIAM Journal of Numerical Analysis) and SIAP (SIAM Journal of Applied Mathematics).
- M. Bonnet is associate editor of Engineering Analysis with Boundary Elements
- M. Bonnet is in the editorial board of Inverse Problems.
- M. Bonnet is in the editorial board of Computational Mechanics.
- M. Bonnet is in the editorial board of Journal of Optimization Theory and Application.
- P. Ciarlet is an editor of CAMWA (Computers & Mathematics with Applications).
- P. Ciarlet is an editor of ESAIM:M2AN (Mathematical Modeling and Numerical Analysis).
- P. Joly is an editor of ESAIM:M2AN (Mathematical Modeling and Numerical Analysis).
- P. Joly is a member of the editorial board of AAMM (Advances in Applied Mathematics and Mechanics).
- P. Joly is a member of the Book Series Scientific Computing of Springer Verlag.
- The team members regularly review papers for many international journals.

10.2. Teaching - Supervision

10.2.1. Teaching

Eliane Bécache

- *Méthode des éléments finis*, ENSTA ParisTech (2nd year)
- *Compléments sur la méthode des éléments finis*, ENSTA ParisTech, (2nd year)
- *Fonctions d'une variable complexe*, ENSTA ParisTech (1st year)

Marc Bonnet

- *Problèmes inverses*, Master MS2SC (Centrale Paris and ENS Cachan)
- *Méthodes intégrales*, Master TACS (ENS Cachan)
- *Outils élémentaires d'analyse pour les équations aux dérivées partielles*, ENSTA Paris-Tech (1st year)

Anne-Sophie Bonnet-Ben Dhia

- *Fonctions d'une variable complexe*, ENSTA ParisTech (1st year)
- *Propagation dans les guides d'ondes*, ENSTA ParisTech (3rd year) and Master "Modeling and Simulation" (M2)
- *Théorie spectrale des opérateurs autoadjoints et applications aux guides optiques*, ENSTA ParisTech (2nd year)

Laurent Bourgeois

- *Outils élémentaires pour l'analyse des équations aux dérivées partielles*, ENSTA Paris-Tech (1st year)
- *Inverse problems: mathematical analysis and numerical algorithms*, (Master AN& EDP, Paris 6 and Ecole Polytechnique)

Stéphanie Chaillat

- *Introduction à la discrétisation des équations aux dérivées partielles*, ENSTA ParisTech (1st year)
- *Fonctions d'une variable complexe*, ENSTA ParisTech (1st year)
- *Equations intégrales et multipôles rapides*, Ecole doctorale MODES (Univ. Paris Est, Marne la Vallée)
- *Résolution des problèmes de diffraction par équations intégrales*, ENSTA ParisTech (3rd year) and Master "Modeling and Simulation" (M2)

Colin Chambeyron

- *Analyse réelle: optimisation libre et sous contraintes*, Dauphine University (1st year)
- *Outils mathématiques*, Dauphine University (1st year)
- *Algèbre linéaire*, Dauphine University (2nd year)

Patrick Ciarlet

- Advanced Finite Element Methods, ENSTA ParisTech (2nd year)
- Parallel Scientific Computing, ENSTA ParisTech (3rd year), and Master "Analysis, Modelling, Simulation" (M2)
- Mathematical Models and their Discretisation in Electromagnetism, ENSTA ParisTech (3rd year), and Master "Analysis, Modelling, Simulation" (M2)
- Deputy Head of the Master's Program Analysis, Modelling, Simulation, Paris-Saclay University

Sonia Fliss

- *Méthode des éléments finis*, ENSTA ParisTech (2nd year)
- *Introduction à la discrétisation des équations aux dérivées partielles*, ENSTA ParisTech (1st year).
- *Propagation des ondes dans les milieux périodiques*, ENSTA ParisTech (3rd year) and Master "Modeling and Simulation" (M2)
- *Homogeneisation*, Master ANEDP Paris 6 and Ecole Polytechnique (M2)

Christophe Hazard

- *Outils élémentaires d'analyse pour les équations aux dérivées partielles*, ENSTA Paris-Tech (1st year)
- *Théorie spectrale des opérateurs autoadjoints et applications aux guides optiques*, ENSTA ParisTech (2nd year)

Patrick Joly

- *Introduction à la discrétisation des équations aux dérivées partielles*, ENSTA ParisTech (1st year)
- *Propagation des ondes dans les milieux périodiques*, ENSTA ParisTech (3rd year) and Master "Modeling and Simulation" (M2)

Nicolas Kielbasiewicz

- *Programmation scientifique et simulation numérique*, ENSTA ParisTech (2nd year)
- *Parallélisme et calcul réparti*, ENSTA ParisTech (Master 2)

Marc Lenoir

- *Fonctions d'une variable complexe*, ENSTA ParisTech (2nd year)
- *Equations intégrales*, ENSTA ParisTech (3rd year) and Master "Modeling and Simulation" (M2)
- *Méthodes asymptotiques hautes fréquences pour les équations d'ondes - course notes*, ENSTA ParisTech (3rd year) and Master "Modeling and Simulation" (M2)

Eric Lunéville

- *Introduction au Calcul Scientifique*, ENSTA ParisTech (2nd year).
- *Programmation scientifique et simulation numérique*, ENSTA ParisTech (2nd year).
- *Propagation dans les guides d'ondes*, ENSTA ParisTech (3rd year) and Master "Modeling and Simulation" (M2)

Jean-François Mercier

- *Outils élémentaires d'analyse pour les équations aux dérivées partielles*, ENSTA Paris-Tech (1st year)
- *Fonctions d'une variable complexe*, ENSTA ParisTech, ENSTA ParisTech (2nd year)
- *Théorie spectrale des opérateurs autoadjoints et application aux guides optiques*, ENSTA ParisTech (2nd year)

Axel Modave

- *Scientific parallel computing*, ENSTA ParisTech (3rd year) and Master "Modeling and Simulation" (M2)

10.2.2. Supervision

PhD: Marc Bakry, "Estimateurs a posteriori pour la résolution des problèmes de diffraction par équations intégrales", October 2016, Patrick Ciarlet and Sébastien Pernet.

PhD: Geoffrey Beck, "Modélisation de la propagation d'ondes électromagnétiques dans des câbles co-axiaux", March 2016, Patrick Joly et Sébastien Impériale

PhD: Mathieu Chamaillard, "Conditions aux limites effectives pour des revêtements minces périodiques", October 2011, Patrick Joly and Houssem Haddar

PhD: Rémi Cornaggia, "Asymptotique petit-défaut de fonctions-coût et son application en identification: justifications théorique et expérimentale, extensions", September 2016, Marc Bonnet and Bojan Guzina

PhD: Elizaveta Vasilevskaia, "Modes localisés dans les guides d'onde quantiques", July 2016, Patrick Joly

PhD: Valentin Vinoles, "Analyse asymptotique des équations de Maxwell en présence de méta-matériaux", September 2016, Sonia Fliss and Patrick Joly

PhD in progress : Zouhair Adnani , "Modélisation numérique tridimensionnelle des effets de site en interaction sol-structure par une méthode adaptée aux problèmes sismiques de très grande taille", October 2014, Marc Bonnet and Stéphanie Chaillat

PhD in progress : Antoine Bensalah, "Une approche nouvelle de la modélisation mathématique et numérique en aéroacoustique par les équations de Goldstein et applications en aéronautique", October 2014, Patrick Joly and Jean-François Mercier

PhD: Antoine Bera, "Conception de perturbations invisibles pour les ondes électromagnétiques ou acoustiques", October 2016, Anne-Sophie Bonnet-Ben Dhia and Lucas Chesnel

PhD in progress :Luca Desiderio, "Efficient visco-eleastic wave propagation in 3D for high contrast media", October 2013, Stéphanie Chaillat and Patrick Ciarlet

PhD in progress :Léandre Giret, "Development of a domain decomposition method on non-conforming meshes: application to the modeling of a Reactivity-Initiated Accident (RIA) in a Pressurized Water Reactor (PWR)", October 2014, Patrick Ciarlet

PhD in progress :Sandrine Paolantoni, "Analyse spectrale et simulation numérique de la diffraction électromagnétique par des métamatériaux", October 2016, Christophe Hazard and Boris Gralak

PhD in progress :Laure Pesudo , "Modélisation de la réponse ultrasonore de défauts de type fissure par méthode BEM et couplage à un modèle de propagation - Application à la simulation des contrôle non destructifs", October 2014, Marc Bonnet and Stéphanie Chaillat

PhD in progress : Arnaud Recoquillay, "Identification de défauts dans un guide d'ondes en régime temporel", October 2014, Laurent Bourgeois

PhD in progress : Yohanes Tjandrawidjaja, "Modélisation de la propagation d'ondes guidées et de leur interaction avec des défauts localisés dans une plaque élastique anisotrope pour des applications en SHM", October 2016, Anne-Sophie Bonnet-Ben Dhia and Sonia Fliss

<p style="text-align:center; color:red;">**POLARIS Team**</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organization

9.1.1.1. General Chair, Scientific Chair

- Panayotis Mertikopoulos was the general co-chair of the GEL 2016 international workshop on Geometry, Evolution and Learning in Games

9.1.1.2. Member of the Organizing Committees

- Nicolas Gast served as Publicity Chair for ACM Sigmetrics 2016
- Jean-Marc Vincent served in the Organization Committee of the "Decision-making and Optimization under Uncertainty" summer school for young researchers, and the joint LICIA-EXASE workshop

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Arnaud Legrand was chair of the performance evaluation track of Europar 2016.

9.1.2.2. Member of the Conference Program Committees

The members of the team regularly review numerous papers for international conferences.

- Bruno Gaujal and Nicolas Gast were members of the Technical Program Committee of ACM Sigmetrics 2016
- Nicolas Gast was a member of the Technical Program Committee of ACM E-Energy 2016.
- Panayotis Mertikopoulos was a member of the Technical Program Committee of VALUETOOLS 2016.
- E. Veronica Belmega was a member of the Technical Program Committee of IEEE Globecom 2016, IEEE ICC 2016, IEEE BlackSeaComm 2016, and IEEE WCNC 2016
- Jean-Marc Vincent was a member of the Technical Program Committees of ASMTA 2016, Simul-Tech 2016 and EPEW 2016
- Arnaud Legrand was a member of the Technical Program Committees of HiPC 2016, ICPP 2016, and COMPAS 2016.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- E. Veronica Belmega is an executive editor for the Transactions on Emerging Telecommunications Technologies.

9.1.3.2. Reviewer - Reviewing Activities

The members of the POLARIS team regularly review articles for JPDC, DAM, IEEE Transactions on Networking/Automatic Control/Cloud Computing/Parallel and Distributed Computing/Information Theory/Signal Processing/Wireless Communications, SIAM Journal on Optimization/Control and Optimization, and others.

9.1.4. Invited Talks

- Bruno Gaujal was a plenary speaker at ECQT 2016 (European Conference on Queuing Theory)
- Bruno Gaujal was a plenary speaker at "Journées SDA2 2016" (Groupe de Travail "Systèmes Dynamiques, Automates et Algorithmes" of the CNRS thematic group GDR Informatique Mathématique.
- Panayotis Mertikopoulos was a plenary speaker at the ADGO 2016 workshop on Algorithms and Dynamics for Games and Optimization
- Panayotis Mertikopoulos gave an invited tutorial on "*Online Optimization for Wireless Communications*" at the Orange workshop on Learning and Networks.
- Panayotis Mertikopoulos gave a two-part tutorial on "*Game Theory, Learning and Cognitive Radio*" at CROWNCOM 2016.

9.1.5. Leadership within the Scientific Community

Arnaud Legrand has organized a series of webinars on reproducible research and whose aim is to introduce the audience to one particular aspect of reproducible research and to illustrate how this aspect can be addressed with state-of-the-art tools. To this end, experts of a given topic are invited and their seminar is screencast so that researchers from other universities can easily follow it. So far, the following topics have been covered:

1. Introduction (reproducible research, challenges, ethic, ...) to reproducible research. Producing replicable articles and managing a laboratory notebook.
2. Controlling your experimental environment
3. Numerical reproducibility
4. Logging and backing up your work: a not so short introduction to git for research
5. Preserving software: ensuring availability and tracking provenance
6. Reproducible science in bioinformatics: current status, solutions and research opportunities

All the corresponding videos and materials are available at the following address: https://github.com/alegrand/RR_webinars/

9.1.6. Scientific Expertise

- E. Veronica Belmega was a member of the jury for the GRETSI–GdR ISIS thematic research group "best thesis" award
- Panayotis Mertikopoulos is a member of the steering committee (*comité de liaison*) of the optimization and decision theory group of the French Society for Industrial and Applied Mathematics (SMAI).
- Jean-Marc Vincent is a member of the scientific committees of the CIST (Centre International des Sciences du Territoire)

9.1.7. Research Administration

- Bruno Gaujal is member of the "bureau du LIG" (Laboratoire d'informatique de Grenoble)
- Bruno Gaujal is member of the "bureau du CP" of Inria Grenoble.
- Bruno Gaujal was member of the CR2 admissibility jury of Inria-Grenoble.
- Panayotis Mertikopoulos serves as the graduate students liaison (*chargé de mission doctorants*) for the Laboratoire d'Informatique de Grenoble
- Arnaud Legrand was coordinator of the Inria evaluation of the "Distributed and High Performance Computing" theme.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: Bruno Gaujal and Nicolas Gast, *"Advanced Performance Evaluation"*, 18h (M2), EN-SIMAG

Master: Guillaume Huard, *"Conception des Systèmes d'Exploitation"* (M1), Université Grenoble-Alpes

Master: Arnaud Legrand and Jean-Marc Vincent, *"Scientific Methodology and Performance Evaluation"*, 15h (22.5h) M2, M2R MOSIG

Master: Arnaud Legrand, *"Parallel Systems"*, 21h (31.5h) M2R, M2R Mosig.

Master: Arnaud Legrand, *"Scientific Methodology and Performance Evaluation"*, 24h (36h), ENS Lyon.

Master: Panayotis Mertikopoulos, *"Selected Topics in the Theory of Stochastic Processes"*, 16h M2, University of Athens, Athens, Greece

Master: Florence Perronnin, *"Simulation"*, M1, Université Versailles – Saint-Quentin

Master: Florence Perronnin, *"Probabilités–Simulation"*, RICM4 Polytech Grenoble

Master: Arnaud Legrand and Jean-Marc Vincent, Probability and simulation, performance evaluation 72 h, (M1), RICM, Polytech Grenoble.

Master: Jean-Marc Vincent, Mathematics for computer science, 18 h , (M1) Mosig.

DU: Jean-Marc Vincent, *"Informatique et sciences du numérique"*, 20 h, (Professeurs de lycée).

9.2.2. Supervision

Post-Doc: Angelika Studeny, Université Grenoble-Alpes (Jean-Marc Vincent)

PhD: David Beniamine, *"Analyse du comportement mémoire d'application paralleles de calcul scientifique"*, Université Grenoble-Alpes, 05/12/2016 (Guillaume Huard)

PhD: Joaquim Assunção, *"Fitting techniques to knowledge discovery through stochastic models"*, 08/12/2016 (Jean-Marc Vincent)

PhD in progress: Alexandre Marcastel, *"Online resource allocation in dynamic wireless networks"*, 10/2016 (Panayotis Mertikopoulos, E. V. Belmega)

PhD in progress: Stéphane Durand, *"Game theory and control in distributed systems"* (Bruno Gaujal)

PhD in progress: Stephan Plassart, *"Optimization of critical embedded systems"* (Bruno Gaujal)

PhD in progress: Baptiste Jonglez, *"Diversity exploitation in communication networks"* (Bruno Gaujal)

PhD in progress: Umar Ozeer, OrangeLabs, 12/2016 (Jean-Marc Vincent)

PhD in progress: Christian Heinrich, *"Performance Evaluation of HPC Systems Through Simulation"*, 12/2015 (Arnaud Legrand)

PhD in progress: Rafael Keller Tesser, *"Performance Evaluation of Dynamic Load Balancing for Legacy Iterative Parallel Applications"*, 12/2015 (Arnaud Legrand, Cotutelle with Philippe Navaux from UFRGS)

PhD in progress: Vinicius Garcia Pinto, *"Visual Performance Analysis of HPC applications running over Dynamic Task-based Runtimes"*, 12/2015 (Arnaud Legrand, Cotutelle with Nicolas Maillard and Lucas Schnorr from UFRGS)

9.2.2.1. Internships

- Jean-Marc Vincent supervised the eng. internship of Benjamin Briot (02–03/2016)
- Jean-Marc Vincent supervised the master internship Mathieu Baille (Magistère + TER M1)
- Guillaume Huard supervised the Licence internship of Michael Picard
- Guillaume Huard supervised the Licence internship of Loic Poncet

- Arnaud Legrand and Vincent Danjean supervised the eng. internship of Florian Popek (06–08/2016)
- Arnaud Legrand supervised the master internship of Steven Quinito Masnada (02–08/2016) in collaboration with the CORSE team (Brice Videau and Frédéric Desprez)

9.2.3. *Juries*

- E. Veronica Belmega was a member of the jury for the PhD defense of Kenza Hamidouche (12/2016, Supélec)
- Bruno Gaujal was a reviewer for the HDR defense of Bruno Scherrer
- Bruno Gaujal was a member of the jury for the HDR defense of Patrick Loiseau
- Arnaud Legrand was reviewer for the PhD defense of Rafife Nheili

9.3. Popularization

The POLARIS team is actively involved in various scientific popularization activities. In addition to participating in the Fête de la Science (Guillaume Huard, Florence Perronnin, Jean-Marc Vincent), the POLARIS team also participates in the organization of the "Conférence Inria". Jean-Marc Vincent has also organized (and/or participated in) several training courses for computer science teachers (at a high school level) and has supervised several MathC2+ trainees.

Jean-Marc Vincent also organized the 2-day-long atelier "Computer Science without Computers" for elementary school students; the atelier was nominated for the Shannon trophy (awarded by the Institut Henri Poincaré).

POLSYS Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. Member of the organizing committees

Dongming Wang was involved in the organization of the following conferences

- Special Session on Software of Polynomial Systems at the 5th International Congress on Mathematical Software (ICMS 2016) (Berlin, Germany, July 11-14, 2016).

9.1.2. Scientific events selection

9.1.2.1. Member of the conference program committees

Emmanuel Prouff was member of the program committees of the following conferences

- Conference on Cryptographic Hardware and Embedded Systems 2016 (CHES 2016) (Santa Barbara, CA, USA, Aug. 17-19, 2016);
- Smart Card Research and Advanced Application Conference (CARDIS 2016) (Cannes, France, Nov. 7-9, 2016);
- International Workshop on Constructive Side-Channel Analysis and Secure Design (COSADE 2016) (Graz, Austria, Apr. 14-15);
- 23rd ACM Conference on Computer and Communications Security (ACM CCS 2016) (Vienna, Austria, Oct. 24-28).

Dongming Wang was member of the program committees of the following conferences

- 11th International Workshop on Automated Deduction in Geometry (ADG 2016) (Strasbourg, France, June 27-29, 2016);
- 7th International Symposium on Symbolic Computation in Software Science (SCSS 2016) (Tokyo, Japan, March 28-31, 2016).

Elias Tsigaridas was member of the program committees of the following conferences

- Computer Algebra in Scientific Computing (CASC 2016), Sept 2016 Bucharest, Romania.

9.1.3. Journal

9.1.3.1. Member of the editorial boards

Ludovic Perret is Member of the Editorial Board of Designs, Codes and Cryptography.

Emmanuel Prouff is member of the editorial board of Journal of Cryptographic Engineering.

Mohab Safey El Din is member of the editorial board of Journal of Symbolic Computation.

Dongming Wang has the following editorial activities:

- Editor-in-Chief and Managing Editor for the journal
  Mathematics in Computer Science (published by Birkhäuser/Springer, Basel).
- Executive Associate Editor-in-Chief for the journal

SCIENCE CHINA Information Sciences (published by Science China Press, Beijing and Springer, Berlin).

- Member of the Editorial Boards for the
    - Journal of Symbolic Computation (published by Academic Press/Elsevier, London),
    - Frontiers of Computer Science (published by Higher Education Press, Beijing and Springer, Berlin),
    - Texts and Monographs in Symbolic Computation (published by Springer, Wien New York),
- Member of the International Advisory Board for the Communications of JSSAC (Japan Society for Symbolic and Algebraic Computation) (published by JSSAC).

9.1.4. Invited talks

Emmanuel Prouff was invited speaker at

- EUROCRYPT 2016 (invited tutorial), Vienna, Austria, on Securing Cryptography Implementations in Embedded Systems.
- SPACE 2016 (invited speaker), Hyderabad, India on Breaking Cryptographic Implementations Using Deep Learning Techniques.

Mohab Safey El Din was invited speaker at

- the SMAI-MODE session on semi-algebraic optimization, Toulouse, March 2016, France.
- the AIM Workshop on Algebraic Vision which was held at the American Institute of Mathematics, San Jose, May 2016, USA.
- the NCSU seminar on Symbolic Computation, Raleigh, May 2016, USA.
- the PGMO session on Semi-Definite Programming, Palaiseau, October 2016, France.

Ludovic Perret was invited speaker at 17th World Conference on Information Security Applications (WISA 2016, August, Korea).

Elias Tsigaridas was invited speaker at

- the Department Seminar Series, of the Computer Science Department of the University of Liverpool, Apr 2016, UK.
- the Seminar of RICAM, University of Linz, Austria (Dec. 2016)

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Jérémy Berthomieu had the following teaching activities:

Master : Modeling and problems numerical and symbolic solving through Maple and MATLAB software, 34 hours, M1, Université Pierre-et-Marie-Curie, France

Master : In charge of Basics of Algebraic Algorithms, 70 hours, M1, Université Pierre-et-Marie-Curie, France

Master : Introduction to Security, 20 hours, M1, Université Pierre-et-Marie-Curie, France

Master : Projects supervision, 8 hours, L2, Université Pierre-et-Marie-Curie, France

Licence : Introduction to Algorithmics, 49 hours, L3, Université Pierre-et-Marie-Curie, France

Licence : Representations and Numerical Methods, 41 hours, L2, Université Pierre-et-Marie-Curie, France

Licence : Projects supervision, 10 hours, L2, Université Pierre-et-Marie-Curie, France

Jean-Charles Faugère had the following teaching activities:

> Master: Fundamental Algorithms in Real Algebraic Geometry, 13,5 hours, M2, ENS de Lyon, France

> Master : Polynomial Systems solving, 12 hours, M2, MPRI

Ludovic Perret had the following teaching activities amounting to around 220 hours:

> Master : Polynomial Systems solving, M2, MPRI

> Master : In charge of Introduction to Security, M1, Université Pierre-et-Marie-Curie, France

> Master : In charge of Complexity, M1, Université Pierre-et-Marie-Curie, France

> Licence : Introduction to Algorithmic, L2, Université Pierre-et-Marie-Curie, France

> Licence : In charge of the Computer Science – Applied Mathematics Program (PIMA) in Licence, L2, Université Pierre-et-Marie-Curie, France

> Licence : Project supervision, L2, Université Pierre-et-Marie-Curie, France

Guénaël Renault had the following teaching activities:

> Master : In charge of the Security, Reliability and Numerical Efficiency Program in Master, 45 hours, M1 and M2, Université Pierre-et-Marie-Curie, France

> Master : In charge of Advanced and Applied Cryptology, 70 hours, M2, Université Pierre-et-Marie-Curie, France

> Master : In charge of Security and Side-channels, 10 hours, M2, Université Pierre-et-Marie-Curie, France

> Master : In charge of Threats and Attacks Modeling, 40 hours, M1, Université Pierre-et-Marie-Curie, France

> Master : Pro/Research internships supervision, 40 hours, M2, Université Pierre-et-Marie-Curie, France

> Master : Projects supervision, 20 hours, M1, Université Pierre-et-Marie-Curie, France

> Licence : In charge of Introduction to Cryptology, 30 hours, L3, Université Pierre-et-Marie-Curie, France

> Licence : Project supervision, 10 hours, L2, Université Pierre-et-Marie-Curie, France

Mohab Safey El Din had the following teaching activities:

> Master : In charge of Modeling and problems numerical and symbolic solving through MAPLE and MATLAB software, 36 hours, M1, Université Pierre-et-Marie-Curie, France

> Master : In charge of Introduction to polynomial system solving, 48 hours, M2, Université Pierre-et-Marie-Curie, France

> Master: In charge of Fundamental Algorithms in Real Algebraic Geometry, 22,5 hours, M2, ENS de Lyon, France

> Master : In charge of the Security, Reliability and Numerical Efficiency Program in Master, 12 hours, M1 and M2, Université Pierre-et-Marie-Curie, France

> Master : Introduction to Security, 10 hours, M1, Université Pierre-et-Marie-Curie, France

> Licence : Introduction to Cryptology, 20 hours, L3, Université Pierre-et-Marie-Curie, France

> Licence : In charge of the Computer Science – Applied Mathematics Program (PIMA) in Licence, L2 and L3, Université Pierre-et-Marie-Curie, France

9.2.2. Supervision

PhD in progress : Ivan Bannwarth, Fast algorithms for studying real algebraic sets, started in Sept. 2014, Mohab Safey El Din

PhD in progress : Matías Bender, Algorithms for Sparse Gröbner basis and applications, started in Dec. 2015, Jean-Charles Faugère and Elias Tsigaridas

PhD in progress : Eleonora Cagli, Analysis and interest points research in the attacks by observation context, Emmanuel Prouff and Cécile Dumas

PhD in progress : Clayton Eduardo Lente da Silva, Planar discontinuous dynamical system, Universidade Estadual Paulista (São José do Rio Preto), started in Sep. 2013, Paulo Ricardo da Silva and Alain Jacquemard

HdR : Ludovic Perret, Université Pierre-et-Marie-Curie, defended in Dec. 2016

HdR : Guénaël Renault, Université Pierre-et-Marie-Curie, defended in Dec. 2016

PhD : Thársis Souza Silva, Relay Systems, Universidade Federal de Goiás, Goiânia, defended in May 2016, Ronaldo Alves Garcia and Alain Jacquemard

PhD : Adrian Thillard, Countermeasures to Side-Channel Attacks and Secure- Multi-Party Computation, ENS Paris, defended in Dec. 2016 Damien Vergnaud and Emmanuel Prouff

PhD : Thibaut Verron, Gröbner bases and structured polynomial systems, Université Pierre-et-Marie-Curie, defended in Sept. 2016, Jean-Charles Faugère and Mohab Safey El Din

PhD : Alexandre Wallet, The point decomposition problem in Jacobian varieties, Université Pierre-et-Marie-Curie, defended in Dec. 2016, Jean-Charles Faugère

9.2.3. Juries

Jean-Charles Faugère was examiner in the PhD committees of C. Chenavier, V. Neiger, T. Verron and A. Wallet and in the HDR committees of L. Perret and G. Renault.

Alain Jacquemard was examiner in the PhD committee of T.S. Silva.

Emmanuel Prouff was reviewer of the PhD theses of A. Battistello and D. Martin. He was examiner in the PhD committee of A. Battistello, D. Martin and A. Thillard and in the HDR committees of G. Renault.

Mohab Safey El Din was examiner in the PhD committees of T. Verron and A. Wallet and in the HDR committees of L. Perret and G. Renault.

9.3. Popularization

J.-C. Faugère and L. Perret wrote a paper "Le grand défi du post-quantique" for MISC (HS 13, April 2016).

POSET Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- D. Janin, General Chair of ACM Workshop on Functional Art, Music, Modeling and Design (FARM), Nara (Japan), associated with ICFP,

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- D. Janin, PC Chair of Journées d'Informatique Musicale (JIM 2015), Albi (France),

10.1.2.2. Member of the Conference Program Committees

- M. Desainte-Catherine, PC member of Journées d'Informatique Musicale (JIM 2015), Albi (France),

10.1.2.3. Reviewer

Members of the project are yearly reviewers for a number of international conferences including LICS, ICALP, STACS, MFCS, FST&TCS, in theoretical computer science, and ICMC, SMC, NIME, FARM, TENOR, JIM in computer music.

10.1.3. Journal

10.1.3.1. Member of the editorial boards

- S. Salvati is editor of the Journal of Logic Language and Information (JoLLI); since the end of 2015, he has been promoted as Editor in Chief,
- M. Desainte-Catherine is editor of the Revue francophone d'informatique musicale (RFIM).

10.1.3.2. Reviewer - Reviewing activities

Members of the project are regular reviewers for a number of international journal including ACM Computers In Entertainment (CIE), Journal of New Music Research (JNMR), Journal of Logic Language and Information (JoLLI), Revue francophone d'informatique musicale (RFIM), Discrete Mathematics &Theoretical Computer Science (DMTCS), International Journal of Foundations of Computer Science (IJFCS), Information & Computation (I&C) ...

10.1.4. Leadership within the Scientific Community

- M. Desainte-Catherine is president of the Association Française d'Informatique Musicale (AFIM)
- S. Salvati is the secretary of the Foundation for Logic Language and Information (FoLLI).

10.1.5. Research Administration

- M. Desainte-Catherine, directrice adjointe du LaBRI,
- M. Desainte-Catherine, directrice scientifique et administrative du SCRIME,
- M. Desainte-Catherine, responsable du thème SI de l'équipe image et son du LaBRI,
- D. Janin, membre commission recherche Bordeaux INP/ENSEIRB-MATMECA.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence: Myriam Desainte-Catherine, *Programmation fonctionnelle*, 44 h, L3, Software Engineering department, Bordeaux INP, France,

Licence: Myriam Desainte-Catherine, *Projet d'algorithmique et de programmation*, 25 h, L3, Software Engineering department, Bordeaux INP, France,

Licence: Anne Dicky, *Algorithmique des graphes*, 30 h, L3, Computer Science Departement, Paris VI University, Vietnam,

Licence: Anne Dicky, *Probabilités et combinatoire*, 75 h, L3, Computer Science Departement, Bordeaux University, France,

Licence: Anne Dicky, *Algorithmique et structures de données*, 50h, L2, Computer Science Departement, Bordeaux University, France,

Licence: Anne Dicky, *Fondamentaux pour les mathématiques et l'informatique*, 35 h, L1, Computer Science Departement, Bordeaux University, France,

Master: Sylvain Salvati, *Logique*, 12h, M1, Computer Science Departement, Bordeaux University, France,

Licence: David Janin, *Projet d'algorithmique et de programmation*, 25 h, L3, Software Engineering department, Bordeaux INP, France,

Licence: Sylvain Salvati, *Analyse syntaxique et projet de programmation 3*, 37,5 h, niveau L3, Computer Science Departement, Bordeaux University, France,

Master: Myriam Desainte-Catherine, *Compilation*, 14 h, M1, Software Engineering department, Bordeaux INP, France,

Master: Myriam Desainte-Catherine, *Projet de Génie Logiciel*, 25 h, M1, Software Engineering department, Bordeaux INP, France,

Master: Myriam Desainte-Catherine, *Informatique musicale contrôle et composition*, 25 h, M2, Software Engineering department, Bordeaux INP, France,

Master: Anne Dicky, *Recherche operationelle*, 70 h, M1, Computer Science Departement, Bordeaux University, France,

Master: David Janin, *Projet de Génie Logiciel*, 25 h, M1, Software Engineering department, Bordeaux INP, France,

Master: David Janin, *Compilation*, 20 h, M1, Network and System Engineering department (RSI), Bordeaux INP, France,

Master: David Janin, *Tutorat*, 15 h, M1, M2, Network and System Engineering department (RSI), Bordeaux INP, France,

Doctorat: Sylvain Salvati, *Initiation à CoQ*, 12 h, Ecole Doctorale Mathématique et Informatique, Bordeaux University, France.

10.2.2. Supervision

PhD : Etienne Dubourg, "Contribution à la théorie des langages de tuiles", defended in July 2016, supervised by D. Janin

PhD in progress : Pauline Mouawad, "Analyse et modélisation de l'émotion musicale"', started in september 2012, supervised by M. Desainte-Catherine,

PhD in progress : Jean-Michaël Célérier, "Outils d'écriture spatiale pour les partitions interactives", started in january 2015, supervised by M. Desainte-Catherine,

PhD in progress : Simon Archipoff, "Modélisation et programmation tuilée réactive", started in september 2015, supervised by D. Janin,

10.2.3. Juries

- D. Janin, member of the PhD jury of Clément Poncelet, "Model-Based Testing Real-Time and Interactive Music Systems", Université Paris VI / IRCAM, November 2016,

10.3. Popularization

The development of the T-calculus has eventually led us to a piano & computer performance that is going to be performed on stage in February 2017 with the pianist Edwin Bugger, associate member of the PoSET project.

POTIOC Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

"2nd International OpenViBE workshop", International BCI meeting 2016, Asilomar, CA, USA,2016 (Fabien Lotte)

10.1.1.2. Member of the Organizing Committees

"IHM et Education", workshop at IHM conference, Fribourg, Switzerland, Nov. 2016 (Martin Hachet, Anke Brock)

"2nd InternationalOpenViBE workshop", International BCI meeting 2016, Asilomar, CA, USA,2016 (Fabien Lotte, Camille Jeunet, Jérémy Frey)

"What's wrong with us? Roadblocks and pitfalls in designing BCI applications", International BCI meeting, Asilomar, CA, USA, 2016 (Fabien Lotte)

Special session "Human Factors and performance metrics for BMI Training and Operation",IEEE SMC 2016, Budapest, Hungary, (Fabien Lotte, Camille Jeunet)

Diversity Co-Chair at the ACM CHI'16 conference, San José, USA, 05/2016 (Anke Brock)

Microsoft Student Research Competition at the ACM ASSETS'16 conference, Reno,USA, 10/2016 (Anke Brock)

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

IEEE VR 2017 (Martin Hachet)

Eurographics STAR 2017 (Martin Hachet)

IHM 2016 (Martin Hachet)

Mobile and Ubiquitous Multimedia MUM 2016 (Anke Brock)

Mobile and Ubiquitous Multimedia MUM 2016 Poster Committee (David Furió, Anke Brock)

1st International Neuroadaptive Technology Conference 2017 (Fabien Lotte)

7th International Brain-Computer Interface Conference, 2017 (Fabien Lotte)

International Conference on Systems, Man and Cybernetics, Brain-MachineInterface Workshop (IEEE SMC) 2016 (Fabien Lotte, Camille Jeunet)

International workshop on Pattern Recognition in NeuroImaging (PRNI) 2016 (Fabien Lotte)

International Brain-Computer Interface Meeting 2016 (publicity committee+ review committee) (Fabien Lotte)

7th Augmented Human International Conference, 2016 (Fabien Lotte)

8th Augmented Human International Conference, 2017 (Fabien Lotte)

ACM ASSETS 2016 (Anke Brock)

Computer Applications and Quantitive Methods in Archaeology 2016 (CAA) (Pascal Guitton)

8th Augmented Human International Conference, 2017 (Fabien Lotte)

7th International Brain-Computer Interface Conference, 2017 (Camille Jeunet)

10.1.2.2. Reviewer

ACM SIGGRAPH 2016 (Martin Hachet)

IEEE 3DUI 2017 (Martin Hachet)

ACM ISS 2016 (Joan Sol Roo)

ACM CHI 2016 (Fabien Lotte, Anke Brock, Camille Jeunet, Jérémy Frey)

ACM CHI 2017 (Fabien Lotte, Camille Jeunet, Anke Brock, David Furió, Camille Jeunet, Jérémy Frey)

Augmented Humans 2016 (Fabien Lotte)

International BCI Meeting 2016 (Fabien Lotte)

EICS 2016 (Fabien Lotte)

IJCNN 2016 (Fabien Lotte)

PRNI 2016 (Fabien Lotte)

IEEE SMC 2016 (Fabien Lotte, Camille Jeunet)

Eurohaptics 2016 (Anke Brock)

Handicap 2016 (Anke Brock)

HapticsSymposium 2016 (Anke Brock)

ACM IHM 2016 (Anke Brock)

ACM MobileHCI 2016 (Anke Brock)

ACM NordiCHI 2016 (Anke Brock)

ACM TEI 2016 (Anke Brock)

ACM Ubicomp 2016 (Anke Brock)

ACM UIST 2016 (Anke Brock)

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Associate Editor in Brain Computer Interfaces (Fabien Lotte)

Associate Editor in Journal of Neural Engineering (Fabien Lotte)

Review Editor for Frontiers in Robotics and AI (Martin Hachet)

Review Editor for Frontiers in Neuroprosthetics (Fabien Lotte)

Review Editor for Frontiers in Human-Media Interaction (Fabien Lotte)

Guest Associate Editor, Frontiers in Robotics and AI, with D. Friedman, on "Brain-Computer Interfaces Technologies forRobotics and Virtual Reality", 2016 (Fabien Lotte)

TACCESS Special Issue for ASSETS'17 conference (Anke Brock)

10.1.3.2. Reviewer - Reviewing Activities

Computer and Graphics (Martin Hachet)

Computers and Education (David Furió)

Computational Intelligence and Neurosciences (Fabien Lotte)

Journal of Neural Engineering (Fabien Lotte)

Frontiers in Neurosciences / Frontiers in ICT (Fabien Lotte)

IEEE Transactions on Biomedical Engineering (Fabien Lotte)

IEEE Transactions on Neural Systems and Rehabilitation Engineering (Fabien Lotte)

Le Travail Humain (Fabien Lotte)

ACM TOCHI (Fabien Lotte)

Nature Scientific Reports (Fabien Lotte)

ACM TACCESS (Anke Brock)

Journal of Psychophysiology (Camille Jeunet)

PLOS One (Camille Jeunet)

Progress in Brain Research (Camille Jeunet)

Transaction in Human Machine Systems (Camille Jeunet)

Brain Science (Camille Jeunet)

10.1.4. Invited Talks

"Tangible Interaction and Spatial Augmented Reality for Education", University of Sussex, Jan. 2016 (Martin Hachet).

"Vers des interfaces cerveau-ordinateur populaires", Conférence What's Up In Your Mind, Paris, Jun 2016 (Jérémy Frey)

"Interaction Homme-Machine pour l'Education : au-delà de la souris et de l'écran", Colloque Robotique et Education, Bordeaux, Juin 2016 (Martin Hachet).

"Human Learning and Alternative Applications Towards Usable Electroencephalography-based Brain-Computer Interfaces", Max Planck Institute, Tuebingen, Germany, December 2016 (Fabien Lotte)

"The birth and scope of the BrainConquest ERC starting grant project", European Research Day 2016, Tokyo, Japan, November 2016 (Fabien Lotte)

"Towards Usable EEG-based Brain-Computer Interfaces", Tokyo University of Agriculture and Technology, Tokyo, Japan, November 2016 (Fabien Lotte)

"Principles and promises of EEG-based Brain-Computer Interface technologies", 1st Iranian IBRO/APRC School of Cognitive Neuroscience, Tehran, Iran, September 2016 (Fabien Lotte)

"When Brain-Computer Interaction meets Educational Sciences", LaBRI general assembly, Bordeaux,France, July 2016 (Fabien Lotte)

"Toward Usable Mental Imagery-based Brain-Computer Interfaces", Brain and Spine Institute, Paris, France, July 2016 (Fabien Lotte)

« From Neurofeedback to Brain-Computer Interfaces », Neurofeedback workshop in Bordeaux, France, July 2016 (Fabien Lotte)

"Brain-Computer Interaction and Spatial Augmented Reality Research in Potioc team", Concordia University, Montreal, Canada, June 2016 (Fabien Lotte, Camille Jeunet)

"Latest research results in Brain-Computer Interfaces and Augmented Reality", Brain and Computers Digital Media Conference, Center for Digital Media, Vancouver, Canada, June 2016 (Fabien Lotte)

« Educational Science Principles for Brain-Computer Interface Design", Inserm Lyon, France, April 2016 (Fabien Lotte)

"Considering User Training and Alternative Applications to Design Usable EEG-based BCI Technologies", EPFL, Center for Neuroprosthetics, Geneva, Switzerland, March 2016 (Fabien Lotte)

"Traitement des signaux cérébraux et classification des états mentaux", Journée scientifique de l'IFRATH "Interfaces Cerveau-Ordinateur", Paris, France, February 2016 (Fabien Lotte)

"Reciprocal learning between machines and humans for neurofeedback and BCI", Première Journée Nationale sur le Neurofeedback, Paris, France, January 2016 (Fabien Lotte)

"Interacting with spatial information" , Stanford HCI Group,Stanford University, USA, May 2016 (Anke Brock)

"Interacting with spatial information" , HERE, Berkeley, USA , May 2016 (Anke Brock)

"Interaction avec des cartes géographiques pour tous", Immersion, Bordeaux, France, April 2016 (Anke Brock, Julia Chatain)

"Interacting with spatial information" , University of Sussex, UK, February 2016 (Anke Brock)

Animation table ronde, Journée URFIST « Vers de nouveaux paradigmes pour l'édition scientifique », Bordeaux, March 2016 (Pascal Guitton)

"L'éthique en Sciences du numérique", Ecole du Management Inria, Paris, September 2016 (Pascal Guitton)

"Physiological computing and spatial augmented reality: reflecting on inner state", Paris Open Source Summit, Paris, November 2016 (Jérémy Frey)

"Transparence algorithmique et éthique", Journée nouveaux arrivants Inria, Saclay, December 2016 (Pascal Guitton)

"Interfaces cerveau-ordinateur : quoi, pourquoi et comment ?", ENSCBP - Media Sciences, Bordeaux, Février 2016 (Camille Jeunet)

"How Cognitive Sciences Can Contribute to Research in Brain-Computer Interaction", National Cognitive Science Conference 2016, San Diego (Camille Jeunet)

"Understanding and Improving Mental-Imagery based Brain-Computer Interface User Training: Towards Efficient, Reliable and Accessible BCIs", University of Oldenburg, October 2016 (Camille Jeunet)

"Understanding and Improving MI-BCI User-Training", University of Freiburg, Germany, November 2016 (Camille Jeunet)

10.1.5. Leadership within the Scientific Community

IEEE 3DUI Steering committe - Leader (Martin Hachet)

10.1.6. Scientific Expertise

Member of Jury for recruitment of Researcher (CR2-CR1) Inria Bordeaux (Martin Hachet)

Expert for the Millennium Science Initiative research group evaluation, Chile (Fabien Lotte)

Expert for the « Sapienza »,University of Rome, research projects, Italy (Fabien Lotte)

Expert for the Partenariats Hubert-Curien (PHC) Germaine deStaël, France-Switzerland research projects (Fabien Lotte)

Etude "Panorama du cyberespace dans 3 à 5 ans" - Workshop "Evolutions technologiques", CEIS, CREC (Fabien Lotte)

Member of Inria Cellule de veille et de prospective (Pascal Guitton)

Expert for Credit Impot Recherche (Martin Hachet)

Member of the scientific committee of SCRIME (Martin Hachet)

10.1.7. Research Administration

Member of Inria Bordeaux Sustainable Development Committee (Martin Hachet)

Member of Inria Ethical Committee (COERLE) (Pascal Guitton)

Member of Inria International Chairs Committee (Pascal Guitton)

Responsable of Inria RA2020 Committee (new annual Activity Report) (Pascal Guitton)

Member of Comité de Pilotage de Software Heritage (Pascal Guitton)

Member of Comité de Pilotage Responsabilité Sociétale de l'Université, Université de Bordeaux (Pascal Guitton)

Member of Conseil d'administration Institut d'Optique Graduate School (Pascal Guitton)

Member of Commission de recrutement des Inspecteurs Généraux de l'Education Nationale (IGEN) (Pascal Guitton)

Member of Inria Bordeaux Committee for Technological Developement (Fabien Lotte)

Member of Inria Bordeaux Young Researchers Committe (Anke Brock)

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence : Jérémy Frey, Unix and Programming, CM-TD, 74.67h eqtd, L1 Computer Science, University of Bordeaux, France

Licence : Damien Clergeaud, Algorithme et Programmation, TD et TP, 32h eqtd, L1 Computer Science, University of Bordeaux, France

Licence : Damien Clergeaud, Algorithmique des structures de données, TD et TP, 32h eqtd, L2 Computer Science, University of Bordeaux, France

Licence : Camille Jeunet, Sciences humaines et méthodes, CM-TD, 18h eqtd, Licence MIASHS, University of Bordeaux, Franc

Master : Jérémy Frey, Programming projects, TD, 18h eqtd, M1 Computer Science, University of Bordeaux, France

Master : Pascal Guitton, Virtual and Augmented Realities, CM, 36h eqtd, M2 Computer Science, University of Bordeaux, France

Master : Pascal Guitton, Digital accessibility, CM, 12h eqtd, M1 Cognitive Science, University of Bordeaux, France

Master : Jérémy Frey, Programming projects, TD, 10h eqtd, M2 Computer Science, University of Bordeaux, France

Master : Pascal Guitton, Assistive technologies, CM, 30h eqtd, M2 Cognitive Science, University of Bordeaux, France

Master : Anke Brock, Virtual Reality and 3D Interaction, CM-TD, 7,5h eqtd, M2 Cognitive Science, University of Bordeaux, France

Master : Martin Hachet, Virtual Reality and 3D Interaction, CM, 12h eqtd, M2 Cognitive Science, University of Bordeaux, France

Master : Fabien Lotte, Virtual Reality and 3D Interaction, CM, 4h eqtd, M2 Cognitive Science, University of Bordeaux, France

Master : Anke Brock, Interaction and Ergonomics, CM-TD, 10h eqtd, 3rd year (M2), Enseirb, Bordeaux, France

Master : Martin Hachet, Interaction and Ergonomics, CM-TD, 8h eqtd, 3rd year (M2), Enseirb, Bordeaux, France

Master: Fabien Lotte, Virtual Reality, Accesibility and Brain-Computer Interfaces, 4h eqtd, 3rd year (M2), ENSSAT, Lannion, France

Master: Fabien Lotte, Brain Computer Interfaces, 6h eqtd, 3rd year (M2), ESIEA, Laval, France

Master : Anke Brock, Human-Computer Interaction, CM-TD, 12h eqtd, M2 SRI, Upsitech Toulouse, France

Master: Fabien Lotte, Human-Computer Interactions, CM-TD, 7.5 eqtd, M1 Cognitive Sciences and Ergonomy, University of Bordeaux, France

Master : Anke Brock, Accessibility of interactive systems, CM-TD, 6h eqtd, M2 IHM, ENAC and University Toulouse, France

Master : Anke Brock, Accessibility of interactive systems, CM-TD, 6h eqtd, M2 Systèmes Mobiles Autonomes Communicants / Internet des Objets (Mobiles), University Bordeaux, France

Master : Camille Jeunet, HCI and Human factors, CM-TD, 18h eqtd, M1 Sciences Cognitives and Ergonomie, University of Bordeaux, France

MOOC : Pascal Guitton and Hélène Sauzéon, "Comment favoriser l'accessibilité numérique", 5 weeks, Plate-forme France Université Numérique (FUN), large audience, initial and continuous training, about 4000 registered people.

10.2.2. Supervision

PhD: Camille Jeunet, "Improving User training approaches for Brain-Computer Interface", University of Bordeaux, Defense on December 2nd, 2016 (Martin Hachet, Fabien Lotte, co-supervision with Bernard N'Kaoua, and Sriram Subramanian)

PhD in progress: Julia Chatain, "Design and evaluation of augmented geographic maps", University of Bordeaux, since September 2015 (Anke Brock and Martin Hachet)

PhD in progress: Damien Clergeaud, "Collaborative interaction for aerospace scenarios", University of Bordeaux, since November 2014 (Pascal Guitton)

PhD in progress: Joan Sol Roo, "Interaction with Spatial Augmented Reality", University of Bordeaux, since December 2014 (Martin Hachet)

PhD in progress: Jelena Mladenovic,"User Modeling for Adaptive BCI training and operation", University of Bordeaux, since December 2015 (Fabien Lotte, co-supervised with Jérémie Mattout)

PhD in progress: Pierre-Antoine Cinquin,"Design and Experimental Validation of Accessible E-learning systems for people with cognitive disabilities", University of Bordeaux, since September 2016 (Hélène Sauzéon, Pascal Guitton)

PhD in progress: Léa Pillette, "Redefining Formative Feedback in Brain-Computer Interface User Training", University of Bordeaux, since September 2016 (Fabien Lotte, Bernard N'Kaoua)

PhD in progress: Lorraine Perronnet, "Neurofeedback and Brain Rehabilitation based on EEG and fMRI", Rennes University, since January 2014 (Fabien Lotte, co-supervision with Anatole Lécuyer, Christian Barillot, Inria Rennes and Maureen Clerc, Inria Sophia Antipolis)

PhD in progress: Stephanie Lees, "Assessing and Optimising Human-Machine Symbiosis through Neural signals for Big Data Analytics", Ulster University, since February 2014 (Fabien Lotte, co-supervision with Damien Coyle, Paul McCullagh and Liam Maguire, Ulster University)

10.2.3. Juries

PhD (Rapporteur): Elizabeth Rousset, INP Grenoble, February 2016 (Pascal Guitton)

PhD (Rapporteur): Sareh Saeedi, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland, March 2016 (Fabien Lotte)

PhD (Rapporteur): Hind Gacem, Telecom ParisTech, April 2016 (Martin Hachet)

PhD (Rapporteur): Honyun Cho, Gwangju Institute of Science and Technology, South Korea, June 2016 (Fabien Lotte)

PhD (Rapporteur): Sebastien Pelurson, Université Grenoble Alpes, August 2016 (Martin Hachet)

PhD (Président): Brett Ridel, Université de Bordeaux, October 2016 (Pascal Guitton)

PhD (Président): Carlos Zubiaga, Université de Bordeaux, November 2016 (Pascal Guitton)

PhD (Examinateur): Emeric Baldisser, Université de Bordeaux, March 2016 (Pascal Guitton)

PhD (Examinateur): Guillaume Claude, INSA Rennes, July 2016 (Pascal Guitton)

PhD (Examinateur): Benoit Bossavit, Universidad de Navarra, Nov. 2016 (Martin Hachet)

PhD (Examinateur): Liming Yang, Ecole Centrale de Nantes, December 2016 (Pascal Guitton)

Thesis Advisory Committee: Lonni Besançon, Université Paris Saclay, June 2016 (Martin Hachet)

Thesis Advisory Committee: Sarah Buchanan, University Central Florida, July 2016 (Martin Hachet)
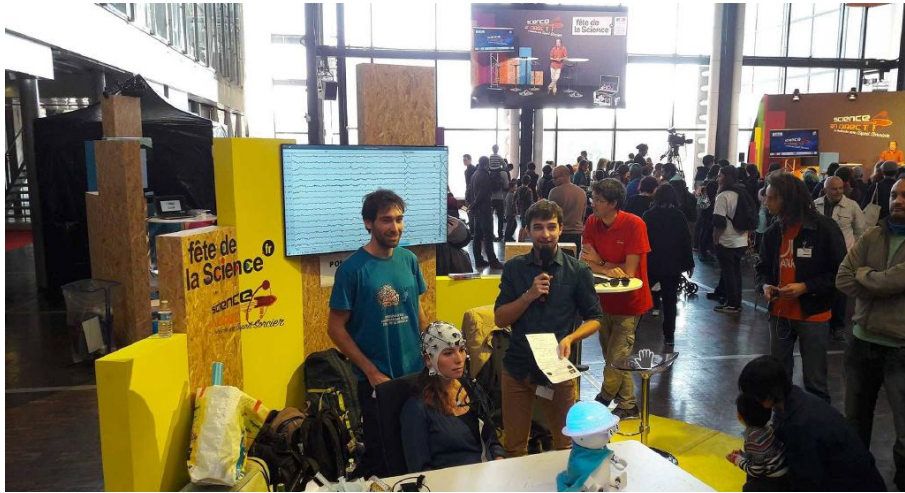
10.3. Popularization

Figure 19. Teegi was demonstrated during several public events over the year, including "Fête de la Science" in La Cité des Sciences in Paris.

10.3.1. Science Festivals

Science Agora, Miraikan, Tokyo, Japan, November 2016 (Fabien Lotte)

Cartopartie, Fête de la Science, Bordeaux, October 2016 (Anke Brock)

Démonsration de Teegi, Cité des Sciences, Paris, retransmission en direct sur l'Esprit Sorcier, October 2016 (Jérémy Frey, Jelena Mladenovic, Thibault Lainé)

"Contrôler par la pensée: Apprenez comment fonctionne une interface cerveau-ordinateur en jouant à Tux Race et découvrez Teegi", Cap science, October 2016 (Jelena Mladenovic, Jérémy Frey, Thibault Lainé)

10.3.2. Popularization Talks

"Les Interfaces Cerveau-Ordinateur", CogTalk, Bordeaux, October 2016 (Fabien Lotte)

TEDx UTC (Compiegne, France, 01/2016): "Toucher et entendre les cartes géographiques" https://www.youtube.com/watch?v=sr2l8PQg_2E&feature=youtu.be, (Anke Brock)

"Comment le numérique nous aide à changer", Séminaire Science et développement durable, Bordeaux, June 2016 (Pascal Guitton)

"Réalité virtuelle et réalité augmentée : quelles réalités et quels futurs ?", Séminaire Photonique et réalité virtuelle, Bordeaux, November 2016 (Pascal Guitton)

"Le numérique et ses sciences dans le réel", Séminaire national « Enseigner l'option Informatique et création numérique au cycle terminal », ISENESR (Futuroscope), November 2016 (Pascal Guitton)

Pint of Science, "Interfaces cerveau-ordinateur : Entre mythes et réalité", Bordeaux, May 2016 (Camille Jeunet)

10.3.3. Popularization Articles

"Mythes et réalités sur l'interaction cerveau-ordinateur", Livre "5 jeunes chercheurs d'avenir" (Prix de Thèse le Monde), Editions Le Pommier (Fabien Lotte)

10.3.4. Demonstrations

Inner Garden, Bordeaux Geek Festival (BGF), May 2016 (Joan Sol Roo, Julia Chatain).

Augmented Michelson Interferometer, Bordeaux Geek Festival (BGF), May 2016 (Benoit Coulais, David Furio)

Augmented Michelson Interferometer, Hall of ALPC region, June 2016 (David Furio)

Demonstration of Teegi, Colloque Robotique et Education, Bordeaux, Juin 2016 (Jérémy Frey, Thibault Lainé).

Demonstration of Teegi,, Bordeaux Geek Festival (BGF), May 2016 (Thibault Lainé)

10.3.5. Women In Science

Femmes et Sciences Deputy Board Member (« suppléante au conseil d'administration »), since 2016 (Anke Brock)

Intervention in a high school in Valence d'Agen to present our research projects and career paths , March 2016 (Anke Brock with fellow members of Femmes et Sciences Aquitaine).

"Digit'elles -témoignages de femmes scientifiques" , Fête de la Science, Bordeaux, October 2016 (Anke Brock with fellow members of Femmes et Sciences Aquitaine)

Django girls, Django workshops for young participants, April and June 2016 (Julia Chatain)

Filles et Maths, Speed meeting with female highschool students ti speak about careers in mathematics, May 2016 (Julia Chatain)

Member of Inria Comité Parité et Egalité (Pascal Guitton)

10.3.6. Other

Conference on Brain-Computer Interfaces and how to become a research scientist, in a High School in Tulles, December 2016 (Fabien Lotte)

Radio interview on BCI for "L'oeuf ou la poule", on CHOQ, a Montréal Radio from UQAM (Université du Québec à Montréal), Montreal, Canada, June 2016 (Fabien Lotte, Camille Jeunet)

Radio interview on BCI and VR on Radio Canada, in Vancouver, Canada, June 2016 (Fabien Lotte)

Radio interview about BCI and the Brain and Computers Digital Media Conference on the Vancouver-based Round House Radio, June 2016 (Fabien Lotte)

Nuit des Chercheurs, Cap Sciences, Bordeaux, Septembre 2016 (Camille Jeunet)

<p style="text-align:center;color:red;font-weight:bold;font-size:large;">PRIVATICS Project-Team</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

Daniel Le Metayer: CPDP 2016 (panel chairman), Privacy protection, new technical and legal instruments (Colloque Inria CAPPRIS).

Cédric Lauradoux: Nombre et cryptographie, maison pour la science Alpes Dauphiné

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

Cédric Lauradoux: RESSI 2016 and ATC 2016.

Daniel Le Metayer: Infer 2016, STM 2016, Annual Privacy Forum 2016, IWPE 2016, CPDP 2016 and WETICE-FISA.

Marine Minier: MyCrypt 2016 and RESSI 2016.

Vincent Roca: GreHack 2016, SPACOMM 2016 and VTC2016-Spring.

Mathieu Cunche: APVP 2016, HotPlanet 2016, ICISSP 2017 and IEEE TrustCom 2016.

Claude Casteluccia: Wisec 2016, DTL 2016, AFP 2016, UEOP'16 and DAT'2016.

9.1.3. Invited Talks

Daniel Le Metayer: IFIP SEC 2016 and France Stratégie, Algorithms: transparency and responsibility panel.

Claude Casteluccia: LIG Keynote.

9.1.4. Leadership within the Scientific Community

Vincent Roca: co-chair of the research group NWCRG (Network Coding Research Group) of IRTF (Internet Research Task Force)

Daniel Le Metayer: member of the scientific committee of the CNIL-Inria Privacy Award

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Undergraduate course : Vincent Roca, *On Wireless Communications*, 12h, L1, Polytech' Grenoble, France.

Undergraduate course : Vincent Roca, *On Network Communications*, 44h, L1, IUT-2 (UPMF University) Grenoble, France.

Undergraduate course : Marine Minier, *Probabilities*, 80h, L3, INSA-Lyon, France.

Undergraduate course : Marine Minier, *Signal Processing*, 20h, L3, INSA-Lyon, France.

Undergraduate course : Marine Minier, *Analysis*, 20h, L3, INSA-Lyon, France.

Undergraduate course : Marine Minier, *Introduction to Cryptography*, 10h, L3, INSA-Lyon, France.

Undergraduate course : Marine Minier, *Information Theory*, 10h, L3, INSA-Lyon, France.

Undergraduate course : Marine Minier, *Computer Architecture*, 20h, L3, INSA-Lyon, France.

Undergraduate course : Marine Minier, *Computer Security*, 20h, L3,IUT-Lyon, France.

Undergraduate course : Mathieu Cunche, *Introduction to computer science*, 120h, L1, INSA-Lyon, France.

Master : Mathieu Cunche, *Wireless Security*, 6h, M2, INSA-Lyon, France.

Undergraduate course : Mathieu Cunche, *On Wireless Network Security*, 10h, L1, IUT-2 (UPMF - Grenoble University) , France.

Undergraduate course : Mathieu Cunche, *Advanced Topics in Security*, 20h, L3, ENSIMAG, France.

Undergraduate course : Mathieu Cunche, *Security & Privacy*, 21h, L3, INSA-Lyon, France.

Undergraduate course : Daniel Le Métayer, *Security & Privacy*, 17h, L3, INSA-Lyon, France.

Undergraduate course : Daniel Le Métayer, *Privacy*, 12h, L3, INSA-Lyon, France.

Master : Cédric Lauradoux, *Introduction to Cryptology*, 30h, M1, University of Grenoble Alpes, France.

Master : Cédric Lauradoux, *Internet Security*, M2, University of Grenoble Alpes, France.

Master : Claude Castelluccia, *Advanced Topics in Security*, 20h, M2, Ensimag/University of Grenoble Alpes, France.

Master : Claude Castelluccia, *Advanced Topics in Security*, 15h, M2, Ensimag/INPG, France.

Master : Claude Castelluccia, *Security & Privacy*, 18h, Master MOSIG, University of Grenoble Alpes, France.

Master : Claude Castelluccia, *Privacy*, 4h, M2, College de droit University of Grenoble Alpes, France.

Master : Marine Minier, *Security for wireless networks*, 20h, M2, INSA-Lyon, France.

Master : Mathieu Cunche, *Wireless Security*, 6h, M2, INSA-Lyon, France.

Master : Daniel Le Métayer, *Privacy*, 6h, M2 MASH, Université Paris Dauphine, France.

9.2.2. Supervision

PhD defended : Jagdish Achara, *Unveiling and Controlling Online Tracking*, Claude Castelluccia and Vincent Roca.

PhD defended : Amrit Kumar, *Security and Privacy of Hash-Based Software Applications* , Cedric Lauradoux.

PhD in progress : Victor Morel, *IoT privacy* , September 2016, Daniel Le Métayer.

PhD in progress : Jessye Dos Santos, *Wireless physical tracking*, October 2013, Cédric Lauradoux and Claude Castelluccia.

PhD in progress : Célestin Matte, *Système d'observation des flux humains via Wi-Fi respectueux de la vie privée*, October 2014, Marine Minier et Mathieu Cunche.

Intern (M2): Alessandro Tedesco, *The rise of Internet of things made possible the large-scale collection of personal data and metadata*, Claude Castelluccia

Intern (M2): Jose-Paul Domingez, *The geopolitics of Internet protocols*, Claude Castelluccia

Intern (M2): Zoltan Kovac, *MyRealOnlineChoices*, Claude Castelluccia

Intern (M1): Margaux Canet Sola, *decompression bombs*, Cédric Lauradoux

Intern (M1): Julie Catania, Fuzzing the `zlib`, Cédric Lauradoux

Intern (M1): Aurelien Monnet Paquet, *Anti-virus DOS attacks*, Amrit Kumar

Intern (M1): Mary-Andrea Rakotomanga, *Compression quines*, Cédric Lauradoux

9.2.3. Juries

PhD: Yagdish Achara, *Unveiling and Controlling Online Tracking*, 18/10/2016, Claude Castelluccia and Vincent Roca.

PhD: Amrit Kumar, *Security and Privacy of Hash-Based Software Applications*, Université de Grenoble, Nantes, 18/10/2016, Cédric Lauradoux.

PhD : Tarek Sayah, *Exposition seélective et probleème de fuite d'inférence dans le Linked Data*, Université Claude Bernard Lyon 1, 8/9/2016, Vincent Roca.

PhD : Karina Sokolova Perez, *Bridging the Gap between Privacy by Design and Mobile Systems by Patterns*, UTT Troyes, 27/04/2016, Daniel Le Métayer.

PhD: Tania Richmond, *Implantation sécurisée de protocoles cryptographiques basés sur les codes correcteurs d'erreurs*, Université de Saint-Etienne, 24/10/2016, Marine Minier.

PhD: Nora El Amrani, *Codes MDS additifs pour la cryptographie*, Université de Limoges, 24/02/2016, Marine Minier.

9.3. Popularization

9.3.1. Interview

Privatics team has participated to an episode of X:enius entitled: "Données personnelles : à quel point sommes-nous prévisibles ?". It features an interview of Claude Castelluccia, Daniel Le Métayer and Mathieu Cunche. The episode was broadcasted the 12th december 2016 on Arte.

9.3.2. Articles

D. Le Métayer in *France Stratégie, Algorithmes, libertés et responsabilités*, 10/03/2016.

C. Castelluccia in Le Monde, *Que reproche-t-on au TES, le « mégafichier » des 60 millions de Français*, 08/11/2016.

M. Cunche and C. Matte in GNU/Linux Magazine HS 84, *Traçage Wi-Fi : applications et contre-mesures*, 05/2016.

M. Cunche in Arte Futuremag, *Données personnelles, nos smartphones nous espionnent-ils?*, 05/2016.

9.3.3. Conferences

C. Castelluccia, *An Introduction to DataVeillance (Data + Surveillance)*, LIG UGA Keynote, 07/04/2016

V. Roca, *Vie privé et smartphones font ils bon ménage?*, Cours Universite´ Ouverte, Lyon 1, cycle Impact de l'informatique sur la socie´te´ et sur nos vies, 11/2016.

C. Lauradoux, *Email et vie privée: pourquoi utiliser GPG ?*, Cours Master 2, 01/12/2016

C. Lauradoux, *Cryptographie et grands nombres*, Olympiades académiques de Mathématiques, 04/07/2016

C. Lauradoux, *Cryptographie visuelle*, Collège/Lycée Jean Prévost, 01/06/2016

C. Lauradoux, *Cryptanalyse*, stage MathC2+, 06/2016

C. Lauradoux, *Protéger la confidentialité de ces messages*, Collège Paul Fort Is sur Tille, 04/10/2016

C. Lauradoux, *Internet et vie privée*, Collège Poncet Cluses, 15/12/2016

PROSECCO Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Prosecco is organizing the 2nd IEEE European Symposium on Security and Privacy in Paris, | 26-28 April 2017. Catalin Hritcu is General Chair, Bruno Blanchet is Finance Chair, and Karthikeyan Bhargavan is Local arrangements Chair.
- Catalin Hritcu organized two Secure Compilation Meetings (SCM) at Inria Paris in (13 invited participants, 17–19 August 2016) and POPL (15 January 2017)

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

- Catalin Hritcu is PC member at POPL 2017
- Catalin Hritcu is PC member at POST 2017
- Catalin Hritcu was PC member at CSF 2016
- Catalin Hritcu was PC member at POST 2016
- Catalin Hritcu was PC member at ITP 2016
- Catalin Hritcu was PC member at cPP 2016
- Harry Halpin is PC member for ACM WWW 2017
- Harry Halpin was PC member for W3C Blockchains and the Web
- Karthikeyan Bhargavan is ERC member at POPL 2017
- Karthikeyan Bhargavan is PC member at IEEE S&P 2017
- Karthikeyan Bhargavan was PC member at IEEE S&P 2016
- Karthikeyan Bhargavan was PC member at ACM CCS 2016
- Karthikeyan Bhargavan was PC member at IEEE CSF 2016
- Karthikeyan Bhargavan was PC member at ACM PLAS 2016

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Associate Editor

- – of the *International Journal of Applied Cryptography (IJACT)* – Inderscience Publishers: Bruno Blanchet

9.1.4. Invited Talks

- Karthikeyan Bhargavan gave an invited talk at EUROCRYPT 2016
- Karthikeyan Bhargavan gave an invited talk at the OAuth Workshop 2016
- Karthikeyan Bhargavan gave an invited talk at SSTIC 2016

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Master: Bruno Blanchet, Formal Methods, 9h equivalent TD, master M2 MIC, université Paris VII, France
- Master: Bruno Blanchet, Cryptographic protocols: formal and computational proofs, 31.5h equivalent TD, master M2 MPRI, université Paris VII, France
- Master: Karthikeyan Bhargavan, Cryptographic protocols: formal and computational proofs, 31.5h equivalent TD, master M2 MPRI, université Paris VII, France
- Master: Karthikeyan Bhargavan, Protocol Safety and Security, master ACN Telecom ParisTech et Ecole Polytechnique
- Undergraduate: Karthikeyan Bhargavan, INF421 and INF431: Programmation, Ecole Polytechnique
- Doctorat: Karthikeyan Bhargavan: Protecting TLS from legacy cryptography, l'École de printemps en codage et cryptographie, May 2016
- Master: Catalin Hritcu, Cryptographic protocols: formal and computational proofs, 31.5h equivalent TD, master M2 MPRI, université Paris VII, France
- Doctorat: Catalin Hritcu: F* course at Computer Aided Analysis of Cryptographic Protocols summer school, Bucharest, September 2016

9.2.2. Supervision

- PhD completed: Antoine Delignat-Lavaud
  On the Security of Authentication Protocols for the Web
  defended March 2016, supervised by Karthikeyan Bhargavan
- PhD in progress: Evmorfia-Iro Bartzia
  Machine-checked program verification for concrete cryptography,
  defence on February 15, 2017, supervised by Karthikeyan Bhargavan and Pierre-Yves Strub
- PhD in progress: Jean Karim Zinzindohoué
  Analyzing cryptographic protocols and their implementations,
  started September 2014, supervised by Karthikeyan Bhargavan
- PhD in progress: Nadim Kobeissi
  Analyzing cryptographic web applications,
  started February 2015, supervised by Karthikeyan Bhargavan
- PhD incomplete: Yannis Juglaret
  Micro-policies and Secure Compilation,
  started September 2015, interrupted September 2016, supervised by Catalin Hritcu

9.2.3. Juries

- Karthikeyan Bhargavan served on the PhD jury of Olivier Levillain
- Harry Halpin served on the PhD jury of Nikita Mazurov

9.3. Popularization

9.3.1. Seminars

- Karthikeyan Bhargavan: invited talks at SSTIC, EUROCRYPT, OAuth Workshop
- Bruno Blanchet: invited talks at John Mitchell's 60th birthday workshop, Stanford University, CA (May 2016), Facebook, Menlo Park, CA (May 2016), and at University of Oslo (Dec 2016).
- Catalin Hritcu: invited talks at CEA List, MSR Redmond, Inria Gallium, Secure Compilation Meeting, ERC, Inria Prosecco, MPI-SWS
- Harry Halpin: invited talks at NetFutures 2016 (April 2016), Trust in the Digital World (June 2016), Strategic Research Challenges in Privacy-Enhancing Technologies (July 2016), European Dialogue on Internet Governance (September 2016), Internet Governance Forum Tunis (October 2016), Keynote at International Workshop on Semantic Web, and Cryptodesign (November 2016).

<p style="text-align:center;color:red;">QUANTIC Project-Team</p>

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Journal

8.1.1.1. Member of the Editorial Boards

Mazyar Mirrahimi is an associate editor of System and Control Letters.

Mazyar Mirrahimi is a guest editor for the journal "Quantum Science and Technology" (Institute Of Physics, 2016), Special number on "Quantum coherent feedback and quantum reservoir engineering".

8.1.1.2. Reviewer - Reviewing Activities

Benjamin Huard served as a referee for Nature, Science, Physical Review Letters and other physics journals.

Zaki Leghtas served as a referee for Physical Review Letters and Physical Review X.

Mazyar Mirrahimi served as a referee for Nature and Physical Review Journals.

Pierre Rouchon has been a reviewer for several automatic control and dynamical systems journals and conferences.

Alain Sarlette has been a reviewer for several automatic control and dynamical systems journals and conferences.

8.1.2. Invited Talks

Benjamin Huard, Aug 2016 Formulating and Finding Higher-Order Interference Workshop, Perimeter Institute, Canada.

Benjamin Huard, Jun 2016 4th International Workshop on Frontiers in Quantum Optics and Quantum Information, Beijing Computational Research Center, Beijing, China.

Benjamin Huard, May 2016 Physics department seminar, Chalmers University, Sweden.

Benjamin Huard, May 2016 Statistical Mechanics of Quantum Dynamics, Mariehamn, Finland.

Benjamin Huard, May 2016 Workshop Non-equilibrium thermodynamic phenomena and problems of mesoscopic physics, Aalto University, Finland.

Benjamin Huard, Mar 2016 Mini-Colloque "Rencontre du Non Linéaire" 2016, Paris, France.

Benjamin Huard, Jan 2016 Conference SCALEQIT 2016, Delft, Netherlands.

Zaki Leghtas, Oct 2016, Karlsruhe Institute of Technology, Germany.

Mazyar Mirrahimi, Dec 2016, Yale University, USA.

Mazyar Mirrahimi, Dec 2016, Tutorial at Conference GDR Physique Mesoscopique, Aussois, France.

Mazyar Mirrahimi, Nov 2016, UC Berkeley, USA.

Mazyar Mirrahimi, Oct 2016, University of Pennsylvania, USA.

Mazyar Mirrahimi, June 2016, Journées Scientifiques Inria, Inria Rennes, France.

Mazyar Mirrahimi, July 2016, Tutorial in summer school "Stochastic Methods in Quantum Mechanics", Autrans, France.

Mazyar Mirrahimi, April 2016, "Quantum and Nano Control" workshop, Institute of Mathematics and its Applications of Minneapolis, USA.

Mazyar Mirrahimi, Feb 2016, Institut Néel, Grenoble, France.

Mazyar Mirrahimi, Jan 2016, Conference SCALEQIT 2016, Delft, Netherlands.

Pierre Rouchon, Dec 2016, IEEE Conference on Decision and Control, Las Vegas, USA.

Pierre Rouchon, April 2016, "Quantum and Nano Control" workshop, Institute of Mathematics and its Applications of Minneapolis, USA.

Pierre Rouchon, June 2016, Conference "Nonlinear Partial Differential Equations and Applications" in the honor of Jean-Michel Coron for his 60th birthday, IHP, Paris.

Alain Sarlette, May 2016, workshop on quantum dynamics and control, IHP, Paris.

Alain Sarlette, July 2016, summer school "Stochastic Methods in Quantum Mechanics", Autrans, France.

8.1.3. Scientific Expertise

Benjamin Huard was a member of the ANR CES30 committee in 2016.

Mazyar Mirrahimi is a member of the Technical Committee on "Distributed Parameter Systems" in IFAC (International Federation of Automatic Control).

Pierre Rouchon was "president du comité d'experts" for the HCERES evaluation in January 2016 of the "Laboratoire des Sciences du numériques de Nantes (LS2N)" .

Pierre Rouchon acts as panel member for the panel PE1-Mathematics in the ERC Advanced Grant 2016 evaluation.

Pierre Rouchon is a member of the "Conseil Scientifique du Conservatoire National des Arts et Metiers" since 2014.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Benjamin Huard has given a course (20 hours) entitled "Quantum fluctuations and measurement" in the Master ICFP (International Centre for Fundamental Physics) of ENS Paris, UPMC, Paris 7 and Orsay.

Benjamin Huard has coordinated an experimental project (40 hours) entitled "Measuring the quantum of conductance across an atom" at ENS Paris for Physics students in L3.

Zaki Leghtas taught a course on Quantum Mechanics at Paris Sciences et Lettres (40 hours).

Zaki Leghtas taught a course on Quantum Mechanics and Statistical Physics at Mines ParisTech (12 hours).

Zaki Leghtas taught a course on Complex Analysis at Mines ParisTech (10 hours).

Mazyar Mirrahimi and Pierre Rouchon have given a course (20 hours) entitled "UE : Analyse et contrôle de systèmes quantiques " in the "Master de sciences et technologies, mention mathématiques et applications, Université Pierre et Marie Curie".

Mazyar Mirrahimi has given a graduate-level course (15 hours) entitled "Quantum Control" at Yale University.

Mazyar Mirrahimi has given a 4-hour tutorial on "Quantum measurement and feedback" at the summer school "Stochastic Methods in Quantum Mechanics", Autrans, France.

Pierre Rouchon and Alain Sarlette gave a one week half-time course (15hours) on feedback control of quantum systems at the Elgersburg schools for Mathematical System Theory, 29/2/2016 - 4/3/2016, Germany.

Alain Sarlette has given a master course on "Probabilistic robotics" at Ghent University (30 hours).

8.2.2. Supervision

PhD in progress: Danijela Markovic, ENS. "Quantum information protocols with microwave quantum optics". Sept 2014. (advisors: Benjamin Huard and François Mallet).

PhD in progress: Nathanaël Cottet. ENS. "Quantum heat engines based on superconducting circuits". Sept 2015. (advisor: Benjamin Huard).

PhD in progress: Quentin Ficheux. ENS. "Thermodynamics of quantum information". Sept 2015. (advisors: Benjamin Huard and Zaki Leghtas).

PhD in progress: Raphael Lescanne. ENS. "Engineering Multi-Photon Dissipation In Superconducting Circuits For Quantum Error Correction". September 2016. (advisors: Zaki Leghtas and Benjamin Huard).

PhD in progress: Rémi Azouit. Mines Paristech. "Quantum circuits, Input/Output theory and adiabatic elimination". Sept 2014. (advisor: Pierre Rouchon).

PhD in progress: Gerardo Cardona. Mines ParisTech. "Beyond static gains in analog quantum feedback control". Nov 2016 (advisors: Pierre Rouchon and Alain Sarlette).

PhD in progress: Alain Sarlette is co-supervising 3 PhD students with his former institution UGent (Simon Apers, Zhifei Zhang, Arash Farnam). Simon Apers is working on (quantum) network algorithms accelerations and intends to address other quantum control questions.

PhD: Joachim Cohen. ENS. "Autonomous quantum error correction with superconducting circuits". Nov 2013 (advisor: Mazyar Mirrahimi), His defense is programmed for Feb 2017.

PhD in progress: Lucas Verney. ENS. "Robust quantum information processing with superconducting circuits". Sept 2016. (advisors: Zaki Leghtas and Mazyar Mirrahimi).

PhD: Noad Hamze El Badaoui. He has defended his PhD thesis on December 2, 2016. His thesis entitled "Dynamique et estimation paramétrique pour les gyroscopes laser à milieu amplificateur gazeux" was under the supervision of Philippe Martin and Pierre Rouchon.

PhD: Pierre Six. He has defended his PhD thesis on November 22, 2016. His thesis entitled "Estimation d'état et de paramètres pour les systèmes quantiques ouverts" was under the supervision of Pierre Rouchon.

8.2.3. *Juries*

Benjamin Huard was a member of the PhD defense committees of Katrina Sliwa (Yale University, USA), Antoine Tilloy (ENS Paris, France), Philip Krantz (Chalmers, Sweden), Kristinn Juliusson (CEA Saclay, France), Yehan Liu (Yale University, USA), Pierre Six (Mines ParisTech, France) and of the HdR committee of Caglar Girit (Collège de France, France).

Mazyar Mirrahimi was a member the PhD defense committees of Zhan Shi (Reviewer, University of New South Wales, Australia), Shakib Daryanoush (Reviewer, University of Griffith, Australia), Ying Fu (Reviewer, Université Paris Dauphine), Kristinn Juliusson (CEA Saclay, France).

Alain Sarlette was a member of the PhD defense committee of Bram Vervisch (Ghent University, Belgium).

8.3. Popularization

Mazyar Mirrahimi gave interviews for radios, newspapers, magazines and websites (France Culture, Le Monde, La Recherche, Silicon, Industrie and Technologies).

Pierre Rouchon was invited by the "Département de Mathématiques Appliquées de l'Ecole Polytechnique" to give a talk entilted "Dynamique et contrôle des systèmes: du classique au quantique' for the students of Ecole Polytechnique (April 21, 2016).

Alain Sarlette is answering questions about quantum control and quantum computing on the website "ik-heb-een-vraag.be" where Flemish layman can ask questions to scientific experts.

RAP Project-Team

7. Dissemination

7.1. Promoting Scientific Activities

7.1.1. Scientific events selection

7.1.1.1. Member of the editorial boards

- *Nicolas Broutin* is member of the steering committee of the international meeting on analysis of algorithms (AofA).
- *Philippe Robert* is Associate Editor of the Book Series "Mathématiques et Applications" edited by Springer Verlag and Associate Editor of the journal "Queueing Systems, Theory and Applications".

7.1.2. Conferences

- *Nicolas Broutin* has given lectures at annual meeting of the ALEA working group of the GDR-IM, the workshop GRAAL that took place at IHES, at the workshop organized in honor of Svante Janson's 60's birthday in Sweden, and the workshop on geometric networks at the Symposium on Computational Geometry that was held in Einhoven. He gave a plenary lecture at the conference on analysis of algorithms that was held in Strobl in June. He has also exposed his results at the probability seminar in Grenoble, the seminar of algorithmic and combinatorial geometry at IHP, and at the probability seminar of the NYU-ECNU Math institute in Shanghai.

  Nicolas Broutin has given the following lectures:
    - "Almost optimal sparsification of random geometric graphs" on Jan 30 at the Journées Présage at the Computer Science department of the University of Marne-la-Vallée,
    - "The scaling limit of inhomogeneous random graphs" on June 29 at the Paris-Bath workshop that took place at the IHP.
    - "Combinatorial structures and fixed-points arguments" on Nov 1 at NYU-ECNU Mathematics institute in Shanghai
    - "Random graphs and their scaling limits" on Nov 24 at the Hong Kong University of Science and Technology

  He has visited the mathematics department of Beijing Normal University (China), the computer science department of McGill University (Canada), the Mathematics Institute at the Hong-Kong University of Science and Technology, the NYU-ECNU institute for mathematical sciences at NYU Shanghai (China).

- *Renaud Dessalles* has given talks at the conference "Les probabilités de demain" (May 2016) and "Journées Modélisation Aléatoire et Statistique" (August 2016).
- *Christine Fricker* and GT have given talks at the Sigmetrics and MAMA workshop, Juan-les-Pins,14-18 /6/2016 and at the 2nd ECQT (European Conference on Queueing Theory) Toulouse, 18-20/7/2016.
- *Veronica Quintuna Rodriguez* gave a talk at the conference "17th International Network Strategy and Planning Symposium" in september (Montreal).
- *Philippe Robert* gave a talk at the department of mathematics of Brown University (April), at the stochastic networks conference in San Diego, and at the conference "Modern Problems in Theoretical and Applied Probability" in Novosibirsk in August.

7.1.3. Scientific expertise

- *Christine Fricker* is member of the jury of agrégation.

- *Philippe Robert* is member of the scientific council of EURANDOM.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Master : *Nicolas Broutin* Master Parisien de Recherche en Informatique (MPRI), in the course 2.15 on Analysis of Algorithms.

Master: *Nicolas Broutin* , Analysis of Algorithms, NYU Shanghai.

Master: *Philippe Robert* , Master, Probabilités et Applications, UPMC.

7.2.2. Juries

- *Philippe Robert* has been member of the jury of PhD defense of Sarah Eugène, Claudio Imbrenda and Tanguy Cabana.

RAPSODI Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

The team organized the second edition of the conference ABPDE *Asymptotic Behavior of systems of PDE arising in physics and biology: theoretical and numerical points of view* in Lille (June 15-17, 2016). See https://indico.math.cnrs.fr/event/939/.

The kick-off meeting of the GdR MaNu was organized by Clément Cancès, Corinne Jamroz, and Nicolas Seguin (Univ. Rennes) in Saint-Valery-sur-Somme in October 2016. See https://indico.math.cnrs.fr/event/1575/.

Claire Chainais-Hillairet and Clément Cancès are members of the organizing committee of the eighth symposium on Finite Volumes for Complex Applications (FVCA8) to be held in Lille next June 2017. See https://indico.math.cnrs.fr/event/1299/.

I. Lacroix-Violet is in charge of the organization of the weekly seminary of the Numerical Analysis and Partial Differential Equations (ANEDP) research team at the Laboratoire Paul Painlevé, Université de Lille 1.

10.1.2. Journal

10.1.2.1. Member of the editorial boards

C. Chainais-Hillairet is a member of the editorial board of the North-Western European Journal of Mathematics (`http://math.univ-lille1.fr/ nwejm/`) and of the International Journal on Finite Volumes (`http://www.i2m.univ-amu.fr/IJFV/`).

10.1.2.2. Reviewer - Reviewing activities

The members of the team RAPSODI reviewed numerous papers for numerous international journals.

10.1.3. Invited Talks

C. Cancès was an invited speaker at the international conference *Advanced numerical methods: recent developments, analysis, and applications* held in the framework of the IHP quarter on *Numerical Methods for PDEs*.

10.1.4. Scientific Expertise

C. Chainais-Hillairet and E. Creusé were experts for the HCERES.

10.1.5. Research Administration

Clément Cancès is the head of the MaNu Research Group (GdR MaNu, http://gdr-manu.math.cnrs.fr/) funded by the Institute for Mathematical Sciences and Interaction (INSMI) of the French National Center for Research (CNRS).

E. Creusé is AMIES Facilitator (Agency for the Interaction of Mathematics with Enterprise and Society) for the Northern France area. He is also the industrial representative of the Paul Painlevé Laboratory.

C. Chainais-Hillairet is head of the Commission Emplois de Recherche of the Lille - Nord Europe Inria research center.

Caterina Calgaro is a member of the Commission de la Formation et de la Vie Universitaire of the Academic Council of Université Lille 1.

Ingrid Lacroix-Violet, Benoît Merlet and Thomas Rey are members of the Conseil du Laboratoire Paul Painlevé.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

The group is strongly involved in teaching at the Université Lille 1. C. Calgaro and C. Chainais-Hillairet are in charge respectively of the Master of Mathematical Engineering and of the Master 2 of Scientific Computing, whereas E. Creusé is responsible of the "Cursus Master Ingénierie" in Mathematics, Lille 1 University. C. Cancès gives lectures at Polytech' UPMC.

10.2.2. Supervision

PhD : Pierre-Louis Colin has defended his PhD thesis on June 27, 2016. *Analyse numérique de modèles de dérive-diffusion : convergence et comportements asymptotiques*, Univ. Lille 1. advisors: C. Chainais-Hillairet and I. Lacroix-Violet.

PhD : Roberta Tittarelli, *A posteriori error estimators for Maxwell equations in potential and temporal formulations*, Univ. Lille 1, defended on September 27, 2016, advisors: E. Creusé & F. Piriou.

PhD in progress: Ahmed Aït Hammou Oulhaj, *Design and analysis of nonlinear numerical schemes for solving parabolic problems: application to porous media flows*, since 01/10/2014, advisors: C. Cancès & C. Chainais-Hillairet.

PhD in progress: Claire Colin, *Analyse numérique et simulations de modèles multifluides*, since 01/10/2015, advisors: C. Calgaro & E. Creusé.

PhD in progress: Luca Ferrari, *Line energies and applications to image reconstruc- tion of partially masked objects*, since 01/09/2015, advisors: A. Chambolle (CNRS & CMAP, École Polytechnique) & B. Merlet.

PhD in progress: Nicolas Peton, *Numerical methods for a stratigraphic model with nonlinear diffusion and moving frontier areas*, 15/10/2015, C. Cancès, Q. H. Tran (IFPEN) & S. Wolf (IFPEN).

PhD in progress: Antoine Zurek, *Numerical and theoretical analysis of models describing the corrosion of materials*, since 01/10/2016, advisors: C. Chainais-Hillairet & B. Merlet.

10.2.3. Juries

C. Cancès reported on Mayya Groza's PhD thesis, defended on November 10, 2016 at Univ. Nice - Sophia Antipolis. Title: *Modélisation et discrétisation des écoulements diphasiques en milieux poreux avec réseaux de fractures discrètes*

C. Chainais-Hillairet reported on Polina Shpartko's PhD thesis, defended on June 6, 2016 at TU Wien. Title: *Analytical and numerical study of drift-diffusion models for spin-transport in semiconductors*. She was also a member of the jury of Toko Kamtchueng's PhD thesis, defended on December 7, 2016 at Université d'Orléans. Title: *Formulation généralisée du transport réactif pour les modèles de réseaux de pores saturés en eau.*

E. Creusé reported on Azba Riaz' PhD thesis, defended on April 4, 2016 at Univ. Cergy-Pontoise. Title: *A new discontinuous Galerkin formulation for time dependant Maxwell's equation : a priori and a posteriori error estimation*. He was also a member of the jury of Florent Dewez' PhD thesis defended on November 3, 2016 at Univ. Lille 1. Title: *Estimations sans pertes pour des méthodes asymptotiques et notion de propagation pour des équations dispersives.*

B. Merlet reported François Dayrens' PhD thesis, defended in july 1st, 2016 at University Lyon 1. Title: *Minimizing movement and gradient flows for second order geometric functionals.*

10.3. Popularization

C. Calgaro is in charge of the communication of "Laboratoire Paul Painlevé" and she is in charge of the relation between the University of Lille 1 and high schools. Accordingly, she organizes various events which promote mathematics among young peoples like

Les Mathématiques itinérantes (http://mathematiques.univ-lille1.fr/Ouvertures/Mathematiques-itinerantes/)

La semaine des Mathématiques (http://mathematiques.univ-lille1.fr/Ouvertures/Mathematiques-itinerantes/)

Stage en sciences pour les élèves de seconde (http://www.univ-lille1.fr/etudes/stageseconde)

Members of the team participate regularly in theses actions.

Thomas Rey animates a Mathematics workshop (Math en Jeans) in the Adolphe Delégorgue middle school at Courcelles-lès-Lens.

<p align="center" style="color:red">REALOPT Project-Team</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- Pierre Pesneau has organized the workshop "Polyhedral Approaches for Combinatorial Optimization", December 8-9 2016, Paris
- Arnaud Pêcher has organized the workshop "Bordeaux Graph Workshop", Novembre 7-10 2016, Bordeaux.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Lionel Eyraud-Dubois is Chair of the "Cloud Computing and Data Center Management" track of I-SPAN 2017: the 14th International Symposium on Pervasive Systems, Algorithms, and Networks
- Olivier Beaumont is Co-Chair of the Algorithms track of ICPP 2016: 2016 International Conference on Parallel Processing

10.1.2.2. Member of the Conference Program Committees

The team members are members of the following program committees:

- François Clautiaux: ROADEF 2016: French Operational Research Society Conference.
- Lionel Eyraud-Dubois: ICPP 2016: 2016 International Conference on Parallel Processing
- Lionel Eyraud-Dubois and Olivier Beaumont: HiPC 2016: 23rd IEEE International Conference on High Performance Computing, Data, and Analytics
- Olivier Beaumont: IPDPS 2016, 30th IEEE International Parallel & Distributed Processing Symposium
- Olivier Beaumont: Euro-EDUPAR 2016, Parallel and Distributed Computing Education for Undergraduate Students, a EuroPar workshop
- Olivier Beaumont: HeteroPar 2016: Algorithms, Models, and Tools for Parallel Computing on Heterogeneous Platforms, a EuroPar Workshop

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Olivier Beaumont is editor for IEEE Transactions on Parallel and Distributed Systems (TPDS)
- François Vanderbeck is Associate Editor for the EURO Journal on Computational Optimization
- François Clautiaux is Associate Editor for Mathematical Programming and Exact Methods in the journal ISTE "Recherche Opérationnelle"

10.1.3.2. Reviewer - Reviewing Activities

The team members are regular referees for the best journals of the field.

10.1.4. Invited Talks

Arnaud Pêcher: *On sets avoiding distance 1*, 2016 International Conference on Graph Theory, Jinhua, Chine, 2016

10.1.5. Scientific Expertise

- Olivier Beaumont is a member of the INCITE (math-comp track) panel
- Olivier Beaumont is an expert for the H2020-FET-OPEN-2016 projects

10.1.6. Research Administration

- Olivier Beaumont is the scientific deputy of Inria Bordeaux Sud-Ouest and a member of the Evaluation Committee of Inria.
- François Vanderbeck is taking care of the team OptimAl ("Optimisation Mathématique Modèle Aléatoire et Statistique") at the Mathematics Institute of Bordeaux.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence : A. Pêcher, Programmation Impérative, 10h, DUT, Université de Bordeaux, France

Licence : A. Pêcher, Conception Objet, 42h, DUT, Université de Bordeaux, France

Licence : A. Pêcher, Programmation objet en Java, 44h, DUT, Université de Bordeaux, France

Licence : A. Pêcher, Algorithmique Avancée, 32h, DUT, Université de Bordeaux, France

Licence : A. Pêcher, Assembleur, 24h, DUT, Université de Bordeaux, France

Licence : A. Pêcher, Programmation Mobile, 24h, DUT, Université de Bordeaux, France

Master : F. Clautiaux, Gestion des Opérations et Planification de la Production, 20h, M2, Université de Bordeaux, France

Master : F. Clautiaux, Flot et Combinatoire, 10h, M2, Institut Polytechniques de Bordeaux, France

Master : F. Clautiaux, Introduction à la Programmation en Variables Entières, 20h, M1, Université de Bordeaux, France

Master : F. Clautiaux, Projet d'optimisation pour l'insertion professionnelle, M2, Université de Bordeaux, France

Master : L. Eyraud-Dubois, Optimisation en Cloud Computing et Big Data, 15h, M2, Université de Bordeaux, France

Master : L. Eyraud-Dubois, Algorithmique et Programmation, 30h, M1, Université de Bordeaux, France

Master : L. Eyraud-Dubois, Introduction à la Programmation en Variables Entières, 15h, M1, Université de Bordeaux, France

Licence : P. Pesneau, Modèles et Méthodes d'Optimisation, 30h, L2, Université de Bordeaux, France

Licence : P. Pesneau, Système et programmation en Fortran 90, 24h, L2, Université de Bordeaux, France

Licence : P. Pesneau, Recherche Opérationnelle, 24h, DUT, Université de Bordeaux, France

Master : P. Pesneau, Algorithmique et Programmation 1, 60h, M1, Université de Bordeaux, France

Master : P. Pesneau, Algorithmique et Programmation 2, 30h, M1, Université de Bordeaux, France

Master : P. Pesneau, Programmation linéaire, 15h, M1, Université de Bordeaux, France

Master : P. Pesneau, Optimisation dans les graphes (partie flots), 15h, M1, Université de Bordeaux, France

Master : O. Beaumont, Approximation et Big Data, 15h, M2, Université de Bordeaux, France

Master : O. Beaumont, Distributed Computing and Data Mining, 4h, M2, Institut National Polytechnique de Bordeaux, France

Master : B. Detienne, Optimisation continue, 29h, M1, Université de Bordeaux, France

Master : B. Detienne, Recherche Opérationnelle, 16h, M1, Institut National Polytechnique de Bordeaux, France

Master : B. Detienne, Introduction à la Programmation en Variables Entières, 14h, M1, Université de Bordeaux, France

Master : B. Detienne, Gestion des Opérations et Planification de la Production, 28h, M2, Université de Bordeaux, France

Master : B. Detienne, Optimisation dans l'incertain, 58h, M2, Université de Bordeaux, France

Master : B. Detienne, Problèmes combinatoires et routage, 14h, M1, Université de Bordeaux, France

Master : I. Tahiri, Outils et Logiciels pour l'Optimisation, 30h, M1, Université de Bordeaux, France

Master : F. Vanderbeck, Recherche Opérationnelle, 15h, M1, Institut National Polytechnique de Bordeaux, France

Master : F. Vanderbeck, Programmation Entière, 58h, M2, Université de Bordeaux, France

10.2.2. Supervision

PhD in progress : Jérémy Guillot, Optimisation de problèmes de partionnement, September 2014, François Clautiaux (dir) and Pierre Pesneau (dir).

PhD in progress : Quentin Viaud, Méthodes de programmation mathématiques pour des problèmes complexes de découpe, January 2015, François Clautiaux (dir), Ruslan Sadykov (dir), and François Vanderbeck (co-dir)).

PhD in progress : Martin Bué, Gestion du revenu dans le cadre du voyage professionnel, September 2012, François Clautiaux (dir), Luce Brotcorne (dir).

PhD in progress : Rodolphe Griset, Robust planning in Electricity production, November 2015, Boris Detienne (dir) and François Vanderbeck (dir).

PhD in progress : Imen Ben Mohamed, Location routing problems, October 2015, Walid Klibi (dir) and François Vanderbeck (dir).

PhD in progress : Thomas Bellitto, Infinite graphs, September 2015, Arnaud Pêcher (dir) and Christine Bachoc (dir).

PhD in progress : Philippe Moustrou, Codes, September 2014, Arnaud Pêcher (dir) and Christine Bachoc (dir).

PhD in progress : Thomas Lambert, September 2014, Placement de tâches et réplication de fichiers sur plates-formes parallèles, Olivier Beaumont (dir) and Lionel Eyraud-Dubois (co-dir)

PhD in progress : Suraj Kumar, December 2013, Scheduling of Dense Linear Algebra Kernels on Heterogeneous Resources, Olivier Beaumont (dir) and Lionel Eyraud-Dubois (co-dir)

10.2.3. Juries

- François Clautiaux: Evaluation (rapporteur) of the PhD thesis of Charly Lersteau (University Bretagne Sud)
- Ruslan Sadykov: Evaluation (examinateur) of the PhD thesis of Rian Gabriel Santos Pinheiro (University Federal Fluminense, Niteroi, Brazil), March 1st, 2016.

10.3. Popularization

François Clautiaux is a member of the board of AMIES, the French Agency for Interaction in Mathematics with Business and Society. AMIES is a national organization that aims to develop relations between academic research teams in mathematics and business, especially SMEs.

REGAL Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

Swan Dubois: Co-Chair of the first Workshop DGDC, collocated with DISC 2016

Franck Petit: General Chair of the 17th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS 2016), ed. LNCS, Lyon, France.

9.1.1.2. Member of the Organizing Committees

Swan Dubois: Member of the Organizing Committee and Publicity Chair of the 30th International Symposium on DIStributed Computing (DISC 2016)

9.1.2. Scientific Events Selection

9.1.2.1. Member of Steering Committee

- Marc Shapiro, Steering Committee of OPODIS 2013–2016.

9.1.2.2. Chair of Conference Program Committees

Pierre Sens: Chair of Distributed Systems and Networks track, 28th International Symposium on Computer Architecture and High Performance Computing (SBAC-PAD 2016), Los Angeles, USA.

9.1.2.3. Member of the Conference Program Committees

Luciana Arantes: IFIP International Conference on Distributed Applications and Interoperable Systems (DAIS 2016), International Workshop on Recent Advances in the Dependability Assessment of Complex System (Radiance 2016), IEEE International Symposium on Network Computing and Applications (NCA 2016), 28th International Symposium on Computer Architecture and High Performance Computing (SBAC-PAD 2016), 7th Latin-American Symposium on Dependable Computing (LADC 2016), 18th International Conferences on High Performance Computing and Communications (HPCC 2016), 11th International Conference on Green, Pervasive and Cloud Computing (GPC-2016), 35th International Conference of the Chilean Computer Science Society (SCCC 2016).

Swan Dubois: 30th International Symposium on DIStributed Computing (DISC 2016), 17th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS 2016), 18th *Workshop on Advances in Parallel and Distributed Computational Models* (APDCM 2016), 18eme Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (ALGO-TEL 2016)

Franck Petit: 18th *Workshop on Advances in Parallel and Distributed Computational Models* (APDCM 2016)

Pierre Sens: 27th International Symposium on Software Reliability Engineering (ISSRE 2016), 12th European Dependable Computing Conference (EDCC 2016) 30th IEEE International Parallel & Distributed Processing Symposium (IPDPS 2016), IEEE International Symposium on Network Computing and Applications (NCA 2016).

Marc Shapiro: Int. Conf. on Architectural Support for Programming Languages and Systems (ASPLOS 2016), Int. Conf. on Principles of Distributed Systems (OPODIS 2016), Selection committee of Enterprise Research Challenge Contest (ERCC) at Int. Symp. on Stabilization, Safety, and Security of Dist. Sys. (SSS 2016), W. on Planet-Scale Distributed Systems (W-PSDS 2016).

9.1.2.4. Reviewer

Swan Dubois: 20th International Conference on Principles of Distributed Systems (OPODIS 2016), 4th International Conference on Networked Systems (NETYS 2016)

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Franck Petit: co-editor of the proceedings of the 18th International Symposium on Stabilization, Safety, and Security of Distributed Systems, LNCS 10083.

Pierre Sens: Associate editor of International Journal of High Performance Computing and Networking (IJHPCN)

9.1.3.2. Reviewer - Reviewing Activities

Swan Dubois: ACM Transactions on Storage (TOS), SIAM Journal on Computing (SICOMP)

9.1.4. Invited Talks

Pierre Sens. Resource Management in Large Scale Distributed Systems, Dec. 2016, University of Santiago

Marc Shapiro. KTH, Stockholm, Sweden, Nov. 2016. AntidoteDB: a Planet-Scale Available Transactional Database With Strong Semantics

Marc Shapiro. Paris-Descartes University, Nov. 2016. Just-Right Consistency

Nuno Preguiça. Invariant-Preserving Applications for Weakly-consistent Replicated Databases. OPODIS PC workshop, October 2016, Lugano, Switzerland.

Marc Shapiro. Consistency in 3D. OPODIS PC workshop, October 2016, Lugano, Switzerland.

Marc Shapiro. "Consistency in 3D" [17]. Invited talk at Int. Conf. on Concurrency Theory (CONCUR), Québec, Canada, Aug. 2016.

Marc Shapiro. "Just-Right Consistency: Static analysis for minimal synchronisation." Technical talk at Critéo, Paris, France, March 2016.

Marc Shapiro. Keynote Speach at Laboratoire d'Informatique de Grenoble. "Just-Right Consistency: Static analysis for minimal synchronisation." March 2016.

Marc Shapiro, "Reconciling performance and safety in the Antidote widely-geo-replicated database," invited talk at GDR RSD and ASF Winter School 2016, le Pleynet les Sept Laux, France, March 2016.

Marc Shapiro. Invited talk at Inria/EPFL Workshop "Consistency in three dimensions (It's the invariants, stupid)." Rennes, Jan. 2016.

9.1.5. Scientific Expertise

Franck Petit, 2016: Expertise for HCERES

9.1.6. Research Administration

Franck Petit, 2014-2018: Deputy Director of LIP6

Franck Petit, since 2012: Member of the Executive Committee of Labex SMART, Co-Chair (with P. Sens) of Track 4, Autonomic Distributed Environments for Mobility.

Franck Petit, 2016–2020: Coordinator, ANR project ESTATE.

Pierre Sens, since 2016: Member of Section 6 of the national committee for scientific research CoNRS

Pierre Sens, since 2012: Member of the Executive Committee of Labex SMART, Co-Chair (with F. Petit) of Track 4, Autonomic Distributed Environments for Mobility.

Pierre Sens, 2012–2016: Member of the scientific council of UPMC

Pierre Sens, since 2015, officer at scientific research vice presidency UPMC

Pierre Sens, since 2014: Member of Steering Committee of International Symposium on Computer Architecture and High Performance Computing (SBAC-PAD).

Marc Shapiro, since 2009: Member of Scientific Advisory Board of the Center of Informatics and Information Technology (CITI), then Lab. for Informatics and Comp. Sc. (NOVA-LINCS) Universidade Nova de Lisboa, Portugal.

Marc Shapiro, since 2012: Member ERC (European Research Council) Consolidator Grants panel PE6.

Marc Shapiro, since 2013: member of the board of *Société Informatique de France*. Vice-Chair for Research since 2016.

Marc Shapiro, since 2016: Member of Advisory Board of IEEE Computer Society Special Technical Community on Operating Systems (STCOS).

Marc Shapiro, since 2014: Member of Steering Committee of Int. Conf. on Principles of Distributed Systems (OPODIS).

Marc Shapiro, 2016–2020: Coordinator, ANR project RainbowFS.

Marc Shapiro, 2013–2016: Coordinator, FP7 project SyncFree.

Julien Sopena, Member of "Directoire des formations et de l'insertion professionnelle" of UPMC Sorbonne Universités, France

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Julien Sopena is Member of "Directoire des formations et de l'insertion professionnelle" of UPMC Sorbonne Universités, France

Master: Julien Sopena is responsible of Computer Science Master's degree in Distributed systems and applications (in French, SAR), UPMC Sorbonne Universités, France

Master: Luciana Arantes, Swan Dubois, Sébastien Monnet, Franck Petit, Pierre Sens, Julien Sopena, Advanced distributed algorithms, M2, UPMC Sorbonne Universités, France

Master: Jonathan Lejeune, Designing Large-Scale Distributed Applications, M2, UPMC Sorbonne Universités, France

Master: Maxime Lorrillere, Julien Sopena, Linux Kernel Programming, M1, UPMC Sorbonne Universités, France

Master: Luciana Arantes, Sébastien Monnet, Pierre Sens, Julien Sopena, Operating systems kernel, M1, UPMC Sorbonne Universités, France

Master: Luciana Arantes, Swan Dubois, System distributed Programming, M1, UPMC Sorbonne Universités, France

Master: Luciana Arantes, Swan Dubois, Franck Petit, Distributed Algorithms, M1, UPMC Sorbonne Universités, France

Master: Sébastien Monnet, Julien Sopena, Client-server distributed systems, M1, UPMC Sorbonne Universités, France

Licence: Pierre Sens, Luciana Arantes, Julien Sopena, Principles of operating systems, L3, UPMC Sorbonne Universités, France

Licence: Swan Dubois, Initiation to operating systems, L3, UPMC Sorbonne Universités, France

Licence: Swan Dubois, Franck Petit, Advanced C Programming, L2, UPMC Sorbonne Universités, France

Licence: Swan Dubois, Sébastien Monnet, Introduction to operating systems, L2, UPMC Sorbonne Universités, France

Licence: Mesaac Makpangou, C Programming Language, 27 h, L2, UPMC Sorbonne Universités, France

Ingénieur 4ème année : Marc Shapiro, Introduction aux systèmes d'exploitation, 26 h, M1, Polytech UPMC Sorbonne Universités, France.

9.2.2. Supervision

PhD: Mohamed Hamza Kaaouachi, "Autonomic Distributed Environments for Mobility", UPMC/Chart-LUTIN (Labex SMART), Franck Petit, Swan Dubois, and Francois Jouen (Chart), 01/12/2016.

PhD: Maxime Lorrillere, "A kernel cooperative cache for virtualized environments", UPMC, Sébastien Monnet, Julien Sopena, Pierre Sens, 02/04/2016.

PhD: Mahsa Najafzadeh, UPMC, funded by Inria competitive grant (Cordi-S), since Nov. 2012, Marc Shapiro, 22 April 2016.

PhD in Progress: Joao Paulo de Araujo, "L'exécution efficace d'algorithmes distribués dans les réseaux véhiculaires", funded by CNPq (Brésil), since Nov.2015, Pierre Sens and Luciana Arantes.

PhD in progress : Antoine Blin, "Execution of real-time applications on a small multicore embedded system", since April 2012, Gilles Muller (Whisper) and Julien Sopena, CIFRE Renault

PhD in progress: Sébastien Bouchard, "Gathering with faulty robots", UPMC, since Oct. 2016, Swan Dubois, Franck Petit, Yoann Dieudonné (University of Picardy Jules Verne)

PhD in progress: Marjorie Bournat, "Exploration with robots in dynamic networks", UPMC, since Sep. 2015, Swan Dubois, Franck Petit, Yoann Dieudonné (University of Picardy Jules Verne)

PhD in progress: Damien Carver, "HACHE : HorizontAl Cache cHorEgraphy - Toward automatic resizing of shared I/O caches.", UPMC, CIFRE, since Jan. 2015, Sébastien Monnet, Pierre Sens, Julien Sopena, Dimitri Refauvelet (Magency).

PhD in Progress: Florent Coriat, "Géolocalisation et routage en situation de crise" since Sept 2014, UPMC, Anne Fladenmuller (NPA-LIP6) and Luciana Arantes.

PhD in progress: Rudyar Cortes,"Un Environnement à grande échelle pour le traitement de flots massifs de données," UPMC, funded by Chile government, since Sep. 2013, Olivier Marin, Luciana Arantes, Pierre Sens.

PhD in progress: Lyes Hamidouche, "Data replication and data sharing in mobile networks", UPMC, CIFRE, since Nov. 2014, Sébastien Monnet, Pierre Sens, Dimitri Refauvelet (Magency).

PhD in progress: Denis Jeanneau,"Problèmes d'accord et détecteurs de défaillances dans les réseaux dynamique," UPMC, funded by Labex Smart, since Oct. 2015, Luciana Arantes, Pierre Sens.

PhD in progress: Yoann Péron, "Development of an adaptive recommendation system", UPMC/Makazi, since May 2014, Franck Petit, Patrick Gallinari, Matthias Oehler (Makazi).

PhD in progress: Alejandro Z. Tomsic, UPMC, funded by SyncFree, since Feb. 2014, Marc Shapiro.

PhD in progress: Tao Thanh Vinh, UPMC, CIFRE, since Feb. 2014, Marc Shapiro, Vianney Rancurel (Scality).

PhD in progress: Gauthier Voron, "Big-Os : un OS pour les grands volumes de données,", UPMC, since Sep. 2014, Gaël Thomas, Pierre Sens.

9.2.3. PhD committees

Franck Petit was the reviewer of:

- Mohamed Khaled, PhD UPJV (Advisors: F. Levé and V. Villain)

Franck Petit was Chair of:

- Quentin Bramas, UPMC (Advisor: S. Tixeuil)
- Fadwa Boubekeur, UPMC (Advisor: L. Blin)

Pierre Sens was the reviewer of:

- S. Chiky, HDR ISEP, Paris
- P. Li, PhD Bordeaux (Advisors: R. Namyst, E. Brunnet)
- J. Olivares, PhD Rennes 1 (Advisor: A-M Kermarrec)
- J. Pastor, PhD ENM, Nantes (Advisors: A. Lebre, F. Desprez)
- C. Sauvagnat, PhD IRIT, Toulouse (Advisor: M. Kaaniche)

Pierre Sens was Chair of

- C. Concolato, HDR Telecom Paris
- T. Ecarot, PhD, Telecom SupParis, UPMC (Advisor: D. Zeghlache)

Marc Shapiro was on the following committees:

- Kirill Bogdanov (Advisors: Dejan Kostic, Jeff Maguire), licentiate thesis, KTH, Stockholm, Nov. 2016.
- Brice Nédélec (Advisors: Pascal Molli, Achour Mostefaoui), PhD thesis, Nantes, oct. 2016.

9.3. Popularization

Julien Sopena animated an activity during the Science Festival 2016 at UPMC

REO Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- Matteo Aletti
    - Co-organizer of the monthly Junior Seminar of Inria Paris.
- Laurent Boudin
    - Member of the organizing and scientific committees of the "Recent advances in kinetic equations and applications" workshop, June 2016, Paris
    - Member of the organizing committee of the 5th "Forum Emploi Maths", December 2016, Paris
- Jean-Frédéric Gerbeau
    - Local organizing Committee of the SIAM conference on Parallel Processing 2016. Paris, France.
- Sanjay Pant
    - Organizing committee member, 5th International Conference on Computational and Mathematical Biomedical Engineering (CMBE) 2017
- I. Vignon-Clementel
    - Organized a minisymposium at the COSINE conference, May 25th-26th, Bordeaux, France
    - Organized a minisymposium at the ECCOMAS congress, June 4th-9th, Crete, Greece
    - Programme committee member, Computational and Mathematical Biomedical Engineering Conference
    - Conference steering committee, International Conference on Engineering Frontiers in Pediatric and Congenital Heart Disease, 2015-present

10.1.2. Scientific Events Selection

10.1.2.1. Reviewer

- Jean-Frédéric Gerbeau
    - Member of the Scientific Program Committee of the Millennium Science Initiative, a program of the Ministry of Economy of Chile.
    - Expert for Horizon2020 FET OPEN RIA Call 2015/2.
- Irene Vignon-Clementel
    - Expert for "Appel à projets générique", ANR 2016.
- Marina Vidrascu
    - Expert for FONDECYT - Chile "Projects for Initiation in Research" 2016

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Jean-Frédéric Gerbeau

- – Editor-in-Chief of Mathematical Modelling and Numerical Analysis (M2AN), SMAI/EDP Sciences.
- – Series editor of "SEMA SIMAI Series", Springer.
- – Member of the editorial board of Journal Advances in Computational Mathematics (ACOM), Springer
- – Member of the editorial board of International Journal for Numerical Methods in Biomedical Engineering (IJNMBE), Wiley.
- – Member of the editorial board of Communications in Applied and Industrial Mathematics, SIMAI/De Gruyter.
- – Member of the editorial board of Journal for Modeling in Ophthalmology, Kugler.
- Marc Thiriet
  - – Member of the editorial board of Digital Medicine

10.1.4. Research Administration

- Laurent Boudin
  - – Expert evaluator for ANVUR (VQR 2011-2014), Italy
  - – Member of the Board of Mathematics Licence (EFU de Licence de mathématiques), UPMC
  - – Member of the think-tank for third-year programs in Mathematics at UPMC.
  - – Member of the IREM (Institutes for Research on Mathematics Teaching) Scientific Committee.
  - – Member of the SMAI (French Society for applied and industrial mathematics) Teaching Committee.
- Muriel Boulakia
  - – Supervisor of the teaching of mathematics at the engineer school Polytech Paris-UPMC
- Miguel Ángel Fernández Varela
  - – Co-president of the Scientific Positions Commission, Inria Paris
- Jean-Frédéric Gerbeau
  - – Service activity at Inria: Délégué Scientifique / Chairman of the project-teams' committee of Inria Paris research center; Member of the Inria Evaluation Committee.
  - – Service activity in other French institutions: member of the scientific committee of Labex NUMEV, Montpellier.
  - – Service activity abroad: member of the Reference Committee of the PhD program Mathematical Models and Methods in Engineering (Politecnico di Milano, Italy).
- Céline Grandmont
  - – Member of the Evaluation Committee Inria (2015–)
  - – Head of the HCERES evaluation Jury of Imath lab. Toulon Univ.
- Marc Thiriet
  - – Vice-President & Council Member of the International Society of Digital Medicine
- I. Vignon-Clementel
  - – Organizing the monthly seminar at Inria Paris on "modeling and scientific computing", now joint seminar "Rencontres Inria-LJLL en calcul scientifique" (until June 2016)
  - – Committee member for PhD students at Inria "Commission consultative des doctorants", since July 2016.
  - – Mediator between PhD students and their supervisors for Inria Paris-Rocquencourt

10.1.5. Conferences

- Matteo Aletti
  - Minisymposium talk, SIMAI2016, Sep 13-16, 2016 Milano, Italy
  - Minisymposium talk, ECCOMAS Congress 2016, Jun 5-10, 2016, Crete, Greece
  - Presentation at REVAMMAD (EU Marie Curie ITN) meeting, Jun 2016, Lincoln, UK
- Rodolfo Araya
  - Seminar, Laboratoire de Mathématiques de Besançon, Université de Franche-Comté, Besançon, May 26
  - Seminar, Groupe de Modélisation Mathématique, Mécanique et Numérique, Université de Caen Basse-Normandie, Jun 6
  - Minisymposium talk, The Mathematics of Finite Elements and Applications 2016 (MAFE-LAP 2016) conference, Jun 14-17, London, UK
- Chloé Audebert
  - Seminar, Journée interne du Laboratoire Jacques-Louis Lions, Nov 16, 2016, Paris, France.
  - Seminar, BioMécanique et BioIngénierie (BMBI), UTC, Nov 15, 2016, Compiègne, France.
  - Minisymposium talk, Word Congress on Computational Mechanics (WCCM), Jul 24-29, 2016, Seoul, Korea
  - Minisymposium talk, European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS), Jun 5-10, 2016, Crete Island, Greece
  - Open Brain in HPB Surgery, Club Innovation ACHBT, Jun 3-5, 2016, Carnac, France.
  - Congrès National d'Analyse Numérique (CANUM), May 9-13, 2016, Obernai, France
  - Talk, Saint-Antoine hospital, May 3, 2016, Paris, France
- Laurent Boudin
  - Seminar, Applied Mathematics, Department of Mathematics and Informatics, Univ. Novi Sad, Serbia, July 2016
- Muriel Boulakia
  - Workshop ANR IFSMACS, Toulouse, Nov 2016
  - Invited talk, Workshop Carleman estimates, unique continuation, University College of London, Nov 2016
  - Seminar LMAC, Compiègne, Oct 2016
  - Workshop Mathematics and Health, LJLL, UPMC, May 2016
  - Workshop ANR IFSMACS, Paris, Mar 2016
  - Seminar PDE, IECL, Nancy, Feb 2016
- Miguel Ángel Fernández Varela
  - Invited Speaker IWH Symposium on Simulation and Optimization of Extreme Fluids, Oct 2016, Heidelberg, Germany
  - Minisymposium talk, The Mathematics of Finite Elements and Applications 2016 (MAFE-LAP 2016) conference, Jun 14-17, London, UK
  - Invited Speaker, Workshop on geometrically unfitted finite element methods, Jan 6-8, 2016, London, UK
- Jean-Frédéric Gerbeau

- Invited lecturer, CISM-ECCOMAS International Summer School (6 hours), June 2016, Udine, Italia.

- Invited lecturer, "Numerical methods for PDEs", Institut Henri Poincaré (9 hours), Oct 2016, Paris, France.

- Invited speaker, Workshop: Mathematical Modeling in Cardiovascular Healthcare, Oct 2016, Emory University, USA

- Invited speaker, Workshop "Boundary layer and Fluid-Structure Interaction", Jan 2016, Bordeaux, France.

- Invited speaker, 2d conference "Mathematical Modelling of Complex Systems", Dec 2016, Châtenay Malabry, France.

- Seminar at Collège de France, Pierre-Louis Lions chair, May 2016, Paris, France.

- Minisymposium talk, European Congress of Mathematics (ECM), July 2016, Berlin, Germany.

- Minisymposium talk, World Congress of Computational Mechanics (WCCM), July 2016, Seoul, Korea.

- Minisymposium talk, SIMAI conference, Sep 2016, Milan, Italy.

- Céline Grandmont
  - Invited Speaker IWH Symposium on Simulation and Optimization of Extreme Fluids, Oct 2016, Heidelberg, Germany
  - Seminar, Ecole Centrale, Apr 2016
  - Invited Speaker, Journées Jeunes Edépistes, Mar 2016, Bordeaux
  - Invited Speaker, Boundary Layers and Fluid-Structure Interactions, Jan 2016, Bordeaux

- Mikel Landajuela
  - Seminar, Séminaire d'analyse numérique, Université de Genève, Mar 8, 2016, Geneva, Switzerland

- Damiano Lombardi
  - Invited talk, ALGORITMY 2016, Mar 13-18, 2016, Podbaske, Slovakia
  - Invited talk, SIMAI 2016, Sep 13-16, 2016, Milano, Italy
  - Contributed talk, Workshop on Reduced Order Modeling, Nov 7-10, 2016, Institut Henri Poincaré, Paris

- Sanjay Pant
  - Contributed talk, The 12th World Congress on Computational Mechanics (WCCM XII), Jul 2016, Seoul, Korea
  - Contributed talk, 5th International Conference on Engineering Frontiers in Pediatric and Congenital Heart Disease, Jun 2016 , Orlando, Florida, USA
  - Contributed talk, Computational modeling in healthcare: Making confident predictions in a world of error and uncertainty, Apr 2016, Glasgow, UK

- Nicolas Pozin
  - Minisymposium talk, European Congress on Computational Methods in Applied Sciences and Engineering - ECCOMAS 2016, Jun 5-10, 2016, Creta, Greece

- Marc Thiriet
  - Invited Speaker, 6th Annual Academic Congress of Chinese Society of Digital Medicine and1st International Conference on Digital Medicine & Medical 3D Printing, Jun 17-19, 2016, Nanjing, China

- – Minisymposium talk, 16th International Society for Therapeutic Ultrasound (ISTU), Mar 14-16, 2016, Tel-Aviv, Israel
- Alexandre This
  - – Seminar, Inria Paris Junior Seminar, Oct 18, 2016, Paris
- Eliott Tixier
  - – Minisymposium talk, SIAM Conference on Uncertainty Quantification, Apr 5-8, 2016, Lausanne, Switzerland
- Irene Vignon-Clementel
  - – Seminar, Paul Brousse Hospital, Nov 18th, Villejuif, France
  - – Seminar, DKFZ, Nov 15th, Heidelberg, Germany
  - – Invited talk, SimInhale workshop, Oct 17th-19th, Prague, Czech Republic
  - – Invited talk, GRIC Journées Françaises de Radiologie, Oct 13th, Paris, France
  - – Minisymposium talk, CMBBE conference, September 20th-22nd, Tel Aviv, Israel
  - – Seminar, Dassault Systems, July 20th, Velizy-Villacoublay, France
  - – Minisymposium talk, SIAM Conference on the Life Sciences, July 11th-14th, Boston, USA
  - – Presentation for the Chinese Academy of Science, June 29th, Paris, France
  - – Invited talk, Inria National Scientific Days, June 20th-22th, Rennes, France
  - – Invited talk, International Conference on Engineering Frontiers in Pediatric and Congenital Heart Disease, June 9th-10th, Orlando, USA
  - – Minisymposim Keynote, ECCOMAS congress, June 4th-9th, Crete, Greece
  - – Minisymposium talk, COSINE conference, May 25th-26th, Bordeaux, France
  - – Presentation, Demi-journée Math-Industrie, LJLL-UPMC, May 10th 2016, Paris, France
  - – Invited Keynote, Computational modelling in healthcare: Making confident predictions in a world of error and uncertainty (workshop), April 26th 2016, Glasgow, UK
  - – Minisymposium talk, UQ SIAM conference, EPFL, April 5th-8th, 2016, Lausanne, Switzerland
  - – Invited talk, workshop: towards a unified framework for benchmarking multicellular models and modelling/simulation software, Leipzig University, March 14th-16th, 2016, Leipzig, Germany
  - – Podium talk, The 8th International Bio-Fluids Symposium, February 12-14, 2016, CaltechTech, Pasadena, USA
  - – Seminar, Department of Mechanical Eng., UC at Berkeley, Feb. 10th, 2016, Berkeley, USA
  - – Seminar, HeartFlow company, Feb. 9th, 2016, Mountain View, USA

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence :
- Ludovic Boilevin-Kayl
  - – Calculus, 60h, L1, UPMC
- Laurent Boudin
  - – Introduction to series for signal theory, 18h, L2, UPMC

- Shared studies supervision in mathematics licence for approximately 500 students, 48h, L2-L3, UPMC
- Muriel Boulakia
  - Scilab, 35h, L2, UPMC
  - Nonlinear systems and optimization, 35h, L3, Polytech'Paris
  - Hilbertian analysis, 50h, L3, Polytech'Paris
  - Oral tests in numerical analysis, 20h, L3, UPMC
- Miguel Ángel Fernández Varela
  - Analysis and Scientific Computing, 30h, L3, ENPC
- Jean-Frédéric Gerbeau
  - Numerical Analysis and Optimization, 32h, L3, Ecole Polytechnique.
- Céline Grandmont
  - Ordinary differential equations, 24h, L3, UPMC
- Damiano Lombardi
  - Numerical Methods, 48h, L3, Polytech'Paris
- Eliott Tixier
  - Linear algebra, 60h, L2, Polytech'Paris
- Irene Vignon-Clementel
  - Mathematics for biology, 54h, L1, Université de Versailles Saint Quentin
  - Numerical simulations of blood flow, 1h30, as part of the undergraduate "continuum mechanics", AgroParisTech

Master :
- Laurent Boudin
  - Basics for numerical methods, 36h, M1, UPMC
- Muriel Boulakia
  - Preparatory course for teaching admission examination "Agrégation", 15h, M2, UPMC
- Miguel Ángel Fernández Varela
  - Numerical methods for bio-fluids simulation, 9h, M2, Universidade de Vigo, Spain
- Irene Vignon-Clementel
  - Modélisation hémodynamique & simulation numérique comme outil pour la chirurgie, 1h, M2, Université Paris Sud
- Jean-Frédéric Gerbeau
  - Numerical methods in hemodynamics (20h), M2, UPMC / Univ Paris-Sud / Ecole Polytechnique.
  - Seminar for M2 students of the master "Math SV" (1h), M2, Univ Paris-Sud, December, 2015
  - Seminar for M2 students at Ecole des Mines (3h), Paris, February, 2015

10.2.2. Supervision

HdR : Irene Vignon-Clementel, *Blood and air flow multi-scale simulations based on real data*, defended on March 31, 2016

PhD in progress: Chloé Audebert, *Modeling of liver hemodynamics*, since October 2013. Supervisors: J.-F. Gerbeau & I. Vignon-Clementel.

PhD : Francesco Bonaldi, *Modélisation Mathématique et Numérique de Multi-Structures avec couplage Magnéto-Electro-Thermo-Elastique*, defended on July 6, 2016. Supervisors: F. Krasucki & M. Vidrascu

PhD : Mikel Landajuela, *Coupling schemes and unfitted mesh methods for fluid-structure interaction*, defended in March 29, 2016. Supervisor: M.A. Fernández Varela.

PhD in progress: Matteo Aletti, *Multiscale retinal vascular modeling*, since January 2014. Supervisors: J.-F. Gerbeau & D. Lombardi.

PhD in progress: Eliott Tixier, *Stem cells electrophysiology*, since September 2014. Supervisors: J-F. Gerbeau & D. Lombardi.

PhD in progress: Nicolas Pozin, *Multiscale lung ventilation modeling in health and disease*, since March 2014. Supervisors: C. Grandmont & I. Vignon-Clementel.

PhD in progress: Andrea Bondesan, *Kinetic and fluid models, numerical and asymptotic analysis*, since October 2015. Supervisors: L. Boudin, B. Grec & S. Martin.

PhD in progress: Ludovic Boilevin-Kayl, *Modeling of cardiac implantable devices*, since February 2016. Supervisors: J.-F. Gerbeau & M.A. Fernández Varela

PhD in progress: Alexandre This, *Fusion data/simulation for the assessment of mitral regurgitation*, since January 2016. Supervisor: J.-F. Gerbeau

PhD in progress: Chen-Yu Chiang, *Transport on biological systems and some applications*, since February 2016. Supervisor: M. Thiriet

10.2.3. Juries

- Laurent Boudin
  - PhD committee: Alexandra de Cecco, Université Paul Sabatier (referee), Anthony Preux, Université Paris-Saclay
- Muriel Boulakia
  - PhD committee: Andjela Davidovic, Inria Bordeaux Sud-Ouest; Ibtissem Ben Aïcha, Université d'Aix-Marseille
- Miguel Ángel Fernández Varela
  - PhD committee: Moctar Ndiaye, Université Paul Sabatier (president), Davide Baroli, Politecnico di Milano, Simone Brugiapaglia, Politecnico di Milano; Rocco M. Lancellotti, Politecnico di Milano (referee); Paolo Pacciarini, Politecnico di Milano
- Jean-Frédéric Gerbeau
  - PhD committees: Julien Sigüenza, Univ Montpellier (referee). Anna Tagliabue, Politecnico di Milano (referee).
  - Hiring committee: Inria Bordeaux (CR2); Inria Paris (CR2).
- Céline Grandmont
  - Hiring committee: Rennes Univ. (Professor position), Marseille Univ. (Professor position)
  - PhD committee: M. Ndiaye, Université Paul Sabatier (president), B. Polizzi, Univ. de Nice (referee), B. Burtschell, Ecole Polytechnique (referee), P. Jounieaux, UPMC (president)
  - Member of the «Agrégation» Jury in mathematics
- Marc Thiriet
  - PhD committee: M. Haddadi, Université Paris Est–Créteil (referee)
- Marina Vidrascu

- PhD committee: F. Bonaldi, Université de Montpellier; M Hédi, Tunis El-Manar & UPMC; F. Cheick, Tunis El-Manar & UPMC
- Irene Vignon-Clementel
  - PhD committee: Gabrielle Fournet, CEA & Université Paris-Saclay (referee)

10.3. Popularization

- Céline Grandmont
  - Conference : "Filles et Maths : une équation lumineuse", 60 students secondary school level, Feb 2016
  - Popularization paper with J.-F. Gerbeau : "Maths, médecine et entreprises : des collaborations gagnantes", brochure Maths Société Express, 2016
  - Conference "Métier": Master 1 Maths students, UPMC, Nov 2016
- Irene Vignon-Clementel
  - Telerama, Interview (Richard Senejoux), Mar 10, 2016
  - Presentation, Inauguration of Inria Paris research center in presence of the Minister of Research and presidents of Universities, ANR, EPST, media, etc. Mar 10, 2016, Paris
  - High school conference, Mar 14, 2016, Lycée St François d'Assise, Montigny le Bretonneux

RITS Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

Fawzi Nashashibi: member of the steering committee of VENITS 2016 (2nd International Workshop on Vehicular Networking and Intelligent Transportation Systems), Sep. 2016, Valencia, Spain

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

Guy Fayolle: scientific program committee member of *The IEEE Computer Society's MASCOTS 2016 (Modelling, Analysis and Simulation of Computer and Telecommunication Systems)*, September 21-23, Imperial College, London, UK.

Vicente Milanés: international program committee member of IEEE International Conference on Intelligent Transportation Systems (ITSC 2016).

Fawzi Nashashibi: international program committee member of IEEE Intelligent Vehicles Symposium (IV 2016).
Fawzi Nashashibi: IPC for the 2016 IEEE Intelligent Transportation Systems Conference (ITSC'2016), 8th Workshop on Planning, Perception and Navigation for Intelligent Vehicles, Nov. 2016, Rio de Janeiro.
Fawzi Nashashibi: member of the Technical Program Committee of the 14th Int. Conference on Control, Automation, Robotics and Vision, Nov. 2016, Phuket.
Fawzi Nashashibi: member of the Technical Program Committee of the 2016 International Conference on Computer Science and Artificial Intelligence, Aug. 2016, Guilin.

Oyunchimeg Shagdar: program committee member of the IEEE International Conference on Advanced Information Networking and Applications (AINA 2016).

Ahmed Soua: technical program committee member of IEEE International Conference on Communications and of International Workshop on Vehicular Adhoc Networks for Smart Cities (IWVSC 2016).

Anne Verroust-Blondet: technical program committee member of MMEDIA 2016.

9.1.2.2. Reviewer

Raoul de Charette: IEEE International Conference on Intelligent Transportation Systems (ITSC 2016).

Guy Fayolle: IEEE MASCOTS 2016 (Modelling, Analysis and Simulation of Computer and Telecommunication Systems) conference.

Jean-Marc Lasgouttes: IEEE MASCOTS 2016 (Modelling, Analysis and Simulation of Computer and Telecommunication Systems) conference.

Fawzi Nashashibi: International conference on Multidisciplinary in IT and Communication Science and Technologies 2016 (AIC-MITC), Transportation Research Board (TRB 2016), IEEE International Conference on Robotics and Automation (ICRA 2016), IEEE Intelligent Transportation Systems Conference (ITSC 2016), IEEE International Conference on Intelligent Robots and Systems (IROS 2016), International Conference on Advanced Robotics and Computer Vision (ICARCV 2016), Reconnaissance des Formes et Intelligence Artificielle (RFIA 2016).

Anne Verroust-Blondet: IEEE International Conference on Intelligent Transportation Systems (ITSC 2016).

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Guy Fayolle: associate editor of the journal *Markov Processes and Related Fields*

Vicente Milanés: editor-in-chief of Journal of Computer and Communications, associate Editor of Journal of Intelligent Transportation and Urban Planning.

Fawzi Nashashibi: associate editor of IEEE Transactions on Intelligent Vehicles, associate editor of the IEEE Transactions on Intelligent Transportation Systems, Editor of the Journal of Internet of Things (IoT) ISTE Editions (London).

Oyunchimeg Shagdar: associate editor of Wiley International Journal of Communication Systems.

9.1.3.2. Reviewer - Reviewing Activities

Raoul de Charette: *Journal of Computer and Communications*.

Guy Fayolle: *AAP, MPRF, PTRF, QUESTA, European Journal of Combinatorics, JSP, Physica A*.

Jean-Marc Lasgouttes: *Journal of Applied Probability, IEEE Transactions on Knowledge and Data Engineering*.

Pierre Merdrignac: *IEEE Trans. on Intelligent Transportation Systems*.

Fawzi Nashashibi: *IEEE Transactions on Intelligent Vehicles, IEEE Transactions on Intelligent Transportation Systems, IEEE Intelligent Transportation Systems Magazine*.

Ahmed Soua: *IEEE Communications Letters*.

Thomas Streubel: *IEEE Transactions on Intelligent Vehicles*.

Anne Verroust-Blondet: *Transactions on Pattern Analysis and Machine Intelligence*.

9.1.4. Invited Talks

Raoul de Charette: "Perception research for Autonomous Vehicles", Sino-European Workshop on Information and Technology, Beijin, October 10-11 2016.

Guy Fayolle: "Random walks in the quarter-plane: explicit criterions for the finiteness of the associated group in the genus 1 case", Int. Conf. on Random Walks in Cones with Big Jumps, Tours, December 14-16 2016.

Fawzi Nashashibi:

1. Plenary keynote at the B.I.G. Forum (Big data Initiative of Gyeonggi). Invitation by the Geyonggi Province and Seoul National University, Oct. 19-20, Pangyo, Korea.
2. Keynote speaker at the Plenary session of the International Conference on Advanced Robotics and Computer Vision (ICARCV'2016), Nov. 15, Phuket, Thailand.
3. Keynote at the French ASPROM Workshop "'De la connectée à la voiture autonome : technologies, enjeux et applications"', Feb. 10-11, Paris, France.
4. Keynote at the "'Algorithms for HRI Workshop 2016"', July 21, Paris, France.

Anne Verroust-Blondet: "Sketch-based 3D model retrieval", Whitehead Lectures in Cognition, Computation and Culture, Goldsmiths, University of London, 24 May 2016.

9.1.5. Scientific Expertise

Guy Fayolle is scientific advisor at the Robotics Laboratory of Mines ParisTech.

Jean-Marc Lasgouttes is member of the Conseil Académique of Université Paris-Saclay.

9.1.6. Research Administration

Jean-Marc Lasgouttes is a member of the Comité Technique Inria.

Guy Fayolle is a member of the working group IFIP WG 7.3.

Fawzi Nashashibi is a member of the international Automated Highway Board Committee of the TRB (AHB30). He is a member of the Board of Governors of the VEDECOM Institute representing Inria and of the Board of Governors of MOV'EO Competitiveness cluster representing Inria.

Anne Verroust-Blondet is the scientific correspondent of the European affairs and of the International relations of Inria Paris. She is member of the COST-GTRI committee at Inria.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Fawzi Nashashibi, "Programmation avancée", 84h, L1, Université Paris-8 Saint-Denis, France.

Master: Jean-Marc Lasgouttes, "Analyse de données", 54h, second year of Magistère de Finance (M1), University Paris 1 Panthéon Sorbonne, France.

Master: Fawzi Nashashibi, "Image synthesis and 3D Infographics", 12h, M2, INT Télécom Sud-Paris

Master: Fawzi Nashashibi, "Obstacle detection and Multisensor Fusion", 4h, M2, INSA de Rouen.

Master: Fawzi Nashashibi, "Perception and Image processing for Mobile Autonomous Systems", 12h, M2, University of Evry.

Master: Oyunchimeg Shagdar, "Nouvelles technologies de communication", 32h, M2, University Versailles Saint-Quentin, France.

Master : Pierre Merdrignac, Introduction au traitement d'image, 12h (M1), Université Versailles Saint-Quentin en Yvelines, France.

Master: David González Bautista and Anne Verroust-Blondet, "Le véhicule autonome. Présentation des recherches de l'équipe-projet RITS",1.5 h, 2nd year, Ecole des Ponts ParisTech, France, Sept. 2016.

Doctorat: Jean-Marc Lasgouttes, "Analyse de données fonctionnelles", 31.5h, Mastère Spécialisé "Expert en sciences des données", INSA-Rouen, France

9.2.2. Supervision

PhD: Mohammad Abualhoul, "Visible light and radio communication for cooperative autonomous driving: applied to vehicle convoy", Mines ParisTech, December 2016, supervisor: Fawzi Nashashibi, co-supervisor: Oyunchimeg Shagdar. (cf. [17])

PhD: Guillaume Trehard, "Gestion des intersections pour la conduite urbaine autonome", Mines ParisTech, February 2016, supervisor: Fawzi Nashashibi.(cf. [18]).

PhD in progress : Zayed Al-Sayed, "Système de localisation redondant en environnement extérieur ouvert pour véhicule urbain automatique", Télécom ParisTech, October 2014, supervisor: Anne Verroust-Blondet, co-supervisor: Guillaume Bresson.

PhD in progress : David González Bautista, "Contrôle coordonné et planification dynamique des trajectoires pour un système de transport cybernétique en milieu urbain instrumenté", Mines ParisTech, January 2014, supervisor: Fawzi Nashashibi.

PhD in progress : Pierre de Beaucorps, "Autonomous vehicle: behavior prediction and Interaction with road users", UPMC Paris, January 2016, supervisor: Anne Verroust-Blondet, co-supervisor: Fawzi Nashashibi.

PhD in progress : Fernando Garrido Carpio, "Optimal trajectory generation for autonomous vehicles in urban environments" , Mines ParisTech, November 2014, supervisor: Fawzi Nashashibi, co-supervisors: Vicente Milanés, Joshué Pérez.

PhD in progress : Carlos Flores, "Analysis and design of cooperative systems for trains of green cars", Mines ParisTech, December 2015, supervisor: Fawzi Nashashibi, co-supervisor: Vicente Milanés.

PhD in progress : Francisco Navas, "Plug&Play control for highly non-linear systems: Stability analysis of autonomous vehicles", Mines ParisTech, October 2015, supervisor: Fawzi Nashashibi, co-supervisor: Vicente Milanés.

PhD in progress : Dinh-Van Nguyen, "Wireless sensor networks for indoor mapping and accurate localization for low speed navigation in smart cities", Mines ParisTech, December 2015, supervisor: Fawzi Nashashibi, co-supervisor: Eric Castelli.

Starting PhD: Farouk Ghallabi, "Environment modeling and simultaneous localization of a mobile vehicle on motorways: a multi-sensor approach", Mines ParisTech, October 2016, supervisor: Fawzi Nashashibi.

9.2.3. *Juries*

Guy Fayolle was a jury member of the PhD thesis defense of Mohamed Hadded "Design and Optimization of Access Control Protocols in Vehicular Ad Hoc Networks (VANETs)", Télécom SudParis, 30 November 2016. Fawzi Nashashibi was a reviewer and examiner of the following PhD theses:

- Rémy Sohier – « Sensibilité artistique et création vidéoludique : Critique du jeu par le jeu et modèle ludographique ». Université Paris VIII Saint-Denis, 28 November 2016 – Reviewer

- Yiyuan Huang – « Méthode de création numérique et interactivité inconsciente entre philosophie de l'oeuvre et psychologie du participant. Ré-exploration de la peinture traditionnelle chinoise de manière numérique en utilisant l'installation artistique interactive ». Université de Paris VIII Saint-Denis, département Arts et Technologies de l'Image. 14 June 2016 – Reviewer

- Adela Sirbu – « Dynamic Machine Learning for Supervised and Unsupervised Classification". Thèse en co-tutelle de l'Université BABES-BOLYAI, CLUJ-NAPOCA et de l'Université de Normandie délivrée par INSA Rouen. 6 June 2016 – Reviewer

- Carlos Fernandez-Lopez – «Road Scene Interpretation For Autonomous Navigation Fusing Stereo Vision and Digital Maps». Université de Alcalà (Spain). 23 September 2016 – Examiner

Anne Verroust-Blondet was:

- the external examiner of the PhD Examining Committee of Prashant Aparajeya's PhD "Medialness-based shape invariant feature transformation", Goldsmidth, University of London (UK), 23 May 2016.

- a jury member of the PdD thesis defense of Arthur Truong "Analyse du contenu expressif des gestes corporels", Télécom SudParis, 21 September 2016.

9.3. Popularization

An article about YoGoKo (spinoff RITS) was published by bpifrance. *"YoGoKo joue la connectivité routière"*. Date: 09/02/2016.

"La Tribune" published an article about the Link&Go prototype developed by AKKA Technologies and Inria-Rits. *"Voiture autonome : la LINK & GO d'AKKA veut sortir des frontières"*, pp.72-73. Date: 29/06/2016. Journalist: Marie-Annick Depagneux.

Fawzi Nashashibi was interviewed in the "L'Auto-Journal" journal. Title: *"Les voitures autonomes sont là."*. Date : 21/01-03/02 16. OJD : 105052, pp.30-32. Journalist: Brice Perrin.

Fawzi Nashashibi was interviewed in the "Usine Nouvelle" journal. Title: *"À la recherche du véhicule vraiment autonome"*. Date: 14/04/2016. Also: *"Le véhicule autonome fait avancer la simulation"*, pp. 48-49. Journalist: Frédéric Parisot.

Fawzi Nashashibi was interviewed in the "webcar center" (http://www.webcarcenter.com). Title: *"Conduite autonome : les premières voitures sont là"*. Date: 10/02/2016. Journalist: Brice Perrin.

Fawzi Nashashibi was interviewed by "L'Automobile & L'Entreprise" (http://www.automobile-entreprise.com). Journalist: Séverine Fontaine.

Fawzi Nashashibi was interviewed by "Télérama" magazine. Title: *"IA : c'est vraiment demain?"*. Date : 23/04-29/04 16. OJD : 578680. Journalists: Olivier Tesquet / Richard Sénéjoux.

Fawzi Nashashibi was interviewed by "Innovation Review". Title: *"Voitures autonomes : quel est le rôle du « deep learning » ?"*. Journalist: Thibault Lescuyer.

Fawzi Nashashibi was interviewed by "Les Echos" newspaper. Title: *"Google Car, le robot qui a remis la voiture autonome dans la course"*. Date: 02-03 Sept. 2016, pp.10-11. Journalist: Jacques Henno.

Fawzi Nashashibi was interviewed by "Science & Vie Special Edition - High Tech -". Title: *"Voiture connectée : la révolution cachée"*, pp. 78-83. Date: N 43/2016.

Fawzi Nashashibi was interviewed by "Industrie & Technologies". Title: *"Pourquoi et comment les véhicules autonomes vont devoir coopérer"*. Date: 11/10/2016. Journalist: Juliette Raynal. (https://www.industrie-techno.com/pourquoi-et-comment-les-vehicules-autonomes-vont-devoir-cooperer.46065).

Fawzi Nashashibi participated to a radio program on France Culture, La méthode scientifique, *"Jusqu'où ira l'autonomie des voitures ?"*, September 28, 2016.

Fawzi Nashashibi participated to a round table on *"Transports et énergies du futur"* for the event *Science en direct*, organized at the Cité des sciences et de l'industrie, Paris, October 8, 2016.

RITS team members participated to the making of a short movie dedicated to Teletoon Channel. Title/Serie: *"Culture Décode"*. Date: 09/12/2016. Journalist: Benjamin Brun (Tralalère: http://www.tralalere.com/).

<p style="text-align:center">**RMOD Project-Team**</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Chair of Conference Program Committees

- Anne Etien acted as Program chair for the following international events: IWST16 (International Worshop on SmallTalk Technologies) and VISSOFT 2016 (IEEE Working Conference on Software Visualization): NIER and Tool Track
- Stéphane Ducasse acted as Program Chair for ESUG 2016.

10.1.1.2. Member of the Conference Program Committees

- Stéphane Ducasse
  - International Conference 18th International Conference on Fundamental Approaches to Software Engineering (FASE) 2016.
  - For health reasons, I declined the PC participation to ICSE 2013, ECOOP 2013, ECOOP 2014, ECOOP 2015 (but I was the workshop chair) ECOOP 2016.
  - IWST'16 (International Worshop on SmallTalk Technologies).
- Anne Etien
  - DChanges'16 (4th International Workshop on Document Changes: Modeling, Detection, Storage and Visualization);
  - ME'16 (10th Workshop on Models and Evolution);
  - Modelwards'16 (4th International Conference on Model-Driven Engineering and Software Development).
  - IWST'16 (International Worshop on SmallTalk Technologies).
- Nicolas Anquetil
  - ICSOFT-EA'16 (11th International Conference on Software Technologies and Applications);
  - IWST'16 (International Worshop on SmallTalk Technologies).
- Marcus Denker
  - SANER 2017 (23rd IEEE International Conference on Software Analysis, Evolution, and Reengineering)
  - Meta 2016 (International Workshop, SPLASH 16)
  - SLE 2016 (International Conference on Software Language Engineering)
  - DLS 2016 (Dynamic Languages Symposium at SPLASH)
  - IWST'16 (International Worshop on SmallTalk Technologies).
- Clément Béra
  - ICOOOLPS'16 (11th Implementation, Compilation, Optimization of Object-Oriented Languages, Programs and Systems Workshop)
  - IWST'16 (International Worshop on SmallTalk Technologies).

10.1.2. Journal

10.1.2.1. Reviewer - Reviewing Activities

- Anne Etien reviewed manuscripts for the Software Quality Journal
- Nicolas Anquetil reviewed manuscripts for the ACM Transactions on Software Engineering and Methodology (TOSEM); Journal of Software: Evolution and Process (JSME); Computers & Operations Research (COR).
- Stéphane Ducasse reviewed manuscripts for Information ; Journal of Software: Evolution and Process (JSME); Journal of Science of Computer Programming; Journal of Object Technologies (JOT).
- Stéphane Ducasse and Marcus Denker are Moderators for arXiv cs.SE. http://arxiv.org/list/cs.SE/recent

10.1.3. Invited Talks

- Stéphane Ducasse gave a presentation at CITI laboratory Lyon, Diverse Team seminar Inria Rennes, La Sorbonne
- Clément Béra gave a presentation "Sista: Speculative inlining, Smalltalk-style", with Eliot Miranda (Cadence Design Systems) at the Stanford EE Computer Systems Colloquium, Stanford University (https://www.youtube.com/watch?v=f4Cvia-HZ-w).

10.1.4. Scientific Expertise

- Anne Etien reviewed several proposals for *Jeune Entreprise Innovante* and *Crédit Impôt Recherche*;
- Nicolas Anquetil acted as expert to evaluate project proposal for *Fondo Nacional de Desarrollo Cientifico y Tecnologico* (FONDECYT), Chile;
- Marcus Denker reviewed a research proposal for FONDECYT (Chilean National Science and Technology Commission);
- Damien Pollet reviewed projects proposal for NWO (Netherlands Organisation for Scientific Research) Veni grant proposal;
- Stéphane Ducasse participated to FWO (Belgium) PhD grant panel;
- Damien Cassou was a member of the Apps Togo jury, a contest from Ministry of Industry of Togo to encourage innovation in apps development (http://www.republicoftogo.com/Toutes-les-rubriques/Tech-Web/Voici-les-meilleures-applis-du-moment).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master : C. Demarey, Intégration Continue, 4h, M2, GIS2A5, Polytech-Lille, France

Master : C. Demarey, Intégration Continue, 12h, M2, IAGL, Université de Lille 1, France

Master: Anne Etien, Metamodelisation for Reverse Engineering, 25h, M2, Montpellier, France

Master: Anne Etien, Test et Maintenance, 10h, M2, Polytech-Lille, France

Master: Anne Etien, Test et Maintenance, 14h, M2, Polytech-Lille, France

Master : Anne Etien, Système d'information objet, 22h, M1, Polytech-Lille, France

Master : Anne Etien, Bases de données, 44h, M1, Polytech-Lille, France

Master : Anne Etien, Bases de données Avancées, 12h, M1, Polytech-Lille, France

Licence : Anne Etien, Bases de données, 22h, L3, Polytech-Lille, France

Licence : Nicolas Anquetil, Conception et programmation objet avancées, 52h, L2, Univ. Lille1, IUT-A, France

Licence : Nicolas Anquetil, Principes des systèmes d'exploitation, 40h, L2, Univ. Lille1, IUT-A, France

Licence : Nicolas Anquetil, Modélisation mathématique, 14h, L2, univ. Lille1, IUT-A, France

Licence : Nicolas Anquetil, Conception et développement d'applications mobiles, 30h, L2, univ. Lille1, IUT-A, France

Licence : Nicolas Anquetil, Méthodologie de la production d'applications, 33h, L2, univ. Lille1, IUT-A, France

Licence : Damien Pollet, Java lecture, 30h, L3, Telecom Lille, France

Licence : Damien Pollet, Java lecture, 20h, L3, Telecom Lille, France

Licence : Damien Pollet, Java project, 20h, L3, Telecom Lille, France

Licence : Damien Pollet, Computer architecture,10h, L3, Telecom Lille, France

Master : Damien Pollet, Technologies for information systems, 30h, M1, Telecom Lille, France

Master : Damien Pollet, Network algorithms, 30h, M2, Telecom Lille, France

Master : Damien Pollet, Software engineering, 6h, M1, Telecom Lille, France

Licence: Damien Cassou, Algorithmique et programmation, 25h, L1, Polytech-Lille, France

Licence: Damien Cassou, OpenDevs—Communauté de Développeurs, 30h, L3, Univ. Lille-1, France

Licence : Clément Béra, Algorithmique et programmation, 35h, L1, Polytech-Lille, France

Licence : Clément Béra, Conception orienté objet, 35h, L1, Univ. Lille-1, France

Master : Clément Béra, Génie Logiciel, 40h, M3, Univ. Lille-1, France

Master : Vincent Blondeau, Bases de données, 12h, M1, Polytech-Lille, France

E-learning

Mooc: Stéphane Ducasse, Damien Cassou, Luc Fabresse, "Programmation Objet Immersive en Pharo / Live Object Programming in Pharo", 7 weeks, by France Université Numerique and Inria, for programmers, 3400 participants

10.2.2. Supervision

PhD in progress : Vincent Blondeau, "Studying and Enhancing Testing Habits of Developers in a Large IT Company", CIFRE Worldline, started Oct 2014, Anne Etien, Nicolas Anquetil.

PhD in progress : Brice Govin, "Support to implement a rejuvenated software architecture in legacy software", CIFRE Thales, started Jan 2015, Anne Etien, Nicolas Anquetil, Stéphane Ducasse.

PhD in progress : Gustavo Santos, "Assessing and Improving Code Transformations to Support Software Evolution", started April 2014, Anne Etien, Nicolas Anquetil.

PhD: Camille Teruel, "Security for dynamic languages", 21/01/2016, Stéphane Ducasse, Damien Cassou

PhD in progress: Marco Naddéo, "Evolvable and reusable software: from language design to developer tools", started 01/01/2014, Viviana Bono (University of Turin), Damien Cassou, Stéphane Ducasse

PhD in progress: Clément Béra, "Evolvable Runtimes for a Changing World", started Oct 2014,Stéphane Ducasse, Marcus Denker.

PhD in progresss: Klérisson Paixao, "Automating reactions for API changes based on dynamic analysis", started 16/08/2014, Marcelo Maia, Damien Cassou, Nicolas Anquetil.

10.2.3. Juries

- Anne Etien: Jonathan Pepin, PhD thesis, "Architecture d'entreprise : alignement des cartographies me´tiers et applicatives du syste`me d'informations", Dec. 5th, 2016, University of Nantes (France).
- Nicolas Anquetil: David Michael Cutting, PhD thesis, "Enhancing Legacy Software System Analysis by Combining Behavioural and Semantic Information Services", Aug. 5th, 2016, University of East Anglia, Norwich (England).

10.3. Popularization

- Stéphane Ducasse and Damien Cassou were important contributors of the "Enterprise Pharo" book (http://files.pharo.org/books/enterprise-pharo/).
- Brice Govin and Vincent Blondeau participated in the contest "My thesis in 180 seconds"

ROMA Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Laure Gonnord is co-chair of the "Compilation French community", with Florian Brandner (ENSTA) and Fabrice Rastello (Inria Corse).

Bora Uçar was the workshops chair at IPDPS 2016, local chair of the a topic of Euro-Par 2016, co-chair of PCO 2016 (a workshop of IPDPS 2016), and has organized mini-symposia at SIAM PP16 and PMAA16.

10.1.2. Scientific Events Selection

10.1.2.1. Steering committees

Yves Robert is a member of the steering committee of HCW, Heteropar and IPDPS. He is the chair of the steering committee of Euro-EduPar.

Bora Uçar serves in the steering committee of CSC.

10.1.2.2. Chair of Conference Program Committees

Anne Benoit was the program chair of HiPC 2016, and the program area chair for Algorithms of SC 2016.

Loris Marchal was the program chair of HeteroPar 2016.

10.1.2.3. Member of the Conference Program Committees

Christophe Alias was a member of the program committee of IMPACT'16.

Anne Benoit was a member of the program committee of IPDPS, SC, HCW, and Ena-HPC.

Laure Gonnord was a member of the program committee of VMCAI'17.

Jean-Yves L'Excellent was a member of the program committee of VECPAR'16.

Loris Marchal was a member of the program committee of IPDPS 2016.

Yves Robert was a member of the program committee of FTS, FTXS, ICCS, ISCIS, and SC

Bora Uçar was a member of the program committee of the following conferences and workshops: HiPC 2016, IPDPS 2016, ICCS 2016, HPC4BD 2016, P^3MA, CSE 2016, MPP2016.

Frédéric Vivien was a member of the program committee of IPDPS, SC, HiPC, PDP, EduPar, EuroEduPar and WAPCO.

10.1.2.4. Reviewer

Jean-Yves L'Excellent reviewed papers for VECPAR'16, ADVCOMP'16.

Christophe Alias reviewed papers for IMPACT'16.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Anne Benoit is Associate Editor of TPDS (IEEE Transactions on Parallel and Distributed Systems), of JPDC (Elsevier Journal of Parallel and Distributed Computing) and SUSCOM (Elsevier Journal of Sustainable Computing).

Loris Marchal is an invited associated Editor of Parallel Computing (Elsevier) for a special issue following HeteroPar 2016.

Yves Robert is Associate Editor f TPDS (IEEE Transactions on Parallel and Distributed Systems), JPDC (Elsevier Journal of Parallel and Distributed Computing), IJHPCA (Sage International Journal of High Performance Computing Applications), and JOCS (Elsevier Journal of Computational Science).

Bora Uçar is Associate Editor of Parallel Computing (Elsevier).

Frédéric Vivien is Associate Editor of Parallel Computing (Elsevier) and of JPDC (Elsevier Journal of Parallel and Distributed Computing).

10.1.3.2. Reviewer - Reviewing Activities

Christophe Alias reviewed papers for TVLSI (IEEE Transactions on Very Large Scale Integration Systems), PARCO (Parallel Computing), MICPRO (Microprocessors and Microsystems).

10.1.4. Invited Talks

Christophe Alias gave a talk at "Journée Calcul" in ENS-Lyon on May 2016 and a talk at "Journée Langage, Compilation et Sémantique" in ENS-Lyon on November 2016.

10.1.5. Tutorials

Yves Robert gave a tutorial on *Fault-tolerance techniques for HPC platforms* at PPoPP'16 (with Thomas Hérault), SC'16 (with Aurélien Bouteiller, George Bosilca, and Thomas Hérault) and Euro-Par'16.

10.1.6. Leadership within the Scientific Community

Christophe Alias, together with Cédric Bastoul (CAMUS), co-founded the Impact workshop (International Workshop on Polyhedral Compilation Techniques) on 2011, which is now the reference international event of the polyhedral compilation community http://impact.gforge.inria.fr/. Since then, Christophe Alias is involved in IMPACT committees.

Laure Gonnord, together with Fabrice Rastello (CORSE) and Florian Brandner (Telecom Paris Tech) animate since 2010 the French Compilation Community (http://compilfr.ens-lyon.fr).

10.1.7. Research Administration

Anne Benoit is a member of the executive committee of the Labex MI-LYON. She is the head of the Master of fundamental computer science at ENS Lyon.

Loris Marchal is a member of the scientific council of the "Ecole Nationale Supe´rieure de Me´canique et des Microtechniques" (ENSMM, Besançon).

Jean-Yves L'Excellent is a member of the direction board of the LIP laboratory.

Yves Robert was a member of the Senior Member election of Institut Universitaire de France. He was a committee member of the IEEE Fellows selection. he is a member of the scientific council of the Maison de la Simulation.

Frédéric Vivien is a member of the scientific council of the École normale supérieure de Lyon and of the academic council of the University of Lyon.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence:

- Anne Benoit : Algorithmique avancée (CM 32h), L3, Ecole Normale Supérieure de Lyon.
- Maroua Maalej : Algorithmique et Programmation Avancée (TD=18, TP=24h), L2, Université Lyon 1 Claude Bernard : Autumn 2016.
- Maroua Maalej : Architecture et système (TP=24h), L2, Université Lyon 1 Claude Bernard : Autumn 2016.

- Maroua Maalej : Gestion de Projet et Génie Logiciel (TD/TP=10h), M1, Université Lyon 1 Claude Bernard : Autumn 2016.
- Christophe Alias : Compilation et outils de développement (CM+TD=18h), L3, INSA Centre-Val-de-Loire : Spring 2016.
- Christophe Alias : Concours E3A – épreuve informatique MPSI (correcteur) : Spring 2016.
- Yves Robert : Algorithmique (CM 32h), L3, Ecole Normale Supérieure de Lyon

Master:

- Anne Benoit, Resilient and energy-aware scheduling algorithms (CM 24h), M2, Ecole Normale Supérieure de Lyon.
- Laure Gonnord : Compilation (CM+TD 76h), M1, Université Claude Bernard Lyon 1, et M1 Ecole Normale Supérieure de Lyon.
- Laure Gonnord : Préparation à l'écrit et à l'oral d'informatique du capès d'informatique, 10h, M1 MEEF Université Claude Bernard Lyon1.
- Laure Gonnord : Program Analysis : (CM+TP 10h, avec D.Monniaux), M2 Ecole Normale Supérieure de Lyon.
- Christophe Alias : Optimisation d'applications embarquées (CM+TD=24h), M1, INSA Centre-Val-de-Loire.
- Christophe Alias: Advanced Compilers: Automatic Parallelization and High-level Synthesis (CM 24h, avec F. Rastello), M2, Ecole Normale Supérieure de Lyon, France.
- Frédéric Vivien, Algorithmique et Programmation Parallèles et Distribuées (CM 36 h), M1, École normale supérieure de Lyon, France.

10.2.2. Supervision

PhD in progress: Aurélien Cavelan, "Resilient and energy-aware scheduling algorithms for large-scale distributed systems", started in September 2014, advisors: Anne Benoit and Yves Robert.

PhD in progress: Changjiang Gou, "Resilient and energy-aware scheduling algorithms for large-scale distributed systems", started in September 2016, funding: China Scholarship Council, advisors: Anne Benoit and Loris Marchal.

PhD in progress: Li Han, "Algorithms for detecting and correcting silent and non-functional errors in scientific workflows", started in September 2016, funding: China Scholarship Council, advisors: Yves Robert and Frédéric Vivien

PhD in progress: Oguz Kaya, "High performance parallel tensor computations", started in September 2014, funding: Inria, advisors: Bora Uçar and Yves Robert.

PhD in progress: Aurélie Kong Win Chang, "Techniques de résilience pour l'ordonnancement de workflows sur plates-formes décentralisées (cloud computing) avec contraintes de sécurité", started in October 2016, funding: ENS Lyon, advisors: Yves Robert, Yves Caniou and Eddy Caron.

PhD in progress: Maroua Maalej, "Low cost static analyses for compilers", started in October 2014, advisors : Laure Gonnord and Frédéric Vivien.

PhD in progress: Gilles Moreau, "High-performance multifrontal solution of sparse linear systems with multiple right-hand sides, application to the MUMPS solver", started in December 2015, funding: MUMPS consortium and Labex MILYON, advisor: Jean-Yves L'Excellent.

PhD in progress: Loic Pottier, "Scheduling concurrent applications in the presence of failures", started in September 2015, advisors: Anne Benoit and Yves Robert.

PhD in progress: Issam Rais, "Multi-criteria scheduling for high-performance computing", started in November 2015, advisors: Anne Benoit, Laurent Lefèvre (LIP, ENS Lyon, Avalon team), and Anne-Cécile Orgerie (IRISA, Myriads team).

PhD in progress: Bertrand Simon, "Task-graph scheduling and memory optimization", started in September 2015, funding: ENS Lyon, advisors: Loris Marchal and Frédéric Vivien.

PhD defended on July 1st: Guillaume Iooss, "Semantic tiling", started in September 2011, joint PhD ENS-Lyon/Colorado State University, advisors: Christophe Alias and Alain Darte (ENS-Lyon) / Sanjay Rajopadhye (Colorado State University).

10.2.3. Juries

- Christophe Alias participated to the PhD jury of Guillaume Iooss (Colorado State University), in July 2016.

- Laure Gonnord participated to the Inria recruiting jury for junior research positions (CR2), in Rennes, in Spring 2016.

- Laure Gonnord participated to the PhD jury of Nasrine Damouche (Univ. Perpignan) and Sajith Kalathingal (Univ. Rennes), in December 2016.

- Laure Gonnord is member of the "Comité de Suivi de thèse" de Maurica Fonenantsoa (Univ. Réunion) since 2015.

- Loris Marchal participated to the selection committee recruting an assistant professor (MCF) at University of Bordeaux 1, in Spring 2016.

10.3. Popularization

Frédéric Vivien gave two lectures about "Approximation algorithms" at the CIRM "Algorithmique et programmation" workshop for Maths teachers in *Classes préparatoires aux grandes écoles*. The two lectures were recorded and are available online (http://library.cirm-math.fr/Record.htm?Record=19278406157910966889).

<p align="center" style="color:red">SECRET Project-Team</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- DISC 2016, Workshop for early-career symmetric cryptographers funded by the COST Action IC1306, Bochum, Germany, March 23-24 2016. https://disc2016.compute.dtu.dk/, co-organizer: A. Canteaut.
- Research retreat (H2020 PQCRYPTO), September 21-22, 2016, Inria de Paris, organizer: N. Sendrier

10.1.1.2. Member of the Organizing Committees

- EuroS&P 2017: April 26-28, 2015, Paris (France): G. Leurent (poster chair)

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- FSE 2017: March 5-8, 2017, Tokyo, Japan: M. Naya-Plasencia (co-chair).

10.1.2.2. Member of the Conference Program Committees

- PQCrypto 2016: February 24-26, 2016, Fukuoka, Japan (N. Sendrier, J.P. Tillich)
- CT-RSA 2016: Feb. 29- March 4, 2016, San Francisco, USA (M. Naya Plasencia)
- FSE 2016: March 20-23, 2016, Bochum, Germany (A. Canteaut, G. Leurent)
- Eurocrypt 2016: May 8-12, 2016, Vienna, Austria (M. Naya Plasencia)
- Crypto 2016: August 14-18, 2016, Santa Barbara, USA (A. Canteaut)
- ACISP 2016: July 4-6, 2016, Melbourne, Australia (G. Leurent)
- Waifi 2016: July 13-15, 2016, Ghent, Belgium (A. Canteaut)
- YACC 2016: June 6-10, 2016, Porquerolles Island (A. Canteaut)
- SAC 2016: August 10-12, 2016, St. John's, NL, Canada (G. Leurent, M. Naya-Plasencia)
- Lightsec 2016: September 21-22, 2016, Cappadocia, Turkey (M. Naya-Plasencia)
- Redundancy 2016: September 26-29, 2016, St. Petersburg, Russia (P. Charpin)
- TQC 2016: September 27-29, 2016, Berlin, Germany (A. Chailloux);
- SETA 2016 (International Conference on SequEnces and Their Applications): October 9-14, 2016, Chengdu, China (P. Charpin).
- Asiacrypt 2016: December 4-8, 2016, Hanoi, Vietnam (A. Canteaut)
- Indocrypt 2016: December 11-14, 2016, Kolkata, India (G. Leurent)
- QIP 2017: January 16-20, 2017, Seattle, USA (A. Chailloux, A. Leverrier)
- Financial Crypto 2017: April 3-7, 2017, Sliema, Malta (G. Leurent)
- Fq13: June 4-9, 2017, Geata, Italy (A. Canteaut)
- Crypto 2017: August 20-24, 2017, Santa Barbara, CA, USA (G. Leurent)

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- *Designs, Codes and Cryptography*, associate editor: P. Charpin.
- *Finite Fields and Their Applications*, associate editors: A. Canteaut, P. Charpin.
- *Annals of telecommunications*, associate editor : J.-P. Tillich.
- *Applicable Algebra in Engineering, Communication and Computing*, associate editor: A. Canteaut.
- *IACR Transactions on Symmetric Cryptology*, associate editors: A. Canteaut and G. Leurent, co-editor-in-chief: M. Naya-Plasencia.

P. Charpin serves as a reviewer for *Mathematical Reviews*.

10.1.3.2. Editor for books or special issues

- Special issue in Coding and Cryptography, *Designs, Codes and Cryptography*, to appear, editors: P. Charpin, N. Sendrier and J-P. Tillich.
- *Contemporary Developments in Finite Fields and Applications*, 2016, World Scientific Publishing [62], co-editor: A. Canteaut.

10.1.4. Invited Talks

- G. Leurent *Breaking Symmetric Cryptosystems Using Quantum Period Finding*, TCCM-CACR 2016, Yinchuan, China, August 2016
- A. Leverrier, *Quantum Expander Codes*, Beyond i.i.d. in Information Theory, Barcelone, Spain, 18-22 June 2016

The members of the project-team have also been invited to give talks to some workshops or international seminars, including:

- A. Canteaut, *Another view of the division property* Dagstuhl seminar on symmetric cryptology, Dagstuhl, Germany, Jan. 10-14, 2016.
- A. Canteaut, *Stream Ciphers: A Practical Solution for Efficient Homomorphic-Ciphertext Compression*, CryptoAction Symposium 2016, Budapest, Hungary, April 6-8, 2016.
- A. Canteaut, *Algebraic Distinguishers against Symmetric Primitives*, Paris Crypto Day, France, June 30, 2016.
- A. Canteaut, *Comment concevoir un algorithme de chiffrement sûr et efficace : l'héritage de Shannon*, Shannon 100, workshop organized at the occasion of Shannon's 100th birthday, Institut Henri Poincaré, Paris October 26, 2016. The talk is available online at https://www.youtube.com/watch?v=BYlOO4MkVgU.
- A. Chailloux, *Cryptographie relativiste*, Coding, Cryptography and Algorithms (CCA), Paris, July 1, 2016.
- A. Chailloux, *Quantum Information Processing*, Journées Scientifiques Inria 2016, Rennes, France, June 2016.
- V. Lallemand, *Cryptanalysis of the FLIP Family of Stream Ciphers*, Paris Crypto Day, Sept. 6, 2016.
- G. Leurent, *Transcript Collision Attacks*, Dagstuhl seminar on symmetric cryptology, Dagstuhl, Germany, Jan. 10-14, 2016.
- A. Leverrier, *Distributing Secret Keys with Quantum Continuous Variables*, Recent Advances in Continuous-variable Quantum Information Theory, Barcelone, Spain, 16-8 April 2016
- M. Naya-Plasencia: *Pourquoi essaie-t-on de casser les fonctions cryptographiques ?*. Colloquium organised by the pre-GDR Sécurité Informatique: Colloque Sécurité informatique CNRS http://colloque-cybersecu.cnrs.fr/. Paris, France, Dec. 9, 2016.
- J.P. Tillich, *Attaining the capacity with Reed-Solomon codes through the $(U|U+V)$ construction and Koetter-Vardy soft decoding*, Journée Claude Shannon, Paris, July 1, 2016.

10.1.5. Leadership within the Scientific Community

- A. Canteaut serves as a chair of the steering committee of *Fast Software Encryption (FSE)*.
- N. Sendrier serves on the steering committee of *Post-quantum cryptography (PQCrypto)*.
- M. Naya Plasencia serves on the steering committee of the *Coding and Cryptography* group of GDR-IM https://crypto.di.ens.fr/c2:main;
- N. Sendrier is a member of the "Comité de pilotage" of the ANR (défi 9);
- Since 2014, JP. Tillich organizes a working group on code-based cryptography which meets on a monthly/bimonthly basis. It gathers people from the project-team, from the GRACE project-team (Inria Saclay), from the University of Limoges, from the University of Rennes and from the University of Rouen who all work on this topic.

10.1.6. Research Administration

- N. Sendrier has been a vice-chair of the "Commission d'Evaluation" at Inria until October 2016;
- A. Canteaut is a member of the "Comité de pilotage" of the Fondation Sciences Mathématiques de Paris;
- M. Naya-Plasencia is a member of *Inria Paris CES Committee* (Comité de suivi doctoral).
- M. Naya-Plasencia is a member of *Inria Paris Scientific Hiring Committee* (Assignement of PhD, post-doctoral and delegation Inria fundings).
- N. Sendrier served on the jury of PEDR CNRS INSII 2016.
- J.-P. Tillich is in charge of "Formation par la recherche" for the Paris Inria center;
- **Committees for the selection of professors, assistant professors and researchers**: Inria Paris Chargés de recherche (A. Canteaut), University Paris 8 assistant professor (A. Canteaut, M. Naya-Plasencia, JP Tillich), Inria Directeurs de recherche (N. Sendrier)

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: A. Canteaut, *Introduction to Symmetric Cryptography*, 7 hours, M1, Telecom ParisTech, France;

Master: A. Canteaut, *Error-correcting codes and applications to cryptology*, 12 hours, M2, University Paris-Diderot (MPRI), France;

Master: A. Chailloux, *Quantum computing*, 6 hours, M2, University Paris-Diderot (MPRI), France;

Master: N. Sendrier, *Code-based cryptography*, 4.5 hours, M2, University Paris-Diderot (MPRI), France;

Master: N. Sendrier, Information theory, 32 hours, M1, University of Versailles-St Quentin (MINT), France;

Master: J.-P. Tillich, *Introduction to Information Theory*, 32 hours, M2, Ecole Polytechnique, France.

The members of the project-team also gave advanced lectures to summer schools for PhD students:

- *UbiCrypt Spring School on Symmetric Cryptography*, Bochum, Germany, March 2016: A. Canteaut (9 hours). Some of the lectures are available online.

  E-learning

  Mooc: I. Marquez-Corbella and N. Sendrier, *Code-based cryptography*, 5 weeks, FUN, Inria, undergraduate and Master's degree students in mathematics or computer science.

  Pedagogical resources: https://www.fun-mooc.fr/courses/inria/41006S02/session02/about

10.2.2. Supervision

PhD: Virginie Lallemand, *Cryptanalysis for symmetric cryptography*, University Pierre-et-Marie Curie, October 5, 2016, supervisors: M. Naya-Plasencia and A. Canteaut

PhD in progress: Julia Chaulet, *Study of public-key cryptosystems based on MDPC quasi-cyclic codes*, since February 2014, CIFRE convention with Thales, supervisor: N. Sendrier

PhD in progress: Kaushik Chakraborty, *Position-based Quantum Cryptography*, since October 2014, supervisors: A. Leverrier, J.P. Tillich

PhD in progress: Adrien Hauteville, *Rank-metric-based Cryptosystems*, since October 2014, supervisors: P. Gaborit (Univ. Limoges) and J.-P. Tillich

PhD in progress: Rodolfo Canto Torres, *Analysis of generic decoding algorithms for the Hamming metric and study of cryptosystems based on the rank metric*, since September 2015, supervisor: N. Sendrier

PhD in progress: Sébastien Duval, *Constructions for lightweight cryptography*, since October 2015, supervisor: A. Canteaut and G. Leurent

PhD in progress: Yann Rotella, *Finite fields and symmetric cryptography*, since October 2015, supervisor: A. Canteaut

PhD in progress: Xavier Bonnetain, *Cryptanalysis of symmetric primitives in the post-quantum world*, since September 2016, supervisor: M. Naya Plasencia and A. Canteaut

PhD in progress: Thomas Debris, *Quantum algorithms for decoding linear codes*, since September 2016, supervisor: J.-P. Tillich

PhD in progress: Antoine Grospellier, *LDPC codes: constructions and decoding*, since October 2016, supervisor: J.-P. Tillich

PhD in progress: Vivien Londe, *Study of quantum LDPC codes*, since September 2016, supervisors: G. Zémor and A. Leverrier

PhD in progress: Kevin Carrier, *Reconstruction of error-correcting codes*, since October 2016, supervisor: N. Sendrier

10.2.3. Juries

- Mohamed Nidhal Mejri, *Securing Vehicular Networks against Denial of Service attacks*, University Paris 13, May 19, 2016, committee: A. Canteaut;

- Tung Chou *Accelerating Pre- and Post-quantum Cryptography*, TU Eindhoven, The Netherlands, June 26, 2016, committee: N. Sendrier;

- Jean-Marie Le Bars, *Some studies about randomness in Computer Science*, HdR, University of Caen, June 29, 2016, committee: J.P. Tillich (reviewer);

- Tom Douce, *Realistic quantum information processing: from devices to computational models*, Université Paris Diderot, September 9, 2016, committee: A. Leverrier;

- Virginie Lallemand, *Cryptanalysis for symmetric cryptography*, University Pierre-et-Marie Curie, October 5, 2016, committee: M. Naya-Plasencia and A. Canteaut (supervisors)

- Brice Minaud, *Analysis of recent cryptographic primitives*, University of Rennes 1, October 7, 2016, committee: A. Canteaut;

- Pierre Karpmann, *Analysis of symmetric primitives*, University Paris-Saclay, October 18, 2016, committee: A. Canteaut (reviewer);

- Jean-Christophe De Neuville, *Contributions to post-quantum cryptography*, University of Limoges, December 1, 2016, committee: J.P. Tillich (reviewer).

- Zoé Amblard , *Quantum cryptography and applications to spatial communications*, University of Limoges, December 5, 2016, committee: J.P. Tillich (reviewer).

- Qian Guo, *Using coding techniques for attacking post-quantum cryptographic assumptions and systems*, Lund University, Sweden, December 13, 2016, committee: J.P. Tillich.

10.3. Popularization

- Nicolas Sendrier and Jean-Pierre Tillich, *Code-Based Cryptography: New Security Solutions Against a Quantum Adversary*, ERCIM News [67].

- Anne Canteaut gave a talk at the *dotSecurity 2016* conference for developers, at Théâtre des Variétés, Paris, April 2016 http://www.thedotpost.com/2016/05/anne-canteaut-the-struggle-for-secure-cryptography.

- Anne Canteaut gave a talk at *Séminaire général du département d'informatique de l'ENS* for Master students in computer science at ENS Paris, April 13, 2016 http://savoirs.ens.fr/expose.php?id=2516.

- André Chailloux gave a talk entitled *L'ordinateur quantique*, at Journées Art, Cerveau, Futur; Mouans-Sartoux, France, September 2016;

- Anne Canteaut gave a talk on cryptography at lycée Rodin, Paris, February 2, 2016.
- Sébastien Duval gave a talk on cryptography at lycée des 7 Mares, Maurepas, December 2, 2016
- Anne Canteaut has been involved in the AlKindi competition, which is a national competition on cryptanalysis for students in "Seconde" http://www.concours-alkindi.fr/.

  The best teams from Paris have been visiting the SECRET project-team in June 2016 https://www.youtube.com/watch?v=EVLHEOWAORc.
- Julia Chaulet participated to a general-public mediation about the use of mathematics in industry at "Salon Culture & Jeux Mathématiques", Paris, May 28, 2016.
- Yann Rotella hold a stand to explain cryptography at Futur en Seine, Carreau du Temple, Paris, June 12, 2016.

<p style="text-align:center; color:red;">**SELECT Project-Team**</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

Sylvain Arlot:

- Sylvain Arlot organized a workshop at IHES on statistics and learning in the Paris-Saclay area.
- Sylvain Arlot co-organized (with Francis Bach, Inria Paris, and Alain Celisse, Univ. Lille 1) a 2-day workshop at IHES about computational and statistical trade-offs in learning.

Jean-Michel Poggi:

- Organization Special Invited Session entitled "Advances in Random Forests", 22nd International Conference on Computational Statistics, Oviedo, Spain, 23-26 August 2016.

9.1.1.2. Member of the Organizing Committees

Gilles Celeux is one of the co-organizers of the international working group on model-based clustering. This year the workshop took place in Paris.

Sylvain Arlot co-organized the 1st Junior Conference on Data Science and Engineering at Paris-Saclay (at LAL, Orsay).

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Jean-Michel Poggi was:

- President of the Scientific Programme Committee, ENBIS 2017, Naples, 10-14 June 2017

9.1.2.2. Member of the Conference Program Committees

Jean-Michel Poggi was:

- Member of the Scientific Committee of CESS 2016, Conference of European Statistics Stakeholders, Hungarian Academy of Sciences, Budapest, 20-21 October 2016
- Member of SPC ENBIS-2016, Sheffield, UK, 11-15 September 2016
- Member of the Scientific committee of the journées MAS 2016, Grenoble
- Member of SPC COMPSTAT 2016, 22nd International Conference on Computational Statistics, Oviedo, Spain, 23-26 August 2016.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Gilles Celeux is Editor-in-Chief of the *Journal de la SFdS*. He is Associate Editor of *Statistics and Computing*, *CSBIGS*.

Pascal Massart is Associate Editor of *Annals of Statistics*, *Confluentes Mathematici*, and *Foundations and Trends in Machine Learning*.

Jean-Michel Poggi is Associate Editor of *Journal of Statistical Software*, *Journal de la SFdS* and *CSBIGS*.

9.1.3.2. Reviewer - Reviewing Activities

The members of the team have reviewed numerous papers for numerous international journals.

9.1.4. Invited Talks

The members of the team have given many invited talks on their research in the course of 2016.

9.1.5. Leadership within the Scientific Community

Jean-Michel Poggi is:

- Vice-President ENBIS (European Network for Business and Industrial Statistics), 2015-18
- Vice-President FENStatS (Federation of European National Statistical Societies) since 2012
- Council Member of the ISI (2015-19)
- Member of the Board of Directors of the ERS of IASC (since 2014)

9.1.6. Scientific Expertise

Jean-Michel Poggi is member of the EMS Committee for Applied Mathematics (since 2014).

9.1.7. Research Administration

Jean-Michel Poggi is the president of ECAS (European Courses in Advanced Statistics) since 2015.

Sylvain Arlot coordinates (jointly with Marc Schoenauer, Inria Saclay) the math-STIC program of the Labex Mathématique Hadamard.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

SELECT members teach various courses at several different universities, and in particular the Master 2 "Mathématique de l'aléatoire" of Université Paris-Saclay.

9.2.2. Supervision

PhD in progress: Valérie Robert, 2013, Gilles Celeux and Christine Keribin

PhD in progress: Yann Vasseur, 2013, Gilles Celeux and Marie-Laure Martin-Magniette (URGV)

PhD in progress: Neska El Haouij, 2014, Jean-Michel Poggi and Meriem Jaïdane, Raja Ghozi (ENIT Tunisie) and Sylvie Sevestre-Ghalila (CEA LinkLab), Thesis ENITUPS

PhD in progress: Florence Ducros, 2015, Gilles Celeux and Patrick Pamphile

PhD in progress: Claire Brécheteau, 2015, Pascal Massart

PhD in progress: Eddie Aamari, 2015, Pascal Massart and Frédéric Chazal

PhD in progress: Damien Garreau, 2016, Sylvain Arlot and Gérard Biau

PhD in progress: Guillaume Maillard, 2016, Sylvain Arlot and Matthieu Lerasle

PhD in progress: Jeanne Nguyen, 2015, Claire Lacour

PhD in progress: Benjamin Goehry, 2015, Pascal Massart and Jean-Michel Poggi

9.2.3. Juries

- Ph.D. Jérémy Bensadon: Sylvain Arlot (president)
- Ph.D. Gwenaelle Mabon: Sylvain Arlot (member)
- Ph.D. Mokhtar Alaya: Sylvain Arlot (president)
- Ph.D. Marie-Liesse Cauwet: Sylvain Arlot (member)

<p align="center" style="color:red">SEMAGRAMME Project-Team</p>

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. General Chair, Scientific Chair

> MAXIME AMBLARD: LACL 2016 *Logical Aspects of Computational Linguistics 2016*.

8.1.1.2. Member of the Organizing Committees

> PHILIPPE DE GROOTE: LACL 2016 *Logical Aspects of Computational Linguistics 2016*.

> SYLVAIN POGODALLA: LACL 2016 *Logical Aspects of Computational Linguistics 2016*.

8.1.2. Scientific Events Selection

8.1.2.1. Chair of Conference Program Committees

> SYLVAIN POGODALLA: co-chair of FG 2016 *21st Conference on Formal Grammar*[19]; co-chair of LACL 2016 (*Logical Aspects of Computational Linguistics 2016*) [18]

> MAXIME AMBLARD: co-chair of LACL 2016 (*Logical Aspects of Computational Linguistics 2016*) [18]

8.1.2.2. Member of the Conference Program Committees

> PHILIPPE DE GROOTE: FG 2016, *21st Conference on Formal Grammar*; NLCS'16, *Fourth Workshop on Natural Language and Computer Science*; LACL 2016 *Logical Aspects of Computational Linguistics 2016*.

> MAXIME AMBLARD: LACL 2016 *Logical Aspects of Computational Linguistics 2016*; TALN 2016 *Traitement Automatique des Langues 2016*; RECITAL 2016 *Rencontre des Étudiants Chercheurs en Informatique pour le Traitement Automatique des Langues*.

> GUY PERRIER: HrTAL2016 *10th International Conference on Natural Language Processing*.

8.1.2.3. Reviewer

> PHILIPPE DE GROOTE: FG 2016, *21st Conference on Formal Grammar*; NLCS'16, *Fourth Workshop on Natural Language and Computer Science*; LACL 2016 *Logical Aspects of Computational Linguistics 2016*.

> SYLVAIN POGODALLA: NISM 2016 *New Ideas in Semantics and Modelisation*; Cognitive Structures: Linguistic, Philosophical and Psychological Perspectives; FG 2016 *21st Conference on Formal Grammar*; LACL 2016 *Logical Aspects of Computational Linguistics 2016*.

> MAXIME AMBLARD: LACL 2016 *Logical Aspects of Computational Linguistics 2016*; TALN 2016 *Traitement Automatique des Langues 2016*; RECITAL 2016 *Rencontre des Étudiants Chercheurs en Informatique pour le Traitement Automatique des Langues*.

> GUY PERRIER: HrTAL2016 *10th International Conference on Natural Language Processing*; LACL 2016 *Logical Aspects of Computational Linguistics 2016*.

8.1.3. Journal

8.1.3.1. Member of the Editorial Boards

> PHILIPPE DE GROOTE: area editor of the *FoLLI-LNCS series*; associate editor of *Higher-Order and Symbolic Computation*; member of the editorial board of *Cahiers du Centre de Logique*.

SYLVAIN POGODALLA: Member of the editorial board of the journal *Traitement Automatique des Langues*, in charge of the *Résumés de thèses* section.

MAXIME AMBLARD: Member of the editorial board of the journal *Traitement Automatique des Langues*, in charge of the final editing process

8.1.3.2. Reviewer - Reviewing Activities

PHILIPPE DE GROOTE: *Journal of Logic, Language and Information*; *Journal of Applied Logic*.

SYLVAIN POGODALLA: *Journal of Language Modelling*; *Traitement Automatique des Langues*.

MAXIME AMBLARD: *Traitement Automatique des Langues*.

8.1.4. Invited Talks

MAXIME AMBLARD: *Sémantique : modélisation formelle et interprétation de données empiriques*, ATILF, Nancy; *L'informaticien face au traitement du langage : que peut-on faire et que croit-on que nous faisons ?*, at the occasion of *Images du savoir pratique : les figures de l'informaticien et du médecin dans les récits de fiction populaire contemporains*, IRIST, Strasbourg.

8.1.5. Leadership within the Scientific Community

PHILIPPE DE GROOTE: vice president of SIGMOL, *Association for Mathematics of Language, a Special Interest Group of the Association for Computational Linguistics*; member of the LACL steering committee.

BRUNO GUILLAUME: nominated as a Management Committee Substitute of the COST Action CA16105 "European Network for Combining Language Learning with Crowdsourcing Techniques" (http://www.cost.eu/COST_Actions/ca/CA16105)

SYLVAIN POGODALLA: member of the LACL steering committee; member of the Formal Grammar standing committee.

8.1.6. Scientific Expertise

PHILIPPE DE GROOTE: expert for the FNRS, *Fond National de la Recherche Scientifique*, Belgium; expert for the *National Science Center*, Poland.

SYLVAIN POGODALLA: expert for the Research Executive Agency (REA) of the EU.

MAXIME AMBLARD: member of the PhD award of ATALA

8.1.7. Research Administration

PHILIPPE DE GROOTE: member of the *bureau du comité des projets d'Inria-Nancy*.

BRUNO GUILLAUME:

- Head of the Loria department NLPKD (Natural Language Processing and Kownledge Discovery)
- Animator of the CPER 2015-2020 project *Langues, Connaissances et Humanités Numériques'* (Languages, Knowledge and Digital Humanities) in which ten laboratories of the *Université de Lorraine* are implied.
- Elected member of the *Pôle scientifique AM2I* of the Université de Lorraine.
- Member of the Comipers (Inria committee for PhD and Post-doctoral selection).

MAXIME AMBLARD:

- member of *conseil scientifique de l'Université de Lorraine*.
- member of *conseil de laboratoire du Loria*
- member of *conseil de gestion de la Maison des sciences de l'homme, MSH-Lorraine*
- head of the master (M2) in Natural Language Processing.
- in charge of the proposal of a new master in NLP.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence: Maxime Amblard, Formalismes de représentation et raisonnement, 25h, L3, Université de Lorraine, France

Licence: Maxime Amblard, C2i, 20h, L1, Université de Lorraine, France

Licence: Jirka Maršík, Ingénierie linguistique, 25h, L3, Université de Lorraine, France

Master: Maxime Amblard, Formalisms : from Syntax to Discourse, 50h, M2, Univ. Lorraine, France

Master: Maxime Amblard, Remise à niveau TAL, 6h, M2, Université de Lorraine, France

Master: Maxime Amblard, Programming for NLP, 44h, M1, Université de Lorraine, France

Master: Philippe de Groote, Formal logic, 35h, M2, Université de Lorraine, France.

Master: Philippe de Groote, Computational structures and logics for natural language modelling, 18h, M2, Université Paris Diderot, France.

Master : Bruno Guillaume, NLP Toolchain and Linguistic Resources, 15h, M2, Université de Lorraine, France.

Master: Jirka Maršík, IA fondamentale : représentation des connaissances et fouille de données, 11h30, M1, Université de Lorraine, France

Master: Jirka Maršík, Communication scientifique, 15h30, M1, Université de Lorraine, France

Master: Jirka Maršík, Cognitive Aspect of Computational Linguistic, 15h, M2, Université de Lorraine, France

Master: Jirka Maršík, Aspects cognitives de la linguistique computationnelle, 16h30, M2, Université de Lorraine, France

Master: Jirka Maršík, Remise à niveau TAL, 10h, M2, Université de Lorraine, France

Master : Sylvain Pogodalla, Formal Languages, 24h, M2, Université de Lorraine, France.

8.2.2. Supervision

HdR: Maxime Amblard, Sémantique et discours, de la modélisation à l'interprétation, Université de Lorraine, November 28th, 2016, Philippe de Groote.

PhD: Jirka Maršík, Effects and Handlers in Natural Language, Université de Lorraine, December 9th, 2016, Philippe de Groote and Maxime Amblard.

PhD: Aleksandre Maskharashvili, Discourse Modeling with Abstract Categorial Grammars, Université de Lorraine, December 1st, 2016, Philippe de Groote and Sylvain Pogodalla.

PhD in progress: Clément Beysson, Quantificateurs généralisés dynamiques pour l'analyse discursive, since september 2015, Philippe de Groote and Bruno Guillaume.

8.2.3. Juries

PHILIPPE DE GROOTE was member of the jury of the HdR of Maxime Amblard, *Sémantique et discours, de la modélisation à l'interprétation* [6], November 28th, 2016, Université de Lorraine.

PHILIPPE DE GROOTE was member of the jury of the PhD thesis of Aleksandre Maskharashvili, *Discourse Modeling with Abstract Categorial Grammars* [8], December 1st, 2016, Université de Lorraine.

PHILIPPE DE GROOTE was member of the jury of the PhD thesis of Jirka Maršík, *Effects and Handlers in Natural Language* [7], Université de Lorraine, December 9th, 2016, Université de Lorraine.

SYLVAIN POGODALLA was member of the jury of the PhD thesis of Aleksandre Maskharashvili, *Discourse Modeling with Abstract Categorial Grammars* [8], December 1st, 2016, Université de Lorraine.

MAXIME AMBLARD was member of the jury of the PhD thesis of Jirka Maršík, *Effects and Handlers in Natural Language* [7], Université de Lorraine, December 9th, 2016, Université de Lorraine.

GUY PERRIER was member of the jury of the PhD thesis of Bikash Gyawali *Surface Realisation from Knowledge Bases*, January 20, 2016, Université de Lorraine.

8.3. Popularization

- Maxime Amblard is scientific vice head of the editorial board of interstice)i(, a french magazine popularizing computer sciences. He is the head of the rubric *informatique —ou presque— dans les films*.

- Maxime Amblard was scientific expert for the exhibition *Homo Numericus*.

- Bruno Guillaume was invited twice to present and lead an open discussion about Citizen Science: *Séminaire ESPÉ DANE : la pépinière 4.0*, in January, and *Séminaire ESPÉ DANE : la pépinière 4.1*, in October.

- Bruno Guillaume was invited in July to a panel discussion about Citizen Science, *Les rendez-vous de Science&You*.

<p style="text-align:center; color:red;">**SEQUEL Project-Team**</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- C. Dimitrakakis, ICML Workshop on the theory and practice of differential privacy.
- Ph. Preux, "Big Data : Modelisation, Estimation and Selection", June 2016, Villeneuve d'Ascq.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- Conference on Learning Theory (COLT)
- International Joint Conference on Artificial Intelligence (IJCAI)
- European Conference on Machine Learning (ECML)
- ICPRAM
- French conferences:
  - Extraction et Gestion de Conaissances (EGC),
  - Journées Francophones de Planification, Décision, Apprentissage (JFPDA),
  - Apprentissage Automatique et Fouille de Données & Société Française de Classification

10.1.2.2. Reviewer

- Thirtieth AAAI Conference on Artificial Intelligence (AAAI-16)
- Conference on Learning Theory (COLT 2016)
- European Workshop on Reinforcement Learning (EWRL 2016)
- European Conference on Machine Learning (ECML 2016)
- International Conference on Machine Learning (ICML 2016)
- Neural Information Processing Systems (NIPS 2016)
- International Joint Conference on Artificial Intelligence (IJCAI 2016)
- Conference on Autonomous Agents and Multia-Agent Systems (AAMAS 2016)
- International Conference on Artificial Intelligence and Statistics (AISTATS 2016)
- French conferences:
  - Extraction et Gestion de Conaissances (EGC),
  - Journées Francophones de Planification, Décision, Apprentissage (JFPDA),
  - conférence francophone sur l'Apprentissage Automatique (CAp),
  - Apprentissage Automatique et Fouille de Données & Société Française de Classification
  - Conférence Nationale d'Intelligence Artificielle (CNIA)

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Journal of Games.
- Neurocomputing.
- Revue d'Intelligence Artificielle

10.1.3.2. Reviewer - Reviewing Activities

- Automatica
- Artificial Intelligence Journal
- Machine Learning Journal
- Journal of Artificial Intelligence Research
- Journal of Machine Learning Research
- AMS Mathematical Review
- IEEE Transaction on Signal Processing
- IEEE Tansaction on Cybernetics

10.1.4. Invited Talks

- R. Gaudel, *From Bandits to Recommender Systems*, Presented on September 29th, 2016 at ENSAI, Rennes, France
- R. Gaudel, *Recommendation as a sequential process*, Presented on December 12th, 2016 at CMLA Mathématiques Appliquées, Cachan, France
- E. Kaufmann, *The information complexity of best arm identification*, Multi-armed Bandit Workshop 2016 at STOR-i, Lancaster University, UK, January 2016.
- E. Kaufmann, *The information complexity of sequential resource allocation*, seminar of the Collegio Carlo Alberto, Turin, March 2016.
- E. Kaufmann, *Optimal Best Arm Identification with Fixed Confidence*, Workshop on Computational and Statistical Trade-offs in Learning , Institut des Hautes Etudes Scientifiques (Orsay), March 2016.
- E. Kaufmann, *The information complexity of sequential resource allocation*, Stalab seminar, University of Cambridge, UK, April 2016.
- E. Kaufmann, *Stratégies bayésiennes et fréquentistes dans un modèle de bandit*, 1er congrès de la Société Mathématique de France, Tours, June 2016.
- E. Kaufmann, *Stratégies bayésiennes et fréquentistes dans un modèle de bandit*, Journées MAS, Grenoble, August 2016.
- E. Kaufmann, *Revisiting the Exploration-Exploitation Tradeoff in Bandit Models*, Workshop on Optimization and Decision-Making in Uncertainty, Simons Institute, Berkeley, September 2016.
- A. Lazaric, *Spectral Methods for Learning in POMDPs*, University of Liège, Belgium, February 2016.
- A. Lazaric, *Spectral Methods for Learning in POMDPs*, CMLA Mathématiques Appliquées, Cachan, France, February 2016.
- A. Lazaric, *Incremental Kernel Regression with Ridge Leverage Score Sampling*, "Data Learning and Inference" (DALI), Sestri Levante, Italy, April 2016.
- A. Lazaric, *Optimism and Randomness in Linear Multi-armed Bandit*, "International Conference on Monte-Carlo Techniques", July 2016.
- J. Mary, *Structured Bandits*, "University of Strasbourg", May. 2016.
- J. Mary, *Tutorial on Deep Neural Networks*, "Journées Big Data", by the Laboratoire Painlevé. Jun. 2016.
- J. Mary, *Machine Learning and AI*, "EDF Seminar", Dec. 2016.
- O. Pietquin, *Closing the Interaction Loop with (Inverse) Reinforcement Learning*, Presented on November 15, 2016 at AWRL, Hamilton, New-Zealand
- O. Pietquin, *Challenges of End-to-End Spoken Dialogue Systems*, Presented on December 10, 2016 at FILM@NIPS Workshop, Barcelona, Spain

- O. Pietquin, *Keeping the Human in the Loop: Challenges for Machine Learning*, Presented on March 10, 2016 at Xerox Research Center in Europe, Grenoble, France
- M. Valko, *Spectral Methods for Learning in POMDPs*, University of Liège, Belgium, February 2016.
- M. Valko, *Where is Justin Bieber?*, Presented on September 22nd, 2016 at Comenius University in Bratislava, Slovakia (*FMFI 2016*)
- M. Valko, *Bandit learning*, Presented on September 15–19th, 2016 at Information technologies - Applications and Theory, at Tatranské Matliare, High Tatras, Slovakia (*ITAT 2016*)
- M. Valko, *Decision-making on graphs without graphs*, Presented on June 16-17th, 2016 at Graph-based Learning and Graph Mining workshop, at Inria Lille, France (*GBLGM 2016*)
- M. Valko, *Sequential learning on graphs with limited feedback*, Presented on May 11–13th, 2016 at Data Driven Approach to Networks and Language, at ENS Lyon, France (*NETSpringLyon 2016*)
- M. Valko, *Benefits of Graphs in Bandit Settings*, Presented on January 11–12th, 2016 at Multi-armed Bandit Workshop 2016 at STOR-i, Lancaster University, UK (*STOR-i 2016*)

10.1.5. Scientific Expertise

- Agence Nationale pour la Recherche (ANR)
- ANRT
- D2RT Ile de France
- Institut National de Recherche en Agronomie (INRA)
- Fonds National pour la Recherche Scientifique (FNRS), Belgium
- H2020 program
- *A. Lazaric* was a member of the hiring committee for junior researchers at Inria Lille (2016).
- *M. Valko* is an elected member of the evaluation committee and participates in the hiring, promotion, and evaluation juries of Inria, notably
    - Hiring committee for junior researchers at Inria Sophia Antipolis (2016)
    - Selection committee for Inria award for scientific excellence, junior and senior (2016)
    - Selection committee for CR promotions (2016)
- Ph. Preux has chaired the hiring committee for an associate professor position at Université de Lille 3
- J. Mary was webpage chair for ICML'2016 in NYC

10.1.6. Research Administration

- Philippe Preux is:
    - Délégué Scientifique Adjoint (DSA) at Inria Lille
    - member of the Evaluation Committee (CE) at Inria
    - member of the Project Committee Board (BCP, Bureau du Comité des Projets) at Inria Lille
    - head of the "Data Intelligence" (DatInG) thematic group at CRIStAL.
    - member of the Scientific Committee of CRIStAL.
- R. Gaudel is member of the board of CRIStAL.
- R. Gaudel is manager of proml mailing list. This mailing list gathers French-speaking researchers from Machine Learning community.
- J. Mary is member of the "Commission Développement Technologique" at Inria Lille.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence: C. Dimitrakakis, C2i, 25h eqTD, L1-2, Université de Lille 3, France.

Licence: C. Dimitrakakis, Traitement de données, Université de Lille 3, France.

Licence: C. Dimitrakakis, Modélisation de bases de données, Université de Lille 3, France.

Licence: C. Dimitrakakis, Fonctionnement des réseaux, Université de Lille 3, France.

Master: A. Lazaric, Reinforcement Learning, 25h eqTD, M2, ENS Cachan, France

Master: A. Lazaric, Reinforcement Learning, 25h eqTD, M2, Ecole Centrale Lille, France

Master: Ph. Preux, Advanced data mining, 30h eqTD, M2, Université de Lille 3, France

Master: Ph. Preux, Fundamental algorithms for data mining, 30h eqTD, M1, Université de Lille 3, France

Licence: Ph. Preux, Neural Networks, 28h eqTD, L3, Université de Lille 3, France

Licence: Ph. Preux, Graph Theory, 28h eqTD, L3, Université de Lille 3, France

Licence: Ph. Preux, C2i, 25h eqTD, L1-2, Université de Lille 3, France.

Master: M. Valko, 2016/2017 Fall: Graphs in Machine Learning, 27h eqTD, M2, ENS Cachan

Licence: R. Gaudel, 2016/2017 Spring: programmation R pour statistiques et sociologie quantitative, 44h eqTD, L1, université Lille 3, France

Licence: R. Gaudel, 2016/2017 Fall: préparation au C2i niveau 1, 30h eqTD, L1-3, université Lille 3, France

Licence: R. Gaudel, 2016/2017 Spring: préparation au C2i niveau 1, 25h eqTD, L1-3, université Lille 3, France

Licence: R. Gaudel, 2016/2017 Fall: travail collaboratif et à distance dans un monde numérique, 13h eqTD, L1-3 (enseignement à distance), université Lille 3, France

Licence: R. Gaudel, 2016/2017 Fall: algorithmes fondamentaux de la fouille de données, 30h eqTD, M1, université Lille 3, France

Licence: R. Gaudel, 2016/2017 Fall: Fouille de données avancée, 30h eqTD, M2, université Lille 3, France

Master: B. Piot, 2016/2017 Spring: Web Design, 60h eqTD, M2, Univ. Lille, France

Master: B. Piot, 2016/2017 Spring: Object Programming, 70h eqTD, M2, Univ. Lille, France

Master: B. Piot, 2016/2017 Fall: Web Design, 30h eqTD, M2, Univ. Lille, France

Master: B. Piot, 2016/2017 Fall: Object Programming, 22h eqTD, M2, Univ. Lille, France

Master: B. Piot, 2016/2017 Fall: Databases, 30h eqTD, M1, Univ. Lille, France

Master: J. Mary, 2016/2017 Fall: algorithmes fondamentaux de la fouille de données, 30h eqTD, M1, Univ. Lille, France

Master: J. Mary, 2016/2017 Fall: Programmation Web Avancée, 30h eqTD, M2, Univ. Lille, France

Master: J. Mary, 2016/2017 Fall: Reinforcement Learning, 16h eqTD, M2, Univ. Lille, France

10.2.2. Supervision

HdR: Michal Valko, Bandits on graphs and structures, ENS-Cachan, June 15th, 2016

PhD: Frédéric Guillou, On recommendation systems in sequential context, University of Lille, Dec. 2nd, 2016, advisors: Philippe Preux, Romaric Gaudel, Jérémie Mary

PhD: Tomas Kocak, Apprentissage séquentiel avec similitudes, University of Lille, Nov. 28th, 2016, advisor: Michal Valko, Rémi Munos

PhD: Hadrien Glaude, Méthodes des moments pour l'inférence de systèmes séquentiels linéaires rationnels, University of Lille, July. 8th, 2016, advisor: Olivier Pietquin

PhD in progress: Pratik Gajane, Sequential Learning and Decision Making under Partial Monitoring, University of Lille, started Oct. 2014, advisor: Philippe Preux

PhD in progress: Marc Abeille, Randomized Exploration-exploration Stretegies, University of Lille, started Oct. 2014, advisor: Alessandro Lazaric

PhD in progress: Merwan Barlier, Dialogues intelligents basés sur l'écoute de conversations homme/homme, University of Lille, started Oct. 2014, advisor: Olivier Pietquin

PhD in progress: Alexandre Berard, Learning from post-editing for machine translation, University of Lille, started Oct. 2014, advisor: Olivier Pietquin

PhD in progress: Lilian Besson, Apprentissage séquentiel multi-joueurs pour la radio intelligente, CentraleSupélec Rennes, started Oct. 2016, advisor: Emilie Kaufmann

PhD in progress: Reda Alami, Bandit à Mémoire pour la prise de décision en environnement dynamique, Orange LABS, University of Paris-Saclay, started Oct. 2016, advisor: Odalric-Ambrym Maillard, Raphaël Feraud

PhD in progress: Daniele Calandriello, Efficient Sequential Learning in Structured and Constrained Environment, Inria, started Oct. 2014, advisor: Michal Valko, Alessandro Lazaric

PhD in progress: Ronan Fruit, Transfer in Hierarchical Reinforcement Learning, University of Lille, started Dec. 2015, advisor: Alessandro Lazaric

PhD in progress: Guillaume Gautier, DPPs in ML, started Oct. 2016, advisor: Michal Valko; Rémi Bardenet

PhD in progress: Jean-Bastien Grill, Création et analyse d'algorithmes efficaces pour la prise de décision dans un environnement inconnu et incertain, Inria/ENS Paris/Lille 1, started Oct. 2014, advisor: Rémi Munos, Michal Valko

PhD in progress: Julien Perolat, Reinforcement learning: the 2-player case, University of Lille, started Oct. 2014, advisor: Olivier Pietquin, Bilal Piot

PhD in progress: Florian Strub, Deep sequential learning and its application to human-robot interaction, University of Lille, started Jan. 2016, advisor: Olivier Pietquin, Jérémie Mary

PhD in progress: Romain Warlop, Novel Learning and Exploration-Exploitation Methods for Effective Recommender Systems, University of Lille, started Sep. 2015, advisor: Jérémie Mary

PhD in progress: Aristide Tossou, Privacy in Sequential Decision Making (provional), Chalmers, started Feb. 2015, advisor: Christos Dimitrakakis

10.2.3. Juries

PhD and hdr juries:

- E. Kaufmann: Marie-Liesse Cauwet, LRI, Orsay.
- A. Lazaric: Matteo Pirotta, Politecnico di Milano, Italy.
- J. Mary: examinator for Raphël Puget, université Paris 6.
- J. Mary: reviewer for Robin Allesiardo, université Paris Saclay
- Ph. Preux: reviewer for Hongliang Zhong, Laboratoire d'Informatique Fondamentale, Marseille
- Ph. Preux: president of the defense jury of the HDR of Matthieu Geist, Université de Lille
- O. Pietquin: advisor of the HDR of Matthieu Gesit, Université de Lille
- O. Pietquin: Hatim Khouzami, University of Avignon

PhD mid-term evaluation:

- A. Lazaric: Claire Vernade (mid-term evaluation), Telecom ParisTech, France.
- E. Kaufmann: opponent for the licenciate thesis of Stefan Magureanu, KTH, Stockholm, Sweden.

10.3. Popularization

- A. Lazaric was interviewed for Inria-Lille magazine (December issue).
- J. Mary gave a 55 min talk in front of students of Lycée Sainte-Famille at Amiens.
- Ph. Preux gave 2 talks on "Artificial Intelligence" in a high-school in Villeneuve d'Ascq within the "Fête de la science".
- O. Pietquin was interviewed by France Culture (Supersonic) on March 23rd, 2016

SERENA Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

A. Ern co-organized with D. Di Pietro and L. Formaggia the IHP Thematic Quarter on Numerical methods for PDEs from September 5th to December 16th, 2016.

M. Vohralík co-organized, together with I. Vignon-Clémentel from the project-team REO, the monthly *Scientific computing, modeling, and numerical analysis* seminar ("Rencontres Inria-LJLL en calcul scientifique"), see the web page https://project.inria.fr/rencontresljll/, until July, 2016. Since September, 2016, I. Smears co-organizes this seminar together with C. Grandmont from the project-team REO.

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

A. Ern and M. Vohralík are members of the Scientific Committee of the ENUMATH 2017 conference (Voss, Norway).

M. Vohralík is a member of the Scientific Committee of the Finite Volumes for Complex Applications 8 conference (Lille, France).

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

A. Ern is a member of the editorial boards of SIAM Journal on Scientific Computing, ESAIM Mathematical Modelling and Numerical Analysis, IMA Journal of Numerical Analysis, Computational Methods in Applied Mathematics, and Journal de l'Ecole polytechnique, Mathématiques.

M. Vohralík is a member of the editorial boards of SIAM Journal on Numerical Analysis and of Acta Polytechnica.

9.1.3.2. Reviewer - Reviewing Activities

M. Kern was a reviewer for the journal Mathematics and Computers in Simulation, Electron. Trans. Numer. Anal., and Oil and Gas Science and Technology,

L. Monasse was a reviewer for J. Comput. Phys. and J. Comput. Particle Mech.

A. Ern and M. Vohralík served as reviewers for tens of papers in different journals.

9.1.4. Invited Talks

A. Ern, plenary speaker, ECCOMAS 2016, Crete.

A. Ern, plenary speaker, WONAPDE 2016, Concepción, Chile.

M. Kern, minisymposium speaker at the German Priority Programme, Software for Exascale Computing, Germany.

M. Vohralík, invited speaker, Adaptive algorithms for computational PDEs, Birmingham, Great Britain.

M. Vohralík, plenary speaker, WONAPDE 2016, Concepción, Chile.

M. Vohralík, plenary speaker, ALGORITMY 2016, Podbanske, Slovakia.

9.1.5. Leadership within the Scientific Community

M. Kern was a member of the nominating committee for the SIAM Activity Group on Geosciences.

M. Kern is a reviewer for the German Supercomputing Center JARA program.

M. Kern is a member of the Scientific Committee of Orap (ORganisation Associative du Parallélisme), of the Scientific Board of GDR Calcul and of the jury and executive board of Label C3I.

M. Vohralík is a member of the steering committee of GIS Géosciences franciliennes.

9.1.6. Research Administration

F. Clément is a member of the *Comité local d'hygiène, de sécurité et des conditions de travail* of the Inria Research Center of Paris.

F. Clément is the *correspondant Inria-entreprise* of the Inria Research Center of Paris for AMIES.

M. Kern is Deputy Director of Maison de la Simulation, a joint project between CEA, CNRS, Inria, Université de Paris 11, and Université de Versailles, focused on applications of high end computing.

M. Kern is a member of the *Comité de site* of the Inria center of Paris.

G. Pichot is a member of the *Comité local d'hygiène, de sécurité et des conditions de travail* of the Inria center of Paris.

G. Pichot is member of the Conseil de département MAM of Polytech Lyon.

G. Pichot is member of the Commission de developpement technologique (CDT) of the Inria center of Paris.

G. Pichot is a member of the CES commission of the Inria center of Paris.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

A. Ern, Analyse numérique et optimisation, 78h, L3, Ecole Polytechnique (professeur chargé de cours), France.

A. Ern, Méthodes de Galerkine Discontinu, 20h, M2 Mathématiques de la modélisation, Paris 6, France.

M. Kern, Modélisation et simulation des écoulements de fluides dans la géosphère (with E. Mouche, CEA), 30h, M2 Mathématiques et Applications (parcours Analyse, Modélisation et Simulation), Université Paris Saclay, France.

M. Kern, Eléments finis (avec D. Ryckelynck), 30h, 2nd year students, Ecole Mines-ParisTech, France.

M. Kern, Problèmes inverses, 24 h, 2nd year students, Ecole Mines-ParisTech, France.

M. Kern, Analyse numérique avancée, 20h, 3rd year students, MACS, Université Paris Nord, France.

L. Monasse, Analyse et Calcul Scientifique, 30h, L3, ENPC, France.

M. Vohralík, A posteriori error estimates for efficiency and error control in numerical simulations, 36h, M2, Charles University in Prague, Czech Republic.

M. Vohralík, A posteriori error estimates and adaptive error components balancing in numerical simulations, summer school "IHP quarter on Numerical Methods for PDEs", Cargèse, Corsica & Paris, France, 15h.

9.2.2. Supervision

PhD: N. Birgle, *Underground flow, numerical methods and high performance computing*, University Paris VI, defended on March 24th, 2016, advisor J. Jaffré, co-advisor J. E. Roberts.

PhD: F. Cheikh, *Identification of fractures in a porous medium by a method of indicators*, University Paris VI and University of Tunis El Manar, defended on October 12th, 2016, advisors J. E. Roberts and H. Ben Ameur, co-advisors V. Martin and F. Clément.

PhD: M. H. Riahi, *Identification of hydrogeological parameters in a porous medium*, University Paris VI and University of Tunis El Manar, defended on October 12th, 2016, advisors J. Jaffré and H. Ben Ameur.

PhD in progress: S. Ali Hassan, *A posteriori error estimates and stopping criteria for domain decomposition solvers with local time stepping*, University Paris VI, November 2013, advisor M. Vohralík, co-advisors C. Japhet and M. Kern.

PhD in progress: J. Dabaghi, *Adaptive modeling via complementarity of phase appearance and disappearance in fractured and porous media*, University Paris VI, November 2015, advisor M. Vohralík, co-advisor V. Martin.

PhD in progress: P. Daniel, *Adaptive multilevel solvers with a posteriori error control for porous media flows* University Paris VI, October 2015, advisor M. Vohralík, co-advisor A. Ern.

PhD students at ENPC are listed in Section 1.

9.2.3. Juries

A. Ern, external examiner of the PhD of Z. Dong, University of Leicester, November 24, 2016.

A. Ern, chair of jury of the PhD of M. Giacomini, Ecole Polytechnique, December 9, 2016.

M. Kern, jury member for the PhD of V. Groza, Identification de paramètres et analyses de sensibilité pour un modèle d'usinage par jet d'eau abrasif, Université de Nice, November 9, 2016.

M. Kern, jury member for the PhD of M. Massaro, Méthodes numériques pour les plasmas sur architectures multicoeurs, Université de Strasbourg, December 16, 2016.

M. Kern, jury member for the Habilitation of Y. Mesri, Méthodes numériques massivement parallèles à base de maillages non structurés adaptatifs et anisotropes pour la mécanique numérique, Université de Nice, December 19, 2016.

G. Pichot, jury member of the PhD of A. Botella, Unstructured volumetric meshing of geological models for physical phenomenon simulations, University of Lorraine, April, 1st, 2016.

G. Pichot, jury member of the PhD of A. Dartois, Study of the macro-dispersion of inert particles in highly heterogeneous 3D porous media, University of Poitiers, December, 14, 2016.

M. Vohralík, reviewer and jury member of the PhD of R. Tittarelli, University Lille 1, September 27, 2016.

M. Vohralík, chair of jury of the PhD of M. Groza, Université de Nice, November 10, 2016.

9.3. Popularization

F. Clément was member of the Organizing Committee of the *17e Salon Culture & Jeux Mathématiques*, held in Paris, 26–29 May, 2016. He was member of the Editorial Board of the *Maths Société Express* booklet distributed during the exhibition. He was also coordinator of the Maths-Enterprises booth for AMIES.

F. Clément realized, with the Communication Department of the Inria Research Center of Paris, an exhibition illustrating the results of the *Etude de l'impact socio-économique des mathématiques en France* sponsored by AMIES, FSMP, and FMJH.

F. Clément coordinated an article about AMIES in the magazine PLOT published by the *Association des Professeurs de Mathématiques de l'Enseignement Public*.

Major publications by the team in recent years: [1], [2], [3], [4], [5], [6], [7], [8], [9], [10].

SERPICO Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

Frédéric Lavancier and Charles Kervrann were head of the organizing committee of the international workshop "Spatial Statistics and Image Analysis in Biology" (SSIAB'16), Inria Rennes, May 2016.

Frédéric Lavancier was head of the workshop "Spatio-Temporal Models and Statistics", IRMAR University of Rennes 1, LMJL University of Nantes, ENSAI, University of Rennes 2, INRA Rennes, Inria Rennes, April 2016.

Patrick Bouthemy and Thierry Pécot were respectively main organizer and co-organizer of the BioImage Computing workshop in conjunction with ECCV'2016, Amsterdam, October 2016.

Patrick Bouthemy and Charles Kervrann were respectively main organizer and co-organizer of the mini-symposium "Image analysis advances in dynamic microscopy and live cell imaging" in SIAM Conference on Imaging Sciences, Albuquerque, New-Mexico, USA, May 2016.

Charles Kervrann was member of the organization committee of the Microscopy school MiFoBio'2016, Seignosse, October 2016.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

Charles Kervrann: member of the scientific committee of RFIA'2016 (Clermont-Ferrand), Associated Editor for the conference ISBI'2017, member of the scientific committee of the "Image the Cell 2017" conference (Rennes), member of the scientific committee "Journées d'Imagerie Optique Non-Conventionnelle" (JIONC'2016 and JIONC'2017).

Patrick Bouthemy: Associate Editor for the conference ISBI'2016 and ISBI'2017, Area Chair of ICIP'2016, member of the program committee of RFIA'2016.

Thierry Pécot: member of the program committee of BIOIMAGING'2016.

10.1.2.2. Reviewer

Charles Kervrann: reviewer for ICIP'2016, ICASSP'2016, ISBI'2016, ICASSP'2017, ICIP'2017.

Patrick Bouthemy: reviewer for ICIP'2016, ISBI'2016.

Thierry Pécot: reviewer for ISBI'2016, BIOIMAGING'2016.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Charles Kervrann is Guest Editor of the special issue entitled "Advanced Signal Processing in Microscopy and Cell Imaging" of the IEEE Selected Topics in Signal Processing Journal, February 2016.

Charles Kervrann is Associate Editor of the IEEE Signal Processing Letters journal (since January 2015).

Patrick Bouthemy is co-editor in chief of the open access journal Frontiers in ICT, specialty Computer Image Analysis.

10.1.3.2. Reviewer - Reviewing Activities

Charles Kervrann: BMC Bioinformatics, IEEE Transactions on Computational Imaging, SIAM J. on Imaging Sciences, Methods, expert for the project evaluation in the framework of FONDECYT Science Council (Chile).

Patrick Bouthemy: IEEE Transactions on Image Processing, Mathematical Problems in Engineering, IEEE Signal Processing Letters, IEEE Robotics and Automation Letters, Applied Soft Computing Journal, Computational Intelligence and Neuroscience.

Frédéric Lavancier: Spatial Statistics, R Journal

Thierry Pécot: Bioinformatics, IEEE Transactions on Medical Imaging.

10.1.4. Invited Talks

Charles Kervrann:

Invited talk at the FBI seminar (Paris centre), Computational methods for diffusion, motion and molecular interaction estimation, Pont l'Eveque, February 2016.

Invited talk at the Forum Mathématique Diderot, Computational analysis of intracellular membrane dynamics: from live cell images to biophysical model, Paris, March 2016.

Seminar UTSW, Danuser's lab, Computational analysis of intracellular membrane dynamics: from live cell images to biophysical model, Dallas, TX, USA, May 2016.

Invited talk at SIAM Conference on Imaging Sciences, PEWA: Patch-based Exponentially Weighted Aggregation for image denoising, Albuquerque, New-Mexico, USA, May 2016.

Patrick Bouthemy

Invited talk at SIAM Conference on Imaging Sciences, A scale-adaptive method for retracing and registering in correlative light-electron microscopy, Albuquerque, New-Mexico, USA, May 2016.

Vincent Briane:

Invited talk at SSIAB'2016 workshop, An adaptive statistical test to detect non Brownian diffusion from particle trajectories, Inria Rennes, May 2016.

Thierry Pécot:

Invited talk at SSIAB'2016 workshop, A non-parametric procedure for co-localization studies in fluorescence microscopy, Inria Rennes, May 2016.

Talk and practical course at Microscopy school MiFoBio'2016, mage processing methods for the temporal analysis of moving particles, Seignosse, October 2016.

Seminar IGDR, QuantEv: Quantifying the spatial distribution of intracellular events, Rennes, November 2016.

Frédéric Lavancier:

Seminar of Statistics and Probability in Lille 1, Determinantal point process models and statistical inference, Lille, March 2016.

Seminar in Statistics of University Toulouse 1, A general procedure to combine estimators, Toulouse, June 2016.

Invited talk at "Journées MAS", Determinantal point process models and statistical inference, Grenoble, August 2016.

10.1.5. Scientific Expertise

Charles Kervrann:

Member of the IEEE BISP "Biomedical Image and Signal Processing" committee.

Member of executive board of the GdR MIV (2588 - Microscopie Fonctionnelle du Vivant) CNRS.

Member of the scientific committee of the Interdisciplinary MiFoBio School CNRS (http://www.mifobio.fr).

Patrick Bouthemy:

> Member of the board of AFRIF (Association Française pour la Reconnaissance et l'Interprétation des Formes).

> Member of the Research Committee of Telecom Bretagne.

Frédéric Lavancier:

> Elected member of CNU section 26.

> Expert for the project evaluation in the framework of FNRS (Fonds de la Recherche Scientifique), Belgium.

10.1.6. Research Administration

Charles Kervrann:

> Member of the executive board of the project committee of the Inria Rennes - Bretagne Atlantique centre.

> Member of the Scientific Council of the INRA Rennes Research Centre.

> Co-head of the "BioImage Informatics" node (ANR France-BioImaging project, National Infrastructure en Biologie et Santé).

Patrick Bouthemy:

> Head of Excellence Lab CominLabs since April 2014.

> Deputy member of the board of directors and member of the Selection and Validation Committee of the Images & Réseaux competitivity cluster.

> Deputy member of the board of directors of IRT (Technological Research Institute) b<>com.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Charles Kervrann:

> Engineer Degree: Genomics and Informatics, 4.5 hours, Ecole Nationale Supérieure des Mines de Paris.

> Master: From Bioimage Processing to BioImage Informatics, 5 hours, coordinator of the module (30 hours), Master 2 Research IRIV, Telecom-Physique Strasbourg and University of Strasbourg.

> Master: Geometric Modeling for Shapes and Images, 6 hours, Master 2 Research SISEA, University of Rennes 1.

> Engineer Degree and Master 2 Statistics and Mathematics: Statistical Models and Image Analysis, 37 hours + 15 hours (TP, Emmanuel Moebel), 3rd year, Ecole Nationale de la Statistique et de l'Analyse de l'Information (ENSAI), Rennes.

Patrick Bouthemy:

> Master: Analysis of Image Sequences, 18 hours, Master 2 Research SISEA, ISTIC & University of Rennes 1.

> Master: Video Indexing, 9 hours, Master 2 Research Computer Science, ISTIC & University of Rennes 1.

> Engineer Degree and Master 2 Research IRIV: Motion Analysis, 12 hours, Telecom-Physique Strasbourg & University of Strasbourg.

Frédéric Lavancier:

> Master: Linear Models, 36 hours, Master 2 Mathematics & Engineering, option Statistics, University of Nantes.

> Master: Time Series, 36 hours, Master 2 Mathematics & Engineering, option Statistics, University of Nantes.

10.2.2. Supervision

PhD in progress: Arnaud Poinas, Inference for inhomogeneous determinantal point processes, started in September 2016, supervised by Bernard Delyon and Frédéric Lavancier

PhD in progress: Hoai Nam Nguyen, Methods and algorithms for tissue microarrays image analysis, started in October 2013, supervised by Charles Kervrann and Vincent Paveau (Innopsys).

PhD in progress: Vincent Briane, Statistical methods and models for motion analysis in microscopy, started in October 2014, supervised by Charles Kervrann and Myriam Vimond (ENSAI-CREST).

PhD in progress: Bertha Mayela Toledo Acosta, Methods and algorithms for 3D image registration and correlative microscopy, started in October 2014, supervised by Patrick Bouthemy and Charles Kervrann.

PhD in progress: Emmanuel Moebel, New strategies for the nonambiguous identification and enumeration of macromolecules in cryo electron tomograms, started in November 2015, supervised by Charles Kervrann.

PhD in progress: Juan Manuel Perez Rua, Semantically meaningful motion descriptors for video understanding, started in January 2015, supervised by Patrick Bouthemy in collaboration with Tomas Crivelli and Patrick Pérez (Technicolor).

PhD in progress: Ancageorgiana Caranfil, Data assimilation methods for cell division mechanisms and molecule trafficking analysis, started in December 2016, supervised by Charles Kervrann and Yann Le Cunff.

PhD in progress: Sandeep Manandhar, Optical flow methods for 3D fluoresence imaging, started in October 2016, supervised by Patrick Bouthemy and Charles Kervrann.

10.2.3. Juries

Referee of PhD thesis: G. Michelin (University of Côte d'Azur, supervised by G. Malandain) [P. Bouthemy], L. Azzari (Tampere University of Technology, Finland, supervised by A. Foi) [C. Kervrann], H. Robjani (University of Strasbourg, supervised by C. Ronse) [C. Kervrann].

<p style="text-align:center; color:red">SIERRA Project-Team</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

Alexandre d'Aspremont: Workshop preparation for les Houches in Feb. 2016: "Optimization without borders", to celebrate Y. Nesterov's 60th birthday.

Francis Bach: organization of a workshop at IHES (with S. Arlot and A. Celisse), March 2016.

Francis Bach: co-organization of two NIPS workshops.

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

Francis Bach: Area chair for ICML 2016

Simon Lacoste-Julien: Area chair for ICML 2016

Simon Lacoste-Julien: Area chair for NIPS 2016

9.1.3. Journal

9.1.3.1. Member of Editorial Boards

Alexandre d'Aspremont: Associate Editor, SIAM Journal on Optimization (2013-...).

F. Bach: Action Editor, Journal of Machine Learning Research.

F. Bach: Information and Inference, Associate Editor.

F. Bach: SIAM Journal on Imaging Sciences, Associate Editor.

F. Bach: Electronic Journal of Statistics, Associate Editor.

9.1.4. Invited Talks

Alexandre d'Aspremont: Regularized Nonlinear Acceleration, BIRS workshop, Oaxaca, October 2016.

Alexandre d'Aspremont: Optimal Affine Invariant Smooth Minimization Algorithms, Institut des hautes études scientifiques, June 2016.

Alexandre d'Aspremont: Optimal Affine Invariant Smooth Minimization Algorithms, Nexus of Information and Computation Theories, Institut Henri Poincaré, March 2016.

Alexandre d'Aspremont: Optimal Affine Invariant Smooth Minimization Algorithms, Workshop on Algorithms and Dynamics for Games and Optimization, Santiago Chile, January 2016.

Francis Bach: Winter School on Signal processing, Bonn, January 2016.

Francis Bach: "Optimization without borders", Les Houches, February 2016.

Francis Bach: Oberwolfach, March 2016.

Francis Bach: Dali meeting, Sestri Levante, Italy, March 2016.

Francis Bach: ETH Computer Science Colloquium, April 2016.

Francis Bach: Workshop San Servolo, May 2016.

Francis Bach: Machine Learning summer school Cadiz, May 2016.

Francis Bach: Summer school, Bangalore, July 2016.

Francis Bach: ICCOPT conference, plenary speaker, August 2016.

Francis Bach: Workshop, Haifa, Septembre 2016.

Francis Bach: Statistics Seminar, Cambridge, October 2016.

Francis Bach: BIRS Oaxaca, October 2016.

Francis Bach: NIPS workshops (three presentations), December 2016.

Damien Garreau: "Consistent multiple change-point detection with kernels", Group meeting of Geometrica Inria project team, Saclay (February 18, 2016).

Damien Garreau: "Consistent multiple change-point detection with kernels", Inria Junior Seminar, Paris (March 15, 2016).

Damien Garreau: "Consistent multiple change-point detection with kernels", Colloque final de l'ANR Calibration, Nice (April 7, 2016).

Damien Garreau: "Consistent multiple change-point detection with kernels", Colloque Jeunes probabilistes et Statisticiens, Les Houches (April 18, 2016).

Pascal Germain: "A Representation Learning Approach for Domain Adaptation", Tao Seminars, Université Paris-Sud, Paris, France, March 2016.

Pascal Germain: "A Representation Learning Approach for Domain Adaptation", Data Intelligence Group Seminars, Université Jean-Monnet, Saint-Étienne, France, March 2016.

Pascal Germain: "Variations on the PAC-Bayesian Bound", Bayes in Paris Seminar at ENSAE, Paris, France, June 2016.

Pascal Germain: "Variations on the PAC-Bayesian Bound", Séminaires du département d'informatique et de génie logiciel, Université Laval, Quebec, Canada, July 2016.

Simon Lacoste-Julien: "On the Global Linear Convergence of Frank-Wolfe Optimization Variants", invited talk in the Conic and Polynomial Optimization cluster at ICCOPT 2016, Tokyo, Japan, August 2016..

Simon Lacoste-Julien: "On the Global Linear Convergence of Frank-Wolfe Optimization Variants", invited talk in the Learning and Optimization workshop of DALI meeting, Sestri Levante, Italy, April 2016.

Simon Lacoste-Julien: "Modern Optimization for Structured Machine Learning", CS & OR Department Colloquium, Université de Montréal, Montreal, Canada, February 2016.

Antoine Recanati: Presentation at the group meeting of Mines ParisTech Centre for Computational Biology (CBIO) at Institut Curie, October, 18th 2016.

9.1.5. Leadership within the Scientific Community

Alexandre d'Aspremont: Porteur de l'IRIS PSL "Science des données, données de la science".

Alexandre d'Aspremont: Co-scientific director of Master's program MASH (Mathématiques, Apprentissage et Sciences Humaines), with ENS - Paris Dauphine.

Alexandre d'Aspremont: Scientific committee, programme Gaspard Monge pour l'Optimisation.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: A. d'Aspremont, M1 course on Optimization: ENS Paris, 21h

Master: A. d'Aspremont, M2 course on Optimization: MVA, ENS Cachan, 21h

Master : F. Bach (together with J.-P. Vert), "Apprentissage statistique", 35h, M1, Ecole Normale Supérieure.

Master : F. Bach (together with G. Obozinski), "Graphical models", 30h, M2 (MVA), ENS Cachan.

Master : F. Bach , 20h, M2 (Mathématiques de l'aléatoire), Université Paris-Sud.

Mastere (M1): S. Lacoste-Julien, F. Vogel, "Projets informatiques", 10h, Université de Paris-Dauphine, Master M2: Mathématiques, Apprentissage et Sciences Humaines (MASH)

Master : A. Osokin (together with K. Alahari), "The introduction to discrete optimization", 30h, M2, Centrale Supélec

Master: Fabian Pedredoga, Machine learning with scikit-learn, Master Mathématiques, Apprentissage et Sciences Humaines (MASH), Paris Dauphine.

9.2.2. Supervision

PhD: Anastasia Podosinnikova, November 2016, co-advised by Francis Bach and Simon Lacoste-Julien

PhD: Thomas Schatz, September 2016, co-advised by and E. Dupoux (ENS, cognitive sciences).

PhD: Sesh Kumar, September 2016, advised by F. Bach.

PhD in progress : Nom du doctorant, titre (provisoire) du mémoire, date du début de la thèse, encadrant(s)

PhD in progress : Jean-Baptiste Alayrac, co-advised by Simon Lacoste-Julien, Josef Sivic and Ivan Laptev, started Sept. 2014.

PhD in progress : Rémi Leblond, advised by Simon Lacoste-Julien, started Sept. 2015.

PhD in progress : Gauthier Gidel, advised by Simon Lacoste-Julien, started Sept. 2016.

PhD in progress : Vincent Roulet, directed by Alexandre d'Aspremont, started as a PhD on Oct. 1 2014.

PhD in progress : Nicolas Flammarion, co-directed by Alexandre d'Aspremont and Francis Bach, started Sept. 2013.

PhD in progress : Damien Scieur, co-directed with Alexandre d'Aspremont and Francis Bach, started Sept. 2015.

PhD in progress : Antoine Recanati, directed by Alexandre d'Aspremont, started Sept. 2015.

PhD in progress: Rafael Rezende, September 2013, F. Bach, co-advised with J. Ponce.

PhD in progress: PhD in progress: Christophe Dupuy, January 2014, co-advised by F. Bach and C. Diot (Technicolor).

PhD in progress: Damien Garreau, September 2014, co-advised by S. Arlot and G. Biau.

PhD in progress: Anaël Bonneton, December 2014, co- advised by F. Bach, located in Agence nationale de la sécurité des systèmes d'information (ANSSI).

PhD in progress: Dmitry Babichev, September 2015, co-advised by F. Bach and A. Judistky (Univ. Grenoble).

PhD in progress: Tatiana Shpakova, September 2015, advised by F. Bach.

9.2.3. Juries

Alexandre d'Aspremont: PhD Committee for Igor Colin, Nov. 2016.

Francis Bach: PhD Committee for Alain Durmus, Dec. 2016.

<p style="text-align:center">**SIROCCO Project-Team**</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of Organizing Committees

- C. Guillemot has served as area chair for the European Signal Processing Conference (EUSIPCO), 2016.
- C. Guillemot co-organized (together with Joachim Weickert, Prof. Universität des Saarlandes, and Thomas Pock, Prof. TU Graz, and Gerlind Plonka-Hoch, Prof. Universität Göttingen) a Schloss Dagstuhl seminar on inpainting-based image compression (Nov. 13-18, 2016).

10.1.1.2. Chair of Conference Program Committees

- C. Guillemot was technical co-chair of the IEEE image, video and multi-dimensional signal processing workshop, 11-12 July 2016
- C. Guillemot was general co-chair of the IEEE International workshop on Multimedia Signal Processing (IEEE-MMSP), Montreal, 21-23 Sept. 2016.

10.1.1.3. Member of Conference Program Committees

- O. Le Meur has been a member of technical program committees of international conferences: EUVIP 2016, QoMEX 2016
- A. Roumy has been a member of the technical program committee of the ACCV 2016 workshop on New Trends in Image Restoration and Enhancement.

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

- C. Guillemot has been associate editor of the Eurasip International Journal on Image Communication (2010-2016).
- C. Guillemot is senior area editor of the IEEE Trans. on Image Processing.
- C. Guillemot is associate editor of the International Journal on Mathematical Imaging and Vision.
- O. Le Meur is member of the editorial board of the IET Image Processing Journal.
- T. Maugey has been Guest editor for the Special Issue on Interactive Multi-view Video Services: from acquisition to Rendering, IEEE Multimedia Communication Technical Committee letters, Vol. 11(2), March 2016 (Guest Editors: Erhan Ekmekcioglu, Thomas Maugey, Laura Toni)
- A. Roumy is associate editor of the Springer Annals of Telecommunications.

10.1.3. Invited Talks

- O. Le Meur has been invited for a talk at Harmonic (Rennes) on "Computational Modelling of visual attention"
- O. Le Meur participated to the TechnoConference at Inria. The presentation dealt with spatio-temporal video inpainting.
- T. Maugey has been invited for a talk at I3S (Nice, France) on "Enabling user to interactively select viewpoint : a challenge for 3D data compression ", May 2016.
- C. Guillemot gave an overview talk on image compression at the Dagstuhl seminar (13-18 Nov. 2016).

10.1.4. Leadership within the Scientific Community

- C. Guillemot is member of the IEEE IVMSP technical committee
- C. Guillemot is senior member of the steering committee of IEEE Trans. on Multimedia (2016-2018).

10.1.5. Scientific Expertise

- C. Guillemot is member as scientific expert of the CCRRDT (Regional Committee of Research and Technological Development) of the Brittany region.

10.1.6. Research Administration

- C. Guillemot has been (Sept. 2015-Dec. 2016) vice-chair of Inria's evaluation committee.
- C. Guillemot is member of the "bureau du Comité des Projets".
- T. Maugey has been member of the selection comitee for the assigment of the ministerial PhD grants at IRISA.
- A. Roumy served as a member of Board of Examiners (Comité de sélection) for an Associate Professor position (Maitre de Conférences) at CREATIS Polytech Lyon (MCU61-46 2016).
- A. Roumy served as a member of Board of Examiners (Comité de sélection) for an Associate Professor position (Maitre de Conférences) at ENSEIRB-MATMECA Bordeaux (MCF61-0127 2016).
- A. Roumy is a member of the Inria Joint Administrative Committee (CAP commission administrative paritaire).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: C. Guillemot, Image and video compression, 8 hours, M2 computer science, Univ. of Rennes 1, France.

Master: C. Guillemot, Image and video compression, 8 hours, M2 SISEA, Univ. of Rennes 1, France.

Master: O. Le Meur, Selective visual attention, 6 hours, M2, Univ. of Paris 8, France.

Master: O. Le Meur, Acquisition/Image Processing/Compression, 22 hours, M2 MITIC, Univ. of Rennes 1, France.

Engineer degree: O. Le Meur, Image Processing, video analysis and compression, 54 hours, ESIR2, Univ. of Rennes 1, France.

Engineer degree: O. Le Meur, Visual communication, 65 hours, ESIR3, Univ. of Rennes 1, France.

Professional training: O. Le Meur, Image Processing and OpenCV, 42 hours, Technicolor Rennes.

Engineering degree: A. Roumy, Compressive sensing, 17 hours, INSA Rennes, 5th year, Mathematical engineering, France.

Master: A. Roumy, Compressive sensing, 15 hours, ENSAI Bruz, Master Big Data, France.

10.2.2. Supervision of PhD defended during the year

PhD-VAE: P. Bordes, Adapting video compression to new formats, Univ. of Rennes 1, 18 Jan. 2016, C. Guillemot.

PhD : M. Le Pendu, Backward compatible approaches for the compression of high dynamic range videos, Univ. of Rennes 1, 17 March 2016, C. Guillemot (Cifre contract with Technicolor).

PhD : J. C. Ferreira, Algorithms for Super-resolution of Images based on Sparse Representation and Manifolds, co-tutelle Univ. of Rennes 1/ University of Uberlandia Brazil, 6 July 2016, C. Guillemot.

PhD: C. Chamaret, Color Harmony: experimental and computational modeling, University of Rennes 1, 28th of April, 2016.

10.2.3. Juries

- C. Guillemot has been member (rapporteur) of the PhD jury of:
    - T. Biatek, INSA-Rennes, Apr. 2016
    - A. Akl, Univ. of Bordeaux, Feb. 2016
- C. Guillemot has been member of the PhD jury of:
    - A. Gilles, INSA-Rennes, Sept. 2016
    - L. LE Magoarou, Univ. Rennes 1, Nov. 2016
- O. Le Meur has been member (rapporteur) of the jury of the PhD committee of:
    - Romain Cohendet, University Bretagne Loire, IRCCyN, 2016
    - Andrea Helo, University Paris Descartes, 2016
    - Ala Aboudib, Telecom Bretagne, 2016
    - Franck Chi, Telecom Bretagne, 2016

SISTM Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

Daniel Commenges organised a SFB (Société Française de Biometrie) in Montpellier (3 Juin 2016),

Daniel Commenges Co-organised the "Journées GDR-SFB" in Lyon (27-28 Juin)

Robin Genuer Co-organised a reading group called Smiling in Bordeaux (http://www.math.u-bordeaux.fr/~machaven/smiling)

Rodolphe Thiébaut organized the scientific program of the Bordeaux Modelling Workshop (1 et 2 Juin 2016)

Rodolphe Thiébaut organised a 10 hours seminar on "Bayesian filters and particule methods" at Inria Bordeaux (Nov. and Dec. 2016)

10.1.2. General Chair, Scientific Chair

Rodolphe Thiébaut is a member of the scientific committee of the Muraz Center (Bobo-Dioulasso, Burkina Faso), since 2016

Rodolphe Thiébaut is a member of the Scientific Advisory Board de l'Institut Pierre Louis d'Epidémiologie et de Santé Publique (UPMC, Dir : Dominique Costagliola), since 2015

Daniel Commenges is a member of the scientific committee of de "Journée de la SFdS (Sociète Francaise de Statistiques)" (Montpellier, 30 Mai-3 Juin)

10.1.3. Member of the Organizing Committees

All the team members helped in the ground organisation of the Bordeaux Modelling Workshop

10.1.4. Member of the Journal Editorial Boards

Lifetime Data Analysis (Daniel Commenges)

Statistics Surveys (Daniel Commenges)

Journal de la Société Francaise de Statistique (Daniel Commenges)

Daniel Commenges DC Principales revues de Statistique (Biometrics, JASA, JRSS, Stat Med, LIDA,...)

10.1.5. Reviewer - Reviewing Activities

AIDS (Rodolphe Thiébaut)

Annals of Applied Statistics (Boris Hejblum)

BioData Mining (Boris Hejblum)

Biometrics (Daniel Commenges, Mélanie Prague)

International Journal of Biostatistics (Robin Genuer)

International Journal of Epidemiology (Daniel Commenges)

Journal of Applied Statistics (Marta Avalos)

Journal of the Royal Statistical Society: Interaction (Mélanie Prague)

Machine Learning (Robin Genuer)

Neural Information Processing Systems (Robin Genuer)

Pattern Recognition Letters (Robin Genuer)

Statistics and Computing (Robin Genuer)

Statistical Methods and Applications (Marta Avalos)

Statistics in Medicine (Daniel Commenges, Rodolphe Thiébaut, Mélanie Prague)

Statistics Surveys (Daniel Commenges)

10.1.6. Invited Talks

Daniel Commenges gave 3 invited talks in Vienne (19 Mai), Vigo (26 Ocotbre) and Berlin (25 Novembre).

Laura Richert gave 2 invited talks in Webinar about "big data in epidemiology" (20 juin) and in Paris for the Colloquium "One Health" about "Signature transcriptomique post-vaccinale chez l'Homme" (3 Novembre).

Rodolphe Thiébaut gave 3 invited talks

Mélanie Prague gave 2 invited talks one in Nancy (20 fev.) and one un Summer Sim (26 july).

10.1.7. Leadership within the Scientific Community

Daniel Commenges is the president of the SFB (Société Française de Biométrie) which is the French satellite for the IBS (International Biometrics society).

10.1.8. Research Administration

Daniel Commenges is the director of the Biostat-Info axis in the Inserm BPH (Bordeaux Public Health) institute.

Rodolphe Thiébaut is a member of the department of life science in University of Bordeaux

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

In class teaching

Master : Marta Avalos teaches in the two years of the Master of Public Health at ISPED, Univ. Bordeaux, France.

Master : Robin Genuer, teaches in the two years of the Master of Public Health (M1 Santé publique, M2 Biostatistique, M2 Informatique médicale, M2 Santé internationale, M2 épidémiologie).

Master : Boris Hejblum, teaches in the two years of the Master of Public Health (M1 Santé publique, M2 Biostatistique, M2 Informatique médicale, M2 Santé internationale, M2 épidémiologie).

Master : Robin Genuer, MSS du collège ST, intervention dans le cours de Statistique en grande dimension.

Master : Rodolphe Thiébaut, teaches in the two years of the Master of Public Health, and he is head of the Epidemiology specialty of the second year of the Master of Public Health.

Master : Laura Richert teaches in the two years of the Master of Public Health at ISPED, Univ. Bordeaux, France (M2 Biostatistiques).

Master : Laura Richert teaches in the Master of Vaccinology at UPEC (University Paris-Est-Créteil), France.

Master : Chloe Pasin is a teaching assistant for the two years of the Master of Public Health at ISPED, Univ. Bordeaux, France.

Master : Laura Villain is a teaching assistant for the two years of the Master of Public Health at ISPED, Univ. Bordeaux, France

Bachelor : Laura Richert teaches in PACES and DFASM1-3 for Medical degree at Univ. Bordeaux, France

Summer School: All the SISTM team member teach in the ISPED Summer school.

E-learning

Marta Avalos is head of the first year of the e-learning program of the Master of Public Health, and teaches in it.

Mélanie Prague teaches in the Diplôme universitaire "Méthodes statistiques de régression en épidémiologie".

Laura Richert teaches in the Diplôme universitaire "Recherche Clinique".

Rodolphe Thiébaut is head of the Epidemiology specialty of the second year of the e-learning program of the Master of Public Health, and teaches in it.

Robin Genuer and Perrine Soret participate to the IdEx Bordeaux University "Défi numérique" project "BeginR" (http://beginr.moutault.net/).

10.2.2. Supervision

PhD in progress : Wenjia Wang "Modèle de Rasch" (CIFRE, co-direction avec Mickael Guedj Pharnext), from Oct 2015, directed by Daniel Commenges.

PhD in progress : Laura Villain "Modélisation de l'effet du traitement par injection IL7" (CIFRE, co-direction avec Rodolphe Thiébaut), from Oct 2015, directed by Daniel Commenges.

PhD in progress : Perrine Soret, *Modélisation de données longitudinales en grande dimension*, from Oct 2014, directed by Marta Avalos.

PhD in progress : Mélanie Née *Recherche et caractérisation de profils attentionnels : mieux comprendre la place de l'attention dans la survenue des accidents de la vie courante*, from Oct 2015, co-directed by Emmanuel Lagarde (60%), Cédric Galera (20%), Marta Avalos (20%)

PhD in progress : Chloé Pasin, *Modelling the immune response to HIV vaccine*, from Sep 2015, co-directed by Rodolphe Thiébaut and Francois Dufour

PhD in progress : Edouard Lhomme, *Analyse des déterminants de la réponse immunitaire post-vaccination dans des stratégies vaccinales expérimentales*, from Oct 2016, directed by Laura Richert.

PhD in progress : Hadrien Lorenzo, *Analyses de données longitudinales de grandes dimensions appliquées aux essais vaccinaux contre le VIH et Ebola*, from Oct 2016, co-directed by Rodolphe Thiébaut and Jérôme Saracco.

Master internship : Hao Ren "Contribution au développement d'un outil statistique d'aide à la décision en sport de haut niveau", directed by Marta Avalos and Perrine Soret (01/03/2016-12/08/2016)

Master internship : Madelyn Rojas "Practices for the provision of prior information in Bayesian Logistic Regression: Application in MAVIE project", directed by Marta Avalos and David Conesa (11/07/2016-09/09/2016)

Master internship : Thomas Blondel "Application of Bayesian linear models to sports science data", directed by David Conesa and Marta Avalos (05/04/2016 - 04/06/2016)

Master internship : Julie Havas "Application of Bayesian Logistic Regression to the mavie study of home and leaisure injury", directed by David Conesa and Marta Avalos (05/04/2016 - 04/06/2016)

Master internship : Thomas Esnaud "Etude de la méthode de clustering par forêts aléatoires, applications à la reconnaissance automatique de populations cellulaires.", directed by Robin Genuer (14/03/2016 - 31/08/2016)

Master internship : Lise Mandigny "Revue systématique et Méta-analyse des essais cliniques publiés de développement de vaccins contre le virus Ebola", directed by Rodolphe Thiébaut (1/04/2016 - 31/09/2016)

Master internship : Stella Huang "Modélisation de l'infection à pseudomonas aeruginosa dans les services de réanimation ? étude DYNAPYO", directed by Rodolphe Thiébaut (11/02/2016 - 15/08/2016)

Master project : B Dufoyer, A Chevalier, H Aassif, A Labchri, projet de programmation du Master 1 Informatique, Univ Bordeaux. Titre : " Développement d'un outil de prévention des accidents de la vie courante à partir de méthodes de machine learning : site web et bases de données ", directed by Marta Avalos and L Orriols, M Travanca, L Divert, INSERM U1219. (11/01/2016-12/04/2016)

Master project : N Craeye, C Elassaoui, F Elouazi, B Faltrept, projet de programmation du Master 1 Informatique, Univ Bordeaux. Titre : " Développement d'un outil de mesure de l'attention via internet ", directed by Marta Avalos and M Née, L Divert, E Lagarde, INSERM U1219. (11/01/2016-12/04/2016)

10.2.3. *Juries*

Daniel Commenges was involved in two PhD defences as president of the jury: Leila Azarang (Vigo), Anais Rouanet (Bordeaux).

Robin Genuer was in charge of the reports of the PhD of Havelund Welling, entitled "Characterization of absorption enhancers for orally administered therapeutic peptides in tablet formulations", defended on 30/09/2016 in Department of Applied Mathematics and Computer Science, Technical University of Denmark, Kongens Lyngby

Mélanie Prague is a member of the follow-up dissertation comity of Sébastien Benzkcry's PhD student (Inria Bor- deaux Sud-ouest, MONC team). Nicolo Chiara is working on "Mathematical modeling of systemic aspects of cancer and cancer therapy".

Rodolphe Thiébaut took part in the HDR committee of Vivian Viallon (2016) and Francesco Salvo (2016)

Robin Genuer took part in the recruitment commission MCF CNU 26 (Toulouse 2016)

Rodolphe Thiébaut took part in the recruitment commissions PU CNU 26 (Paris Descartes 2016), MCF CNU 26 (Bordeaux 2016), MCF CNU 85 (Bordeaux 2016).

10.3. Popularization

Marta Avalos, Marius Kwémou and Perrine Soret animated "Mais qui est le coupable ? (Ou comment les maths contribuent à conduire une enquête épidémiologique)" for high school students through the "Fête de la Science" organized at Inria, Oct 2016.

Laura Richert participated to "Nuit Européenne des Chercheurs" with speed dating and a radio interview, Cap Sciences, Bordeaux, September 2016.

SMIS Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Philippe Pucheral: Co-founder of the bi-annual French Summer School 'Masses de Données Distribuées' and co-organizer of this school in 2016

9.1.1.2. Member of the Organizing Committees

- Benjamin Nguyen: Steering commitee of 'Atelier sur la Protection de la Vie Privée' (APVP) in 2016
- Nicolas Anciaux: co-organizer (with Fabrice Le Guel and Ulysse Roux) of the 'Journée de restitution d'ISN' in 2016

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

- Philippe Pucheral: DATA'16, DBKDA'16, BDA'16, EDBT'17
- Luc Bouganim: VLDB'17, EDBT'16, BDA'16 (Demo)
- Benjamin Nguyen: ECML/PKDD'16
- Nicolas Anciaux: SIGMOD'17, EDBT'16, DATA'16, ICT4AWE'16, BDA'16, RESSI'16
- Iulian Sandu Popa: IEEE MobileCloud'16, DATA'16, MobilWare'16, MCSMS'16

9.1.2.2. Reviewer

- Luc Bouganim: EDBT'17
- Iulian Sandu Popa: MDM'16
- Guillaume Scerri : SIGMOD'17, EDBT'17, STACS'17

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- Nicolas Anciaux: Associate Editor of the VLDB Journal (since 2015)
- Benjamin Nguyen: Techniques et Sciences Informatiques (TSI) - Revue Française (Rédacteur adjoint, domaine Sécurité et Vie Privée depuis 2016-05)
- Luc Bouganim: Area Editor for PVLDB 2018

9.1.3.2. Reviewer - Reviewing Activities

- Iulian Sandu Popa: IEEE TKDE, ACM Transactions on Storage, International Journal of Digital Earth

9.1.4. Invited Talks

- Invited tutorial: N. Anciaux, L. Bouganim, Tutorial: Decentralized Personal Data Management, using secure devices, BDA summer school: "Masses de données distribuées", Urugne, June 2016 [28].
- Invited talk: N. Anciaux, La valorisation de la donnée par l'usager : approche technique. Centre français de droit comparé, Colloque 'Propriété(s) et données', Paris, 2016 https://linc.cnil.fr/fr/le-centre-francais-de-droit-compare-organise-un-colloque-proprietes-et-donnees

- Invited talk: L. Bouganim, Remy Pasquion, A Secure and Mobile Platform for Experimental Economy, Multidisciplinary Research Seminar at Telecom Paris Tech, Paris, June 2016.

- Invited talk: N. Anciaux, Contrôler ses données personnelles par la décentralisation. Journée Protection de la vie privée : Nouveaux instruments techniques et juridiques, CNRS, November 2016. http://www.univ-orleans.fr/lifo/evenements/CAPPRIS/?page_id=125

- Invited demonstration: L. Bouganim and R. Pasquion, Présentation d'une Plateforme de Questionnaires Respectueux de la Vie Privée, Sommet « Partenariat pour un Gouvernement ouvert », Agora numérique « Pour un Sénat ouvert », December, 8, 2016.

- Invited demonstrations: N. Anciaux, L. Bouganim and P. Tran Van, Partager et disposer de ses données en en gardant la maîtrise, trois démonstrations sur la base de PlugDB: Mobile Platform for Experimental Economy, Secure personal cloud (with Cozy Cloud), Personal Social-Medical Folder. Journée Protection de la vie privée : Nouveaux instruments techniques et juridiques, CNRS, November 2016. http://www.univ-orleans.fr/lifo/evenements/CAPPRIS/?page_id=125

- Invited talk: Iulian Sandu Popa, Distributed Architectures for Privacy-Aware Mobile Participatory Sensing, BIS'16 Workshop, June 2016 https://project.inria.fr/siliconvalley/bis2016-day-2-full-day-working-session-on-smart-cities/

- Invited talk: N. Anciaux, A new approach for secure personal cloud, CITI Talk, Lyon, May 2016 http://www.citi-lab.fr/2016/05/17/citi-talk-a-new-approach-for-secure-personal-cloud-by-nicolas-anciaux-on-26th-may/

- Panel: Nicolas Anciaux, Enjeux et opportunités des modèles ouverts en santé, Paris Open Source Summit, 2016. Trackleader : Olivier de Fresnoye. Panelists : Nicolas Anciaux (Inria), Mobin Yasini(MD, MPH, PhD, mHealth Quality R&D Director), Stéphane Gigandet (Open Food Facts), Clémentine Langlois (Fongwama) http://empoweringopeninnovation.org/enjeux-et-opportunites-des-modeles-ouverts-en-sante/

9.1.5. Scientific Expertise

- N. Anciaux, P. Pucheral : scientific expertise on behalf of DGCCRF (Direction Générale de la Concurrence, de la Consommation et de la Répression des Fraudes) and of the European Council regarding the draft proposal of "Directive of the European Parliament and of the Council on certain aspects concerning contracts for the online and other distance sales of goods" regulating the payment of numeric goods and services by means of personal data

- Benjamin Nguyen: Natural Sciences and Engineering Research Council of Canada (NSERC), Research grants

- Benjamin Nguyen: Membre du comité d'éthique de TeraLab, du Groupe des Ecoles Nationales d'Economie et de Statistique (GENES) dont l'ENSAE.

9.1.6. Research Administration

- Philippe Pucheral: Member of the HDR committee of the STV doctoral school (UVSQ) since 2014

- Philippe Pucheral: Member of the steering committee of the ED STIC doctoral school of University Paris-Saclay, 'Data, Knowledge and Interactions' committee (about 250 PhD students) since 2014

- Philippe Pucheral: Representative of Inria in the 'Comité des Tutelles Formation' of Paris-Saclay University since 2016

- Philippe Pucheral: Member of the 'Commission de Sélection' of UVSQ and of the 'Commission des Appellations' of Télécom SudParis in 2016

- Luc Bouganim: Reviewer for the ANR programs (Evaluation committee CE23), 2016

- Luc Bouganim: Member of the 'Commission de Sélection' of the INSA CVL, 2016

- Nicolas Anciaux: Co-director of the 'Privacy and digital identity' WG at Digital Society Institute (DSI), until June 2016

- Nicolas Anciaux: Reviewer of the CHIST-ERA Call 2015 - SPTIoT
- Nicolas Anciaux: Member of the 'Commission de Sélection' of UVSQ, 2016
- Benjamin Nguyen: Director of LIFO (EA 4022) since July 2016
- Benjamin Nguyen: Responsible of CNRS privacy working group "Sécurité" since september 2016
- Benjamin Nguyen: Director of Digital Affairs (INSA CVL)
- Iulian Sandu Popa: Reviewer for the ANR programs (evaluation committee CE23), 2016
- Iulian Sandu Popa: Member of the 'Commission de Sélection' of the UVSQ, 2016

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master : Philippe Pucheral, co-director of the DataScale master (UPSay), courses in M1 and M2 at UVSQ and at ENSIIE

Master: Nicolas Anciaux, Courses on database internal mechanisms and database security, 80, in Master1 and Master2 (AFTI, Orsay) and in engineering school (ENSTA ParisTech, Telecom Paristech)

Master : Luc Bouganim, Bases de données, 24, niveau M2, CFA AFTI/UVSQ, France

Master : Luc Bouganim, Systèmes d'information Privacy by Design, 54, niveau M2, ENSIIE, INSA CVL, France

Master : Luc Bouganim, Sécurité des bases de données, 10, niveau M2, Télécom ParisTech, France

Licence : Iulian Sandu Popa, Initiation aux bases de données (niveau L2), Bases de données (niveau L3), 96, UVSQ, France

Master : Iulian Sandu Popa, Bases de données relationnelles (niveau M1), Gestion des données spatiotemporelles (niveau M2), Sécurité des bases de données (niveau M2), 96, UVSQ, France

Master : Benjamin Nguyen, Databases, IA, Security, 192, INSA CVL, France

Licence : Guillaume Scerri, Fondements de l'informatique, 36, niveau L1, UVSQ, France

Licence : Guillaume Scerri, Initiation aux bases de données, 43.5, niveau L2, UVSQ, France

Master : Guillaume Scerri, Bases de données, 30, niveau M1, UVSQ France

E-learning

MOOC created in 2016: "Villes intelligentes : défis technologiques et sociétaux", coordinated by V. Issarny and N. Mitton. N. Anciaux, S.Grumbach, V. Issarny, N. Mitton, C. Morin, A. Pathak, H. Rivano. Start date 25 Jan. 2016. In 2016, more than 8000 students have registered to follow the courses. A new edition is planned for 2017. https://www.fun-mooc.fr/courses/inria/41009/session01/about

MOOC created in 2016: Bases de données relationnelles : comprendre pour maîtriser (Serge Abiteboul, Benjamin Nguyen, Philippe Rigaux) https://www.fun-mooc.fr/courses/inria/41008/session01/about

9.2.2. Supervision

PhD: Athanasia Katsouraki, Sharing and Usage Control of Personal Information, UVSQ, September 2016, Luc Bouganim and Benjamin Nguyen

PhD: Saliha Lallali, A Secure Search Engine for the Personal Cloud, UVSQ, January 2016, Nicolas Anciaux, Philippe Pucheral, and Iulian Sandu Popa

PhD: Dai Hai Ton That, Efficient Management and Secure Sharing of Mobility Traces, UVSQ, January 2016, Iulian Sandu Popa and Karine Zeitouni

PhD in progress : Paul Tran Van, Partage de documents sécurisé dans le Cloud Personnel, October 2014, Nicolas Anciaux and Philippe Pucheral

PhD in progress : Axel Michel, Secure Distributed Computations, October 2015, Benjamin Nguyen and Philippe Pucheral

PhD in progress : Julien Loudet, Personal Queries on Personal Clouds, July 2016, Luc Bouganim and Iulian Sandu Popa

PhD in progress : Riad Ladjel, Secure Distributed Computation for the Personal Cloud, October 2016, Nicolas Anciaux and Philippe Pucheral

9.2.3. Juries

Philippe Pucheral: member of the PhD jury of Mahsa Najafzadeh (Paris VI, 22/04/2016)

Benjamin Nguyen: reviewer of the PhD of Tarek SAYAH, Exposition sélective et problème de fuite d'inférence dans le Linked Data, Université Claude Bernard Lyon I, 2016/09/08

Benjamin Nguyen: reviewer of the PhD of Germain JOLLY, Evaluation of payment applications on smart cards, Université de Caen/ENSICAEN, 2016/07/08

Benjamin Nguyen: reviewer of the PhD of Julien LOLIVE, Entrelacement des mécanismes d'identification et de respect de la vie privée pour la protection des contenus externalisés, Télécom Bretagne, 2016/05/13

Benjamin Nguyen: president and reviewer of the PhD jury of Karina SOKOLOVA, Bridging the gap between Privacy by Design and mobile systems by patterns, Université Technologique de Troyes, 2016/04/27

9.3. Popularization

General public (large audience magazines, television, videos):

- "Santé connectée. Une médecine sans médecin ?", interview of N. Anciaux, La Recherche, N°510 Avril 2016. (http://fliphtml5.com/ggwf/ynja p.84)
- "PlugDB, coffre-fort numérique personnel", interview of P.Pucheral, Le Monde Science & Techno, November 28th, 2016.
- "Sur Internet, vos données personnelles valent de l'or", interview of P.Pucheral, Ca m'intéresse, November 2016.
- "Santé connectée, santé partagée", interview of P.Pucheral, Le Point, April 7th 2016.

SOCRATE Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. General Chair, Scientific Chair

Jean-Marie Gorce was one of the general chairs in the following conferences:
- GDR-ISIS Meeting: "Wireless networks: decentralized problems and solutions", held in Telecom ParisTech, March, 15, 2016.
- Workshop : "Inclusive Radio Communications for 5G and beyond", held in conjunction with the conference IEEE PIMRC, September 4-7, 2016, Valencia, Spain.

9.1.2. Chair of Conference Program Committees

Florent de Dinechin is a PC chair of the Arith 2017 conference.

9.1.3. Member of the Conference Program Committees

Samir M. Perlaza was a member of the technical program committee of the following conferences:
- IEEE Wireless Communications and Networking Conference (WCNC). 19-22 March 2017, San Francisco, CA. PHY and Fundamentals Track.
- 3rd Workshop on Physical-layer Methods for Wireless Security. Workshop taking place at IEEE CNS 2016 in Philadelphia, PA, USA, Oct 17-19, 2016.
- Workshop on Wireless Energy Harvesting Communication Network. Workshop taking place at IEEE Global Communications Conference (GLOBECOM) in Washington, DC USA, Dec. 8, 2016.
- IEEE WCNC 2016 Workshop on Green and Sustainable 5G Wireless Networks (GRASNET). April 3, 2016, Doha, Qatar
- 6th International Conference on Game Theory for Networks (GameNets). May 10-12, 2016, Kelowna, BC, Canada.

Jean-Marie Gorce was a member of the following technical program committees:
- IEEE APCC(22th Asia-Pacific Communication Conference, Yogyakarta-Indonesia, August 25-27 2016).
- IEEE PIMRC Fundamental & PHY (27th IEEE International Symposium on Personal, Indoor and Mobile Radio Communications , Valencia, Spain, September 4-7, 2016).
- IEEE GLOBECOM Cognitive Radio Networks (Washington, DC, USA, December, 4-8, 2016).
- IEEE ICC Cognitive Radio Networks (IEEE International Conference on Communications, Malaysia, May 23-27 2016).

Guillaume Villemaud was a member of the following technical program committees:
- CROWNCOM2016
- VTC spring 2016
- PIMRC 2016
- EUCAP 2016.

Tanguy Risset was a member of the following technical program committees:
- IEEE Computer Society Annual Symposium on VLSI (ISVLSI) 2016.
- Design Automation and Test in Europe (DATE) 2016.
- International Conference on Cognitive Radio Oriented Wireless Networks (CROWNCOM) 2016 .

Florent de Dinechin was a member of the following technical program committees:

- 12th International Symposium on Applied Reconfigurable Computing (ARC 2016)
- 23rd IEEE Symposium on Computer Arithmetic (Arith)
- 27th Annual IEEE International Conference on Application-specific Systems, Architectures and Processors (ASAP 2016)
- IEEE International Conference on Field Programmable Technologies (FPT 2016)
- Design Automation and Test in Europe (DATE) 2016, track D11.
- 24th IEEE International Symposium on Field-Programmable Custom Computing Machines (FCCM 2016)
- Conférence d'informatique en Parallélisme, Architecture et Système (ComPAS 2016)

9.1.4. Member of the Editorial Boards

Guillaume Villemaud is an associate editor of Annals of Telecommunications (Springer).

Jean-Marie Gorce is an associate editor of Telecommunications Systems (Springer) and Journal of Wireless communications and Networking (Springer).

9.1.5. Invited Talks

S. Perlaza, "On the Benefits of Feedback in Wireless Communications". Invited talk at the Department of Telecommunications, CentraleSupélec, Gif-sur-Yvette, France, December 2, 2016.

G. Salagnac "Peripheral State Persistence For Transiently Powered Systems" at the 3rd edition of the LIP Seminar on Languages Compilation and Semantics. France, November 3 2016.

S. Perlaza, "On the Benefits of Feedback in Wireless Communications". Invited talk at the Department of Electrical Engineering and Computer Science, Technical University of Berlin, Berlin, Germany, November 18, 2016.

J.M. Gorce, "Energy-Capacity Fundamental Limits in a Cell with Dense Users" at Lundis de la radio, Orange Labs, Issy les Moulineaux, France, September 26, 2016.

S. Belhadj Amor, "Simultaneous Energy and Information Transmission". Invited talk at the School of Engineering and Applied Science, Princeton University, Princeton NJ, USA, April 21, 2016.

S. Belhadj Amor, "Simultaneous Energy and Information Transmission". Invited talk at the Center for Wireless Communication and Signal Processing Research (CWCSPR), ECE Department, New Jersey Institute of Technology (NJIT), Newark NJ, USA, April 15, 2016.

S. Perlaza, "Simultaneous Wireless Information and Energy Transmission". Invited talk at the University of Sheffield. Department of Automatic Control and Systems Engineering, Sheffield, UK, April 6, 2016.

T. Risset, "FIT/CorteXlab: A new testbed for cognitive radio experimentation". Invited talk at the Colorado-state University Fort Collins, Computer science departement, Sep. 2016.

T. Risset "Compilation of Parametric Dataflow Applications for Software-Defined-Radio-Dedicated MPSoCs" at the 2rd edition of the LIP Seminar on Languages Compilation and Semantics. Lyon, France, June 24 2016.

T. Risset, "Experimenting Cognitive Radio Communication on FIT/CorteXlab". Invited talk at R2-Lab inauguration, Nice, France, Nov. 2016.

9.1.6. Leadership within the Scientific Community

Guillaume Villemaud is National Delegate (Alt.) for the COST IRACON.

9.1.7. Scientific Expertise

Guillaume Villemaud was reviewer of ANR projects and CIFRE grants.

Jean-Marie Gorce is a member of the following committees:

- Jury prix de thèse 2017 Signal Image et Vision, soutenu par l'association GRETSI, le GDR ISIS et le club EEA.
- Jury for the digital Impulse Innovation price, May, 2016.

Tanguy Risset is member of the Administration council (Conseil d'administration) of the GRAME institute (centre national de création musicale).

9.1.8. Tutorials in International Conferences

- S. Belhadj Amor and S. M. Perlaza, "Simultaneous Energy and Information Transmission". Tutorial at the 11th EAI International Conference on Cognitive Radio Oriented Wireless Networks (Crowncom), Grenoble, France, May 29, 2016.
- S. Belhadj Amor, S. M. Perlaza, and I. Krikidis, "Simultaneous Energy and Information Transmission". Tutorial at the European Wireless (EW) conference, Oulu, Finland, May 18, 2016.
- S. Belhadj Amor and S. M. Perlaza, "Simultaneous Energy and Information Transmission". Tutorial at the 23rd International Conference on Telecommunications, Thessaloniki, Greece, May 16, 2016.
- J.M. Gorce, "Fundamental Limits of Bursty Multi-user Wireless Networks for IoT", at the summer school RESCOM on 5G and Internet of Things, from 13th to 17th June 2016, Guidel Plage, France.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Jean-Marie Gorce is the head ot the Telecommunications department of Insa Lyon.

Tanguy Risset and Jean-Marie Gorce and are professors at the Telecommunications Department of Insa Lyon.

Florent de Dinechin is a professor at the Computer Science Department of Insa Lyon.

Claire Goursaud is an associate professor at the Telecommunications department of Insa Lyon.

Leonardo Sampaio-Cardoso is an associate professor at Insa Lyon (Premier Cycle).

Guillaume Salagnac and Kevin Marquet are associate professors at the Computer Science Department of Insa Lyon.

Guillaume Villemaud and Florin Hutu are associate professor at the Electrical Engineering Department of Insa Lyon.

Samir M. Perlaza and Jean-Marie Gorce teach the course on Network Information Theory at École Normale Supérieure de Lyon.

9.2.2. Supervision

PhD in progress **Tristan Delizy***memory management for normally-of NV-RAM based systems*, Insa-Lyon, (Region ARC6) since 09/2016.

PhD in progress **Yohan Uguen***Synthesis of arithmetic operators*, Insa-Lyon, (Mininstry of research) since 09/2016.

PhD in progress **Yuqi Mo***Scaling of Iot Communication issuers*, Insa-Lyon, since 09/2015.

PhD in progress **David Kibloff***New strategy for Physical Layer Security in wireless networks: self-jamming using Full-Duplex Transceivers*, École Doctorale EEA de Lyon, funded by Inria-DGA grant since 10/2015.

PhD in progress **Victor Quintero***Fundamental Limits of Decentralized Cognitive Radio Networks*, École Doctorale EEA de Lyon, funded by Colciencias since 02/2014.

PhD in progress **Nizar Khalfet***Stochastic Energy Sources to Power Communication Systems*, École Doctorale EEA de Lyon, funded by EU Project COM-MED since 10/2016.

PhD in progress : **Matei Istoan**: *High-performance coarse operators for FPGA-based computing*, ANR Metalibm grant, since 01/2014.

PhD : **Arturo Jimenez Guizar**: *Cooperative communications in Body Area Networks*, ANR Cormoran grant, 27/10/2016.

PhD : **Matthieu Vallerian**: "*Radio Logicielle pour réseau de capteurs*", CIFRE/Orange, 15/06/2016.

9.2.3. Juries

Jean-Marie Gorce was a member of the jury of the following thesis:

- PhD Ehsan Ebrahimi Khaleghi, Advanced techniques of Interference Alignment : Application to Wireless Networks (Telecom ParisTech, January 2016), (as a reviewer).
- PhD Bhanukiran Perabathini, fundamental limits of energy efficiency in wireless networks (CentraleSupélec, January 2016), (as a reviewer).
- PhD Abraham Kaboré, Study of detection-correction error codes for MAC/PHY layers in smart grid networks (University Limoges, March 2016), (as a veviewer).
- PhD Marwa Chami, Optimization of cognitive systems with successive interference cancellation and relaying (CNAM, Paris, May 2016), (as a reviewer).
- PhD Jan Oksanen, Machine learning methods for spectrum exploration and exploitation (University of Aalto, September 2016), (as an opponent).
- PhD Wenjie Li, Robust information gathering and dissemination in wireless sensor networks (CentraleSupélec, November 2016), (as a reviewer).
- PhD Raphael Massin, On the Clustering of Mobile Ad Hoc Networks (Telecom ParisTech, November 2016), (as a reviewer).
- PhD Zheng Chen, User-Centric Content-Aware Communication in Wireless Networks (CentraleSupélec, December 2016), (as a reviewer).
- HdR Frédéric Guilloud, contributions to error correction codes and to digital communications toward communications with short frames (Telecom Brest, December 2016).

Samir M. Perlaza was a member of the jury of the following thesis:

- PhD Chao He, "Broadcasting with delayed CSIT: Finite SNR analysis and heterogeneous feedback". Defended at CentraleSupélec on December 2 2016, Gif-sur-Yvette, France.

Florin Hutu was a member of the jury of the following thesis:

- PhD Jeremy Hyvert, "Techniques de conception d'oscillateurs contrôlés en tension faible bruit de phase en bande Ku intégrés sur silicium en technologie BiCMOS" (Université de Poitiers, September 2016).

Guillaume Villemaud was a member of the jury of the following thesis:

- PhD Roman IGUAL PEREZ, "Platform hardware/software for the energy optimization in a node of wireless sensor networks", Univ. de Lille 1.
- Mohammad ABDI ABYANEH, "Génération des signaux agrégés en fréquences dans le contexte de LTE-A". Telecom Paristech.
- Shiqi CHENG, "Characterization and modeling of the polarimetric MIMO radio channel for highly diffuse scenarios". Univ. de Lille 1.

Tanguy Risset was a member of the jury of the following thesis:

- Marcos Aurelio Pinto Cunha (U. Grenoble, Jan. 2016) as jury president .
- Xiguang Wu (CentraleSupélec, Mar. 2016), as reviewer.
- Shaoyang MEN (U. Nantes, Oct. 2016) jury president.

Florent de Dinechin was a reviewer in the habilitation thesis of Roselyne Chotin-Avot (LIP6, Paris).

SPADES Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. Member of organizing committees

- Sophie Quinton was artifact evaluation chair of the 24th International Conference on Real-Time Networks and Systems (RTNS'16).
- Sophie Quinton was demo chair of the 22nd IEEE Real-Time Embedded Technology & Applications Symposium (RTAS'16)
- Sophie Quinton was co-chair of the 1st Tutorial on Tools for Real-Time Systems (TuToR'16), held as a satellite event of CPSWeek'16. http://tutor2016.inria.fr/
- Sophie Quinton was co-organizer of the 1st Workshop on Collaboration of Academia and Industry for Real World Embedded Systems (CAIRES'16), held as a satellite event of ESWeek'16. http://caires2016.inria.fr/

9.1.2. Scientific events selection

9.1.2.1. Chair of conference program committees

- Gregor Gössler was co-chair of the 1st international Workshop on Causal Reasoning for Embedded and safety-critical Systems Technologies (CREST'16) [22], held as a satellite event of ETAPS'16. http://crest2016.inria.fr
- Sophie Quinton was co-chair of the 7th International Workshop on Analysis Tools and Methodologies for Embedded and Real-time Systems (WATERS'16), held as a satellite event of ECRTS'16. http://waters2016.inria.fr

9.1.2.2. Member of conference program committees

- Pascal Fradet served in the program committee of the 15th International Conference on Modularity (MODULARITY'16).
- Alain Girault served in the program committees of the International Conference on Design and Test in Europe (DATE'16), the Embedded Software conference (EMSOFT'16), and the International Symposium on Industrial Embedded Systems (SIES'16).
- Sophie Quinton served in the program committees of the 28th Euromicro Conference on Real-Time Systems (ECRTS'16), the 24th International Conference on Real-Time Networks and Systems (RTNS'16), the 4th International Workshop on Mixed Criticality Systems (WMC'16), the 10th Junior Researcher Workshop on Real-Time Computing (JRWRTC'16), and in the artifact evaluation committees of ECRTS'16 and the IEEE Real-Time Systems Symposium (RTSS'16).
- Jean-Bernard Stefani served on the program committees of the 36th IFIP International Conference on Formal Techniques for Distributed Objects, Components and Systems (FORTE) and the 8th Conference on Reversible Computation.

9.1.2.3. Reviewer

- Alain Girault reviewed an article for ECRTS'16.
- Gregor Gössler reviewed articles for EMSOFT'16, FACS'16, and RTNS'16.
- Xavier Nicollin reviewed an article for SIES'16.
- Sophie Quinton reviewed articles for EMSOFT'16 and DATE'17.

9.1.3. Journal

9.1.3.1. Member of the editorial boards

- Alain Girault is a member of the editorial board of the EURASIP Journal on Embedded Systems.
- Jean-Bernard Stefani is a member of the editorial board of Annals of Telecommunications.

9.1.3.2. Reviewer - Reviewing activities

- Alain Girault reviewed articles for ACM TECS, Parallel Computing, Embedded Systems Letters, and Microprocessors and Microsystems.
- Gregor Gössler reviewed articles for Formal Methods in System Design (FMSD) and IEEE Transactions on Automatic Control (TAC).
- Jean-Bernard Stefani reviewed articles for Theoretical Computer Science (TCS) and Science of Computer Programming (SCP).

9.1.4. Research administration

- Pascal Fradet is head of the committee for doctoral studies ("Responsable du comité des études doctorales") of the INRIA Grenoble – Rhône-Alpes research center and local correspondent for the young researchers INRIA mission (mission jeunes chercheurs).
- Alain Girault is Vice Chair of the INRIA Evaluation Committee. As such, he co-organizes in particular the evaluation seminars of the INRIA teams (twice a year) and all the juries for the hiring and promotion of INRIA's researchers (CR2, CR1, DR2, DR1, and DR0).
- Jean-Bernard Stefani is Head of science of the INRIA Grenoble – Rhône-Alpes research center. As such, he manages with the research center director all aspects of the scientific life of the research center (creation of the research teams and their evaluation by international panels, scientific relationships with our academic and industrial partners, hiring of the new junior researchers, ...).
- Jean-Bernard Stefani is co-director of I/O LAB, the joint research laboratory with Orange Lab.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Pascal Fradet, Théorie des Langages 1 & 2, 36 HeqTD, niveau L3, Grenoble INP (Ensimag), France

Licence : Gregor Gössler, Théorie des Langages 2, 36 HeqTD, niveau L3, Grenoble INP (Ensimag), France

Master : Xavier Nicollin, Sémantique et Analyse des Programmes, 11,25 HeqTD, niveau M1, Grenoble INP (Ensimag), France

Licence : Xavier Nicollin, Théorie des Langages 2, 36 HeqTD, niveau L3, Grenoble INP (Ensimag), France

Licence : Xavier Nicollin, Bases de la Programmation Impérative, 66 HeqTD, niveau L3, Grenoble INP (Ensimag), France

Licence : Sophie Quinton, Théorie des Langages 2, 18 HeqTD, niveau L3, Grenoble INP (Ensimag), France

Master : Jean-Bernard Stefani, Formal Aspects of Component Software, 9h, MOSIG, Univ. Grenoble Alpes, France

Master : Sophie Quinton, Performance and Quantitative Properties, 6h, MOSIG, Univ. Grenoble Alpes, France

9.2.2. Supervision

- PhD: Yoann Geoffroy, "A general trace-based causality framework for component-based systems", Univ. Grenoble Alpes, defended on December 7th 2016, advised by Gregor Gössler.

- PhD in progress: Sihem Cherrared, "Fault Management in Multi-Tenant Programmable Networks", Univ. Rennes 1, since October 2016, co-advised by Eric Fabre and Gregor Gössler.

- PhD in progress: Christophe Prévot, "Early Performance assessment for evolving and variable Cyber-Physical Systems", Univ. Grenoble Alpes, since November 2015, co-advised by Alain Girault and Sophie Quinton.

- PhD in progress: Xiaojie Guo, "Formal Proofs for the Analysis of Real-Time Systems in COQ", Univ. Grenoble Alpes, since December 2016, co-advised by Pascal Fradet, Jean-François Monin, and Sophie Quinton.

- PhD in progress: Stephan Plassart, "On-line optimization in dynamic real-time systems", Univ. Grenoble Alpes, since September 2016, co-advised by Alain Girault and Bruno Gaujal.

9.2.3. *Juries*

- Alain Girault was president of the HDR jury of Goran Frehse (Univ. Grenoble Alpes).

- Sophie Quinton was member of the PhD jury of Houssam Zahaf (U. Lille).

- Jean-Bernard Stefani was president of the HDR jury of Tom Hirschowitz (U. Savoie).

9.3. Popularization

Alain Girault gave a lecture to high school math professors, titled "Multi-core architectures, reliability, and optimization" (ISN conference cycle, Grenoble, February 2016). http://www.canal-u.tv/video/inria/architectures_multi_coeurs_ fiabilite_et_optimisation.20829

<h1 style="text-align:center; color:red">SPECFUN Project-Team</h1>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Frédéric Chyzak is member of the steering committee of the *Journées Nationales de Calcul Formel* (JNCF), the annual meeting of the French computer algebra community.
- Frédéric Chyzak has been elected member of the steering committee of the *International Symposium on Symbolic and Algebraic Computation* (ISSAC, 3-year term).
- Alin Bostan is part of the Scientific advisory board of the conference series *Effective Methods in Algebraic Geometry* (MEGA).
- Assia Mahboubi serves in the scientific advisory board of the Mathematics, Algorithms and Proofs community (MAP).
- Assia Mahboubi has served in the scientific advisory board of the École du GDR Informatique – Mathématiques 2016.
- Georges Gonthier is a member of the steering committee of the *Certified Programs and Proofs* conference (CPP).

9.1.1.2. Member of the Organizing Committees

- Assia Mahboubi has co-organized the *MAP'16 conference* at CIRM (Marseille), with B. Spitters (Aarhus University, Denmark) and P. Schuster (University of Verona, Italy): http://scientific-events. weebly.com/1508.html.
- Assia Mahboubi has co-organized, with E. Tassi (Marelle), the workshop *Mathematical Components: an introduction*, satellite of the conference ITP 2016: https://itp2016.inria.fr/workshops/#mc.
- Assia Mahboubi has co-organized, with K. Nakata (FireEye, Germany), the workshop *TTT*, satellite of the POPL'17 conference: http://popl17.sigplan.org/track/TTT-2017.
- Suzy Maddah has co-organized the gathering *Functional Equations in Limoges (FELIM 2016)*: https://indico.math.cnrs.fr/event/919/.
- Suzy Maddah has co-organized a session on software for the symbolic study of functional equations at the *International Congress on Mathematical Software (ICMS 2016)*: http://icms2016.zib.de/.
- Alin Bostan has co-organized, together with Bruno Salvy (Inria and ENS Lyon) and Conrado Martinez (UPC BarcelonaTech), the conference *ALEA 2016* at CIRM (Marseille): http://scientific-events.weebly.com/1406.html.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

- Alin Bostan has served as Symbolic Computation track chair for the international conference SYNASC 2016.

9.1.2.2. Member of the Conference Program Committees

- Assia Mahboubi has served as a member of the program committee for the international conferences with proceedings CPP 2017, ITP 2016, CSL 2016, CICM 2016 and SCSS 2016. She has also served as member of the program committee for the MAP 2016 conference and for the HaTT workshop.
- Alin Bostan has served as a member of the program committee of the ISSAC 2016 and of the SYNASC 2016 international conferences.

9.1.2.3. Reviewer

- Assia Mahboubi has served as reviewer for the proceedings of the international conferences CPP 2017, ITP 2016, CSL 2016, CICM 2016 and SCSS.
- Alin Bostan has served as reviewer for the proceedings of the international conferences FPSAC 2016, ISSAC 2016, AofA 2016 and SYNASC 2016.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- Georges Gonthier is a member of the editorial board of the *Journal of Formalized Reasoning*.

9.1.3.2. Reviewer - Reviewing Activities

- Assia Mahboubi has served as a reviewer for the *Journal of Automated Reasoning*.
- Frédéric Chyzak has served as a reviewer for the journals: *Applicable Algebra in Engineering, Communication and Computing*; *Journal of Symbolic Computation*; *Journal of Algebra*; and *Electronic Journal of Combinatorics*.
- Alin Bostan has served as a reviewer for the journals: *Journal of Complexity*; *Mathematics of Computation*; *Linear Algebra and its Applications*; *Journal of Physics A: Mathematical and Theoretical*; *Journal of Algebra and its Applications*; *Journal of Symbolic Computation*; *Advances in Applied Mathematics*.

9.1.4. Invited Talks

- Assia Mahboubi has given an invited talk at the special trimester Mathematics – Computer Science – Philosophy CIPPMI in Toulouse in March 2016.
- Assia Mahboubi has given an invited lecture for the students of École Normale Supérieure Paris-Saclay in September 2016.
- Alin Bostan has been invited to give a series of five lectures at the summer school *Algorithmic and Enumerative Combinatorics* (RISC, Hagenberg, Austria), August 1–5, 2016.
- Philippe Dumas has given an invited lecture about divide-and-conquer recurrences at the *Journées Aléa* (CIRM, Marseille, France), March 7–11, 2016 [18].

9.1.5. Leadership within the Scientific Community

- Assia Mahboubi is leading the working group *Type theory based tools* inside the EUTYPES COST project. She is also M.C. for France for this project and a member of its core managment group.

9.1.6. Research Administration

- Assia Mahboubi is member of the *Commission Scientifique* of Inria Saclay — Île-de-France.
- Georges Gonthier is a member of the board of the *École doctorale de mathématiques Hadamard (EDMH)*.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

License:

Louis Dumont, two L1 maths courses, 64h, Université Paris-Sud, France.

Master:

Assia Mahboubi, *Proof Assistants*, 18h, M2, Denis Diderot University (Paris), France.

Frédéric Chyzak, *Algorithmes efficaces en calcul formel*, 18h, M2, MPRI, France.

Alin Bostan, *Algorithmes efficaces en calcul formel*, 40.5h, M2, MPRI, France.

Pierre Lairez, *Algorithmique avancée*, 18h, M1, École polytechnique, France.

9.2.2. Supervision

PhD in progress: Thomas Sibut-Pinote, "Calcul numérique et démonstrations mathématiques: de la rigueur à la preuve formelle", September 2014, Assia Mahboubi

PhD in progress: Louis Dumont, "Algorithmes rapides pour le calcul symbolique de certaines intégrales de contour à paramètre", started in September 2013, supervised by Alin Bostan and B. Salvy.

Master intership (M1): G. Boisseau and Th. Huffschmitt, *Combination of decision procedures in presence of meta-variables*, École Polytechnique, supervised by Assia Mahboubi (jointly with S. Graham-Lengrand from LIX).

9.2.3. Juries

- Alin Bostan has served as a jury member of the French *Agrégation de Mathématiques – épreuve de modélisation, option C*.

- Alin Bostan has served as an examiner in the PhD jury of Aladin Virmaux, *Théorie des représentations combinatoires de tours de monoïdes, Application à la catégorification et aux fonctions de parking*, Université Paris-Saclay, June 13, 2016.

9.3. Popularization

- Assia Mahboubi has written a paper [8] for the quarterly journal of the Royal Dutch Mathematical Society.

- Alin Bostan has given a talk at the *Mathematic Park* seminar at IHP, Paris, on January 23rd 2016.

<h1 style="text-align:center; color:red;">SPHINX Project-Team</h1>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General chair, scientific chair

Xavier Antoine was a member of the scientific committee of Waves 2017, University of Minneapolis, USA.

10.1.1.2. Member of the Organizing Committees

Several members of the team were involved in the organization of the 43rd national conference CANUM 2016 (http://smai.emath.fr/canum2016/). In particular, Karim Ramdani was the head of the Organizing Committee.

Xavier Antoine was co-organizer of Colloque Couplages numériques, hold in September 27-29, 2016, in Nice, France. http://math.unice.fr/~massonr/CouplagesNumeriques/index.php

Julie Valein organized a day Fédération Charles Hermite "Estimation for dynamical systems" (06/10/2016)

10.1.2. Scientific Events Selection

10.1.2.1. Reviewer

Thomas Chambrion is a reviewer for the American Control Conference and the Conference on Decision and Control.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Jean-Claude Vivalda is a member of the editorial board of the *Journal of Dynamical and Control Systems*.

10.1.3.2. Reviewer - Reviewing Activities

Most of the members of our team are regular reviewer for major publications in the field of control.

- Thomas Chambrion is a reviewer for SICON, IEEE TAC, Automatica, International Journal of Control, MCMS.
- Julie Valein is a reviewer for SICON, ESAIM COCV.
- Jean-Claude Vivalda is a reviewer for SICON and for the Mathematical Reviews.

10.1.4. Invited Talks

Julie Valein was invited to

- LMV seminar, Versailles, 14 janvier 2016
- Mathematics-Automatic meeting, IECL – CRAN, Nancy, 28 June, 2016
- Conference « Stability of non-conservative systems », Valenciennes, 4-7 July 2016

Xavier Antoine was invited to

- Seminar, Bale University, December 2016.
- Seminar, Beijing University, July 2016.

10.1.5. Scientific Expertise

Julie Valein was a member of several "Comité de selection":

- for an associate professor position at École des Mines de Nancy;
- for an associate professor position at Université Lyon 1;
- for a teaching position at École des Sciences et Techniques de l'Ingénieur de Nancy.

Thomas Chambrion belongs to the selection panel for the Natural Sciences and Engineering Research Council of Canada.

10.1.6. Research Administration

- Xavier Antoine has been head of IECL since September 2015.
- David Dos Santos has been head of IECL PDE team since September 2014.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Most of the members of the team have a teaching position at Université de Lorraine.

Xavier Antoine teaches at Mines Nancy and ENSEM (Université de Lorraine), L3-M1, 96 hours.

Thomas Chambrion teaches at ESSTIN (Université de Lorraine), L1-L2, 192 hours.

David Dos Santos Ferreira teaches at UFR STMIA (Université de Lorraine), 192 hours.

Alexandre Munnier teaches at UFR STMIA (Université de Lorraine), 192 hours.

Jean-François Scheid teaches at Telecom Nancy (Université de Lorraine), 192 hours.

Julie Valein teaches at ESSTIN (Université de Lorraine), L1-L2, 192 hours.

10.2.2. Supervision

PhD in progress : Boris Caudron, CIFRE thesis with Thales, Coupling between integral equations/finite element for the numerical solution by domain decomposition methods of wave scattering problems, since June 2015, Xavier Antoine and Christophe Guezaine.

PhD in progress : Alessandro Duca, controllability of bilinear Schrödinger equations, since September 2015, Nabile Boussaïd and Thomas Chambrion.

10.2.3. Juries

Xavier Antoine was a referee for the Ph.D. thesis of P. Rammaciotti Morales (Ecole Polytechnique), and Marc Bakry (ENSTA).

Thomas Chambrion was referee of the PhD thesis of Leo Van Damme (Université de Bourgogne).

10.3. Popularization

Karim Ramdani has given several talks at Université de Lorraine to raise researchers awareness on the risks of author-pays publication model (for more information on economic models of scientific publishing, see http://iecl.univ-lorraine.fr/~Karim.Ramdani/KR_BIB/AUTEURS.html).

Thomas Chambrion gave a presentation of applied mathematics at Lycée Poincaré (Nancy) in April 2016.

SPIRALS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Laurence Duchien has been General Chair of (EJCP'2016), that is an international summer school in the domain of software engineering. The summer school was held in Lille from 27 June to 1 July 2016.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

Laurence Duchien

International Systems and Software Product Line Conference, Vision Track (SPLC)

IEEE Conference on Software Engineering Education & Training (CSEE&T)

International Workshop on Software Engineering for Systems-of-Systems (SESoS)

European Conference on Software Architecture (ECSA)

Philippe Merle

International Symposium on Security in Computing and Communications (SSCC)

International Workshop on Adaptive and Reflective Middleware (ARM)

Informatique des Organisation et Systèmes d'Information et de Décision (INFORSID)

Workshop on CrossCloud Infrastructures & Platforms (CrossCloud)

International Conference on Cloud Computing and Services Science (CLOSER), Special Session on Experiences with OCCI

Martin Monperrus

International Symposium on Software Testing and Analysis (ISSTA)

International Conference on Software Maintenance and Evolution (ICSME)

Romain Rouvoy

ACM/IFIP/USENIX Middleware conference (Middleware)

ACM Symposium on Applied Computing (SAC), track on Dependable, Adaptive, and Trustworthy Distributed Systems (DADS)

International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC)

International Conference on Ambient Systems, Networks and Technologies (ANT)

International Conference on Formal Aspects of Component Software (FACS)

IEEE International Workshop on Big Data Management for the Internet of Things (BIOT)

International Workshop on Meta-Programming Techniques and Reflection (Meta)

Lionel Seinturier

> International Conference on Service Oriented Computing (ICSOC)
>
> ACM/IEEE Joint Conference WICSA and CompArch (ICSA)
>
> ACM Symposium on Applied Computing (SAC), tracks Software Architecture Theory Technology and Applications (SA-TTA), Operating Systems (OS)
>
> IEEE International Symposium on Software Crowdsourcing (ISSC)
>
> Euromicro Conference on Software Engineering and Advanced Applications (SEAA), track Model-based development Components and Services (MOCS)
>
> International Conference on Software Paradigm Trends (ICSOFT-PT)
>
> International Cloud Forward Conference (CF)
>
> International Workshop on Interplay of Security, Safety and System/Software Architecture (ISSA)
>
> International Workshop on Models@run.time @ MODELS
>
> International Workshop on Models@run.time @ ICAC
>
> Workshop on Software Engineering for Sustainable Systems (SE4SuSy)
>
> International Workshop on Advanced Information Systems for Enterprises (IWAISE)
>
> Workshop on Model-driven Engineering for Component-based Software Systems (ModComp)

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Martin Monperrus is member of the editorial board of the international journal Springer Empirical Software Engineering (IF-2015: 1.933).

Romain Rouvoy is member of the editorial board of the journal Lavoisier Technique et Science Informatiques (TSI).

Lionel Seinturier is editor for software engineering of the ISTE-Wiley Computer Science and Information Technology book collection.

10.1.3.2. Reviewer - Reviewing Activities

Laurence Duchien: Lavoisier Technique et Science Informatiques (TSI), Wiley Software Practice and Experience (SPE), Elsevier Journal of Software and Systems (JSS).

Martin Monperrus: Springer Empirical Software Engineering (EMSE), Elsevier Information and Software Technology (IST), IEEE Transactions on Software Engineering (TSE).

Romain Rouvoy: Wiley Journal of Software: Evolution and Process (JSME), Elsevier Journal of Pervasive and Mobile Computing (PMC), Elsevier Journal of Computer Networks (COMNET), Elsevier Journal of Computer Communications (COMCOM), Elsevier Journal of Network and Computer Applications (JNCA), Elsevier Journal on Science of Computer Programming (SCICO).

Lionel Seinturier: ACM Computing Surveys, Elsevier Information and Software Technology (IST), Wiley Software Practice and Experience (SPE), Elsevier Science of Computer Programming (SCP), Springer International Journal on Software and Systems Modeling (SoSyM), Springer Knowledge and Information Systems (KAIS), Elsevier Computers & Electrical Engineering (CAEE), Oxford The Computer Journal, Revue Africaine de la Recherche en Informatique et Mathématiques Appliquées (ARIMA), Inderscience International Journal of Computer Applications in Technology (IJCAT).

10.1.4. Invited Talks

Romain Rouvoy gave on keynote at ECAAS 2016 in the 1st workshop on Engineering Context-Aware Applications and Services, on mobile crowdsensing.

Walter Rudametkin gave an invited talk on browser fingerprinting at CiComp 2016, the 8th International Congress on Computational Sciences.

Lionel Seinturier gave an webinar at the West University of Timisoara, Romania, on High-level Language Support for Reconfiguration Control in Component-Based Architectures.

10.1.5. Leadership within the Scientific Community

Martin Monperrus is the co-head of the "Groupe de Travail Génie Logiciel Empirique" of the GDR GPL.

Romain Rouvoy is the co-head of the "Groupe de Travail Génie Logiciel pour les Systèmes Cyber-physiques" of the GDR GPL.

10.1.6. Scientific Expertise

Laurence Duchien was member of the recruitment committee for Chaire Inria at Ecole des Mines de Nantes, and deputy head of the recruitment committee for Chargés de Recherche at Inria Lille - Nord Europe. She did some scientific expertises for Direction des Relations Internationales of the French Ministry of Research.

Martin Monperrus has evaluated grants for the Natural Sciences and Engineering Research Council of Canada (NSERC).

Romain Rouvoy has evaluated Discovery Grants for the Natural Sciences and Engineering Research Council of Canada (NSERC) and research proposals for the STIC-AmSud Program.

Lionel Seinturier was member of the recruitment committees for professors in computer science at the University of Bordeaux, and the University of Grenoble. He was scientific expert for ANRT and University Paris 6. He was member of the Agence Nationale de la Recherche (ANR) Scientific Evaluation Committee for Software and Network (CES25).

10.1.7. Research Administration

Laurence Duchien is member of the Scientific Advisory Board for the Certus Center of the Simula Lab Norway (2014-2016). She is member of the CNRS CoCNRS section 6 committee, and of the "bureau" of this committee.

Philippe Merle is member of the scientific board of Inria. He is in charge of creating the Lille's instance of the Irill research and innovation institute on free software. He is president of the CUMI (Comité des Utilisateurs des Moyens Informatiques), alternate member of the Comité de centre, member of the CLHSCT (Comité Local d'Hygiène, de Sécurité et de Conditions de Travail).

Romain Rouvoy is member of the CLDD (Commission Locale de Développement Durable), member of the CUB (Commission des Utilisateurs du Bâtiment), member of the CER (Commission Emplois Recherche), and member of the Horizon Startup committee for the Inria Lille - Nord Europe research center.

Lionel Seinturier is president of the CDT (Commission Développement Technologique), member of the BCP (Bureau du Comité des Projets), and scientific correspondant for DPEI (Direction Partenariat Europe et International), for the Inria Lille - Nord Europe research center. He heads the committee (so-called "vivier 27 rang A") that selects members of recruitment committees in Computer Science at the University of Lille.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Laurence Duchien teaches at the University of Lille 1, IEEA faculty. She heads the Carrières et Emplois service and is referent for the professional insertion in the PhD program in Computer Science at ComUE University Lille Nord de France. She is Director of Doctoral Studies for Computer Science in the Doctoral School Engineering Science (SPI) - ComUE Lille Nord de France.

    Software Project Management, 50h, Level M2, Master MIAGE

    Design of distributed applications, 42h, Level M1, Master of Computer Science

    Software Product Lines, 8h, Level M2, Master of Computer Science

    Research and Innovation Initiation, 22h, Level M2 IAGL, Master of Computer Science

    Tutoring Internship, 16h, Level M2, Master of Computer Science

Martin Monperrus teaches at the University of Lille 1, IEEA faculty. He heads the IAGL specialty of the Master of Computer Science at the University of Lille 1.

> Introduction to programming, 48h, Level L1, Licence of Computer Science
>
> Object-oriented design, 39h, Level L3, Licence of Computer Science
>
> Automated software engineering, 40h, Level M2 IAGL, Master of Computer Science

Romain Rouvoy teaches at the University of Lille 1, IEEA faculty. He heads the Master of Computer Science program at the University of Lille 1. He supervises the Agil-IT Junior Enterprise.

> Infrastructures et Frameworks Internet, 32h, Level M2 IAGL, Master of Computer Science
>
> Innovation & Initiation à la Recherche, 14h, Level M2 IAGL, Master of Computer Science speciality
>
> Outils pour la Programmation des Logiciels, 12h, Level M2 IAGL, Master of Computer Science
>
> Suivi de projets, 20h, Level M2, Master of Computer Science
>
> Suivi d'alternants, 20h, Level M2, Master of Computer Science

Walter Rudametkin Ivey teaches at the University of Lille 1, Polytech engineering school.

> GIS4 Programmation par Objets
>
> GIS4 Architectures Logicielles
>
> GIS2A3 (apprentissage) Projet programmation par Objet
>
> IMA2A4 (apprentissage) Conception Modélisation Objet
>
> GBIAAL4 Bases de données

Lionel Seinturier teaches at the University of Lille 1, IEEA faculty.

> Conception d'Applications Réparties, 50h, Level M1, Master MIAGE
>
> Conception d'Applications Réparties, 36h, Level M1, Master of Computer Science
>
> Infrastructures et Frameworks Internet, 52h, Level M2 E-Services IAGL and TIIR, Master of Computer Science

10.2.2. Supervision

> Defended HdR: Martin Monperrus, On Oracles for Automated Diagnosis and Repair of Software Bugs, 3 May 2016.
>
> Defended PhD: Vincenzo Musco, Usages of Graphs and Synthetic Data for Software Propagation Analysis, 3 November 2016, Philippe Preux (Inria SequeL) & Martin Monperrus.
>
> Defended PhD: Maxime Colmant, Multi-Dimensional Analysis of Software Power Consumptions in Multi-Core Architectures, 24 November 2016, Lionel Seinturier & Romain Rouvoy.
>
> Defended PhD: Geoffrey Hecht, Détection et analyse de l'impact des défauts de code dans les applications mobiles, 30 November 2016, Romain Rouvoy.
>
> Defended PhD: María Gómez Lacruz, Towards Improving the Quality of Mobile Apps by Leveraging Crowdsourced Feedback, 2 December 2016, Lionel Seinturier & Romain Rouvoy.
>
> Defended PhD: Bo Zhang, Self-optimization of Infrastructure and Platform Resources in Cloud Computing, 12 December 2016, Lionel Seinturier & Romain Rouvoy.
>
> In progress PhD: Benjamin Danglot, December 2016, Martin Monperrus.
>
> In progress PhD: Lakhdar Meftah, November 2016, Romain Rouvoy & Isabelle Chrisment (Inria Madynes).
>
> In progress PhD: Miguel Gonzalez, October 2016, Martin Monperrus & Romain Rouvoy & Walter Rudametkin.
>
> In progress PhD: Sarra Habchi, Une supervision de contexte sensible à la confidentialité pour les développements logiciels en crowdsource, October 2016, Romain Rouvoy.

In progress PhD: Antoine Vastel, Cartographie de la qualité d'expérience pour l'accès à l'internet mobile, October 2016, Romain Rouvoy & Walter Rudametkin.

In progress PhD: Yahya Al Dhuraibi, Un cadre flexible pour l'élasticité dans les nuages, October 2015, Philippe Merle.

In progress PhD: Stéphanie Challita, Un cadre formel et outillé pour la gestion de toute ressource en nuage, October 2015, Philippe Merle.

In progress PhD: Thomas Durieux, Search-based Monitoring and Root Cause Diagnosis in Production, September 2015, Lionel Seinturier & Martin Monperrus.

In progress PhD: Gustavo Sousa, Towards dynamic software product lines to optimize management and reconfiguration of cloud applications, October 2012, Laurence Duchien & Walter Rudametkin Ivey.

In progress PhD: Amal Tahri, Evolution logicielle multi-vues, des réseaux domestiques au Cloud, March 2013, Laurence Duchien.

10.2.3. Juries

Laurence Duchien

HDR Tewfik Ziadi (University Paris 6), reviewer

HDR Christelle Urtado (University of Montpellier), reviewer

HDR Anne Etien (University of Lille 1), chair

HDR Martin Monperrus (University of Lille 1), garant

HDR Fabien Dagnat (University Rennes 1), reviewer

Bui Thi Mai Anh (University Paris 6), examiner

Alix Gogey (University of Lille 1), chair

Guillaume Bécan (University Rennes 1), reviewer

Martin Monperrus

Alan Charpentier (University of Bordeaux), examiner

Vincenzo Musco (University of Lille 1), co-supervisor

Romain Rouvoy

Assaad Moawad (University of Luxembourg), reviewer

Simon Dupont (École des Mines de Nantes), reviewer

Lucas Perronne (University of Grenoble), reviewer

Alexandre Caron (University of Lille 1), chair

Maxime Colmant (University of Lille 1), co-supervisor

Geoffrey Hecht (University of Lille 1 & UQAM), co-supervisor

María Gómez Lacruz (University of Lille 1), co-supervisor

Bo Zhang (University of Lille 1), co-supervisor

Lionel Seinturier

HDR Brahim Hamid (University of Toulouse), reviewer

Sebastian Martinez (University Bretagne Occidentale), reviewer

Julie Rochas (University of Nice), reviewer

Hamza Chehili (University Constantine 2, Algérie), reviewer

Naweulo Zhou (University of Grenoble), reviewer

Anca Iordache (University Rennes 1), examiner

Maxime Colmant (University of Lille 1), co-supervisor

María Gómez Lacruz (University of Lille 1), co-supervisor

Bo Zhang (University of Lille 1), co-supervisor

10.3. Popularization

Romain Rouvoy is in charge of a demonstrator of APISENSE® as part of the Xperium initiative of the LILLIAD Learning center Innovation at the University of Lille 1.

Lionel Seinturier has participated in October to the event Chercheur itinérant organized by the Inria Lille Nord Europe research center in the context of La Fête de la science. Two classrooms (3ème) have been visited. The theme of the visit was crowd-sensing and data gathering from mobile devices.

STARS Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. General chair, scientific chair

François Brémond was organizer of the ISG 2016, 10th World Conference of Gerontechnology, Nice,28th to 30th September 2016.

François Brémond was editor of the Crowd Understanding workshop, part of ECCV, Amsterdam, October 2016.

9.1.1.2. Member of the organizing committee

François Brémond was a member of the Management Committee and COST Action IC1307 in 2016.

9.1.2. Scientific events selection

9.1.2.1. Member of the conference program committees

François Brémond was program committee member of the conferences and workshops: KSE 2016, PETS2016, MMM2017.

François Brémond was ACM Multimedia Area Chair for Multimedia and Vision, Amsterdam, 2016.

François Brémond was session chair of AVSS-16, Colorado Springs, USA, 2016.

Jean-Paul Rigault is a member of the *Association Internationale pour les Technologies à Objets* (AITO) which organizes international conferences such as ECOOP.

Antitza Dantcheva was program committee member of the conference International Conference on Biometrics (ICB 2016), the CVPR Workshop ChaLearn Looking at People 2016 and the Healthcare Conference Workshop within the EAIInternational Conference on Pervasive Computing Technologies.

9.1.2.2. Reviewer

François Brémond was reviewer for the conferences : CVPR2016-7, ECCV2016, VOT2016, MARMI2016, WACV 2017.

Carlos Fernando Crispim Junior was reviewer for the conferences: International Conference on Intelligent Robot and Systems, IEEE International Conference on Robotics and Automaton, Brazilian Conference in Biomadical Engineering, AMBIANT Conference, Computer on the Beach.

9.1.3. Journal

9.1.3.1. Member of the editorial boards

François Brémond was handling editor of the international journal "SDECLAREMachine Vision and Application".

9.1.3.2. Reviewer - Reviewing activities

François Brémond was reviewer for the journal revue Retraite et sociétéänd Medical Engineering & Physics.

Carlos Fernando Crispim Junior was reviewer for the journals: Pattern Recognition, Neurocomputing, Computer Vision and Image Understanding Journal, Computers in Biology and Medecine Journal, PLOS One Journal, Frontiers in Neuroscience, Sensors.

Antitza Dantcheva reviewed for the journals: IEEE Transactions on Information Forensics and Security (TIFS), Information Processing Letters, The Computer Journal, IET Biometrics, Multimedia Systems, International Journal for Information Management, Information Fusion (INFFUS), Sensors, Pattern Recognition.

9.1.4. Invited talks

François Brémond was invited by Prof. Ram Nevatia to give a talk on research initiatives and new directions in Video Understanding, USC, LA, USA 17 August 2016.

François Brémond was invited by Prof. Jonathan Ventura to give a talk on People detection, at the SLDP 2016 workshop of AVSS, Colorado Springs, USA,23 August 2016.

François Brémond was invited by Prof. William Robson Schwartz,Department of Computer Science, Federal University of Minas Gerais to give a talk on Video Analytic, at Video Surveillance workshop in Belo Horizonte-Brazil, 03 October 2016.

François Brémond was invited by Prof. William Robson Schwartz to give a talk on People Tracking, at SIBGRAPI 2016, Sao Paulo-Brazil, 05 October 2016.

François Brémond was invited by Prof. Cosimo Distante, Consiglio Nazionale delle Ricerche to give a talk on Activity Recognition, at ACIVS 2016, Lecce, Italy, 26 October 2016.

François Brémond was invited by Sebastien Ambellouis (IFSTTAR) to give a talk on Activity Monitoring, at IEEE IPAS 2016,Hammamet, Tunisia,5-7 November 2016.

Carlos Fernando Crispim Junior was invited to give a talk at the 1st Inter-lalex seminar "Smart Systems", Besançon, France, November 23rd 2016.

Carlos Fernando Crispim Junior was invited to make a presentation at PSI-VISICS seminar at ESAT department in KU Leuven University,October 24th 2016.

Carlos Fernando Crispim Junior was invited to make a presentation at Machine Learning seminar at Computer Science department of KU Leuven University, October 17th 2016.

Carlos Fernando Crispim Junior was invited to give a talk at ISG 2016 - Seminar European FP7 project Dem@care: Automatic Video Analysis for Diagnosis and Care, Nice, France, October 29th 2016.

Carlos Fernando Crispim Junior was invited speaker at the internal seminar of LAAS-CNRS, Toulouse, France, July3rd-4th.

Carlos Fernando Crispim Junior was invited speaker at CPUEX seminar, LABRI-CNRS, Bordeaux, France, February 2016.

9.1.5. Scientific expertise

François Brémond was expert for EU European Reference Network for Critical Infrastructure Protection (ERNCIP) - Video Anlaytics and surveillance Group, at European Commission's Joint Research Centre in Brussels in July 2016.

François Brémond was expert for the Foundation Médéric Alzheimer, for the doctoral fellowship selection, September 2016.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master : Annie Ressouche, Safety in Middleware for Internet of Things, 10h, niveau (M2), Polytech Nice School of Nice University.

Jean-Paul Rigault is Full Professor of Computer Science at Polytech'Nice (University of Nice): courses on C++ (beginners and advanced), C, System Programming, Software Modeling.

9.2.2. Supervision

PhD in progress : Auriane Gros, Evaluation and Specific Management of Emotionnal Disturbances with Activity Recognition Systems for Alzheimer patient, Sept 2014, François Brémond.

PhD in progress : Minh Khue Phan Tran, Man-machine interaction for older adults with dementia, May 2013, François Brémond.

PhD in progress : Michal Koperski, Detecting critical human activities using RGB/RGBD cameras in home environment, François Brémond.

PhD in progress : Thi Lan Anh Nguyen, Complex Activity Recognition from 3D sensors, Dec 2014, François Brémond.

PhD in progress : Ines Sarray, Activity Recognition System Design, Oct 2015, Sabine Moisan.

PhD in progress : Farhood Negin, People Detection for Activity Recognition using RGB-Depth Sensors, Jan 2015, François Brémond.

PhD in progress : Ujjwal Ujjwal, Pedestrian Detection to Dynamically Populate the Map of a Crossroad, Sep 2016, François Brémond.

9.2.3. *Juries*

François Brémond was jury member of the following PhD theses:

PhD, Andrei Stoian, CNAM, Paris, 15 January 2016.

PhD, Romain Endelin, University of Montpellier, 2nd June 2016.

PhD, Jean-Charles Bricola, CMM, Mines ParisTech, Fontainebleau, 19 October 2016.

PhD, Salma Moujtahid, LIRIS-Equipe IMAGINE-INSA Lyon, 3 November 2016.

PhD, Marion Chevalier, Laboratoire d'Informatique de Paris 6, Thales Optronique S.A.S., Paris,2 December 2016.

9.3. Popularization

François Brémond was invited to give a talk at Conférence des métiers at International Lycée (CIV) in Sophia, January 2016.

François Brémond was interviewed by the agence Citizen Press February 2016.

François Brémond was invited to give a talk at the Artificial Intelligence Workshop Meeting Amadeus - Inria, June 2016.

François Brémond was invited to give a talk at la rencontre Inria Industrie Ed-Tech, 1 December 2016.

François Brémond has published an article in ERCIM news, December 2016.

<p style="text-align:center;color:red;font-weight:bold;">STEEP Project-Team</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Member of the Conference Program Committees

- Association for the Advancement of Artificial Intelligence (AAAI) 2016 Computational Sustainability and AI (S. Fenet)
- International Conference on Principles and Practices of Constraint Programming (CP) 2016 Computational Sustainability track (S. Fenet)
- CompSust@CP-2016 (the 22nd International Conference on Principles and Practice of Constraint Programming), Toulouse, France, September 2016 (E. Prados)
- Journées Scientifiques Inria – Inria Science Days (P. Sturm)
- German Conference on Pattern Recognition (P. Sturm)

10.1.1.2. Reviewer

- EVOSTAR 2016 (S. Fenet)

10.1.2. Invited Talks

- E. Prados has been invited by the Wimmics team to give a seminar at Inria Sophia-Antipolis (Conference title : "Comment réduire l'impact d'un éventuel effondrement ? Comment construire le monde d'après ?", Sophia-Antipolis, France, 10th of November, 2016).
- E. Prados gave a seminar at the Conseil Scientifique de l'AURG (Conference title : "Modèle TRANUS d'usage des sols et transport pour l'agglomération grenobloise", Grenoble, France, 6th of July, 2016).
- P. Sturm gave an invited seminar at the Czech Technical University (Prague, Czech Republic), on former work in computer vision.

10.1.3. Scientific Expertise

- P. Sturm: Expert for the European Eureka/Eurostars program and for the regional ARC6 program.

10.1.4. Research Administration

- P. Sturm is Deputy Scientific Director of Inria, in charge of domain "Perception, Cognition and Interaction".
- E. Prados and P. Sturm organized the Inria – FING partnership. The FING (Fondation Internet Nouvelle Génération) is a think tank working on socio-economic changes inspired by technology and its uses. In 2016, they organized two workshops in the framework of the project "Transition[2]" [http://www.transitions2.net/], see https://team.inria.fr/steep/fing/

10.2. Teaching - Supervision - Juries

10.2.1. Supervision

PhD: Jean-Yves Courtonne, Evaluation environnementale de territoires à travers l'analyse de filières - La comptabilité biophysique pour l'aide à la décision délibérative, Grenoble University, 28/06/2016, D. Dupré and P.Y. Longaretti

PhD: Laurent Gilquin, Echantillonnages Monte Carlo et quasi-Monte Carlo pour l'estimation des indices de Sobol'. Application à un modèle transport-urbanisme, Grenoble University, 17/10/2016, Elise Arnaud and C. Prieur

PhD in progress: Michela Bevione, Sustainability and territorial energy transition: coupling supply chains with LCA, 11/2016, N. Buclet and P.Y. Longaretti

PhD in progress: Thomas Capelle, Development of optimisation methods for land-use and transportation models, 10/2013, P. Sturm and A. Vidard

PhD in progress: Luciano Gervasoni, Modeling the dynamics of urban sprawl, 10/2015, S. Fenet and P. Sturm

PhD in progress: Julien Salotti, Spatio-temporal analysis of traffic data for smart mobility, 11/2014, S. Fenet, C. Solnon and N.-E. El Faouzi

PhD in progress: Lucas Foulon, Detection of anomalies in real-time ground–on board flows of the SNCF, 12/2016, S. Fenet, C. Rigotti and D. Jouvin

10.2.2. Juries

- P. Sturm was reviewer of the PhD thesis of Liming Yang, Ecole Centrale de Nantes.
- P. Sturm was reviewer of the PhD thesis of Jan Heller, Czech Technical University, Prague.

10.3. Popularization

STEEP team has organized a series of conferences entitled "Understanding and Acting" (six conferences in 2016). The conferences has been filmed, edited and posted on the video-sharing website, YouTube. A total of more than 500 people have attended to the conferences. The conferences received more than 2000 YouTube views (December 2016).
https://www.youtube.com/channel/UCJbcXCcOA63M8VMysAbmt_A
https://team.inria.fr/steep/les-conferences-debats-comprendre-et-agir/

Emmanuel Prados gave a "conférence-débat" at "Marie Reynoard" High school on "Sustainable development, territorial governance and democracy" (Villard-Bonnot, France, 16th of December, 2016).

Emmanuel Prados gave a conference at the "Café In" of Inria Sophia-Antipolis entitled "Comprendre les phénomènes d'effondrement de sociétés. Quel avenir pour la nôtre ?" (Sophia-Antipolis, France, 10th of November, 2016).

Emmanuel Prados has organized a workshop in collaboration with the EP SCOT Grenoble on the land-use and transport modelling and on its potential application to the follow up of the Grenoble' SCOT project (Grenoble, France, 14th of October, 2016). Representatives of all the main political and administrative authorities of Grenoble area attended to this workshop (Région Rhône-Alpes, Département of Isère, Grenoble-Alpes Métropole, AURG, municipalities communities of Grenoble employment catchment areas).

<p style="text-align:center; color:red">**STORM Team**</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Selection

9.1.1.1. Chair of Conference Program Committees

- Samuel Thibault was a Program Committee chair for EuroPar'16.

9.1.1.2. Member of the Conference Program Committees

- Samuel Thibault was a member of the Program Committee for Compas'16, HCW'16, MuCoCos'16, P^3MA'16
- Olivier Aumage was a member of the Program Committee for HUCAA 16'
- Raymond Namyst was a member of the Program Committees for Cluster'16, EuroPar'16 and SAC/MUSEPAT'16
- Denis Barthou was a Program Committee chair for UCHPC'16

9.1.1.3. Reviewer

The members of the team reviewed numerous papers for various international conferences such as IPDPS, Super-Computing, Euro-Par, ICPP.

9.1.2. Journal

The members of the team review papers from many high-level journals such as TPDS, CCPE, TACO, JPDC.

9.1.3. Invited Talks

- Samuel Thibault was invited to present StarPU advances at the "Scalable Task-based Programming Models" workshop of SIAM-PP 2016
- Samuel Thibault was invited to participate to the "What Do You Need to Know About Task-Based Programming for Future Systems?" panel of SIAM-PP 2016
- Samuel Thibault was invited to make a talk on StarPU at an meeting for the H2020 NLAFET project
- Samuel Thibault was then invited to make a talk at the CCDSC-2016 workshop
- Samuel Thibault was invited to make a talk at Jussieu for a APR seminar
- Terry Cojean was invited to present his work at the "Task-based Scientific, High Performance Computing on Top of Runtime Systems" workshop of SIAM-PP 2016
- Terry Cojean was invited to present his work by the research group of Prof. Benkner at the University of Vienna.
- Terry Cojean was invited to give a talk on StarPU at the RESPA workshop of Super-Computing 2016, details available in [2]
- Luka Stanisic was invited to present an effective methodology for reproducible research on dynamic task-based runtime systems at the "Task-based Scientific, High Performance Computing on Top of Runtime Systems" workshop of SIAM-PP 2016
- Luka Stanisic was invited to present advanced usage of Git at the "Reproducible Research" webinars
- Olivier Aumage was invited to present StarPU at the Parallel Programming Frameworks: Technologies, Performance and Applications track of SIAM-PP 2016 in Paris.
- Olivier Aumage was invited to present StarPU at CERFACS in Toulouse.

- Olivier Aumage was invited to present StarPU at the workshop Building a European/American Community for the Development of Dynamic Runtimes in Extreme-Scale Systems, as part of ISC'2016 in Frankfurt.

- Olivier Aumage and Samuel Thibault presented a tutorial session on runtime systems and StarPU as part of the Prace Advanced Training Center (PATC) program in Paris, in partnership with La Maison de la simulation.

- Olivier Aumage was invited to present StarPU by the research group of Prof. Benkner at the university of Vienna.

- Olivier Aumage was invited to give a training session on advanced parallel programming models for HPC platforms as part of the EoCoE European Center of Excellence face-to-face meeting in Rome

- Raymond Namyst was invited to give a talk about Heterogeneous Programming at the RoMoL Workshop, Barcelona, March 2016

- Raymond Namyst was invited to give a talk about StarPU at the CEA 2016 HPC Worshop, Cargèse

9.2. Teaching - Supervision - Juries

9.2.1. Teaching administration

Samuel Thibault is responsible for the computer science topic of the first university semester.

Samuel Thibault is responsible for the creation of the new Licence Pro ADSILLH (Administrateur et Développeur de Systèmes Informatiques sous Licences Libres et Hybrides)

Denis Barthou is responsible for the cyber-security, systems and networks 3rd year of the ENSEIRB-MATMECA engineering school.

Raymond Namyst is Vice-chair of the Computer Science Training Department of University of Bordeaux

9.2.2. Teaching

Licence : Marie-Christine Counilh, Introduction to Computer Science, 64HeTD, L1, University of Bordeaux

Licence : Marie-Christine Counilh, Introduction to C Programming, 52HeTD, L1, University of Bordeaux

Licence : Samuel Thibault, Introduction to Computer Science, 32HeTD, L1, University of Bordeaux

Licence : Samuel Thibault, Networking, 51HeTD, L3, University of Bordeaux

Licence : Samuel Thibault, Computer Architecture, 77HeTD, L2, University of Bordeaux

Licence : Samuel Thibault, Tutored project, 10HeTD, L3, University of Bordeaux

Licence : Pierre-André Wacrenier, Introduction to Computer Science, 64HeTD, L1, University of Bordeaux

Licence : Terry Cojean, Networking, 40HeTD, L1, IUT Bordeaux

Licence : Terry Cojean, Object Oriented Programming, 24HeTD, L3, IUT Bordeaux

Master : Luka Stanisic, Operating Systems, 22HeTD, M1, University of Bordeaux

Master : Samuel Thibault, Operating Systems, 22HeTD, M1, University of Bordeaux

Master : Marie-Christine Counilh, Object Oriented Programming, 30HeTD, M1, University of Bordeaux

Master : Raymond Namyst, Operating Systems, M1, University of Bordeaux

Master : Pierre-André Wacrenier and Raymond Namyst, Parallel Programming, M1, University of Bordeaux

Engineering School: Samuel Thibault, Information System Security, 13HeTD, M1, ENSEIRB-MATMECA/IPB

Engineering School: Olivier Aumage, Languages and Supports for Parallelism, 14HeTD, M2, ENSEIRB-MATMECA/IPB joint with University of Bordeaux

Engineering School: Olivier Aumage, High Performance Communication Libraries, 20HeTD, M2, ENSEIRB-MATMECA/IPB joint with University of Bordeaux

Engineering School: Denis Barthou, Compilation, Architecture, Architecture for HPC, real-time 3D at ENSEIRB-MATMECA (around 200HeTD), from L3 to M2.

9.2.3. Supervision

- PhD: Gregory Vaumourin, Hybrid Memory Hierarchy and Dynamic Data Handling in Embedded Parallel Architectures, University of Bordeaux, defended in Nov 2016, advisors: Denis Barthou, Alexandre Guerre (CEA), Thomas Dombek (CEA)

- PhD: Marc Sergent, Passage à l'échelle d'un support d'exécution à base de tâches pour l'algèbre linéaire dense, University of Bordeaux, defended in Dec 2016, advisors: Raymond Namyst, Olivier Aumage, Samuel Thibault, David Goudin (CEA)

- PhD in progress: Suraj Kumar, Task-based programming paradigms and scheduling, 2013/12, Emmanuel Agullo, Olivier Beaumont, Samuel Thibault

- PhD in progress: Terry cojean, Programming heterogeneous machines using moldable tasks, 2014/09, Pierre-André Wacrenier, Abdou Guermouche, Raymond Namyst

- PhD in progress: Christopher Haine, Estimating efficiency and automatic restructuration of data layout, 2014/01, Olivier Aumage, Denis Barthou

- PhD in progress: Arthur Loussert, Ressource (co)Allocation in HPC systems, 2016/10, Raymond Namyst, Marc Perache (CEA), Benoît Welterlen (ATOS)

- PhD in progress: Raphaël Prat, Load Balancing in Molecular Dynamics, 2016/10, Raymond Namyst, Laurent Colombet (CEA)

9.2.4. Juries

Denis Barthou has participated to the following PhD juries

- Abdul Wahid MEMON, U. Versailles St Quentin, Jun 2016 (reviewer)
- Abderrahmane Nassim HALLI, U. of Grenoble, Sep 2016 (reviewer)
- Milan KABAC, U. Bordeaux, Oct 2016 (president)
- Nans ODRY, U. Aix Marseille, Oct 2016 (reviewer)

Raymond Namyst has participated to the following PhD juries

- David Beniamine, U. Grenoble, Dec 2016 (reviewer)
- Alban Rousset, U. Besançon, Oct 2016 (reviewer)
- Naweiluo Zhou, U. Grenoble, Oct 2016 (reviewer)
- Béranger Bramas, U. Bordeaux, Feb 2016 (president)
- Oleg Iegorov, U. Grenoble, Apr 2016 (president)

9.3. Popularization

- Samuel Thibault made a Inria talk about « Building Debian/Ubuntu packages to make it easy for users to install your software »

<h1 style="text-align: center; color: red;">SUMO Project-Team</h1>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

Hervé Marchand is member of the IFAC Technical Committees (TC 1.3 on Discrete Event and Hybrid Systems) since 2005. He is member of the steering committee of MSR (Modélisation de systèmes réactifs).

Thierry Jéron and Nicolas Markey are members of the steering committee of the european summer school MOVEP (Modélisation et Vérification des Systèmes Parallèles). Nicolas Markey was co-chair of the edition that took place in Genova in July 2016.

Thierry Jéron is member of the steering committee of FMF 2017 (Formal Methods Forum) held in Toulouse in January 2017.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

Éric Badouel was Chair of conference program committee of CARI 2016.

10.1.2.2. Member of the Conference Program Committees

Éric Badouel was a member of the programme committee of ATAED 2016.

Nathalie Bertrand served on the Program Committees of the international conferences STACS'16, TACAS'16, Concur'16 and QEST'16.

Loïc Hélouët was member of the program committees of ACSD 2016 (Approaches of Concurrency for Systems Design) and SAM 2016 (System Analysis and Modeling).

Thierry Jéron served on the Program Committees of the following international conferences: ICTSS'16, RV'16, SAC-SVT 2017.

10.1.2.3. Reviewer

Nicolas Markey was reviewer for STACS 2017 and AAAI 2017.

Éric Badouel was reviewer for LICS 2016, VeCos 2016, CARI 2016, TACAS 2016, and ATAED 2016.

Loïc Hélouët was reviewer for SAM'2016, ACSD'2016, DNS'2016, STACS'2016, and ICTAC'2016

Thierry Jéron was reviewer for IEEE CASE & ISAM, CONCUR'16.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Éric Badouel is co-Editor-in-Chief of ARIMA Journal (https://arima.episciences.org/).

10.1.3.2. Reviewer - Reviewing Activities

Éric Fabre was reviewer for IEEE TAC, Automatica, JDEDS, CDC, and JONS.

Hervé Marchand was reviewer for JDEDS and Automatica.

Nathalie Bertrand was reviewer for JACM and JCSS.

Nicolas Markey was reviewer for FMSD and TCS.

Éric Badouel was reviewer for Fundamenta Informaticae and Mathematical review-AMS (MathSciNet).

Loïc Hélouët was reviewer for FAOC, TCS, TECS and Fundamenta Informaticae. He also served as reviewer for Mathematical review-AMS (MathSciNet).

Thierry Jéron was reviewer for FAOC and TECS.

10.1.4. Invited Talks

Nathalie Bertrand was invited speaker at MFPS international conference, and gave a lecture at MOVEP summer school.

Éric Badouel was invited speaker at VeCos 2016.

10.1.5. Scientific Expertise

Thierry Jéron served for the expertise of ANR and ASTRID (ANR/DGA) projects.

10.1.6. Research Administration

Éric Fabre is co-director, with Olivier Audouin, of the joint research lab of Nokia Bel Labs and Inria. He is member of the scientific board of the joint lab of Alstom Transport and Inria and member of the Bureau of the Scientific Board of Inria Rennes Bretagne Atlantique.

Hervé Marchand is chairman of the CUMI in Rennes.

Nathalie Bertrand is a nominated member of CNU27 (Conseil National des Universités, section 27).

Éric Badouel is co-director with Moussa Lo (UGB, Saint-Louis du Sénégal) of LIRIMA, the Inria International Lab for Africa. He is scientific officer for the African and Middle-East region at Inria European and International Partnerships Department and member of the executive board of GIS SARIMA.

Loïc Hélouët, Nathalie Bertrand and Ocan Sankur organize the weekly seminar 68NQRT at IRISA (40 talks each year).

Loïc Hélouët was elected representant of rank B researchers in the *Comité de Centre* of Inria Rennes. He is also part of the bureau of the *Comité de Centre*. He leads the P22 projects with Alstom transports and is responsible for Workpackage 2 of the Headwork ANR.

Thierry Jéron is Member Committee Substitute for COST IC1402 ARVI (Runtime Verification beyond Monitoring). He is member of the IFIP Working Group 10.2 on Embedded Systems. He is member of the COS Prospective of Irisa Rennes and member of the *Comité de Centre* of Inria Rennes. Since 2016 he is *référent chercheur* for the Inria Rennes research center.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Éric Fabre

> Master: "ASR: introduction to distributed systems and algorithms," 12h (eq. TD), M2, Univ. Rennes 1, France.
> Master: "Information theory", 30h (eq. TD), M1, Ecole Normale Superieure de Rennes, France.

Nathalie Bertrand

> Licence: "Algorithmics", 18h (eq. TD), L3, Univ. Rennes 1, France.
> Master: "Prépa. Agreg.", 40h (eq. TD), Ecole Normale Superieure de Rennes, France.

Loïc Hélouët

> Licence: JAVA and algorithmics, L2, 40h, INSA de Renne, France.
> Licence : practical studies (development of a small project), 8h, INSA de Renne, France.
> Master: "Prépa. Agreg.", 8h (eq. TD)+ mock exams, Ecole Normale Superieure de Rennes, France.

10.2.2. Supervision

- PhD in progress: Engel Lefaucheux, *Controlling information in Probabilistic Systems, Sept. 2015, Nathalie Bertrand, Serge Haddad (LSV, Cachan).*
- *PhD in progress: Karim Kecir,* Régulation et robustesse des systèmes ferroviaires urbains, May 2018, Loïc Hélouët and Pierre Dersin (Alstom).
- PhD in progress: The Anh Pham, *Dynamic Formal Verification of High Performance Runtimes and Applications, Nov. 2016, Thierry Jéron, Martin Quinson (Myriads, Inria Rennes).*
- *PhD in progress: Hugo Bazille,* Diagnosability and opacity analysis of large scale systems, Oct. 2016, Blaise Genest, Éric Fabre.
- PhD in progress: Sihem Cherrared, *Fault management in multi-tenant programmable networks, Oct. 2016, Éric Fabre, Gregor Goessler (Inria Grenoble), Sofiane Imadali (Orange Labs).*

10.2.3. Juries

Éric Fabre was reviewer in the PhD defense committee of Yoann Geoffroy, *A general framework for causality analysis based on traces, for composite systems*, Dec. 2016, Univ. Grenoble Alpes. He was also jury member for the Habilitation defense of Blaise Genest, *Taming Concurrency Using Representatives, March 2016, Univ. Rennes 1.*

Hervé Marchand was member of the PhD defences of Hassan Ibrahim, Analyse à base de SAT de la diagnosticabilité et de la prédictabilité des systèmes à événements discrets centralisés et distribués (Université Paris-Sud, Gif-sur-Yvette), December 2016 and of Toussaint Tigori, *Méthodes de génération d'exécutifs temps réel (Ecole centrale de Nantes, Nantes), in November 2016.*

Nicolas Markey was reviewer in the PhD defense committee of Thanh-Tung Tran (LaBRI; supervised by Igor Walukiewicz and Frédéric Herbreteau).

10.3. Popularization

Nathalie Bertrand gave an introductory talk on graph theory and its use to solve practical problems, to grad school students following the ISN (Introduction aux Sciences du Numérique) courses.

<p style="text-align:center; color:red">TACOMA Team</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- PC member for Ehpwas 2016: 4th IEEE Int. Workshop on E-Health , 2016, F. Weis
- PC member of The 83th IEEE Vehicular Technology Conference, 15-18 May 2016, Nanjing, China, JM. Bonnin
- PC member of EAI International Conference on Mobile Medical Multimedia Technologies, Applications and Services, 14-15 June 2016, Budapest, Hungary, JM. Bonnin
- PC member of 13th African Conference on Research in Computer Science and Applied Mathematics, 11 - 14 October 2016, Tunis, Tunisia, JM. Bonnin
- PC member of The 84th IEEE Vehicular Technology Conference, 18-21 September 2016, Montreal, Canada, JM. Bonnin

9.1.2. Scientific Events Selection

9.1.2.1. Reviewer

- Mobile Networks and Applications, JM. Bonnin
- IEEE transactions on Mobile Computing, JM. Bonnin
- Simulation Modeling Practice and Theory, JM. Bonnin
- Computer Standards & Interfaces, an international journal on Engineering Science and Technology, JM. Bonnin

9.1.3. Invited Talks

- Keynote speech at the 6th NGNS international conferences, 17/12/2016, Rabat, Morocco, JM. Bonnin
- Invited talk at the Drive for All seminary, 31/08/2016, Paris, France, JM. Bonnin
- RFIDay Event, June 2016, Vitré. Talk and demos, P. Couderc
- Invited talk at the BMW Summer School, "New Business, New Mobility - YoGoKo case study", July 2016, Tegernsee, Bavaria, Germany, JM. Bonnin
- SESAME school of Tunis, Nov 2016, Tunis, Tunisia, JM. Bonnin
- Invited Talk at Smart Systems inter Labex Symposium, November 2016, Besançon, P. Couderc
- ENSAM school of Meknes, Dec 2016, Meknes, Morocco, JM. Bonnin

9.1.4. Leadership within the Scientific Community

- Jean-Marie Bonnin is member of the scientific council of the GIS ITS
- Jean-Marie Bonnin is member of the scientific council the Id4Car cluster
- Jean-Marie Bonnin is an elected member of the Scientific Council of IMT

9.1.5. Scientific Expertise

- Evaluation committee for the Belgium government, JM. Bonnin
- Expert for ANR, F. Weis and JM Bonnin
- Expert for CSV board of "Pôle Images et Réseaux", P. Couderc

9.1.6. Research Administration

- Head of the Networks, Telecommunication and service department at IRISA, JM. Bonnin

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

L2/L3: network computing (lectures, tutorials, labs), 250 hours, F. Weis, University Rennes 1

Master: Wireless LANs, F. Weis, 20 hours, M2, Telecom Bretagne

Master: Supervision of a Master 1 project related to the smart building (in collaboration with Myriads), 48 hours, P. Couderc, University Rennes 1

Master 2: Pervasive computing introduction course, Paul Couderc, 4 hours, University Rennes 1

Master 1: Network programming (lectures, tutorial, labs), 78 hours, Y. Maurel

L3/M2: network communications protocol for building automation (lectures, labs), 80 hours, Y. Maurel

Master 2: Software engineering (lectures, tutorial, labs), 82 hours, Y. Maurel

9.2.2. Supervision

PhD in progress: Adrien Capaine, Vers une plate-forme de LED connectées comme vecteur de services contextuels dans le cadre des bâtiments intelligents, 01/05/15, Frédéric Weis and Yoann Maurel

PhD in progress: Zaineb Lioune, Une Architecture pour des Services e-Santé évolutifs dans le cadre des Maisons Intelligentes, 01/09/14, Frédéric Weis, Tayeb Lemlouna and Philippe Roose

PhD in progress: Indra Ngurah, Protocoles de routage pour l'ITS, 01/05/16, Jean-Marie Bonnin

PhD in progress: Christophe Couturier, Exploitation de mécanismes EDGE pour l'ITS, 01/11/16, Jean-Marie Bonnin

PhD in progress: Alexandre Rio, Modélisation des activités de site consommateur d'énergie, 01/10/16, Olivier Barais and Yoann Maurel

9.2.3. Juries

Clément DUHART, "Toward Organic Ambient Intelligences ? EMMA", University du Havre, F. Weis, PhD referee

Minh Huong NGUYEN, "Contribution to Intelligent Transportations Systems: Security of Safety applications in Vehicular Ad hoc Networks", JM Bonnin, PhD referee

Matthieu KANJ, "Intelligent Supervision of Flexible Optical Networks", JM Bonnin, Président

9.3. Popularization

- Invited talk at the Telecom ParisTalks on "De la voiture connectée à la voiture autonome", "Le véhicule autonome, un véhicule ultra-communicant", March 2016, Paris, France, JM. Bonnin
- Invited talk at the A3C7 public event: "L?automobile intelligente et communicante: Carminat, GPS et demain?", "L?automobile communicante dans la ville", June 2016, Cesson-Sévigné, France, JM. Bonnin
- Invited talk at the workshop "Atelier Cybercriminalité dans les transports - Véhicule autonome et transport connecté : quelles stratégies de fiabilité et de sécurité ?","Sécurité des Communications pour les ITS", June 2016, Angers, France, JM. Bonnin
- "Les véhicules autonomes seront communicants?, Revue TELECOM 182, Oct 2016, JM. Bonnin
- Special issue TPC for Revue TEC mobilité intelligente : "Routes & Véhicules : Quelles Connexions ?", Nov 2016, JM. Bonnin

- "Standards et ITS : vers un écosystème ouvert ?", Revue TEC Mobilité intelligente, Nov 2016, JM. Bonnin

- "Quand les modes de vie actuels façonnent l'habitat du futur", Site Internet Batiactu, Jan 2016, http://www.batiactu.com/edito/quand-modes-vie-actuels-faconnent-habitat-futur-43438.php

- Invited talk "Le logement évolutif, Michele Dominici", Matin de l'aura angevine, Jan 2016, Angers

- Cardinal Edifice imagine l'habitat de demain, Communiqué de presse de Cardinal, relayé sur le site Batinfo, Jan 2016. http://batinfo.com/actualite/cardinal-edifice-imagine-lhabitat-de-demain_4339

- Invited talk "Ville et Habitat intelligent : des innovations au service du vivre-ensemble ?", Michele Dominici, Feb 2016, La Friche la Belle de Mai, Marseille

- "Place au logement caméléon - freemium" - Métiers. LeMoniteur, 1 mars 2016. http://www.lemoniteur.fr/articles/place-au-logement-cameleon-31516795

- Invited talk "L'habitat d'hier, d'aujourd'hui et de demain, intervention de Michele Dominici", Apr 2016 dans le cadre du Printemps du Développement Durable, Langueux

- Ecole d'été "Ecologie et biens communs", Université de Bretagne Occidentale, Sept 2016, Michele Dominici

<div align="center">

TADAAM Team

</div>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Guillaume AUPY was the Technical Program vice-chair of SC'17.

10.1.1.2. Member of the steering committee

Emmanuel JEANNOT is member of the steering committee of Euro-Par and the Cluster international conference.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

Guillaume AUPY was the co-chair of the Parallel and Distributed Algorithms track of ICA3PP'17.

Emmanuel JEANNOT was the Program chair of the Heterogeneity in Computing Workshop (HCW'17).

Emmanuel JEANNOT was the Program chair of the track parallelism of COMPAS 2016.

10.1.2.2. Member of the Conference Program Committees

Alexandre DENIS was a member of the program committee of Compas'16 and CCGrid 2017.

Brice GOGLIN was a member of the program committee of CCGrid 2016, Cluster 2016, EuroMPI 2017, HotInterconnect 24 and of the Exacomm workshop.

Emmanuel JEANNOT was a member of the program committee of IPDPS 2017, CCGRID 2017,

Guillaume MERCIER was a member of the program committee of EuroMPI 2016 and EuroMPI 2017.

10.1.2.3. Reviewer

Cyril BORDAGE was reviewer for Cluster 2016.

Alexandre DENIS was a reviewer for Cluster 2016.

Brice GOGLIN was a reviewer for IEEE Micro.

Farouk MANSOURI was a reviewer for Cluster 2016.

Guillaume MERCIER was a reviewer for IPDPS 2017.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Emmanuel JEANNOT is associate editor of the International Journal of Parallel, Emergent & Distibuted Systems (IJPEDS).

Guillaume MERCIER is editor of the EuroMPI 2016 Special issue of the Journal of High Performance Computing Applications (IJHPCA).

10.1.3.2. Reviewer - Reviewing Activities

Guillaume AUPY was a reviewer for EURASIP Journal of Embedded Systems, Cluster Computing and Transactions on Parallel and Distributed Systems (TPDS).

Alexandre DENIS was a reviewer for the Journal of Parallel and Distributed Computing (JPDC).

Emmanuel JEANNOT was reviewer of IEEE TPDS.

Guillaume MERCIER was a reviewer for the EuroMPI 2016 Special Issue of the Parallel Computing journal.

François PELLEGRINI was a reviewer for SIAM Journal on Scientific Computing (SISC).

10.1.4. Invited Talks

Brice GOGLIN gave a talk about managing hardware locality in HPC during an AMD Tech Talk at AMD Research (Austin, TX).

Emmanuel JEANNOT gave a talk about topology-aware data management at the Workshop on Clusters, Clouds, and Data for Scientific Computing (CCDSC 2016).

Emmanuel JEANNOT gave a talk about metrics and models for process placement at the Third Workshop on Programming Abstractions for Data Locality (PADAL'16).

François PELLEGRINI delivered a keynote speech on freedom in the digital age, during the annual congress of *Société informatique de France*, Strasbourg.

François PELLEGRINI gave a talk on software law at Université de Nice Sophia-Antipolis.

François PELLEGRINI participated in a round-table on *Big data, compliance and personal data* during the JInov meeting, Paris.

François PELLEGRINI gave a talk on *Free software, a tool for sustainable development in countries of the Souths* law at the *Colloque international sur le logiciel libre dans les pays du Sud*, organized by Université Moulay Ismaïl & École nationale supérieure d'arts et métiers de Meknès.

François PELLEGRINI delivered a talk on freedom in the digital age, during the Defense Security Cyber summer school organized by Université de Bordeaux.

François PELLEGRINI delivered a talk on freedom and the ethics of informatics during the summer school for young researchers on the ethics of informatics, organized by CERNA and Allistene in Arcachon.

François PELLEGRINI participated in a round-table on the legal crtieria for software originality in the colloquium on protection and infringement of software : the notion of digital common pool, organized by AFDIT at Conseil national des barreaux, Paris.

François PELLEGRINI delivered a talk on the issues of rights on immaterial goods for digital development, during the international seminal of training for trainers on internet and information systems governance, organised by ITICC with the support of Organisation Internationale de la Francophonie and ARCEP-BF, in Ouagadougou.

François PELLEGRINI delivered the opening conference on the legal and economic bases the digital economy, for a training seminar for Members of the Parliament of Benin on the issues of laws on digital matters, organized by Organisation Internationale de la Francophonie at Grand-Popo.

François PELLEGRINI gave a talk on the operational solutions to digital security issues, during the 4th NGO forum organized by the French embassy in Moscow.

François PELLEGRINI delivered a keynote speech on the governance of open and free innovation, at the invitation of the French ministry of Foreign affairs, during the workshop on open innovation which took place within the French-German inter-governmental conference on digital issues, in Berlin.

Adèle VILLIERMET has been invited to give a talk at the summer school of GDR RO.

10.1.5. Scientific Expertise

Emmanuel JEANNOT was member of the hiring committee for an assistant professor position in informatics at Université de Bordeaux.

Brice GOGLIN was also a member of the hiring committee for Inria Bordeaux - Sud-Ouest research scientists.

François PELLEGRINI was a member of the hiring committee for a full professor position in informatics at Université de Nice Sophia-Antipolis (PR27-327). He also reviewed a PR1 promotion file at Université de Bordeaux.

10.1.6. Standardization Activities

TADAAM attends the MPI Forum meetings on behalf of Inria (where the MPI standard for communication in parallel applications is developed and maintained).

A proposal in currently under early discussion for submission to the forum 7.15 .

10.1.7. Tutorials

Brice GOGLIN gave a tutorial about managing hardware affinities on hierarchical platforms with HWLOC during a PRACE Advanced Training Center session.

François PELLEGRINI gave a "hands-on" tutorial on SCOTCH during a meeting of the European projet COLOC.

10.1.8. Research Administration

Emmanuel JEANNOT is member of the scientific committee of the Labex IRMIA (Universite´ de Strasbourg).

Emmanuel JEANNOT is the head of the young researcher commission of Inria Bordeaux Sud-Ouest in charge of supervising the hiring of the PhDs and post-doc of the center.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Members of the TADAAM project gave hundreds of hours of teaching at Université de Bordeaux and the Bordeaux INP engineering school, covering a wide range of topics from basic use of computers and C programming to advanced topics such as computer architecture, operating systems, parallel programming and high-performance runtime systems, as well as software law.

10.2.2. Supervision

PhD in progress: Remi Barat, multi-criteria graph partitioning, started in 2014. Advisor: François Pellegrini.

PhD in progress: Raphaël Blanchard, parallelization and data distribution of discontinuous Galerkin methods for complex flow simulations, started in 2013. Advisor: François Pellegrini.

PhD in progress: Nicolas Denoyelle, advanced memory hierarchies and new topologies, started in 2015. Advisor: Brice Goglin and Emmanuel Jeannot.

PhD in progress: Benjamin Lorendeau, new programming models and optimization of Code Saturn, started in 2015. Advisor: Yvan Fournier and Emmanuel Jeannot.

PhD in progress: Hugo Taboada, communication progression in runtime systems, started in 2015. Advisor: Alexandre Denis and Emmanuel Jeannot.

PhD in progress: Adèle Villiermet, topology-aware resource management, started in 2014. Advisor: Emmanuel Jeannot and Guillaume Mercier.

PhD stopped: Romain Prou, communication management based on remote memory access, student resigned in october 2016. Advisor: Alexandre Denis and Emmanuel Jeannot.

10.2.3. Juries

Brice GOGLIN was member of the PhD defense committee of:

- Mohamed Lamine Karaoui (Université Pierre et Marie Curie, Reviewer).

Emmanuel JEANNOT was member of the PhD defense committee of:

- Loïc Thiébault (Université de Versailles Saint-Quentin, Reviewer).

François PELLEGRINI was member of the PhD defense committee of:

- Karl-Eduard Berger (Université de Versailles Saint-Quentin);
- Alessandro Fanfarillo (Università degli Studi di Roma Tor Vergata, Reviewer);
- Thomas Hume, Université de Bordeaux;
- Sébastien Morais (Université Évry Val d'Essonne, Reviewer).

10.3. Popularization

Brice GOGLIN is in charge of the diffusion of the scientific culture for the Inria Research Center of Bordeaux. He organized several popularization activities in the center. He also gave several talks about computer architecture, high performance computing, and research careers to general public audience, school students, teachers, or even to non-expert Inria colleagues.

Brice GOGLIN was involved in the design of the section about fondamentals of computer science in the 2017 massive open online course that will help teachers of the new ICN section in schools (*Informatique et Création Numérique*). It was filmed for 10 video sequences (about an hour in total).

François PELLEGRINI was filmed during a 3-hour conference on author's rights, in the context of the MAPI'Days, to serve as an on-line training for personnel and students of Université de Bordeaux (https://fad.u-bordeaux.fr/course/view.php?id=740).

François PELLEGRINI is the author of an opinion piece on digital sovereignty in newspaper Le Monde (http://www.lemonde.fr/idees/article/2016/06/24/la-souverainete-numerique-passe-par-le-logiciel-libre_4957781_3232.html).

François PELLEGRINI is the co-author of a booklet on free/libre software licenses edited by Pôle Systematic Paris Région & Pôle Aquinetic, which is now in its second edition (http://systematic-paris-region.org/sites/default/files/content/page/attachments/LivretBleu_Juridique_GT-LogicielLibre_Systematic_Mai2016_web.pdf).

In the context of the decree authorizing the TES (*Titres Électroniques Sécurisés*) file, François PELLEGRINI published a set of three blog posts (starting with http://www.pellegrini.cc/2016/11/la-biometrie-des-honnetes-gens/), which have been cited and linked by several French newspapers (Libération, Mediapart, NextInpact). He also participated in a debate on the same subject, organised by the Ligue des droits de l'Homme de Gironde (http://ldh-gironde.org/jeudi-15-decembre-2016-a-18h30-rencontre-debat-autour-du-mega-fichier-tes/).

François PELLEGRINI delivered a talk on *Freedom and the ethics of informatics* during a seminar on *Technologies, ethics and cognition* organized by the bouddhist group Dhagpo Bordeaux, in partnership with Cap Sciences and Université de Bordeaux (http://www.dhagpo-bordeaux.org/seminaire-technologies-ethique-cognition/).

François PELLEGRINI was filmed, during an interview on *Innovation and free/libre licenses*, for the *ULab Innov+* MOOC.

<p style="text-align:center;color:red;font-weight:bold;">TAMIS Team</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- Axel Legay has been the general chair for the 11th International Conference on Risks and Security of Internet and Systems

10.1.1.2. Member of Organizing Committees

- Axel Legay has been organizing the ICT-Energy Science Conference 2016.

10.1.2. Scientific Events Selection

10.1.2.1. Member of Conference Steering Committees

- Olivier Zendra is a founder and a member of the Steering Committee of ICOOOLPS (International Workshop on Implementation, Compilation, Optimization of OO Languages, Programs and Systems)

10.1.2.2. Chair of Conference Program Committees

- Axel Legay has been the chair for the 14'International Symposium on Automated Technology for Verification and Analysis

10.1.2.3. Member of Conference Program Committees

- Axel Legay has been PC member for ASE, MEMOCODE, FASE, RV, SPLC, FORMATS, FORMALIZE, SETTA,
- Jean-Louis Lanet has been PC member of Cardis 2016, 15th Smart Card Research and Advanced Application Conference, Crisis 2016 The Eleventh International Conference on Risks and Security of Internet and Systems CRiSIS 2016, GraMSec'16, The Third International Workshop on Graphical Models for Security, June 27th Lisbon, Portugal Ressi 2016, Rendez-Vous de la Recherche et de l'Enseignement de la Sécurité des Systèmes d'Information, Toulouse, France, Afadl2016, 15èmes Journées Francophones Internationales sur les Approches Formelles dans l'Assistance au Développement de Logiciels.
- Olivier Zendra has been PC member of PEC 2016 (International Conference on Pervasive and Embedded Computing)

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Axel Legay is a funder and member of the editorial board of "Foundations for Mastering Changes" journal.

10.1.3.2. Reviewer - Reviewing Activities

- Axel Legay has been reviewer for TCS, TSE, Information and Computation.

10.1.4. Invited Talks

- Axel Legay has been an invited speaker for the 10th International Workshop on Reachability Problems.
- Axel Legay has been an invited speaker for the ICT-Energy Science Conference 2016.
- The Wheel of Fault Injection, J.-L Lanet, Workshop Sertif, Grenoble, October 2016.

- Christian Grothoff. "Enabling Secure Web Payments with GNU Taler". Keynote at SPACE 2016 (December).

- Christian Grothoff. "Anonymous Payment Systems" at MAPPING Second General Assembly, Prague, 2016.

- Christian Grothoff. "Netzwerksicherheit: Probleme und Lösungsansätze" at NPO Kongress, Wien, 2016.

- Christian Grothoff. "The GNU Name System: A Public Key Infrastructure for Social Movements in the Age of Universal Surveillance" at Johns Hopkins University, Baltimore, USA, 2016.

- Christian Grothoff. "GNU Taler" at the Free Software Foundation Fellowship Meeting, Düsseldorf, 2016.

- Christian Grothoff. "The GNU Name System: A clean-slate solution to the DNS security and privacy nightmare" at Journée du Conseil scientifique de l'Afnic, Paris, 2016.

- Christian Grothoff. "GNU Taler: A privacy-preserving online payment system for libre society" at CubaConf, Havana, 2016.

- Jeffrey Burdges. "GNU Taler" at the Internet Freedom Festival, 2016.

- Jeffrey Burdges. Preliminary report "Xolotl A compact mixnet format with stronger forward secrecy and hybrid anonymity" at the GNU Hacker Meeting, 2016.

- Florian Dold presented "GNU Taler – Privacy preserving payments for the web" at the GNU Hacker Meeting, 2016.

- Jeffrey Burdges. Panel on "Privacy-preserving decentralization: what challenges are lying ahead?" at the ECRYPT 2016 Workshop on Strategic Research Challenges for Privacy Technologies.

- Christian Grothoff. Panel on "Innovation, Complexity, Risk and Trust" at MAPPING Second General Assembly, Prague, 2016.

10.1.5. *Scientific Expertise*

- Axel Legay is an expert for the Wallonie Government.

- Axel Legay is a member of Inria's evaluation committee. He participated to the CR2 and CR1 juries for Lille Center.

- Axel Legay has been in the jury for the chair on cyber security at CentralSupelec.

- Jeffrey Burdges, Christian Grothoff, and Florian Dold have been involved in the W3C Payments Working Group, primarily contributing security and privacy comments on their evolving standard.

- Olivier Zendra is a CIR expert for the MENESR.

- Olivier Zendra is a member of Inria's evaluation committee. He participated to the CR2 jury for Grenoble Center, to the national CR1 promotion jury, and to the workgroup on the creation of the PACAP team of Inria Rennes.

- Olivier Zendra is a member of the editorial board and co-author of the "HiPEAC Vision" [69]

10.1.6. *Research Administration*

- Axel Legay is a member of Inria's evaluation committee.

- Axel Legay is the Representative for non-permanent staff committees (in charge of postdocs).

- Olivier Zendra is a member of Inria's evaluation committee.

- Olivier Zendra was a member of Inria's Parity and Equal Opportunities committee.

- Olivier Zendra is a member of Inria's worksgroup on Inria's social barometer.

- Olivier Zendra was a member of Inria's CNHSCT.

- Olivier Zendra was Head of Inria Nancy's IES Committee (formerly IST).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- Master : Axel Legay, Introduction au Model Checking, 36, M2, Université de Bretagne Sud, France
- Master : Axel Legay, Introduction à l'analyse de risques, M2, Université de Bretagne Sud, France

10.2.2. Supervision

- PhD : Aymerick Savary, De la génération de suites de test à partir de modèles formels, University of Sherbrook and University of Limoges, 30th June 2016, Marc Frappier, Jean-Louis Lanet
- PhD : Tiana Razafindralambo, Attaques combinées sur appareil mobiles, University of Limoges, November 2016, Christophe Clavier, Jean-Louis Lanet
- PhD : Neal Walfield, Location prediction for context-aware applications, Johns Hopkins, 4th October 2016, Christian Grothoff
- PhD in progress : Kevin Bukasa, Démarrage sécurisé, 2015, Jean-Louis Lanet and Axel Legay
- PhD in progress : Mounir Chadli (Rennes 1), On Scheduling and SMC, December 2014, Axel Legay and Saddek Bensalem.
- PhD in progress : Olivier Descourbe, On Code Obfuscation, October 2016, Axel Legay and Fabrizio Biondi.
- PhD in progress : Mike Enescu, On Symbolic Execution for Malware Detection, October 2016, Axel Legay and Flavio Oquendo and Fabrizio Biondi.
- PhD in progress : Alexandre Gonsalvez, On Obfuscation via crypto primitives, April 2016, Axel Legay and Caroline Fontaine.
- PhD in progress : Nisrine Jafri (Rennes1), On fault Injection detection with MC of Binary code, December 2015, Axel Legay and Jean-Louis Lanet.
- PhD in progress : Razika Lounas, Validation des spécifications formelles de la mise à jour dynamique des applications Java Card, 2010, Mohamed Mezghiche and Jean-Louis Lanet
- PhD in progress : Aurélien Palisse, Observabilité de codes hostiles, 2015, Jean-Louis Lanet
- PhD in progress : Aurélien Trulla, Caractérisation de malware Android par suivi de flux d'information et nouvelles techniques d'évasion, 2016, Valerie Viet Triem Tong and Jean-Louis Lanet
- PhD in progress : Tristan Ninet (Rennes 1), Vérification formelle d'une implémentation de la pile protocolaire IKEv2, December 2016, Axel Legay, Romaric Maillard and Olivier Zendra

10.2.3. Juries

- Axel Legay has been a referee for the PhD defense of Najah Ben Said (University of Grenoble Alpes).
- Axel Legay has been a member of the jury for the PhD defense of Zaruhi Aslanyan (DTU Denmark).
- Jean-Louis Lanet has been a referee for the PhD defense of Pierre Belgarric (Télécom ParisTech).
- Jean-Louis Lanet has been a referee for the PhD defense of Louis Dureuil (University of Grenoble Alpes).
- Jean-Louis Lanet has been a referee for the PhD defense of Gabriel Risterucci (University of Aix Marseille).
- Jean-Louis Lanet has been a member of the jury for the PhD defense of Benoît Morgan (University of Toulouse).
- Jean-Louis Lanet has been a member of the jury for the PhD defense of Najah Ben Said (University of Grenoble Alpes).

- Olivier Zendra has been a co-referee for the PhD defense of Rabah Laouadi (University of Montpellier).

10.3. Popularization

- Vulnerability Prediction Against Fault Attacks , N. Jafri, A. Legay, J.-L. Lanet, Ercim news 106, 2016

- Skyfall : Tombé du ciel, J.-L. Lanet, Interstices, 2016 In this publication we revisit the movie Skyfall and explain on which scientific background rely some elements of the movie.

- FIC 2016 Internet des objets : la nouvelle fragilité ? We have been invited to participate at a panel with layers, IoT designer to discuss the security of the IoT.

- Atlantico, Et si les objets connectés étaient la plus grande faille qu'entreprises et particuliers pouvaient offrir aux hackers ? January 2016. In this interview we explain that the security is not the main concern of low end IoT, which is not the case with high end IoT.

<p align="center" style="color:red">TAO Project-Team</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

> Isabelle Guyon, Program Chair of NIPS 2016

10.1.1.2. Member of the Organizing Committees

- Anne Auger, co-organizer of the GECCO workshop on Black Box Optimization Benchmarking.
- Cécile Germain, Scientific Committee, DataScience@HEP 2016
- Nikolaus Hansen, co-organizer of the GECCO workshop on Black Box Optimization Benchmarking.
- Marc Schoenauer, Steering Committee, Parallel Problem Solving from Nature (PPSN); Steering Committee, Learning and Intelligent OptimizatioN (LION).
- Michele Sebag, President of Steering Committee, Eur. Conf. on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD).
- Isabelle Guyon, co-organizer of two NIPS workshops (Challenges in Machine Learning and Spatio-temporal time series), co-organizer of AutoML workshop at ICML, co-organizer of LAP challenge workshops (ECCV, ICPR).
- Paola Tubaro, co-organizer of the Second European Social Networks (EUSN) Conference.

10.1.1.3. Member of Conference Program Committees

All TAO members are members of the Program Committees of the main conferences in the fields of Machine Learning, Evolutionary Computation, and Information Processing.

10.1.1.4. Reviewer

All TAO member review papers for the most prestigious journals in the fields of Machine Learning and Evolutionary Computation.

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

- Anne Auger, member of Editorial Board, *Evolutionary Computation Journal*, MIT Press.
- Gregory Grefenstette, member of Editorial Board, *Journal of Natural Language Engineering*, Cambridge University Press.
- Isabelle Guyon, action editor, *Journal of Machine Learning Research* (JMLR).
- Isabelle Guyon, series editor, *Microtome book series Challenges in Machine Learning* (CiML).
- Nikolaus Hansen, member of Editorial Board, *Evolutionary Computation Journal*, MIT Press.
- Marc Schoenauer, member of Advisory Board, *Evolutionary Computation Journal*, MIT Press; member of Editorial Board, *Genetic Programming and Evolutionary Machines*, Springer Verlag; action editor, *Journal of Machine Learning Research*(JMLR).
- Michèle Sebag: Editorial Board, Machine Learning, Springer Verlag.
- Olivier Teytaud, action editor, *Journal of Machine Learning Research* (JMLR).
- Paola Tubaro, member of Associate Editorial Board, *Sociology*, Sage; member of Editorial Board, *Revue Française de Sociologie*, Presses de Sciences Po.

10.1.2.2. Reviewer - Reviewing Activities

All members of the team reviewed numerous articles for international conferences and journals.

10.1.3. Invited Talks

- Isabelle Guyon. 17 Oct. ENS SMILE seminars. Network Reconstruction: the Contribution of Challenges in Machine Learning.
- Michele Sebag, 21 Jan., Deep Learning, IHP
- Michele Sebag, 24 Mar., Nutrition personnalisée et alimentation sur mesure, AgroParisTech.
- Michele Sebag, 12 Oct., Deep Learning and Artificial Intelligence, Franco-Japanese Symposium. Tokyo
- Paola Tubaro. 8 Mar. University of Insubria (Italy) economics department seminar. Investigating peer effects and performance similarity in organizational networks: a longitudinal study.
- Paola Tubaro. 15 Mar. EHESS seminar. Sociabilité et soutien social dans les communautés en ligne autour des troubles de l'alimentation.
- Paola Tubaro. 2 Nov. UQAM (Montréal), Seminar of the health communication research center (ComSante). Le phénomène 'pro ana' : Troubles alimentaires et réseaux sociaux.
- Paola Tubaro. 8 Nov. Université Laval (Québec), Seminar of the CELAT research center. Le phénomène 'pro ana' : Troubles alimentaires et réseaux sociaux.

10.1.4. Leadership within the scientific community

- Isabelle Guyon, President and co-founder of ChaLearn, a non-for-profit organization dedicated to the organization of challenge. http://chalearn.org
- Marc Schoenauer, elected Chair of ACM-SIGEVO (Special Interest Group on Evolutionary Computation), July 2015 (2-years term).
- Marc Schoenauer, founding President of SPECIES (Society for the Promotion of Evolutionary Computation In Europe and Surroundings), that organizes the yearly series of conferences *EvoStar*.
- Michèle Sebag, elected Chair of Steering Committee, ECML-PKDD; head of the Research Committee of Labex Digicosme.
- Paola Tubaro, convenor of the Social Network Analysis Group of British Sociological Association.

10.1.5. Scientific expertise

- Cécile Germain, evaluator for the H2020 calls: *ICT-2015 Topic ICT-16 – Big Data - research*
- Gregory Grefenstette, evaluator for FU21, Cap Digital, Digiteo (IASI) review board
- Gregory Grefenstette, project reviewer for the H2020 (SemCare): *Information and Communication Technologies ICT*
- Michele Sebag, evaluator for the Swedish Foundation for Strategic Research
- Michele Sebag, member of hiring jury for U. Nancy
- Paola Tubaro, evaluator for ANR, SNSF (Swiss National Science Foundation), and National Science Center (Poland).

10.1.6. Research administration

- Philippe Caillou, elected member of the Scientific Council and Academic Council.
- Cécile Germain, elected member of the U-PSUD Scientific Council and of its board. University officer for scientific computing. Deputy head of the computer science departement, in charge of research, member of the Board of the Lidex *Center for Data Science*.
- Marc Schoenauer, *Délégué Scientifique* (aka VP-Research) for the Inria Saclay Île-de-France branch until June 2016; co-chair (with Sylvain Arlot) of the *Maths-STIC* program of the Labex of Mathematics Hadamard (LMH).
- Michele Sebag, deputy director of LRI, CNRS UMR 8623; elected member of the Research Council of Univ. Paris-Saclay; member of the STIC department council; member of the Board of the Lidexes *Institut de la Société Numérique* and *Center for Data Science*.

- Paola Tubaro, member of the steering team, MSH Paris-Saclay, axis 1 "Power of algorithms".

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence : Philippe Caillou, Computer Science for students in Accounting and Management, 192h, L1, IUT Sceaux, Univ. Paris Sud.

Licence : Aurélien Decelle, Computer Architecture, 60h, L2, Univ. Paris-Sud.

Licence : Aurélien Decelle, Machine Learning and Artificial Life, 55h, L2, Univ. Paris-Sud.

Licence : Aurélien Decelle, Computer Architecture, 41h, L3, Univ. Paris-Sud.

Licence and Polytech : Cécile Germain, Computer Architecture

Licence : Isabelle Guyon, Project: Creation of mini-challenges, M2, Univ. Paris-Sud.

Master : Anne Auger, Optimisation, 12h, M2 Recherche, U. Paris-sud.

Master : Guillaume Charpiat et Gaétan Marceau, Advanced Machine Learning, 34h, M2 Recherche, Centrale-Supélec.

Master : Aurélien Decelle, Machine Learning, 27h, M1, Univ. Paris-Sud.

Master : Aurélien Decelle, Information theory, 39h, M1, Univ. Paris-Sud.

Master : Cécile Germain, Parallel Programming

Master : Isabelle Guyon, Project: Resolution of mini-challenges (created by M2 students), L2, Univ. Paris-Sud.

Master : Odalric-Ambrym Maillard, Machine Learning, 6h, M2 Recherche, Univ. Paris-Sud

Master : Yann Ollivier, Deep learning, 4h, M2 Recherche, Telecom/Polytech.

Master : Michèle Sebag, Machine Learning, 12h; Deep Learning, 6h; Reinforcement Learning, 6h; M2 Recherche, U. Paris-sud.

Master : Paola Tubaro, Sociology of social networks, 24h, M2, EHESS/ENS/ENSAE.

Master : Paola Tubaro, Digital platforms, online socialization and new economic models, 6h, M2, Arts et Métiers ParisTech (ENSAM).

Doctorate: Paola Tubaro, Research Methods, 9h, University of Insubria, Italy.

10.2.2. Supervision

PhD: Jérémy BENSADON, *Applications of Information Theory to Statistical Learning*, Univ. Paris-Saclay, 02/02/2016, Yann Ollivier.

PhD: Marie-Liesse CAUWET, *Artificial intelligence with uncertainties, application to power systems*, Univ. Paris-Saclay, 30/9/2016, Olivier Teytaud.

PhD: Sandra ASTETE-MORALES, *Noisy optimization, with applications to power systems*, Univ. Paris-Saclay, 5/10/2016, Olivier Teytaud.

PhD: Robin ALLESIARDIO, *Multi-armed Bandits on non Stationary Data Streams*, Univ. Paris-Saclay, 19/10/2016, Raphaël Féraud (Orange Labs) and Michèle Sebag.

PhD in progress: Ouassim AIT ELHARA, *Large-scale optimization and Evolution Strategies*, 1/09/2012, Anne Auger and Nikolaus Hansen.

PhD in progress: Asma ATAMNA, *Evolution Strategies and Constrained Optimization*, 1/10/2013, Anne Auger and Nikolaus Hansen.

PhD in progress: Nacim BELKHIR, *On-line parameter tuning*, 1/5/2014, Marc Schoenauer and Johann Dréo (Thalès), CIFRE Thalès.

PhD in progress: Vincent BERTHIER, *Large scale parallel optimization, with application to power systems*, 1/09/2013, Michèle Sebag et Olivier Teytaud.

PhD in progress: Mehdi CHERTI *Learning to discover: supervised discrimination and unsupervised representation learning with applications in particle physics.* 01/10/2014, Balazs Kegl and Cécile Germain.

PhD in progress : Benjamin DONNOT, *Optimisation et méthodes d'apprentissage pour une conduite robuste et efficace du réseau électrique par anticipation sur base de parades topologiques.*, 1/09/2015, Isabelle Guyon and Marc Schoenauer

PhD in progress : Guillaume DOQUET, *ML Algorithm Selection and Domain Adaptation*, 1/09/2015, Michele Sebag

PhD in progress: Victor ESTRADE *Robust domain-adversarial learning, with applications to High Energy Physics,* 01/10/2016, Cécile Germain and Isabelle Guyon.

PhD in progress: François GONARD, *Automatic optimization algorithm selection and configuration*, 1/10/2014, Marc Schoenauer and Michèle Sebag, thèse IRT SystemX.

PhD in progress : Hoang M. LUONG, *Squaring the Circle in Modelling Corporate Governance, Market Structure and Innovation: A Tobin's Q Approach to R&D Investment when Network Effects Are Present*, 01/09/2014, (with M. Ugur and S. Gorgoni, at the University of Greenwich, London, UK).

PhD in progress : Emmanuel MAGGIORI, *Large-Scale Remote Sensing Image Classification*, 1/1/2015, Guillaume Charpiat (with Yuliya Tarabalka and Pierre Alliez, Inria Sophia-Antipolis)

PhD in progress: Pierre-Yves MASSÉ, *Gradient Methods for Statistical Learning*, 1/10/2014, Yann Ollivier

PhD in progress: Sourava MISHRA, *AutoML: An empirical approach to Machine Learning*, 1/10/2014, Balazs Kégl and Michèle Sebag

PhD in progress : Anna PIAZZA, *Inter-Organisational Relationships and Organisational Performance: Network Analysis Applications to a Health Care System*, 01/09/2014, Paola Tubaro (with F. Pallotti and A. Lomi, at the University of Greenwich, London, UK).

PhD in progress: Adrian POL *Machine Learning Anomaly Detection, with application to CMS Data Quality Monitoring,* 01/10/2016, Cécile Germain.

PhD in progress: Karima RAFES *Gestion et sécurité des données personnelles dans le web des objets.* 01/10/2014, Serge Abiteboul and Cécile Germain.

PhD in progress : Yasaman SARABI, *Network Analysis of Private Water Companies, Challenges Collaboration and Competition*, 15/03/2012, Paola Tubaro (at the University of Greenwich, London, UK).

PhD in progress: Thomas SCHMITT, *A Collaborative Filtering Approach to Matching Job Openings and Job Seekers*, 1/11/2014, Philippe Caillou and Michèle Sebag and Jean-Pierre Nadal (EHESS)

PhD in progress : Lisheng SUN, *Apprentissage Automatique: Vers une analyse de données automatisé*, 1/10/2016, Isabelle Guyon and Michèle Sebag

PhD in progress : Corentin TALLEC, *Reinforcement Learning and Recurrent Neural Networks: dynamical approaches*, 1/10/2016, Yann Ollivier

PhD in progress : Pierre WOLINSKI, *Learning the Architecture of Neural Networks*, 1/9/2016, Guillaume Charpiat and Yann Ollivier

10.2.3. Juries

Marc Schoenauer, PhD jury of Jonathan GUERRA (ISAE, Toulouse), External reviewer of HDR of David Gianazza (IRIT, Toulouse).

Cyril Furtlehner, PhD jury of Christophe Schülke (Université Paris Diderot).

Isabelle Guyon, PhD jury of Mathieu Bouyrie (AgroPariTech), November 29, 2016. Restauration d'images de noyaux cellulaires en microscopie 3D par l'introduction de connaissance a priori.

Guillaume Charpiat, PhD jury of Thomas Bonis (Inria Saclay); jury for the SIF best PhD prize (Gilles Kahn).

Nikolaus Hansen, PhD jury of Oswin Krause (University of Copenhagen), January 8, 2016. External reviewer.

Michele Sebag, HdR jury of Matthieu Geist (U. Lille); PhD Jury Jiaxin Kou (Royal Holloway, London); PhD Phong N'guyen (U. Geneve).

10.3. Popularization

- **Yann Ollivier** coordinated, with IHP, numerous activitives for the centenary of Claude Shannon, including a public exhibition at the Musee des Arts et Metiers, a cycle of public conferences, a contest for teachers on the best IT class project, and a workshop on the current state of information theory.

- **Yann Ollivier**, co-organizes the European Union Contest for Young Scientists (science fair for high school students from 30+ countries organized by the European Commission).

- **Aurélien Decelle**, participation to "la fête de la science" animating a presentation of arduino to high school students and families at Inria Turing.

- **Paola Tubaro**, invited talk on "Online social networks and eating disorders", ACT eating disorders association, Nîmes, 5 Feb.; invited talk on "Are we all digital laborers?", Autonomy salon of urban mobility, Paris, 8 Oct.; public interview, "L'économie peut-elle être collaborative? Rencontre avec la sociologue et chercheure Paola Tubaro", Montréal, 2 Nov.; panelist at the round table "Big data, que fait-on de nos données?", organized at Museum of civilization, Québec, 3 Nov.; co-animator, workshop on big data in the "International science and society forum" for high school students, Québec, 4-6 Nov.; panelist at the round table "L'économie peut-elle être vraiment collaborative ET sociale et solidaire?", Ministry of the Economy, Paris, 13 Dec.

- **Paola Tubaro**, training on the digital society and its effects on labor and the economy, for union leaders (CGT, 27 Apr., CFDT, 23 Jun).

- **Paola Tubaro**, radio interviews and panels: Radio France Inter, Radio France Culture, ICI Radio Canada, Aligre.fm. Book reviews and mentions in the media: Le Monde, Rue89/L'Obs, Mashable/France24, Slate.fr, Journal International de Médecine, The Conversation.

- **io.datascience** notable presentations at: CNRS-Inria day *data4ist : exploration et analyse des sources de données pour la recherche et ses environnements* (May 2016) ; Futur en Seine 2016 (Juin 2016) ; DGESIP/MiPNES seminar *Normes et échanges de données : où en est-on ?* (September 2016).

TAPDANCE Team

6. Dissemination

6.1. Promoting Scientific Activities

6.1.1. Scientific Events Organisation

6.1.1.1. Chair of Conference Program Committees

Woods. Program committee (PC) co-chair for DNA22: The 22nd International Conference on DNA Computing and Molecular Programming, 2016. Munich, Germany (co-chairing with Yannick Rondelez, CNRS, ESPCI)

6.1.1.2. Member of the Conference Program Committees

Woods. AUTOMATA 2016. 22nd International Workshop on Cellular Automata & Discrete Complex Systems, ETH Zürich, Switzerland

6.1.1.3. Reviewer

Woods was reviewer for several conferences and journals (not listed for confidentiality reasons).

6.1.2. Invited Talks

- Woods. Transversal aspects of tilings, month-long workshop/course, Oléron, France. Week 1 lectures on Theory and Experiments with Algorithmic Self-Assembly. Invited lecture series.

- Woods. Dagstuhl Seminar 16271 on Algorithmic Foundations of Programmable Matter, 3-8 July 2016 (Germinay).

- Woods. Oxford University, Department of Computer Science, UK, 2016.

- Woods. Journées GT COA, Bordeaux. Evaluating a large class of Boolean circuits via algorithmic self-assembly of DNA strands. 28-29 Nov, 2016.

- Woods. 15éme Journées de la Matière Condensée, Bordeaux 22-26 Aug 2016 (JMC15). Evaluating a large class of Boolean circuits via algorithmic self-assembly of DNA strands

6.2. Teaching - Supervision - Juries

6.2.1. Teaching

Woods made preparations, including visits, to teach a 1-week school at ENS Lyon showing students both theoretical results and wet-lab experimental results. Also, students took part in wet-lab experiments, as well as carrying out projects in teams (involving both theory and experiments). The school occurred in the week of Jan 16-20, 2017.

6.2.2. Juries

In 2016 Woods was PhD examiner for: Frits Dannenberg. Oxford University, 2016 (Supervisors: Marta Kwiatkowska & Andrew Turberfield) Thesis title: Modelling and verification for DNA nanotechnology

<h1 style="text-align:center; color:red;">TASC Project-Team</h1>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Leadership within the Scientific Community

Charlotte Truchet was elected in the ACP committee.

10.1.2. Research Administration

Preparation by the whole team of the two evaluations that respectively toke place in January 2016 (hceres evaluation) and in March 2016 (inria evaluation).

10.2. Teaching - Supervision - Juries

10.2.1. Supervision

PhD: Ignacio Salas Donoso, Packing curved objects with interval methods, Started in May 2013, PhD defense April 5 2016 with committee Luc Jaulin, Gilles Trombettoni, François Fages, see PhD thesis, Gilles Chabert and Nicolas Beldiceanu.

PhD in progress : Gilles Madi Wamba, Mixing constraint programming and behavioural models to manage energy consumption in data centre, October 2014, Nicolas Beldiceanu and Didier Lime.

PhD in progress : Alejandro Reyes Amaro, Toward autonomous parallel algorithms for constraint-based problems, October 2014, Eric Monfroy and Florian Richoux.

PhD in progress : Anicet Bart, Solving mixed constraints, application to the management of mobile sensors, October 2014, Eric Monfroy and Charlotte Truchet.

PhD in progress : Ekaterina Arafailova, Functional constraints, September 2015, Nicolas Beldiceanu and Rémi Douence.

PhD in progress : Nicolas Galvez, Hybrid Algorithms for Search Based Software Engineering, December 2014, Eric Monfroy with Frédéric Saubion from Angers University and C. Castro from UTFSM Valparaiso, Chili.

10.3. Popularization

- Maintenance of the global constraint catalogue.
- Illustrations of the volume II of the global constraint catalogue: 2000 figures.

TEA Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. General chair, scientific chair

Jean-Pierre Talpin served as General Chair and Finance Chair of the 14th. ACM-IEEE Conference on Methods and Models for System Design (MEMOCODE'16, IIT Kanpur, October 18-20.).

10.1.1.2. Member of the organizing committees

Jean-Pierre Talpin and Vania Joloboff co-organized the Shonan workshop on "Architecture-Centric Modeling, Analysis, and Verification of Cyber-Physical Systems" in collaboration with Toyota ITC and Denso, March 21-24.

Jean-Pierre Talpin is a member of the steering committee of the ACM-IEEE Conference on Methods and Models for System Design (MEMOCODE).

10.1.2. Scientific events selection

10.1.2.1. Member of the conference program committees

Jean-Pierre Talpin served the program committee of:

- ACVI'16, 3rd. Workshop on Architecture Centric Virtual Integration
- HLDVT'16, 18th. IEEE International High-Level Design Validation and Test Workshop
- ICESS'16, 13th. IEEE International Conference on Embedded Software and Systems
- IDEA'16, 2nd. International Workshop Integrating Data-flow, Embedded computing and Architecture
- LCTES'16, 19th. ACM SIGPLAN-SIGBED Conference on Languages, Compilers, and Tools for Embedded Systems
- MEMOCODE'16, 14th. ACM-IEEE Conference on Methods and Models for System Design
- SAC'16, 31st. ACM SIGAPP Symposium on Applied Computing
- SCOPES'16, 19th. International Workshop on Software and Compilers for Embedded Systems
- TASE'16, 10th. Theoretical Aspects of Software Engineering Conference

10.1.3. Journal

10.1.3.1. Member of the editorial boards

Jean-Pierre Talpin is Associate Editor with the ACM Transactions for Embedded Computing Systems (TECS), with the Springer journal on Frontiers of Computer Science (FCS) and with the EURASIP journal of embedded systems (JES).

10.1.3.2. reviewer

Jean-Pierre Talpin reviewed articles for Acta Informatica.

Thierry Gautier reviewed for Frontiers of Computer Science.

10.2. Teaching - Supervision - Juries

10.2.1. Invited talks

Vania Joloboff gave a talk in the series of the Distinguished Lecturers of the Computer Science and Engineering department at UC San Diego.

Jean-Pierre Talpin gave an invited presentation at the APAC 2016 Summit on Robotics at the HKSTP in Hong Kong https://www.apacinnosummit.net.

10.2.2. Supervision

Vania Joloboff supervised work of Master student Daian Yue that was selected in the joint program between ENS Rennes and ECNU.

Jean-Pierre Talpin is the supervisor of Simon Lunel's thesis on "*Timed contract algebras for correct by construction real-time system design*".

10.2.3. Juries

Jean-Pierre Talpin served as examiner for the Ph.D. Thesis defense of Fatma Jebali on "Formal Framework for modeling and Verifying Globally Asynchronous Locally Synchronous Systems", September 12., in Grenoble.

Jean-Pierre Talpin served as referee for the PhD. Thesis Defence of Amani Khecharem on "Une approche de méta-modélisation pour la représentation multi-vues des architectures hétérogènes embarqués", May 3., in Sophia Antipolis.

THOTH Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- G. Rogez. Co-organizer of the CVPR workshop on Observing and Understanding Hands in Action (HANDS 2016).
- J. Verbeek. Organized Symposium on Computer Vision and Deep Learning on June 9th in Grenoble with around 80 attendants.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- C. Schmid: area chair for ECCV'16, ICCV'17.
- J. Mairal: area chair for CVPR 2016, ECCV 2016, ICLR 2016 and NIPS 2016.
- J. Verbeek: tutorial chair for ECCV'16.

10.1.2.2. Reviewer

The permanent members of the team reviewed numerous papers for numerous international conferences in computer vision and machine learning: CVPR, ECCV, NIPS, ICML, AISTATS.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- C. Schmid: Editor in Chief of the International Journal of Computer Vision, since 2013.
- C. Schmid: Associate editor for Foundations and Trends in Computer Graphics and Vision, since 2005.
- J. Verbeek: Associate editor for Image and Vision Computing Journal, since 2011.
- J. Verbeek: Associate editor for the International Journal on Computer Vision, since 2014.
- J. Mairal: Associate editor of the International Journal of Computer Vision (IJCV), since 2015.
- J. Mairal: Senior associate editor for IEEE Signal Processing Letters, since Feb 2015 (editor since Aug. 2014).
- J. Mairal: Associate editor of Journal of Mathematical Imaging and Vision (JMIV), since 2015.

10.1.3.2. Reviewer - Reviewing Activities

The permanent members of the team reviewed numerous papers for numerous international journals in computer vision (IJCV, PAMI,CVIU), machine learning (JMLR, Machine Learning). Some of them are also reviewing for journals in optimization (SIAM Journal on Optimization, Mathematical Programming), image processing (SIAM Imaging Science).

10.1.4. Invited Talks

- C. Schmid. Invited speaker at Large-scale Computer Vision Workshop in conjunction with NIPS'16, December 2016.
- C. Schmid. Keynote speaker at IEEE International Conference on Image Processing, Phoenix, September 2016.
- C. Schmid. Invited speaker at Robust Features Workshop in conjunction with CVPR'16, June 2016.
- C. Schmid. Invited speaker at collège de France seminar (chair of Yann LeCun), Mars 2016.
- C. Schmid. Invited speaker at the LIG (laboratoire d'informatique de Grenoble) keynote talks, February 2016.
- C. Schmid. Seminar at Google, Montain View, July 2016.
- C. Schmid. Seminar at "journées scientifiques Inria", June 2016.
- C. Schmid. Seminar at Karlsruhe Technology Institute, June 2016.
- C. Schmid. Seminar at MPI, Tübingen, April 2016.
- C. Schmid. Seminar at INSA Lyon, April 2016.
- C. Schmid. Seminar at New York University, January 2016.
- J. Verbeek. Invited speaker at NVIDIA GPU Technology Conference, Amsterdam, The Netherlands. September 2016.
- J. Verbeek. Seminar GREYC, University of Caen, France, December 2016.
- J. Verbeek. Seminar PSI team, department of Electrical Engineering (ESAT), University of Leuven, Belgium, October 2016.
- J. Mairal. Invited talk at the Dagstuhl seminar "New Directions for Learning with Kernels and Gaussian Processes", December 2016.
- J. Mairal. Invited talk at workshop Phi-Tab, Telecom ParisTech, November 2016.
- J. Mairal. Invited talk at Journées GDR-Isis, Telecom ParisTech, September 2016.
- J. Mairal. Invited talk at Journées MAS, Grenoble, France, August 2016.
- J. Mairal. Invited talk at ICCOPT, Tokyo, Japan, August 2016.
- J. Mairal. Seminar at UC Berkeley, EECS department, USA, March 2016.
- J. Mairal. Seminar at UBC Vancouver, Canada, February 2016.
- J. Mairal. Invited talk at the MIA'16 workshop, Paris, France, January 2016.
- K. Alahari. Seminar at Carnegie Mellon University, USA, July 2016.
- K. Alahari. invited talk at Mysore Park workshop on vision, language and AI, India, December 2016.
- G. Rogez. Invited talk at Journées CNRS-GDR Isis, Telecom Paris, May 2016.
- G. Rogez. Invited speaker at CVPR Tutorial on First-person Visual Sensing: Theory, Models, and Application, Las Vegas, June 2016.
- G. Rogez. Seminar at LIRMM, Université de Montpellier, December 2016.
- H. Lin. Seminar at New York University, USA, April 2016.
- H. Lin. Seminar at Princeton University, USA, April 2016.
- H. Lin. Invited talk at ICCOPT, Tokyo, Japan, August 2016.

10.1.5. Scientific Expertise

- C. Schmid is member of the PAMI-TC awards committee, and the PAMI-TC executive commitee.
- K. Alahari: reviewer for National Sciences and Engineering Research Council of Canada (NSERC), Canada, Agence Nationale de la Recherche (ANR), and Icelandic Research Fund (IRF), Iceland.

- J. Mairal: reviewer for ANR.

10.1.6. Research Administration

- C. Schmid is member of the "comité d'orientations scientifiques". Inria Grenoble, 2016.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Doctorat: C. Schmid, Tutorial on action recognition at the Winter School in Computer Vision, Jerusalem, January 2017.

Doctorat: J. Mairal, Lecturer at the summer school MAESTRA, Ohrid, Macedonia.

Master : C. Schmid, "Object recognition and computer vision", 9H eqTD, M2, ENS Cachan, France.

Master : J. Verbeek and C. Schmid. "Machine Learning & Category Representation", 27H eqTD, M2, Univ. Grenoble.

Master : J. Verbeek and J. Mairal, "Kernel Methods for Statistical Learning", 27H eqTD, M2, ENSIMAG, Grenoble.

Master: J. Mairal, "Kernel methods for statistical learning", 27H eqTD, M2, Ecole Normale Supérieure, Cachan.

Master: J. Mairal, "Introduction to sparse estimation", 6H eq-TD, M2, PSL-ITI, France.

Master: K. Alahari, "Introduction to Discrete Optimization", Ecole Centrale Paris, 27H eq-TD, M1, Paris, France.

Master: K. Alahari, "Understanding Big Visual Data", Grenoble INP, 13.5H eq-TD, M2, Grenoble, France.

Licence: P. Weinzaepfel, "Introduction à UNIX et à la programmation en langage C", 67.5H TD, L1, DLST Grenoble.

10.2.2. Supervision

PhD: P. Weinzaepfel, Motion in action : optical flow estimation and action localization in videos, supervision 50% C. Schmid and 50% Z. Harchaoui, September 2016.

PhD: Y. Hua, Towards robust visual object tracking : proposal selection and occlusion reasoning, supervision 50% C. Schmid and 50% K. Alahari, June 2016.

PhD: A. Mishra, Understanding Text in Scene Images, supervision 50% K. Alahari and 50% Prof. C. V. Jawahar, November 2016.

PhD: P. Bojanowski, Learning to annotate dynamic video scenes, supervision 20% with J. Ponce, I. Laptev and J. Sivic, June 2016.

PhD: S. Saxena, Learning representations for visual recognition, supervision 95% J. Verbeek and 5% C. Schmid, December 2016.

10.2.3. Juries

C. Schmid: Pedro Oliveira Pinheiro, January 2017, rapporteur, these, EPFL.

C. Schmid: Makarand Tapaswi, June 2016, rapporteur, these, KIT Karlsruhe.

C. Schmid: Natalia Neverova, avril 2016, president, these, INSA Lyon.

K. Alahari: Guillaume Seguin, 2016, examinateur, these, Ecole Normale Superieure, Paris, France.

G. Rogez. Marta Salas, 2016, rapporteur, these, Universidad de Zaragoza, Spain.

G. Rogez. Tu-Hoa Pham, December 2016, examinateur, these, Univ. Montpellier.

J. Verbeek. Amir Ghodrati, October 2016, rapporteur, these, Univ. Leuven.

J. Verbeek. Binod Bhattarai, December 2016, rapporteur, these, Univ. Caen.

<h1 style="color:red; text-align:center">TITANE Project-Team</h1>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Florent Lafarge was co-chair of the ISPRS working group on point cloud processing.

10.1.1.2. Member of the Organizing Committees

Pierre Alliez is a member of the Steering Board of the EUROGRAPHICS Workshop on Graphics and Cultural Heritage.

Yuliya Tarabalka chaired a session "Classification of Hyperspectral Image" at IEEE IGARSS 2016.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

Pierre Alliez was a program committee member of ACM SIGGRAPH, EUROGRAPHICS annual conference, EUROGRAPHICS Symposium on Geometry Processing, Geometric Modeling and Processing, Shape Modeling International and EUROGRAPHICS Workshop on Graphics and Cultural Heritage.
Florent Lafarge was a program committee member for the ISPRS congress in 2016.
Yuliya Tarabalka was a program committee member for ACIVS 2016, Lecce, Italy.

10.1.2.2. Reviewer

Pierre Alliez was a reviewer for the conferences listed above, and for around 25 additional papers in several journals ranging from geometric modeling to computer vision. Florent Lafarge was a reviewer for JPRS.
Yuliya Tarabalka was a reviewer for the conferences IEEE IGARSS (student competition selection committee) and ACIVS 2016.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Pierre Alliez is an associate editor of ACM Transactions on Graphics, Elsevier Graphical Models, Computer Aided Geometric Design and Visual Informatics (since 2016). He is also a member of the editorial board of the CGAL open source project.

Florent Lafarge is an associate editor of The Visual Computer since 2015.

Yuliya Tarabalka was a co-editor of the special issue "Hyperspectral Imaging and Image Processing" of the Springer journal Sensing and Imaging.

10.1.3.2. Reviewer - Reviewing Activities

Florent Lafarge was a reviewer for CVPR, ECCV, and SIGGRAPH.
Yuliya Tarabalka was a reviewer for the journals IEEE TGRS and IEEE JSTARS.

10.1.4. Invited Talks

Pierre Alliez gave an invited talk at the CVPR Workshop on Large Scale 3D Data: Acquisition, Modelling and Analysis. The talk was entitled: *Shape Reconstruction and Approximation: Robustness and Guarantees*. See http://www.multimediauts.org/3DWorkshop_CVPR2016/Program.html.

He also gave a keynote at STAG 2016: Smart Tools and Apps in computer Graphics, organized October 3-4, in Genova, Italy. The talk was entitled: *Low Distortion Inter-surface Mapping via Optimal Mass Transport*. He also gave a course at ACM SIGGRAPH on the CGAL library, in collaboration with Andreas Fabri from GeometryFactory.

10.1.5. Scientific Expertise

Pierre Alliez was an evaluator and reviewer for the H2020, EuroSTARS and ERC programmes from the European commission. He participated to the Scientific Commissions of Belgium FNRS (Fund for Scientific Research). He was a member of the panel GEV 01 (mathematics and computer science) of ANVUR (Italian research evaluation agency). We evaluated the period 2011-2014 through bibliometry and peer-review. He was also a reviewer for PRIN projects (fundamental research projects) for the MIUR (the Italian Ministry for Education, University and Research).

Yuliya Tarabalka was an expert evaluator for an ANR project submission in May 2016. She is since November 2016 a member of the expert panel SBWT (signal processing) of the FWO (Belgian research funding foundation).

10.1.6. Research Administration

Pierre Alliez: member of the BCP (bureau du CP) since 2015, comité MASTIC (popularization), and comité espace immersif.

Florent Lafarge was an elected member of the Comité de Centre from 2013 to 2016, and a member of the CSD (Commission de Suivi Doctorale) from 2011 to 2016.

Yuliya Tarabalka is an elected member of the Comité de Centre since 2016.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: Pierre Alliez and Florent Lafarge, Ingeniérie 3D, 21h, M2, university Nice Sophia Antipolis, France.

Master: Pierre Alliez and Florent Lafarge, 3D Meshes and Applications, 32h, M2, Ecole des Ponts ParisTech, France.

Master: Pierre Alliez, Mathématiques pour la géométrie, 24h, M2, EFREI, France.

Master: Florent Lafarge, Traitement d'images numériques, 9h, M2, university Nice Sophia Antipolis, France.

Master: Yuliya Tarabalka, Mathematical methods, 25h, MSc in data sciences and business analytics ESSEC-CS, CentraleSupelec, France.

L2: Yuliya Tarabalka, Advanced algorithms, 28.5h, L2 Networks and Telecoms, IUT Nice Cote d'Azur, Sophia-Antipolis, France.

10.2.2. Supervision

PhD defended November 29th: Manish Mandad, Shape approximation with guarantees, since October 2012, Pierre Alliez.

PhD in progress: Dorothy Duan, Semantized Elevation Maps, since October 2013, Florent Lafarge.

PhD in progress: Jean-Dominique Favreau, Sketch-based modeling in multi-view context, since October 2014, Florent Lafarge and Adrien Bousseau.

PhD in progress: Hao Fang, Scale-space understanding in urban scenes, since March 2016, Florent Lafarge.

PhD in progress: Jean-Philippe Bauchet, City modelling from high resolution satellite images, since October 2016, Florent Lafarge.

PhD in progress: Emmanuel Maggiori, Representation and Analysis of Multisensor Remote Sensing Images with Partition Trees, University of Nice-Sophia Antipolis, since January 2015, Yuliya Tarabalka and Pierre Alliez.

10.2.3. Juries

Pierre Alliez:

- Thesis reviewer: Ludovic Blache (CReSTIC-SIC Reims).
- Thesis reviewer: Ruqi Huang (Inria Saclay).
- Thesis examiner: Mael Rouxel-Labbé (Inria Sophia Antipolis)

Florent Lafarge:

- Thesis examiner: Remi Cura (University Paris Est).

Yuliya Tarabalka:

- Monitoring committee for the thesis of Amine Bohi, Southern University of Toulon-Var in October 2016.

10.3. Popularization

Pierre Alliez participated to the "Fête de la science" in Juan-les-Pins, October 22 and 23. He also gave two talks in high schools: April 28 in Celony, and February 25th in Aix Valabre, and organized a workshop for MathC2+ in June.

TOCCATA Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- S. Boldo, vice-president of the 28th "Journées Francophones des Langages Applicatifs" (JFLA 2017)
- J.-C. Filliâtre, organizer of EJCP (École Jeunes Chercheurs en Programmation du GDR GPL) at Lille on June 27–July 1, 2016. 42 participants. http://ejcp2016.univ-lille1.fr/
- A. Paskevich, program chair of the 9th Working Conference on Verified Software: Theories, Tools, and Experiments (VSTTE 2017), in collaboration with Thomas Wies (NYU).

10.1.1.2. Member of the Organizing Committees

- S. Conchon, local chair for the 44th ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages (POPL 2017), held in Paris, France in January 2017.
- G. Melquiond, web chair for the 23rd IEEE Symposium on Computer Arithmetic (Arith 23), held in Silicon Valley, USA in July 2016.
- S. Boldo, member of the organization committee of the Inria Scientific Days in Rennes (June 2016).

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- S. Boldo, PC of the 23rd IEEE Symposium on Computer Arithmetic (ARITH 2016).
- S. Boldo, PC of the 9th International Workshop on Numerical Software Verification (NSV 2016).
- S. Boldo, PC of the 1st Workshop on High-Consequence Control Verification (HCCV 2016).
- S. Boldo, PC of the 27th "Journées Francophones des Langages Applicatifs" (JFLA 2016).
- A. Charguéraud, PC of the International Workshop on Hammers for Type Theories (HaTT 2016).
- A. Charguéraud, PC of the Workshop on ML (ML 2016).
- G. Melquiond, PC of the 3rd International Workshop on Coq for Programming Languages (CoqPL 2017).

10.1.2.2. Reviewer

The members of the Toccata team have reviewed papers for numerous international conferences.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- G. Melquiond is a member of the editorial board of *Reliable Computing*.
- S. Boldo is member of the editorial board of Binaire http://binaire.blog.lemonde.fr, the blog of the French Computer Science Society.
- J.-C. Filliâtre is member of the editorial board of the *Journal of Functional Programming*.
- C. Paulin is member of the editorial board of the *Journal of Formalized Reasoning*.

10.1.3.2. Reviewer - Reviewing Activities

The members of the Toccata team have reviewed numerous papers for numerous international journals.

10.1.4. Invited Talks

- S. Boldo gave an invited lecture at Effective Analysis: Foundations, Implementations, Certification in January 2016 at Marseille, France.
- S. Boldo gave a keynote talk in Cambridge at a local workshop about Testing and Verification in Computational Science.
- A. Charguéraud gave an invited talk at the Royal Society specialist meeting "Verified trustworthy software systems", presenting an interactive interpreter for the semantics of JavaScript, in London, on April 7th.
- S. Conchon gave an invited lecture "Model Checking Modulo Theories with Cubicle" at the 2016 edition of the School for Junior Researchers in Programming (École Jeunes Chercheurs en Programmation, EJCP 2016, http://ejcp2016.univ-lille1.fr/) held in Lille, France.
- A. Paskevich gave an invited lecture "Deductive Program Verification using Why3" at the 2016 edition of the School for Junior Researchers in Programming (École Jeunes Chercheurs en Programmation, EJCP 2016, http://ejcp2016.univ-lille1.fr/) held in Lille, France.

10.1.5. Leadership within the Scientific Community

- C. Paulin, scientific leader of Labex DigiCosme http://labex-digicosme.fr (Digital Worlds: distributed data, programs and architectures), until June 2016. It is a project launched by the French Ministry of research and higher education as part of the program "Investissements d'avenir", it involves the 14 research units in computer science and communications from the "Paris-Saclay" cluster.
- C. Paulin, dean of the Faculty of Sciences of Université Paris-Sud, since July 2016.

10.1.6. Scientific Expertise

- S. Boldo, member of the reviewing board for the ANR (first step in 2016).
- S. Boldo, member of the 2016 committee for the Gilles Kahn PhD award of the French Computer Science Society.
- S. Conchon and A. Paskevich, members of the *"commission consultative de spécialistes de l'université"*, Section 27, University Paris-Sud since December 2014.
- C. Marché, president of the evaluation committee of the joint Digiteo-DigiCosme call for projects https://digicosme.lri.fr/AAPDigiteoDigiCosme2016. The committee selected 10 thesis projects for funding, among 52 submissions. The committee also selected to support 10 scientific events in the Île-de-France region.
- C. Marché, member of the scientific commission of Inria-Saclay, in charge of selecting candidates for PhD grants, Post-doc grants, temporary leaves from universities ("délégations")
- C. Marché, member of the "Bureau du Comité des Projets" of Inria-Saclay, in charge of examining proposals for creation of new Inria project-teams.
- C. Marché, member of a hiring committee for an associate professor position in computer science at CNAM, Paris, France. (sep-oct 2016)

10.1.7. Research Administration

- S. Boldo, member of the CCD, *commission consultative des doctorants*.
- S. Boldo, member of the CLFP, *comité local de formation permanente*.
- S. Boldo, scientific head for Saclay for the MECSI group for networking about computer science popularization inside Inria.
- A. Charguéraud is vice-president of *France-ioi*, a non-profit organization in charge of the selection and the training of the French team to the International Olympiads in Informatics (IOI). France-ioi also provides online exercises in programming and algorithmics—in average, over 100,000 such exercises are solved every month on the website.

- A. Charguéraud is a board member of the non-profit organization *Animath*, which aims at developing interest in mathematics among young students.

- A. Charguéraud and G. Melquiond are members of the committee for the monitoring of PhD students (*"commission de suivi des doctorants"*).

- J.-C. Filliâtre is *correcteur au concours d'entrée à l'École Polytechnique et aux ENS* (computer science examiner for the entrance exam at École Polytechnique and Écoles Normales Supérieures) since 2008.

- C. Marché, director of the ProofInUse Joint Laboratory between Inria and AdaCore, http://www.spark-2014.org/proofinuse

- C. Paulin, member of the *"commission consultative de spécialistes de l'université"*, Section 27, University Paris-Sud since April 2010. C. Paulin is the president of this committee since December 2014.

- C. Paulin, chaired the hiring committee for a professor position in computer science at Université Paris-Sud.

- J.-C. Filliâtre, member of the board of GDR GPL, since January 2016.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master Parisien de Recherche en Informatique (MPRI) https://wikimpri.dptinfo.ens-cachan.fr/doku.php: "Proofs of Programs" http://www.lri.fr/~marche/MPRI-2-36-1/ (M2), C. Marché (12h), A. Charguéraud (12h), Université Paris-Diderot, France.

Master: Fondements de l'informatique et ingénierie du logiciel (FIIL) https://www.lri.fr/~conchon/parcours_fiil/: "Software Model Checking" (M2), S. Conchon (9h), "Programmation C++11 avancée" (M2), G. Melquiond (12h), "Vérification déductive de programmes" (M2), A. Paskevich (10.5h), Université Paris-Sud, France.

DUT (Diplôme Universitaire de Technologie): M1101 "Introduction aux systèmes informatiques", A. Paskevich (36h), M3101 "Principes des systèmes d'exploitation", A. Paskevich (58.5h), IUT d'Orsay, Université Paris-Sud, France.

Licence: "Langages de programmation et compilation" (L3), J.-C. Filliâtre (26h), École Normale Supérieure, France.

Licence: "INF411: Les bases de l'algorithmique et de la programmation" (L3), J.-C. Filliâtre (16h), École Polytechnique, France.

Licence: "Programmation fonctionnelle avancée" (L3), S. Conchon (45h), Université Paris-Sud, France.

Licence: "Introduction à la programmation fonctionnelle" (L2), S. Conchon (25h), Université Paris-Sud, France.

10.2.2. Internships

- Raphaël Rieu-Helft (ENS, Paris) is a pre-PhD student doing an internship for 6 months under supervision of C. Marché, G. Melquiond and A. Paskevich. He is working on the design and the formal verification of a library for unbounded integer arithmetic. Why3 is used for formally verifying the functional behaviour of the library operations. Raphaël is also implementing in Why3 a mechanism for extracting code to the C language, in order to obtain a certified code that runs very efficiently.

- Lucas Baudin (ENS, Paris) is a master 1 intern under the supervision of J.-C. Filliâtre between September 2016 and January 2017. He is working on the inference of loop invariants by abstract interpretation in the tool Why3.

- F. Faissole was a master 2 trainee under the supervision of S. Boldo between March and August 2016. He worked on the formal proof of the Lax-Milgram theorem.

10.2.3. Supervision

PhD: L. Gondelmans, "Obtention de programmes corrects par raffinement dans un langage de haut niveau", Université Paris-Saclay & Université Paris-Sud, December 13, 2016, supervised by J.-C. Filliâtre and A. Paskevich.

PhD in progress: M. Clochard, "A unique language for developing programs and prove them at the same time", since Oct. 2013, supervised by C. Marché and A. Paskevich.

PhD in progress: D. Declerck, "Vérification par des techniques de test et model checking de programmes C11", since Sep. 2014, supervised by F. Zaïdi (LRI) and S. Conchon.

PhD in progress: M. Roux, "Model Checking de systèmes paramétrés et temporisés", since Sep. 2015, supervised by Sylvain Conchon.

PhD in progress: M. Pereira, "A Verified Graph Library. Tools and techniques for the verification of modular higher-order programs, with extraction", since May 2015, supervised by J.-C. Filliâtre.

PhD in progress: A. Coquereau, "[ErgoFast] Amélioration de performances pour le solveur SMT Alt-Ergo : conception d'outils d'analyse, optimisations et structures de données efficaces pour OCaml", since Sep. 2015, supervised by Sylvain Conchon, Fabrice Le Fessant et Michel Mauny.

PhD in progress: F. Faissole, "Stabilité(s): liens entre l'arithmétique flottante et l'analyse numérique", since Oct 2016, supervised by S. Boldo and A. Chapoutot.

10.2.4. Juries

J.-C. Filliâtre: president of the PhD committee of A. Djoudi, "Analyse statique au niveau binaire", Université Paris Saclay, France, December 2016.

S. Conchon: examiner of the PhD of M. Morterol, "Méthodes avancées de raisonnement en logique propositionnelle : application aux réseaux métaboliques", Université Paris-Saclay, December 2016.

S. Conchon: reviewer of the PhD of A. Blanchard, "Aide à la vérification de programmes concurrents par transformation de code et de spécifications", Université d'Orléans, December 2016.

S. Conchon: reviewer of the HDR of X. Thirioux, "Verifying Embedded Systems", Institut National Polytechnique de Toulouse, September 2016.

S. Conchon : examiner of the PhD of L. Cabaret, "Algorithmes d'étiquetage en composantes connexes efficaces pour architectures hautes performances", September 2016.

10.3. Popularization

- A. Charguéraud is one of the three organizers of the *Concours Castor informatique* http://castor-informatique.fr/. The purpose of the Concours Castor in to introduce pupils (from *CM1* to *Terminale*) to computer sciences. 475,000 teenagers played with the interactive exercises in November 2016.

- S. Boldo is a speaker for a MOOC for computer science teachers. She was also invited to Poitiers in November 2016 to discuss with teachers and present this MOOC.

- S. Boldo was invited to a panel about teaching computer science before university in Besançon in June 2016 during the GDR GPL days.

- During the "Fête de la science" on October 14th to 16th, S. Boldo gave several talks about computer arithmetic to teenagers and F. Faissole run a stand about an introduction to programming with robots.

- S. Boldo and F. Voisin did an introduction to computer science with an activity on computer hardware as a 1-hour extracurricular activity in schools for pupils in *CM1-CM2* on October 4th.

- S. Boldo gave a talk during a girls & maths weekend on November 22nd. See http://www.animath.fr/spip.php?article2897&lang=fr.

TONUS Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Journal

9.1.1.1. Member of the editorial boards

Philippe Helluy is member of the editorial board of IJFV http://ijfv.org/

9.1.1.2. Reviewer - Reviewing activities

Emmanuel Franck has been reviewer for

Communications in computational physics

Methods and Algorithms for Scientific Computing

Methods for Partial Differential equations

Philippe Helluy has been reviewer for

Math. Review

International Journal for Numerical Methods in Fluids

Computers and fluids

M2AN

ESAIM Proceedings

PIER Journal

Sever Adrian Hirstoaga has been reviewer for

Journal of Fixed Point Theory and Applications

MathSciNet/Mathematical Reviews

Michel Mehrenberger has been reviewer for

SISC

Electronic Journal of Qualitative Theory of Differential Equations (EJQTDE)

Mathematical Methods in the Applied Sciences

Journal Of Computational Physics

Computer Physics Communications

Computational and Applied Mathematics

Zeitschrift fuer Angewandte Mathematik und Physik

David Coulette has been reviewer for

Journal of Plasma Physics - Cambridge University Press

9.1.2. Invited Talks

Emmanuel Franck was invited at

Minisymposium Fusion, Canum 2016, Obernai

Workshop Jorek, Nice, France

Seminar of numerical analysis, Rennes university, France

Emmanuel Franck has participated as speaker at

> ECCOMAS 2016, Greece

> Workshop ABPDE 2016, Lille, France

> IGA and free mesh methods, La Jolla, USA

Philippe Helluy was invited at:

> Oberwolfach au workshop (Hyperbolic Techniques for Phase Dynamics)

Sever Adrian Hirstoaga was invited at

> 17th SIAM Conference on Parallel Processing for Scientific Computing, 12-15 April 2016, Paris.

> PASC (Platform for Advanced Scientific Computing), 8-10 June 2016, Lausanne.

> NumKin, October 2016, Strasbourg

Michel Mehrenberger was invited at

> ECCOMAS Congress 2016 , 5-10 june 2016 Crete Island, Greece.

> Conference - Stability of non-conservative systems 4th-7th July 2016, University of Valenciennes, France.

> Collaborative Research Center (CRC) seminar, Karlsruhe Institute of Technology (KIT), 28 april 2016.

> Seminar, "Modellistica Differenziale Numerica", Dipartimento di Matematica - Sapienza Universita di Roma, 19 april 2016.

> Seminar, "Applications des mathématiques", ENS Rennes, 2 mars 2016.

Laurent Navoret was invited at

> Seminar. Laboratoire Jean Kuntzmann Grenoble

> Workshop: Kinetic theory : from equations to models - Imperial College, Londres

Laurent Navoret has participated as speaker at

> Congres Hyp2016, Aachen, Germany

David Coulette was invited at

> 14eme congress of French Physics Society and IAP Plasma Workshop, Nancy France

> European Physical Society - 43rd conference on Plasma Physics, Leuven - Belgium

9.1.3. Scientific Expertise

Philippe Helluy, expertises for:

> ANR

9.1.4. Research Administration

> Philippe Helluy is the head of the "Modélisation et Contrôle" research team at IRMA Strasbourg.

> Michel Mehrenberger is in the IREM ("Institut de recherche sur l'enseignement des mathématiques") team "Modélisation" for the year 2016-2017.

> Philippe Helluy and Sever Hirstoaga have participated in a jury for an assistant professor position.

> Michaël Gutnic is member of the National Commitee for Scientific Research (from september 2012 to august 2016).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

> Licence : Laurent Navoret, Nonlinear optimisation (108h eq. TD)

Licence : Laurent Navoret, Integration (34h eq. TD)

Licence : Philippe Helluy, scientific computing (70h eq. TD)

Licence : Philippe Helluy, statistic (50h eq. TD)

Licence : Philippe Helluy, basic mathematics (20h eq. TD)

Licence : Michel Mehrenberger, Scientific computing (65 h eq. TD)

Licence : Michel Mehrenberger, nonlinear optimization (18 h eq. TD)

Licence : Michel Mehrenberger, mathematics for chemistry (56h eq. TD)

Licence: Michaël Gutnic, Mathematics for biology, (84h eq. TD)

Licence: Michaël Gutnic, Statistic for biology, (65h eq. TD)

Master 1: Laurent Navoret, Python (19h eq. TD)

Master 1: Philippe Helluy, operational research (50h eq. TD)

Master 1: Michaël Gutnic, probability and statistic, (30h eq. TD)

Master 2 (Agrégation) : Laurent Navoret, scientific computing (50h eq. TD)

Master 2 (Cellar physic) : Laurent Navoret, Basics in maths (24h eq. TD)

Master 2 (Agrégation) : Michel Mehrenberger, scientific computing (28h eq. TD)

Master 2: Philippe Helluy, hyperbolic systems (30h eq. TD)

Master 2: Sever Hirstoaga "two-scales convergence" (24h eq. TD)

9.2.2. Supervision

PhD defended (december 2016): Thi Trang Nhung Pham, "Méthodes numériques pour Vlasov", Advisors: Philippe Helluy, Laurent Navoret.

PhD defended (december 2016): Michel Massaro, "Méthodes numériques pour les plasmas sur architectures multicœurs", Advisor: Philippe Helluy.

PhD in progress: Pierre Gerhard, "Résolution des modèles cinétiques. Application à l'acoustique du bâtiment.", October 2015, Advisors: Philippe Helluy, Laurent Navoret.

PhD in progress: Bruno Weber, "Optimisation de code Galerkin Discontinu sur ordinateur hybride. Application à la simulation numérique en électromagnétisme", March 2015, Advisor: Philippe Helluy.

PhD in progress: Nicolas Bouzat, "Fine grain algorithms and deployment methods for exascale codes", October 2015, Advisors: Michel Mehrenberger, Jean Roman, Guillaume Latu.

PhD in progress: Mustafa Gaja, "Compatible finite element method and preconditioning", December 2015, Advisors: E. Sonnendruecker (IPP, germany), A. Ratnani (IPP), E. Franck

PhD in progress: Conrad Hillairet, "Implicit Boltzmann scheme and Task Parallelization for MHD simulations", November 2016, Advisors: Philippe Helluy, E. Franck

PhD in progress: Ksander Ejjaouani, "Conception of a programmation model, application to gyrokinetic simulations", October 2015, Advisors: Michel Mehrenberger, Julien Bigot, Olivier Aumage.

9.2.3. Juries

Philippe Helluy:

PhD defense of Rémi Chauvin (Toulouse)

PhD defense of Eric Madaule (Nancy)

PhD defense of Juan Manuel Martinez Caamano (Strasbourg)

PHD defense of Thibault Gasc (CEA Paris)

PHD defense of Nicolas Deymier (Toulouse)

Habilitation defense of Virginie Grandgirard (CEA cadarache)

Michel Mehrenberger:

PhD defense of Florian Delage (Strasbourg)

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TOSCA Project-Team

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9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Promotion of Mathematics in the industry

- M. Deaconu and A. Lejay were invited to give a talk at ILAC, Luxembourg in March 2016.
- A. Lejay has been appointed as representative of Inria Nancy-Grand Est in the Agence Mathématiques et Entreprise (AMIES).
- D. Talay continued to serve as the Vice-President of the Fondation d'Entreprise Natixis which aims to contribute to develop research in quantitative finance. He also serves as a member of the Scientific Committee of the Foundation.
- D. Talay continued to serve as a member of the Scientific Committee of the AMIES National Agency aimed to promote interactions between Mathematics and Industry.

9.1.2. Scientific Events Organisation

- N. Champagnat and M. Deaconu organized the mini-symposium "Un panorama de progrès récents sur les méthodes numériques probabilistes" at CANUM 2016 (Congrès d'Analyse Numérique) at Obernai in July 2016.

9.1.2.1. Member of the Organizing Committees

- A. Lejay was member of the conference organizing committees of *CANUM 2016* (Obernai, France).

9.1.3. Scientific Events Selection

9.1.3.1. Member of the Conference Program Committees

- N. Champagnat served as a member of the program committee of CARI 2016 (13ème Colloque Africain sur la Recherche en Informatique et Mathématiques Appliquées), Tunis, 10–14 octobre 2016.
- A. Lejay is member of the conference program committees of *CANUM 2016* (Obernai, France) and *Journées de Probabilités 2016* (Le Mans, France).
- D. Talay served as a member of the XIIIth France-Romania Colloquium in Applied Mathematics.
- E. Tanré served as a member of the program committee of the International Conference on Mathematical NeuroScience (ICMNS 2016), Juan les Pins.

9.1.4. Journal

9.1.4.1. Member of the Editorial Boards

- M. Bossy served as an Associate Editor of *Annals of Applied Probability*.
- N. Champagnat served as an Associate Editor of *Stochastic Models*.
- A. Lejay is one of the three editors of the *Séminaire de Probabilités*.
- D. Talay served as an Associate Editor of: *Stochastic Processes and their Applications*, *ESAIM Probability and Statistics*, *Stochastics and Dynamics*, *Journal of Scientific Computing*, *Monte Carlo Methods and Applications*, *Oxford IMA Journal of Numerical Analysis*, *SIAM Journal on Scientific Computing*, *Communications in Applied Mathematics and Computational Science*, *Éditions de l'École Polytechnique*. He also served as the Co-editor in chief of *MathematicS in Action*.

9.1.4.2. Reviewer - Reviewing Activities

- M. Deaconu wrote reviews for manuscripts submitted to *Journal of Computational and Applied Mathematics*.

- A. Lejay wrote reviews for manuscripts submitted to *Journal of Computational Mathematics*, *Mathematics and Computers in Simulation*, *Mathematical Reports*, *SIAM Journal of Control and Optimization*, *Communications in Mathematical Physics*,, *Real Analysis Exchange* , *Annals of Probability*, *Electronic Journal of Probability*.

- E. Tanré wrote reviews for manuscripts submitted to *Applied Mathematical Finance*, *Bernoulli*, *European Journal of Applied Mathematics*.

- E. Tanré serves has a permanent reviewer of *Mathematical Reviews of the American Mathematical Society (MathSciNet)*

- D. Villemonais wrote reviews for *Mathematical Reviews of the American Mathematical Society (MathSciNet)* and for manuscripts submitted to *Stochastic processes and applications* and *Theoretical Population Biology*.

9.1.5. Invited Talks

- M. Bossy has been invited to give a talk at the seminar of the Laboratoire Jacques-Louis Lions, in May.

- M. Bossy has been invited to give a seminar talk at the Rencontre Niçoise de Mécanique des Fluides, at the Observatoire de la Côte d'Azur in Nice, June

- M. Bossy has been invited to give a talk at the symposium *SDE approximation* at the International Conference on Monte Carlo techniques, In Paris, July.

- N. Champagnat has been invited to give talks at the conference *Stochastic PDE's, Large Scale Interacting Systems and Applications to Biology* in Orsay in March, to the CMO-BIRS workshop *Stochastic and Deterministic Models for Evolutionary Biology* in Oaxaca, Mexico, in August and at the conference *Probabilistic structures in deterministic population genetics* in Vienna in November.

- N. Champagnat has been invited to give seminar talks at *TOSCA seminar* in Inria Sophia Antipolis in April, at the *MAPMO probability seminar* in October and at the seminar *Méthodes probabilistes et statistiques en dynamique des populations* in Grenoble in December.

- N. Champagnat has been invited to give a lecture at the CIMPA School *Mathématiques pour la Biologie* (4h) in Tunis in October.

- M. Deaconu was invited to give a talk at the *Colloque Franco Roumain de Mathématiques Appliquées*, Iaşi (Romania) in August 2016.

- C. Fritsch has been invited to give talks at the *Workshop on "Approche Interdisciplinaire en Evolution"* in Saint-Martin-de-Londres in December.

- A. Lejay has been invited to give talk at the *Workshop on Numerical Schemes of SDE and SPDE* in Lille in June 2016, and at the *International Conference on Monte Carlo techniques* in Paris in July 2016.

- A. Lejay has ben invited to give a seminair talk at the Université de Reims in February 2016.

- P. Pigato gave talks at the Probability Seminar of Luxembourg University, in January, at the Seminar of TOSCA-Sophia Antipolis, in February, at the Seminar of CIMFAV (Valparaíso) in March, at the Journées de Probabilités 2016, in May, at the Probability Seminar of Università degli studi di Padova, in June, and at the London-Paris Bachelier Workshop on Mathematical Finance in September.

- A. Richard gave seminar talks at the LPMA (Paris 6) Probability seminar and the IMT (Toulouse) probability seminar in February, at the Groupe de Travail on stochastic models in finance at Ecole Polytechnique and at the Barcelona probability seminar in April.

- A. Richard had an accepted talk at ICMNS 2016.

- D. Talay gave a lecture at the Mean-field and population-level descriptions of brain dynamics Meeting in February at the EITN, Paris, the opeing lecture at the conference in V. Konokov's honor in Moscow in June, a mini-course at Lille University in June, and an invited lecture at the Workshop on the Numerics for Stochastic Partial Differential Equations and their Applications at RICAM, Linz (Austria) in December.

- E. Tanré gave talks at LPMA (Paris 6) and at the workshop on Numerical schemes for SDEs and SPDEs in Lille in June.

- D. Villemonais has been invited to give talks at the workshop *Stochastic processes under constraints* in July in Augsburg, Germany, at the conference *Colloque franco-roumain de mathématiques* in August in Iaşi, Romania, and at the *School on Information and Randomness* in December in Santiago, Chile.

- D. Villemonais has been invited to give seminar talks at *Institut Montpelliérain Alexander Grothendieck* in February, at the *Institut de Recherche Mathématique Avancée* in Strasbourg in November, and at the *Modal'X seminar* in Nanterre in December.

9.1.6. Leadership within the Scientific Community

- A. Lejay is the head of the Probability and Statistics team of the Institut Élie Cartan since September 2016.

- A. Lejay was a member of the Administration Council of the SMAI until June 2016.

- D. Talay continued to chair the Scientific Council of the French Applied Math. Society SMAI.

- D. Talay served as a member of the scientific council of the Complex System academy of the UCA Idex.

- D. Talay is serveing as a member of the committee in charge of preparing the application of Paris to the International Congress of Mathematicians 2022.

9.1.7. Scientific Expertise

- N. Champagnat reported on an application submitted to CONICYT (Chilean Funding Agency).

- M. Deaconu has been a member of the Committee for junior permanent research positions of Inria Nancy - Grand Est.

- A. Lejay reported on applications to National Science Centre of Poland.

- A. Lejay participated in a Professor position recruitment committee at Université de Lorraine.

9.1.8. Research Administration

- M. Bossy is an elected member of the Inria Evaluation Board.

- M. Bossy has been a member of the DTK-Committee.

- N. Champagnat is a member of the *Commission de Développement Technologique* and the *Commission Information Scientifique et Technique* of Inria Nancy - Grand Est, a subsitute member of the *Comité de Centre* of Inria Nancy - Grand Est (until Nov. 2016), *Responsable Scientifique* for the library of Mathematics of the IECL, member of the *Conseil du laboratoire* of IECL (as *responsable scientifique* of the library). He is also local correspondent of the COERLE (*Comité Opérationel d'Évaluation des Risques Légaux et Éthiques*) for the Inria Research Center of Nancy - Grand Est. This year, together with Aline Wagner (Inria Nancy - Grand Est), he finished to write the new version of the application form for research approval by the COERLE.

- M. Deaconu is a member of the *Bureau du Comité de Projets* of Inria Nancy - Grand Est, and of the *Comité de Projet* of Inria Nancy - Grand Est.

- A. Lejay is a member of the COMIPERS of Inria Nancy Grand-Est and of *Commission des thèses* of the Institut Élie Cartan (Nancy).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: M. Bossy, *Continuous time stochastic models for quantitative Finance*, 30h, M2 IMAFA (Informatique et Mathématiques Appliquées à la Finance et à l'Assurance), École Polytechnique Universitaire, Univ. Nice - Sophia Antipolis, France.

Master : M. Bossy, *Risk on energetic financial markets*, 27h, Master Spécialisé, Ingénierie et Gestion de l'Énergie, Mine ParisTech, France.

Master : M. Bossy *Stochastic Particle Methods for PDEs*, 18h, M2 Probabilité et Applications, Université Pierre et Marie Curie, France.

PhD-level lectures : M. Bossy *McKean SDEs and related stochastic methods for PDEs*, 18h, University of Edinburgh (UK).

PhD-level lectures : M. Bossy *Stochastic numerical methods for turbulence*, Winter school Numerics for Stochastic Partial Differential Equations and their Applications, 10h, at RICAM - University of Linz.

Master: N. Champagnat, *Introduction to Quantitative Finance*, 18h, M1, École des Mines de Nancy, France.

Master: N. Champagnat, *Introduction to Quantitative Finance*, 13.5h, M2, École des Mines de Nancy, France.

Master: N. Champagnat, *Chaînes de Markov*, 22.5h, M2 "double diplôme" Mathématiques et Applications - École Supérieure des Sciences et de Technologie de Hammam Sousse, Tunisie (lieu des cours) - Université de Lorraine, France.

Master: M. Deaconu, *Équations différentielles stochastiques : résolution numérique et applications*, 21h, M2, École des Mines de Nancy, France.

Master: M. Deaconu, *Modélisation stochastique*, 30h, M2, Université de Lorraine, France.

Master: M. Deaconu, *Simulation Monte Carlo*, 24h, M1, Faculté de Droit, Sciences Economiques et Gestion, Université de Lorraine, France.

Master: C. Fritsch, *Introduction à la finance quantitative*, 3h, M1, École des Mines de Nancy, France.

Licence: C. Fritsch, *Décision et Prévision Statistiques*, 20h, L3, École des Mines de Nancy, France.

Licence: C. Fritsch, *Supervision d'un projet de recherche*, 6h, M2, École des Mines de Nancy, France.

Licence: B. Henry, *Statistiques*, 20h, L3, École des Mines de Nancy, France.

Licence: B. Henry, *Probabilités*, 36h, L3, École des Mines de Nancy, France.

Master: A. Lejay, *Simulation des marchés financiers*, 28.5h, M2, Université de Lorraine (Metz), France.

Master: P. Pigato, *Calcul Intégral*, 15h, M1, Université de Lorraine (Nancy), France.

Licence: K. Salhi, *Mathématiques Appliquées et Probabilités*, 24h, L3, Télécom Nancy, France.

Master: K. Salhi, *Statistiques et analyse de données*, 20h, M1, Télécom Nancy, France.

Master: K. Salhi, *Probabilités et Statistiques*, 20h, M1, ENSEM Nancy, France.

Master: D. Talay *Invariant measures of diffusion processes*, 18h, M2 Probabilité et Applications, Université Paris 6, France.

Master: E. Tanré (courses) and M. Tomasevic (exercices), *Advanced Numerics for Computational Finance*, 30h (20h + 10h), M2, UCA (Mathmods Erasmus Mundus), France.

Master: E. Tanré, *Mathematical Methods for Neurosciences*, 37h, M2, ENS - Master MVA / Paris 6 - Master Maths-Bio, France.

Master: E.Tanré (courses) and A. Richard (practical classes) *Numerical probability for mathematical finance*, 20h (8h + 12h), M2, EPU (Master IMAFA), France.

9.2.2. Supervision

PhD: Maxime Bonelli, *Behavioral finance approach to risk assessment in quantitative portfolio management*, Univ. Nice Sophia Antipolis, September 2016, M. Bossy.

PhD : Benoît Henry, *Processus de branchements non markoviens en dynamique et génétique des populations*, Univ. Lorraine, 17/11/2016, Nicolas Champagnat, D. Ritchie (EPI CAPSID).

PhD : Khaled Salhi, *Risques extrêmes en finance : analyse et modélisation*, Univ. Lorraine, 05/12/2016, M. Deaconu and A. Lejay.

PhD in progress: Antoine Brault, *Formules de Trotter-Kato pour les trajectoires rugueuses*, Université Toulouse 3, L. Coutin (U. Toulouse 3), A. Lejay.

PhD in progress: Baldwin Dumortier, *Contrôle acoustique des éoliennes*, October 2014, M. Deaconu and E. Vincent (EPI MULTISPEECH).

PhD in progress: Pascal Helson, *Plasticity in networks of spikking neurons in interaction*, October 2016, E. Tanré and R. Veltz (MATHNEURO Inria team).

PhD in progress: Kouadio Jean Claude Kouaho, *Modélisations stochastique et déterministe de croissance de tumeurs cancéreuses*, Mar. 2016, N. Champagnat, Pierre Vallois (EPI BIGS, Modest N'Zi (UFHB, Abidjan).

PhD in progress: Radu Maftei, *A stochastic approach to colloidal particle agglomeration in turbulent flows*, November 2014, M. Bossy.

PhD in progress: Hernán Mardones, *Numerical solutions of stochastic differential equations with multiplicative noise*, Universidad de Concepción, A. Lejay, C. Mora (U. Concepción).

PhD in progress: Milica Tomasevic, *Stochastic approaches to Keller–Segel equations*, October 2015, D. Talay.

9.2.3. Juries

- M. Bossy served as a referee for the Ph.D. theses of Anthony LE CAVIL, *Représentation probabiliste de type progressif d'EDP nonlinéaires nonconservatives et algorithmes particulaires associés.* Université Paris Saclay, December 9, 2016.

- M. Bossy served as an examiner for the Ph.D. thesis of Ahmed MTIRAOUI , *EDS Progressives Rétrogrades couplées contrôlées, EDDS Rétrogrades et EDP Stochastiques.* Université de Toulon, November the 25th, 2016.

- N. Champagnat served as a referee for the Ph.D. theses of Elma Nessar, *Modèles probabilistes de l'évolution d'une population dans un environnement variable*, Univ. Aix-Marseille, July 4, 2016, and of Joseba Dalmau, *La quasi-espèce pour une population finie*, Univ. Orsay, November 25, 2016.

- N. Champagnat served as an examiner for the Ph.D. thesis of Lucas Mercier, *Grands graphes et grand arbres aléatoires : Analyse du comportement asymptotique*, Univ. Lorraine, May 11, 2016, and of Benoît Henry, *Processus de branchements non markoviens en dynamique et génétique des populations*, Univ. Lorraine, November 17, 2016.

- A. Lejay served as a referee for the Ph.D. theses of Sarav Mazzonetto, *On the exact simulation of (Skew) Brownian Diffusions with Discontinuous Drift*, Potsdam Universität / Université Lille 1, November 2016, of Anis Al Gerbi, *Ninomiya-Victoir scheme: strong convergence, asymptotics for the normalized error and multilevel Monte Carlo methods*, Université Paris-Est, October 2016, and of Joseph El Maalouf, *Méthodes de Monte Carlo stratifiées pour la simulation des chaînes de Markov*, Université de Grenoble / Université Saint Joseph de Beyrouth, December 2016.

- A. Lejay served as an examiner for the Habilitation Thesis of Pierre Étoré, *Quelques contributions à l'étude et à la simulation des diffusions asymétriques*, Université de Grenoble, December 2016.

- M. Deaconu and A. Lejay served as examiners for the Ph.D. thesis of Khaled Salhi, *Risques extrêmes en finance : analyse et modélisation*, Université de Lorraine, December 2016.
- D. Talay chaired the Ph.D. thesis jury of Ahmed Mtiraoui, *Equations différentielles stochastique rétrogrades progressives et leurs applications aux théories de contrôles*, Université de Toulon.
- D. Talay served as a referee for the Ph.D. theses of Daoud Ounaissi, *Méthodes Quasi Monte-Carlo et Monte-Carlo applications aux calculs des estimateurs Lasso et Lasso bayésien*, université de Lille I; and of Ahmed Bel Hadj Ayed *Robustesse de la stratégie de trading optimale*, École Centrale Paris;
- D. Talay chaired the Habilitation à Diriger les Recherches juries of Christophette Blanhet-Scalliet, *Contribution a` l'analyse des risques financiers : risque de crédit, asymétrie d'information, analyse chartiste*, École Centrale de Lyon, and of Pierre Étoré, *Quelques contributions à l'étude et à la simulation des diffusions asymétriques*, INP Grenoble.

9.3. Popularization

- D. Talay participated in a scientific France Culture radio program in December.

TROPICAL Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- S. Gaubert co-organized, jointly with D. Grigoriev (CNRS, Lille), M. Joswig (TU Berlin) and T. Theobald (Frankfurt), a Dagstuhl workshop, on "Effectivity in tropical mathematics, and beyond".

10.1.1.2. Member of the Organizing Committees

- M. Akian co-organized a workshop on hybrid systems, IHP, 2016.
- S. Gaubert co-organizes the "Séminaire Parisien d'Optimisation".
- S. Gaubert, co-organized with S. Charousset (EDF) the PGMO days at EDF labs Paris-Saclay.
- X. Allamigeon co-organized two invited sessions on semidefinite programming and tropical methods at the conference PGMO Days.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- S. Gaubert, president of the scientific committee of SMAI-MODE 2016 (Toulouse, March 2016).

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- S. Gaubert is member of the editorial committee of the collection Mathématiques et Applications, SMAI and Springer.
- S. Gaubert is associate editor of Linear and Multilinear Algebra.
- S. Gaubert is associate editor of RAIRO Operations research.

10.1.4. Invited Talks

- M. Akian, Keynote lecture at ETAMM 2016.
- S. Gaubert, invited lecture at the 2016 Conference on Applied Mathematics, Hong Kong University.

10.1.5. Leadership within the Scientific Community

- S. Gaubert coordinates the Gaspard Monge Programme for Optimization and Operations Research (PGMO), a corporate sponsorship of EDF operated by Fondation Mathématique Jacques Hadamard at Paris-Saclay. The goal of the program is to help to develop the research community in these fields, connecting academic and industrial researchers. It includes a research initiative on energy, led by S. Charousset from EDF (IROE, funding focused projects on the optimization of energy), and a subprogram dedicated to basic research (PRMO, funding smaller size projects). Projects are selected after an open call, instructed by the scientific commitee of PGMO. The program organizes advanced invited lectures for PhD students and researchers (in 2016, lectures by Yuri Nesterov from Louvain and Jean-Bernard Lasserre from LAAS), a regular seminar, and an annual conference (PGMO days, 250 participants in 2016). The program is currently being renewed, with an opening to new industrial partners interested by optimization. See https://www.fondation-hadamard.fr/PGMO for more information on PGMO.

10.1.6. Research Administration

- M. Akian :
    - Member of the "comité de liaison SMAI-MODE" since June 2015.
- S. Gaubert :
    - Coordinator of PGMO (Gaspard Monge Program for Optimization and Operations Research, a corporate sponsorship of EDF operated by FMJH).
    - Member of the scientific council of CMAP.
- X. Allamigeon:
    - Member of the scientific committee of Inria Saclay – Ile-de-France.
    - Member of the laboratory council of CMAP.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- M. Akian
    - Course "Markov decision processes: dynamic programming and applications" joint between (3rd year of) ENSTA and M2 "Mathématiques et Applications", U. Paris Saclay, "Optimization", and shared with Jean-Philippe Chancelier (ENPC), 15 hours each.
- X. Allamigeon
    - Petites classes et encadrement d'enseignements d'approfondissement de Recherche Opérationnelle en troisième année à l'École Polytechnique (programme d'approfondissement de Mathématiques Appliquées) (niveau M1).
    - Cours du M2 "Optimisation" de l'Université Paris Saclay, cours partagé avec Céline Gicquel et Dominique Quadri (LRI, Université Paris Sud).
    - Co-responsabilité du programme d'approfondissement en mathématiques appliquées (troisième année) à l'École Polytechnique.
- V. Boeuf
    - Petite classe du cours de tronc commun de 1ere année "Introduction à l'optimisation" de l'École des ponts (ENPC), niveau L3.
- S. Gaubert
    - Course "Systèmes à Événements Discrets", option MAREVA, ENSMP.
    - Course "Algèbre max-plus pour le contrôle optimal et les jeux" of "Parcours Optimisation, Jeux et Dynamique" (ODJ) of M2 "Mathématiques et Applications" of Paris 6 University and École Polytechnique.
    - Lecture of Operations Research, third year of École Polytechnique. The lectures notes were published this year as a book [46].
- A. Hochart
    - Cours de niveau L1 et L2 à l'Univ. Paris Diderot (Paris VII), dans le cadre d'un monitorat (34h).
- M. Skomra
    - Petite classe du cours de tronc commun de 1ere année "Introduction à l'optimisation" de l'École des ponts (ENPC), niveau L1.
- N. Stott
    - Cours et TD "Introduction à la programmation graphique en C++", option MAREVA et semaine Athens à l'ENSMP (École des Mines de Paris), niveau M1.

10.2.2. Supervision

- PhD: Antoine Hochart, registered at École Polytechnique, since October 2013, thesis supervisor: Stéphane Gaubert, cosupervision: Marianne Akian, defended on 14 Nov 2016.
- PhD in progress : Eric Fodjo, registered at École Polytechnique, since October 2013, thesis supervisor: Marianne Akian.
- PhD in progress : Nikolas Stott, registered at École Polytechnique, since October 2014, thesis supervisor: Stéphane Gaubert, cosupervision: Xavier Allamigeon, Éric Goubault, Sylvie Putot.
- PhD in progress : Vianney Boeuf, registered at École Polytechnique, since October 2014, thesis supervisor: Stéphane Gaubert, cosupervision: Stéphane Raclot (BSPP), Marianne Akian, Xavier Allamigeon.
- PhD in progress : Mateusz Skomra, registered at Univ. Paris Saclay since October 2015, thesis supervisor: Stéphane Gaubert, cosupervision: Xavier Allamigeon.
- PhD in progress : Jean-Bernard Eytard, registered at Univ. Paris Saclay since October 2015, thesis supervisor: Stéphane Gaubert, cosupervision: Marianne Akian, Mustapha Bouhtou.
- PhD in progress: Paulin Jacquot, registered at Univ. Paris Saclay since November 2016, thesis supervisor: Stéphane Gaubert, cosupervision: Nadia Oujdane, Olivier Beaude (EDF).

10.2.3. Juries

- M. Akian
  - Vice-president of the jury of the 2016 competition for CR2 positions of Inria Saclay–Île-de-France.
  - Member of the jury selecting the 2016 PGMO PhD price.
  - Jury of the PhD thesis of A. Hochart (X, Palaiseau, November 2016).
- S. Gaubert
  - Member of hiring commitee (Professor position) at Paris 6 University.
  - Member of hiring commitee (Assistant Professor position) at Limoges University.
  - Jury of the HdR of A. Auger (Saclay, 2016).
  - Jury of the HdR of B. Scherrer (Nancy, reviewer, 2016).
  - Jury of the PhD thesis of C. Josz (Paris 6, reviewer, 2016).
  - Jury of the PhD thesis of A. Parmentier (ENPC, reviewer, 2016).
  - Jury of the PhD thesis of A. Hochart (X, Palaiseau, 2016).

10.3. Popularization

- J.P. Quadrat :
  - Webmaster of the site http://www.maxplus.org, dedicated to max-plus algebra.

10.4. Conferences, Seminars

- M. Akian
  - Conference "Emerging Trends in Applied Mathematics and Mechanics" (ETAMM), Perpignan, May 30 - June 3, 2016, Title of the talk: "Majorization inequalities for valuations of eigenvalues using tropical algebra".
  - MTNS 2016 (22nd International Symposium on Mathematical Theory of Networks and Systems), Minneapolis, July 12-15, 2016, Title of the talk: "Solving Hamilton-Jacobi-Bellman equations by combining a max-plus linear approximation and a probabilistic numerical method".

- Workshop "Numerical methods for Hamilton-Jacobi equations in optimal control and related fields" at the Radon Institute, Austrian Academy of Sciences, Linz, Austria, Nov. 21 - Nov. 25, 2016. Title of the talk: "Solving Hamilton-Jacobi-Bellman equations by combining a max-plus linear approximation and a probabilistic numerical method".
- Dagstuhl Seminar "Algorithms and Effectivity in Tropical Mathematics and Beyond", Nov. 28 - Dec. 02, 2016. Title of the talk: "Majorization inequalities for valuations of eigenvalues using tropical algebra".

- X. Allamigeon
  - Journée Equipe McTAO, Inria Sophia Antipolis, January 18, 2016. Title of the talk: "Long and winding central paths".
  - Conference "Emerging Trends in Applied Mathematics and Mechanics" (ETAMM), Perpignan, May 30 - June 3, 2016. Title of the talk: "Long and winding central paths".
  - Groupe de travail combinatoire du Plateau de Saclay, June 8, 2016. Title of the talk: "Long and winding central paths".
  - Dagstuhl Seminar "Algorithms and Effectivity in Tropical Mathematics and Beyond", Nov. 28 - Dec. 02, 2016. Title of the talk: "Log-barrier interior-point methods are not strongly polynomial".
  - Séminaire Parisien d'Optimisation, Paris, December 12, 2016. Title of the talk: "Log-barrier interior-point methods are not strongly polynomial".

- V. Boeuf
  - Congrès annuel de la société Française de Recherche Opérationnelle et d'Aide à la Décision (ROADEF), Compiègne, February 10-12, 2016. Title of the talk: "Évaluation de performance en réception d'appels d'urgence : débits asymptotiques dans un réseau de Pétri avec priorités.".
  - Conference on Performance Evaluation Methodologies and Tools (VALUETOOLS), Taormina, October 25-28, 2016. Title of the talk: "Stationary solutions of discrete and continuous Petri nets with priorities".

- J.B. Eytard
  - PGMO Days, Nov. 8-9, 2016, Palaiseau. Title of the talk: "Price incentives in mobile networks: a tropical approach".

- E. Fodjo
  - 9th European Summer School in Financial Mathematics, Aug. 29- Sep. 2, 2016, St Petersbourg, Russia. Title of the talk: "A probabilistic max-plus numerical method for solving stochastic control problems".
  - SIAM Conference on Financial Mathematics & Engineering, Nov. 17-19, 2016, Austin, Texas, USA. Title of the talk: "A probabilistic max-plus numerical method for solving stochastic control problems".
  - 55th Conference on Decision and Control (CDC 2016), Dec. 12-14, 2016, Las Vegas, USA. Title of the talk: "A probabilistic max-plus numerical method for solving stochastic control problems".

- S. Gaubert
  - International Conference on Tensors, Matrices and their Applications, Chern Institute of Mathematics, Nankai University, Tianjin, 20-24 May 2016. Title of the talk: "Ergodicity conditions in non-linear Perron-Frobenius theory and application to nonnegative tensors".
  - SIAM Conference on Discrete Mathematics, Atlanta, June 6-10, 2016. Title of the talk: "Stochastic mean payoff games are tropical semidefinite programs".

- Workshop: Advances in Convex Analysis and Optimization Erice July 6-11, 2016. Title of the talk: "Zero-sum games, non-archimedean convexity and sinuous central paths".
- 2016 Conference on Applied Mathematics, The University of Hong Kong Aug 23-26, 2016. Title of the talk: "Zero-sum games, non-archimedean convexity and sinuous central paths".
- Seminar of the algebraic geometry group at the University of Hong Kong, Aug 24, 2016. Title of the talk. "Tropical spectrahedra".
- Dagstuhl Seminar "Algorithms and Effectivity in Tropical Mathematics and Beyond", Nov. 28 - Dec. 02, 2016. Title of the talk "The equivalence between zero-sum games and tropical convexity".

- A. Hochart
  - Game Theory PhD Seminar, Paris, February 1, 2016. Title of the talk: "Ergodic problems for zero-sum stochastic games".
  - Conference SMAI-MODE, Toulouse, March 23-27, 2016. Title of the talk: "Une approche opérateur accrétif pour les jeux stochastiques avec critère ergodique".
  - MTNS 2016 (22nd International Symposium on Mathematical Theory of Networks and Systems), Minneapolis, July 12-15, 2016, Title of the talk: "An Accretive Operator Approach to Ergodic Problems for Zero-Sum Games".

- M. MacCaig
  - Birmingham Young Mathematicians Conference 2016. Title: "Tropical algebra: Optimisation, tropical polytopes and integer points".
  - Student tropical algebraic geometry seminar (STAGS 2016), Yale. Title: "Calculating the volume of tropical polytopes is hard".
  - ILAS 20th annual meeting, K.U.Leuven, July 11, 2016. Title: "Scaling to integer matrices in max-algebra".
  - Dagstuhl Seminar on Algorithms and Effectivity in Tropical Mathematics.

- A. Niv
  - Conference "Recent advances in linear algebra and graph-theory", U.T.Chattanooga, March 5-6, 2016. Title of the talk: "Introduction to tropical total positivity".
  - Seminar at Afeka Academic College of Engineering, Tel-Aviv, May 8, 2016. Title of the talk: "Assignment problems via tropical matrices".
  - Tropical symposium, ILAS 20th annual meeting, K.U.Leuven, July 11, 2016. Title of the talk: "Total non-negativity via valuations in tropical algebra".

- M. Skomra
  - Conference SMAI-MODE, Toulouse, March 23–25, 2016. Title of the talk: "Les spectrahèdres tropicaux et leur relation aux jeux stochastiques".
  - Conference "Emerging Trends in Applied Mathematics and Mechanics" (ETAMM), Perpignan, May 30 - June 3, 2016. Title of the talk: "Nonarchimedean semidefinite programming and stochastic games".
  - Séminaire des doctorants du CMAP, Palaiseau, June 10, 2016. Title of the talk: "Une relation entre la programmation semi-définie paramétrique et les jeux stochastiques".
  - Conference of the International Linear Algebra Society (ILAS), Leuven, July 11-16, 2016. Title of the talk: "Nonarchimedean semidefinite programming and stochastic games".
  - International Symposium on Symbolic and Algebraic Computation (ISSAC), Waterloo, Ontario, Canada, July 19-22, 2016. Title of the talk: "Solving Generic Nonarchimedean Semidefinite Programs using Stochastic Game Algorithms".

- – Conference PGMO Days, EDF Labs Paris-Saclay, November 8-9, 2016. Title of the talk: "Solving Generic Nonarchimedean Semidefinite Programs using Stochastic Game Algorithms".
- – Dagstuhl Seminar "Algorithms and Effectivity in Tropical Mathematics and Beyond", Nov. 28 - Dec. 02, 2016. Title of the talk: "Tropical spectrahedra and stochastic mean payoff games".

- C. Walsh
  - – Conference "New Methods in Finsler Geometry", Leipzig, July 5-9, 2016. Title of the talk: "Studying isometry groups using the horofunction boundary".

<h1 style="text-align:center; color:red;">TYREX Project-Team</h1>

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. Member of the Organizing Committees

- C. Roisin is a member of the steering committee of the ACM Symposium on Document Engineering. (until Sept. 2016)

8.1.2. Scientific Events Selection

8.1.2.1. Member of the Conference Program Committees

- P. Genevès has been external review committee member for the 21st ACM SIGPLAN International Conference on Functional Programming (ICFP'16).
- P. Genevès has been program committee member for the 16th ACM Symposium on Document Engineering (DocEng'16).
- C. Roisin has been program committee member for the 16th ACM Symposium on Document Engineering (DocEng'16).

8.1.2.2. Reviewer

- P. Genevès has been a referee for the '32ème Conférence sur la Gestion de Données - Principes, Technologies et Applications' (BDA 2016)

8.1.3. Journal

8.1.3.1. Reviewer - Reviewing Activities

- N. Gesbert has been a referee for Logical Methods in Computer Science (LMCS).
- C. Roisin has been a referee for Journal of Visual Languages & Computing, Elsevier (JVLC).

8.1.4. Leadership within the Scientific Community

- C. Roisin is member of the section 27 of the CNU (Conseil National des Universités).

8.1.5. Scientific Expertise

Oppidoc

> Title: Choice of Methods and Algorithms for XQuery Static Analyses in the Oppidum Framework
>
> Duration: November - December 2016
>
> Coordinator: Pierre Genevès
>
> Abstract: The Oppidoc startup develops 'Oppidum': an XQuery web application framework which simplifies the development of XML-REST-XQuery applications (XRX) with the full XML technology stack (XQuery, XSLT, native XML database). It relies on a RESTful approach and on a well defined application model using concepts (routes, conventions, pipelines) popularized in other frameworks such as Ruby On Rails, Orbeon Forms and more recently Express on nodejs. Our collaboration concerns a study about the introduction of advanced static analyses techniques in the Oppidum development process.

8.1.6. Research Administration

- P. Genevès is co-responsible of the doctoral school of Grenoble University for Computer Science (around 400 PhD students).

- P. Genevès is a permanent member of the committee in charge of hiring research engineers at Inria Grenoble - Rhône-Alpes research center.

- N. Layaïda is 'référent budget' member of the budget commission of the Inria Grenoble – Rhône-Alpes research center. The role of this commission is to allocate yearly budget ('dotation') to Inria project teams and services. On a yearly basis, we meet with team and service leaders individually, collect their financial needs and set their budget.

- N. Layaïda is member of the Scientific Board of Advanced Data-mining of the Persyval Labex.

- N. Layaïda is member of the experts pool (selection committee) of the minalogic competitive cluster.

- N. Layaïda is a permanent member of the jury in charge of evaluation harmonisation of the Master of Science in Informatics at Grenoble.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master : P. Genevès, 'Semantic web: from XML to OWL', 36 h, M2, Univ. Grenoble-Alpes

Licence : N. Gesbert, 'Logique pour l'informatique', 45 h eq TD, L3, Grenoble INP

Licence : N. Gesbert, 'Bases de la programmation impérative', 33 h eq TD, L3, Grenoble INP

Licence : N. Gesbert, academic tutorship of an apprentice, 5 h eq TD, L3, Grenoble INP

Master : N. Gesbert, 'Fondements logiques pour l'informatique', 12 h eq TD, M1, Grenoble INP

Master : N. Gesbert, 'Construction d'applications Web', 22 h 30 eq TD, M1, Grenoble INP

Master : N. Gesbert, 'Analyse, conception et validation de logiciels', 41 h 15 eq TD, M1, Grenoble INP

Licence : C. Roisin, 'Programmation C', 12h eq TD, L2, IUT2, Univ. Grenoble-Alpes

Licence : C. Roisin, 'Architecture des réseaux', 112h eq TD, L1, IUT2, Univ. Grenoble-Alpes

Licence : C. Roisin, 'Services réseaux', 22h eq TD, L2, IUT2, Univ. Grenoble-Alpes

Licence : C. Roisin, 'Introduction système Linux', 21h eq TD, L1, IUT2, Univ. Grenoble-Alpes

Licence : C. Roisin, 'Système et réseaux', 14h eq TD, L3, IUT2, Univ. Grenoble-Alpes

Licence : C. Roisin, academic tutorship of four apprentices, 20h eq TD, L3, IUT2, Univ. Grenoble-Alpes

Licence : C. Roisin, academic tutorship of 18 students, 13h eq TD, L1, IUT2, Univ. Grenoble-Alpes

N. Gesbert is responsible of the L3-level course 'logique pour l'informatique' (25 apprentices) and of the M1-level course 'construction d'applications Web' (72 students).

P. Genevès is co-responsible of the Master-level course 'Semantic Web: from XML to OWL' in the Mosig, Univ. Grenoble Alpes.

C. Roisin is responsible of the Licence Professionnelle en Alternance 'Administration et Sécurité des Systèmes et des Réseaux' , L3, IUT2, Univ. Grenoble-Alpes (15 apprentices).

C. Roisin is responsible of the L1-level course 'Architecture des réseaux' (150 students).

8.2.2. Supervision

PhD : D. Graux, On the Efficient Distributed Evaluation of SPARQL Queries, Université Grenoble-Alpes, 15 December 2016, N. Layaïda and P. Genevès

PhD in progress : A. Abbas, Web query rewriting for heterogeneous data sources, since October 2014, N. Layaïda and P. Genevès

PhD in progress : T. Michel, Mobile Augmented Reality Applications for Smart Cities, since October 2014, P. Genevès, N. Layaïda and H. Fourati

PhD in progress : L. Jachiet, Reasoning with NoSQL Data Flows in Massively Parallel Systems, since October 2014, N. Layaïda and P. Genevès

8.2.3. Juries

- C. Roisin has been referee and jury member of the Mira Sarkis PhD thesis, Telecom ParisTech (oct 2016).

<p style="text-align:center;color:red;font-weight:bold;">URBANET Team</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- Razvan Stanica was general co-chair of CoRes 2016, the first French national conference on protocol design, performance evaluation and experimentation, held in Bayonne in May 2016.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Razvan Stanica was the co-chair of the track "Vehicular and Delay Tolerant Networks" at the Wireless Days 2016 conference, held in Toulouse in March 2016.

10.1.2.2. Member of the Conference Program Committees

- Walid Bechkit was in the TPC of IEEE ICC and IEEE GlobeCom.
- Razvan Stanica was in the TPC of the following conferences: IEEE ICC, IEEE GlobeCom, IEEE VTC Spring/Fall, AdHoc-Now, GIIS, IEEE ISC2, IEEE UIC, WF-IoT.
- Fabrice Valois was in the TPC of the following conferences: IEEE Globecom, IEEE ICC, IEEE ICT, IEEE WCNC, IEEE WCMC, WiSARN.

10.1.2.3. Reviewer

- Razvan Stanica was a reviewer for IEEE Infocom and IEEE WoWMoM.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Razvan Stanica was Guest Editor for the Elsevier Computer Communication special issue on Mobile Traffic Analytics.
- Fabrice Valois is Associated Editor for Annals of Telecommunications.

10.1.3.2. Reviewer - Reviewing Activities

- Walid Bechkit was a reviewer for ACM Transactions on Sensor Networks, Journal of Network and Computer Applications (Elsevier), Journal of Network and Systems Management, Telecommunication Systems.
- Razvan Stanica was a reviewer for the following journals: IEEE Transactions on Mobile Computing, IEEE Communications Magazine, IEEE Transactions on Big Data, IEEE Transactions on Vehicular Technology, Vehicular Communications, Wireless Networks, China Communications, Frontiers of Information Technology & Electronic Engineering.

10.1.4. Invited Talks

- Hervé Rivano was an invited speaker at the Intelligent Internet of Things Showroom (SIDO), Lyon, April 2016.
- Hervé Rivano gave an invited talk at the inauguration of the Sense City EquipEx, Paris, April 2016.
- Hervé Rivano gave an invited talk at the UCN@Sophia Labex seminar, Sophia Antipolis, April 2016.
- Hervé Rivano was an invited speaker at the Inria Alumni jam session on IoT, Paris, November 2016.

- Fabrice Valois gave a talk on the "Scientific Challenges of IoT: the viewpoint of the CITI Lab.", CA Foundation INSA Lyon, September 2016.

10.1.5. Leadership within the Scientific Community

- Hervé Rivano is member of the steering committee of the ResCom axis of the RSD CNRS GdR.
- Hervé Rivano is a member of the Scientific Council of TUBA Lyon.
- Fabrice Valois is a member of the Scientific Council of the LIMOS-UMR6158 laboratory, Clermont Ferrand.
- Fabrice Valois is member of the Scientifc Council of the Labex IMU (Intelligence des Mondes Urbains).
- Fabrice Valois is in the steering committee of the Féderation d'Information de Lyon (FR 2000 CNRS).

10.1.6. Scientific Expertise

- Walid Bechkit was a reviewer for ANRT for Cifre PhD thesis.
- Hervé Rivano was a reviewer for the Sino-French call for project of the Joint Research Institute for Science and Society.
- Razvan Stanica was a reviewer for the following calls: ANR appel générique (France), ANRT Cifre (France), CETIC (Cameroun).
- Fabrice Valois was a reviewer for ANRT for Cifre PhD thesis.

10.1.7. Research Administration

- Walid Bechkit is responsible for seminar organization and scientific animation within the CITI laboratory.
- Hervé Rivano is member of the Administration Council of the EquipEx Sense City as representative of Inria.
- Hervé Rivano is member in the CITI laboratory council.
- Razvan Stanica is the CITI laboratory correspondent with the Labex IMU.
- Razvan Stanica is member of the steering committee of the Volvo Chaire at INSA Lyon.
- Fabrice Valois is director of the CITI research laboratory of INSA Lyon.
- Fabrice Valois is in the steering committee of the SPIE INSA Lyon IoT Chaire.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence : Isabelle Augé-Blum, Operating Systems, 70h, L3, Telecom. Dpt. INSA Lyon.

Licence : Walid Bechkit, IP Networks, 40h, L3, Telecom. Dpt. INSA Lyon.

Licence : Hervé Rivano, IP Networks, 34h, L3, Telecom. Dpt. INSA Lyon.

Licence : Razvan Stanica, Network Programming, 90h, L3, Telecom. Dpt. INSA Lyon.

Licence : Razvan Stanica, Advanced Wireless Networks, 20h, L3, IST / Telecom. Dpt. INSA Lyon (lectures given in english).

Licence : Fabrice Valois, IP Networks, 100h, L3, Telecom. Dpt. INSA Lyon.

Licence : Fabrice Valois, IP Networks, 20h, L3, IST / Telecom. Dpt. INSA Lyon (lectures given in english).

Master : Isabelle Augé-Blum, Innovation project, 30h, M1, Telecom. Dpt. INSA Lyon.

Master : Isabelle Augé-Blum, Bibliographical study, 30h, M1, Telecom. Dpt. INSA Lyon.

Master : Isabelle Augé-Blum, Real-Time Networks, 25h, M2, Telecom. Dpt. INSA Lyon.

Master : Walid Bechkit, Network architectures, protocols and services, 12h, M1, Telecom. Dpt. INSA Lyon.

Master : Walid Bechkit, Performance evaluation of telecom networks, 100h, M1, Telecom. Dpt. INSA Lyon.

Master : Walid Bechkit, Wireless multihop networks, 10h, M2, University of Lyon.

Master : Walid Bechkit, Wireless networks: architecture and security, 18h, M2, INSA Lyon.

Master: Hervé Rivano, Wireless multihop networks, 10h, M2, University of Lyon.

Master: Hervé Rivano, Smart Cities, 4h, M2, Polytech Perpignan.

Master: Hervé Rivano, Smart Cities and IoT, 48h, M2, Telecom. Dpt. INSA Lyon.

Master : Razvan Stanica, Mobile Networks, 30h, M1, Telecom. Dpt. INSA Lyon.

Master : Razvan Stanica, Network Science, 10h, M2, Telecom. Dpt. INSA Lyon.

Master : Fabrice Valois, Mobile Networks, 30h, M1, Telecom. Dpt. INSA Lyon.

Master : Fabrice Valois, Wireless Sensor Networks, 6h, M2, University of Grenoble.

Isabelle Augé-Blum is in charge of the foreign affairs of the Telecommunications department at INSA Lyon, coordinating all incoming and outgoing student exchange programs.

Hervé Rivano is responsible for the coordination of all courses in the Smart Cities and IoT option at the INSA Lyon Telecommunications department.

Razvan Stanica is responsible for the administrative part related to all Master projects prepared by INSA Lyon Telecommunications department students.

Razvan Stanica is responsible of the research option at the Telecommunications department of INSA Lyon.

Fabrice Valois is responsible of the networking teaching team in the Telecommunications department at INSA Lyon, coordinating all the courses in the networking domain.

Fabrice Valois and Walid Bechkit are elected members of the Telecommunications Department Council at INSA Lyon.

10.2.2. Supervision

PhD : Jin Cui, Data aggregation in wireless sensor networks, INSA Lyon, 06/2016. Advisor: Fabrice Valois.

PhD : Guillaume Gaillard, Opérer les réseaux de l'Internet des Objets à l'aide de contrats de qualité de service (Service Level Agreements), INSA Lyon, 12/2016. Advisors:Dominique Barthel (Orange Labs), Fabrice Theoleyre (I-Cube CNRS), Fabrice Valois.

PhD in progress : Yosra Bahri Zguira, DTN for IoT, since 05/2015. Advisors: Aref Meddeb (Univ. Sousse, Tunisia), Hervé Rivano.

PhD in progress: Abderrahman Ben Khalifa, Cognitive mechanisms for IoT networks. Advisors: Hervé Rivano, Razvan Stanica.

PhD in progress: Ahmed Boubrima, Optimal deployment of wireless sensor networks for air pollution monitoring, since 10/2015. Advisors: Walid Bechkit, Hervé Rivano.

PhD in progress : Soukaina Cherkaoui, Energy-saving strategies for backhaul networks, since 11/2013. Advisor: Hervé Rivano.

PhD in progress : Rodrigue Domga Komguem, Autonomous WSN architectures for road traffic applications, since 11/2012. Advisors: Razvan Stanica, Maurice Tchuente (Univ. Yaoundé, Cameroun), Fabrice Valois.

PhD in progress : Alexis Duque, Use of visible light communication in a smart city context, since 10/2015. Advisors: Hervé Rivano, Razvan Stanica.

PhD in progress : Leo Le Taro, Recalibration of wireless sensors for pollution monitoring, since 11/2015. Advisor: Hervé Rivano.

PhD in progress: Abdul Aziz Mack, Data gathering in sensor and passive RFID with energy harvesting for urban infrastructure monitoring, since 10/2016. Advisors: Nathalie Mitton (FUN team), Hervé Rivano.

PhD in progress: Jad Oueis, Systèmes PMR très haut débit fédérateurs, since 10/2015. Advisors: Razvan Stanica, Fabrice Valois.

PhD in progress: Mihai Popescu, Mobilité au sein de flottes de robots sous contrainte de maintien de la connectivité, since 11/2015. Advisors: Olivier Simonin (Inria CHROMA), Anne Spalanzanni (Inria CHROMA), Fabrice Valois.

MS thesis: T.Alias, Univ. Bretagne Sud, Resource Allocation in Cloud RAN, 07/2016. Advisors: Hervé Rivano, Razvan Stanica.

MS thesis: M Biteau, Data Gathering in Linear WSN, 01/2016. Advisors: Isabelle Augé-Blum, Walid Bechkit.

MS thesis: L. Bontemps, INSA Lyon, Anonymization of Mobile Traffic Datasets, 10/2016. Advisors: Razvan Stanica.

MS thesis: N. Chovelon, INSA Lyon, Control Traffic Model for LTE Core Networks, 06/2016. Advisors: Razvan Stanica, Fabrice Valois.

MS thesis: A. Mermouri, INSA Lyon, User Mobility in Virtualized Cellular Networks, 10/2016. Advisors: Razvan Stanica.

10.2.3. Juries

- Hervé Rivano was reviewer in the following PhD defense committee:
  – L. Wang, Facilitating Mobile Crowdsensing from both Organizers' and Participants' Perspectives, Télécom SudParis and Université Pierre et Marie Curie – Paris 6, 05/2016.
- Razvan Stanica was member in the following PhD defense committee:
  – M. Abualhoul, Visible Light and Radio Communication for Cooperative Autonomous Driving, Mines Paris Tech, Université Paris Sciences et Lettres, 12/2016.
- Fabrice Valois was reviewer in the following PhD defense committee:
  – M. G. Chalhoub, Enhanced Communication in Data Collection Multihop WSN, LIMOS, Univ. Clermont Ferrand, 07/2016.
- Fabrice Valois was member in the following PhD defense committee:
  – M. B. Tian, Data Dissemination Protocols and Mobility Model for VANETs, LIMOS, Univ. Clermont Ferrand, 10/2016.

10.3. Popularization

- Hervé Rivano has been involved in several popularization actions, in particular with the Grand Lyon metropolis (on air quality monitoring, smart cities infrastructure), SPL Lyon Part Dieu (on sensors networks), the TUBA (on sensors, mobility, networking), and Cité du Design et de l'Industrie.
- Hervé Rivano was a panelist at a pubic debate on "revolutions in education, culture, thinking and public space".

VEGAS Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of Organizing Committees

Sylvain Lazard organized with S. Whitesides (Victoria University) the 15th Workshop on Computational Geometry at the Bellairs Research Institute of McGill University in Feb. (1 week workshop on invitation).

Monique Teillaud co-organized the workshop *20 years of CGAL*, with Efi Fogel, Michael Hoffmann, and Emo Welzl, Zurich, Switzerland, September 10-11, and she gave a talk.

9.1.2. Scientific Events Selection

9.1.2.1. Member of Conference Program Committees

Monique Teillaud was a member of the program committee of EuroCG, *European Workshop on Computational Geometry*.

9.1.2.2. Reviewer

All members of the team are regular reviewers for the conferences of our field, namely the *Symposium on Computational Geometry* (SoCG) and the *International Symposium on Symbolic and Algebraic Computation* (ISSAC) and also SODA, CCCG, EuroCG.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Monique Teillaud is a managing editor of JoCG, *Journal of Computational Geometry*. She is also a member of the Editorial Board of IJCGA, *International Journal of Computational Geometry and Applications*. She resigned from the Editorial Board of CGTA, *Computational Geometry: Theory and Applications*, after unsuccessfully trying to convince the Editorial Board to leave Elsevier and move to a free (libre and gratis) open-access model.

Marc Pouget and Monique Teillaud are members of the CGAL editorial board.

Olivier Devillers resigned from the Editorial Board of Graphical Models (Elsevier) after discussion to move to a free open-access model.

9.1.3.2. Reviewer - Reviewing Activities

All members of the team are regular reviewers for the journals of our field, namely *Discrete and Computational Geometry* (DCG), *Computational Geometry. Theory and Applications* (CGTA), *Journal of Computational Geometry* (JoCG), *International Journal on Computational Geometry and Applications* (IJCGA), *Journal on Symbolic Computations* (JSC), *SIAM Journal on Computing* (SICOMP), *Mathematics in Computer Science* (MCS), etc.

9.1.4. Invited Talks

Olivier Devillers was invited to give a talk at the geometry week organized by GipsaLab in Grenoble.

Guillaume Moroz was invited to give talks at the LIGM seminar in Marne-la-Vallée university, at the SpecFun team seminary in Inria Saclay and at the MSDOS workshop in CIRM.

Monique Teillaud was invited to give a talk talk at the seminar *Computer Science meets Mathematics* of the University of Luxembourg, February 8: "CGAL, geometry made practical". She was invited to give a talk at the *Mittagsseminar* of Institute of Theoretical Computer Science of ETH Zürich on September 8: "Delaunay triangulations on orientable surfaces of low genus".

9.1.5. Seminar Organization

We invited:

Kacper Pluta (LIGM - Laboratoire d'Informatique Gaspard-Monge),

Mickaël Buchet (Tohoku University).

Andrew Yarmola (University of Luxembourg).

9.1.6. Leadership within the Scientific Community

9.1.6.1. Steering Committees

M. Teillaud has been elected Chair of the Steering Committee of the Symposium on Computational Geometry (SoCG). She is a member of the Steering Committee of the European Symposium on Algorithms (ESA).

9.1.7. Research Administration

9.1.7.1. Hiring committees

Sylvain Lazard was president of the hiring committee for a Professor position (UL/École des Mines/LORIA).

Monique Teillaud was the representative of LORIA in the hiring committee for an Associate Professor (MCF) position (École des Mines/LORIA) and composed the committee with the president. She was also a member of the Inria CR2 Nancy - Grand Est interview committee and of the hiring committee for a Professor position (FST/LORIA).

9.1.7.2. National committees

L. Dupont is a member of "Commission Pédagogique Nationale" (CPN) Information-Communication / Métiers du Multimédia et de l'Internet.

M. Teillaud is a member of the Scientific Board of the *Société Informatique de France* (SIF).

M. Teillaud is a member of the working group for the BIL, *Base d'Information des Logiciels* of Inria.

9.1.7.3. Local Committees and Responsabilities

S. Lazard: Head of the PhD and Post-doc hiring committee for Inria Nancy-Grand Est (since 2009). Member of the *Bureau de la mention informatique* of the *École Doctorale IAE+M* (since 2009). Head of the *Mission Jeunes Chercheurs* for Inria Nancy-Grand Est (since 2011). Head of the Department Algo at LORIA (since 2014). Member of the *Conseil Scientifique* of LORIA (since 2014).

G. Moroz is member of the Mathematics Olympiades committee of the Nancy-Metz academy. G. Moroz is member of the *Comité des utilisateurs des moyens informatiques*

M. Pouget is elected at the *Comité de centre*, and member of the board of the Charles Hermite federation of labs. M. Pouget is secretary of the board of *AGOS-Nancy*.

M. Teillaud is a member of the BCP, *Bureau du Comité des Projets* and of the CDT, *Commission de développement technologique* of Inria Nancy - Grand Est.

9.1.7.4. Websites

M. Teillaud is maintaining the Computational Geometry Web Pages http://www.computational-geometry.org/, hosted by Inria Nancy - Grand Est since December. This site offers general interest information for the computational geometry community, in particular the Web proceedings of the Video Review of Computational Geometry, part of the Annual/international Symposium on Computational Geometry.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master : O. Devillers, *Synthèse, image et géométrie* , 12h (academic year 2015-16) and 12h (academic year 2016-2017), IPAC-R, Université de Lorraine. https://members.loria.fr/ODevillers/master/

Master: Marc Pouget, *Introduction to computational geometry*, 10.5h, M2, École Nationale Supérieure de Géologie, France.

Licence: Sylvain Lazard, *Algorithms and Complexity*, 25h, L3, Université de Lorraine, France.

Licence: Laurent Dupont, *Algorithmique*, 78h, L1, Université de Lorraine, France.

Licence: Laurent Dupont, *Web development*, 75h, L2, Université de Lorraine, France.

Licence: Laurent Dupont, *Traitement Numérique du Signal*, 10h, L2, Université de Lorraine, France.

Licence: Laurent Dupont, *Data structures*, 40h, L1, Université de Lorraine, France.

9.2.2. Supervision

PhD : Ranjan Jha, Étude de l'espace de travail des mécanismes à boucles fermées, defended in Jul. 2016, supervised by Damien Chablat, Fabrice Rouillier and Guillaume Moroz.

PhD in progress : Sény Diatta, Complexité du calcul de la topologie d'une courbe dans l'espace et d'une surface, started in Nov. 2014, supervised by Daouda Niang Diatta, Marie-Françoise Roy and Guillaume Moroz.

PhD in progress : Charles Duménil, Probabilistic analysis of geometric structures, started in Oct. 2016, supervised by Olivier Devillers.

PhD in progress : Iordan Iordanov, Triangulations of Hyperbolic Manifolds, started in Jan. 2016, supervised by Monique Teillaud.

Postdoc: Rémy Imbach, Topology and geometry of singular surfaces with numerical algorithms, supervised by Guillaume Moroz and Marc Pouget.

9.2.3. Juries

O. Devillers was president of the PhD defense committee of Vincent Despré (Univ. Grenoble-Alpes).

G. Moroz was in the PhD defense committee of Ranjan Jha (IRCCyN).

9.2.4. Teaching Responsabilities

Licence: Laurent Dupont, creation and opening of L3 (Licence Professionnelle) « Animation des Communautés et Réseaux Socionumériques », Université de Lorraine, France.

VERIDIS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Organization of Scientific Events

10.1.1.1. General Chair, Scientific Chair

Jasmin Blanchette and Stephan Merz, with the help of Anne-Lise Charbonnier of Inria Nancy, organized the *7th International Conference on Interactive Theorem Proving* (ITP 2016) and associated workshops in Nancy, on August 22–27, 2016.

10.1.1.2. Member of the Organizing Committees

Jasmin Blanchette co-organized the *Hammers for Type Theories* (HaTT 2016) workshop at IJCAR 2016 in Coimbra, Portugal.

Pascal Fontaine co-organized the *First SC^2 workshop on Satisfiability Checking and Symbolic Computation* with Erika Abraham (RWTH, Aachen).

Pascal Fontaine co-organized the 5th Workshop on Practical Aspects of Automated Reasoning (PAAR) with Stephan Schulz (DHBW Stuttgart) and Josef Urban (Czech Technical University in Prague).

Dominique Méry was a member of the organizing committees of the workshops F-IDE, BWare, Impex, and Formose.

Dominique Méry, together with Yamine Aït-Ameur (Toulouse) and Shin Nakajima (Tokyo), organized a meeting on *Implicit and explicit semantics integration in proof based developments of discrete systems* in November within the series of NII Shonan meetings.

The International Summer School on Verification Techniques, Systems, and Applications (VTSA) has been organized since 2008 in the Greater Region (Nancy, Saarbrücken, Luxembourg, Liège, and Koblenz), and Stephan Merz and Christoph Weidenbach are co-organizers of VTSA. In 2016, VTSA took place at the end of August in Liège, Belgium.

10.1.2. Selection of Scientific Events

10.1.2.1. Chair of Conference Program Committees

Jasmin Blanchette and Stephan Merz chaired the program committee of the *7th International Conference on Interactive Theorem Proving* (ITP 2016).

Stephan Merz co-chaired the program committee of the Third International Workshop on Formal Reasoning in Distributed Algorithms (FRiDA), organized in May as a satellite of NETYS in Marrakech, Morocco.

10.1.2.2. Member of Conference Program Committees

Jasmin Blanchette served on the program committee of the *International Conference on Tests and Proofs* (TAP).

Pascal Fontaine served on the program committee of the workshop SMT.

Stephan Merz served on the program committees of the international conferences ABZ, ICALP, and ICFEM, and of the workshops ARQNL, FMICS-AVoCS, and GRSRD.

Martin Strecker served on the program committees of ICTERI and ICGT.

Thomas Sturm served on the program committees of CASC and of the SC^2 workshop at SYNACS.

Uwe Waldmann served on the program committee of the workshop PAAR, colocated with IJCAR 2016.

Christoph Weidenbach served on the program committee of IJCAR.

10.1.3. Journals

Stephan Merz, together with Jun Pang of the University of Luxembourg, edited two volumes of a special issue on Formal Engineering Methods in the journal *Formal Aspects of Computing*.

Thomas Sturm is a member of the editorial boards of the *Journal of Symbolic Computation* (Elsevier) and *Mathematics in Computer Science* (Springer).

Christoph Weidenbach is an editor of the Journal of Automated Reasoning. Together with Deepak Kapur and Stéphane Demri he edited a special issue of JAR containing selected and extended papers of IJCAR 2014.

10.1.4. Invited Talks

Jasmin Blanchette gave invited talks at the Semantic Representation of Mathematical Knowledge Workshop organized by the Wolfram Foundation and the Fields Institute in Toronto, Canada, at the Sino-German Frontiers of Science Symposium (SINOGFOS) organized by the Humboldt Foundation and the Chinese Academy of Science in Shenzhen, China, at the Workshop on Proofs, Justifications, and Certificates in Toulouse, France, at the Universality of Proof seminar at Schloss Dagstuhl in Wadern, Germany, and at the Prague Inter-Reasonning Workshop (PIWo) in Prague, Czech Republic.

Pascal Fontaine gave an invited talk at the AFSEC day of the GdR GPL, and at GT-Verif day of the GdR IM.

Stephan Merz gave invited talks at the TRS meeting and the JAIST-LORIA workshop in Kanazawa, Japan, on *Satisfiability Checking for Modal Logics via SMT Solving* and on *The Design of the TLA$^+$ Proof System*. He also gave an invited talk at the *Cloud Reliability Workshop* in Shenzhen, China, on *A Formal Analysis of Pastry*.

Thomas Sturm gave an invited talk at ACA 2016 titled *Real Problems over the Reals*.

Christoph Weidenbach gave an invited lecture at the SMT Summer School in Lisbon, Portugal.

10.1.5. Leadership within the Scientific Community

Jasmin Blanchette served as editor of the newsletter of the Association for Automated Reasoning (AAR) and as member of the AAR board.

Jasmin Blanchette and Christoph Weidenbach were elected on the CADE (*Conference on Automated Deduction*) Inc. Board of Trustees. Christoph Weidenbach was elected President of CADE Inc. by the CADE Inc. Board of Trustees.

Jasmin Blanchette is an ex officio member of the steering committee of the conference series *Interactive Theorem Proving*.

Pascal Fontaine is an SMT-LIB manager, together with Clark Barrett (Stanford University) and Cesare Tinelli (University of Iowa). He is a member of the FroCoS steering Committee. He has been an elected CADE trustee since October 2014. He serves as member of the Association for Automated Reasoning (AAR) board.

Stephan Merz is a member of the IFIP Working Group 2.2 on *Formal Description of Programming Concepts*. He is also a member of the steering committee of the workshop on Automated Verification of Critical Systems (AVoCS).

Thomas Sturm is a member of the steering committee of the conference series *Mathematical Aspects of Computer and Information Sciences* (MACIS).

Christoph Weidenbach is a member of the steering committee of IJCAR.

10.1.6. Scientific Expertise

Pascal Fontaine was a panel member for the CASC-25 competition of first-order theorem prover.

Stephan Merz served as an expert for the French Agence Nationale de la Recherche (ANR), the Haut Conseil de l'Évaluation de la Recherche et de l'Enseignement Supérieur (HCERES), and for the European Research Council (ERC).

Christoph Weidenbach served as an expert for GIF (German Israel Foundation), the FWF (Austrian Science Fund) and the DFG (German Science Foundation).

10.1.7. Research Administration

Dominique Méry is the head of the Doctoral School IAEM Lorraine for the University of Lorraine.

Stephan Merz is a member of the Scientific Directorate of the International Computer Science Meeting Center in Schloss Dagstuhl. Until August 2016, he was the head of the PhD committee for computer science of the Doctoral School IAEM Lorraine. Since September 2016, he is the delegate for scientific affairs at the Inria Nancy – Grand Est research center. He is also the delegate for the organization of conferences at Inria Nancy and the coordinator of the CPER *Sciences du Numérique* in Lorraine (2015–2020). He was a member of the hiring committee of junior researchers at Inria Nancy in 2016 and a member of the committee for the SIF thesis award (*Prix Gilles Kahn*).

Christoph Weidenbach is a member of the selection committee of the Saarbrücken Graduate School in Computer Science.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: Jasmin Blanchette, Computational Metaphysics (guest lecturer), 4 HETD, Freie Universität Berlin, Germany.

Licence: Marie Duflot-Kremer, Algorithmique et Programmation 1, 80 HETD L1 Mathématiques, Informatiques Sciences pour l'Ingénieur, Université de Lorraine, France.

Licence: Marie Duflot-Kremer, Bases de données 1 et 2, 35 HETD, L2 informatique, Université de Lorraine, France.

Licence: Marie Duflot-Kremer, Projet personnel et communication, 50 HETD, L2 informatique, Université de Lorraine, France.

Master : Marie Duflot-Kremer, Vérification de systèmes, 30 HETD, M1 Informatique, Université de Lorraine, France.

Master: Marie Duflot-Kremer and Stephan Merz, Vérification algorithmique, 30 HETD, M2 Informatique, Université de Lorraine, France.

Master: Marie Duflot-Kremer and Stephan Merz, Elements of Model Checking, 36 HETD, M2 Informatique and Master Erasmus Mundus DESEM, Université de Lorraine, France.

Master : Marie Duflot-Kremer and Stephan Merz, Conception et architectures distribuées 24 HETD M1 informatique, Université de Lorraine

Licence : Pascal Fontaine, Structure des ordinateurs, 67 HETD, L2 MIASHS, parcours MIAGE, Université de Lorraine, France.

Licence : Pascal Fontaine, Logique des prédicats, 32 HETD, L2 MIASHS, Université de Lorraine, France.

Master : Pascal Fontaine, Réseaux, 50 HETD, M1 MIAGE, Université de Lorraine, France.

Master : Pascal Fontaine, Génie Logiciel, 30 HETD, M1 MIAGE, IGA Rabbat et Université de Lorraine, Maroc.

Master: Dominique Méry, Models and algorithms, 60 HETD, M1, Telecom Nancy, Université de Lorraine, France.

Master: Dominique Méry, Formal model engineering, 24 HETD, M2, Telecom Nancy, Université de Lorraine, France.

Master: Dominique Méry, Modeling Systems, 30 HETD, M2, Telecom Nancy, Université de Lorraine, France.

Master: Dominique Méry, Modeling Systems, 36 HETD, M2 informatique and Master Erasmus Mundus DESEM, Université de Lorraine, France.

Master: Dominique Méry, Event-B modeling, 8 HETD, NUI Maynooth.

Master: Uwe Waldmann, Automated Reasoning I, 90 HETD, Universität des Saarlandes, Germany.

Master: Uwe Waldmann, Automated Reasoning II, 60 HETD, Universität des Saarlandes, Germany. This lecture received the teaching award of the Computer Science Students Association.

10.2.2. Supervision

PhD: Noran Azmy, An Automated Proof of Correctness for Pastry, Saarland University and Université de Lorraine, defended on November 24, 2016.

PhD: Marek Košta, Computational Logic, Universität des Saarlandes. Defended on December 13, 2016.

PhD in progress: Gabor Alági, Efficient Reasoning in Finite Domains, Saarland University. Supervised by Christoph Weidenbach, since 11/2012.

PhD in progress: Haniel Barbosa, Refutational Completeness in Satisfiability Modulo Theories, Université de Lorraine and UFRN (Natal, Brazil). Supervised by David Déharbe, Pascal Fontaine, and Stephan Merz, since 12/2013.

PhD in progress: Martin Bromberger, Arithmetic Reasoning, Saarland University. Supervised by Christoph Weidenbach, since 07/2014.

PhD in progress: Mathias Fleury, Formalization of Logical Calculi, Saarland University. Supervised by Christoph Weidenbach and Jasmin Blanchette, since 09/2015.

PhD in progress: Marco Voigt, Decidable Hierarchic Combinations, Saarland University. Supervised by Christoph Weidenbach, since 11/2013.

PhD in progress: Daniel Wand, First-Order Extensions to Support Higher-Order Reasoning, Saarland University. Supervised by Christoph Weidenbach and Jasmin Blanchette, since 02/2011.

10.2.3. Thesis committees

Dominique Méry served on the committees for the PhD thesis of Pierre Halmagrand (CNAM) and the habilitation thesis of Brahim Hamid (Université Toulouse Jean Jaurès).

Stephan Merz served as a reviewer for the PhD thesis of Yakoub Némouchi (Université Paris Saclay) and as a PhD examiner for the PhD thesis of Alland Blanchard (Université d'Orléans).

10.3. Science outreach

Marie Duflot-Kremer took part in various science outreach activities, with a public ranging from primary school kids to golden agers, including high school and potential university students. A selection of these activities is given below:

- two days at "Fête de la science" in Nancy (Faculté de Sciences et Technologies and ARTEM);
- a course on Scratch for high school professors in charge of teaching optional course ISN (Informatique et Sciences du Numérique);
- her explanations of three new unplugged activities (data bases, model checking and text compression) have been recorded by Inria and will soon be added to the Youtube channel of Interstice intended for promoting and sharing such activities;
- she is in charge of the scientific part of the second module in the Class'Code project, aiming at training teachers and educators for carrying out computer science activities with childrens aged 8 to 14 years;

- she is a member of two groups including university and secondary school teachers, dedicated to the training of math teachers who now teach computer science to students of age 11 to 18. A day of training was given to high school teachers;

- "Journée femmes de Sciences": one day dedicated to the promotion of science towards 14 year-old girls;

- she is a member of the steering committee preparing an itinerant exposition intended for explaining computer science to the public, to be released in December 2016;

- she presented unplugged outreach activities to the staff at Cité des Sciences (Paris);

- she conducted during five months an experiment on the discovery of programming for golden agers using Scratch;

- she took part in "Pépinière 4.0" and 4.1, explaining computer science concepts to teachers.

VIRTUAL PLANTS Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

Yann Guédon was member of the organizing committee of the 48ème journées de statistique de la SFdS.

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

Christophe Godin and Yann Guédon were members of the program committee of the IEEE International Conference on Functional-Structural Plant Growth Modeling, Simulation, Visualization and Applications (FSPMA 2016).

9.1.2.2. Reviewer

Frédéric Boudon was referee for papers submitted to Eurographics and Siggraph Asia and was a rewiewer and a member of the jury for best paper of the Journée Francaise d'Informatique Graphique (jFIG).

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Christophe Godin is a member of the Editorial Board of Frontiers in Plant Sciences. He was also a guest editor for PLoS Computational Biology,

9.1.3.2. Reviewer - Reviewing Activities

- Yann Guédon was referee for papers submitted to Functional Ecology and Journal of Internet Services and Applications.
- Christophe Godin reviewed papers for several journals in plant sciences and modelling.

9.1.4. Invited Talks

- C. Godin gave invited talks at RDP-ENS-Lyon research unit in Lyon (January), at the African Institute for Mathematical Sciences (AIMS), Dakar, Senegal, (February), at the University of Lund, Sweden (June), at the Journées scientifiques Inria, Rennes, (June), at the European Conference on Computational Biology and Bioinformatics, The Hague, The Netherlands (September), Inria/Inra joint meeting programme, Aix-en-Provence, (October), at CRBM research unit in Montpellier (October), BPMP research unit in Montpellier (December), and a plenary talk at the International workshop on multiscale modeling of complex systems in plant and developmental biology, U. Riverside, USA (December).
- F. Boudon gave invited talks at the workshop "Tree data and modelling", Tampere, Finland (June), in the AGAP scientific seminar and at the journée AGAP.
- Y Guédon gave an invited talk at the AGAP scientific seminar.
- C. Pradal gave invited talk at the "Agricultural Model Exchange Initiative" in Bologna, Italy (June), at the workshop "Multi-scale Plant Modeling" at the Pacific Northwest National Laboratory, USA (August), and at the workshop SUCCES, in Paris (November).

9.1.5. Leadership within the Scientific Community

- Christophe Godin is member of the Board of the Functional Structural Plant Models series of conferences.

- Christophe Godin is co-coordinator with Patrick Lemaire of the 4th Research Axis on Imaging in Biology and Modeling of the Institute for Computational Biology (IBC) of Montpellier.
- Christophe Godin spent 3 days at the African Institute for Mathematical Sciences (AIMS) to study potential future collaborations between Inria and AIMS in Dakar.

9.1.6. Scientific Expertise

- Christophe Godin is a member of the International Scientific Advisory Committee of the new Plant Phenotyping and Imaging Research Centre (P2IRC), Saskatchewan, Canada.
- Christophe Godin is a member of the Review and Mentoring committee of James Lock's group in Sainsbury Lab, Cambridge, UK.
- Christophe Godin is a member of the scientific councils of the Environnement-Agronomie department (up to August 2016) and of the Biologie et Amélioration des Plantes Department at Inra (Starting September 2016).

9.1.7. Research Administration

- Christophe Godin is a member of the project committee board at Sophia-antipolis Mediterrannée Reacher Center
- Christophe Godin is also part of the steering board of the Institute for Computational Biology (IBC) of Montpellier.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master Computer Science: Frédéric Boudon, Guillaume Cerutti, Christophe Godin, Christophe Pradal and David Vanderhaege and Loïc Barthe [IRIT, Toulouse], Computer graphics, 45h, M2, University Montpellier, France.

Master Computer Science: Christophe Godin, Frédéric Boudon, Computational and Discrete Geometry and graphics, 15h, M1, University Montpellier, France.

Master Functional Plant Biology: Christophe Godin, Introduction to plant modeling, 25h, M2, University Montpellier, France.

Master Life Sciences (IMaLiS): module co-organized by Patrick Lemaire and Christophe Godin, Animal and Vegetal Morphogenesis, 6 days, 4 h + TD supervision every afternoon, ENS Paris, Montpellier, France.

Master Functional Plant Biology: Christophe Godin, Phyllotaxis class in a module on Mathematical modeling in biology, 4h, M2, University Montpellier, France.

Master Functional Bioinformatics: Christophe Godin and Patrick Lemaire (Coordination O. Radulescu), Modeling in biology, 5h, M2, University Montpellier, France.

Master Biostatistics: Yann Guédon and Pierre Fernique, Stochastic processes, 32h, M2, University Montpellier, France.

Master Bioinformatique - Biomathématiques: Christophe Godin, iPlant, Modeling organ development, 4h, M2, Cheikh Anta Diop University (UCAD), Dakar, Senegal.

Master Plant Breeding: Christophe Pradal, Plant modelling, 4h, M2, Project CultiVar, University Montpellier, France.

Engineering Degree: SupAgro Montpellier. Christophe Pradal and Christian Fournier. "Introduction to modelling" (1st year, 12h).

9.2.2. Supervision

- PhD in progress : Anne Schneider, *"Modeling branching in Roses"*, Angers University, Jessica Bertheloo, C. Godin, F. Boudon.

- PhD in progress : Hadrien Oliveri, *"Mechanical modeling of organ growth"*, Montpellier University, C. Godin, J traas and O. Ali.

- PhD in progress : Jean-Louis Dinh, *"Coupling flux and growth models in plant development"*, Nottingham University, C. Hodgman, C. Godin.

- PhD in progress : Jean-Philippe Bernard, *"Meshless methods for organ development"*, Montpellier University, C. Godin, B. Gilles.

- PhD in progress : Severine Persello, *"Structural-Functional modeling of yield and fruit quality build-up of the mango, and integration of the effects of cultural practices"*, Montpellier University, F. Normand, I. Grechi, F. Boudon.

- PhD : Beatriz Moreno-Ortega, Developmental instability in lateral roots of maize: a multi-scale analysis, Montpellier SupAgro, December 12th 2016, Betrand Muller, Yann Guédon.

- PhD : Sixtine Passot, Exploring pearl millet root system and its outcome for drought tolerance, Montpellier University, September 30th 2016, Laurent Laplaze, Yann Guédon.

- PhD in progress : Marc Labadie, Study of the alternation between vegetative and floral development in strawberry: spatio-temporal architecture and analysis of key flowering genes, Bordeaux University, Béatrice Denoyes, Yann Guédon.

9.2.3. Juries

- Christophe Godin was the Opponent of Beruz Bozorg, June, University of Lund, Sweden, a member of the PhD Jury of Gaël Michelin, October University Cote d'Azur, Président of the PhD Jury of Sam Caullodin, December ENS-Lyon. He also participated in the PhD committees of Adrien Corot (AgroparisTech), Léo Serra (AgroParisTech) and Mathilde Dumond (ENS-Lyon).

- Yann Guédon was referee of Philippe Cuvillier PhD: On temporal coherency of probabilistic models for audio-to-score alignment, Pierre and Marie Curie University, Paris, December 15th 2016, Arshia Cont (supervisor).

9.3. Popularization

- Olivier Ali is a member of the writing committee of the newsletter of the Sophia-Antipolis Méditerrannée Inria Centre.

- High School: Christophe Godin gives regular 2h classes at Lycée Pompidou (Montpellier) and in other Lycées.

- Christophe Godin gave two invited seminars in the context of the Maths Week (March), at the Lycée International de Valbonne, France.

- Christophe Godin gave an interview to the European Journal Labtimes about their paper published in eLife: Alejandrolvido (2016). Green noise. Labtimes 5, 34–35.

VISAGES Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- Olivier Commowick was General Chair of the "Multiple Sclerosis Lesions Segmentation Challenge", MICCAI 2016.

10.1.1.2. Member of the Organizing Committees

- Olivier Commowick, Michael Kain, Florent Leray, Jean-Christophe Ferré, Anne Kerbrat, Mathieu Simon and Christian Barillot organized the "Multiple Sclerosis Lesions Segmentation Challenge", MICCAI 2016.
- Christian Barillot is member of the Board of Directors of IPMI conference series (Information Processing in Medical Imaging)

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Christian Barillot was area chair of SPIE Medical Imaging 2016
- Christain Barillot was area chair of IEEE ISBI 2016

10.1.2.2. Member of the Conference Program Committees

- Christian Barillot was TPC Member of PatchMI-2016, MICCAI-MCV2016
- Emmanuel Caruyer was Program Committee member of the CDMRI MICCAI workshop.

10.1.2.3. Reviewer

- ISBI (Emmanuel Caruyer, Olivier Commowick), ISMRM (Élise Bannier), MICCAI (Emmanuel Caruyer, Olivier Commowick).

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Christian Barillot is member of Editorial Boards of Medical Image Analysis, Current Medical Imaging Reviews, ISRN Signal Processing
- Christian Barillot is Editor-in-Chief of Frontiers in ICT: Computer Image Analysis.

10.1.3.2. Reviewer - Reviewing Activities

- Am J Neuroradiol (Élise Bannier), Comput Biol Med (Christian Barillot), Comput Meth Prog Bio (Christian Barillot), Front Neurosc (Pierre Maurel), Hum Brain Mapp (Emmanuel Caruyer), IEEE TMI (Pierre Maurel, Olivier Commowick), Med Image Anal (Olivier Commowick), Med Phys (Christian Barillot) Neuroimage (Christian Barillot, Isabelle Corouge, Emmanuel Caruyer, Olivier Commowick), Pattern Recog Lett (Christian Barillot).

10.1.4. Invited Talks

- Gilles Edan gave an invited keynote at the world 2016 ECTRIMS conference (London, UK)
- Christian Barillot published an invited position paper for the 20th anniversary of Medical Image Analysis
- Christian Barillot gave an invited lecture at the 25ème COLLOQUE DE LA CONFÉRENCE NATIONALE DES COMITÉS DE PROTECTION DES PERSONNES (CNCP)

- Christian Barillot gave an invited lecture at the Global Bioimaging Training Program, Eurobioimaging ESFRI program, EMBL, Germany

- Christian Barillot gave an invited lecture at the Miccai-BrainLes Workshop 2016, Athenes, GR

- Christian Barillot gave an invited lecture at the Maria de Maeztu Strategic Research Program; Department of Information and Communication Technologies, UPF, Barcelona, Spain

- Christian Barillot gave an invited lecture at the RIR 2016 - Emerging challenges in neuroscience, neurology & psychiatry, Paris, France

- Christian Barillot gave an invited lecture at the Biomedical Imaging Seminar, Erasmus MC, Rotterdam

- Christian Barillot gave an invited lecture at the FCRIN day on "Specificities of clinical research in imaging"

- Christian Barillot, Emmanuel Caruyer and Olivier Commowick gave an invited talk at the "MRI based Virtual Histology: Meeting Tomorrow's Healthcare Challenges Today" workshop, University College London, May 26-27th.

10.1.5. Leadership within the Scientific Community

- Gilles Edan was elected Fellow of the European Academy of Neurologie. Member of the EAN teaching committee in 2015

- Christian Barillot is member of the Scientific Council of the INS2I [0] Institute of CNRS since 2011 and is Chairman of the Board since 2015

- Christian Barillot is member of the C3N committee (CNRS)

- Christian Barillot is member of the scientific board of "GIS France Grilles"

10.1.6. Scientific Expertise

- Christian Barillot provided an expertise for the Royal Netherlands Academy of Arts and Sciences (KNAW)

- Christian Barillot provided expertise for the EPSRC, UK

- Christian Barillot provided an expertise for ANRT

- Christian Barillot provided expertise for the Assistant professor committee for the University of Paris Sud

- Emmanuel Caruyer provided expertise for the Inria Associate Team program.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master SIBM, University of Angers-Brest-Rennes

Christian Barillot, Élise Bannier, Emmanuel Caruyer, Olivier Commowick, Isabelle Corouge, Jean-Yves Gauvrit, Sylvain Prima, 3D medical imaging – visualization, segmentation, fusion, management, normalization (26h)

Sylvain Prima, Master 1 SIBM, University of Rennes (5h)

Christian Barillot is responsible for one semester

Jean-Yves Gauvrit is the coordinator for the Master

École Supérieure d'Ingénieur de Rennes (ESIR): Pierre Maurel, General image processing (60h), Algorithmics and complexity (60h), Medical imaging (60h)

ENS Rennes: Pierre Maurel, Introduction to image processing (24h)

ISTIC – Université of Rennes 1: Emmanuel Caruyer, Software Engineering (12h)

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[0] http://csins2i.irisa.fr

10.2.2. Supervision

PhD: Hrishikesh Deshpande, "Dimensionality Reduction and Statistical Learning for Computational Modeling of Natural Evolution of Brain Pathologies", Inria, Jun 2012, Christian Barillot, Pierre Maurel.

PhD in progress: Sudhanya Chatterjee, "Image-based Tissue Compartment Characterization of Neural Circuits with in-vivo MRI", Inria, from Nov 2015, Christian Barillot, Olivier Commowick, Jean-Christophe Ferré, Simon Warfield.

PhD in progress: Renaud Hédouin, "Biomarker discovery in brain imaging by using diffusion MRI", Inria/Inserm, from November 2013, Christian Barillot, Olivier Commowick.

PhD in progress: Cédric Meurée, "Quantitative Analysis Of Arterial Spin Labeling MRI For Robust Parametric Information Of Perfusion Maps", Inria / Siemens, from Mar 2014, Christian Barillot, Pierre Maurel.

PhD in progress: Corentin Vallée, "Joint estimation of neuronal activation, resting-state and basal metabolism from Arterial Spin Labeling", Christian Barillot, Isabelle Corouge, Pierre Maurel.

PhD in progress: Antoine Legouhy, "Analyse IRM multimodale pour l'e´tude du de´veloppement ce´re´bral chez le pre´mature´", from Nov 2016, Christian Barillot, Olivier Commowick, François Rousseau.

PhD in progress: Lorraine Perronnet, "Neurofeedback Using Virtual Reality And Combining Eeg-Mri For Brain Rehabilitation", Inria/CominLabs Hemisfer project, from Dec 2013, Christian Barillot, Maureen Clerc (Inria Sophia-Antipolis), Anatole Lecuyer (HYBRID project), Fabien Lotte (Inria Bordeaux)

PhD in progress: Haykel Snoussi, "Diffusion MRI detection of early occurring spine lesions in relapsing-remitting multiple sclerosis with late physical impairment", from Nov 2015, Christian Barillot, Gilles Edan, Emmanuel Caruyer

PhD in progress: Pierre-Yves Jonin, "Relationships between context-free and context-rich memory: cognitive and neural subtrates", Inria/Inserm/CNRS from Oct 2014, Christian Barillot (co-supervisor)

PhD in progress: Maia Proisy, "Perfusion in neonates and in pediatric diseases", Univ. Rennes 1/CHRU Rennes, from Oct 2014, Jean-Christophe Ferré (supervisor)

PhD in progress: Anne Kerbrat, "Quantitative MR imaging in MS for Brain and Spine", Univ. Rennes 1/CHRU Rennes, from Oct 2014, Gilles Edan (supervisor)

10.2.3. Juries

- Pierre Maurel, PhD committee Hrishikesh Despande, Inria, Rennes July 2016.
- Christian Barillot, PhD committees: Hrishikesh Despande, Inria, Rennes July 2016.
- Christian Barillot, PhD reviewer: Mehdi Hadj-Hamou, Inria, Sophia; Dec 2016; Ester Bron, Erasmus MC, NL, March 2016

10.3. Popularization

- Inria demonstration stand, Journées Françaises de Radiologie.

<h1 style="text-align:center; color:red;">WHISPER Project-Team</h1>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Member of the Conference Program Committees

- Pierre-Évariste Dagand: TyDe 2016 PC.
- Julia Lawall: FLOPS 2016 PC, PLDI 2016 EPC, LCTES 2016 PC, OOPSLA 2016 PC, ASE 2016 ERP, Middleware 2016 PC, GPCE 2016 PC, SLE 2016 PC, ICSME 2016 ERA.
- Gilles Muller: EDCC 2016 PC, OPODIS 2016 PC, DSN 2016 PC, ASPLOS 2016 PC.

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

- Julia Lawall: Editorial board of Science of Computer Programing (2008 - present).

10.1.2.2. Reviewer - Reviewing Activities

- Pierre-Évariste Dagand: Journal of Logical and Algebraic Methods in Programming (journal), Journal of Functional Programming (journal), Type-driven Development (workshop)
- Julia Lawall: Automated Software Engineering (journal).
- Gilles Muller: IEEE Transactions on Computers, Operating Systems Review.

10.1.3. Invited Talks

- Julia Lawall: PPL workshop (Japan) 2016, Linux Security Summit 2016, SPLASH 2016 Programming Languages Mentoring Workshop, IFIP WG 2.4 (Software Implementation Technology).

10.1.4. Research Administration

- Pierre-Évariste Dagand: Member of the steering committee for the Colloquium d'Informatique de L'UPMC Sorbonne Universités
- Julia Lawall: IFIP TC secretary (2012 - present).

  Hiring committees: Inria Paris (CR2, 2016), Bordeaux (MdC, 2016), CNAM (MdC, 2016)
- Gilles Muller: EuroSys steering committee (2013-2016), elected member of WG 10.4 (Dependability), representative of Inria in Sorbonne University's advisory committee for research, member of the project committee board of the Inria Paris Center, member of the Paris committee for allocating post-docs, PhD stipends and sabbaticals.
- Bertil Folliot: Elected member of the IFIP WG10.3 working group (Concurrent systems)

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- Licence: Pierre-Évariste Dagand, Distributed cooperating objects, L3, UPMC, France
- Professional Licence: Bertil Folliot, Programmation C, L2, UPMC, France
- Professional Licence: Bertil Folliot, Lab projects, L2, UPMC, France

10.2.2. Supervision

- PhD in progress : Antoine Blin, CIFRE Renault, Vers une utilisation efficace des multi-coeurs dans des systèmes embarqués à criticités multiples, 30 Janvier 2017, Gilles Muller, Julien Sopéna (Regal)

- PhD in progress : Mariem Saeid, Jens Gustedt (Camus), soutenance en 2017, Gilles Muller.

- PhD in progress : Cédric Courtaud, CIFRE Thalès, 2016-2018, Gilles Muller, Julien Sopéna (Regal).

- PhD in progress : Redha Gouicem, 2016-2018, Gilles Muller, Julien Sopéna (Regal).

10.2.3. Juries

- Pierre-Évariste Dagand: member of the Jury of Mahsa Najafzadeh (UPMC)

- Julia Lawall: PhD reporter for Pierre Wilke (Rennes), Alan Charpentier (Bordeaux), Guido Lena Cota (Milan, defense in 2017), Krishna Narasimhan (Frankfurt, defense in 2017). PhD jury for Ripon Saha (UT Austin).

- Gilles Muller: President of the PhD thesis of T. Tigori (U. of Nantes), Member of the Jury of V. Trigonakis (EPFL, Switzerland), Reporter of the PhD of A. Walker (U. of New South Wales, Australia).

10.3. Popularization

10.3.1. Talks

- Julia Lawall: Coccinelle: invited talk, Linux Security Summit, 2016.

- Julia Lawall: Coccinelle BoF: Linuxcon Europe 2016.

- Julia Lawall: Outreachy intern panel, Linuxcon Europe 2016.

- Julia Lawall: Prequel, 2016 OSADL networking day.

<p style="text-align:center">**WILLOW Project-Team**</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- I. Laptev will be program co-chair of IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2018.

10.1.1.2. Member of the Organizing Committees

- M. Trager is an organizer of "Minisymposium" on "Algebraic Vision" at the SIAM conference on Applied Algebraic Geometry (Atlanta, July 31st-August 4th 2017).

10.1.2. Scientific Events Selection

10.1.2.1. Area chairs

- IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2016 (I. Laptev).
- Asian Conference on Computer Vision (ACCV), 2016 (I. Laptev).
- International Conference on Computer Vision (ICCV), 2017 (J. Sivic).

10.1.2.2. Member of the Conference Program Committees

- IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2016 (R. Arandjelovic, A. Bursuc, P. Bojanowski, M. Cho, J. Sivic, G. Cheron).
- European Conference on Computer Vision (ECCV), 2016 (R. Arandjelovic, A. Bursuc, P. Bojanowski, G. Cheron, M. Cho, S. Kwak, J. Sivic, G. Cheron, I. Laptev).
- International Conference on Learning Representations, 2016 (J. Sivic).

10.1.3. Journals

10.1.3.1. Member of the editorial board

- International Journal of Computer Vision (I. Laptev, J. Ponce, J. Sivic).
- IEEE Transactions on Pattern Analysis and Machine Intelligence (I. Laptev, J. Sivic).
- Foundations and Trends in Computer Graphics and Vision (J. Ponce).
- I. Laptev and J. Sivic co-edit a special issue on "Video representations for visual recognition" in the International Journal of Computer Vision.
- J. Sivic co-edits a special issue on "Advances in Large-Scale Media Geo-Localization" in the International Journal of Computer Vision.

10.1.3.2. Reviewer

- International Journal of Computer Vision (M. Cho, G. Cheron, R. Arandjelovic).
- IEEE Transactions on Pattern Analysis and Machine Intelligence (R. Arandjelovic, P. Bojanowski, M. Cho, S. Kwak, G. Cheron, A. Bursuc).
- IEEE Transactions on Circuits and Systems for Video Technology (P. Bojanowski, B. Ham).
- IEEE Transactions on Image Processing (B. Ham).
- IEEE Signal Processing Letters (B. Ham).
- Computer Vision and Image Understanding (M. Cho, A. Bursuc).
- Elsevier Neurocomputing (B. Ham).

- EURASIP Journal on Image and Video Processing (B. Ham).

10.1.4. Others

- J. Sivic is senior fellow of the Neural Computation and Adaptive Perception program of the Canadian Institute of Advanced Research.
- R. Arandjelovic and J. Sivic obtained the outstanding reviewer award at IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2016.

10.1.5. Invited Talks

- V. Kantorov, Speaker at Second Christmas Colloquium on Computer Vision (December 2016, Moscow, SkolTech).
- I. Laptev, Invited talk, MailRu, Moscow, May 2016.
- I. Laptev, Invited talk, Skolkovo Robotics, Moscow, May 2016.
- I. Laptev, Invited talk, Deep Machine Intelligence and its Applications, SkolTech, Moscow, June 2016.
- I. Laptev, Invited talk, MSR-Inria Offsite Meeting, Paris, September, 2016.
- I. Laptev, Invited talk, University of Central Florida, Orlando, September, 2016.
- I. Laptev, Invited talk, Georgia Institute of Technology, Atlanta, September, 2016.
- I. Laptev, Invited talk, ECCV'16 Workshop on Brave new ideas for motion representations in videos, Amsterdam, October, 2016.
- I. Laptev, Invited talk, Open Day AI Innovation Factory , December, 2016.
- J. Ponce, Invited talk, New York University, January 2016.
- J. Ponce, Invited talk, Université Marne la Vallée, Mars 2016.
- J. Ponce, Invited talk, Workshop on Algebraic Vision, San Jose, May 2016.
- J. Ponce, Invited talk, Colloque LORIA, Nancy, May 2016.
- J. Ponce, Invited talk, Parthenos Workshop, Bordeaux, November 2016.
- J. Sivic, seminar, UC Berkeley, May, December, 2016.
- J. Sivic, invited talk, Brno University of Technology, April 2016.
- J. Sivic, Invited talk, the CIFAR workshop, Barcelona, December 2016.
- J. Sivic, Invited talk, Colloquium on Perspectives and New Challenges in Data Science, Ecole de Ponts ParisTech, 2016.
- M. Trager, invited speaker, AIM workshop "Algebraic Vision" (San Jose, May 2-6, 2016).

10.1.6. Leadership within the Scientific Community

- Member, advisory board, IBM Watson AI Xprize (J. Ponce).
- Member, steering committee, "France Intelligence Artificielle" initiative (J. Ponce).
- Member, advisory board, Computer Vision Foundation (J. Sivic).

10.1.7. Scientific Expertise

- J. Sivic gave an overview of state-of-the-art in computer vision at the seminar on artificial intelligence, Direction Generale des Entreprises (DGE) du Ministere de l'Economie, de l'Industrie et du Numerique, September, 2016.

10.1.8. Research Administration

- Member, Bureau du comité des projets, Inria, Paris (J. Ponce)
- Director, Department of Computer Science, Ecole normale supérieure (J. Ponce)
- Member, Scientific academic council, PSL Research University (J. Ponce)

- Member, Research representative committee, PSL Research University (J. Ponce).
- Member of Inria Commission de developpement technologique (CDT), 2012- (J. Sivic).
- Member of ANR evaluation committee (I. Laptev).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- Master : J. Ponce, "Introduction to computer vision", M1, Ecole normale superieure, 36h.
- Master : I. Laptev, J. Ponce and J. Sivic (together with C. Schmid, Inria Grenoble), "Object recognition and computer vision", M2, Ecole normale superieure, and MVA, Ecole normale superieure de Cachan, 36h.
- Master : I. Laptev, J. Ponce and J. Sivic, Cours PSL-ITI - Informatique, mathematiques appliques pour le traitement du signal et l'imagerie, 20h.

10.2.2. Supervision

PhD : Piotr Bojanowski, "Learning to annotate dynamic video scenes", graduated in 2016, I. Laptev, J. Ponce, C. Schmid and J. Sivic.

PhD : Guillaume Seguin, "Person analysis in stereoscopic movies", graduated in 2016, I. Laptev and J. Sivic.

PhD in progress : Ignacio Rocco, "Estimating correspondence between images via convolutional neural networks", started in Jan 2017, J. Sivic, R. Arandjelovic (Google DeepMind).

PhD in progress : Antoine Miech, "Understanding long-term temporal structure of videos Phd thesis proposal", started in Oct 2016, I. Laptev, J. Sivic, P. Bojanowski (Facebook AI Research).

PhD in progress : Gul Varol, "Deep learning methods for video interpretation", started in Oct 2015, I. Laptev, C. Schmid.

PhD in progress : Julia Peyre, "Learning to reason about scenes from images and language", started in Oct 2015, C. Schmid, I. Laptev, J. Sivic.

PhD in progress : Jean-Baptiste Alayrac, "Structured learning from video and natural language", started in 2014, I. Laptev, J. Sivic and S. Lacoste-Julien (Inria SIERRA / U. Montreal).

PhD in progress : Rafael Sampaio de Rezende, started in 2013, J.Ponce.

PhD in progress : Guilhem Cheron, "Structured modeling and recognition of human actions in video", started in 2014, I. Laptev and C. Schmid.

PhD in progress : Theophile Dalens, "Learning to analyze and reconstruct architectural scenes", starting in Jan 2015, M. Aubry and J. Sivic.

PhD in progress : Vadim Kantorov, "Large-scale video mining and recognition", started in 2012, I. Laptev.

PhD in progress : Maxime Oquab, "Learning to annotate dynamic scenes with convolutional neural networks", started in Jan 2014, L. Bottou (Facebook AI Research), I. Laptev and J. Sivic.

PhD in progress : Matthew Trager, "Projective geometric models in vision", started in 2014, J. Ponce and M. Hebert (CMU).

PhD in progress : Tuang Hung VU, "Learning functional description of dynamic scenes", started in 2013, I. Laptev.

10.2.3. Juries

- PhD thesis committee:
  - Stavros Tsogkas, Ecole Centrale, France, 2016 (J. Sivic, examinateur).
  - Sesh Karri, Ecole Normale Superieure, France, 2016 (J. Sivic, examinateur).

– Elliot Crowley, University of Oxford, UK, 2016, (J. Sivic, external examiner)

– Olivier Frigo, Universite Paris Descartes, France, 2016 (J. Sivic, rapporteur).

– Mattis Paulin, Inria Grenoble, France, 2017 (J. Sivic, rapporteur).

– Francesco Massa, ENPC, France 2017 (J. Sivic, examinateur).

– Philippe Weinzaepfel, Universite Grenoble Alpes, France, 2015 (I. Laptev, rapporteur).

– Guillaume Seguin, Ecole Normale Superieure, France, 2016 (I. Laptev, J.Ponce, J. Sivic, examinateurs).

– Piotr Bojanowski, Ecole Normale Superieure, France, 2016 (I. Laptev, J.Ponce, J. Sivic, examinateurs).

– Ala Aboudib, Télécom Bretagne, France, 2016 (J. Ponce).

– Philippe Weinzaepfel, Universite Grenoble Alpes, France, 2016 (J. Ponce).

10.3. Popularization

• Participation to the round table on "L'IA est-elle réservée aux GAFA", NUMA, June 2016 (J. Ponce).

• Participation to the round table on "Fictions, magie numerique et realites", Post-digital program, ENS/PSL Research University, October 2016 (J. Ponce).

• Debate with Jacques Attali, "Intelligence Artificielle, science avec conscience?", "Intelligence Artificielle : de la technique au business" Conference, December 2016 (J. Ponce).

• Participation to the round table on AI, Liberté Living Lab, December 2016 (J. Ponce).

• Participation to the round table on ethics at the Senate's public hearing on Artificial Intelligence, January 2017 (J. Ponce).

• Interview on Nolife 56Kast (https://www.youtube.com/watch?v=8UgH8_J2ugU) (J. Ponce).

• Interview in Le Monde (http://www.lemonde.fr/pixels/article/2016/01/08/intelligence-artificielle-ce-que-voient-les-machines_4843858_4408996.html) (J. Ponce).

• Interview in Télérama (http://www.telerama.fr/monde/trouver-le-calme-reconstituer-palmyre-ou-choisir-un-traitement-grace-a-l-ia,141131.php) (J. Ponce).

<p style="text-align: center; color: red;">**WIMMICS Project-Team**</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Valerio Basile: Area chair for Information Retrieval at CLiC-it 2016.

Elena Cabrio: Area chair (Semantics for applications). The Fifth Joint Conference on Lexical and Computational Semantics (*SEM 2016).

Scientific co-chair. Dagstuhl Seminar on Natural Language Argumentation: Mining, Processing, and Reasoning over Textual Arguments, 2016.

Fabien Gandon: co-chair and organizer of the Q4APS (Question Answering And Activity Analysis in Participatory Sites) Workshop at WWW [0].

Catherine Faron-Zucker: co-chair of the ESWC2016 workshop on Semantic Web for Scientific Heritage (SW4SH 2016),

co-chair of the first scientific day of the Inria Learning Lab, November 16th,

scientific chair of the Inria-Industry meeting (R2I) on Ed-Tech, December 1st.

Serena Villata: Chair together with Elena Cabrio, Graeme Hirst and Adam Wyner of the Dagstuhl Seminar on Mining, Processing, and Reasoning over Textual Arguments (Dagstuhl Seminar 16161), April 17-22, 2016. Local chair of the 29th International Conference on Legal Knowledge and Information Systems (JURIX 2016), December 14-16, 2016.

10.1.1.2. Member of the Organizing Committees

Valerio Basile: local organizer for JURIX 2016 and for the SENTIPOLC challenge at EVALITA 2016.

Elena Cabrio: 6th Open Challenge on Question Answering over Linked Data (QALD-6), ESWC 2016.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

Catherine Faron-Zucker: PC co-chair of the 22th Int. Conference on Conceptual Structures (ICCS 2016).

10.1.2.2. Member of the Conference Program Committees

Valerio Basile: *SEM , PEOPLES workshop at COLING, EACL 2017, WebNLG workshop at INLG, ESWC, EKAW, ICRA, CLiC-it, MIREL workshop at JURIX, DSAA, AIC workshop at BICA.

Michel Buffa: Web Audio Conference (WAC), ESWC, ISWC, WWW demo W3C track, Semantic Web Collaborative Spaces (SWCS) workshop.

Elena Cabrio: Association for Computational Linguistics conference (ACL, EACL), the Computational Linguistics conference (COLING), and the Extended Semantic Web Conference (ESWC).

Olivier Corby: Arima, EKAW, GraphQ, IC, ICCS, MoreBI, Top-K Shortest Path in Large Typed RDF Graphs Challenge at ESWC.

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[0] https://project.inria.fr/q4aps2016/

Catherine Faron-Zucker: ESWC (European Semantic Web Conference), ISWC (Int. Semantic Web Conference, P&D), WebEd (WWW Workshop on Web Science and Technology for Education), Q4APS2016 (WWW Workshop on Question Answering And Activity Analysis in Participatory Sites), EKM (EKAW workshop on Educational Knowledge Management), ISW-LOD (Int. Workshop on Semantic Web and Linked Open Data), CNIA (Conf. Nationale d'Intelligence Artificielle), IC (Ingénierie des Connaissances), EGC 2017 (Extraction et Gestion des Connaissances).

Fabien Gandon: IJCAI , ISWC (Senior PC), WWW , WebScience (Senior PC), ESWC, FOIS, IC, Semantics, SemWeb.Pro, CNIA (Conférence Nationale en Intelligence Artificielle), Diversity-Aware AI Workshop at ECAI, EGC, Journée Intelligence Artificielle et Big Data [0].

Alain Giboin is member of the steering committee of the COOP conference series (International Conferences on the Design of Cooperative Systems). He is also member of the program committee of: COOP, ESWC (In-use & Industrial Track), IC, SEMANTICS (Research Track), SEMANTICS (Posters and Demos), UBIMOB, WebSci.

Isabelle Mirbel: 27th International Conference on Advanced Information Systems Engineering (CAISE), IEEE Tenth International Conference on Research Challenges in Information Science.

Alexandre Monnin: WWW, ESWC, SWASH (ESWC workshop), WebSci, IC.

Oscar Rodríguez Rocha: KEOD, KSE

Andrea Tettamanzi: ECG 2017, ESWC, FLAIRS-29, FUZZ-IEEE, IC, LREC, MOD, PPSN, and SAC 2017 conferences, SW4SH workshop of ESWC.

Serena Villata: IJCAI, AAAI, JURIX.

10.1.2.3. Reviewer

Olivier Corby: ESWC, ISWC, WWW, EGC.

Isabelle Mirbel: ESWC.

Alain Giboin: ISWC, WWW, IHM.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Catherine Faron-Zucker: Revue d'Intelligence Artificielle, special issue "Ingénierie des Connaissances".

Fabien Gandon:

- Editor of the special issue of the Semantic Web Journal for best papers at ESWC 2015.
- Special issue RIA, Revue d'intelligence artificielle, Analyse intelligente des réseaux sociaux, volume 30, n. 4/2016.

Nhan Le Thanh: Journal of Science and Technology, Da Nang University- Issue on Information and Communications Technology.

Isabelle Mirbel: Ingénierie des Systèmes d'Information (Hermès).

10.1.3.2. Reviewer - Reviewing Activities

Valerio Basile: Language and Cognition (published by Cambridge University Press), Computer Speech & Language, Interacting with Computers.

Olivier Corby: Semantic Web Journal.

Catherine Faron-Zucker: Semantic Web Journal (SWJ), Journal of Web Science, ACM's Transactions on Internet Technology (TOIT), International Journal of Web Information Systems (IJWIS), International Journal of Metadata, Semantics and Ontologies (IJMSO).

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[0]http://bigia2016.irisa.fr/

Nhan Le Thanh: Journal of Science and Technology, Da Nang University- Issue on Information and Communications Technology.

Isabelle Mirbel: Neurocomp journal.

Alexandre Monnin: Minds and Machines, Big Data and Society, Revue d'intelligence artificielle.

Andrea Tettamanzi: Evolutionary Intelligence, Soft COmputing (SOCO).

Serena Villata: Journal of Logic and Computation, Argument & Computation, Artificial Intelligence.

10.1.4. Invited Talks

Valerio Basile: University of Turin, Building a default knowledge base of objects (and other stories of robots), November 16th.

Michel Buffa:

WWW 2016 W3C Track: HTML5 games, When your browser becomes a game console! Coding games for the Web + Demo of a HTML5 game developed by students in the first session of the W3Cx HTML5 Part 2 MOOC.

Discussion on the future of Web games development using HTML5, special off-conference HTML5 gaming meetup (chair and co-organizer), WWW 2016 Conference, April 13, Montreal, Canada.

AmpSim2, un simulateur d'amplificateur de guitare en Web Audio, Paris Audio #3, September 7, IRCAM.

Michel Buffa, Thierry Bergeron: "Le projet AZKAR : navigation d'un robot mobile temps réel à travers le Web en P2P avec l'API WebRTC", Conférence Blend WebMix 2016, November 2 & 3, Lyon, France.

Elena Cabrio: Bielefeld University, Germany, "Argument mining: our story so far", June 20th.

Catherine Faron-Zucker: Invited research Talk, at the Ministry of Economy and Finance (MEF- DGE), September 23rd.

Fabien Gandon:

- Keynote speaker for the conference Web Intelligence, Mining and Semantics (WIMS 2016) titled "One Web of pages, One Web of peoples, One Web of Services, One Web of Data, One Web of Things... and with the Semantic Web bind them.", June 14th;
- Joint keynote speaker for the International Conference on Conceptual Structures (ICCS 2016) and International Conference on Formal Ontology in Information Systems (FOIS 2016) titled "On the many graphs of the Web and the interest of adding their missing links.", July 7th;
- CafeLecture - Atelier de lecture transdisciplinaire - Learning Centre SophiaTech, Regards Croisés. "Dans l'esprit du Pagerank : regards croisés sur les algorithmes".

Alain Giboin (with Agnès Festré, GREDEG) gave a talk on "Nudges, Affordances et conception d'artefacts" in "Regards croisés" Seminar at Sophia Antipolis Campus.

Alexandre Monnin:

National interLabex symposium "Excellence in Smart Systems" (Besançon), November 17th.

Roundtable as part of the Economique numérique summer school - 3EN (Nice), May 31st.

Master Miage to deliver a talk entitled "La philosophie à partir de l'architecture du Web" (Sophia Antipolis), March 9th.

Hypertopic seminar of Tech-Cico (UTT, Troyes, online presentation), March 21st.

Emilie Palagi:

A presentation in FORUM SPARKS seminar on the evaluation and design of the explanation features of the exploratory search system Discovery Hub, March 1st.

A presentation in Axis-2 of the "Maison des Sciences Humaines et Sociales (MSHS) du Sud-Est (Nice)" : "Exploratory search system and user centered evaluation method", March 14th.

A presentation of Palagi's PhD Subject in a new cycle of seminars on Human Computer Interaction (HCI) and UX Design called "les lundis de l'ergonomie", October 10th.

"Journée rencontre Inria Industrie" in Lille: A demo of Discovery Hub and the presentation of an ongoing work on the design of a user centered evaluation method of exploratory search systems, November 25th.

10.1.5. Leadership within the Scientific Community

Alexandre Monnin organizes a seminar with Lise Arena (UNS, GREDEG) and Bernard Conein (UNS, GREDEG), between Inria and MSHS, entitled "Digital artifacts and materialities". International researchers such as Jérôme Denis [0] (Mines ParisTech), Paul Smart (Southampton) [0], Michael Wheeler (Stirling), David Kirsh (San Diego) [0], Yuk Hui (Lüneburg) [0] and Brian Cantwell Smith (Toronto) participated in the seminar this year.

Alexandre Monnin and Manuel Boutet (UNS, GREDEG) organize the "ateliers de lecture transdisciplinaires" of UCA, hosted by SophiaTech learning centre and later redubbed "Regards croisés" (5 sessions took place, all organized by Alexandre Monnin, with Lise Arena and Fabien Gandon, Alexandre Monnin et Bernard Conein, Ali Douai et Gabriel Plassat, Nathalie Oriol and François Bremond, Alain Giboin and Agnès Festré). The regards croisés have been chosen to be recorded and archived on a future UCA portal and YouTube channel.

Alexandre Monnin participated to the invitation of Brian Cantwell Smith to a Morgenstern colloquium at Inria Sophia Antipolis, December 8th. Alexandre Monnin is extending Brian Cantwell Smith's stay for the Morgenstern Colloquium thanks to fundings provided by the MSHS. Two workshops will be organized around him on Dec. 12th and 13th at the MSHS in Nice in addition to the PhiloWeb day on the 14th.

Alexandre Monnin organized a PhiloWeb conference with B.C. Smith and Harry Halpin,

Alexandre Monnin participated in two events as part of the $Transition^2$ initiative set up by Inria and FING. In January, he created the W3C Community Group "Web We Can Afford" whose goal is to discuss the future of the Web at the time of the Anthropocene [0].

"Les lundis de l'ergonomie" is a new cycle of seminars on Human Computer Interaction (HCI) and UX Design. Organized by Emilie Palagi and Louise Chaussade, this multidisciplinary series of talks may attract academic and professional profiles but also anyone interested in social science's approach to digital matters. Two presentations took place in October (with Emilie Palagi and Louise Chaussade) and December (Patrice Pena).

10.1.6. Scientific Expertise

Elena Cabrio was reviewer for French ANR projects.

Olivier Corby was reviewer for Atlanstic 2020 (Pays de la Loire) project submission.

Catherine Faron-Zucker is the scientific reference of the Inria Learning Lab.

Catherine Faron-Zucker reviewed project proposals for the Academic Research Community (ARC) 6 of Rhône Alpes Region.

10.1.7. Research Administration

Michel Buffa is director of the MIAGE of Nice Sophia Antipolis, composed of Licence, Master 1 and four Master 2 diplomas with about 350 students [0]. He is member of the OpenMiage committee that aims at proposing an online version of the whole MIAGE cursus.

Olivier Corby is member of the PostDoc Inria Sophia committee.

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[0] http://mshs.unice.fr/?p=6799
[0] http://mshs.unice.fr/?p=6725
[0] http://mshs.unice.fr/?p=6908
[0] http://mshs.unice.fr/?p=7644
[0] https://www.w3.org/community/wwca/
[0] http://miage.unice.fr

Catherine Faron-Zucker is General Treasurer of the French Society for Artificial Intelligence (AFIA).

She was member of the 2016 recruitment committee of Telecom Saint Etienne, University Jean Monnet.

She coordinates the Web option of the 5th year of Polytech Nice Sophia engineering school and is in charge of continuous training for the computer science department of Polytech Nice Sophia Antipolis.

Fabien Gandon is:

- representative of Inria at W3C consortium.
- representative of Inria in the Web Science Trust Network.
- member of the Steering Committee of the Scientific Board of Inria Sophia Antipolis (Bureau CP).
- member of the scientific committee of the Labex UCN.
- member of the Scientific Committee academy 1 of IDEX.
- member of the Steering Committee academy 5 of IDEX.
- member of ESWC Steering committee.
- member of IW3C2 Steering committee for WWW conference series.

Alain Giboin serves as scientific correspondent for Inria Sophia of COERLE (Inria Comité Opérationnel d'Evaluation des Risques Légaux et Ethiques), in tandem with the legal correspondent Nadège Camelio-Laurent. Alain Giboin is member of the Commission "Médiation et Animation des MAthématiques, des Sciences et Techniques Informatiques et des Communications" (MASTIC) of Inria Sophia Antipolis – Méditerranée.

Nhan Le Thanh is Animator of a multidisciplinary Idex working group "Connected Healthcare and well Aging INnovative Services" (CHAINS) at UNS. He is animator of a multidisciplinary join working group (TRT eHealth), UNS and Da Nang University, on the themes of IoT services for eHealth and smart city. He is coordinator of the bilateral scientific cooperation program NiceCampus between UNS and Da Nang University. He is director of the computer science department, IUT, UNS.

Isabelle Mirbel is Vice Dean of Science Department at University Nice-Sophia Antipolis.

Andrea Tettamanzi is coordinator of the 3rd year of the *Licence* in Business Informatics (MIAGE) at the UFR Science of the Université Nice Sophia Antipolis (UNS). He is co-animator, together with Johan Montagnat (I3S), of the SPARKS team who hosts Wimmics at I3S.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence: Amel Ben Othmane, Oracle Database, 64h, L1, IUT Institute of Technology of Nice, France.

Licence: Elena Cabrio, Web Server Programming, 45h, L1, UNS, France.

Licence: Amosse Edouard, Object Oriented Design, 33h, L3, UNS, France.

Licence: Amosse Edouard, Introduction to Web Programming, 16h, L3, UNS, France.

Licence: Catherine Faron-Zucker, Web languages, 36h, Licence 3, Polytech UNS.

Licence: Catherine Faron-Zucker, Statistics, 36h, Licence 3, Polytech UNS.

Licence: Nhan Le Thanh, Databases, 150h, DUT Info S2 at IUT, UNS, France.

Licence: Nhan Le Thanh, Advanced Databases, 105h, DUT Info S3 at IUT, UNS, France.

Licence: Nhan Le Thanh, Logical Data Models and languages, 24h, L3 LPSIL at IUT, UNS, France.

Licence: Nhan Le Thanh, Design and Development of DBMS services, 24h, L3 LPSIL at IUT, UNS, France.

Licence: Isabelle Mirbel, Databases, 58h, L3 MIAGE, UNS, France.

Licence: Isabelle Mirbel, Web programming (Persistence), 54h, L3 MIAGE, UNS, France.

Licence: Alexandre Monnin, Analyse des controverses, 4h30, L1, Telecom ParisTech, France.

Licence: Alexandre Monnin, Analyse des controverses and climate change, 6h, ESC Clermont-Ferrand, France.

Licence: Andrea Tettamanzi, Algorithmique, Programmation Objet, Python, L2, 50h, UNS, France.

Licence: Andrea Tettamanzi, Programmation Web Avancée coté client, L2, 39h, UNS, France.

Licence: Andrea Tettamanzi, Web, 18h, L3 MIAGE, UNS, ETD;

Master: Valerio Basile, Knowledge Engineering, 7h, Master 2 IFI, UNS, France.

Master: Michel Buffa, Web technologies, 40h, M1, UNS, France.

Master: Michel Buffa, Server Side JavaScript, 20h, M2 UNS, France.

Master: Michel Buffa, Web 2.0/Web Services/HTML5, 40h, M2, UNS, France.

Master: Michel Buffa, Java Certification, 25h, M2, Polytech'Nice UNS, France.

Master: Michel Buffa, Programmable Web, 40h, M2, Polytech'Nice students, UNS, France.

Master: Michel Buffa, Distributed Web development, 40h, M2, UNS, France. This course is also given by video conference to M2 students in Marroco, Madagascar and Haïti, that gets the same diploma as students from the UNS, France.

Master: Elena Cabrio, Web Science, 5h, M2, UNS, France.

Master: Olivier Corby, Oscar Rodríguez Rocha, Catherine Faron-Zucker, Fabien Gandon, Semantic Web, 45h, M2, UNS, France.

Master: Olivier Corby, XML, 15H, M2, UNS, France.

Master: Olivier Corby, Semantic Web, 3H, M2, University of Toulouse, France.

Master: Olivier Corby, Semantic Web, 3H, M2, University of Montpellier, France.

Master: Amosse Edouard, Development on the Android platform, 38h, M2, UNS, France.

Master: Amosse Edouard, Web Services, 17h, M2, UNS, France.

Master: Amosse Edouard, Introduction to Near Field Communication, 20h, M2, EMSI, Morocco.

Master: Catherine Faron-Zucker, Web languages, 24h, M1, Polytech UNS.

Master: Catherine Faron-Zucker, Web Science, 4h, M1 IFI, UNS.

Master: Catherine Faron-Zucker, Network Programming, 12h, M1, Polytech UNS.

Master: Catherine Faron-Zucker, XML technologies, 24h, M2 IMAFA, UNS.

Master: Catherine Faron-Zucker, Semantic Web technologies, 28h, M2 IFI, Polytech, UNS.

Master: Catherine Faron-Zucker, Knowledge Engineering, 9h, M2 IFI, Polytech, UNS.

Master: Fabien Gandon, Web Science, 4h, M1 IFI, UNS.

Master: Fabien Gandon, Semantic Web technologies, 4h, M2 IFI, Polytech, UNS.

Master: Fabien Gandon, Semantic Web technologies, 25h, Data Science Technical Institute, Paris.

Master: Alain Giboin, Human-Computer-Interaction Design and Evaluation, 54h, M2, UNS.

Master: Alain Giboin, Interaction Techniques and Multimodality, 8h, M2, UNS.

Master: Alain Giboin, Task and Activity Analysis for HCI design and evaluation, 6h, M2 Sociology and Ergonomics of Digital Technologies, UNS.

Master: Alain Giboin, HCI Design and Evaluation, 10h, M2 Sociology and Ergonomics of Digital Technologies, UNS.

Master : Alain Giboin, Economics and ICT: Ergonomics, 15h, M2 Economics and ICT, ISEM, UNS.

Master: Isabelle Mirbel, Requirement Engineering, 42h Master MIAGE 1, UNS, France.

Master: Isabelle Mirbel, Advanced databases, 48h Master MIAGE 1, UNS, France.

Master: Alexandre Monnin, Ingénierie des connaissances, 11h, M2, UNS, France.

Master: Oscar Rodríguez Rocha, Ingénierie des connaissances, 12h, M2, UNS, France.

Master: Andrea Tettamanzi, Systèmes Distribués, 18h, M1 MIAGE, UNS, France.

Master: Andrea Tettamanzi, Concurrency and Parallelism, 18h, M1 International, UNS, France.

Master: Andrea Tettamanzi, Fuzzy Description Logics and Ontology Learning, *in Ingénierie des connaissances*, 10h, M2, Polytech'Nice, UNS, France.

E-learning

MOOC: Fabien Gandon, Olivier Corby & Catherine Faron-Zucker, Introduction au Web Sémantique, 7 weeks, https://www.fun-mooc.fr/, Inria, France Université Numérique, Education for Adults, 4870 registered.

MOOC: Fabien Gandon, Olivier Corby & Catherine Faron-Zucker, Introduction to a Web of Linked Data, 4 weeks, https://www.fun-mooc.fr/, Inria, France Université Numérique, Education for Adults, 1703 registered.

MOOC: Michel Buffa, two MOOCs HTML5 for W3Cx / edX (MIT/Harvard). More than 300k registered students since 2015. Finalist for the first-ever edX Prize for Exceptional Contributions in Online Teaching and Learning (11 teachers have been selected among 2500 others and 1200 online courses).

10.2.1.1. Internships

Mihai-Alexandru Dusmanu

Date: June – August

Institution: ENS Paris

Title: Argument Detection on Twitter

Supervisors: Elena Cabrio, Serena Villata

Safaa Rziou

Date: April – September

Title: Semantic Categorization of Segments of Ancient and Mediaeval Zoological Texts

Institution: Université Nice Sophia Antipolis, Master 2 MIAGE

Supervisors: Catherine Faron-Zucker, Andrea Tettamanzi

10.2.2. Supervision

PhD: **Papa Fary Diallo**, *Co-Construction of Community Ontologies and Corpus in a Limited Technological Environment*, Inria, UNS, UGB, September 16th, Isabelle Mirbel, Olivier Corby, Moussa Lo.

PhD: **Zide Meng**, *Temporal and Semantic Analysis of Richly Typed Social Networks from User-Generated-Content Sites on the Web*, UNS, November 7th, Fabien Gandon, Catherine Faron-Zucker.

PhD in progress: **Amel Ben Othmane**, *Temporal and Semantic Analysis of Information Retrieved from Short and Spatio-Temporal Messages in Social Networks*, UNS, Nhan Le Than.

PhD in progress: **Chihabeddine Bouchenaki**, *Semantic Analysis of Activities in a Learning Environment*, UNS, September 2016, Fabien Gandon, Catherine Faron-Zucker.

PhD in progress: **Amosse Edouard**, *Studies of Spatial Semantic Aspect, Real Time Filtering Mechanisms and Semantic Enrichment of Short Messages on Dynamic Spatio-Temporal Social Networks*, UNS, Nhan Le Thanh and Elena Cabrio.

PhD in progress: **Raphaël Gazzotti**, *Conversational Agent Assistant Endowed with Natural Language and Intuition*, UNS & SynchroNext, Fabien Gandon, Catherine Faron-Zucker.

PhD in progress: **Franck Michel**, *Heterogeneous Databases Federation in Distributed Environment*, UNS, Johan Montagnat, Catherine Faron-Zucker.

PhD in progress: **Tran Duc Minh**, *Learning Ontologies from Linked Open Data*, Andrea Tettamanzi, UNS and Nguyen Thanh Binh, University of Danang.

PhD in progress: **Emilie Palagi**, *Design of a Model-based Method for Evaluating Exploratory Search Systems*, UNS, Labex UCN@Sophia, Alain Giboin, Fabien Gandon with Raphaël Troncy (Eurecom).

PhD in progress : **Tuan Anh Pham**, *Study and integration of the mechanism of workflow control in MVC (Model View Controler) architecture: design and implementation of an APM (Activity Process Management) platform for dynamic information systems on the networks*, UNS, Nhan Le Thanh.

10.2.3. *Juries*

Olivier Corby was jury member for the PhD Thesis of Géraud Fokou Pelap on *Conception d'un framework pour la relaxation des requêtes SPARQL*, November 21st, ENSMA, Poitiers.

Fabien Gandon was:

- President HDR Fabrice Huet entitled "From HPC to Big Data: Models and Tools for Large Scale Middleware", February 15th.
- Reviewer HDR Olivier Dameron entitled "Ontology-based methods for analyzing life science data", IRISA, Université de Rennes, January 11th.
- Reviewer PhD Thesis Andrei-Nicolae Ciortea entitled "Weaving a Social Web of Things: Enabling Autonomous and Flexible Interaction in the Internet of Things", École Nationale Supérieure des Mines de Saint-Étienne and University Politehnica of Bucarest, January 14th.
- Reviewer PhD Thesis Gabriela Montoya entitled "Answering SPARQL Queries using Views", LINA, Université de Nantes Angers Le Mans, March 3rd.
- Reviewer PhD Thesis Luis Redondo Garcia, "Semantically Capturing and Representing Contextualized News Stories on the Web", Eurecom, TELECOM ParisTech, March 4th.
- Jury member PhD Thesis Mazen Alsarem entitled "Semantic Snippets via Query-Biased Ranking of Linked Data Entities", Insa Lyon, University Lyon, Villeurbanne, May 5th.
- Jury member PhD Thesis Luis Galárraga entitled "Rule Mining in Knowledge Bases", TELECOM ParisTech, September 9th.

Nhan Le Thanh was jury member for the PhD of Nourhène Alaya, *Managing The Empirical Hardness of the Ontology*, Paris 8 University, October 13rd; Cheikh Hito Kacfah Emani, *Formalisation automatique et sémantique de règles métier*, Lyon 1 University, December 1st.

Andrea Tettamanzi was reviewer for the PhD Thesis of Regina Ticona Herrera, *Towards RDF Normalization*, Université de Pau et des Pays de l'Adour, Anglet, July 6th.

He was President of the jury for the PhD Thesis of

Papa Fary Diallo, UNS, September 16th (see above); Romaric Pighetti, *Une méthode hybride pour la classification d'images à grain fin*, UNS, November 28th; Atheer Al-Najdi, *Une approche basée sur les motifs fermés pour résoudre le problème de clustering par consensus*, UNS, November 30th.

Alexandre Monnin was president of the jury of 11 Master thesis of graphic design students of ESAD Valence (Ecole supérieure d'art et de design), May. He was president of the "diplôme de fin d'études" of the same students of ESAD Valence, June.

10.3. Popularization

Catherine Faron-Zucker: Article on the Web of Data in the Interstices online journal of scientific culture [0].

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[0] https://interstices.info/jcms/d_80071/le-web-de-donnees

Fabien Gandon:

- Les Révolutions de la Planète Web, Lycée Calmette, – Nice – April 26th.
- Retour d'expérience sur le Mooc Web Sémantique, Journée Pédagogie innovante June 6th.
- SPARKS Day: How to supervise your supervisor?
- Meeting "Alumni" with students from Insa Rouen.

Alexandre Monnin: Café-in (June 2) : *Transition numérique et effondrement écologique : quel monde d'après ?* Stage Maths C2+ (June 16) : same presentation as above. Invitation by the FING to address the issues of "Small Science".

<div align="center">

XPOP Team

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10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Julie josse was chair of useR!2016, Stanford, CA, USA, July 2016. http://user2016.org.

10.1.2. Scientific Expertise

Marc Lavielle is member of the Scientific Committee of the High Council for Biotechnologies

10.1.3. Research administration

Marc Lavielle is member of

- the Scientific Programming Committee (CPS) of the Institute Henri Poincaré (IHP),
- the Executive Board (CA) of SMAI.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master : Julie Josse, Statistics with R, 48, M2, X-HEC

Master : Eric Moulines, Regresson models, 36, M2, X-HEC

Engineering School : Eric Moulines, Statistics, 36, 2A, X

Engineering School : Eric Moulines, Markov Chains, 36, 3A, X

Engineering School : Erwan Le Pennec, Statistics, 36, 2A, X

Engineering School : Erwan Le Pennec, Statistical Learning, 36, 3A, X

Engineering School : Marc Lavielle, Time Series, 24, 3A, X

10.2.2. Supervision

PhD in progress : Nicolas Brosse, September 2016, Eric Moulines

PhD in progress : Geneviève Robin, September 2016, Julie Josse

PhD in progress : Belhal Karimi, October 2016, Marc Lavielle and Eric Moulines

PhD in progress : Marine Zulian, October 2016, Marc Lavielle

ZENITH Project-Team

10. Dissemination

10.1. Scientific Animation

Editorial board of scientific journals:

- VLDB Journal: P. Valduriez.
- Journal of Transactions on Large Scale Data and Knowledge Centered Systems: R. Akbarinia and E. Pacitti are guest editors of a special issue on data management in internet of things (IoT).
- Distributed and Parallel Databases, Kluwer Academic Publishers: E. Pacitti, P. Valduriez.
- Internet and Databases: Web Information Systems, Kluwer Academic Publishers: P. Valduriez.
- Journal of Information and Data Management, Brazilian Computer Society Special Interest Group on Databases: P. Valduriez.
- Book series "Data Centric Systems and Applications" (Springer): P. Valduriez.
- Multimedia Tools and Applications: A. Joly.

Organization of conferences and workshops:

- Alexis Joly was the chair of the LifeCLEF 2016 international workshop [0] dedicated to multimedia biodiversity data management, Evora, sept. 2016
- Alexis Joly was in the organizing committee of the Floris'tic national workshop held in Montpellier, nov. 2016 (http://floristic.org/8-nov-2016)

Conference program committees :

- ACM SIGMOD Conf. 2016: R. Akbarinia, 2017: F. Masseglia
- IEEE Int. Conf. on Data Engineering (ICDE) 2016: R. Akbarinia, E. Pacitti, P. Valduriez (area chair)
- VLDB Joint Workshop on Big Data Open-Source Systems (BOSS) / Polyglot: P. Valduriez (co-chair)
- DataDiversityConvergence workshop, 6th International Conference on Cloud Computing and Services Science (CLOSER 2016): P. Valduriez (co-chair)
- Int. Conf. on Extending DataBase Technologies (EDBT), 2017: E. Pacitti
- 2nd Workshop on Big Data and Data Mining Challenges on IoT and Pervasive Systems (BigD2M), 2016: E. Pacitti
- International Conference and Labs of the Evaluation Forum (CLEF), 2016: A. Joly
- ACM International Conference on Multimedia Retrieval (ICMR), 2016: A. Joly
- IEEE International Conference on Image Processing (ICIP), 2016: A. Joly
- ACM Multimedia conference (ACMMM), 2016: A. Joly
- Int. work.Multimedia Analysis and Retrieval for Multimodal Interactions (MARMI): A. Joly
- Int. Conf. on Scientific and Statistical Database Management (SSDBM), 2016: A. Joly
- European Conf. on Computer Vision (ECCV), 2016: A. Joly
- VLDB 2017: F. Masseglia
- IEEE Int. Conf. on Data Mining, 2016: F. Masseglia
- ACM Symposium on Applied Computing 2017: F. Masseglia
- Pacific-Asia Conf. on Knowledge Discovery and Data Mining (PAKDD) 2017: F. Masseglia
- IEEE Int. Conf. on Data Science and Advanced Analytics (DSAA), 2016: F. Masseglia
- Int. Symposium on Information Management and Big Data (SimBig), 2016: F. Masseglia
- Int. Conf. on Data Science, Technology and Applications (DATA), 2016: F. Masseglia

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[0]http://www.imageclef.org/lifeclef/2016

Reviewing in international journals :

- Distributed and Parallel Databases: R. Akbarinia
- ACM Transactions on Database Systems (TODS): A. Joly
- IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI): A. Joly
- IEEE Transactions on Knowledge and Data Engineering: R. Akbarinia
- Information Sciences: A. Joly
- Ecological Informatics: A. Joly
- Multimedia Tools and Applications Journal (MTAP): A. Joly
- Multimedia Systems: A. Joly
- Transactions on Information Forensics & Security: A. Joly
- International Journal of Computer Vision: A. Joly
- Transactions on Image Processing: A. Joly
- ACM Trans. on Database Systems: E. Pacitti
- Knowledge and Information Systems (KAIS): F. Masseglia
- IEEE Transactions on Knowledge and Data Engineering (TKDE): F. Masseglia

Other activities (national):

- Alexis Joly gave invited talks in national events: Inria scientific days (https://journees-scientifiques2016.inria.fr/), INRA-Inria days (https://journees.inra.fr/maths-info2016), Award ceremony of « La Recherche 2016 » (http://www.leprixlarecherche.com/).
- P. Valduriez is the scientific manager for the Latin America zone at Inria Direction des Relations Internationales (DRI), Member of the Scientific Committee at Agence Nationale de la Recherche (ANR) - Défi 7 Information and communication society and Member of the Scientific Committee of the BDA conference.
- F. Masseglia gave an invited talk at the CNRS national seminar on IST about "Publication Data Analytics" (Meudon, 10 November), and an invited talk to the DSI service of IRD on "Scientific Data Mining" (Montpellier, 18 September). Florent also participates in the Class'Code PIA project dedicated to teaching computational thinking for professionals of education (head of the working group on the definition of fundamental notions).
- P. Valduriez gave invited talks at: "La Science des données à l'IRIT", Toulouse, april 2016, the Junior Conference on Data Science and Engineering, Paris Saclay, sept. 2016, the Orange Summer University "Innovate in IT", sept. 2016.

Other activities (international):

- Alexis Joly was a member of the scientific advisory board of the EU REVEAL project (http://revealproject.eu). He was invited by the ATC innovation lab in Athens to participate in a workshop on social media verification (http://revealproject.eu/reveal-workshop-on-16-sept-2016).
- E. Pacitti gave an invited talk at the 6th workshop on big data and analytics (WOS6), co-organized by Technicolor and Inria (http://www.bretagne-networking.org/wos6) on Experiences on Data Management Techniques for Scientific Application in Rennes, nov. 2016, and a talk at Fundação Getulio Vargas on Experiences on Data Management Techniques for Big Data in Rio de Janeiro, dec. 2016.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Most permanent members of Zenith teach at the Licence and Master degree levels at UM2.

Reza Akbarinia:

    Master Research: New approaches for data storage, 9h, level M2, Faculty of Science, UM

Florent Masseglia:

    Science Popularization: 4 Ph.D students, from 3 different doctoral schools are having a 30h doctoral module under Florent Masseglia's supervision.

Esther Pacitti:

    IG3: Database design, physical organization, 54h, level L3, Polytech'Montpellier, UM2

    IG4: Networks, 42h, level M1, Polytech' Montpellier, UM2

    IG4: Object-relational databases, 32h, level M1, Polytech' Montpellier, UM2

    IG5: Distributed systems, virtualization, 27h, level M2, Polytech' Montpellier, UM2

    Industry internship committee, 50h, level M2, Polytech' Montpellier

Patrick Valduriez:

    Professional: Distributed Information Systems, Big Data Architectures, 75h, level M2, Capgemini Institut

    Professional: XML, 10h, level M2, Orsys Formation

Alexis Joly:

    Master Research: Large-scale Content-based Visual Information Retrieval, 3h, level M2, Faculty of Science, UM

10.2.2. Supervision

- PhD: Ji Liu, Multisite Management of Scientific Worflows in the Cloud, Univ. Montpellier, 3 Nov 2016, Advisors: Esther Pacitti and Patrick Valduriez
- PhD: Valentin Leveau, Spatially Consistent Nearest Neighbor Representations for Fine-Grained Classification, Univ. Montpellier, 9 Nov 2016, Advisor: Patrick Valduriez, co-advisor: Alexis Joly and Olivier Buisson
- PhD : Saber Salah, Optimizing a Cloud for Data Mining Primitives, Univ. Montpellier, 20 Apr 2016 Advisor: Florent Masseglia, co-advisor: Reza Akbarinia
- PhD in progress: Christophe Botella, Lareg-scale Species Distribution Modelling based on crowd-srouced image streams, started Oct 2016, Univ. Montpellier, Alexis Joly, François Munoz (IRD), Pascal Monestiez (INRA)
- PhD in progress: Titouan Lorieul, Pro-active crowdsourcing, started Oct 2016, Univ. Montpellier, Advisor: Alexis Joly
- PhD in progress: Mehdi Zitouni Closed Pattern Mining in a Massively Distributed Environment started sept. 2014, Univ. Tunis, Advisor: Florent Masseglia, co-advisor: Reza Akbarinia
- PhD in progress : Djamel-Edine Yagoubi, Indexing Time Series in a Massively Distributed Environment, started oct. 2014, Univ. Montpellier, Advisors: Florent Masseglia and Patrick Valduriez, co-advisor: Reza Akbarinia
- PhD in progress : Sakina Mahboubi, Privacy Preserving Query Processing in Clouds, started oct. 2015, Univ. Montpellier, Advisor: Patrick Valduriez, co-advisor: Reza Akbarinia
- PhD in progress: Khadidja Meguelati, Massively Distributed Clustering, started Oct 2016, Univ. Montpellier, Advisor: Florent Masseglia, co-advisor : Nadine Hilgert (INRA)

10.2.3. Juries

Members of the team participated to the following PhD committees:

- A. Joly: Zongyuan Ge (Queensland University of Technology), Amel Tuama Alhussainy (Univ. of Montpellier)
- E. Pacitti: Saliha Lallali (UVSQ), Nupur Mittal (Univ. Rennes 1)
- P. Valduriez: Damien Graux (Univ. Grenoble)
- F. Masseglia: Hadi Hashem (Telecom SudParis), Manuel Pozo (CNAM), Martin Kirchgessner (Univ. Grenoble)

10.3. Popularization

F. Masseglia is now "Chargé de mission pour la médiation scientifique Inria" and heads Inria's national network of colleagues involved in science popularization.

Zenith has major contributions to science popularization, as follows.

10.3.1. Code Teaching for Kids

Teaching code is now officially in the school programs in France. Class'Code is a PIA project that aims at training the needed 300,000 teachers and professionals of education France. The project is a hybrid MOOC (both online courses and physical meetings).

Along with Class'Code, the association "La main à la pâte" has coordinated the writing of a school book on the teaching of computer science teaching, with Inria (Gilles Dowek, Pierre-Yves Oudeyer, Florent Masseglia and Didier Roy), France-IOI and the University of Lorraine. The book has been requested by and distributed to 15,000 readers in less than one month.

F. Masseglia is giving a doctoral training at different doctoral schools in Montpellier, in order to train facilitators for helping teachers and people of the education world to better understand the "computational thinking". So far, 12 people have been trained. He is also a member of the management board of "Les Petits Débrouillards" in Languedoc-Roussillon and the scientific responsible for school visits in the LIRMM laboratory.

10.3.2. Science Outreach

In the context of the Floris'tic project, A. Joly participates regularly to the set up of popularization, educational and citizen science actions in France (with schools, cities, parks, etc.). The softwares developed within the project (Pl@ntNet, Smart'Flore and ThePlantGame) are used in a growing number of formal educational programs and informal educational actions of individual teachers. For instance, Smart'Flore is used by the French National Education in a program for reducing early school leaving. Pl@ntNet app is used in the Reunion island in an educational action called Vegetal riddle organized by the Center for cooperation at school. It is also planned to be used in a large-scale program in the Czech republic that is being finalized (in 40 classrooms). An impact study of the Pl@ntNet application did show that 6% of the respondents use it for educational purposes in the context of their professional activity. The Inria movie "Pl@ntNet, the application that helps people identify plants" enjoyed about 350 thousand views on Youtube.

10.3.3. Events

Zenith participated to the following events:

- F. Masseglia co-organized and co-animated the Inria's stand at "La fête de la science", Montpellier, held by Genopolys (a science village).
- F. Masseglia is member of the project selection committee for "La fête de la science" in Montpellier.
- M. Servajean and A. Joly animated a stand at "La fête de la science", Montpellier, held by the LIRMM laboratory.
- A. Joly and J. Champ participated to the set-up of a Pl@ntNet demo within the French pavillon at the Universal Exposition hold in Milan (about 2M visitors on the French pavillon).
- As a member of the organizing committee of the Floris'tic project, A. Joly participated to several popularization and educational actions in collaboration with Tela Botanica NGO (cities, parks, schools, etc.).
- P. Valduriez published an article in Interstices on "the data in question" [58].