



RESEARCH CENTER
Sophia Antipolis - Méditerranée

FIELD

Activity Report 2013

Section Dissemination

Edition: 2014-03-19

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ABS Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Organization of Schools and Courses

- **(Winter school Algorithms in Structural Bio-informatics)** Together with J. Cortès from LAAS / CNRS (Toulouse) and C. Robert (IBPC/CNRS), F. Cazals organized the winter school *Algorithms in Structural Bio-informatics*⁴. The goal of this winter school is to present state-of-the-art concepts, algorithms and software tools meant to model the flexibility of proteins, with a focus on methodological developments. The audience consisted of 30 PhD students and post-docs from all over the world.
- **(Statistical Learning Theory: a Short Course)** F. Cazals organized a mini-course by P. Grunwald, from the CWI. The details can be found at <https://team.inria.fr/abs/statistical-learning-theory-a-short-course/>.

8.1.2. Conference Program Committees

– F. Cazals was member of the following PC:

- Symposium on Geometry Processing.
- Computer Graphics International
- ACM Conference on Bioinformatics, Computational Biology and Biomedical Informatics
- International Conference on Pattern Recognition in Bioinformatics
- Computational Intelligence Methods for Bioinformatics and Biostatistics

8.1.3. Appointments

– F. Cazals was appointed as Panel expert for the 7th Framework Programme 7 from the EU, Information and Communication Technologies /

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master: F. Cazals, *Geometric and topological modeling with applications in biophysics*, 24h, Ecole Centrale Paris, France, 3rd year of the engineering curriculum in applied mathematics.

Master: F. Cazals, *Algorithmic problems in computational structural biology*, 24h, Master of Science in Computational Biology from the University of Nice Sophia Antipolis, France. (<http://cbb.unice.fr>)

Graduate level: F. Cazals and C. Robert, *Analyzing conformational landscapes, with applications to the design of collective coordinates*, 6h, Winter school *Algorithms in Structural Bio-informatics*.

8.2.2. Supervision

(PhD thesis, ongoing) C. Roth, *Modeling the flexibility of macro-molecules: theory and applications*, University of Nice Sophia Antipolis. Advisor: F. Cazals.

(PhD thesis, ongoing) A. Lheritier, *Scoring and discriminating in high-dimensional spaces: a geometric based approach of statistical tests*, University of Nice Sophia Antipolis. Advisor: F. Cazals.

(PhD thesis, ongoing) D. Agarwal, *Towards nano-molecular design: advanced algorithms for modeling large protein assemblies*, University of Nice Sophia Antipolis. Advisor: F. Cazals.

(PhD thesis, ongoing) S. Marillet, *Modeling antibody - antigen complexes*, Univ. of Nice Sophia Antipolis. The thesis is co-advised by F. Cazals and P. Boudinot (INRA Jouy-en-Josas).

⁴<http://algosb.sciencesconf.org/>

AOSTE Project-Team

9. Dissemination

9.1. Scientific Animation

Robert de Simone

General Chair: RTNS 2013.

Technical Program Committee: EmSoft 2013, MEMOCODE2013, FDL2013, CSDM 2013.

Board of Administrators: CIM PACA Design Platform association

Yves Sorel

Technical Program Committee: RTNS 2013, DASIP 2013

Editorial Board: Traitement du Signal Journal

Steering Committee: OCDS/SYSTEM@TIC Paris-Region Cluster

Liliana Cucu-Grosjean

Inria Evaluation Commission: elected member

Technical Program Committee: IEEE RTSS 2013, IEEE ETFA 2013, DATE 2013 and IEEE SIES'2013.

Steering Committee and co-chair: RTSOPS2013, WMC2013 (workshops)

Dumitru Potop Butucaru

Technical Program Committee: Memocode 2013, ACSD 2013, EsISyn 2013, APRES 2013

Julien Deantoni

General Chair: organizer and chair: First international workshop on globalization of modeling languages (GeMoC)

Technical Program Committee: CIEL2013, GlobalDSL2013, Journal of System and Software

Laurent George

General Chair: ECRTS 2013

Program Committee Chair: ReTiMiCS 2013

Scientific Co-chair: ACTRISS group, supported by GDR ASR (CNRS, France) (<http://www.actriss.org/>).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Julien Deantoni, Computer Environnement, 30 h, L2 level, Polytech engineering school of University Nice/Sophia-Antipolis (UNS EPU) France.

Master: Julien Deantoni, Model Driven Engineering, 22 h, M2, UNS EPU.

Master : Julien Deantoni, C++ and Object Oriented Programming, 54 h, M1, UNS EPU.

Master: Julien Deantoni, Embedded Software and systems, 7 h, M2, UNS EPU.

Master: Julien Deantoni, VHDL, 40 h, M1, UNS EPU.

Licence: Sid-Ahmed-Ali Touati, Assembleurs et jeux d'instructions, 52h, L3, UNS Licence info.

Licence: Sid-Ahmed-Ali Touati, Systèmes informatiques, 30h, L1, UNS Licence info.

Master: Sid-Ahmed-Ali Touati, Programmation efficaces pour programmes embarqués et hautes performances, 16h, M1 Master ISI.

Master: Sid-Ahmed-Ali Touati, Systèmes d'exploitation avancés, 39h, M1, UNS Master ISI.

Master: Sid-Ahmed-Ali Touati, Programmation efficace et Optimisation de code, 16h, M1, UNS Master ISI.

Master: Sid-Ahmed-Ali Touati, Architecture des Processeurs, 15h, M1, UNS EPU.

Licence : Frédéric Mallet, Introduction à la Programmation Objet, 45h, L1, UNS.

Licence: Frédéric Mallet, Architecture des ordinateurs, 45h, L3, UNS.

Master: Frédéric Mallet, Programmation Avancée et Design Patterns, 93h, M1, UNS.

Master: Frédéric Mallet, Java pour l'Informatique Industrielle, 24h, M1, UNS.

Master: Frédéric Mallet, Architectures des ordinateurs, 12h, M1, UNS.

Master: Frédéric Mallet, Formal Models for Network-On-Chips, 3h, M2, UNS.

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.

Master : Robert de Simone, Formal Models for Networks-on-Chip, 24h , M2, UNS.

Master : Robert de Simone, Semantics of Embedded and Distributed Systems, 24 h, M1, UNS.

Master: Yves Sorel, Optimization of distributed real-time embedded systems, 24H, M2, University Paris Sud.

Master: Yves Sorel, Distributed real-time systems, 26H, M2, University Paris Est

Master: Yves Sorel, Specification and formal models for embedded systems, 28H, M2, ENSTA Engineering School Paris

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

Master: Dumitru Potop and Thomas Carle, Programmation synchrone des systèmes temps-réel, 8h, M1, EPITA Engineering School Paris

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

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

9.2.2. Supervision

PhD: Carlos Ernesto Gomez-Cardenas, *Environnement multi-vues pour la métamodélisation sémantique formelle de systèmes embarqués*, UNS, defended Dec 20th 2013, supervised by Frédéric Mallet, co-supervised by Julien deAntoni.

PhD in progress: Matias Vara-Larsen, *Toward a formal and hierarchical timed model for concurrent heterogeneous model*, ANR/CNRS, started November 2012, 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, started October 2012, supervised by Robert de Simone.

PhD in progress: Ying Lin, *Formal Analysis of polychronous models with MARTE/CCSL*, East China Normal University, started September 2011, supervised by Jing Liu (ECNU), co-supervised by Frédéric Mallet.

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: Falou Ndoye, *Multiprocessor real-time scheduling taking into account preemption cost*, started January 2011, supervised by Yves Sorel.

PhD in progress: Manel Djemal, *Distributed real-time scheduling onto NoC architectures*, EDITE/UPMC, started Nov. 2010, co-supervised by Alix Munier (UPMC/Lip6) and D. Potop-Butucaru.

PhD in progress: Thomas Carle, *Real-time implementation of embedded control applications with conditional control onto time-triggered architectures*, EDITE/UPMC, started Sep. 2011, supervised by D. Potop-Butucaru.

PhD : Dorin Maxim, Probabilistic Real-Time Systems, University of Lorraine, December 10th, 2013, co-supervised by Liliana Cucu-Grosjean and Françoise Simonot-Lion

9.2.3. Juries

Robert de Simone

PhD reviewer: Adnan Bouakaz (U. Rennes 1), Jagadish Suryadevara (Malardalen U., Sweden)

HDR reviewer: Sébastien Gérard (U. Paris 11 Orsay).

Frédéric Mallet

PhD reviewer: Xin An (U. Grenoble 1), Clément Guy (U. Rennes 1)

PhD examiner: João Claudio Rodrigues Américo (U. Grenoble 1), Jair Gonzalez (Mines-Telecom)

Laurent George

PhD reviewer: Xiaoting Li (ENSEEIH), Ahmed Daghsen (UTC Compiègne)

Yves Sorel

PhD reviewer: Yassine Ouhammou (ENSMA Poitiers)

PhD examiner: Pierre Courbin (U. Paris Est)

Dumitru Potop Butucaru

PhD reviewer: Léonard Gérard (U. Paris Sud)

9.3. Popularization

We held a thematic Spring School in late April in Shanghai, based on the topics of the DAESD associated-team 8.4.1.1 . It was open to students from all over China, and we invited also chinese speakers (but the attendance of around sixty students was mostly from several universities in and around Shanghai).

APICS Project-Team

9. Dissemination

9.1. Scientific Animation

- F. Seyfert was invited to give a talk at the department "Optimization and System Theory" of KTH University (Stockholm, Sweden), on "Generalized Nevanlinna-Pick interpolation on the boundary"
- J. Leblond and D. Ponomarev gave communications at the *11th International Conference on Mathematical and Numerical Aspects of Wave Propagation (WAVES 2013)*, Tunis, June (<http://www.lamsin.tn/waves13/>). J. Leblond was invited to give a communication at the *Workshop on Control and Observation of Nonlinear Control Systems with Application to Medicine (CONCSAM)*, Honolulu, Hawaii, Sept. (<http://math.hawaii.edu/control2013/>).
- M. Olivi gave a talk at the SSSC 2013 conference in Grenoble (France) [25] and presented a poster at the ERNSI 2013 conference in Nancy (France).
- E. Pozzi gave communications at the *Spring School in Functional and Harmonic analysis and Operator theory*, Lens (may), at the *Workshop in Operator Theory, Harmonic and Complex Analysis*, Lille (may), and at the seminar of the Lab. J.-A. Dieudonné, Université Nice-Sophia Antipolis.
- L. Baratchart was an invited speaker at the workshop "Inverse Problems and Nonlinear Equations", May, Palaiseau. He was an invited speaker at the workshop "Frames and Bases in Banach Spaces of Holomorphic Functions", October, Bordeaux. He was an invited speaker at the conference in honor of A.A. Gonchar, November, Steklov Institute, Moscow. He was a speaker at CMFT 2013 (Shantou, China). He was an invited speaker at the seminar in Guangzhou University (China), the University of Bordeaux (LMB) and of Grenoble (Laboratoire J. Kuntzmann). He was a visitor at the University of Macao, MIT, and the University of Cyprus.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master, PhD: J. Leblond, Inverse source problems, 3h, Franco-German summer school for inverse problems and PDE, Univ. Brême, All.

9.2.2. Supervision

PhD: S. Chaabi, Analyse complexe et problèmes de Dirichlet dans le plan : équation de Weinstein et autres conductivités non-bornées, defended Dec.2d, 2013 (advisors: L. Baratchart, A. Borichev).

PhD in progress: D. Ponomarev, Inverse problems for planar conductivity and Schrödinger PDEs, since Nov. 2012 (advisors: J. Leblond, L. Baratchart).

PhD in progress: M. Caenepeel, A hierarchical framework for design oriented modeling, since Feb. 2013 (advisors: Y. Rolain, M. Olivi, F. Seyfert).

9.2.3. Juries

- L. Baratchart was a referee of the PhD. manuscript of J. Vayssettes (Univ. Poitiers).
- J. Leblond was a member of the hiring committee for a professor in applied mathematics, Univ. Lorraine, and of the PhD jury of A. Blandinières (Univ. Lyon), R. Tytgat (Aix-Marseille University), and A. Abdelmoula (Univ. Rennes, reviewer).
- M. Olivi was a member (reviewer) of the HdR jury of Sylvie Icart (Université de Nice-Sophia Antipolis, March).

9.3. Popularization

- J. Leblond is a member of the Committee MASTIC. She gave a communication within the “Café-in” of the Research Center (Sept.).
- M. Olivi is co-president with I. Castellani of the Committee MASTIC (Commission d’Animation et de Médiation Scientifique) <https://project.inria.fr/mastic/>. She is responsible for Scientific Mediation. She held a booth at the APMEP conference 2013 in Marseille (France).
- E. Pozzi was a member of the Committee MASTIC.
- S. Chevillard published a popularization blog post on the website “Mathématiques de la planète Terre 2013” (<http://mpt2013.fr/>) about the problem of inverse magnetization of rocks (cf. Section 4.3)

9.4. Community services

- L. Baratchart is a member of the Editorial Boards of *Constructive Methods and Function Theory* and *Complex Analysis and Operator Theory*. He is Inria’s representative at the “conseil scientifique” of the Aix-Marseille University.
- S. Chevillard is representative at the “comité de centre” and at the “comité des projets” (Research Center Inria-Sophia). He was a member of the work-group “Books” whose assignment was to propose different scenarios regarding the future of the books currently stored at the library of the research center.
- J. Leblond is an elected member of the “Conseil Scientifique” of Inria. She is one of the two researchers in charge of the mission “Conseil et soutien aux chercheurs” within the Research Center. She is a member of the “Comité de Suivi National PRPS - QVT” (Prévention des Risques Psycho-Sociaux et la Qualité de Vie au Travail).
- M. Olivi is responsible for scientific mediation and co-president of the committee MASTIC.
- F. Seyfert is a member of CUMIR at Inria Sophia-Antipolis-Méditerranée.

ASCLEPIOS Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Journal editorial boards

- N. Ayache is the co-founder and the Co-Editor in Chief with J. Duncan (Professor at Yale) of *Medical Image Analysis*⁷. This scientific journal was created in 1996 and is published by Elsevier.
- N. Ayache is Associated Editor of *IEEE Transactions on Medical Imaging*⁸ and 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. Stobant is editorial coordinator for *Medical Image Analysis*, Elsevier (since october 2001) and editorial assistant for *IEEE Transactions on Medical Image Analysis*, (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) and of the *SIAM Journal on Imaging Sciences (SIIMS)*.

8.1.2. Participation in the organization of conferences

- H. Delingette was area chair of the MICCAI 2013 conference held in Nagoya, program committee member of the International Symposium on Biomedical Imaging (ISBI'12), the conference on Virtual Reality Interactions and Physical Simulation (VRIPHYS'13), the MICCAI Workshop on Mesh Processing in Medical Image Analysis (MeshMed'13), the conference on Functional Imaging and Modeling of the Heart (FIMH'13).
- X. Pennec was the general chair of the MICCAI workshop MFCA'13 (Mathematical Foundations of Computational Anatomy), which was held at Nagoya (JP) on Sept. 22; area chair of the MICCAI 2013 conference held in Nagoya (JP), Sept. 23-25; member of the paper selection committee of IMPI 2013 (Information processing in Medical Images), Asilomar, CA, USA, June 28, July 3rd, 2013; member of the program committees of: MICCAI 2013; GSI 2013 (Geometric Science of Information), Paris, FR, August 28-30, 2013; Workshop on computational diffusion MRI (CDMRI'13).
- M. Sermesant was a co-organizer of the MICCAI 2013 Workshop on Statistical Atlases and Computational Models of the Heart and the medInria hands-on workshop.

8.1.3. Scientific animation

- Nicholas Ayache is member of the Aviesan national alliance on biosciences. He is also a member of the "Comité de la Recherche Biomédicale en Santé Publique (CRBSP)" of the Nice hospitals since 2008. He was invited to Fukuoka, Japan in February 2012 to evaluate a national program on "Computational Anatomy" funded by the MEXT.
- Xavier Pennec has been a member of the MICCAI Society Board of Directors for the period 2012-2016 and of the Doctoral follow-up Committee (CSD) at Inria Sophia Antipolis since 2010. In 2013, he was an evaluator for the European Research Council (math panel), the Council of Physical Science of the Netherlands Organisation for Scientific Research (NWO), for several project proposals submitted to the French research agency ANR.

⁷http://www.elsevier.com/wps/find/journaleditorialboard.cws_home/620983/editorialboard

⁸<http://www.ieee-tmi.org/>

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. He was an evaluator for the integrated European project ARTREAT, for the Austrian center of excellence ACMIT, for several project proposals submitted to the French research agency ANR, to the National Commission for Scientific and Technological Research of the Government of Chile (CONICYT). He was involved in the redaction of the report for the evaluation of Inria Sophia Antipolis research center by the national evaluation agency (AERES). He was the coordinator for the national evaluation of the Inria theme "Computational Medicine and Neuroscience" by the Inria evaluation committee and a panel of experts.

M. Sermesant acted as an evaluator for the ANR, CNRS and the Dutch and UK Research Councils. He is a member of the Medical Simulation Working Group of Aviesan, CUMIR (local committee representing the users of computer services) and of the CCC (local committee in charge of the selection of funding for courses and conferences organisation). He also participates in scientific animation in high schools, presenting research and medical imaging (2 times in 2013).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master 2 MVA and École Centrale de Paris. H. Delingette and X. Pennec are jointly responsible for 2 modules on medical imaging (formation and analysis of medical images) (45 hours of lectures) at the Master MVA of ENS Cachan "Mathématiques, Vision et Apprentissage". The second module is common to the 3rd year of Ecole Centrale Paris.

Master CBB - Computational Biology and Biomedicine, Univ. Nice-Sophia-Antipolis. X. Pennec is responsible for a 21h module on Computational Anatomy and Physiology, with the participation of H. Delingette (9h)

Diplôme Inter Universitaire - Radiothérapie externe Haute Technicité, Univ. Nice-Sophia-Antipolis. X. Pennec gave a 1 h course.

8.2.2. Supervision

8.2.2.1. PhD defended in 2013

1. Marine Breuille, *Imagerie TEMP 4D du petit animal - Estimation du Mouvement Respiratoire et de la Biodistribution de l'Iode*. Nice Sophia-Antipolis University, November 2013, [1].
2. Ezequiel Geremia, *Spatial random forests for brain lesions segmentation in MRIs and model-based tumor cell extrapolation*. Nice Sophia-Antipolis University, January 2013, [2].
3. Stephanie Marchesseau *Simulation de modèles personnalisés du coeur pour la prédiction de thérapies cardiaques*. Ecole des Mines de Paris, January 2013, [3].
4. Kristin Mc Leod, *Modeling of Cardiac Growth and Deformation from Medical Images*. Nice-Sophia Antipolis University, November 2013.
5. Adityo Prakosa, *Analysis and simulation of multimodal cardiac images to study the heart function*. Nice-Sophia Antipolis University, January 2013, [5].

8.2.2.2. Current PhDs

1. Chloé Audigier, *Modeling radio-frequency ablation for the planning of abdominal tumors resection*, Nice Sophia-Antipolis University. Started in April 2012.
2. Thomas Benseghir, *3D/2D Coronary Registration for Interventional Cardiology Guidance*, Nice Sophia-Antipolis University. Started in March 2012.
3. Rocio Cabrera Lozoya, *Radio frequency ablation planning for cardiac arrhythmia treatment through biophysical modelling and machine learning approaches*, Nice Sophia-Antipolis University. Started in February 2012.

4. Nicolas Cordier, *Simulation and Analysis and Simulation of Brain Tumors Images*, University of Lille. Started in February 2012.
5. Vikash Gupta, *Diffusion tensor imaging of the brain: towards quantitative clinical tools*, Nice Sophia-Antipolis University. Started in November 2011.
6. Mehdi Hadj-Hamou, *Biophysical modeling of the anatomical evolution of the brain*, Nice Sophia-Antipolis University. Started in September 2012.
7. Bishesh Khanal, *Modeling the atrophy of the brain in Alzheimer's disease*, Nice Sophia-Antipolis University. Started in November 2012.
8. Loic Le Folgoc, *Biophysical Personalization of Cardiac Models based on Machine Learning*, Nice Sophia-Antipolis University. Started in June 2012.
9. Jan Margeta, *Indexation of time-series 4D cardiac MR images*, Ecole des Mines de Paris. Started in March 2011.
10. Nina Miolane, *Geometric Statistics in Computational Anatomy: Template Estimation and Subspace Learning in Manifolds, Lie groups and Stratified Spaces*, Nice-Sophia Antipolis University. Started in November 2013.
11. Erin Stretton, *Modelling and simulation of brain tumor growth from time-series of 3-D MR images to improve diagnosis and therapy*, Ecole des Mines de Paris. Started in June 2010.
12. Hugo Talbot, *Simulation of Radiofrequency ablation of cardiac cells*, University of Lille. Started in September 2010.
13. Anant Vemuri, *Augmented reality for image-guided surgery*, Nice-Sophia Antipolis University. Started in 2012.

8.2.2.3. Masters Students

1. Nina Miolane: *Defining a mean on Lie groups*. MSc Quantum Fields and Fundamental Forces, Theoretical Physics Dept, Imperial College London, UK. 2013. From July 2013 to August 2013.

8.2.3. Juries

N. Ayache was supervisor of the PhD thesis of Ezequiel Geremia (University of Nice-Sophia Antipolis), co-supervisor of the PhD theses of S. Marchesseau (École des Mines de Paris) and A. Prakosa (University of Nice-Sophia Antipolis), reviewer of the PhD thesis of R. Prevost (Univ. Paris Dauphine).

Hervé Delingette was supervisor of the PhD theses of S. Marchesseau (École des Mines de Paris) and A. Prakosa (University of Nice-Sophia Antipolis), co-supervisor of the PhD thesis of Ezequiel Geremia (University of Nice-Sophia Antipolis), reviewer of the PhD thesis committee of P-Y. Baudin (Ecole Centrale de Paris).

X. Pennec was a member of the HDR jury of Stéphanie Allassionnière, Ecole Normale Cachan (Reviewer) and to the PhD juries of Kevin Sol, U. Montpellier (Reviewer); Aymeric Stamm, U. Rennes; Fabrice Michel, U. ParisTech (Ecole Centrale) (Reviewer); Jean-Baptiste Fiot, U. Dauphine (Reviewer); Barthelemy Serres, U. Tours (President of the jury); Kristin McLeod, University of Nice-Sophia Antipolis, (Advisor).

Maxime Sermesant was co-supervisor of the PhD theses committee of S. Marchesseau (École des Mines de Paris), A. Prakosa (University of Nice-Sophia Antipolis) and Kristin McLeod (University of Nice-Sophia Antipolis). He was external examiner for the PhD viva of Robert Xi (Oxford University, UK) and Mikael Wallman (Oxford University, UK), and part of the PhD committee of Hubert Cochet MD in Radiology (Bordeaux University).

8.2.4. Invited Lectures

We only list invited talks here. Please refer to general references for regular participation in conferences with a submission process.

- **Nicholas Ayache** gave the following invited lectures:

- at the *French-Japanese symposium on the future of surgery* in Strasbourg on December 20th 2012.
- at the *Rank Prize Fund Symposium* on March 21th 2013 on the topic "Medical Imaging meets Computer Vision".
- at the symposium organized for the 15th anniversary of the Imaging Science Center at Johns Hopkins University on May 18th 2013.
- at the Ecole Centrale Paris on November 5th 2013 during the session organised around the challenges in Healthcare and Biotechnologies.
- **Hervé Delingette** gave the following invited lectures:
 - at the *MICI international workshop* held in Tokyo (Japan).
 - at the *MICCAI Workshop on Mesh Processing in Medical Image Analysis 2013* in Nagoya (Japan).
 - at the *10th VRIPHYS Workshop on Virtual Reality Interaction and Physical Simulation* in Lille, France.
 - at the session on cardiac imaging organized by the GRIC (Groupe de Recherche en Imagerie Cardiaque) during the Journées Française de radiologie in Paris.
 - at the *ORASIS conference* in Cluny (France).
- **Xavier Pennec** gave the following invited lectures:
 - **IMA Annual Program Year Workshop on Topological Structures in Computational Biology**, Minneapolis, US, December 9-13, 2013.
 - **Advances in Matrix Functions and Matrix Equations (FUN13)**, Manchester, UK, April 10-12, 2013.
 - **Distinguished seminar series, SCI institute**, Salt-Lake City, February 13 2013.
 - **Geometric Mechanics and Shape, NZMRI workshop 2013**, Ohope beach, New Zealand, January 13-19, 2013.
 - Hamiltonian Dynamics Seminar, Chair of Geometric Analysis Section de Mathématiques, EPFL, Lausanne, October 9, 2013.
 - Thematic day on initial stress for geomechanical models at IFP Energies nouvelles (IFPEN), Rueil-Malmaison, Sept. 19, 2013.
- **Maxime Sermesant** was invited to give the closing lecture on "Mathematics for Healthcare" at the 34th Paediatric Cardiology Seminar organised by Necker Hospital, and gave an invited lecture on congenital cardiopathies at the "Printemps de la Cardiologie" in Marseille and an invited lecture on real-time simulation of ablation at the Atrial Fibrillation meeting in London.

8.2.5. Nominations and Prizes

- **Nicholas Ayache** received the MICCAI 2013 "Enduring Impact Award" for his scientific contributions since the inception of the conference in 1998. This award was established four years ago and was previously awarded to Ron Kikinis (Harvard Medical School), Russ Taylor (Johns Hopkins), Chris Taylor (Manchester Univ.) and Jerry Prince (Johns Hopkins). Nicholas took the opportunity to thank the team and all his collaborators.
- **Nicholas Ayache** was elected at the Collège de France to the Chair "Informatics and Computational Sciences" for the academic year 2013-2014. He will teach a course entitled "The Personalized Digital Patient: Images, Medicine and Informatics". The course will be completed by seminars (2 of them being delivered by H. Delingette and X. Pennec), and an international Colloquium. More details to appear on the web site of the Collège de France: <http://www.college-de-france.fr/site/nicholas-ayache/>.
- **Tom Vercauteren** won the Young Scientist Publication Impact Award 2013 of the MICCAI Society (Oct 2012) for the paper "Symmetric log-domain diffeomorphic Registration: a demons-based approach", published at MICCAI 2008 co-authored by X. Pennec, A. Perchant, N. Ayache.

ATHENA Project-Team

9. Dissemination

9.1. Scientific Animation

- R. Deriche is Adj. Director at the Doctoral School EDSTIC (<http://edstic.i3s.unice.fr/index.html>)
- 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 of GRETSI (Groupe d'Etudes du Traitement du Signal et des Images).
- R. Deriche is member of the Editorial Board of the Journal of Neural Engineering, Associate Editor of SIAM Journal on Imaging Sciences (SIIMS) and editorial board member at Springer for the book series entitled Computational Imaging and Vision.
- R. Deriche has served for many years as area-chair and/or as program committee member for International Conferences as ICCV, MICCAI, ECCV, CVPR, ISBI and national conferences as AFRIF-AFIA RFIA and serves several international journals and conferences (NeuroImage, IEEE Transactions on Medical Imaging, Magnetic Resonance in Medicine, JMIV, Medical Image Analysis Journal, ISBI, ISMRM, HBM..).
- R. Deriche has co-organised MICCAI 2013 Workshop on Mathematical Methods for Brain Connectivity.
- R. Deriche has organised the "Computational diffusion MR imaging" session of the BASP: international biomedical and astronomical signal processing (BASP) Frontiers held in Villars-sur-Ollon (Jan. 27, Feb.1, 2013).
- M. Clerc is on the Editorial Board of Biomedical Engineering Online, and of the ISTE-Wiley book series (Neural Engineering committee).
- T. Papadopoulo served as a referee for the international conferences MICCAI 2013, ICVS 2013, NER 2013 and ISBI 2013 and 2014. He was area chair for the national conference GRETSI 2013. In 2013, he has been reviewer for the journals Image and Vision Computing and Signal, Image and Video Processing.
- T. Papadopoulo has reviewed a BPI proposal and a Futur & Rupture de l'Institut Mines-Télécom proposal.
- T. Papadopoulo (since september 2011) is the 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).
- T. Papadopoulo is a member of the local (Sophia Antipolis) committees for software development (CDT) and for Sustainable development. He is also member of the piloting committee for the platform dtk.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: R. Deriche, *Variational approaches and Geometrical Flows for Brain Imaging*, 36 ETD, M2 "Computational Biology and Biomedicine", University of Nice Sophia Antipolis, France.

Master: M. Clerc and T. Papadopoulo, *Inverse Problems in Brain Functional Imaging*, 36 ETD, M2 "Computational Biology and Biomedicine", University of Nice Sophia Antipolis, France.

Master: T. Papadopoulo, *3D Computer Vision*, 36 ETD, M2, SSTIM/VIM/MAM5 option at Polytechnic Engineering School, 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.

Doctorat: M. Clerc *Inverse Problems in Brain Imaging*, 6 ETD, OIPE Doctoral Course, Ghent University, Belgium.

9.2.2. Supervision

PhD: Sylvain Merlet, "Compressive Sensing in dMRI", Université Nice Sophia Antipolis, Sept. 11, 2013. Supervisor : Rachid Deriche

PhD: Anne-Charlotte Philippe, "MEG inverse problem regularization via Diffusion MRI", Université Nice Sophia Antipolis, Dec. 19th, 2013. Supervisors: Rachid Deriche and Maureen Clerc.

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 October 2013, Supervisor: Theo Papadopoulo.

PhD in progress: Kai Dang, "Conductivity models for optimizing cochlear implant stimulation", started December 2013, Supervisor: Maureen Clerc.

PhD in progress: Rutger H.J. Fick, "Microstructure Recovery via dMRI", started Oct. 2013, Université Nice Sophia Antipolis. Supervisor: Rachid Deriche.

PhD in progress: Gabriel Girard, "fMRI & dMRI", started Sept. 2012, Supervisors: Rachid Deriche & Maxime Descoteaux (University of Sherbrooke, CA).

PhD in progress: Sebastian Hitziger, "MEEG signal processing", started Nov. 2011, Supervisors: Théodore Papadopoulo & Maureen Clerc.

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: Romain Trachel, "A Brain Machine Interface for enhancing human performance", started Oct. 2010. Supervisors: Maureen Clerc & Thomas Brochier.

9.2.3. Juries

- M. Clerc participated in the PhD juries of Maxime Rio (Université de Lorraine), Janis Hofmanis (Université de Lorraine) and Anne-Charlotte Philippe (UNS, Nice).
- M. Clerc participated in a jury for CR2 recrutement at Inria Nancy Grand Est.
- R. Deriche participated in the PhD juries of Alexandre Chapoulie (UNS, Nice), Lihui Wang (INSA, Lyon), Gonzalo Vegas Sanchez Ferrero (Valladolid University, Spain), Yacine Morsli (EMP, Algiers), Nicolas Bourdis (Télécom ParisTech, Paris), Sylvain Merlet (UNS, Nice), Stamm Aymeric (Université de Rennes 1) and Anne-Charlotte Philippe (UNS, Nice).
- R. Deriche participated in the HDR juries of Iasonas Kokkinos (Université Paris Est) and Olivier Coulon (Université d'Aix-Marseille).
- T. Papadopoulo participated in the PhD juries of Carolina Saavedra à Inria Nancy (Université de Lorraine).

AXIS Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Organization of Workshops and Conferences

Participation to Innovative City Convention Organisation (June 18th): this event ICC 2013 has attracted more than 2500 people from enterprises and territories.

- B. Trousse organised one workshop Inria-France Living Labs at Innovative City Convention on "Co-create with Users digital services of the territories of tomorrow" with around 100 attendants. At Innovative city convention 2013 (2500 attendants, June 18th, Nice), Inria and Fing has awarded several participants for their user involvement (idea production, viral marketing, questionnaires, sensor management). Two special winners being involved in many experiments received as awards one tablet offered by FING. The awarded citizen have expressed during this workshop their satisfaction related to MyGreenServices in producing IoT data, in being informed about the pollution where they live or when they move or in exchanging with others.

See the article on Atelier.net (the disruptive innovation BNP Paribas journal) ([here](#))

- Co-redaction of a flyer (English version) related to the PACALABS ECOFFICES project for the ICC conference in Nice distributed by "Chambre de Commerce et industrie" (Enterprise/Environment/Energy Department) ISGAN - CCI.

8.1.2. Editorial Boards and Reviewing

Axis members participate in the **editorial boards** of various journals:

Yves Lechevallier

- MODULAD (electronic journal) as co-editor
- BIT (Behaviour & Information Technology)
- ADAC (Advances in Data Analysis and Classification)

Dominique Scapin

- BIT (Behaviour & Information Technology) (Associate Editor)
- UAIS -International Journal of Universal Access in the Information Society)
- IJHCS - International Journal of Human-Computer Studies
- IWC - Interacting with Computers
- IJPOP - International Journal of People-Oriented Programming
- International Journal On Advances in Intelligent Systems
- JMUI - Journal of Mutimodal User Interfaces
- JIPS - "Journal d'Interaction Personne-Système"

Brigitte Trousse

- Journal of Symbolic Data Analysis
- IJDST - International Journal of Design Sciences & Technology (Europia Productions)
- Co-Design, International Journal of CoCreation in Design and the Arts Journal (Taylor Francis online)

AxIS members are very regularly **reviewers** for various major journals: ADAC "Advances in Data Analysis and Classification", BIT (Behavior and Information Technology), ADAC "Advances in Data Analysis and Classification", IJHCS (International Journal of Human-Computer Studies), JMUI (Journal of Multimodal User Interfaces), "Le Travail Humain", UAIS, IwC in 2012. Thierry Despeyroux was reviewer for a book: Advances in Knowledge Discovery and Management Vol. 4 to be published. B. Senach reviewed a paper for the BIT journal

8.1.3. Conferences - Workshops Scientific Program Committees

Y. Lechevallier and B. Trousse are members of the **supervising committee** of the association EGC (<http://www.egc.asso.fr/>).

AxIS permanent members are involved in the following program committees of conferences and workshops:

Thierry Despeyroux

- EGC 2013, January 29th - February 1st 2013, Toulouse, France.
- EGC 2014, 27-31 January 2014, Rennes, France.

Yves Lechevallier

- EGC 2013, January 29th - February 1st 2013, Toulouse, France.
- EGC 2014, 27-31 January 2014, Rennes, France.

Dominique Scapin

- EGC 2013, January 29th - February 1st 2013, Toulouse, France.
- HCII 2013, 21-26 July 2013, Las Vegas, Nevada, USA.
- SETIT 20143, 6th International Conference Sciences of Electronics, Technologies of Information and Telecommunications, 11-13 October 2013, Chongqing, China.
- INTERACT 2013, 2-6 September 2013, Cape Town, South Africa.
- CENTRIC 2013. October 27th - November 1st, 2013, Venice, Italy.
- IHM 2013, 12-15 November 2013, Bordeaux, France.
- ICMI, 5th ACM International Conference on Multimodal Interaction, December 9-13th, 2013, Sydney, Australia.
- PhyCS, 1st. International Conference on Physiological Computing Systems, January 7-9, 2014, Lisbon, Portugal.
- EGC 2014, 27-31 January 2014, Rennes, France.
- ACHI 2014, 23-27 March 2014 - Barcelona, Spain.
- SETIT 2014, 7th International Conference Sciences of Electronics, Technologies of Information and Telecommunications, March 24-28 2014, Kuala Lumpur, Malaysia.
- CHI 2014, April 26 - May 1, Toronto, Canada.
- HCII 2014, 22-27 June 2014, Heraklion, Crete, Greece.
- ErgoIA 2014, 15-17 October 2014, Bidart, France.

Brigitte Trousse

- EGC 2013, January 29th - February 1st 2013, Toulouse, France.
- CSCWD 2013, the 2013 17th IEEE International Conference on Computer Supported Cooperative Work in Design, June 27-29, Whistler, BC, Canada (sponsored by IEEE SMC Society).
- RAPC 2013?, 21th French Workshop on Case-based Reasoning.
- H2PTM 2013, 16-18 October, International Conference "Hypertextes et Hypermedia, Produits, Outils et méthodes, Usages et pratiques numériques", 2013 CNAM - Paris.
- IJCAI 2013, 3-9 August, 23rd International joint Conference on Artificial Intelligence, Beijing, China (reviewer).
- EGC 2014, 27-31 January 2014, Rennes, France.
- CSCWD 2014, 21-24 May 2014, the 2014 IEEE 18th International Conference on Computer Supported Cooperative Work, National Tsing Hua University, Taiwan in Design.
- DCC 2014, 23-25 June 2014, Sixth International Conference on design Computing and Cognition, University College London, London, UK.
- ICC 2014, 25-26 June 2014, Innovative City Convention, Nice, France.
- ICE 2014, 23-25 June 2014, 20th International Conference ICE on Engineering, Technology and Innovation, IEEE TMC Europe Conference, Bergamo, Italy.

8.1.4. Invited talks or participations**Yves Lechevallier**

- Conference ECDA 2013: Y. Lechevallier gave an **invited talk** "Partitioning Methods On Dissimilarity Matrices Set" related to this publication [20] at the First European Conference on Data Analysis (ECDA 2013) (with around 300 participants) jointly hosted by the two Classification Societies (GkKI in Germany and SFC in France) in July at Luxembourg.

B. Trousse

- BIOVISION 2013, The World Life Sciences Forum (Lyon, March): B. Trousse as President of France Living Labs was invited to be panelist in the prospective session "eHealth: a coming medical revolution?".
- Conference of Ladies in mobility at Ever Monaco (Monaco, March 29): B. Trousse made an invited talk on "Innovative Services in Mobility (User Experience, Living Lab Approach)".
- 2030 Prospective ADEME workshop (2 days) organised by ADEME and Chronos firm, Sophia Antipolis.

8.1.5. Other actions

Local Dissemination to Citizen within ELLIOT project which has required a huge effort, both in terms of citizen workshop reporting, recruitment for our two 16 days experiments related to MyGreenServices in 2013 (February and June), community management within the forum, maintenance of a Scoop-it page on green services and finally MyGreenServices reporting for large audience. We realized for citizen recruitment a flyer on ELLIOT project and a call for participation for the workshops we published on various web sites: ICT Usage Lab, GreenCode, WebTimeMedias and Local networks such as the local JCI chapter. In addition to the recruitment we have prepared various packages for citizen related to the use of each citizen IoT stations. Finally for ELLIOT experiments we have recruited 48 participants from the idea generation until the experimentation.

Participation to other events:

B. Trousse participated in several events or meetings disseminating AxIS results:

- Workshop "Design & Living Labs: L'apport du design et des SHS dans les démarches d'innovation centrée usagers ?", January 16th, Marseille (France)
- R2DS Conference: "Dispositifs d'activation de l'innovation pour la ville durable: Espace coworking, fablab, living lab et Smart Cities", organised by Fondaterr and the Regional Council of "Ile de France", at Hémicycle - Regional Council Ile de France (Paris 7e),
- International Biennale of Design, Forum Design et Innovation, March, St Etienne (France).
- General Assembly of France Living Labs, March, St Etienne (France),
- Meeting of the Strategical Orientation Committee of Pacalabs (evaluation of the past Pacalabs four years, done by EDATER and PacaLabs Operational Committee) June, Marseille (France)
- Innovative City Convention (ICC 2013), June, Nice (France),
- European Summer School on Living Labs, August, Manchester (UK),
- Final ELLIOT Review at EU, August, Brussels (Belgium),
- LIFT 2013 "Produire autrement!", 15 October, Marseille (France),
- Innovation & Territories - City of Antibes organised by Telecom valley (Innovation Committee), November 14th, Campus SophiaTech.

B. Senach participated in several scientific events:

- International Biennale of Design, Forum Design et Innovation, Saint-Etienne, March, St Etienne (France). Participation in the Workshop : "Passage de l'économie de la propriété à l'économie de l'usage".
- Conférence "L'intégration de la mobilité durable dans les villes intelligentes", Monaco, March, 29.
- Innovative City Convention (ICC 2013), June, Nice (France).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

8.2.1.1. Teaching Activities

Y. Lechevallier

- Master 2 Recherche *Systèmes intelligents* (resp: S. Pinson), University at Paris IX-Dauphine, France. Yves Lechevallier taught a course on "Du data mining au knowledge mining" (24h).
- ENSG: Yves Lechevallier taught a course on Clustering (12h).

8.2.2. Supervision

B. Trousse is involved in the supervision committee of two PhD in progress:

- **E. L. Moukhtar Zemmouri**, Ontology-based model for Multi-View KDD process, PhD student at ENSAM, Mathematics-Computer Science Departmenté Moulay Ismaël - Ecole Nationale Supérieure d'Arts et Métiers - Meknès (Morocco), supervision committee: H. Behja, A. Marzark, B. Trousse, B. Ouhbi and Y. Benghabrit
- **Dié Diya**, LIMOS, Université de Clermont Ferrand, supervisors Yannick Loiseau, Olivier Raynaud

8.2.3. Juries

AxIS researchers were members of the following Ph.D. committees in 2013:

Yves Lechevallier

- **Djamal Adboul Nasser Seck**, Ph.D, Arbres de décision symboliques, outils de validation et d'aide à l'interprétation, January, Dauphine University
- **Wafia Parr Bouberrima**, Ph.D, Modèles de mélange de Von Mises-Fisher, October, University Paris 5 and Sétif University

Brigitte Trousse

- **Malek Alaoui**, Ph.D., Application d'une démarche Living Lab au développement de services de TV sociale dédiée aux personnes âgées, December, Technology University of Troyes (UTT)
- **E.L. Moukhtar Zemmouri**, Ph.D., "Représentation et gestion des connaissances dans un processus d'Extraction de Connaissances à partir de Données multi-points de vue", December, Université Moulay Ismaël - Ecole Nationale Supérieure d'Arts et Métiers - Meknès (Morocco) [75] .

AYIN Team

9. Dissemination

9.1. Scientific Animation

- Ikhlef Bechar participated in “Journées Envol-Recherche EADS” in Paris on 14/02/2013.
- Aurélie Boisbunon, Seong-Gyun Jeong, and Yuliya Tarabalka attended the “Methodological Aspects of Hyperspectral Imaging” (MAHI) workshop in Nice (France) in October.
- Paula Craciun gave a seminar at ASTRIUM EADS in Toulouse, in January. She gave a seminar at the West University of Timisoara, Romania, in February. She gave a presentation at Inria in Bordeaux, in May. Also in May, she obtained a grant from the Centre for Stochastic Geometry and Advanced Bioimaging (CSGB), Denmark, to attend a summer school on “Topics on space-time modeling and inference”, in Aalborg, Denmark. She presented a paper at ICIP’13 in Melbourne, Australia, in September. Paula Craciun visited Dr. Ba-Ngu Vo at Curtin University, Perth, Australia, from 20/09/2013 to 25/09/2013. She attended meetings with ASTRIUM EADS in Paris and Toulouse in December.
- Seong-Gyun Jeong attended the workshop GeoStoch’13 in Grenoble in April. He was a reviewer for the journal JVCI (Journal of Visual Communication and Image Representation).
- Zhao Liu presented a paper at EUSIPCO’13 in Marrakech, Morocco, in September, and another paper at ACPR’13 in Okinawa, Japan, in November. She gave talks to the LIRA Consortium during the LIRA workshop in Sophia Antipolis in February, and at the workshop in Berlin in May. She presented her work to CHU Nice at the hospital l’Archet 2 in May, and to Galderma R&D in Sophia Antipolis in July.
- Claudio Price presented a paper at the LARS conference in Santiago, Chile in October.
- Yuliya Tarabalka presented a paper at the IEEE IGARSS conference in Melbourne, Australia, and a paper at the BMVC conference in Bristol, UK. She also presented a paper of A. Gamal Eldin *et al.* at the SPIE Computational Imaging Conference in Burlingame, USA. In June, she presented the Ayin team and her work to students visiting Inria from SupCom-Tunis. She presented the Ayin team at the India-France Technology Summit in New Delhi, India in October. She visited and gave a seminar at the Indian Institute of Space Science and Technology in Trivandrum, India in October. She gave a seminar at the MAP5 laboratory of the University Paris Descartes in Paris in December. Yuliya Tarabalka is a co-editor of the special issue “Analysis of Remote Sensing Image Data” for the journal Remote Sensing. She was a reviewer for the journals IEEE TIP, IEEE TGRS, IEEE GRSL, IEEE Trans. on Neural Networks and Learning Systems, Computer Vision and Image Understanding, Remote Sensing, IEEE JSTARS, Journal of Applied Remote Sensing, and for the conferences GRETSI’2013, IEEE ICIP’2013, IEEE ICASSP’2013, IEEE IGARSS’2013 and OSA Imaging Systems and Applications’2013. She was a part of the program committee for the OSA Imaging Systems and Applications conference. She chaired a session at the conference IEEE IGARSS’2013.
- Ian Jermyn was a reviewer for the conferences EMMCVPR, ICIP, IDEAL; for the Journal of Mathematical Imaging and Vision; and of proposals for the UK Engineering and Physical Sciences Research Council and the Israel Science Foundation.
- Josiane Zerubia is an IEEE Fellow. She was a reference proposal reviewer for CRC Press. She was a reviewer for SFPT (Revue Française de Photogrammétrie et de Télédétection). She was a reviewer (and also a program committee member for some of these conferences) for ICASSP’13, ISBI’13, ICIP’13, and for EMMCVPR’13, MICCAI’13, TAIMA’13, SPIE-ISPRS’13 (“Image and Signal Processing for Remote Sensing”), ICPRAM’13 and GRETSI’13. She was a member of the

Image, Video and Multidimensional Signal Processing (IVMSP) Technical Committee of the IEEE Signal Processing Society until December 2013. She was a member of the Editorial Board of IJCV until March 2013. She is an Associate Editor of the collection “Foundation and Trends in Signal Processing” [<http://www.nowpublishers.com/>]. She is a member of the Editorial Board of the “Revue Française de Photogrammétrie et de Télédétection of SFPT”. She is an Associate Editor of the electronic journal Earthzine [<http://www.earthzine.org/>].

Josiane Zerubia visited Astrium EADS Toulouse in January. She participated in the CNES Research and Technology day in Toulouse in February. In February, she also organized at Inria-SAM the LIRA skincare workshop. In April, she attended a dermoscopy workshop organized by CHU Nice (Faculty of Medicine), and presented the work of Ayin in dermato/cosmetology at the L’Oreal R&D center in Aulnay. She also attended the IGN Research Days in Marne la Vallée in April. She was a member of the CR2 selection committee at Inria-SAM in May. In May, she gave a talk at l’Archet 2 hospital, CHU Nice (Dept of Dermatology), a talk in Berlin at the Fraunhofer Institute during a LIRA skincare workshop, and a third talk at the international KAL’Haiti meeting organized by CNES at the Ministry of Foreign Affairs in Paris. Finally, in May she took part in a one-day meeting with EPI Alea and Astrium EADS at Inria Bordeaux. In June she presented Ayin’s research in dermatology at Galderma R&D and gave a talk on Ayin’s research in remote sensing at the University of Tunis El Manar. She also presented the activities of Inria-SAM and of the international Masters UBINET and BIOCAMP of UNS to Tunisian Masters students. In September, she gave an invited talk at the “Imaging in Geospatial Applications” workshop at the Institute of Mathematics and Applications (IMA) at University of Minneapolis, and presented a paper at GRETSI in Brest. In November she gave an invited talk at the Remote Sensing Days organized by the University of Bordeaux I. In December, she went to Toulouse for meetings with Astrium EADS and with CNES. In December, she also attended the annual meeting of the Astrium/Inria PhD committee organized at EADS in Suresnes.

Josiane Zerubia is a deputy of Frederic Alexandre on the Executive Committee of the LIRA Consortium (Philips, CWI, Fraunhofer, Inria). She is a member of the ORFEO group (CNES). She is a consultant for Galderma R&D in Sophia-Antipolis. She is also a member of the Program Committee of the Master 2 in Computational Biology and Biomedicine (CBB) at the University of Nice Sophia Antipolis, in charge of sponsoring.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Masters: Yuliya Tarabalka, Spaceborne sensors and their applications, 4.5h eq. TD (3h of lectures), Master PPM, École Nationale des Sciences Géographiques, France.
- Masters: Yuliya Tarabalka, Digital imaging, 15h eq. TD (2h of lectures + 12h of TD), M2 SVS ISAB, Université de Nice Sophia-Antipolis, France.
- Masters: Josiane Zerubia, Deconvolution and denoising in confocal microscopy, 18h eq. TD (12h of lectures), M2 IFI BCC, Université de Nice Sophia-Antipolis, France. Josiane Zerubia is also director of this course (total: 24h of lectures).
- 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 Master 2 of Applied Mathematics at the University Paul Sabatier in Toulouse.
- Masters: Josiane Zerubia, Introduction to image processing, 4.5h eq. TD (3h of lectures), M2 SVS ISAB, Université de Nice Sophia-Antipolis, France. Josiane Zerubia is also director of the course “Digital imaging” at UNS, Master 2 SVS ISAB, UE3 (total: 25h of lectures and 25h of TD).

9.2.2. Supervision

PhD in progress: Paula Craciun, Automatic object tracking on a sequence of images taken from a geostationary satellite, University of Nice-Sophia Antipolis, started in December 2012, Josiane Zerubia and Pierre Del Moral.

PhD in progress: Ihsen Hedhli, Change detection methods for multisensor and multiresolution remote sensing images for applications to environmental disaster management, University of Genova and University of Nice-Sophia Antipolis, started in January 2013, Gabriele Moser and Josiane Zerubia.

PhD in progress: Seong-Gyun Jeong, New image processing methods for skin condition evaluation, University of Nice-Sophia Antipolis, started in December 2012, Josiane Zerubia and Yuliya Tarabalka.

9.2.3. *Juries*

- Yuliya Tarabalka was a reviewer of one PhD thesis for the AFIA prize.
- Josiane Zerubia was a member of two PhD committees in April and October 2013. She was a reviewer of one PhD thesis at the University of Tunis El Manar in Tunisia, in July 2013.

9.3. Popularization

- Paula Craciun and Josiane Zerubia have published an article in ERCIM News'95 [19]. They have also written a blog article for MPT2013 in French [<http://mpt2013.fr/les-ports-vus-du-ciel/>] and MPE2013 in English [<http://mpe2013.org/2013/10/29/boat-extraction-in-harbors-from-high-resolution-satellite-images/>].
- Yuliya Tarabalka gave an interview to the LISA journal in January 2013 [<https://lisa.sophia.inria.fr/yuliya-tarabalka-888.html>]. She participated in the conference of the Young Academy of Science in Ukraine, presenting the Ayin team and her research work to the 12-16 year-old attendees of the Academy.
- Yuliya Tarabalka and Guillaume Charpiat (STARS EPI) published an article in the Earthzine journal "Exploiting Temporal Coherence for Fire Mapping from MODIS Spaceborne Observations" in September 2013 [20].
- Josiane Zerubia took part in a debate on the topic "Les TIC, une révolution pour les femmes?" organized at the SKEMA Business School in Sophia-Antipolis by three associations (Femmes & Sciences, Femmes 3000 and Telecom Valley) on November 26, 2013 (for more detail see <http://www.femmesetsciences.fr/actualites/les-tic-une-revolution-pour-les-femmes-conference-debat-261113-sophia-antipolis/>)

BIOCORE Project-Team

9. Dissemination

9.1. Scientific Animation

J.-L. Gouzé is a member of the scientific committee for the conference BIOMATH ; also for the conference for E. Benoit (La Rochelle 2013). He 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 a member of the board of the SFBT (French Speaking Society for Theoretical Biology).

M. Chaves is the coordinator of ANR project GEMCO. Since September 2011, she is a member of the COST-GTRI (the Working Group on International Relations in 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.

O. Bernard is in the technical committee of the Computer Applied to Biotechnology (CAB) conferences. He is in the scientific committee of the French conference "Stic et Environnement". He is a member of the scientific comity of the competitiveness pole "Trimatec". O. Bernard represents Inria at the ANCRE (Alliance Nationale de Coordination de la Recherche pour l'Energie), in the biomass committee. He is member of the ADT (Technological Development Actions) at Inria.

F. Grogard 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 committees of the doctoral school "Sciences de la Vie" at the University of Nice-Sophia Antipolis.

P. Bernhard is a member of the scientific committees of the doctoral school "Sciences fondamentales et appliquées" at the University of Nice-Sophia Antipolis.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

O. Bernard (9h ETD), "Mathematical models in Biology". Master on biological oceanography in Villefranche-sur-Mer (M2), Universit Pierre et Marie Curie, France.

O. Bernard (4.5 ETD), "Bioenergy from microalgae", Master International Energy Management : alternatives pour l'énergie du futur, Ecole Nationale Supérieure des Mines de Paris, France.

O. Bernard (18h ETD), "Modelling biotechnological processes", Ecole Centrale de Paris, France.

F. Grogard (45.5h ETD) and L. Mailleret (26h ETD), "Equations différentielles ordinaires et systèmes dynamiques", 1st year Engineering in Modeling and Applied Mathematics (eq. L3), Polytech'Nice, Université of Nice Sophia Antipolis, France.

F. Grogard (21h ETD) and L. Mailleret (21h ETD), "Bio-Mathématiques", 2nd year Engineering in Modeling and Applied Mathematics (eq. M1), Polytech'Nice, Université of Nice Sophia Antipolis, France.

J.-L. Gouzé (9h ETD), M. Chaves (4.5h ETD), "Discrete and continuous approaches to model gene regulatory networks", Master of Science in Computational Biology (M2), University of Nice - Sophia Antipolis. M. Chaves and J.-L. Gouzé have participated in a book chapter entitled "Modeling and analysis of gene regulatory networks" on the topics taught in this course [62].

J.-L. Gouzé (18h ETD), M. Chaves (9h ETD), A. Carta (6h ETD), "Modelling biological networks by ordinary differential equations", 4th year students, Génie Biologie, Ecole Polytechnique University of Nice - Sophia Antipolis

O. Bernard supervised two projects for engineer school students. The first project involved 6 students of Ecole Nationale Supérieure des Mines de Paris (last year of engineering school, 1 week ("Using thermal flux to agitate microalgae cultures") and the second project involved 4 students from the Ecole Centrale de Paris (first year of engineering school), 4 months, to design biofilm for microalgae.

9.2.2. Supervision

PhD : M. Teixeira-Alves, “Modélisation de réseaux écologiques dans un cadre de protection des cultures: applications à la lutte biologique”, UNS, defended January 25, 2013. Supervisors: F. Grognard and L. Mailleret.

PhD : M. Castel “Modélisation des trajectoires évolutives des pathogènes de plantes dans les écosystèmes agricoles”, University of Rennes, defended November 12, 2013. Supervisors : F. Hamelin and D. Andrivon (Agrocampus Ouest) and L. Mailleret.

PhD in progress : P. Hartmann, "Development of a model for microalgal photoadaptation", since september 2010, UNS. Supervisor: O. Bernard.

PhD in progress : A. Carta, “Analysis and Control of models of biological regulatory systems. Application to growth control in *E. coli*”, since december 2010, UNS. Supervisors: J.-L. Gouzé and M. Chaves.

PhD in progress : C. Baroukh, “Modeling the coupling of microalgae with anaerobic digestion”, since September 2011, University of Montpellier 2. Supervisors: J.-P. Steyer and O. Bernard.

PhD in progress : A. Lebon, “Modélisation couplée plantes-ravageurs-ennemis naturels dans un contexte de lutte biologique”, since October 2011, University of Montpellier 2. Supervisors : Y. Dumont (CIRAD), F. Grognard and L. Mailleret.

PhD in progress : I. Belgacem “Control de systèmes de régulation génétique”, since November 2011, UNS. Supervisor: J.-L. Gouzé.

PhD in progress : H. Bonnefond, "Experimental development of selection oriented photobioreactors", since september 2012, UPMC. Supervisors: A. Sciandra and O. Bernard

PhD in progress : C. Combe, "Response of microalgae to fluctuating light", since september 2012, UPMC. Supervisors: A. Sciandra and S. Rabouille.

PhD in progress : G. Grimaud, "Controlled competition for the selection of microalgal species of interest", since September 2012, UNS. Supervisors: O. Bernard and S. Rabouille.

PhD in progress : T. Morel Journel, “Où, quand, combien? Stratégies d’introduction d’organismes dans un environnement spatialement structuré”, since October 2012, UNS. Supervisors: T. Guillemaud, E. Vercken and L. Mailleret.

PhD in progress : E. Rousseau, “Plant viruses adaptation to quantitative resistance: from the study of their impact on within-host viral evolutionary dynamics to their durable management in agroecosystems”, since November 2012, UNS. Supervisors: F. Grognard, L. Mailleret, B. Moury, and F. Fabre (INRA Avignon).

PhD in progress : D. Demory, "Impact of virus dynamics on microalgae mortality ", since September 2013, UPMC. Supervisor: A. Sciandra and O. Bernard

PhD in progress : N. Bajoux, "Influence d’une densité dépendance dans les modèles impulsifs de dynamiques des populations", since October 2013, UNS. Supervisor: O. Bernard.

PhD in progress : S. Casagrande. “Analysis and control of cell growth models”, since November 2013, UNS. Supervisor: J.-L. Gouzé.

9.2.3. Juries

O. Bernard was referee for the HDR of J. Morchain, Nov. 19, Title: "Bioreactor modelling by coupling fluid mechanics and population balance" Toulouse University

O. Bernard was in the PhD jury of A. Besson, Dec. 9. Title: "Multi scale study of the harvesting of *Dunaliella salina*"

O. Bernard was in the PhD jury of B. Sialve, Jul 15. Title: “Coupling microalgal cultivation with anaerobic digestion”, INSA Lyon

O. Bernard was in the PhD jury of A.-C. Boulanger, Sep.13. Title: "Modelling, simulation and data assimilation for a hydrodynamics-biology coupling problem", University Pierre et Marie Curie.

M. Chaves was in the PhD thesis jury of Luca Grieco, May 3. Title: "Integrative modelling and analysis of MAPK network deregulations in human cancers," University of Marseille and TAGC (INSERM U928).

J.L. Gouzé was referee for the PhD thesis of Radhouane Fekih-Salem, Sept. 30. Title: "Modèles Mathématiques pour la Compétition et la Coexistence des Espèces Microbiennes dans un Chemo-stat", UM2 Montpellier

J.L. Gouzé was in the PhD thesis jury of Olivier Borkowski, Feb. 19. Title: "Growth-rate-dependent protein production in bacteria". Univ. Paris Descartes.

J.L. Gouzé was referee for the PhD thesis of Mohamed Amin Ben Sassi, Apr. 15. Title: "Analyse et contrôle des systèmes dynamiques polynomiaux". UJF Grenoble.

J.L. Gouzé, F. Grognard and L. Mailleret were in the PhD thesis jury of Mickael Teixeira Alves, Jan. 25. Title: "Des interactions indirectes entre les proies : modélisation et influence du comportement du prédateur commun". UNS.

J.L. Gouzé was in the HDR jury of Madalena Chaves, Oct. 24. Title: "Predictive analysis of dynamical systems: combining discrete and continuous formalisms", UNS.

L. Mailleret was in the PhD thesis jury of Magda Castel, Nov. 12. Title: "Écologie et évolution théoriques des parasites de plantes annuelles", Université de Rennes.

J.-L. Gouzé is in the thesis committee of C. Baroukh (University of Montpellier).

M. Chaves is in the thesis committee of F. Fourré (University of Luxembourg).

O. Bernard is in the thesis committee of S. Bellini (University of Montpellier), G. Bougaran (University of Nantes), Valeria Villanova (University of Grenoble) and Sofiane Mazeghrane (University of Montpellier).

9.3. Popularization and media

The activities related to microalgae have generated many articles in national newspapers (Le Monde.fr, Libération, Le Point.fr, ...), and broadcasts on national TV. Several articles were written by the team members to explain the hurdles and potential of microalgae [36], [70]. A book [65] was also written with C. Gudin (formerly at CEA Cadarache) on the potential of microalgae. We also developed a Java applet for the simulation of microalgae growth and biological pest control. The aim of the applet is for the general public to understand the goals and difficulties of controlling such systems.

We have also made a short movie to explain the advantages of our supervision software ODIN.

P. Bernhard has given conferences in high schools in the framework of the program "Sciences et culture au lycée".

9.4. Conferences, invited conferences

Conferences cited in the bibliography are not repeated here.

O. Bernard was invited to give a conference on microalgae at Ecole Centrale de Paris ("Défi biotechnologie") "Use of microorganisms for biofuel production" (November 8, 2013).

O. Bernard and J.-L. Gouzé gave two keynote lectures at the CAB2013 conference, Mumbai, India.

F. Grognard was invited to give a talk entitled "Commande des systèmes proies-prédateurs: rétroactions et impulsions" at the workshop "Des dynamiques singulièrement perturbées aux dynamiques de populations" in honour of Eric Benoît (La Rochelle, December 16-18, 2013)

P. Bernhard gave a talk on the handicap paradox at the International Workshop on Biodiversity and Environment at the Mathematical Research Center of Montreal.

E. Rousseau gave a talk on " Sustainable plant resistance management in agricultural landscapes" at the Réunions de Virologie Vegetale (RVV) at Aussois, France (January 13-17, 2013). She presented a poster on the "Impact of quantitative plant resistance on within-host viral demo-genetic dynamics" at the "Workshop Bridging theoretical and experimental evolution" in La Fouly, Switzerland (June 12-15, 2013) and at the "5èmes Journées de Rencontre des Doctorants du Département SPE" in Montpellier, France (June 26-28, 2013).

CASTOR Team

9. Dissemination

9.1. Popularization

- With Maria Vittoria Salvetti of the University of Pisa, Hervé Guillard has written a popularization article "Des mathématiciens à la rescousse des lagunes méditerranéennes" [29] for the journal *Accromath*.
Accromath is a journal of the "Centre de recherches mathématiques de l'Université de Montréal" whose aim is to popularize Mathematics and their applications for secondary school pupils and their professors.
- Redaction of the short note "Les vagues et les rivages, une question de changement de variables" <http://mpt2013.fr/changement-de-variable-et-comment-les-vagues-montent-a-lassaut-des-rivages/> in the framework of Mathematics of Planet Earth 2013 (MPE2013) published 04/10/2013 (Hervé Guillard).
- Redaction of the short note "Retour vers le futur" <http://mpt2013.fr/retour-vers-le-futur/> in the framework of Mathematics of Planet Earth 2013 (MPE2013) published 16/10/2013 (Jacques Blum & Didier Auroux).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Ecole d'ingénieur: D. Auroux, Optimisation, 66h, M1, Polytech Nice, Université de Nice Sophia Antipolis, France

Master: D. Auroux, Optimisation, 45h, M1, Université de Nice Sophia Antipolis, France

Ecole d'ingénieur: D. Auroux, Méthodes numériques, 36h, M1, Polytech Nucei Sophia, Université de Nice Sophia Antipolis, France

Master: J. Blum, Optimization, 30h, M1 Erasmus Mundus, Université de Nice Sophia Antipolis, France

Master: J. Blum, Optimisation et controle, 30h, M2, 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, 68h, L2, Polytech Nice Sophia Antipolis, France

Ecole d'ingénieur: C. Boulbe, Analyse Numérique, 71.5h, L3, Polytech Nice Sophia Antipolis, France

Ecole d'ingénieur: C. Boulbe, Méthodes numérique - EDP, 66h, M1, Polytech Nice Sophia Antipolis, France

Ecole d'ingénieur: B. Faugeras, Analyse, 39h, L2, Polytech Nice Sophia Antipolis, France

Master: B. Nkonga, Finites volumes/Finites differences, 90h, M1, Université de Nice Sophia Antipolis, France

Master: B. Nkonga, Algorithmique, 35h, M1, Université de Nice Sophia Antipolis, France

Master: B. Nkonga, Calcul Parallèle, 24h, M2, Université de Nice Sophia Antipolis, France

Licence: A. Sangam, Analyse, 40h, L1, Université de Nice Sophia Antipolis, France

Licence: A. Sangam, Mathématiques Appliquées, 50h, L3, Université de Nice Sophia Antipolis, France

Master: A. Sangam, Introduction to Finite Element, 25h, M1, Université de Nice Sophia Antipolis, France

9.2.2. Supervision

PhD : C. Lachat, Conception et validation d'algorithmes de remaillage parallèles à mémoire distribuée basés sur un remaillage séquentiel", University of Nice Sophia Antipolis 13 décembre 2013, Hervé Guillard, Laurent Hascoet.

PhD : M. Martin, Modélisation fluide pour les plasmas de fusion : approximation par éléments finis de Bell, University of Nice Sophia Antipolis, 4 juin 2013, Boniface Nkonga

PhD in progress: K. Bashtova, modelling of abrasive waterjet and focused ion beam, 1st September 2013, Didier Auroux

PhD in progress : Pierre Cargemel, "Déraffinement adaptatif de maillages non structurés pour une simulation efficace des procédés EOR", September 1st 2012, Hervé Guillard.

PhD In progress : J. Costa, Modeling of Elms, Sep 2012 - July 2015, B. Nkonga

PhD in progress: A. Drogoul, Détection de structures fines en imagerie par analyse asymptotique topologique, 1st september 211, Didier Auroux, Gilles Aubert (UNS)

PhD in progress : E. Estibals, "MHD réduite: Modélisation et Simulation numérique utilisant des éléments finis stabilisés d'ordre élevés 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: V. Groza, control and identification of etching rate function in abrasive waterjet, 1st september 2013, Didier Auroux

PhD in progress : C. Le Touze, "Etude du couplage entre modèles à phase séparée et modèles à phase dispersée pour la simulation de l'atomisation primaire en combustion cryotechnique", September 1st 2011, Hervé Guillard.

PhD in progress : J. Vides, Numerical Modeling in toroidal geometries, Oct. 2012 - July 2014, Boniface Nkonga and Hervé Guillard

9.2.3. Juries

Hervé Guillard acted as referee in the PhD thesis jury of Samuel Richard, Aix Marseille Université

Hervé Guillard was in the PhD thesis jury of Clément Surville, Aix Marseille Université

Hervé Guillard acted as referee in the PhD thesis jury of Sophie Gérald: Paris VI

Jacques Blum was referee in the PhD thesis jury of David Coulette , Université de Nancy

Jacques Blum was referee in the HdR jury of Frederic Parrenin, Université de Grenoble

Jacques Blum was in the HdR jury of Maelle Nodet, Université de Grenoble

Richard Pasquetti was president of the PhD thesis jury of A. Parades, Aix-Marseille université

Boniface Nkonga was referee in the PhD thesis jury of

- Mathias Malandain, INSA Rouen,
- Laurent Dastugue, Université Pierre-et-Marie-Curie :Paris VI
- Nicolas Kowalski, Université Pierre-et-Marie-Curie :Paris VI
- Carine Moussaed, Université Montpellier II
- Alejandro Paredes, Aix-Marseille Université

Boniface Nkonga was in the PhD thesis jury of

- Alexandre Carabias: Université de Nice Sophia Antipolis (president)
- Sébastien Le Martelot, Aix-Marseille Université

COATI Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Participation in Committees

- J-C. Bermond: Expert for DRTT, and various projects outside France (Canada, Italy,...); Member of the Ph.D. committee of the University of Marseille;
- D. Coudert: Member of the *comité du suivi doctoral* of Inria Sophia Antipolis (since January 2009); Member of the scientific board of the GIS ENSL-UNS (CNRS, ENSL, Inria, UNS) since 2011; Expert for the Future and Emerging Technologies Open Scheme (FET-Open) European program, and the ANR;
- F. Giroire: Member of the *conseil de laboratoire I3S*;
- F. Havet: Responsible of the Pôle ComRed of I3S (since September 2013); Expert for the ANR and its Czech analogues; Member of the *conseil de l'Ecole Doctorale I2S* (Montpellier);
- M. Syska: Member of the commission ad-hoc ATER 27 UNS; Member of *Comité Permanent de Ressources Humaines* (CPRH) UNS 27e; Member of the *conseil de département* (Department Committee) of IUT Nice; Expert for DRTT PACA.

9.1.2. Editorial Boards

- J-C. Bermond: Combinatorics Probability and Computing, 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, SIAM book series on Discrete Mathematics, Transactions on Network Optimization and Control, Discrete Mathematics, Algorithms and Applications;
- D. Coudert: Discrete Applied Mathematics (Elsevier); Networks (Wiley);
- F. Havet: Discrete Mathematics and Theoretical Computer Science;

9.1.3. Steering Committees

- D. Coudert: Pôle ResCom du GDR ASR du CNRS (since 2005); Rencontres francophones sur les aspects algorithmiques des télécommunications (AlgoTel);
- F. Havet: GT Graphes du GDR IM du CNRS; Journée Combinatoire et Algorithmes du Littoral Méditerranéen;

9.1.4. Conference Organization

- ALGO'13: this scientific event comprises the *European Symposium on Algorithms* (ESA), the *Workshop on Algorithms for Bioinformatics* (WABI), the *International Symposium on Parameterized and Exact Computation* (IPEC), the *Workshop on Approximation and Online Algorithms* (WAOA), the *International Symposium on Algorithms for Sensor Systems, Wireless Ad Hoc Networks and Autonomous Mobile Entities* (ALGOSENSORS), the *Workshop on Algorithmic Approaches for Transportation Modeling, Optimization, and Systems* (ATMOS), and the *Workshop on Massive Data Algorithmics* (MASSIVE). Sophia Antipolis, France (September 2-6, 2013); D. Coudert and J. Moulierac were members of the organizing committee.
- OPODIS'13: 17th International Conference On Principle Of DIstributed Systems; Conference Chair: N. Nisse; Organization Committee: A. Kodjo, B. Li.

9.1.5. Participation in Program Committees

- D. Coudert: IEEE ICC – Green Communications and Networks Track, Budapest, Hungary (June 9-13, 2013); IEEE GLOBECOM – Green Networks and Communication Systems Track, Atlanta, GA, USA (December 9-13, 2013); 17th International Conference on Optical Network Design and Modeling (ONDM’13), Brest, France (April 16-19, 2013);
- F. Havet: 15emes Journées Graphes et Algorithmes, Orsay, France (November 13-15, 2013);
- N. Nisse: PC Chair of the 15th Rencontres francophones sur les aspects algorithmiques des télécommunications (AlgoTel) (May 28-31, 2013);

9.2. Participation in Conferences and Workshops

9.2.1. Invited Talks

- J-C. Bermond: DIMACS Workshop on Algorithms for Green Data Storage, DIMACS, Rutgers University USA (December 18, 2013);
- D. Coudert: Bell labs - NIST Workshop on Large-Scale Networks, Murray Hill, NJ, USA (October 25, 2013); AIDyNet Workshop on Algorithms and Randomness, Santiago, Chile (November 21, 2013);
- F. Havet: School on Graph Theory, Oléron, France (June 17-21, 2010), five hour lecture on “Orientations and colorings of graphs”;
- N. Nisse: AIDyNet Workshop on Algorithms and Randomness, Santiago, Chile (November 21, 2013);

9.2.2. Participation in Scientific Meetings

- ADR Network Science: Meeting of ADR Network Science of the Alcatel-Lucent / Inria Joint lab, Paris, France (February 28, 2013) Attended by D. Coudert (speaker) and N. Nisse (speaker); Sophia-Antipolis, France (December 5) Attended by D. Coudert;
- COMRED: Journée du pôle COMRED (December 3-4, 2013). Attended by all members of COATI;
- DIMAGREEN: Journées de l’ANR - Rencontres du numérique (April 17-18, 2013). Attended by F. Giroire;
- EULER: Plenary meeting of FP7 STREP EULER, Antwerp, Belgium (September 23-25, 2013). Attended by D. Coudert and A. Lancin.
- GDL: GreenDay@Lille, Lille, France (November 28-29, 2013). Attended by K. Phan;
- JFRO: 29e Journée Francilienne de Recherche Operationnelle, Paris, France (June 4, 2013). Attended by J. Araújo, B. Li, N. Nisse;
- JGA: 15èmes Journées Graphes et Algorithmes, Orsay, France (November 13-15, 2013). Attended by J. Araújo, F. Havet, A. Maia (speaker);
- JIF: Journées D’informatique fondamentale de Paris Diderot (April 24, 2013). Attended by N. Nisse;
- Journées REP: Journées Scientifiques and Journée REP of Inria, Rennes, France (June 25-27, 2013). Attended by D. Coudert;
- Inria- Alcatel Lucent Bell Labs: Kick off meeting Phase 2 of the Common Lab Inria-Alcatel Lucent Bell Labs, Nozay, France (March 27, 2013). Attended by J-C. Bermond;
- POC: Polyèdres et Optimisation Combinatoire: Journée sur l’Optimisation Robuste et la programmation mathématique Paris, France (December 6th, 2013). Attended by A. Kodjo;
- SEAT: meeting for preparing submission of ANR SEAT (October 2nd, 2013). Attended by D. Coudert and N. Nisse;
- Struco: Meeting on Combinatorics and Distributed Computing, Pont-à-Mousson, (November 12-15, 2013). Attended by F. Havet;
- TREND: NoE TREND Plenary Meeting, Catania, Italy (February 6-8, 2013). Attended by F. Giroire;

9.2.3. Participation in Conferences

- AIDyNet: AIDyNet Workshop on Algorithms and Randomness, Santiago, Chile (November 21, 2013). Attended by D. Coudert (speaker), B. Li (speaker), F. Moataz (speaker), N. Nisse (speaker);
- ALGO: Sophia Antipolis, France (September 2-6, 2013). Attended by all members of COATI;
- Algotel: 15èmes Rencontres Francophones pour les Aspects Algorithmiques des Telecommunications, Pornic, France (May 28-31, 2013). Attended by F. Moataz (speaker), N. Nisse, D. Coudert, G. Ducoffe (speaker), I. Tahiri, A. Lancin, R. Soares (speaker) and F. Giroire;
- DIMACS: Working group and Workshop on Algorithms for Green Data Storage, DIMACS, Rutgers University USA (December 16-18, 2013). Attended by J-C. Bermond (speaker);
- DRCN: the 9th International Conference on Design of Reliable Communication Networks, Budapest, Hungary (March 4-7, 2013). Attended by F.Z. Moataz (speaker);
- EURO: 26th European Conference on Operational Research, Roma, Italy (July 2-4, 2013). Attended by C. Molle-Caillouet (speaker), D. Coudert and N. Nisse (speaker);
- GIIS: Global Information Infrastructure and Networking Symposium, Trento, Italy (October 28-31, 2013). Attended by A. Kodjo (speaker);
- Globe: 6th International Conference on Data Management in Cloud, Grid and P2P Systems, Prague, Czech Republic (August 28-29, 2013). Attended by R. Modrzejewski (speaker);
- Globecom: IEEE Global Communications Conference, Atlanta, United States (December 9-13, 2013). Attended by F. Giroire (speaker);
- GROW: 6th workshop on Graph Classes, Optimization, and Width Parameters, Santorini Island (October 09-11, 2013). Attended by F. Havet (speaker) and N. Nisse;
- ICC: IEEE International Conference on Communications, Budapest, Hungary (June 9-12, 2013). Attended by R. Modrzejewski (speaker);
- ICGCC: IEEE International Conference on Green Computing and Communications, Beijing, China (August 20-23, 2013). Attended by K. Phan (speaker);
- INOC: 6th International Network Optimization Conference, Tenerife, Spain (May 20-22, 2013). Attended by I. Tahiri (speaker);
- LAGOS: VII Latin-American Algorithms, Graphs and Optimization Symposium, Playa del Carmen, Mexico (April 22-26, 2013). Attended by J. Araújo (speaker), A. Maia (speaker), P. Moura (speaker), R. Soares (speaker);
- OPODIS: 17th International Conference On Principle Of Distributed Systems, Nice, France (December 16-18, 2013). Attended by B. Li, A. Kodjo and N. Nisse
- SIROCCO: 20th International Colloquium on Structural Information and Communication Complexity, Ischia, Italy (July 1-3, 2013). Attended by F. Giroire (speaker) and N. Nisse (speaker);
- WLSN: Bell labs - NIST Workshop on Large-Scale Networks, Murray Hill, NJ, USA (October 25, 2013). Attended by D. Coudert;

9.2.4. Participation in Schools

- CSP: School on Constraint Satisfaction problems, ENS Lyon, France (January 21-25, 2013). Attended by F. Moataz;
- EULERSS: Summer School on Graph and Routing Dynamics: Models and Algorithms, Barcelona, Spain (July 1-5, 2013). Attended by F. Moataz, B. Li and A. Lancin;
- JCALM13: 13es Journées Combinatoire et Algorithmes du Littoral Méditerranéen, Marseille, France (June 10-11, 2013). Attended by J. Araújo, G. Ducoffe, F. Giroire, A. Maia, N. Nisse;
- JCALM14: 14es Journées Combinatoire et Algorithmes du Littoral Méditerranéen, Barcelona, Spain (October 14-15, 2013). Attended by F. Havet (speaker), A. Maia
- NetOpt: Winter School on Network Optimization, Estoril, Portugal (January 14-18, 2013). Attended by B. Li and A. Kodjo;

ResCom: Summer school ResCom 2013 of GDR ASR of CNRS on Content Centric Networks, Porquerolles, France (May 13-17, 2013). Attended by J-C. Bermond, D. Coudert, F. Giroire, R. Modrzejewski;

SGT: Summer School on Graph Theory, île d'Oléron, France (June 17-21, 2013). Attended by J. Araújo, F. Havet, B. Li, A. Maia, F. Moataz, N. Nisse;

TREND: The TREND PhD School in Green Networking, Turin, Italy (July 1-5, 2013). Attended by K. Phan;

9.3. Teaching - Supervision - Juries

9.3.1. Teaching

Licence: A. Kodjo, Algorithmme-Programmation Objet-Python, 40h ETD, L2, Networks, 15h ETD, L2, IUT Nice Côte d'Azur, Informatique pratique, 36h ETD, L1, Univ. Nice Sophia Antipolis;

Licence: F. Moataz, Systèmes Informatiques, 40h ETD, L1, Univ. Nice Sophia Antipolis;

Licence: C. Molle-Caillouet, IT Tools, 53h, L1, Database and advanced information system, 36h, L2, Operations Research, 81h, L2, Delivery Optimization, 30h, L3, IUT Nice Côte d'Azur, Univ. Nice Sophia Antipolis;

Licence: J. Moulierac, Algorithms and Programming, 100h ETD, L1, ASR5 - Networks, 30h ETD, L1, IUT Nice Côte d'Azur, Univ. Nice Sophia Antipolis;

Licence: N. Nisse, informatique, 30h ETD, 1ère année classes préparatoires (L1), CIV, Sophia Antipolis, France;

Licence: I. Tahiri, Introduction to networks, 96h ETD, L1, IUT Nice Côte d'Azur, Univ. Nice Sophia Antipolis;

Licence: M. Syska, Introduction to Operating Systems, 40h ETD, L1, Operating Systems : Advanced Programming, 60h ETD, L2, Bash Scripting, 20h ETD, L3, Introduction to Algorithms, 30h ETD, L3, Linux Systems Administration, 40h ETD, L3, IUT Nice Côte d'Azur, Univ. Nice Sophia Antipolis.

Master: D. Coudert, Algorithms for Telecommunication 2, 30 ETD, M2 Ubinet of Master IFI, Univ. Nice Sophia Antipolis;

Master: F. Giroire, 16h ETD, Introduction to Probabilities and Statistics, International track of the Master 1 IFI, Univ. Nice Sophia Antipolis;

Master: F. Giroire and N. Nisse, Algorithms for Telecommunications, 30h ETD, M2 Ubinet of Master IFI, Univ. Nice Sophia Antipolis;

Master: F. Giroire and N. Nisse, Algorithms for Telecommunications, 36h ETD, M2, Master MDFI, Univ. Marseille;

Master: F. Havet, Discharging Method, 6h, M2, Simon Fraser University, Canada.

Master: A. Kodjo, Réseaux, 15h ETD, M1, Univ. Nice Sophia Antipolis;

9.3.1.1. Administration

Collaboration Inria-Lycée International de Valbonne: N. Nisse is co-responsible of the Computer Science course of MPSI;

IUT Nice Côte d'Azur: J. Moulierac is Directrice d'études of Semestre 2 décalé at IUT Nice Côte d'Azur, Computer Science Department since september 2013;

M. Syska is responsible of the Computer Science Department of IUT since september 2011;

Ubinet, Master IFI: J.-C. Bermond is member of the scientific committee;

F. Giroire is responsible of the Internships within international stream Ubinet, Master IFI (<http://ubinet.unice.fr>), since October 2011;

International Master 1: J.-C. Bermond is member of the scientific committee of the international track of the M1 (<http://computerscience.unice.fr/master1>).

9.3.2. Supervision

PhD:

R. Modrzejewski, *Systèmes pair-à-pair de partage de données*, October 24, 2013, S. Pérennes and F. Giroire.

R. Pardo Soares, *Routing reconfiguration in WDM networks*, November 8, 2013, D. Coudert, C. Linhares Sales and N. Nisse.

PhD in progress:

I. Tahiri, *Optimisation dans les réseaux de collecte IP sans fils*, since November 2009, D. Coudert.

4th year:

S. Félix, *Smart transports : optimisation du trafic dans les villes*, since January 2011, J.-C. Bermond and J. Galtier.

A. Lancin, *Study of network properties for efficient routing algorithms*, since January 2011, D. Coudert.

3rd year:

M. A. Bergach, *GPGPU Graphics Processing Units for signal processing*, since September 2011, M. Syska.

A. Kodjo, *Design and optimization of multi-operators wireless backhaul networks*, since October 2011, D. Coudert.

B. Li, *Tree-decomposition and applications to routing*, since October 2011, D. Coudert and N. Nisse.

A. K. Maia, *Partitions of directed graphs*, since September 2011, F. Havet.

T. K. Phan, *Design and Management of networks with low-power Consumption*, since October 2011, D. Coudert and J. Moulierac.

2nd year:

F. Z. Moataz, *Conception et optimisation de réseaux robustes aux pannes et variations de capacités*, since October 2012, D. Coudert.

9.3.2.1. Internships

D. Coudert: supervised the internship of Guillaume Ducoffe (ENS Cachan, Paris, France) on "Computation in Large Graphs with Applications to Gromov Hyperbolicity", March-September 2013 (6 months);

F. Havet: supervised the internship of Mathieu Schmitt (École Normale Supérieure de Lyon, France) on backbone colouring, May-August 2013 (3 months).

N. Nisse: supervised the internship of Christos Papageorgakis (University of Thessaly, Volos, Greece) on implementation of Cops and Robber games, February-July 2013 (6 months);

N. Nisse and S. Pérennes: supervised the internship of Ioannis Lamprou (University of Athens, Greece) on fractional games in graphs, March-August 2013 (6 months);

9.3.3. Juries

J.-C. Bermond: member of the PhD jury of Remigiusz Modrzejewski, Univ. Nice Sophia Antipolis (October 24, 2013);

D. Coudert: Member of the PhD jury of Valentin Weber, Université de Grenoble, France (July 8, 2013); Referee and member of the PhD jury of Jiyai Liu, Télécom Bretagne, Rennes, France (November 4, 2013); Member of the PhD jury of Ronan Soares, Univ. Nice Sophia Antipolis, France (November 8, 2013); Member of the PhD jury of Christian Glacet, Université de Bordeaux 1, Bordeaux, France (December 6, 2013);

F. Giroire: member of the PhD jury of Ngo Hoang Giang, Univ. Nice Sophia Antipolis (December 16, 2013); member of the PhD jury of Remigiusz Modrzejewski, Univ. Nice Sophia Antipolis (October 24, 2013);

F. Havet: external referee of the PhD of S. Simonsen, University of Southern Denmark (November 7 2013); external referee of the PhD of A. Maddaloni, University of Southern Denmark (November 8 2013);

N. Nisse: member of the PhD jury of Ronan Soares, Univ. Nice Sophia Antipolis (November 8, 2013);

9.4. Popularization

Attractiveness: J-C. Bermond is in charge of the attractiveness of the center Inria Sophia Antipolis Méditerranée. Among other activities he corganized The "Mediterranean days" (January 23-25) (25 foreign students invited) and co-organized the valorization afternoon on February 2, 2013 (100 students);

Fête de la Science: F. Giroire presented the stand "Magie et jeux mathématiques" at the Centre International de Valbonne, France (October 8, 2013); F. Moataz assisted the stand "Drone/Unmanned Aerial Vehicle" at Sophia Antipolis, France (October 12-13, 2013);

Formation EDSTIC: J. Araújo has given lectures on Graph Theory and Algorithms to PhD students, 20h;

Mathématiques et Internet: J-C. Bermond gave a vulgarization talk at the Centre Culturel of La Grande Motte, Hérault France (April 16, 2013);

Optimisation dans les réseaux: J-C. Bermond gave 3 talks to investors on the future of optimization in networks, Paris (March 28, 2013);

Science culture au lycée, Inria/PACA: N. Nisse explains graph to a Lycée class at Marseille, France (December 19th, 2013);

COFFEE Project-Team

8. Dissemination

8.1. Scientific Animation

- R. Masson: Workshop Multiphase flows Oct. 2013, co-organized with Danielle Hilhorst, Magdalena Dymitrowska, Olivier Le Maitre.
- R. Masson: Minisymposium SIAM Geoscience, July 2013, Padova
- T. Goudon: “Mathematics for Planet Earth: Waves and geophysics”, 2013.
- M. Ribot: “Models for bacterial biofilms formation : mathematical, physical and biological perspectives”, June 2014, Nice.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

As said above, the members of the team, but one, are faculties of the Math. Department of the University of Nice Sophia Antipolis. The individual teaching duties are as high as 196h/year, with lectures ranging from 1st to 5th year. It is worth pointing out that S. Junca and S. Krell are affiliated to ESPE/IUFM with quite specific teaching duties for the formation of teachers, ranging from K-grades to pre-university. Their duties include visiting classes and mentoring students in the preparation of memoirs with a high professional content. We indicate below the most advanced lectures in which we have been involved:

- F. Berthelin is in charge of the preparation to “agrégation” a national competition to hire teachers in mathematics. This is the most selective competition for teachers. With M. Ribot, F. Berthelin manages specifically the lectures in Analysis and Scientific Computing.
- F. Berthelin: “Kinetic and hyperbolic PDEs”, master 2 lecture (2012-13)
- R. Masson: “Finite volumes”, master 2 lecture (2012-13)
- M. Ribot, T. Goudon, with P. Raphaël, D. Chiron, L. Michel will be in charge in 2015 of the M2 lectures of Analysis and Numerical Analysis, with a joint program devoted to various aspects of PDEs for fluid mechanics.

We are also at the initiative of creating a “Numerical Working Session” in the laboratory, which can be included in the doctoral formation. The session is based on the invitation of leading experts, with lectures completed by implementation exercises in order to learn new numerical methods (in 2014, the invited speakers are F. Boyer and F. Coquel).

Furthermore, team members have been invited for a couple of lectures abroad:

- R. Masson: “Discretization for diphasic flows in porous media”, master lecture jointly with ENSG Nancy and Almaty Kazakhstan.
- T. Goudon and M. Ribot with F. Coquel (CNRS-Ecole Polytechnique): “Numerical methods for conservation laws”, Summer School on Numerics and Control of PDEs, Indian Institute of Sciences, 2013.
- T. Goudon: “From kinetic equation to conservation laws, hydrodynamic limits and kinetic schemes”, French-Mexican Meeting on Industrial and Applied Mathematics, 2013.

8.2.2. Supervision

- Aude Champmartin, post-doc 2012-2013, funded by Inria, currently post-doc CEA-Univ. Pierre et Marie Curie, labo. J.-L. Lions.
- Walid Kheriji, Post-doc funded by Total
- Nathalie Ayi, PhD UNS, advised by F. Berthelin and L. Saint Raymond (ENS)
- Pierre Castelli, PhD UNS, advised by S. Junca (PhD thesis under the wage-earning student regime)
- Mayya Groza, PhD GdF-Suez, advised by R. Masson
- Bastien Polizzi, PhD UNS, advised by M. Ribot and T. Goudon
- Arthur Vavasseur PhD Ec. Normale Sup. Lyon, advised by T. Goudon
- Yumeng Zhang, PhD Inria/Andra advised by R. Masson and T. Goudon

8.3. Popularization

- R. Masson: Talk “mathematics in geosciences” for the prize-giving of the Olympiads of Mathematics 2013 at UNS
- R. Masson: Article on the role of mathematics in petroleum engineering, in “L’énergie à découvert”, CNRS Editions, 2013.
- T. Goudon: “Modelling and simulation of spacecraft charging”, European Success Stories in Industrial Mathematics, Springer 2012.
- During the international program “2013, Mathematics of the Planet Earth”, supported by UNESCO, T. Goudon, with M. Andler, L. Bel, S. Benzoni, C. Imbert, A. Rousseau has animated the website mpt2013.fr with a daily short notice describing a mathematical activity in connection to the Planet Earth. This operation will be followed by a book, to be edited in 2014.
- T. Goudon: “Mathématiques de la Planète Terre”, Textes et Documents pour la Classe (TDC), Scérén, CNDP-CRDP, 2013.
- T. Goudon, with C. Calgaro and E. Creusé “Modélisation et simulation des avalanches de neige”, Matapli n. 100, 2013.
- T. Goudon: Working session for teachers on “mathematics of the planet earth”, during the national meeting of the APMEP (national society of teachers in math), with F. Boyer, G. Chapuisat and J. Charrier from Marseille; this will be completed with talks in classes, with S. Krell.

COPRIN Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. International activities

- D. Daney has presented a paper in Computational Kinematic 2013, Barcelona, ICRA 2013 Karlsruhe and IROS 2013, Tokyo.
- D. Daney has organized and has been a member program committee of IROS 2013 workshop on Assistance and Service Robotics in a Human Environment
- 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 and board member of the Journal of Behavioral Robotics. He was also a board member of 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 is one of the 10 members of IFToMM Executive Council, the board of this federation.
- Y. Papegay is a permanent member of the International Steering Committee of the International Mathematica Symposium conferences serie.

9.1.2. National activities

- Laurent Blanchet and Rémy Ramadour organized the JJCR (Journée des Jeunes Chercheurs en Robotique) in October 2013, and attended the JNRR (Journées Nationales de la Recherche en Robotique) in October 2013.
- D. Daney is a member of the scientific committee of the CNR SDA (Centre National de Référence Santé à Domicile et Autonomie) and of the evaluation committee of the ANR TecSan.
- D. Daney has presented the large scale initiative action PAL to JNRR 0213, Journée Nationale de la Recherche en Robotique, Annecy, to Journée Scientifique de Inria, Rennes and to the 2nd Workshop of Centre Expertise National en Robotique, Evry.
- J-P. Merlet is a member of the scientific committee of the CNRS GDR robotique

9.1.3. Inria activities

- K. Bakal is chair of the PhD students association of Inria Sophia
- D. Daney is coordinator of the Large Scale Initiative Personally Assisting Living (PAL)
- J-P. Merlet is a member of the "Bureau du Comité des Projets" of the Sophia-Antipolis Inria center.
- O. Pourtallier is a member of the CSD (doctoral students monitoring), and is responsible of the NICE committee (long term invited scientists and post-doctoral student selection).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence :D. Daney gave a lecture on industrial control systems (L3), ITII, Polytech Nice (48h ETP).

Master : D. Daney gave a lecture on medical robotics, Master of Bio-Medical (M2), Univ. Nice Sophia Antipolis (22h ETP)

Master : O. Pourtallier lectured 6 hours on game theory to Master OSE (M2), at École des Mines de Paris, Sophia Antipolis, France

9.2.2. Supervision

PhD : J. Alexandre dit Sandretto, Calibration of large parallel robots, 2013, supervisors: D. Daney, G. Trombettoni

PhD :T. Gayral, Calibration of parallel telescope, 2013, supervisors: D. Daney, J-P. Merlet

PhD in progress :K. Bakal, Indices biomécaniques globaux de capacité de génération de forces, supervisor: P. Gorce (Handibio), J-P. Merlet

PhD in progress :A. Berti, Analysis of cable-driven parallel robots, 2012-2015, supervisor: M. Carricato (U. Bologna), J-P. Merlet supervisor: P. Gorce (Handibio), J-P. Merlet

PhD in progress :L. Blanchet, Design of large scale wire-driven parallel robots, 2012-2016, supervisor: J-P. Merlet supervisors: J-P. Merlet

PhD in progress :H. Lamine, Analysis of cable-driven parallel robots, 2013-2016, supervisor: L. Romdhane (ENI Sousse), J-P. Merlet

PhD in progress : R. Ramadour, Manipulation for assistance, 2011-2014, supervisors: F. Chaumette, J-P. Merlet

9.2.3. Juries

- David Daney has participated in in the following thesis defense committees : Jorgé Alberto Rios Martinez, January 8, University of Grenoble, France, Julien Alexandre Dit Sandretto, September 11, University of Nice, France, Thibault Gayral, November 29, University of Nice, France
- J-P. Merlet has been the member of the jury of 5 PhD defense and of one HdR

9.3. Popularization

- A short breve entitled “How Much for My Ton of CO2 ?” coauthored by Mireille Bossy (Inria TOSCA) , Nadia Maizi (CMA ENSMP) and Odile Pourtallier was published on the daily blog of MPE2013 (Mathematics for Planet Earth 2013). <http://mpe2013.org/2013/07/04/how-much-for-my-ton-of-co2/>
- we extensively use the MARIONET-SCHOOL robots for pedagogy and teaching at all level [13]. It has been exhibited at the BAUMA fair (Munich) by german colleagues, at INNOROBO (Lyon), at the JNRR (Annecy) and during the APMEP (association of mathematics professors) workshop (Marseille)
- 95

DEMAR Project-Team

9. Dissemination

9.1. Scientific Animation

- David Guiraud D. Guiraud is Member of the Editorial Board of Journal of Neural Eng., Associate Editor of EMBC conferences "track rehabilitation, theme 6" 2010-2013, Member of the organizing committee of IEEE NER 2013 (more than 550 registrations for the 2013 edition), member of the steering committee of "Institut des Technologies pour la Santé", Chair of the Labex Numev "Aide à la personne malade et déficiente" specific action. D. Guiraud was reviewer for the 2013 ERC consolidator program panel PE7. specific action.
- C. Azevedo-Coste is Board member of IFESS society (international functional electrical stimulation society) and Associate Editor of Paladyn Behavioral Robotics Journal.
- M. Hayashibe is member of the Editorial Board of the International Journal of Advanced Robotic Systems, Rehabilitation Robotics, and Guest Associate Editor, Frontiers in Neuroprosthetics, Biosignal processing and computational methods to enhance sensory motor neuroprosthetics.
- François Bonnetblanc is reviewer for several journals : Journal of Neuroscience (2011), IEEE Transactions on Neural Systems & Rehabilitation Engineering (2012), Neurosurgery, Journal of Neurology, Research in Developmental Disabilities (2012), Neurocase, Experimental Brain Research, Neuroscience Letters et Journal of Biomechanics.
- Daniel Simon was member of the RTNS'13 (Real Time Networks and Systems) and ETFA'13 (Emerging Technologies and Factory Automation int. conference program committees and of the IFAC Joint Conference (Grenoble, february 2013) organization committees. Peer reviewer for the IEEE Trans. on Industrial Informatics and the Simulation: Transactions of the Society for Modeling and Simulation International journals, and for the ECC'13, SysTol'13, ECC'14 and ACC'14 int. conferences.
- D. Andreu is co-organizer of the french working group on Control Architectures of Robots of the french GdR Robotique and assistant manager of the Robotic Department (LIRMM).
- F. Soulier was Local coordinator of the Belem (BioElectronics for Medical Engineering) intensive program for the University of Montpellier 2 (Erasmus program).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master : D. Guiraud, basics of neurophysiology and neuroprosthetics, 10h, niveau (M1, M2), Institut Telecom / Mines specialisation "Tic santé" UE "medical robotics", France;

Master : D. Guiraud, muscle function, modeling and the basics for the control through FES and neuroprosthesis, 20h, , master 1 & 2 "Tic et santé" and master 2 Human Movement Sciences UE "neuroprotheses", Univ. Montpellier 2, France;

Master : D. Andreu, Software engineering, real time OS, discrete event systems, networks, neuroprosthesis, 200h, master and engineers degrees, Polytech Montpellier, France;

Master : Christine Azevedo-Coste, Neuroprotheses II, Neurophysiology, 6h, Master STIC pour la Santé , Univ. Montpellier 2, France;

Master : Christine Azevedo-Coste, Neuroprotheses I, Neurophysiology, 4.5h, Master STIC pour la Santé , Univ. Montpellier 2, France;

Master : Mitsuhiro Hayashibe, Neuroprotheses II, EMG signal processing and its use for rehabilitation, 6h, Master STIC pour la Santé , Univ. Montpellier 2, France;

Master : Mitsuhiro Hayashibe , Modele et Regulation, Identification and Control in Biomechanics (module coordinator), 6h, Master STIC pour la Santé , Univ. Montpellier 2, France;

Master : Fabien Soulier, electronics and signal processing, 200h, Polytech' Montpellier, France;

Master : François Bonnetblanc, neurophysiology of movement and cerebral plasticity, 65h, University of Bourgogne, France;

Master : Paweł Maciejasz, Neuroprotheses I, Electrical stimulation of nerve fibers – Computer simulation and data processing, 4.5h (TP), Master STIC pour la Santé , Univ. Montpellier 2, France;

Master : Paweł Maciejasz, Neuroprotheses II, Electrical stimulation of nerve fibers and recording of neurophysiological signals, 4.5h (TP), Master STIC pour la Santé , Univ. Montpellier 2, France;

9.2.2. Supervision

HdR : François Bonnetblanc, “Prédictions et traitement des erreurs dans les comportements visuo-manuels : de la flexibilité à la plasticité” , Université de Bourgogne, 23 Sept.

PhD : Maud Pasquier, “Segmentation de la locomotion humaine dans le domaine du sport et de la déficience à partir de capteurs embarqués”, Université Montpellier 2, Sep. 16, Ch. Azevedo-Coste and B. Espiau

PhD in progress : Hélène Leroux, “Abstraction et composition pour la conception formelle de neuroprothèses”, 09/2011 , D. Andreu

PhD in progress : Yacine Berranen, Modélisation volumique du muscle avec représentation des fonctions physiologiques, 10/2011, D. Guiraud, M. Hayashibe and B. Gilles

PhD in progress : Alejandro Gonzalez de Alba, Whole body control framework for lower limb stability in computational rehabilitation, 09/2011, P. Fraise and M. Hayashibe

PhD in progress : Zhan Li , Réhabilitation fonctionnelle computationnelle et modélisation physiologique neuromusculaire, 10/2011, D. Guiraud and M. Hayashibe

PhD in progress : Mariam Abdallah, Système d’acquisition de signaux bioélectriques multicanal, programmable et implantable, 09/2012, G. Cathebras, F. Soulier and S. Bernard

PhD in progress : Marion Vincent, “Effets de la stimulation électrique directe (SED): intérêts pour la cartographie fonctionnelle en chirurgie éveillée” , 12/2013, F. Bonnetblanc

PhD in progress : Wafa Tigra, “Vers la commande intuitive d’une neuroprothèse dédiée à la préhension chez le tétraplégique” , 11/2013, Christine Azevedo-Coste, Guillaume Souquet (MXM), David Guiraud, Charles Fattal (Propara)

PhD in progress : Thomas Guiho, “Stimulation électrique médullaire en vue de la restauration des fonctions urinaires, intestinales et sexuelles chez le sujet lésé médullaire” , 11/2013, David Guiraud, Luc Bauchet (CHU Montpellier), Christine Azevedo-Coste

PhD in progress : Abir Ben Khaled (IFPEN), “Distributed real-time simulation of numerical models : application to powertrains”, 01/2010, D. Simon and M. Ben Gaid (IFPEN)

9.2.3. Juries

D. Guiraud was member of F. Bonnetblanc HDR defense jury, Univ. de Bourgogne, Sep. 23;

Ch. Azevedo Coste was member of M. Pasquier PhD defense, UM2 Montpellier, Sep. 16.

DIANA Team

9. Dissemination

9.1. Scientific Animation

- **Walid Dabbous** served in the programme committees of ACM MM'2013 and CCNxCon'2013. He is member of the ns-3 consortium and has organized the kick-off meeting for the consortium in March 2013. He co-organized the Rescom summer school on Information Centric Networking in Porquerolles in May 2013. He is member of the scientific council of the Inria Bell-Labs laboratory on Self Organizing Networks.
- **Thierry Turletti** Senior ACM and IEEE member, served in 2013 in the program committees of the following international conferences: 20th International Packet Video Workshop and 5th ACM Workshop on mobile Video Delivery (Movid). He 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.
- **Chadi Barakat** is on the editorial board of the Computer Networks journal and served on the Technical Program Committee for the Traffic Monitoring and Analysis (TMA) 2013 workshop and the Passive and Active Measurement (PAM) 2013 conference. He is currently the scientific referee for international affairs at Inria Sophia Antipolis and member of the Conseil d'Orientation Scientifique et Technologique (COST) at Inria within the working group of international affairs (COST-GTRI).
- **Arnaud Legout** is on the editorial board of the Computer Networks journal. He was also reviewer of journals (IEEE/ACM Transactions on Networking, IEEE/ACM Transactions on Computers, IEEE Network, Computer Communications, ACM SIGCOMM CCR), and conferences (IEEE Infocom, ACM Sigmetrics). He also served as an expert to the European Commission to evaluate EC funded projects.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Undergraduate course at IUP GMI Avignon on Peer-to-peer networks, by Arnaud Legout (38h), France.

Master Ubinet: course on Evolving Internet - architectural challenges by Walid Dabbous and Chadi Barakat 42 hours, University of Nice-Sophia Antipolis, France.

Master Ubinet: course on Peer-to-peer networks, by Arnaud Legout (21), University of Nice-Sophia Antipolis.

Master 1 International in Computer Science: course on algorithms for networking, by Chadi Barakat (18h), University of Nice.

Master CAR: course on Internet monitoring by Chadi Barakat, 3h, Telecom Paris Tech, France.

Master TSM: course on Voice over IP by Chadi Barakat, (6h), University of Nice-Sophia Antipolis, France.

Master RISM: course on mobility and wireless networking, by Chadi Barakat (7h), University of Avignon.

Master RISM: course on peer-to-peer networks and privacy, by Arnaud Legout (30), University of Avignon.

9.2.2. Supervision

PhD : Ashwin Rao defended his PhD titled “Improving Transparency and End-User Control in Mobile Networks” on June 30th, at University of Nice Sophia-Antipolis. His thesis was co-supervised by Arnaud Legout and Walid Dabbous.

PhD in progress: Riccardo Ravaioli works on “Active and Passive Inference of Network Neutrality” since October 2012. His thesis is co-supervised by Chadi Barakat.

PhD in progress: Xuan Nam Nguyen works on "Software Defined Networking in challenged environments", since October 2012. His thesis is co-supervised by Thierry Turletti and Walid Dabbous.

PhD in progress: Alina Quereilhac works on "Unified Evaluation environment of Networking Protocols for Simulators and Testbeds", since 2011. Her thesis is co-supervised by Walid Dabbous and Thierry Turletti.

PhD in progress: Maksym Gabielkov works on “Propagation of data in social networks” since 2012. His work is supervised by Arnaud Legout.

9.2.3. Juries

Walid Dabbous served as a reviewer and jury member of Mohamed Diallo PhD thesis, defended in March 2013, at University Pierre and Marie Curie.

Walid Dabbous served as a reviewer and jury member of Bilel Ben Romdhanne PhD thesis, defended in December 2013, at Eurecom.

Thierry Turletti served as an external examiner and presides the jury of Bilel Ben Romdhanne PhD thesis, defended in December 2013, at Eurecom.

Thierry Turletti served as reviewer and jury member of Nicolas Kuhn PhD thesis, defended in November 2013 at INP Toulouse.

Thierry Turletti served as reviewer and jury member of Emmanuel Chaput HDR thesis, defended in November 2013, at INP Toulouse.

Thierry Turletti served as reviewer and jury member of Jean Vella PhD thesis, defended in September 2013, at University of Malta.

Chadi Barakat served as a reviewer and jury member of Xavier Miseri PhD thesis, defended in October 2013 at Telecom ParisTech.

Chadi Barakat served as jury member of Vincenzo Ciancaglini PhD thesis, defended in July 2013 at Inria Sophia Antipolis.

Chadi Barakat served as a reviewer and jury member of Heng Cui PhD thesis, defended in April 2013 at Eurecom.

Arnaud Legout served as a jury member for the Ph.D. thesis of Roberto Roverso defended in December 2013 at KTH.

Arnaud Legout served as an opponent for the Ph.D. thesis of Raul Jimenez defended in December 2013 at KTH.

9.3. Popularization

Arnaud Legout made a presentation on “Exploration macroscopique du graphe social de Twitter” to a user group interested in network security called OSSIR. See <http://www.ossir.org/paris/supports/index/2013.shtml>.

FOCUS Project-Team

8. Dissemination

8.1. Scientific Animation

M. Bravetti: Program Committee co-chair for: SEFM 2013 11th International Conference on Software Engineering and Formal Methods.

Program Committee member of the following conferences: SITIS 2013 (WeCA): 9th Conference on Signal-Image Technology and Internet-Based Systems (Web Computing and Application track); CLOUD 2013: 6th IEEE Conference on Cloud Computing; WS-FM 2013: 10th Workshop on Web Services and Formal Methods: Formal Aspects of Service-Oriented and Cloud Computing; ESOC 2013: 2nd European Conference on Service-Oriented and Cloud Computing; FSEN 2013: 5th Conference on Fundamentals of Software Engineering; WS-FMDS 2013: 3rd Workshop on Formal Methods in the Development of Software.

O. Dardha: Program Committee member 6th Interaction and Concurrency Experience (ICE 2013)

U. Dal Lago: Program Committee co-chair and main organizer for FOPARA 2013: Third International Workshop on Foundational and Practical Aspects of Resource Analysis (August 29th to 31st, 2013, Bertinoro, Italy).

Program Committee member of the following conferences: FOSSACS 2013: 16th Conference on Foundations of Software Science and Computation Structures; CSL 2013: Computer Science Logic 2013; FSTTCS 2013: Foundations of Software Technology and Theoretical Computer Science; LOLA 2013: Syntax and Semantics of Low-Level Languages; GaLoP VIII: Games for Logic and Programming Languages.

I. Lanese: Program Committee co-chair of the following conferences: ICE 2013: 6th Interaction and Concurrency Experience; Service Oriented Architectures and Programming track of the 28th Annual ACM Symposium on Applied Computing (SAC 2013).

Program Committee member of 9th Workshop on Automated Specification and Verification of Web Systems (WWV 2013).

Member of the editorial board of the Scientific World Journal, and the Open Journal of Communications and Software.

C. Laneve: Invited speaker at IFM 2013, 10th International Conference on Integrated Formal Methods

M. Gabbrielli: Member of the editorial board of the Int'l Journal Theory and Practice of Logic Programming.

S. Martini: Program Committee member of the following conferences: 14th Italian Conference on Theoretical Computer Science (ICTCS 2013); 8th International Computer Science Symposium in Russia (CSR 2013); Workshop Logic and Computational Complexity (LCC 13); conference on the History and Philosophy of Computing (HaPoC 2013).

F. Montesi: Track program chair for 27th ACM Symposium on Applied Computing (SAC) track on Service-Oriented Applications and Programming track (SOAP).

Program Committee member of 2013 World Conference on Information Systems and Technologies (WorldCIST).

D. Sangiorgi: Member of the editorial board of the journals: Logical Methods in Computer Science, Acta Informatica, and Distributed Computing, Foundations and Trends in Programming Languages.

Invited speaker at the events: the SIGPLAN Programming Languages Mentoring Workshop; 6th Interaction and Concurrency Experience (ICE 2013)

Program Committee member of the conferences: 7th Conference on Language and Automata Theory and Applications (LATA 2013); 5th IPM International Conference on Fundamentals of Software Engineering (FSEN 2013); 24th International Conference on Concurrency Theory (CONCUR); Fourth International Symposium on Games, Automata, Logics and Formal Verification (GandALF)

Lecturer at the schools: 18th Estonian Winter School in Computer Science (EWSCS), Tallin, February 2013, and Scuola Estiva di Logica 2013, Garignano sul Garda, August 2013.

G. Zavattaro: Invited speaker at the 2013 European Conference on Service-oriented and Cloud Computing (ESOCC'13).

Program Committee member of the following conferences: 3rd Workshop on Adaptive Services for the Future Internet (WAS4FI'13); 10th Workshop on Web Services and Formal Methods: Formal Aspects of Service-Oriented and Cloud Computing (WS-FM'13); 7th Workshop on Reachability Problems (RP'13); European Conference on Service-oriented and Cloud Computing (ESOCC'13); 2nd Workshop on Quality Assurance for Service-based applications (QASBA 2013); 6th IEEE Conference on Cloud Computing (CLOUD 2013); IFIP Joint International Conference on Formal Techniques for Distributed Systems (33rd FORTE / 15th FMOODS); 10th Symposium on Formal Aspects of Component Software (FACS'13); the 10th Conference on Integrating Formal Methods (iFM'13).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Below are the teaching activities of the Focus members during 2013.

- Mario Bravetti
 - Undergraduate: “Tecnologie Web”, 66 hours, 3rd year, University of Bologna, Italy.
 - Master: “Applicazioni e Servizi Web”, 54 hours, 2nd 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.
- Maurizio Gabbrielli
 - Undergraduate: “Programming languages”, 40 hours, 2nd year, University of Bologna, Italy.
 - Master: “Artificial Intelligence”, 60 hours, 2nd year, University of Bologna, Italy.
- Marco Gaboardi
 - Master: “Advanced Programming”, 40 hours. 1st or 2nd year. University of Pennsylvania, USA.
- Ivan Lanese
 - Undergraduate: “Programmazione”, 40 hours, 1st year, University of Bologna, Italy.
 - Undergraduate: “Ingegneria del Software”, 20 hours, 2nd year, University of Bologna, Italy.
 - PhD: “Reversible Computing”, 10 hours, Department of Mathematics and Computer Science, University of Cagliari, Italy
- Cosimo Laneve
 - Undergraduate: “Programmazione”, 90 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: “Basic Complexity”, 12 hours, 1st year and 2nd year, University of Bologna, Italy.

PhD: “Principles of Computer Science: Computing, Machines, and Programming Languages” Joint International Doctoral (Ph.D.) Degree in Law, Science and Technology, University of Torino, 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: “Introduction aux structures de données linéaires”, 6h hours, 1st year, Institut Galilé, Université Paris 13, France

Master: “Administration Système”, 15 hours, 2nd year, école d’ingénieurs, Institut Galilé, Université Paris 13, France

Master: “Intranet, Internet et Web”, 44 hours, 2nd year, école d’ingénieurs, Institut Galilé, Université Paris 13, France

- Gianluigi Zavattaro

Master: “Linguaggi di Programmazione e Modelli Computazionali”, 120 hours, 1st year, University of Bologna, Italy.

- Roberto Amadini

Undergraduate: “Algoritmi e strutture dati”, 20 hours, 1st year, University of Bologna, Italy.

- Giulio Pellitta

Undergraduate: “Laboratorio di Operating Systems”, 40 hours, 2nd year, University of Bologna, Italy.

Undergraduate: “Attività di supporto alla didattica universitaria di Informatica nell’ambito della Piattaforma di e-learning A3”, 130 hours, 1st year, University of Bologna, Italy.

- Elena Giachino

Undergraduate: “Programmazione”, 40 hours, 1st year, University of Bologna, Italy.

8.2.2. Supervision

Phd thesis completed in 2013:

- Paolo Parisen Toldin, Implicit computational complexity and probabilistic classes, Dottorato di Ricerca in Informatica, University of Bologna, April 2013 Supervisors: S. Martini

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.

- Michele Alberti, July 2011; Separation results in the algebraic lambda-calculus; L. Regnier (Marseille) and S. Martini
- Roberto Amadini, January 2012, Constraint Programming, M. Gabbrielli.
- Ferdinanda Camporesi, January 2009, Analysis of system biology, R. Cousot (Ecole Normale, Paris) and M. Gabbrielli
- Alberto Cappai, January 2013; Security, ICC and probabilistic bisimulation, U. Dal Lago.

- Ornella Dardha, January 2011, Type Systems for Distributed Programs: Components and Sessions, D. Sangiorgi.
- Saverio Giallorenzo, January 2013, Adaptation and choreography languages, M. Gabbrielli.
- Tudor Alexandru Lascu, January 2011, Automatic planning of the deployment of cloud-based applications, G. Zavattaro
- Jean-Marie Madiot, September 2011, Types, proofs and proof techniques for process calculi, D. Hirschhoff and D. Sangiorgi.
- Giulio Pellitta, January 2011, Extending Implicit Computational Complexity and Abstract Machines to Languages with Control, S. Martini.
- Alessandro Rioli, January 2012; Bisimulation equivalence in quantum lambda calculi, U. Dal Lago.
- Marco Solieri, December 2011; Géométrie de l'interaction, réseaux, et lambda-calcul, S. Guerrini (Paris Nord) and S. Martini.

The following PhD student is supervised by a member of Focus, but currently not in the Focus team:

- Sara Zuppiroli (Bologna), January 2010; models for quantum computing; U. Dal Lago.

8.2.3. *Juries*

U. Dal Lago has been rapporteur and member of the PhD evaluation committee for Clement Aubert, Paris 13, Stephane Zimmermann, Paris 7, and Martin Avanzini, University of Innsbruck.

S. Martini has been rapporteur and member of the evaluation committee of the “Habilitation a Diriger des Recherches” (HDR) of Michele Pagani, Paris 13, December 2013.

G. Zavattaro has been rapporteur and member of the PhD evaluation committee for Huu Nghia Nguyen (supervisors Prof. Pascal Poizat and Fatiha Zaidi), Université Paris Sud, Paris, France; and he has been member of the Ph.D. evaluation committee of Luca Panziera (supervisor Prof. Flavio De Paoli), universita' Milano Bicocca, Milano, Italy.

8.3. Popularization

Simone Martini has carried out extended work of scientific divulgation:

- member of the technical committee of Olimpiadi del Problem Solving (at Italian Ministry of Education), <http://www.olimpiadiproblemsolving.com>;
- the talks “Calcolo e simboli: la scienza digitale. A.M. Turing a cent'anni dalla nascita”, Accademia di Agricoltura Scienze e Lettere di Verona; “Problem solving tra linguaggio e competizione”, Workshop ‘Olimpiadi e Informatica’, Verona, 22 novembre 2013.

In addition, **S. Martini** and **U. Dal Lago** gave a series of lectures (20 hours altogether) to the students of "Collegio Superiore", a college of excellence at the University of Bologna (general students, not limited to Computer Science). The course was about algorithms, computational complexity, and cryptography.

GALAAD Project-Team

9. Dissemination

9.1. Scientific Animation

Laurent Busé

- is a member of the Jury of the french "agrégation externe de mathématiques".

André Galligo

- is part of the Advisory Board of the MEGA conference series and took part this year to its program committee.

Evelyne Hubert

- is an associate editor of the Journal of Symbolic Computation (<http://www.journals.elsevier.com/journal-of-symbolic-computation>),
- is part of the Advisory Board of the MEGA conference series and, as such, took part to the program committee of this year conference,
- edited, with Elizabeth Mansfield (University of Kent, UK) and Gloria Mari Beffa (University of Wisconsin, USA) a special issue of the journal *Foundations of Computational Mathematics* (Volume 13, Issue 4, August 2013) in honor of Peter Olver (University of Minnesota, USA). Cf. <http://link.springer.com/journal/10208>,
- is part of the local Inria Committee for Invited Professors and Postdoctoral Fellows,
- was elected to the new hiring committee at the mathematics department of the University of Nice (CPRH 25-26-60),
- co-organized the mini-symposia *Computational Aspects of Moving Frame* that was part of the *SIAM Conference on Applied Algebraic Geometry* that took place in Fort Collins, Colorado, August 1-4.

Bernard Mourrain

- is an associate editor of the Journal of Symbolic Computation (<http://www.journals.elsevier.com/journal-of-symbolic-computation>),
- is member of the Advisory Board of the MEGA conference series and chair of the program committee of MEGA'13 in Frankfurt, June 3-7,
- is co-editing, with Alicia Dickenstein and Jan Draisma, a special issue of the Journal of Symbolic Computation, after the conference MEGA'13,
- organized the mini-symposia *Algebraic Geometry, Moment Problems and Applications* that was part of the *SIAM Conference on Applied Algebraic Geometry* that took place in Fort Collins, Colorado, August 1-4,
- is chair of the local Inria Committee for Courses and Conferences.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Mathieu Collowald, Statistics (Exercices), 20h ETD, L1 MASS, University of Nice-Sophia Antipolis, France

Licence: Mathieu Collowald, Algebra (Exercices), 44h ETD, L1 I, University of Nice-Sophia Antipolis, France

Master: Laurent Busé, Curves and Surfaces, 60h ETD, MAM4, Ecole Polytechnique of the University of Nice-Sophia Antipolis, France

Master: Laurent Busé, Elimination theory for geometric modeling, 40h ETD, M2 of mathematics, University of Nice-Sophia Antipolis, France

Doctoral: Evelyne Hubert, Invariants of Group Actions, courses at the french workshop *Journées Nationales de Calcul Formel* (May 2013), 3h, CIRM Luminy, France.

9.2.2. Supervision

9.2.2.1. Ph.D. thesis in progress

Marta Abril Bucero, Moment matrices, real algebraic geometry and polynomial optimization. Advisor: Bernard Mourrain.

Mathieu Collowald, Integral representation of shapes for feature conservation or extraction. Advisor: Evelyne Hubert.

9.2.2.2. Internship

Matthieu Dien, *Décomposition de Tenseur Symétrique : Algorithme et Implémentation* 3.5 months, Master 1. Advisor: Bernard Mourrain.

Anna Karasoulou, *Discriminant of multivariate homogeneous symmetric polynomials*, 6 months, doctoral. Advisor: Laurent Busé.

9.2.3. Juries

Laurent Busé was a member of the PhD committee of Amir Bagheri, "Cohomologie locale, les idéaux gradués et leurs puissances", 25th September, University Pierre et Marie Curie, Paris, France.

Bernard Mourrain was member of the Ph.D. committee of Tatjana A. Kalinka, "Changing representation of curves and surfaces: exact and approximate methods", University of Athenes, 15th March; of the Ph.D. committee of Remy Imbach, "Résolution de contraintes géométriques en guidant une méthode homotopique par la géométrie", University of Strasbourg, 8th October; of the HDR committee of G. Lecerf, "Algorithmique des polynômes à plusieurs variables : opérations élémentaires, factorisation, élimination", University of Orsay, 26th November.

Evelyne Hubert was a member of the PhD committee of Christine Jost, *Topics in Computational Algebraic Geometry and Deformation Quantization*, Stockholm University, March 11th, 2013; and Cédric Zanni, *Skeleton based Implicit Modeling and Applications*, Université de Grenoble, December 6th 2013. She also took part to the mid-term PhD evaluation of Jules Svartz, *Systèmes polynômiaux présentant des symétries : Algorithmes, Complexité, Applications*, Université de Paris 6, June 20th, 2013.

GEOMETRICA Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Editorial boards of scientific journals

Jean-Daniel Boissonnat is a member of the Editorial Board of *Journal of the ACM, Discrete and Computational Geometry, Algorithmica, International Journal on Computational Geometry and Applications*.

Frédéric Chazal is a member of the Editorial Board of *SIAM Journal on Imaging Sciences, Graphical Models* and *Discrete and Computational Geometry* (start in Jan. 2014).

Olivier Devillers is a member of the Editorial Board of *Graphical Models*.

Monique Teillaud is a member of the Editorial Boards of *CGTA, Computational Geometry: Theory and Applications*, and of *IJCGA, International Journal of Computational Geometry and Applications*.

M. Yvinec is a member of the editorial board of *Journal of Discrete Algorithms*.

Monique Teillaud and Mariette Yvinec are members of the CGAL editorial board.

9.1.2. Conference program committees

Jean-Daniel Boissonnat was a member of the PC of the Symposium on Geometry Processing SGP 2013.

Jean-Daniel Boissonnat chaired WoCG (Workshops in Computational Geometry) and was a member of the program committee of the Young Researchers Forum, two satellite events of the ACM Symposium on Computational Geometry SoCG 2013.

Frédéric Chazal was a member of the PC of the ACM Symposium on Computational Geometry 2013, of the the Scientific committee of the SMAI 2013 conference, and of Geometric Science of Information (GSI 2013).

Monique Teillaud was a member of the PC of EuroCG, the European workshop on computational geometry.

9.1.3. Steering committees

Jean-Daniel Boissonnat is a member of the steering committee of the international conference on Curves and Surfaces.

Monique Teillaud was a member of the Computational Geometry Steering Committee until April.

Monique Teillaud has been a member of the Steering Committee of the European Symposium on Algorithms (ESA) since September.

9.1.4. Inria committees

Jean-Daniel Boissonnat was a member of the recruitment committee of Inria Rhône-Alpes.

Frédéric Chazal was a member of the recruitment committee of Inria Saclay (vice-chair).

Monique Teillaud is a member of the Inria Evaluation Committee.

She was a member of the national Inria DR2 interview committee and the local CR2 interview committee.

Monique Teillaud is a member of the local Committee for Technologic Development.

She was also a member of the local committee for transversal masters.

9.1.5. Other committees

Jean-Daniel Boissonnat is a member of the Conseil de l'AERES (Agence d'Evaluation de la Recherche et de l'Enseignement Supérieur).

9.1.6. Conference organization

- O. Devillers and M. Teillaud coorganized the workshop on Geometric Computing (<http://www.acmac.uoc.gr/GC2013/> Heraklion, Greece, January) with Menelaos Karavelas (University of Crete) and Elias Tsigaridas (EPI POLSYS).
- M. Teillaud coorganized the Dagstuhl Seminar on Computational Geometry [38] (<http://www.dagstuhl.de/en/program/calendar/semhp/?semnr=13101>, March 4-8) with Otfried Cheong (KAIST) and Kurt Mehlhorn (MPI Saarbrücken)
- M. Teillaud coorganized the Dagstuhl Seminar on Drawing Graphs and Maps with Curves [39] (<http://www.dagstuhl.de/en/program/calendar/semhp/?semnr=13151>, April 8-12) with Stephen Kobourov (University of Arizona) and Martin Nöllenburg (Karlsruhe Institute of Technology)
- O. Devillers organized the workshop of ANR Presage (Valberg, France, June).
- M. Teillaud (chair) and O. Devillers coorganized ALGO 2013, in cooperation with members of EPI ABS and COATI (<http://algo2013.inria.fr/>. Sophia Antipolis, France, September 2-6). ALGO 2013 combined the European Symposium on Algorithms (ESA) and six more specialized conferences and workshops. There were about three hundred attendees.
- D. Cohen-Steiner organized the 2013 edition of the “Journées de Géométrie Algorithmique” held at the CIRM, Luminy in December <http://quentin.mrgt.fr/events/jga2013.html>.

9.1.7. Web site

M. Teillaud is maintaining the Computational Geometry Web Pages <http://www.computational-geometry.org/>, hosted by Inria. 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 Symposium on Computational Geometry.

9.1.8. Geometrica seminar

The seminar featured presentations by the following scientists:

Omri Azencot (Technion) : An Operator Approach to Tangent Vector Field Processing

Mirela Ben Chen (Technion - Israel Institute of Technology) : Can Mean-Curvature Flow be Modified to be Non-singular?

Benjamin Burton (University of Queensland) : Untangling knots using combinatorial optimisation

A. Chiara de Vitis (Pavia) : Geometrical and Topological Descriptors for Protein Structures

C. Couprie (Courant Institute) : Graph-based Variational Optimization and Applications in Computer Vision

J. Demantke (IGN) : Geometric Feature Extraction from LIDAR Point Clouds and Photorealistic 3D Facade Model Reconstruction from Terrestrial LIDAR and Image Data

Kyle Heath (Stanford University) : Image Webs: Discovering and using object-manifold structure in large-scale image collections

N. Mitra (UCL London) : Computational Design Tools for Smart Models Synthesis

P. Machado Manhães de Castro (UFPE, Brasil) : Invariance for Single Curved Manifolds

Natan Rubín (Freie Universität Berlin) : On Kinetic Delaunay Triangulations: A Near Quadratic Bound for Unit Speed Motions

D. Salinas (Gipsa Lab, Grenoble) : Using the Rips complex for Topologically Certified Manifold Learning

Régis Straubhaar (Université de Neuchâtel) : Numerical optimization of an eigenvalue of the Laplacian on a domain in surfaces

Jian Sun (Mathematical Sciences Center, Tsinghua University) : Rigidity of Infinite Hexagonal Triangulation of Plane

Anaïs Vergne (Télécom ParisTech) : Algebraic topology and sensor networks

Yuan Yao (School of Mathematical Sciences, Peking University) : The Landscape of Complex Networks

H. Zimmer (Aachen) : Geometry Optimization for Dual-Layer Support Structures

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Graduate level: Olivier Devillers, *Delaunay triangulation*, 6h, Universidade Federal de Pernambuco, Brasil.

Master : J.D. Boissonnat, D. Cohen-Steiner, M. Yvinec, *Computational Geometric Learning* , 24h, International Master Sophia-Antipolis.

Master : S. Oudot, *Computational Geometry: from Theory to Applications*, 36h, École polytechnique.

Master: Jean-Daniel Boissonnat, Frédéric Chazal, Mariette Yvinec, *Computational Geometric Learning*, 24h, Master MPRI, Paris.

Master: Olivier Devillers and Monique Teillaud, *Algorithmes géométriques, théorie et pratique*, 16h, Master SSTIM-VIM, Université Nice Sophia Antipolis.

Doctorat : Jean-Daniel Boissonnat, Frédéric Chazal, Mariette Yvinec, *Analyse géométrique des données* , 7h, Ecole Jeunes Chercheurs GDR Informatique Mathématique, Perpignan.

9.2.2. Supervision

PhD: Mikhail Bogdanov, Delaunay triangulations of spaces of constant negative curvature, Université de Nice - Sophia Antipolis, December 9, Monique Teillaud.

PhD in progress: Thomas Bonis, Topological persistence for learning, started on December 2013, Frédéric Chazal.

PhD in progress: Mickaël Buchet, Topological and geometric inference from measures, Université Paris XI, started October 2011, Frédéric Chazal and Steve Oudot.

PhD in progress : Ross Hemsley, Probabilistic methods for the efficiency of geometric structures and algorithms, started October 1st 2011, Olivier Devillers.

PhD in progress: Ruqi Huang, Algorithms for topological inference in metric spaces, started on December 2013, Frédéric Chazal.

PhD in progress : Clément Maria, Data structures and Algorithms in Computational Topology, started October 1st, 2011, Jean-Daniel Boissonnat.

PhD in progress : Rémy Thomasse, Smoothed complexity of geometric structures and algorithms, started December 1st 2012, Olivier Devillers.

PhD in progress : Mael Rouxel-Labbé, Anisotropic Mesh Generation, started October 1st, 2013, Jean-Daniel Boissonnat and Mariette Yvinec.

9.2.3. Juries

Jean-Daniel Boissonnat was a member (reviewer) of the HDR defense of Dominique Attali (Univ. Grenoble).

Jean-Daniel Boissonnat was a member (reviewer) of the PhD defense committee of David Salinas (Univ. Grenoble). Steve Oudot was also part of that defense committee.

Jean-Daniel Boissonnat was a member (reviewer) of the PhD defense of Jérémy Espinas (Univ. Lyon).

Frédéric Chazal was a member (reviewer) of the PhD defense of Lucie Druoton (Univ. de Bourgogne).

Frédéric Chazal was a member (reviewer) of the PhD defense of Anaïs Vergne (Telecom Paris).

Olivier Devillers was a member of the HDR defense committee of Nicolas Bonichon (Univ. Bordeaux).

Monique Teillaud was a member of the PhD defense committee of Marcel Roeloffzen, TU Eindhoven, October.

9.2.4. Internships

Thomas Bonis, image and shape classification using persistent homology (F. Chazal)

Claudia Werner, Triangulations on the sphere, Hochschule für Technik Stuttgart (Monique Teillaud)

Arnaud Poinas, Statistical manifold reconstruction (Jean-Daniel Boissonnat)

Sergei Kachanovich, Graph-induced simplicial complex (Jean-Daniel Boissonnat)

Chunyuan Li, Persistence-based object recognition (F. Chazal and M. Ovsjanikov)

Venkata Yamajala, Implementing (and simplifying) the tangential complex (Jean-Daniel Boissonnat)

9.3. Popularization

Jean-Daniel Boissonnat, Au delà de la dimension 3, Caféin Inria Sophia Antipolis.

Jean-Daniel Boissonnat, Geometry Understanding in Higher Dimensions. Conference for the students of ENS Lyon (Inria Sophia Antipolis)

Monique Teillaud, “à quoi sert un triangle ?”, 2x2h, Collège Le Prés des Roures, Le Rouret, in the framework of the national Week of Mathematics.

Steve Oudot was coordinator of the *Photomaton 3d* booth at the *Nuit des chercheurs* event at École polytechnique in September 2013. Marc Glisse, Maks Ovsjanikov, Mickaël Buchet, and Thomas Bonis also participated.

9.4. Participation to conferences, seminars, invitations

9.4.1. Invited Talks

Jean-Daniel Boissonnat gave an invited lecture at the International Symposium on Voronoi Diagrams (St Petersburg) : on the empty sphere on manifolds. July.

Jean-Daniel Boissonnat gave an invited talk at the Jean-Paul Laumond’s day (on the occasion of his 60th anniversary) : Comprendre la géométrie des données.

Frédéric Chazal gave invited talks at the Workshop on Topological Data analysis, Institute for Mathematics and its Applications, Minneapolis, October 2013; at the Workshop on Topological Methods in Complexity Science, European Conference on Complex Systems satellite conference, Barcelona, September 2013.

9.4.2. Seminars

Members of the project have presented their published articles at conferences. The reader can refer to the bibliography to obtain the corresponding list. We list below all other talks given in seminars, summer schools and other workshops.

Frédéric Chazal, Filtrations et entrelacements : théorie et applications en Analyse Topologique des Données, Séminaire Brillouin, Paris, Dec. 2013.

Frédéric Chazal, Transport de mesures et inférence géométrique, Journées de Contrôle et Transport Optimal, Dijon, February 2013.

Frédéric Chazal, Computer Science and Machine Learning Seminar at Carnegie Mellon University, Pittsburg, September 2013.

Frédéric Chazal, Convergence rates for persistence diagrams in Topological Data Analysis, Workshop on Applied and Computational Topology, Bremen, July 2013.

Frédéric Chazal, Inférence géométrique et analyse topologique des données à l'aide de fonctions distance, colloquium de mathématiques, Univ. Paris 6, May 2013.

Olivier Devillers. Qualitative Symbolic Perturbations. Workshop on Geometric Computing. Heraklion. January.

Olivier Devillers. Hyperbolic Delaunay Triangulation, Universidade Federal de Pernambuco. June.

Monique Teillaud. Delaunay Triangulations of Point Sets in Closed Euclidean d -orbifolds. Workshop on Geometric Computing. Heraklion. January.

Monique Teillaud. Delaunay Triangulations of Point Sets in Closed Euclidean d -orbifolds. Meeting of ANR Presage. January.

Monique Teillaud. Curves in CGAL (with Michael Hemmer, University of Technology Braunschweig). Dagstuhl Seminar on Drawing graphs and maps with curves. April.

Monique Teillaud. 3D meshes in CGAL. Mathematics for Industry and Society, French Embassy Berlin. July.

9.4.3. Short scientific visits

Frédéric Chazal, Carnegie Mellon University, Sept. 2013.

Frédéric Chazal, Stanford University, May 2013.

Olivier Devillers and Monique Teillaud, University of Athens, January.

Monique Teillaud, Zuse Institut Berlin, July.

Monique Teillaud, TU Eindhoven, October.

GRAPHIK Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. *Habilitations à Diriger les Recherches (HDR)*

Rallou Thomopoulos defended her HDR on December, entitled *Aide à la décision dans les filières agroalimentaires* in front of the following jury:

- Christine FROIDEVAUX , Pr., Univ. Paris Sud, Orsay, Reviewer
- Bernard MOULIN, Pr., Univ. Laval, Québec, Canada, Reviewer
- Henri PRADE, DR CNRS, IRIT, Toulouse , Reviewer
- Joël ABECASSIS, IR (HDR), INRA, Montpellier
- Fabien GANDON, CR (HDR), Inria, Sophia-Antipolis
- Marie-Laure MUGNIER, Pr., Univ. Montpellier 2, Président of Jury

9.1.2. *Organization of Conferences/Workshops*

- Souhila Kaci co-organized the “Uncertain reasoning” track at FLAIRS’13. She also co-organized the 7th Multidisciplinary Workshop on Preferences (MPREF’13) in conjunction with IJCAI’13.
- Patrice Buche co-organized the IN-OVIVE workshop dedicated to heterogeneous data sources integration in life sciences during IC’2013 in Lille <http://umr-iate.cirad.fr/actualites/atelier-in-ovive-a-la-conference-ic-2013-le-2-juillet>.
- Madalina Croitoru was chair of GKR 2013 (3rd IJCAI international workshop on graph structures for knowledge representation and reasoning), in conjunction with IJCAI’13; and is general chair of ICCS 2014 (International Conference on Conceptual Structures).

9.1.3. *Editorial Boards*

ICCS (International Conference on Conceptual Structures)

RIA (Revue Francophone d’Intelligence Artificielle)

9.1.4. *Program Committees*

- **International conferences and workshops:**
 - ECAI 2014 (European Conference on Artificial Intelligence) [senior PC; PC]; RR 2014 (8th International Conference on Web Reasoning and Rule Systems) [co-presidency of program committee]; IPMU 2014 (15th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based System) [initiative committee of special session on “Decision Support and uncertainty management in Agri-Environment”]; ICCS 2014 (International Conference on Conceptual Structures) [general chair; steering committee]; ESWC 2014 (European Semantic Web Conference), IJCAI’13 (International Joint Conference on Artificial Intelligence)[senior PC; PC]; AAMAS’13 (Autonomous Agents and Multiagent Systems); EUSFLAT 2013 (8th conference of the European Society for Fuzzy Logic and Technology); RR 2013 (7th International Conference on Web Reasoning and Rule Systems).
 - NMR 2014 (Non-monotonic reasoning workshop); MPREF’14 (Workshop on Advances in Preference Handling); GKR 2013 (3rd IJCAI international workshop on graph structures for knowledge representation and reasoning)[chair].

- **National conferences and workshops:** JIAF 2013 and 2014 (Journées d'Intelligence Artificielle Fondamentale); IC 2013 (Ingénierie des Connaissances); LFA 2013 (22e rencontres francophones sur la logique floue et ses applications)

9.1.5. Invited Talks

- Jean-François Baget gave an invited talk at the “Artificial Intelligence meets the Web of Data” workshop associated to ESWC’13 (European Semantic Web Conference). Title : “*Ontologies and large databases: querying algorithms for the Web of Data*”.
- Marie-Laure Mugnier gave an invited talk at the workshop CrEDIBLE (fédération de données et de connaissances distribuées en imagerie biomédicale, CNRS - défi MASTODONS). Title: “*Ontological Query Answering with Existential Rules*”.
- Madalina Croitoru gave a seminar at the Univ. of Dresden. Title: “*What can argumentation do for inconsistent query answering?*”
- Madalina Croitoru gave 15h of lectures at the Computer Science winter school of the Univ. of Buenos Aires (ECI winter school, <http://www.dc.uba.ar/events/eci/2013/cursos/>). Title: “*Graph-based representation and reasoning in artificial intelligence*”

9.1.6. Scientific Advisory Boards

- ABES (National Bibliographic Agency for Universities) Scientific Advisory Board, Michel Chein (since its creation in 2010).
- Advisory Board of the Center of Excellence in Semantic Technologies (MIMOS, Malaysia), Marie-Laure Mugnier (since its creation in 2008).
- Scientific board of INRA-CEPIA department (Caractérisation et Elaboration des Produits Issus de l’Agriculture – Agricultural Products Engineering), Marie-Laure Mugnier (since Septembre 2011).

9.1.7. Local Collective Tasks

Souhila Kaci is co-responsible of “Artificial Intelligence” axis at LIRMM.

Souhila Kaci and Namrata Patel are members of the LIRMM Laboratory Council.

Jean-François Baget is member of the LIRMM Scientific Council.

9.1.8. Participation to the W3C RDF Working Group

(Jean-François Baget) The mission of the RDF Working Group, part of the Semantic Web Activity, is to update the 2004 version of the Resource Description Framework (RDF) Recommendation. The scope of work is to extend RDF to include some of the features that the community has identified as both desirable and important for interoperability based on experience with the 2004 version of the standard, but without having a negative effect on existing deployment efforts. <http://www.w3.org/2011/01/rdf-wg-charter>.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

The next table details the number of lecture hours as well as the number of module responsibilities for each team member.

Name	Position	2012/13	Cursus (*)	Module Resp. (per year)
J.-F. Baget	Research Scientist	40	M (UM2)	1
M. Croitoru	Assistant Prof.	198	L2	2
M. Chein	Emeritus Prof.	0		
J. Fortin	Assistant Prof	230	Polytech	2
S. Kaci	Professor	198	L and M(UM2)	3
M. Leclère	Assistant Prof.	96	L and M (UM2)	2
M. -L. Mugnier	Professor	192	L and M (UM2)	3
R. Thomopoulos	Research Scientist	0		no
L. Guizol	PhD	64	L	no
M. König	PhD	64	L	no
B. Paiva Lima	PhD	64	L (UM2)	no
M. Thomazo	PhD	64	L and M1 (UM2)	no

(*) L =Licence, M = Master (M1 = first year, M2 = second year), UM2 = Univ. Montpellier 2 (Sciences), IUT = Institute of Technology of UM2 (Licence Cursus), Polytech = Engineering School of UM2, UM3 = Univ. Montpellier 3 (Art and Humanities)

Globally, the team ensures the courses in logics (propositional logic and first-order logic in L, logics for Artificial Intelligence in M2) at the Montpellier 2 University, as well as the Master courses in Artificial Intelligence, Decision Support, Knowledge Representation and Knowledge Engineering. We are also responsible of modules in Web Technologies (Professional L at IUT) and Databases (L).

We have some specific responsibilities in the Computer Science Licence and Master:

- Michel Leclère is co-responsible of the master speciality DECOL (about 20 students) started in September 2011.
- Marie-Laure Mugnier is co-responsible of the Computer Science Master started in September 2011 (about 250 students), which gathers six specialties. She is also leading the Master project for the next four years (LMD4).
- Souhila Kaci is leading the Licence project for the next four years (LMD4).

9.2.2. Supervision

9.2.2.1. PhDs

Michaël Thomazo defended his PhD on October *Conjunctive Query Answering Under Existential Rules - Decidability, Complexity, and Algorithms* [15]. The jury was:

- Georg GOTTLOB (PR), Univ. of Oxford, Reviewer
- Carsten LUTZ (PR), Univ. of Bremen, Reviewer
- Marie-Christine ROUSSET (PR), Univ. de Grenoble, Reviewer
- Christophe PAUL (DR), CNRS, Examiner
- Jean-François BAGET (CR), Inria, Co-advisor
- Marie-Laure MUGNIER (PR), Univ. Montpellier 2, Advisor

The PhDs in progress are:

PhD in progress : Bruno Paiva Lima da Silva (ministry grant), Comparing Storage Systems for Large knowledge bases, Oct. 2010, supervised by Jean-François Baget and Madalina Croitoru. Defence in Jan. 2014.

PhD in progress : Tjitze Rienstra, Dynamic argumentation systems, Oct. 2010, supervised by Souhila Kaci and Leon van der Torre (University of Luxembourg)

PhD in progress : Mélanie König (ministry grant), Algorithms for querying large knowledge bases, Oct. 2011, supervised by Michel Leclère and Marie-Laure Mugnier

PhD in progress : Léa Guizol (ABES grant), Entity identification in metadata bases, Oct. 2011, supervised by Madalina Croitoru

PhD in Progress: Fabien Garreau (ANR ASPIQ grant), Algorithms for stable model semantics and existential rules (ANR ASPIQ, with Univ. of Angers), Sept. 2012, supervised by Igor Stephan, Jean-François Baget and Laurent Garcia

PhD in Progress: Swan Rocher (ANR Qualinca grant), Reasoning with inconsistent knowledge bases in presence of existential rules (ANR Qualinca), Sept. 2013, supervised by Marie-Laure Mugnier and Jean-François Baget

PhD in Progress: Namrata Patel (Univ. Montpellier II grant), Preference Handling in Decision Problems (bourse ministerielle), Sept. 2013, supervised by Souhila Kaci

9.2.3. Juries

9.2.3.1. PhDs

- Patrice Buche was reviewer for *Semantic support for quantitative research*, Hajo Rijgersberg, VU University Amsterdam, May 2013
- Patrice Buche was reviewer for *Validation, synthèse et paramétrage des cartes cognitives*, Aymeric Le Dorze, LERIA/Angers University, Nov. 2013
- Patrice Buche was reviewer for *Evolution cohérente des ressources termino-ontologiques et des annotations sémantiques*, Anis Tissaoui, IRIT/Toulouse 3 University, Dec. 2013
- Patrice Buche was jury member for *D'un langage de haut niveau à des requêtes graphes permettant d'interroger le web sémantique*, Camille Pradel, IRIT/Toulouse 3 University, Dec. 2013
- Marie-Laure Mugnier and Jean-François Baget were jury members (and co-directors) for *Conjunctive Query Answering Under Existential Rules - Decidability, Complexity, and Algorithms*, Univ. Montpellier II, Oct. 2013.

9.2.3.2. HDRs

- Marie-Laure Mugnier was jury president for *Aide à la décision dans les filières agroalimentaires*, Rallou Thomopoulos, Univ. Montpellier II, Dec. 2013
- Marie-Laure Mugnier was jury president for *Contribution des modèles de connaissances à l'amélioration continue des processus industriels*, Bernard Kamsu, ENI Tarbes, Apr. 2013

9.2.3.3. Other juries

- Marie-Laure Mugnier was president of a recruitment committee for a professor position at UM2-IUT Béziers
- Marie-Laure Mugnier was member of 3 recruitment committees for associate professor positions at UM2-IUT Montpellier, UPMF-Grenoble and SupAgro Montpellier
- Madalina Croitoru was member of a recruitment committee for an associate professor position at UM2-IUT Montpellier.

9.3. Popularization

Patrice Buche was invited to give a talk about Packaging Decision support system involving flexible querying and argumentation at ANR Ribenut final meeting in November, 14 2013 (Avignon)

INDES Project-Team

8. Dissemination

8.1. Seminars and conferences

- **Pejman Attar** gave a talk about security in concurrency at Paris 7 in february 2013. He participated March in *rencontres du numérique de l'ANR* and presented a poster about his work and the PARTOUT ANR team work.
- **Nataliia Bielova** was invited to present her work on web security in Labex Security day.
- **Iliaria Castellani** participated in March in the 1st working group (WG) meeting of the BETTY Action, in Rome, where she animated the discussion of the Security WG. In September, she took part in the 2nd WG meeting of BETTY, in Madrid, where she again animated the discussion of the Security WG. In August 2013, Iliaria Castellani participated in the workshop “25 Years of Combining Compositionality and Concurrency” (WS25CCC), in Königswinter, Germany, and in the 8th International Symposium on Trustworthy Global Computing (TGC 2013), in Buenos Aires, Argentina. In both of them, she presented her joint work with Pejman Attar [11]. In Buenos Aires, she also took part in the annual meeting of the IFIP WG 1.8 on Concurrency Theory.
- **Cyprien Nicolas** gave a talk about “Cable-Driven Robots with Wireless Control Capability for Pedagogical Illustration of Science” at the 8th National Conference of “Control Architecture of Robots” in Angers, France, June, 12th 2013 [13].
- **Tamara Rezk** was invited to present her work on web security in IRISA Rennes in January and in University of Cordoba in March. She gave a talk in the Labex Security day.
- **Manuel Serrano** gave a seminar about Web programming in the seminar series associated with the course of Gérard Berry at Collège de France called *Informatique du Temps et des Événements*. He participated in a one-week seminar in Brussels on Secure Cloud and Reactive Internet Programming Technology, where he gave a talk on HipHop. He presented the results of the PWD projet at the ANR *Rencontres du numérique* in Paris. Manuel Serrano gave a lecture on Hop at the ECOOP Programming Summer School.

8.2. Animation

- **Iliaria Castellani** is a member of the editorial board of *Technique et Science Informatiques*. She is a member of the IFIP WG 1.8 on Concurrency Theory. She is a member of the Management Committee of the BETTY Action, and the chair of the BETTY working group on Security. She was a member of the programme committee of the workshop EXPRESS/SOS 2013.
- **Tamara Rezk** was a member of the programme committees of JAIIO'13, CIBSI'13, TGC'13, LATIN'14, TIBETS'13, SOFSEM'14. She was invited to be in the PC of CSF'14. She was invited by the Estonian Research Council as an external expert to the evaluation of a research project. She is part of the organizing committee for the Labex Security day with **Nataliia Bielova**.
- **Manuel Serrano** is a member of the editorial board of the *Journal of Functional Languages*. He is the coordinator of the ANR DEFIS project PWD. He served on the program committee of the *16th Practical Aspects of Declarative Languages* (PADL'14) conference. He was a referee for the *Lisp in Summer Projects*. He was the co-program chair of the *European Lisp Symposium* (ELS'13).

8.3. Teaching - Supervision - Juries

8.3.1. Teaching

DUT: **Cyprien Nicolas**, *Introduction aux systèmes informatiques*, 36ETD, S1, IUT Nice Côte d'Azur, UNS, France. *Architecture Systèmes et Réseaux*, 16ETD, S3, IUT Nice Côte d'Azur, UNS, France.

Licence: **Cyprien Nicolas**, *Algorithmique et Complexité*, 30ETD, Licence Professionnelle SIL, IUT Nice Côte d'Azur, UNS. **Yoann Couillec**, *Algorithmique - Programmation objet - Python*, 36 ETD, L2, University of Nice Sophia Antipolis. **Vincent Prunet**, *Algorithms and Data Structures*, 80 ETD, L2, Lycée International de Valbonne, (Inria action to promote early CS courses in all scientific curricula).

Master: **Ilaria Castellani**, *Programmation et sécurité des applications du web*, 13.5 ETD, M2, University of Nice Sophia Antipolis. **Tamara Rezk**, *Programmation et sécurité des applications du web*, M2, University of Nice. *Programming the Diffuse Web*, 13.5 ETD, M2, University Paris 6 (UPMC), France. *Provable cryptography* 28h ETD, M2 University of Nice Sophia Antipolis. **Manuel Serrano**, *Programming the Diffuse Web*, 13.5 ETD, M2, University Paris 6 (UPMC), France.

PhD: **Manuel Serrano** gave a full-day seminar on Hop at the *École des Jeunes Chercheurs en Programmation* (Rennes).

8.3.2. Supervision

PhD: **Pejman Attar**, *Towards a safe and secure synchronous language*, University of Nice, 1/10/2010, **Frédéric Boussinot** and **Ilaria Castellani**.

PhD in progress: **Cyprien Nicolas**, *Orchestrating multi-tier programming languages*, University of Nice, 1/09/2010, **Gérard Berry** and **Manuel Serrano**.

PhD in progress: **Johan Grande**, *Conception et implantation d'un langage de programmation concurrente modulaire*, University of Nice, 1/10/2010, **Gérard Boudol** and **Manuel Serrano**.

PhD in progress: **Yoann Couillec**, *Langages de programmation et données ouvertes*, University of Nice, 1/10/2012, **Manuel Serrano** and **Patrick Valduriez**.

PhD in progress: **José Santos**, *Language based approach for information flow analysis in distributed mobile code*, University of Nice, 1/12/2010, **Tamara Rezk**.

Master internship: **Jérôme Brunel** master thesis at University of Nice-Sophia Antipolis, tutored by **Tamara Rezk**. **Gerard Boudol** has supervised the intership (Master Recherche) of Arthur Guillon, on relaxed memory models. The long term objective was to investigate the quantitative aspects of such models, but a first phase of the study consisted in refining an abstract model previously introduced by Boudol, Petri and Serpette. More precisely, this model was refined so as to provide an adequate semantics for PowerPC memory barriers, a notoriously difficult topic. To this end we extended the notion of visibility, attached to memory write operations, to these barriers. In this way, we achieved an accurate semantics of these synchronization operations with respect to the series of tests on PowerPC machines developed by Luc Maranget. In a second phase, some requirements for a notion of probabilistic memory model were identified.

8.3.3. Juries

Ilaria Castellani was a member of the jury of the PhD thesis of Fabrizio Montesi, IT University of Copenhagen.

8.4. Popularization

The Web is becoming the richest platform on which to create computer applications. Its power comes from three elements: modern Web browsers enable highly sophisticated graphical user interfaces (GUIs) with 3D, multimedia, fancy typesetting, among others; calling existing services through Web APIs makes it possible to develop sophisticated applications from independently available components; and open-data availability allows access to a wide set of information that was unreachable or that simply did not exist before. The combination of these three elements has already given birth to revolutionary applications such as GoogleMaps, radio podcasts, and social networks.

The next step is likely to be incorporating the physical environment into the Web. Recent electronic devices are equipped with various sensors (GPS, cameras, microphones, metal detectors, speech commands, thermometers, motion detection, and so on) and communication means (IP stack, telephony, SMS, Bluetooth), which enable applications to interact with the real world. Web browsers integrate these features one after the other, making the Web runtime environment richer every day. The future is appealing, but one difficulty remains: current programming methods and languages are not ideally suited for implementing rich Web applications. This is not surprising as most have been invented in the 20th century, before the Web became what it is now.

Traditional programming languages have trouble dealing with the asymmetric client-server architecture of Web applications. Ensuring the semantic coherence of distributed client-server execution is challenging, and traditional languages have no transparent support for physical distribution. Thus, programmers need to master a complex gymnastics for handling distributed applications, most often using different languages for clients and servers. JavaScript is the dominant Web language but was conceived as a browser only client language. Servers are usually programmed with quite different languages such as Java, PHP, Ruby, etc. Recent experiments such as Node.js propose using JavaScript on the server, which makes the development more coherent; however, harmonious composition of independent components is still not ensured.

In 2006, three different projects, namely, GWT from Google, Links from the University of Edinburgh, and HOP from Inria (<http://www.inria.fr>) [6], offered alternative methods for programming Web applications. They all proposed that a Web application should be programmed as a single code for the server and client, written in a single unified language. This principle is known as multitier programming.

Links is an experimental languages in which the server holds no state and functions can be symmetrically called from both sides, allowing them to be declared on either the server or the client. These features are definitely interesting for exploring new programming ideas, but they are difficult to implement efficiently, making the platform difficult to use for realistic applications.

GWT is more pragmatic. It maps traditional Java programming into the Web. A GWT program looks like a traditional Java/Swing program compiled to Java bytecode for the server side and to JavaScript for the client side. Java cannot be considered as the unique language of GWT, however. Calling external APIs relies on JavaScript inclusion in Java extensions. GUIs are based on static components declared in external HTML files and on dynamic parts generated by the client-side execution. Thus, at least Java, Javascript, and HTML are directly involved.

The HOP language takes another path relying on a different idea: incorporating all the required Web-related features into a single language with a single homogeneous development and execution platform, thus uniformly covering all the aspects of a Web application: client-side, server-side, communication, and access to third-party resources. HOP embodies and generalizes both HTML and JavaScript functionalities in a Scheme-based platform that also provides the user with a fully general algorithmic language. Web services and APIs can be used as easily as standard library functions, whether on the server side or client side.

In order to popularize HOP, we have written a paper for targeting engineers which presents an overview of the HOP language and its development environment. It has been simultaneously published in ACM Queue and Communications of the ACM [5]. We have also given several demonstrations of the system. In particular, Cyprien Nicolas has co-developed application software for an educational cable robot (Coprin) presented at the Fête de la Science, in November. The demo consisted in a Cable bot built by a Coprin student and piloted by Hop, the software being written by a Indes student. The demo took place in front of four classes of High School students.

8.5. Transfer

8.5.1. Diffuse Robotics

Dissemination of the HOP technology has become a priority for the team now that HOP is actually used to develop large projects. In 2012, a further step was taken with the allocation of dedicated resources missioned to develop and transfer the application portfolio to the industry. The team has focused on bringing web awareness

to personal assistance robots developed by the Coprin team, also at Inria CRISAM, in line with one of the top strategic orientations of Inria. Using web protocols as a native framework greatly simplifies the integration of the robot as a web entity, and the use of remote web services to manage, monitor or extend the features of the robot. The behavior of a HOP robot is specified in HOP and orchestrated within diffuse HOP run time agents embedded within the robot elements, in charge of handling communication and control between platforms and with remote web services. The project, code-named *Diffuse Robotics*, builds on the experience gained in using HOP for home automation over the recent years, adding in 2012 the support of versatile robotic computing platforms and associated mechanics and sensor hardware and a state of the art plug and play framework for automatic device and service discovery. Among the direct benefits of relying on a web framework are the ability to use any web enabled device such as a smartphone or tablet to drive the robot. Also, it is much simpler to put in place remote diagnostic and monitoring services by leveraging on existing robot sensors and the HOP framework.

LAGADIC Project-Team

9. Dissemination

9.1. Scientific Animation

- *Editorial boards of journals*
 - Eric Marchand and Paolo Robuffo Giordano are Associate Editors of the IEEE Trans. on Robotics.
 - Eric Marchand is a Guest Editor (with Peter Corke and Jana Kosecka) of a Special Issue of the Int. Journal of Robotics Research on Robot Vision.
 - François Chaumette is in the Editorial Board of the Int. Journal of Robotics Research.
- *Technical program committees of conferences*
 - François Chaumette: WRV'13, ICRA'13, RSS'13, ICRA'14
 - Eric Marchand: ICRA'13, IROS'13, ISMAR'13 (area chair), RSS'13, ORASIS'13, ICRA'14, RFIA'14 (area chair)
 - Patrick Rives: RFIA'14
 - Paolo Robuffo Giordano: ICRA'13, RSS'13, IJCAI'13, ICRA'14
 - Alexandre Krupa: Orasis'13
 - Marie Babel: ACIVS'13
- *Selection committees*
 - Patrick Rives participated to the selection committees of research scientists (CR2) at Inria Nancy-Grand Est, Inria senior researchers (DR2), and Inria Starting and Advanced Research positions. .
 - François Chaumette was in the selection committee for an Assistant Professor position at the “Université Blaise Pascal” in Clermont-Ferrand. He also served in the jury for the selection of research scientists (CR2) at Inria Rhône-Alpes.
 - Eric Marchand was in the selection committee for an Assistant Professor position at INSA Rennes.
 - Alexandre Krupa was in the selection committee for an Assistant Professor position at the “Université de Montpellier 2”.
- *Participation in seminars, invitation*
 - Alexandre Krupa was invited by Nassir Navab to give a talk at the Chair for Computer Aided Medical Procedures (CAMP) from the Technische Universität München in May 2013.
 - François Chaumette was invited to give a seminar at the University of Zagreb during a one-week visit in July 2013 in the scope of the FP7 Across Regpot project (see Section 8.3.1.2). He also gave a talk at DGA-MI in Bruz during a workshop about visual localization.
 - Paolo Robuffo Giordano was invited to give talks at I3S in Sophia-Antipolis, Inria Grenoble, Isir in Paris, Ensam in Paris in the scope of the “GdR Robotique”, and University of Rome “La Sapienza”. He also presented an invited talk at the IEEE/RSJ IROS Workshop on Vision-based Closed-Loop Control and Navigation of Micro Helicopters in GPS-denied Environments [28].
 - Fabien Spindler was invited to present the ViSP software at the “Journées technologiques Robotex” in Toulouse in June 2013.

- *Animation at the international level*
 - François Chaumette served as a panel member of the ERC Consolidator Grants (PE7). He also served in the 2013 IEEE RAS Fellow Nomination Committee.
 - Paolo Robuffo Giordano served as external reviewer for evaluating research proposals of the Swiss National Science Foundation (SNSF).
 - Paolo Robuffo Giordano co-organized the ICRA'13 workshop “Towards Fully Decentralized Multi-Robot Systems: Hardware, Software and Integratio”, Karlsruhe, Germany and the “Sixth Workshop on Human-Friendly Robotics” at the University of Rome “La Sapienza”, Italy.
- *Animation at the national level*
 - François Chaumette and Patrick Rives are members of the scientific council of the “GdR Robotique” and JNRR.
 - Eric Marchand was a member of the AERES evaluation panel for U2IS lab at ENSTA Paristech.
 - Patrick Rives is a member of the Inria evaluation committee.
 - Alexandre Krupa is a member of the Inria Cost-GTAI in charge of the evaluation of the ADTs (“Actions de développements technologiques”).
- *Animation at the regional and local levels*
 - Eric Marchand is in the board of the “Images et réseaux” competitiveness cluster.
 - Alexandre Krupa is a member of the GestChir project at the IRT B-Com in Rennes.
 - Eric Marchand is a member of the scientific council of the “École supérieure d’ingénieurs de Rennes” (ESIR).
 - François Chaumette is 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.
 - Eric Marchand is a member of the committee in charge of all the temporary recruitments (“Commission Personnel”) at Inria Rennes-Bretagne Atlantique and Irisa. He is particularly in charge of Irisa Ph.D. students.
 - Marie Babel is a member of the “Comité de centre” of Inria Rennes-Bretagne Atlantique.
 - Fabien Spindler is a member of the “Commission développement durable” of Inria Rennes-Bretagne Atlantique.
 - Alexandre Krupa is a member of the CUMIR (“Commission des Utilisateurs des Moyens Informatiques”) of Inria Rennes-Bretagne Atlantique.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Marie Babel:

Master INSA3: “Statistical Signal Processing”, 24 hours, M2, INSA Rennes

Master INSA1: “Assembler”, 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”, 24 hours, L3, INSA Rennes

Master INSA1: “Risk Management for Information Systems”, 8 hours, L3, INSA Rennes

François Chaumette:

Master ESIR3: “Visual servoing”, 10 hours, M2, Ecole supérieure d’ingénieurs de Rennes

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

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

Paolo Robuffo Giordano

P. Robuffo Giordano: Master in Robotics: “Analysis and Control of Multi-Robot Systems”, 16 hours, M2, Department of Computer and System Sciences, University of Rome “La Sapienza”

9.2.2. Supervision

9.2.2.1. Ph.D.

Ph.D.: Tao Li, “Commande d’un robot de télé-échographie par asservissement visuel échographique”, Université de Rennes 1, defense in February 2013, supervised by Alexandre Krupa [10]

Ph.D.: Antoine Petit, “3D model-based tracking of complex objects in a spatial context”, Université de Rennes 1, defense in December 2013, supervised by Eric Marchand [11]

Ph.D. in progress: Rafik Sekkal, “Features extraction and robust tracking of objects for video representation”, started in October 2010, supervised by Marie Babel

Ph.D. in progress: Manikandan Bakthavatchalam, “Utilisation des moments photométriques en asservissement visuel”, started in October 2011, supervised by François Chaumette

Ph.D. in progress: Bertrand Delabarre, “An information theoretic approach for navigation in robotics”, started in October 2011, supervised by Eric Marchand

Ph.D. in progress: Tawsif Gokhool, “Représentations valides à long terme pour la navigation et l’apprentissage des modèles 3D”, started in February 2012, supervised by Patrick Rives

Ph.D. in progress: Romain Drouilly, “Représentation hybride métrique, topologique et sémantique d’environnement 3D pour la localisation temps réel”, started in May 2012, supervised by Patrick Rives

Ph.D. in progress: Le Cui, “Nano-manipulation par asservissement visuel”, started in October 2012, supervised by Eric Marchand

Ph.D. in progress: Riccardo Spica, “Autonomous vision-based two-hand manipulation strategies for humanoid robots”, started in December 2012, supervised by Paolo Robuffo Giordano and François Chaumette

Ph.D. in progress: Lucas Royer, “Visual tool for percutaneous procedures in interventional radiology”, started in September 2013, supervised by Alexandre Krupa, Maud Marchal (Hybrid group at Inria Rennes-Bretagne Atlantique and Irisa) and Guillaume Dardenne (IRT B-Com)

Ph.D. in progress: Pierre Chatelain, “Multi-modal visual servoing for intra-operative imaging”, started in September 2013, supervised by Alexandre Krupa and Nassir Navab (Technische Universität München)

Ph.D. in progress: Vishnu Narayanan, “Semi-autonomous navigation of a wheelchair by visual servoing and user intention analysis”, started in September 2013, supervised by Marie Babel and Anne Spalanzani (e-Motion group at Inria Rhône-Alpes)

Ph.D. in progress: Suman Bista, “Visual navigation of a humanoid robot”, started in October 2013, supervised by Paolo Robuffo Giordano and François Chaumette

Ph.D. in progress: Nicolas Cazy, “Model predictive visual servoing of a humanoid robot”, started in October 2013, supervised by Paolo Robuffo Giordano, François Chaumette and Pierre-Brice Wieber (Bipop group at Inria Rhône-Alpes)

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: Aly Magassouba, “Audio-based control”, started in December 2013, supervised by François Chaumette and Nancy Bertin (Panama group at Inria Rennes-Bretagne Atlantique and Irisa)

9.2.2.2. Internships

- Antoine Berlon, Master in computer science, Univ. de Rennes 1
- Grégoire Boizante, Master at INSA Rennes
- Baptiste Brun, Master in computer science, Univ. de Rennes 1
- Sylvain Devie, Graduate student, ENS Cachan Bretagne
- Corentin Hardy, Graduate student, ENS Cachan Bretagne
- Lucas Royer, Master at INSA Rennes

9.2.3. Juries

- François Chaumette: Hugues Sert (Ph.D., reviewer, Inria Lille), Soukalo Dembele (HdR, reviewer, Femto, Besançon), Olivier Stasse (HdR, Laas, Toulouse), Nicolas Mansard (HdR, Laas, Toulouse), Fabien Expert (Ph.D, ISM, Marseille)
- Patrick Rives: Hugues Sert (Ph.D., Inria Lille), Benjamin Lefaudeux (Ph.D., Inria Rocquencourt)
- Eric Marchand: Cyril Roussillon (Ph.D., reviewer, LAAS, Toulouse), Joao Paulo Silva do Monte Lima (Ph.D., reviewer, Federal University of Pernambuco, Recife, Brazil), Tomy Tikkaälä (Ph.D., reviewer, I3S, Sophia-Antipolis), Jeff Delaune (Ph.D., reviewer, Onera, Toulouse), Mohamed Tamaazousti (Ph.D., reviewer, CEA, Fontenay-aux-Roses), Glauco Garcia Scandaroli (Ph.D., ISIR, Paris), Ricardo Marquès (Ph.D, president, Rennes), Pascal Lino (Ph.D, president, Rennes).
- Alexandre Krupa: Naresh Marturi (Ph.D., reviewer, Femto, Besançon)

9.3. Popularization

- Due to the visibility of our experimental platforms, the team is often asked 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, the construction of a tower by combining 3D model-based visual tracking and visual servoing techniques to pick up cubes that are assembled, the navigation of a mobile robot in urban environments, vision-based detection and tracking for space navigation in a rendezvous context, the semi-autonomous navigation of a wheelchair, and augmented reality applications.
- Fabien Spindler is a member of the editorial board of “Ouest Inria”, the internal journal at Inria Rennes-Bretagne Atlantique.
- Alexandre Krupa co-authored an article titled “Au coeur des hommes” in the journal DocSciences that is intended for general public. This article is about medical robotics guided from images [27]. An article entitled “L’asservissement visuel au service de la robotique médicale” has also been published in May 2013 in the “Emergences” general-public magazine of Inria Rennes-Bretagne Atlantique <http://emergences.inria.fr/lettres2013/newsletter26/126asservissementvisuel>.

- Paolo Robuffo Giordano participated to the “Café des sciences Drones” at the “Espace des sciences” in Rennes in November 2013 to illustrate his activities on quadrotor UAVs to the general public.
- Marie Babel and François Chaumette participated to the “Science Festival” in October 2013 with a debate after the projection of the film “Vivre avec des robots” in Brécé near Rennes.
- Marie Babel and François Pasteau gave a 1-hour lecture on "Assistance to the mobility: the place of the robotics" on December 13th, during the “Conf’Lunch” monthly seminar organised by Inria in Rennes. Furthermore, two articles related to wheelchair navigation have been published in general-public magazines, namely “Des yeux pour les fauteuils roulants” in “Emergences” in July 2013(http://emergences.inria.fr/lettres2013/newsletter_n27/L27-FAUTEUIL) and “Un fauteuil qui a les yeux en face des roues” in “Sciences Ouest” (the magazine of the “Espace des sciences” in Rennes) in November 2013 (<http://www.espace-sciences.org/sciences-ouest/314/actualite/un-fauteuil-qui-a-les-yeux-en-face-des-roues>).

LOGNET Team

9. Dissemination

9.1. Scientific Animation

- reviewing of an ANR blanc proposition;
- reviewing of an Ecos-sud proposition;
- reviewing of TLCA-13,
- program committee of Modularity 2014;

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master : Luigi Liquori, Peer-to-peer 1, 31.5hTD, M2, Université of Nice Sophia-Antipolis;

9.2.2. Supervision

PhD: Petar Maksimovic, “Development and Verification of Probability Logics and Logical Frameworks”, Faculty of Technical Sciences, University of Novi Sad, Serbia and the University of Nice Sophia Antipolis; Supervisors: Silvia Ghilezan and Luigi Liquori; Defended in October 2013 [24].

PhD: Vincenzo Ciancaglini, “Extending the reach of overlay networks through distributed gateways: design, modeling and applications”, Université de Nice-Sophia Antipolis; Supervisors: Luigi Liquori and Jean-Christophe Pazzaglia (SAP); Defended in July 2013 [23].

PhD: Giang Ngo Hoang, “Inter-heterogeneous overlay co-operation”, Université de Nice-Sophia Antipolis and HUST, Hanoi Institute of Science and Technology, Vietnam; Supervisors: Luigi Liquori and Hung Nguyen Chan (HUST & VIELINA); Defended in December 2013 [25]

PhD in progress: Riccardo Loti, “Modeling and evaluation of protocols for Delay Tolerant Networks exploiting DHT, Content driven routing, and rateless codes”, Université de Nice-Sophia Antipolis and University of Turin Italy; Supervisors: Luigi Liquori and Rossano Gaeta (UNITO); Defense envisaged in the first half of 2014.

PhD in progress: Thao Nguyen, “Trust and reputation management in online marketplaces”, Université de Nice-Sophia Antipolis; Supervisors : Luigi Liquori and Bruno Martin (UNICE); Defense envisaged in the first half of 2014.

9.2.3. Juries

Participating of Raoul Gimenez Ph.D. defense, KTH, Stockholm, December 2013.

9.3. Popularization

The LogNet team has conducted two dozen circa of sessions of popularization of the myMed software (typically an “atelier de formation au réseau social myMed”). Public are typically students, administration people of many town or institutions (CG06, Mairies, Hospital, etc.).

MAESTRO Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Editorial activities

MAESTRO members are

Editor-in-Chief of

- *Performance Evaluation* (PEVA) (**P. Nain** since 1 January 2008);

Associate Editors of (in alphabetical order)

- *Dynamic Games and Applications* (DGAA) (**E. Altman** since 2011);
- *IEEE Transaction on Control of Networks* (TCNS) (**E. Altman** since 2013);
- *IEEE/ACM Transaction on Networking* (ToN) (**E. Altman** since 2013);
- *Journal of Economic Dynamics and Control* (JEDC) (**E. Altman** since 2001);
- *Performance Evaluation* (PEVA) (**K. Avrachenkov** since 2008);

Guest editors of Special Issues of

- *Dynamic Games and Applications* (DGAA) on “Dynamic Games for Networks” [69] (**E. Altman**);
- *Performance Evaluation* (PEVA) on “Selected Papers from the 9th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2011)” [70] (**E. Altman**).

8.1.2. Conferences, meetings and tutorial organization

MAESTRO members were

in the Steering Committee of

- 7th Intl. Conference on Performance Evaluation Methodologies and Tools (VALUE-TOOLS 2013, Turin, Italy) (**E. Altman**);
- 31st Intl. Symposium on Computer Performance, Modeling, Measurements and Evaluation (IFIP WG 7.3 Performance 2013, Vienna, Austria) (**P. Nain**);
- 11th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2013, Tsukuba, Japan) (**E. Altman** as chair).

General Co-chair of

- IEEE Intl. Workshop on Self-Organizing Networks (SONETs 2014, Istanbul, Turkey) (**M. Haddad**);
- 4th Intl. Workshop on Indoor and Outdoor Small Cells (IOSC 2013, Tsukuba, Japan) (**E. Altman, M. Haddad**).

Publicity Co-chair of

- ACM Intl. Conference on Measurement and Modeling of Computer Systems (ACM SIGMETRICS 2014, Austin, Texas, USA) (**S. Alouf**);
- 33rd IEEE Intl. Conference on Computer Communications (IEEE INFOCOM 2014, Toronto, Canada) (**G. Neglia**).

Organizer of

- a stream of sessions “Random Graphs and Complex Networks” at the 17th INFORMS Applied Probability Society Conference 2013 (Costa Rica) (**K. Avrachenkov**).

Workshops chair of

- 11th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2013, Tsukuba, Japan) (**M. Haddad**).

8.1.3. Participation in technical program committees (TPC)

MAESTRO members were in the TPC of (in alphabetical order)

1. 8th ACM MobiCom Workshop on Challenged Networks (CHANTS 2013, Miami, Florida, USA) (**G. Neglia**);
2. ACM Intl. Conference on Measurement and Modeling of Computer Systems (ACM SIGMETRICS 2013, Pittsburgh, Pennsylvania, USA) (**A. Jean-Marie**);
3. 9th Advanced Intl. Conference on Telecommunications (AICT 2013, Rome, Italy) (**K. Avrachenkov**);
4. 33rd IEEE Intl. Conference on Computer Communications (IEEE INFOCOM 2014, Toronto, Canada) (**G. Neglia**);
5. 4th Intl. Conference on Access Networks (ACCESS 2013, Nice, France) (**K. Avrachenkov**);
6. 20th Intl. Conference on Analytical and Stochastic Modelling Techniques and Applications (ASMTA 2013, Ghent, Belgium) (**K. Avrachenkov**);
7. 7th Intl. Conference on Game Theory and Management (GTM 2013, St. Petersburg, Russia) (**E. Altman**);
8. 13th Intl. Conference on Next Generation Wired/Wireless Networking (NEW2AN 2013, St. Petersburg, Russia) (**K. Avrachenkov**);
9. 7th Intl. Conference on Performance Evaluation Methodologies and Tools (VALUETOOLS 2013, Turin, Italy) (**S. Alouf, G. Neglia**);
10. 28th Intl. Symposium on Computer and Information Sciences (ISCIS 2013, Paris, France) (**A. Jean-Marie**);
11. 11th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2013, Tsukuba, Japan) (**D. Ciullo**);
12. 25th Intl. Teletraffic Conference (ITC 2013, Shanghai, China) (**S. Alouf, G. Neglia**);
13. 1st Intl. Workshop on Modeling, Measurements and Optimization of Video Performance over Wireless Networks (WiVid 2013, Tsukuba, Japan) (**O. Habachi**);
14. 6th Intl. Workshop on Multiple Access Communications (MACOM 2013, Vilnius, Lithuania) (**K. Avrachenkov**);
15. Intl. Workshop “Networking Games and Management” (Petrozavodsk, Russia) (**E. Altman, K. Avrachenkov**);
16. 9th Intl. Workshop on Resource Allocation, Cooperation and Competition in Wireless Networks (RAWNET/WNC3 2013, Tsukuba, Japan) (**O. Habachi**);
17. Joint Workshop on Pricing and Incentives in Networks and Systems (W-PIN+NetEcon 2013, Pittsburgh, Pennsylvania, USA) (**E. Altman**);
18. 15èmes Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (Algo-Tel 2013, Pornic, France) (**G. Neglia**);
19. 10th Workshop on Algorithms and Models for the Web Graph (WAW 2013, Cambridge, Massachusetts, USA) (**K. Avrachenkov**);
20. 15th Workshop on Mathematical Performance Modeling and Analysis (MAMA 2013, London, UK) (**A. Jean-Marie, P. Nain**);

8.1.4. 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”.
- P. Nain is the vice-Chair of the IFIP WG7.3 working group on “Computer System Modeling” (since June 30, 2007).

8.1.5. Research administration

S. Alouf

- was member of the recruitment committee for a *Maître de Conférences* position at Polytech’Tours.

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.”
- is Scientific coordinator of the European project CONGAS.

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 in the Scientific Board of the Univ. of Montpellier 2, at the Scientific Council of the Doctoral School “Sciences and Agrosiences” of the Univ. of Avignon, at the Regional Conference of Research Organisms (CODOR), at the Regional Consulting Committee for Research and Technological Development (ARAGO Committee);
- is member of the managing sub-committee of the Project-Team Committee of the Inria Sophia Antipolis – Méditerranée research center (since July 2010);
- is a member of the Steering Committee of the GDR RO, a national research initiative on Operations Research sponsored by the CNRS;
- is president of the Technical and Industrial Orientation Council for Information Technologies (COSTI TIC) of the Transferts LR association (since 2009);
- has presided the 2013 recruitment committee for junior Inria researchers (CR2) for the Inria Sophia-Antipolis – Méditerranée research center.

P. Nain

- is Chairman of Inria’s Evaluation Committee since 1 September 2012 (<http://www.inria.fr/en/institute/organisation/committees/evaluation-committee>); as part of this duty he has presided the 2013 recruitment committee for senior Inria researchers (DR2) and was member of the 2013 recruitment committee for junior Inria researchers (CR2) for the Inria Nancy Grand Est center.
- is Head of project-team MAESTRO.

MAESTRO members are in the following committees of Inria Sophia Antipolis - Méditerranée

- CC (Comité de Centre): General Information Commission (**N. Choungmo Fofack** as PhD Student Representative, until May 2013); **G. Neglia** since September 2013);
- ComRes: Commission Restauration (**N. Choungmo Fofack** as PhD Student Representative, until May 2013);
- CSD: Doctoral Committee (**S. Alouf**, since February 2006);
- NICE: Invited Researchers Committee (**K. Avrachenkov**, since 2010);

and in charge of the following tasks for the research center:

- Supervision and validation of the project-teams' yearly activity reports (**K. Avrachenkov**, since 2010);
- Accounting for the monthly Project-Team Committee meetings (**S. Alouf**, since February 2012);
- Organizing MAESTRO internal meetings (**N. Choungmo Fofack**, since November 2011).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence:

S. Alouf, "Probability and Statistics", 45H, 1st year Water Engineering degree (L3), Univ. of Nice Sophia Antipolis (UNS), France.

E. Altman, "Culture and Internet", 32H, 3rd year of Communication and Culture studies (L3), Univ. of Avignon (UAPV), France.

N. Choungmo Fofack, "Stochastic processes for Signal Processing", 64H, 1st year Electronic Engineering degree (L3), Univ. of Nice Sophia Antipolis (UNS), France.

M. El Chamie, "Databases", 20H, Computer Science Methods applied to the Enterprise Management Program (L3), Univ. of Nice Sophia Antipolis (UNS), France.

M. El Chamie, "Networks", 15H, Computer Science Program (L3), Univ. of Nice Sophia Antipolis (UNS), France.

Master:

S. Alouf, "Performance Evaluation of Networks", 31.5H, M2 IFI Ubinet, Univ. of Nice Sophia Antipolis (UNS), France.

E. Altman, "Analysis of social Networks", 8H, Venezuelan Informatics School (EVI), Master in Computer Engineering, Merida, 30 Sept – 4 October, Merida, Venezuela.

M. El Chamie, "Internet and Networks", M1 International in Computer Science, Univ. of Nice Sophia Antipolis (UNS), France.

G. Neglia, "Performance Evaluation of Networks", 31.5H, M2 IFI Ubinet, Univ. of Nice Sophia Antipolis (UNS), France.

Doctorat:

A. Jean-Marie, "Advanced Markov Modeling", 18H, Univ. of Montpellier 2, France.

8.2.2. Supervision

PhD:

Richard Combes, "Self-organizing functionalities in radio networks," Univ. Pierre and Marie Curie, 15 February 2013, advisors: Eitan Altman and Zwi Altman (Orange Labs) and Sylvain Sorin (Univ. Pierre and Marie Curie).

Eugenio Della Vecchia, "Contribution to the solution of problems in stochastic control and games", National Univ. of Rosario, Argentina, 12 March 2013, advisors: Silvia Di Marco (National Univ. of Rosario, Argentina) and Alain Jean-Marie.

Manjesh Kumar Hanawal, "Resource allocation and learning algorithms in small cells wireless networks," Univ. of Avignon (UAPV), 6 November 2013, advisors: Eitan Altman and Rachid El-Azouzi (Univ. of Avignon).

Cengiz Hasan, "Optimization of resource allocation for small cells networks," INSA Lyon, 29 August 2013, advisors: Eitan Altman and Jean-Marie Gorce (Inria project-team SOCRATE).

Yuhui Wang, “On the use of network coding and multicast for enhancing performance of wired networks”, Telecom SudParis, 17 May 2013, advisors: Eitan Altman, Tijani Chahed and Eric Gourdin (Telecom SudParis).

PhD in progress:

Alberto Benegiamo, “Mathematical tools for smart grids,” 1 November 2013, advisors: Patrick Loiseau (Eurecom) and Giovanni Neglia.

Iliaria Brunetti, “Cooperative and competitive content dissemination in social networks,” 1 October 2012, advisor: Eitan Altman.

Nicaise Choungmo Fofack, “Performance Evaluation of TTL-based resource networks,” 1 October 2010, advisors: Sara Alouf and Philippe Nain.

Mahmoud El Chamie, “Belief propagation in complex networks,” 1 October 2011, advisors: Konstantin Avrachenkov and Giovanni Neglia.

Julien Gaillard, “Creation, simulation and multidiscipline evaluation of dynamic mobility models in complex systems,” 1 October 2011, advisors: Eitan Altman, Marc El Bèze (Univ. of Avignon) and Emmanuel Ethis (Univ. of Avignon).

Jithin Kazhuthuvelil Sreedharan, “Diffusion processes in complex networks,” 23 July 2013, advisor: Konstantin Avrachenkov.

Yonathan Portilla, “Analysis of social networks,” 1 January 2012, advisor: Eitan Altman.

Alexandre Reiffers, “Modelling competition and cooperation in telecommunication networks,” 15 October 2012, advisor: Eitan Altman.

Marina Sokol, “Clustering and learning techniques for traffic/user classification,” 1 October 2009, advisors: Paulo Gonçalves (Inria project-team DANTE) and Philippe Nain.

Abdoulaye Tall, “Self organization in wireless networks,” 1 December 2012, advisors: Eitan Altman and Zwi Altman (Orange Labs).

8.2.3. *Juries*

MAESTRO members participated in the Habilitation (HDR) thesis committees of (in alphabetical order):

- Marc Chaumont: 23 July 2013, Univ. of Montpellier 2 (**A. Jean-Marie** as jury member);
- Yezekael Hayel: 4 December 2013, Univ. of Avignon (UAPV) (**E. Altman** as advisor and **A. Jean-Marie** as jury president);
- Raphaël Soubeyran: 13 November 2013, Univ. Montpellier 1 (**A. Jean-Marie** as jury member);

and in the PhD thesis committees of (in alphabetical order):

- Richard Combes: 15 February 2013, Pierre and Marie Curie Univ. (**E. Altman** as advisor);
- Manjesh Kumar Hanawal: 6 November 2013, Univ. of Avignon (**E. Altman** as advisor);
- Mathieu Leconte: 18 December 2013, Telecom ParisTech (**A. Jean-Marie** as jury president);
- Cédric Mauclair: 13 June 2013, Univ. Toulouse (**A. Jean-Marie** as jury member);
- Alexandre Salch: 29 November 2013, INPG (**A. Jean-Marie** as reviewer and **P. Nain** as jury member);
- Romain Tajan: 5 December 2013, Univ. Cergy-Pontoise (**Eitan Altman** as jury member);
- Yuhui Wang: 17 May 2013, Telecom SudParis (**E. Altman** as advisor).

8.3. Popularization

Activities are presented in chronological order:

- The article titled “Internet” (interview of S. Alouf by E. Kuntzelmann, as reported in the 2012 activity report) has appeared in *Savoirs Jeunes* (14 January 2013). It is available here: <http://www.savoirs.essonne.fr/sections/ressources/questions-a/resource/internet/>.
- E. Altman and A. Reiffers participated in a round-table on the network economy in France, organized at the National Assembly in Paris (28 February 2013).
- A short publication [80] by M. Cosnard and E. Altman has appeared in *01Business* on the network neutrality debate in France (11 July 2013). It is intended for a large audience and presents advantages in legislating on this topic.
- E. Altman presented a talk at the 9th Mediterranean rendez-vous entitled: “The new networks - Cradle of globalized culture in the Mediterranean Area” at Marseille, with the participation of leading political and economical figures from Mediterranean and Middle Eastern countries (9 November 2013).
- S. Alouf delivered a conference titled “Internet ou Web ?” at Inria, Sophia Antipolis, for a group of high school students (22 November 2013).

S. Alouf is a member of MASTIC, a commission in charge of popularization and regional and internal scientific animation (since November 2011).

8.4. Participation in scientific events

8.4.1. Keynotes, tutorials and invited talks

MAESTRO members gave the following keynote lectures (in alphabetical order):

- *Admission control to an M/M/1 queue with partial information*, at the 20th Intl. Conference on Analytical & Stochastic Modelling Techniques & Applications (ASMTA), Ghent, Belgium, 8 July 2013 (**E. Altman**);
- *Dynamic game models in complex systems*, at the 17th Intl. Conference On Principles Of Distributed Systems (OPODIS), Nice, France, 17 December 2013 (**E. Altman**);

the following tutorials (in alphabetical order):

- *Tutorial on Stochastic Games*, at Game Theory Workshop of Politecnico di Milano, Italy, 23–24 May 2013 (**K. Avrachenkov**).

and the following invited talks (in alphabetical order):

- *Analysis of Social Networks*, at the Seminar on interactions of computer science and mathematics in the LIP6 laboratory of the Pierre and Marie Curie Univ., France, 18 October 2013 (**E. Altman**);
- *Competition over popularity in social networks*, at KAIST, Seoul, 21 May 2013 (**E. Altman**);
- *Cooperative Game Theory for Markovian quasi-static multiple access channels*, at the Workshop “Networking Games and Management”, Petrozavodsk, Russia, 24 June 2013 (**K. Avrachenkov**);
- *Game theoretic models for competition over popularity in social networks*, University of California at Berkeley, USA, 26 July 2013 (**E. Altman**);
- *Graph-based semi-supervised learning methods: Comparison and tuning*, at the Yandex Workshop on Random Graphs and their Applications, Moscow, Russia, 25 October 2013 (**K. Avrachenkov**);
- *MAESTRO’s activities on smart grids*, at the JRC-TUM Partnership Event “Emerging Smart Electricity Systems”, 20–21 March 2013, Munich, Germany (**G. Neglia**);
- *Modeling Energy Demand Aggregators for Residential Consumers*, at the Centre de Mathématiques Appliquées de l’Ecole des Mines, Sophia Antipolis, France, 2 April 2013 (**G. Neglia**);

- *Modern DNS cache network*, at Boston Univ., Boston, Massachusetts, USA, 23 September 2013 (**N. Choungmo Fofack**);
- *Online Myopic Network Covering*, at the Mathematics Department of the University of Liverpool, UK, 8 February 2013 (**K. Avrachenkov**);
- *Pay Few, Influence Most - Online Myopic Network Coverage*, at the Technical Univ. of Darmstadt, Germany, 6 September 2013 (**G. Neglia**);
- *Singular Perturbations in Optimization*, at GeoLMI 2013 Conference, Luminy, France, 12 November 2013 (**K. Avrachenkov**);
- *Weight Selection in Consensus Protocols*, at Univ. of Illinois at Urbana-Champaign (UIUC), Champaign, Illinois, USA, 24 October 2013 (**M. El Chamie**).

8.4.2. Conferences and workshops

MAESTRO members gave presentations at the following scientific events (in alphabetical order):

- Conf. on Empirical Methods in Natural Language Processing (EMNLP), 18–21 October 2013, Seattle, Washington, USA (**J. Gaillard**);
- Dagstuhl Scheduling Seminar, 11 March 2013, Dagstuhl Castle, Germany (**K. Avrachenkov**);
- 52nd IEEE Conf. on Decision and Control (CDC), 10–13 December 2013, Florence, Italy (**I. Brunetti, G. Neglia**);
- 32nd IEEE Intl. Conf. on Computer Communications (INFOCOM), 14–19 April 2013, Turin, Italy (**E. Altman**);
- IEEE Wireless Communications and Networking Conf. (WCNC), 7–10 April 2013 Shanghai, China (**O. Habachi**);
- 12th IFIP Intl. Conf. on Networking (Networking), 22–24 May 2013, Brooklyn, New York, USA (**G. Neglia**);
- 20th Intl. Conf. on Analytical and Stochastic Modelling Techniques and Applications (ASMTA), 8–10 July 2013, Ghent, Belgium (**E. Altman**);
- 9th Intl. Conf. on Data Mining (DMIN), 22–25 July 2013, Las Vegas, Nevada, USA (**J. Gaillard**);
- 7th Intl. Conf. on Performance Evaluation Methodologies and Tools (VALUETOOLS), 10–12 December 2013, Turin, Italy (**N. Choungmo Fofack**);
- 11th Intl. Symp. on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt), 13–17 May 2013, Tsukuba, Japan (**E. Altman, M. Haddad, M. K. Hanawal**);
- 25th Intl. Teletraffic Conference (ITC), 10–12 September 2013, Shanghai, China (**M. Haddad**);
- 15èmes Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (Algo-Tel), 28–31 May 2013, Pornic, France (**M. El Chamie, A. Reiffers**);
- 10th Workshop on Algorithms and Models for the Web Graph (WAW), 14–15 December 2013, Cambridge, Massachusetts, USA (**K. Avrachenkov**);
- Workshop of the ANR CLEANER, 31 January–1 February 2013, Annecy, France (**A. Jean-Marie**);
- 9th Workshop of the Intl. Society of Dynamic Games (ISDG), 5–6 July 2013, Barcelona, Spain (**I. Brunetti**).

8.4.3. Technical program committee meetings

MAESTRO members have participated in the following TPC meetings:

- 33rd IEEE Intl. Conference on Computer Communications (IEEE INFOCOM 2014), 16 November 2013, Toronto, Canada (**G. Neglia**).

8.4.4. Schools and students workshops

MAESTRO members have attended the following summer schools:

- Summer school ResCom on “Content-oriented networks, Internet evolution or revolution?” (30H), 13–17 May 2013, Porquerolles, France (**I. Brunetti, N. Choungmo Fofack**).

MARELLE Project-Team

8. Dissemination

8.1. Scientific Animation

Members of the project refereed papers for the journals MSCS (Mathematical Structures of Computer Science), JFR (Journal of Formalized Reasoning), they participated to the program committee of ITP (Interactive Theorem Provers), ACL2 (A Computational Logic for Applicative Common Lisp), PxTP (Proof Exchange for Theorem Provers), and refereed papers for the conferences ITP and ESOP (European Symposium on Programming), ISSAC (International Symposium on Symbolic and Algebraic Computation).

Benjamin Grégoire gave lectures at the first EasyCrypt summer school in Philadelphia in July.

Members of the project participated to the conferences “Journées Francophones des Langages Applicatifs” (Aussois, France, January) “workshop on Foundation of Mathematics for Computer-Aided Formalization” (Padova, Italy, January), “Journées Nationales de l’Informatique Mathématique” (Lyon, January), “Conferences on Intelligent Computer Mathematics” (London, July), “Conference on Interactive Theorem Proving” (Rennes, France), “Conference on Symbolic and Numerical Algorithms for Scientific Computing” (Timisoara, Romania, September).

Yves Bertot was invited to give a joint seminar on homotopy type theory at Harvard in Boston, USA, and MIT on March 25th, 2013, Benjamin Grégoire made 8 visits to IMDEA in Madrid, Spain, to work on formally verified proofs in cryptography and automatic tools for formal verification for cryptographers, L. Rideau, L. Théry, E. Martin-Dorel were invited to meetings in Lyon, in July and October, Y. Bertot, L. Rideau participated to the Spring Day of Microsoft Research-Inria joint centre.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence : Laurence Rideau, “Introduction to programming” classe préparatoire MP*, teaching assistant, 48 hours, Lycée Masséna, Nice, France

Master : Laurent Théry: “Formalization of floating point arithmetic”, 8 hours, ENS Lyon, France

Master : Laurent Théry: “Introduction to Coq”, 3 hours, École des Mines de Paris, Sophia Antipolis, France

Master : Laurent Théry: Examiner for the exam “agrégation de mathématiques, option informatique”

Master : Julianna Zsidó: “Logic”, 48 hours, École Polytechnique Universitaire, Sophia Antipolis, France

8.2.2. Supervision

PhD : Maxime Dénès, “Étude formelle d’algorithmes efficaces en algèbre linéaire”, Université de Nice, defended on November, 20th, 2013, supervised by Yves Bertot.

PhD in progress: Maxime Cano, “Interaction entre algèbre linéaire et analyse en formalisation des mathématiques”, thèse commencée en octobre 2010, supervised par Yves Bertot.

8.2.3. Juries

- Yves Bertot was an examiner for the thesis defense of Shi Xiaomu (University of Grenoble, France and Tsinghua University, Beijing, China), María Poza (Universidad de la Rioja, Spain—with written report duty), Pierre Néron (Ecole Polytechnique, France—as chairman for the Jury), Victor Magron (Ecole Polytechnique, France—with written report duty).

- Benjamin Grégoire was an examiner for the thesis of Chantal Keller (Ecole Polytechnique, France).

8.2.4. Community Service

- José Grimm is a member of the *comité de centre*, the committee where representatives of personnel and management discuss questions of daily life at the level of the Sophia-Antipolis Méditerranée center, he also participates in a commission on continued training and a commission on hygiene, safety, and working conditions. This activity involves around 12 meetings per year.
- Benjamin Grégoire was a member of the *comité de développement technologique* (in English, technological development committee), the committee that oversees the allocation of software engineers on experimental software and platform development, until June 2013. Laurent Théry is a member of the same committee since June 2013.
- Benjamin Grégoire and Yves Bertot are members of the Coq steering committee. Yves Bertot has been appointed chairman of this committee since October 2013. As such, Yves Bertot attended a Coq users meeting at ICFP in 2013.
- Yves Bertot is deputy scientific director for the Sophia Antipolis méditerranée research center. This task implies meetings approximately every fortnight with the center director, the scientific director, and the director of administrative services for the center, together with frequent meetings with researchers from any domain in the center and monthly meetings at the national level as part of the evaluation committee.

8.3. Popularization

Yves Bertot participated to two articles published in popular science magazines (*Science et Vie* and *Science et Avenir*) and Laurence Rideau to one of these articles.

MCTAO Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Editorial service

Ludovic Rifford belongs to the editorial board of *Journal of Dynamical and Control Systems* and *Discrete and Continuous Dynamical Systems-A*.

All members of the team are active reviewers in journals of the field.

9.1.2. Seminars

The team organized two one-day seminars <http://nolot.perso.math.cnrs.fr/JourneesControleTransport.html> on optimal control and optimal transport:

- February 13 in Dijon. Speakers: F. Chazal, B. Bonnard, G. Carlier, E. Trélat.
- June 4 in Nice. Speakers: S. Rigot, Q. Mérigot, M. Mirrahimi, A. Farres.

9.1.3. Conference organization

A two days conference was organized September 6 to 7 (co-organisers: Monique Chyba and Bernard Bonnard), on “Control and Observation of Nonlinear Control Systems with Application to Medicine” at the University of Hawaii. It was supported by supported by a NSF grant and by the Engineering Department (P.E. Crouch); it followed J. Marriott’s PhD defense.

Jean-Baptiste Caillaud organized a mini-symposium on Optimization in aeronautics and space mechanics in the SMAI annual congress in Seignosse, France.

9.2. Community service within Inria

J.-B. Pomet is the president of the “Comité de Suivi Doctoral”, and in charge of “formation par la recherche”. This includes organising local visits for students, organising PhD candidates selection, managing PhD students working at Inria Sophia (that are from two different “écoles doctorales” from Université de Nice, not counting these in Montpellier).

9.3. Teaching - Supervision - Juries

9.3.1. Teaching

Jean-Baptiste Caillaud, *Contrôle optimal : introduction au cas déterministe en dimension finie*, 15 hours, 7ème école d’été de Peyresq en traitement du signal et des images (<http://www.gretsi.fr/peyresq13/cours.php>).

Jean-Baptiste Caillaud, *Introduction to optimal control and application to space mechanics*, 15 hours, Gravasco trimester, Institut Henri Poincaré, France (<http://uma.ensta-paristech.fr/conf/gravasco/P1a.html>).

9.3.2. Supervision

PhD: John Marriott, *Geometric Optimal Control with an Application to Imaging in Nuclear Magnetic Resonance*, University of Hawaii, defended september 5, 2013, advisors: Monique Chyba and Bernard Bonnard.

PhD in progress: Alice Erlinger, subject: *Economics and Optimal Transport*, Université de Nice Sophia Antipolis, started october, 2012, advisor: Ludovic Rifford. She unfortunately decided to stop in 2013, within her first year.

PhD in progress: Helen Heninger, subject: *Étude des solutions du transfert orbital avec poussée faible dans le problème des deux ou trois corps*, Université de Nice Sophia Antipolis, started october, 2012, advisors: Bernard Bonnard and Jean-Baptiste Pomet.

PhD in progress: Ayadi Lazrag, subject: *Control methods in dynamical systems*, Université de Nice Sophia Antipolis, started october, 2011, advisor: Ludovic Rifford.

PhD in progress: Lionel Jassionnesse, subject: *Lieu conjugués et de coupure pour des métriques de Liouville et applications*, Université de Bourgogne, started october, 2010, advisor: Bernard Bonnard.

PhD in progress: Jérémy Rouot, subject: *Moyennisation en contrôle et en contrôle optimal, effet des perturbations non périodiques*, Université de Nice Sophia Antipolis, started october, 2013, advisors: Bernard Bonnard and Jean-Baptiste Pomet.

MSc: Jasseur Abidi, *Optimisation d'une commande appliquée à un satellite*, Ensta ParisTech, supervisors: Jean-Baptiste Caillau and Jean-Baptiste Pomet.

9.3.3. Juries

Jean-Baptiste Caillau was in the jury of X. Dupuis (Ecole Polytechnique, PhD) as President and in the jury of T. Bayen (university of Montpellier, HDR) as a referee.

9.4. Popularization

Jean-Baptiste Caillau: "Mathematics for planet Earth 2013": <http://mpt2013.fr/tout-autour-de-la-terre/>, <http://mpt2013.fr/de-la-terre-a-la-lune/>, <http://mpt2013.fr/tout-autour-de-la-terre-2nde-partie/>.

MODEMIC Project-Team

8. Dissemination

8.1. Scientific Animation

C. Casenave has been an “outstanding reviewer” for IEEE Transactions on Automatic Control in 2013.

The team has organized a one day international workshop on biofilm modeling (May, Paris) [¹⁶].

The team has organized a “research school” of one week in June dedicated to the biologists of the marine research station of Banyuls [¹⁷].

F. Campillo was invited to give a lecture on stochastic modeling and simulation at CNRS/Génopôle Thematic School on “Advances in Systems and Synthetic Biology” at La Colle sur Loup (France), March 25 to 29. Fabien Campillo was invited to give a lecture on particle filtering at the Univ. of Mons at the "Dynamical systems, control and optimization" (DYSCO) of the Interuniversity Attraction Poles, May 24.

C. Casenave and F. Campillo are in the organizing committee of the MIA Division national meeting to be held in March 2014.

C. Casenave is in charge of the Modemic Seminar.

From the 15th to the 18th April, the team had its annual meeting in the “Hameau de l’Etoile”.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

F. Campillo and M. Joannides, “Stochastic modeling of ecosystem”, 20 hours, Master 2 in Biostatistics, Univ. Montpellier 2.

A. Rapaport, “Practical Mathematics”, 25 hours, Master 1 in Mathematics, Univ. Montpellier 2.

C. Casenave and A. Rapaport, “Advanced mathematical modeling”, 18 hours, Master 2 STIC - Environnement, Univ. Montpellier 2.

A. Rapaport, “About modeling and numerical simulations of dynamical systems”, 9 hours, Master 1 in Ecosystems, Univ. Montpellier 2.

A. Rapaport, “Introduction to modeling”, 12 hours, 1st year, SupAgro Montpellier.

C. Casenave, F. Campillo and A. Rapaport, “modeling for biology and ecology, mathematical and computational methods”, 20 hours, Doctoral lectures, Univ. Montpellier 2.

8.2.2. Masters supervision

Supervision:

A. Boutoub [70], supervisor: F. Campillo.

C. Droin [71], supervisor: C. Casenave.

S. Sekkat [74], supervisor: C. Casenave.

¹⁶<https://sites.google.com/site/anrdisco/meetings/workshop-may-2013>

¹⁷http://lomic.obs-banyuls.fr/fr/test/ecole_chercheur_chemostat.html

Co-supervision:

M. Chebbi: “Modélisation et approximation stochastique appliquées en écologie”, Master of Applied Mathematics, ENIT/LAMSIN, Tunis, co-supervisors: S. Toumi and F. Campillo.

Y. Dadoud: “Contrôle Optimal d’un procédé biologique séquentiel discontinu : approche par simulations”, Master of Applied Mathematics, ENIT/LAMSIN, Tunis, co-supervisors: N.a Abdellatif and F. Campillo.

Z. Khedim: “Réalisation d’une interface Matlab pour la simulation des bioprocédés : Application au modèle ADM1”, Master of Automatic Control, Univ. Aboubekr Belkaid, Tlemcen, Algeria, co-supervisors: B. Benyahia and J. Harmand.

M. Crespo: “Modelling unhomogeneous bioreactors”, Master of Applied Mathematics, Univ. Madrid., co-supervisors: B. Ivorra, A. Rapaport

8.2.3. PhD’s supervision

M. Radhouane Fekih-Salem, “Modèles mathématiques pour la compétition et la coexistence d’espèces microbiennes dans un chémostat, co-tutelle Univ. Montpellier 2/ENIT-LAMSIN, Tunis (Tunisia), defended in Sep. 2013 (co-directors: A. Rapaport and T. Sari) [11].

M. Angelo Raherinirina, “Modélisation markovienne des dynamiques d’usages des sols. Cas des parcelles situées sur le bord du corridor forestier Ranomafana-Andringitra”, Univ. Fianarantsoa (Madagascar), defended in Aug. 2013 (director: F. Campillo) [12].

Ms Coralie Fritsch, “Simulation et analyse de modèles individu-centrés d’écosystèmes bactériens pour des procédés biotechnologiques”, Univ Montpellier 2, since Oct. 2011 (director: F. Campillo).

Ms Amel Ghouali, “Analyse et commande optimale d’un bioréacteur de dépollution des eaux usées”, cotutelle Univ Montpellier 2/Univ. Tlemcen (Algeria), since Nov. 2011 (director: J. Harmand).

M. Guilherme Pimentel, “Modélisation dynamique, analyse et supervision d’un réacteur membranaire”, cotutelle Univ. Montpellier 2/Univ. Mons (Belgique), since Sept. 2013 (Co-directors: A. Vande Wouwer and A. Rapaport).

8.2.4. Juries

M. Benjamin Ivorra, “Méthodes et techniques de modélisation, simulation et optimisation appliquées à divers problèmes industriels”, thèse d’Habilitation à Diriger des Recherches, Univ. Montpellier 2, Fev. 2013 (examiner: A. Rapaport).

M. Derdei Bichara, “Etude de modèles épidémiologiques: stabilité, observation et estimation de paramètres”, Univ. Metz, Fev. 2013 (referee: A. Rapaport).

M. Mickael Teixeira Alves, “Des interactions indirectes entre les proies: modélisation et influence du comportement du prédateur commun, Univ. Nice Sophia Antipolis, Jan. 2013 (referee: T. Sari).

M. Sihem Kouloughli, “Optimisation de systèmes automatisés de stockage/déstockage multi allées et à racks glissants”, Univ. of Tlemcen, Algeria, Jun. 2013 (referee: T. Sari).

M. TERENCE Bayen, “Etude de quelques problèmes de contrôle optimal issus des EDP et des EDO”, Habilitation à diriger des recherches, Univ. Montpellier 2, Dec. 2013 (examiner: A. Rapaport).

8.3. Popularization

The team has participated to the writing of a blog [73], [72] for the MPT2013, french edition of Mathematics of the Planet Earth 2013.

The team has participated to the writing of two articles [31], [32] in the TDC magazine dedicated to teachers in secondary classes.

8.4. Community services

A. Rapaport is member of the scientific committee of BIOS dept. of CIRAD, and is member of the scientific committee of Ecotechnologies department of Irstea.

F. Campillo is member of the NICE Inria committee(long term invited scientists selection); deputy elected member of the Inria Scientific Council; member of the internal communication working group of Inria for the redesign of the national intranet; member the “support group to researchers” of Inria Sophia Antipolis; member of the selection board in case of selection of a Professor of probability at the Univ. of Montpellier 2.

J. Harmand is member of the steering committee of the Inra/MEM meta-program (Métagénomique des écosystèmes microbiens); member of the EA department of Inra; member of the “commissions scientifiques spécialisées” STEA-Inra.

MORPHEME Project-Team

7. Dissemination

7.1. Scientific Animation

- Florence Besse was co-organiser of the first Labex Signalife meeting, grant reviewer for ANR and reviewer for PLoS ONE, WIREs Developmental Biology.
- Xavier Descombes was reviewer for the conference ISBI 2013 and the journals IEEE TMI, IEEE IP,... He is associated editor of DSP (Digital Signal Processing), expert for the DRRT Provence Alpes Côte d'AZur and DRRT Paris Ile de France. He is member of the Scientific Committee of the competitiveness pole Optitech, associate member of IEEE BISP (Biomedical Imaging Signal Processing) Technical Committee and member of the Scientific Committee of Labex SIGNALIFE. Xavier Descombes was in the jury of an AAP Cancer call for project launched by INSERM. He was also in a MdC recruitment jury in Toulouse.

Xavier Descombes was invited to give seminar or lectures in Strasbourg University, in the annual workshop on stochastic geometry organized in Grenoble, in the summer school in Cabreret, in a workshop in Toulouse organized by the labex CIMI and at Institut Curie during the GdR workshop on computational biology.

- Eric Debreuve is member of the steering committee of Laboratoire I3S and coordinator of Pôle SIS (Signals, Images, Systems) of Laboratoire I3S (includes the management of a 25000-euro funding provided by the lab). He is member of the Board of the Association GRETSI (Groupement de Recherche en Traitement du Signal et des Images) and was reviewer for IEEE: Transactions on Medical Imaging; Springer: Multimedia Tools and Applications, Machine Vision and Applications; Elsevier: Pattern Recognition, Signal Processing; Revue Traitement du Signal. He was member of conference technical program committees (Advanced Concepts for Intelligent Vision Systems (ACIVS), Poznan, Poland and IEEE International Symposium on Biomedical Imaging (ISBI), Beijing, China).
- Laure Blanc-Féraud is Associate Editor of SIAM Journal Imaging Sciences and Traitement du Signal Journal. She is director of GdR ISIS of CNRS. She is Program chair of the conference IEEE ISBI 2014 in Beijing. She is member of the IEEE BISP (Biomedical Imaging Signal Processing) Technical Committee, she was vice chair of the evaluation committee of the ANR program blanc SIMI3 (till July 2013), she is member of the scientific steering committee of ANR (from September 2013), member of the scientific council of Institute INS2I of CNRS, invited member of the scientific council of Institute INSIS of CNRS, member of "bureau du comité des projets" Inria SAM and alternate member of CNECA (Comité National des Enseignants Chercheurs en Agriculture). She is part of the scientific committee of laboratory GreyC (UMR CNRS 6072) and of "Institut des Technologies Avancées en sciences du Vivant" (ITAV, USR CNRS 3505).

Laure Blanc-Féraud was reviewer for Inverse Problems journal and the conferences IEEE ISBI, IEEE ICIP, IEEE ICASSP. She was co-organiser of the workshop on New Computational Methods in Inverse Problems - NCMIP 2013 (NCMIP) in ENS Cachan and was associate editor for the conferences: IEEE ISBI'13, Workshop NCMIP 2013. She was in the scientific committees of the European workshop on Visual Information Processing (EUVIP 2013) and of the 11th International workshop on Adaptation and Learning in Control and Signal Processing (ALCOSP 2013).

- G. Malandain is member of the IEEE/EMB Technical Committee on Biomedical Imaging and Image Processing (BIIP) He is an invited member of the Scientific Committee of the MIA department of INRA.

G. Malandain is a member of the editorial board of the journal International Journal on Computer Vision (Kluwer). He was an associate editor for the conference ISBI 2014, and serves as reviewer for the conferences DGCI 2013, ISBI 2103, MICCAI 2013 and ICCV 2013.

- Caroline Medioni gave an oral communication at Cold Spring Harbor meeting: Neurobiology of Drosophila in New York and at the "Journées régionales de la Cancéropole PACA".

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

- Master : Emmanuel Soubies, Traitement Numérique des Images, 10h Eq. TD, Niveau M2, Université de Nice Sophia Antipolis, France.
- Master : Florence Besse, Contrôle génétique de la morphologie neuronale, 3h Eq. TD, Niveau M2, Université de Nice Sophia Antipolis, France.
- Master : Florence Bessee, Réseaux neuronaux : de la structure à la fonction, 3h Eq. TD, Niveau M2, Université de Nice Sophia Antipolis, France.
- License : Alejandro Mottini, Introduction au Web, 24h Eq. TD, Niveau L1, Université de Nice Sophia Antipolis, France.
- License : Alejandro Mottini, Systèmes Informatiques, 20h Eq. TD, Niveau L1, Université de Nice Sophia Antipolis, France.
- Master : Alejandro Mottini, Outils Mathématiques pour l'Image, 8h Eq. TD, Niveau M2, Université de Nice Sophia Antipolis, France.
- Master : Alejandro Mottini, Traitement d'images, 8h Eq. TD, Niveau M2, Université de Nice Sophia Antipolis, France.
- Master : Xavier Descombes, Traitement d'images, Analyse de données, Techniques avancées de traitement d'images, 30h Eq. TD, Niveau M2, ISAE, France.
- Master : Xavier Descombes, Traitement d'images, master ISAB, 12h Eq. TD, Niveau M2, Université de Nice Sophia Antipolis, France.
- Master : Xavier Descombes, Traitement d'images, master VIM, 12h Eq. TD, Niveau M2, Université de Nice Sophia Antipolis, France.
- Master : Xavier Descombes, Bio-imagerie, master IRIV, 6h Eq. TD, Niveau M2, Université de Strasbourg, France.
- Master : Eric Debreuve, Introduction to inverse problems in image processing, 29 h Eq. TD, Master 2 in Computational Biology and Biomedicine/5th year Polytech'Nice-Sophia, Université Nice Sophia Antipolis.
- Master : Eric Debreuve, Basics of image processing, 13h Eq. TD, Master 2 "Génie Biomédical", Université Nice Sophia Antipolis.
- Licence : Alexis Zubiolo, Informatique Générale, 36 heures en équivalent TD, niveau L1, Département Informatique de l'Université de Nice Sophia Antipolis, France
- Licence : Alexis Zubiolo, Programmation Web (HTML & CSS), 12 heures en équivalent TD, niveau L1, Département Informatique de l'Université de Nice Sophia Antipolis, France
- Licence : Alexis Zubiolo, Algorithmique et Programmation Objet, 18 heures en équivalent TD, niveau L2, Département Informatique de l'Université de Nice Sophia Antipolis, France
- Master : Laure Blanc-Féraud, Fluorescence image restoration, 18h, M2 Computational Biology , University Nice Sophia Antipolis, France
- Master : Laure Blanc-Féraud, Image restoration, 12h, M2 ISAB, University Nice Sophia Antipolis, France
- Master : Laure Blanc-Féraud, Traitement numérique des images, 12h Eq. TD, M2 VIM , EPU University Nice Sophia Antipolis, France
- Licence : Caroline Medioni. microscopie optique pratiques et théoriques, 15h Eq. TD, L3, University Nice Sophia Antipolis, France

7.2.2. Supervision

- PhD in progress : Gaël Michelin, Quantitative tools for morphogenesis study, 1st october 2011, Grégoire Malandain (advisor).
- PhD in progress : Alejandro Mottini, Métriques de graphes pour la caractérisation des axones, 1st october 2011, Xavier Descombes (advisor), Florence Besse (co-supervisor).
- PhD in progress, Alexis Zubiolo, Statistical Machine Learning for Automatic Cell Classification, Eric Debreuve (advisor).
- PhD : Saima Ben Hadj, Blind restoration of space variant 3D confocal microscopic images, University Nice Sophia Antipolis, 17 April 2013, Laure Blanc-Féraud
- PhD : Mikael Carlván, Optimization of the compression-restoration chain for satellite images, University Nice Sophia Antipolis, 10 June 2013, Laure Blanc-Féraud and Marc Antonini.
- PhD in progress : Emmanuel Soubies, MA-TIRF reconstruction, 1st october 2013, Laure Blanc-Féraud and Sébastien Schaub.
- PhD in progress : Lola Baustista, Fluorescence confocal microscopy image restoration, 1st november 2013, Laure Blanc-Féraud.

7.2.3. Juries

- Florence Besse was in one HDR jury at University of Montpellier and one PhD jury at UPMC Paris and Université Paris Sud.
- Eric Debreuve was examiner in the PhD jury of Thomas Peel, Université d'Aix-Marseille, Laboratoire d'Analyse, Topologie, Probabilités (LATP)/Laboratoire d'Informatique Fondamentale de Marseille (LIF). Title: "Algorithmes de poursuite stochastiques et inégalités de concentration empiriques pour l'apprentissage statistique", november 2013.
- PhD : Laure Blanc-Féraud, referee of the PhD committee of Moncef Hidane, University of Caen
- HDR : Laure Blanc-Féraud, referee of the HDR committee of David Mary, University Nice Sophia Antipolis
- PhD : Laure Blanc-Féraud was examiner for 1 HDR and 4 PhD.
- Grégoire Malandain participated as supervisor to the PhD thesis committee of Marine Breuille (Nice-Sophia Antipolis University), as reviewer to the PhD thesis committee of C. Hughes (INSA Lyon), as chair to the PhD thesis committee of B. Xiang (Ecole Centrale Paris) and V. Delmon (INSA Lyon), as reviewer to the HDR thesis committee of C. Fetita (UPMC) and as referee to the HDR thesis committee of H. Talbot (Paris Est Univ.)

7.3. Popularization

- Xavier Descombes has given a conference in Nice within the program "Science au Lycée".
- Xavier Descombes has given a seminar in Marseille University in a workshop dedicated to multi-disciplinarity.

NACHOS Project-Team

9. Dissemination

9.1. Teaching - Supervision - Juries

9.1.1. Teaching

Victorita Dolean, *Scilab*, MAM3, 24 h, Polytech Nice.

Victorita Dolean, *Partial differential equations*, MAM4, 66 h, Polytech Nice.

Victorita Dolean, *Computational electromagnetics*, MAM5, 40 h, Polytech Nice.

Victorita Dolean, *Numerical analysis*, L2, 30 h, University of Nice-Sophia Antipolis.

Victorita Dolean, *Mathematics and statistics*, M1 Erasmus Mundus EuroAqua, 34 h, University of Nice-Sophia Antipolis.

Claire Scheid and Stéphane Lanteri, *Introduction to scientific computing*, M2 Erasmus Mundus MathMods, 30 h, University of Nice-Sophia Antipolis.

Claire Scheid, *Practical works on differential calculus*, 26 h, L2, University of Nice-Sophia Antipolis.

Claire Scheid, *Practical works on differential equations*, 36 h, L3, University of Nice-Sophia Antipolis.

Stéphane Descombes, *Analyse numérique et applications en finances*, M2, 30 h, University of Nice-Sophia Antipolis.

9.1.2. Supervision

PhD in progress : Caroline Girard, *Numerical modeling of the electromagnetic susceptibility of innovative planar circuits*, October 2011, Stéphane Lanteri, Ronan Perrussel and Nathalie Raveu (Laplace Laboratory, INP/ENSEEIH/UPS, Toulouse).

PhD in progress : Fabien Peyrusse, *Numerical simulation of strong earthquakes by a discontinuous Galerkin method*, University of Nice-Sophia Antipolis, October 2010, Nathalie Glinsky and Stéphane Lanteri.

PhD in progress : Marie Bonnasse, *Numerical simulation of frequency domain elastic and viscoelastic wave propagation using discontinuous Galerkin methods*, University of Nice-Sophia Antipolis, October 2012, Julien Diaz (MAGIQUE3D project-team, Inria Bordeaux - Sud-Ouest) and Stéphane Lanteri.

PhD in progress : Jonathan Viquerat, *Discontinuous Galerkin time domain methods for nanophotonics*, October 2012, Stéphane Lanteri and Claire Scheid.

NEUROMATHCOMP Project-Team

7. Dissemination

7.1. Scientific Animation

Bruno Cessac is a reviewer for the CONYCIT (Chile) and COFECUB (Brasil) program and for the journals *Physica D*, *Nonlinearity*, *Chaos*, *Journal of Statistical Physics*, *IEEE Transaction in Neural Networks*, *Journal of Mathematical Biology*, *Journal of Computational Neuroscience*. He is in charge of internships organisation in the Master of Computational Biology, Nice.

Olivier Faugeras is co-Editor in Chief of the *Journal of Mathematical Science* (JMN). He is a member of the French Academy of Sciences and of the French Academy of Technology. He is a member of panel 1 for the ERC Frontier Research Grants.

Pierre Kornprobst was a member of the program committee of the 6th Pacific-Rim Symposium on Image and Video Technology. He co-edited with Frédéric Cazals the book entitled "*Modeling in Computational Biology and Medicine: A Multidisciplinary Endeavor*" [30], which illustrates the program taught in the Master of Science in Computational Biology (Website: <http://cbb.unice.fr>) that they launched in 2009.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Licence 1 : Massimiliano Muratori, TP de physique, 45 h, L1, Ecole d'ingénieurs Polytech.

Licence 2 : Rodrigo Cofre, Traitement du signal, 50h, L2, Université Nice Sophia Antipolis, France.

Licence 2 : Massimiliano Muratori, TD d'électromagnétisme , 18h, L2, Ecole d'ingénieurs Polytech.

Licence 3 : Hassan Nasser, Electronique numérique, 36h, L3, Université Nice Sophia Antipolis, France

License 3 : Hassan Nasser, Microprocesseurs, 28h, L3, Université Nice Sophia Antipolis, France

Master 2: Bruno Cessac, *Neuronal dynamics*, 36 hours, Master of Computational Biology and Biomedicine, Université Nice Sophia Antipolis, France.

Master 2: Olivier Faugeras, Etienne Tanré (TOSCA EPI) and Romain Veltz, teach the module *Mathematical Methods for Neuroscience*, M2, ENS Paris, France. The teaching load is mostly distributed between Etienne Tanré and Romain Veltz, 24h each.

7.2.2. Supervision

PhD: Javier Baladron, «Parallel implementations of mean field and neural field equations», Université Nice Sophia Antipolis, 2013, supervised by Olivier Faugeras.

PhD: Diego Fasoli, «Mean-field theory of realistic spiking neurons», Université Nice Sophia Antipolis, 2013, supervised by Olivier Faugeras.

PhD in progress: Hassan Nasser, «Reproducing and anticipating retinal responses», defence planned in March 2014, supervised by Bruno Cessac.

PhD in progress: Rodrigo Cofre-Torres, «Statistics of spike trains and neuronal structures», defense planned in 2014, supervised by Bruno Cessac.

PhD interrupted: Massimiliano Muratori, « Mean field equations for neural networks and synaptic correlations», supervised by Bruno Cessac. The student has decided to stop his PhD after one year to teach in college.

PhD in progress: Kartheek Medathati, « Perception du mouvement et attention: Des neurosciences à la vision artificielle », defence planned in 2016, co-supervised by Pierre Kornprobst and Guillaume Masson (Institut de Neurosciences de la Timone, UMR 6193, CNRS, Marseille, France).

7.2.3. Juries

Bruno Cessac. Jury member of Diégo Fasoli's PhD thesis "Mean-field theory of realistic spiking neurons". Nice, 25-09-2013.

Bruno Cessac. Reviewer of Christophe Magnani's PhD Thesis, "Analyse Sinusoïdale Quadratique de la Fonction Neuronale", Paris Descartes, 10-12-13.

Olivier Faugeras, Chair of the Jury of Mikhail Bogdanov PhD Thesis, Nice 9-12-2013.

Olivier Faugeras, Reviewer for the HDR manuscript of Christophe Pouzat, Paris-Descartes, 10-2013.

OASIS Project-Team

8. Dissemination

8.1. Scientific Animation

- Françoise Baude: member of the editorial board of the Techniques et Sciences Informatique French journal from feb 2011, program committee member of HPCS 2013, ISPA 2013, reviewer for HPCS 2012 special issue journal Concurrency Practice and Experiment to be published in 2013, for JPDC, PC member for Compas 2014, ISPA2014 and CCGrid 2014, University of Nice official representative within the KIC EIT ICT Labs, including the Master school, from 2012.
- Olivier Dalle: member of the Steering Committee of SIMUTools (since 2009), member of the Program Committee of the Conferences DEVS/TMS'2013, WSC'2013, ACM SIGSIM PADS'2013, HPC&S 2013, Omnet++2013, reviewer for SIMULATION (SCS), ACM TOMACS, SIMPRA (Elsevier) and JOS (Palgrave).
- Ludovic Henrio: program committee member of FESCA'13, FOCLASA'13, ICE'13 and reviewer for the journal SCP (Science of Computer Programming), DIST, and STVR.
- Fabien Hermenier: program committee member of VTDC and PDP (energy efficiency track) and reviewer for IEEE Transactions on Computers, IEEE Transactions on Cloud Computing, IEEE Transactions on Network and Service Management, Journal of Software: Practice and Experiment, Journal of Systems and Software.
- Fabrice Huet : program committee member of HPDC 2013, CCGrid 2013, Big Data 2013.
- Eric Madelaine: member of the steering committees of the FACS and FMCO symposia, member of the program committee of FACS'13, and of the Science of Computer Programming (SCP) journal.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Master : Françoise Baude and Ludovic Henrio, Distributed systems: an Algorithmic approach, 17 H + 17 h eqTD, niveau M2, Polytech'Nice Sophia/UFR Sciences, UNS, France
- Master : Françoise Baude, Applications Réparties, 45 H eqTD, niveau M1/SI4, Polytech'Nice Sophia, UNS, France
- Licence : Françoise Baude, Algorithmique et Programmation en Java, 70 H eqTD, niveau L2, Polytech'Nice Sophia, UNS, France
- Licence : Olivier Dalle, Systèmes d'Exploitation, 60h eq. TD
- Licence : Olivier Dalle, Initiation Framework Programmation Serveur, 70h eq. TD
- Licence : Olivier Dalle, Algorithmique, 12h eq. TD
- Licence : Olivier Dalle, Projet Scientifique Informatique, 37h eq. TD
- Licence : Fabien Hermenier, Algorithmique et Programmation en Java, 70 H eqTD, niveau L2, Polytech'Nice Sophia, UNS, France
- Licence : Fabien Hermenier, Introduction à Internet, 103 H eqTD, niveau L2, Polytech'Nice Sophia, UNS, France
- Licence : Fabien Hermenier, Outils pour le Génie Logiciel 14 H eqTD, niveau L3/SI3, Polytech'Nice Sophia, UNS, France

8.2.2. Supervision

- PhD in progress: Laurent Pellegrino “Pushing dynamic and ubiquitous event-based interaction in the Internet of services: a middleware for event clouds”, since Sept 2010, advisor Françoise Baude, Fabrice Huet.
- PhD in progress: Nuno Gaspar “Integrated, Autonomic, and Reliable Deployment and Management for SaaS composite applications”, since Nov 2011, advisor: Eric Madelaine
- PhD in progress: Michaël Benguigui, “Modèles de programmation pour l’analyse de données sur machines multi-cœurs, grilles et clouds”, since Dec 2011, advisor Françoise Baude.
- PhD in progress: Yanwen Chen, “Formal model and Scheduling for cyberphysical systems”, since Dec 2011, advisors Eric Madelaine and Yixiang Chen (ECNU Shanghai)
- PhD in progress: Alexandra Savu, “Design, specification, and verification of parameterized topologies of distributed components”, since Oct. 2012, advisor Eric Madelaine
- PhD in progress: Maeva Antoine, “Plateforme élastique pour le stockage et la notification d’Evènements”, since Oct. 2012, advisors Eric Madelaine, Fabrice Huet
- PhD in progress: Oleksandra Kulankhina, “Model-driven environment for the development of safe component-based distributed applications”, since Oct. 2013, advisor Eric Madelaine
- PhD in progress : Vincent Kerbache, “Resource Management in a Cloud Supplied with Renewable Energies”, since Sep. 2013, advisors Eric Madelaine, Fabien Hermenier
- PhD in progress: "Programming model and middleware support for distributed and concurrent applications", since Oct. 2013, advisor Ludovic Henrio
- PhD in progress: Sophie Song, "Publish-Subscribe Models for Large Scale Data Analysis Frameworks", since Feb. 2013, advisor Fabrice Huet, Frédéric Margoulés (ECP)
- PhD in progress: Damian Vicino, "Simulation-based Open Science in the Cloud", since Jan. 2013, advisors Françoise Baude, Gabriel Wainer (Carleton University, Canada), Olivier Dalle.

8.2.3. Juries

Françoise Baude participated in PhD evaluations as

- PhD reviewer and jury member: PhD of Francisco Alvares on 9th April 2013, Ecole des Mines de Nantes (ASCOLA EPI); PhD of Erwan Daubert on May 24th 2013, at INSA Rennes (TRISKELL and MYRIADS EPIs); PhD of Denis Morand on November 5th 2013, Université de Grenoble.
- PhD examiner: PhD of Gauthier Berthou on 21th January 2014, Université de Grenoble; PhD; PhD of Pierre-Louis Aublin, Université de Grenoble, on the same day.

She participated in the recruitment committee for a Professor at ENSEIRB, in May 2013. She evaluated one project for Programme ANR Blanc in 2013.

Ludovic Henrio evaluated one project for Programme ANR: INS 2013.

Olivier Dalle participated in PhD evaluations as

- PhD jury member for the PhD of Imran Mahmood, Feb. 26 2013, Royal Technological Institute of Sweden (KTH), Stockholm.

Fabrice Huet participated in PhD evaluations as jury member for the PhD of Giang Ngo Hoang on 16th December 2013.

8.3. Popularization

- Françoise Baude is in charge since September 2011 of the set up and animation of an educational program *Cordées de la Réussite*. She leads as Polytech’Nice Sophia member, and in connection with MASTIC activities at Sophia-Antipolis, two *Cordées pour la Science à Sophia* groups (one with Lycée Vinci Antibes, the other with Lycée Tocqueville Grasse). Since 2013, she is in charge of the AVOSTII-STI2D program implementation for Polytech’Nice Sophia, requiring advertising high-school pupils for engineering studies, in particular in ICT.

- **Rencontres Inria Industrie:**
The 11th of June 2013, we took advantage of the Inria-Industry national meeting to expose our works on the American basket option pricing. Our strategy relies on a two-level CPU/GPU parallelization of the Picazo algorithm, combining dynamic strategies to fully exploit distributed resources. During the event, we presented the difficulty to price such instruments in reasonable time, and highlight our solution through multiple tests on Grid'5000, of our pricing engine.
A Video is available here: <http://www.inria.fr/centre/saclay/innovation/rii-modelisation-simulation-calcul-intensif/demos/pricing-d-options-sur-panier-de-type-americaain-en-utilisant-des-clusters-equip-es-de-gpus>
- This year, Fabrice Huet gave a seminar to high school students about the inner working of computers. He also leads the ISN *Informatiques et Sciences du Numérique* courses for the academia of Nice. These courses were given to high school teachers who volunteered to offer a Computer Science option to their students.

OPALE Project-Team

9. Dissemination

9.1. Scientific Animation

- R. Duvigneau is member of the "Conseil National des Universités" (CNU) for the 26th section (applied mathematics and application of mathematics)
- P. Goatin was member of the Organizing Committee of the Workshop "*Traffic Modeling and Management: Trends and Perspectives - TRAM2*", Sophia Antipolis (France). March 2013. <https://team.inria.fr/opale/workshop-tram2/>

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Introduction to Numerical Analysis, 19.5 hrs, L3 ("Water Resources Engg." Section), Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (J.-A. Désidéri)

Licence: Numerical Methods, 19.5 hrs, L3 ("Applied Mathematics and Modelling" Section), Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (J.-A. Désidéri)

Licence: Partial Differential Equations, 36 hrs, L3, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (R. Duvigneau).

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

Master: Multidisciplinary Optimization, 22.5 hrs, joint ISAE ("Complex Systems") and M2 (Mathematics), Toulouse (J.-A. Désidéri, R. Duvigneau).

Licence: Numerical Methods I, 56 hrs tutorials, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (A. Habbal).

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).

Master: Reconstructing lost GPS signals using accelerometrics, 10 hrs, M1, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (A. Habbal).

9.2.2. Supervision

HdR : Régis Duvigneau, *Conception optimale en mécanique des fluides numérique : approches hiérarchiques, robustes et isogéométriques*, University of Nice Sophia Antipolis, october 2013

PhD : Andrea Minelli, *Aero-acoustic shape optimization of a supersonic business jet*, University of Nice Sophia Antipolis, November 2013, supervisor: Jean-Antoine Désidéri

PhD : Adrien Zerbinati, *Optimisation multidisciplinaire robuste pour application à l'automobile*, University of Nice Sophia Antipolis, April 2013, supervisors: Jean-Antoine Désidéri and Régis Duvigneau.

PhD in progress : Maria Laura Delle Monache, *Traffic flow modeling by conservation laws*, October 2011, supervisor: P. Goatin.

PhD in progress : Maxime Nguyen Dinh (Cifre ONERA/Aibus), *Qualification of numerical simulations by anisotropic mesh adaptation*, October 2011, supervisor : Jean-Antoine Désidéri.

PhD in progress : Sébastien Bourasseau (Cifre ONERA/Snecma), *Goal-oriented hybrid mesh adaptation for turbomachinery*, April 2011, supervisor : Jean-Antoine Désidéri.

PhD in progress : Enric Roca León (Cifre ONERA/Eurocopter), *Helicopter rotor blade multi-objective optimization*, October 2011, supervisor : Jean-Antoine Désidéri.

PhD in progress : Asma Gdhami, *Analyse isogéométrique pour les problèmes hyperboliques*, November 2013, supervisor: Régis Duvigneau.

PhD in progress : Maroua Mokni, *Numerical analysis and computational assessment of variants of the multiple-gradient of descent algorithm*, November 2013, supervisor: Jean-Antoine Désidéri.

PhD in progress : Bouthaina Yahyaoui, *Cell-dynamics modelling : from the Fisher-KPP equations to mechanical-biological-chemical systems*, January 2013, supervisor: Abderrahmane Habbal.

PhD in progress : Jérémie Labroquère, *Optimization of Flow Control Devices*, October 2010, Supervisors: Jean-Antoine Désidéri and Régis Duvigneau.

PhD in progress : Matthias Mimault, *Crowd motion modeling by conservation laws*, October 2012, Supervisor: P. Goatin.

PhD in progress : Aalae Benki, *Méthodes efficaces de capture de front de Pareto en conception mécanique multicritère. Applications industrielles.*, October 2010, supervisor: A. Habbal.

PhD in progress : Fatima Zahra Oujebbour, *Méthodes et applications industrielles en optimisation multicritère de paramètres de processus et de forme en emboutissage*, October 2010, Supervisors: A. Habbal.

PhD in progress : Bouthaina Yahyaoui, *Modélisation de la dynamique des cellules : Des équations de Fisher-KPP aux systèmes mécano-bio-chimiques*, January 2013, Supervisors: A. Habbal and M. Ayadi (Tunis).

PhD in progress : Mohamed Kaicer, *Group lending : analysis of asymmetric information using game theory. Analysis design and implementation of a simulator adapted to micro-finance market*, October 2009, Supervisors: R. Aboulaich (Rabat) and A. Habbal.

9.3. Popularization

Jean-Antoine Désidéri gave the lecture “*Modelling and simulating, when engineering becomes numerical*” to the Valbonne International High School (CIV) on October 11, 2013.

Paola Goatin was interviewed twice :

- TV interview on evening news, France 3 Côte d’Azur, January 30, 2013 <http://www.youtube.com/watch?v=VIW4VgoTjEI&feature=youtu.be>.
- Journal interview : “*Une chercheuse au chevet des embouteillages*”, Nice Matin, January 2013 <http://www-sop.inria.fr/members/Paola.Goatin/NiceMatin.pdf>.

REVES Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Program Committees

- George Drettakis served on the SIGGRAPH 2013 program committee.
- Adrien Bousseau served on the Eurographics program committee, on the Eurographics Symposium on Rendering program committee and on the NPAR program committee.
- Christian Richardt participated in the Expressive 2013 program committee and created the website: <http://www.cl.cam.ac.uk/conference/expressive-2013/>.

8.1.2. Community Service

G. Drettakis chaired the Eurographics (EG) Awards Committee until May this year, and chairs the EG Working group on Rendering and is part of the EG conference steering committee and the Advisory Board for Eurographics 2013. He also served on several ad-hoc ACM and IEEE Committees, concerning policy and EIC searches. He is an associate editor-in-chief for IEEE Transactions on Computer Graphics and Visualization. He also heads the steering committee of the Gouraud-Phong Immersive Space at Sophia-Antipolis.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Masters: G. Drettakis organizes and teaches Computer Graphics at the ECP (Paris) (9h), A. Bousseau teaches 3h at the same course. G. Drettakis teaches 6h in the MAPI M1 Module (Jeux Video), A. Bousseau teaches 3h in this program. A. Bousseau organizes and teaches the Computer Graphics module in the Master 1 International in Computer Science of University Nice Sophia Antipolis (9h), G. Drettakis teaches 7.5h in this program.

8.2.2. Supervision

- PhD in progress: Rodrigo Ortiz-Cayon, Inpainting and Artifact Removal for Image Based Rendering, (started November 2013), Advisor George Drettakis.
- PhD in progress: Gaurav Chaurasia, Image-Based Rendering, since October 2010 (to defend February 2014), Advisor: George Drettakis
- PhD in progress: Emmanuelle Chapoulie, Gestures in VR, since October 2010 (to defend April 2014), Advisor: George Drettakis
- PhD in progress: Emmanuel Iarussi, Computer-Assisted Drawing, since October 2012, Advisor: George Drettakis, Co-advisor: Adrien Bousseau
- Internship: Julia Chatain (Ecole Polytechnique, from April 8 to Aug. 9, 2013). Depicting materials in vector graphics. Advisor: George Drettakis, Co-advisor: Adrien Bousseau, Jorge Lopez Moreno
- Internship: Uditha Kasthuriarachchi (Jul. to Sep. 2013). GPU-Based Refraction. Advisor: George Drettakis, Co-advisor: Stefan Popov

8.2.3. International Internship

- Joal Sol Roo (UNCPBA Argentina, from May 21 to Sept. 13, 2013). Advisor: Adrien Bousseau, Christian Richardt

8.2.4. Juries

George Drettakis served on Mauricio Delbracio's Ph.D. committee.

8.3. Popularization

8.3.1. Popularization, Invited Talks

- Adrien Bousseau presented the work on Coherent Intrinsic Images from Photo Collections (SIGGRAPH Asia 2012) in the Research Session of the FMX conference in Stuttgart.
- Adrien Bousseau presented the work on sketching tools for designers as a “Cafe’In” at the Inria Sophia Antipolis center and as an introduction to research for high school students from Nice (MathC2+) and Grasse. This work also appeared as an article on the Inria Sophia Antipolis website <http://www.inria.fr/centre/sophia/actualites/des-outils-informatiques-pour-les-artistes-et-les-createurs>
- Christian Richardt gave invited talks at UC Berkeley, Stanford, Nvidia Research (Santa Clara, California) and TU Berlin (Germany).

8.3.2. Demos

We gave demos (mainly of the immersive space) to high school students, representatives from the planned Museum of Cosquer in Marseille, Sup’Com Tunis, the companies Thales, Thales AleniaSpace and Optis.

8.3.3. Conferences and Invited Talks

- At SIGGRAPH 2013, Adrien Bousseau presented the work on Gloss Perception in Painterly and Cartoon Rendering [14]. Jorge Lopez Moreno also presented our work at the French chapter of SIGGRAPH in Paris. Our work also appeared on the Inria Sophia Antipolis website (<http://www.inria.fr/centre/sophia/actualites/siggraph-2013-trois-equipes-du-centre-present-leurs-travaux>).
- Adrien Bousseau and Emmanuel Iarussi attended the ACM CHI conference in Paris (May).
- Adrien Bousseau and Emmanuel Iarussi attended the ACM UIST conference in St Andrews (October) where Emmanuel Iarussi presented the paper on assisting drawing from photographs [19].
- Adrien Bousseau gave a talk on drawing tools for depicting stylized materials at the “Groupe de Travail sur le Rendu” in Paris <http://gtrendu.blogspot.fr/>.
- George Drettakis attended Eurographics 2013 in Girona Spain (May) and EGSR 2013 in Zaragoza Spain (June).
- Gaurav Chaurasia attended Eurographics Symposium on Rendering at Zaragoza (Spain) June 19-21, 2013.
- Gaurav Chaurasia presented the paper “Depth Synthesis and Local Warps for Plausible Image-based Navigation” at SIGGRAPH at Anaheim (CA, USA) between July 21-25, 2013.
- Gaurav Chaurasia gave an invited talk titled “Algorithms and Perception for Interactive Free-Viewpoint Image-Based Navigation” at Microsoft Research Redmond, USA on July 18, 2013. He was hosted by Dr. Eyal Ofek in the Xtreme Computing Group.
- Gaurav Chaurasia visited MIT CSAIL between Aug 1, 2013 and Sept 30, 2013. He was hosted by Prof. Fredo Durand computer graphics group.
- Stefan Popov presented his paper at Eurographics 2013 in Girona, Spain
- Stefan Popov attended the Eurographics Symposium on Rendering 2013 in Zaragoza, Spain
- Christian Richardt attended the Berkeley-Inria-Stanford workshop in Stanford to represent the CRISP associate team.
- Christian Richardt attended Eurographics 2013 in Girona, Spain.
- Christian Richardt attended CVPR 2013 in Portland, Oregon, to present the "Megastereo" paper.
- Christian Richardt attended SIGGRAPH 2013 in Anaheim, California, and co-presented a paper with Peter Vangorp (Perception of Perspective Distortions in IBR).
- Emmanuel Iarussi participated in the ACM CHI Conference on Human Factors in Computing Systems. Paris, France - 27 April, 2 May 2013, and in the ACM Symposium on User Interface Software and Technology (UIST), St Andrews, UK, October 8-11, 2013.
- Sylvain Duchêne attended Siggraph Conference 2013 in Anaheim, USA, 18 hours Inria class on Computational Geometry Learning from David Cohen-Steiner, and university english course LAN02.

SCIPORT Team

8. Dissemination

8.1. Scientific Animation

- Laurent Hascoët is on the organizing committee of the EuroAD Workshops on Automatic Differentiation. The 12th EuroAD workshop was organized and hosted by the team in Sophia-Antipolis, june 10-11.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master : Laurent Hascoët, Optimisation avancée, 15 h, niveau M2, Université de Nice, France

8.2.2. Supervision

PhD : Alexandre Carabias, “Adaptation de maillage pour calculs d’écoulements à l’ordre 3”, Université de Nice, defended december 12th, advisor A. Dervieux

PhD : Cédric Lachat, “Conception et validation d’algorithmes de remaillage parallèles à mémoire distribuée basés sur un remaillieur séquentiel”, Université de Nice, defended december 13th, co-advisor L. Hascoët.

PhD in progress : Gauthier Brethes, “Multigrilles anisotropes adaptatives”, started october 2012, advisor A. Dervieux

PhD in progress : Ala Taftaf, “Adjoint Automatic Differentiation on High-performance codes”, started july 2013, advisor L. Hascoët.

8.3. Popularization

- Laurent Hascoët gave a presentation on adjoint Automatic Differentiation at the AboutFlow meeting in Tinos (Greece), may 27-31.
- Laurent Hascoët made a detailed presentation of Automatic Differentiation at Microsoft Research labs in Cambridge (UK) on december 6th.

STARS Project-Team

9. Dissemination

9.1. Scientific Animation

- François Brémond was reviewer for the conferences : CVPR'13-14, ICCV'13, AVSS'13, ICVS'13, ICDP'13, ICRA'13, ACM MM'13;
- François Brémond was handling editor of the international journal "Machine Vision and Application";
- François Brémond was reviewer for the journal "IEEE Computing Now";
- François Brémond was program committee member of the conferences and workshops: IEEE Workshop on Applications of Computer Vision (WACV 2013-14), ICME AAMS-PS 2013, RIVF 2013, ASROB-2013, ICCV'13 Workshop on Action Recognition (THUMOS), on Re-Identification (Re-Id 2013) and on Object Tracking VOT'2013, LACNEM-13, ACM MIIRH 2013;
- François Brémond was speaker in two thematic schools: S5 Second Spring Short School on Surveillance in Modena Italy, May 7-9 2013 and Dem@Care School on Ambient Assisted Living (DemAAL 2013), Chania, Crete, Greece (16-20 September 2013);
- François Brémond was organizer of the SPHERE workshop on Ambient Assisted Living, at Inria Sophia Antipolis, 9-10 October 2013 and a PANORAMA special session, part of VISAPP Lisbon, Portugal, 5-8 January 2014;
- François Brémond was an expert in review of research projects for France Alzheimer Association (25th May 2013), for NTU Singapore (19th August 2013) and for INSA de Lyon (4th November 201);
- François Brémond was expert for the Proposal KIC Healthy Ageing (Innolife) Expert Group1: Independent living;
- François Brémond was expert for EU European Reference Network for Critical Infrastructure Protection (ERNICIP) - Video Analytics and surveillance Group, at European Commission's Joint Research Centre in Ispra, Italy, 29 April 2013, 28-29 October, 2013;
- François Brémond was area chair of the IEEE International Conference on Advanced Video and Signal Based Surveillance, AVSS'13, Krakow, Poland on August 27-30, 2013;
- François Brémond gave invited talks at:
 - the Symposium of World Congress of Gerontology and Geriatrics (IAGG) 2013, 23-27 June, Coex, Seoul, Korea (Title: "ICT in Dementia: from assessment to stimulation.);
 - the Conference "Les Echos sur la dépendance, quelles réponses pour faire reculer la dépendance ? " in March 2013;
 - the IX Journée de la Fédération CMRR in Nice on the 29 March 2013;
 - the Journée pédo psychiatrie, Nice on the 11th October 2013 (invited by F. Azkenazy);
 - University of Central Florida, 14-15 October 2013 (invited by M. Shah);
- Guillaume Charpiat reviewed for the conferences CVPR, ICCV and Grets;
- Guillaume Charpiat reviewed for the journals CVIU (Computer Vision and Image Understanding), SIAM Journal on Imaging Sciences (SIIMS), RIA (Revue d'intelligence artificielle);
- Guillaume Charpiat gave invited talks :
 - in the TAO team (8 October 2013) about lossless image compression,
 - and in the GALEN team (9 October 2013) about energies minimizable with graph cuts.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Annie Ressouche, Critical Software Verification- Introduction to SCADE, 5h, niveau (L3), Mines Paris Tech, FR

Master : Annie Ressouche, Critical Software Verification and application to WComp Middleware , 10h, niveau (M2), Polytech'Nice School of Nice University, FR

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: Rim Romdhane, Event Recognition in Video Scenes with Uncertain Knowledge, 30th September 2013, François Brémond and Monique Thonnat;

PhD: Malik Souled : Suivi d'Individu à travers un Réseau de Caméras Vidéo, 20th December 2013, François Brémond ;

PhD in progress: Julien Badie, People tracking and video understanding, October 2011, François Brémond;

PhD in progress : Piotr Bilinski, Gesture Recognition in Videos, March 2010, François Brémond;

PhD in progress : Carolina Garate, Video Understanding for Group Behaviour Analysis, August 2011, François Brémond;

PhD in progress : Ratnesh Kumar, Fiber-based segmentation of videos for activity recognition, January 2011, Guillaume Charpiat and Monique Thonnat;

PhD in progress : Minh Khue Phan Tran, Man-machine interaction for older adults with dementia, May 2013, François Brémond.

9.2.3. Juries

- François Brémond was jury member of the following PhD theses:
 - Boris Meden, Lab Vision and Content Engineering, CEA Saclay – nano innov, 15 January 2013;
 - Wenjuan Gong, PhD VIVA at Computer Vision Center in Barcelona, 10th May 2013;
 - Miriam Redi, EURECOM, 29th May 2013;
 - Lyazid Sabri, Université Paris Est Créteil (UPEC), 1 July 2013;
 - Francis Martinez, Vision VLSI/System ISIR/UPMC & CNRS UMR, Université Pierre et Marie Curie (UPMC), Jussieu, Paris, 9 July 2013;
 - Hajer Fradi PhD defense, EURECOM, 28th January 2014.

9.3. Popularization

- François Brémond participated in ERCIM News 95, Special theme: "Image Understanding", Sept 2013;
- François Brémond was interviewed by magazine 01net/itv Jul 2013;
- François Brémond was interviewed on Autisme by Monaco Info TV, September 2013;
- François Brémond gave a talk at Forum de la Recherche, Nice, 22 November 2013;
- Guillaume Charpiat is part of the MASTIC commitee;
- Guillaume Charpiat wrote with Yuliya Tarabalka a popularization article about wild fire mapping from satellite images in the magazine Earthzine : <http://www.earthzine.org/2013/09/16/exploiting-temporal-coherence-for-fire-mapping-from-modis-spaceborne-observations/> [53].

TITANE Team

9. Dissemination

9.1. Scientific Animation

Pierre Alliez, Clément Jamin, Manish Mandad and Thijs van Lankveld have contributed to the organization of Digital Heritage 2013 held in Marseille, October 28 to November 1st.

Pierre Alliez was a paper committee member of EUROGRAPHICS Symposium on Geometry Processing, ACM Virtual Reality International Conference and Shape Modeling International. He is an associate editor of ACM Transactions on Graphics since 2009, and of Elsevier Graphical Models since 2010. This year he joined the editorial board of Computer Aided Geometric Design.

David Bommès was a paper committee member of EUROGRAPHICS Symposium on Geometry Processing, Shape Modeling International, EUROGRAPHICS short papers, ACM SIGGRAPH Asia technical briefs and posters and Digital Heritage.

Florent Lafarge was a paper committee member of ISPRS workshop on City Models, Roads and Traffic, ACM SIGGRAPH Asia technical briefs and posters, CAD/Graphics, Laser Scanning, Digital Heritage and Indoor3D, and a reviewer for CVPR and ICCV.

9.2. Seminars and invited talks

Florent Lafarge gave seminars at the University of Auckland (New Zealand), UCL (United Kingdom) and ETH Zurich (Switzerland). He was a keynote speaker at ISPRS SSG'13 in Antalya (Turkey).

9.3. Teaching - Supervision - Juries

9.3.1. Teaching

Master : Pierre Alliez, Algorithmes géométriques - théorie et pratique, 9h, 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, 30h, M2, EFREI, France.

Master : Florent Lafarge, Traitement d'images numériques, 9h, M2, university Nice Sophia Antipolis, France.

Master : Florent Lafarge, Imagerie numérique, 10h, M2, university Nice Sophia Antipolis, France.

9.3.2. Supervision

PhD : Yannick Verdie, Urban scene modeling from airborne data, University of Nice Sophia Antipolis, October 15, Florent Lafarge and Josiane Zérubia.

PhD in progress : Simon Giraudot, Noise-adaptive shape reconstruction, October 2011, Pierre Alliez.

PhD in progress : Xavier Rolland-Neviere, watermarking of 3D models, October 2011, Pierre Alliez.

PhD in progress : Manish Mandad, Shape approximation with guarantees, October 2012, Pierre Alliez.

PhD in progress : Sven Oesau, reconstruction of indoor scenes, October 2012, Florent Lafarge and Pierre Alliez.

PhD in progress : Dorothy Duan, Semantized Elevation Maps, October 2013, Florent Lafarge and Pierre Alliez.

9.3.3. Juries

Pierre Alliez:

- Thesis committee: Ricardo Uribe-Lobello (LIRIS, CNRS Lyon).
- Thesis committee: Yannick Verdie (Inria).
- Thesis reviewer: Thijs van Lankveld (Utrecht University).
- Thesis committee: Adrien Maglo (Centrale Paris).
- Thesis committee: Noura Faraj (Telecom ParisTech).
- HDR thesis reviewer: Guillaume Lavoue (Universite Lyon).

9.4. Popularization

Florent Lafarge gave talks to high school students on city modeling (Lycee Tocqueville, Lycee De La Montagne, and Stage MathC2+). He is a member of the editorial board of LISA (Inria SAM newsletter).

TOSCA Project-Team

9. Dissemination

9.1. Scientific Animation

- M. Bossy is a member of the Scientific Committee of the *École Doctorale "Sciences Fondamentales et Appliquées"* of the Université de Nice - Sophia Antipolis.
- M. Bossy is a member of the *Collectif Andromède* of the PACA Region council.
- M. Bossy is a elected member of the Inria Evaluation Board.
- M. Bossy served as an Associate Editor of *Annals of Applied Probability*.
- M. Bossy participated to the junior position recruitment committee at the University of Nice - Sophia Antipolis.
- M. Bossy has been a member of the Committee for junior permanent research positions of Inria Nancy - Grand Est.
- N. Champagnat is a member of the *Commission de Développement Technologique* of Inria Nancy - Grand Est, a substitute member of the *Comité de Centre* of Inria Nancy - Grand Est since October and a member of the *Commission bibliothèque* of IECL.
- N. Champagnat organized the Team Working Group on Probability and Statistics of IECL until January.
- N. Champagnat serves as an Associate Editor of *Stochastic Models* since October.
- N. Champagnat, with T. Lelièvre and A. Nouy, was member of the organizing committee of the *Centre d'Eté de Mathématiques et de Recherche Avancée en Calcul Scientifique* (CEMRACS 2013) held in CIRM, Luminy, from July 22nd until August 30th.
- N. Champagnat, with T. Lelièvre and A. Nouy, was member of the organizing committee of the *Special Event "Mathématiques pour la planète Terre"* held at CIRM, Luminy, on the 23rd July.
- N. Champagnat organized with D. Ritchie a *Journée Scientifique de la Fédération Charles Hermite on Ancestral Inference and Evolutionary Relationships in Biology* at Inria Nancy - Grand Est in September.
- N. Champagnat organized a mini-symposium on *Quasi-stationary distributions and Q-processes* at the *Congrès SMAI 2013* in Seignosse in May.
- M. Deaconu is member of *Comité des Projets* and *Bureau du Comité des Projets* at Inria Nancy - Grand Est.
- M. Deaconu organized with S. Herrmann the Workshop *Hitting times and exit problems for stochastic models* held in Dijon, 27-29 November.
- M. Deaconu organized with E. Vincent (Inria, Centre de recherche Nancy-Grand Est) a *Journée Scientifique de la Fédération Charles Hermite on Uncertainties: approaches and challenges* at IECL in December.
- M. Deaconu and A. Lejay were members of the organizing committee of the *Semaine d'Étude Maths-Entreprises Nancy*, 11-15 February 2013.
- A. Lejay is member of a editorial board of the collection *Séminaire de Probabilités*.
- A. Lejay is member of the scientific committee of the *Journées de Probabilités*.
- A. Lejay is General Secretary of Société des Mathématiques Appliquées et Industrielles (SMAI).
- D. Talay continued to serve as the Head of Science and Chair of the Project-Teams Committee of Inria Sophia Antipolis - Méditerranée.

- D. Talay, jointly with F. Delarue (Université Nice - Sophia Antipolis) organized the workshop ERGONUM at CIRM (Marseille) in February.
- 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*, *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*.
- D. Talay is serving as a member of the Advisory Board of the Centro de Mathematica da Universidade do Porto (Portugal).
- D. Talay participated to Professor position recruitment committees at Paris 6 University and Nice Sophia Antipolis University.
- D. Talay chaired the AERES Evaluation Committee of the Mathematics Department of Paris Descartes University.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: M. Bossy, *Continuous time stochastic models for quantitative Finance*, 45h, 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 Ingénierie et Gestion de l'Énergie, Mine ParisTech, France.

Master : M. Bossy *Stochastic Particle Methods for PDEs*, 18h, M2 Probabilité et Applications, Université Paris 6, France.

Master: N. Champagnat, *Introduction to Quantitative Finance*, 18h, M1, École des Mines de Nancy, France.

Master: N. Champagnat, *Introduction to Quantitative Finance*, 18h, M2, École des Mines de Nancy, France.

Master: N. Champagnat, *Généétique des Population et Généalogies Aléatoires*, 22.5h, M2, École supérieure des sciences et de la technologie de Hammam Sousse, Tunisia.

Master: M. Deaconu, *Simulation de variables aléatoires*, 14h, M1, École des Mines de Nancy, France.

Master: M. Deaconu, *Modélisation stochastique*, 33h, M2, Université de Lorraine, France.

Master: J. Inglis, *Advanced Numerics for Computational Finance*, 15h, M2, UNSA (Mathmods Erasmus Mundus), France.

Master: A. Lejay, *simulation des marchés financiers*, 23h, M2, Université de Lorraine, Metz.

Master : D. Talay *Stochastic Methods for PDEs with Boundary Conditions*, 18h, M2 Probabilité et Applications, Université Paris 6, France.

Master: E. Tanré, *Advanced Numerics for Computational Finance*, 15h, M2, UNSA (Mathmods Erasmus Mundus), France.

Master: E. Tanré, *Numerical Probability in Finance*, 12h, M2, Ecole PolytechNice (IMAFA), France.

Master: E. Tanré, *Mathematical Methods for Neurosciences*, 25h, M2, ENS - Master MVA / Paris 6 - Master Maths-Bio, France.

Master: L. Violeau, *Continuous Probabilistic Models with Applications in Finance* (exercice classes), 20h, M2 IMAFA (Informatique et Mathématiques Appliquées à la Finance et à l'Assurance), École Polytechnique Universitaire, Univ. Nice - Sophia Antipolis, France.

Licence: L. Violeau, *Probabilty and Statistics* (exercice classes), 20h, L3, Ecole Polytechnique Universitaire, Univ. Nice - Sophia Antipolis, France.

9.2.2. Supervision

- PhD in progress: Maxime Bonelli, *Behavioral finance approach to risk assessment in quantitative portfolio management*, September 2013, M. Bossy.
- PhD in progress: Paul Charton, *Hedging strategies for wind energy prices*, September 2010, M. Deaconu and A. Lejay.
- PhD in progress: Julien Claisse, *Stochastic control of population dynamics*, September 2010, N. Champagnat, D. Talay.
- PhD in progress: Benoît Henry, *Modeling Evolutionary Relationships Between Three-Dimensional Protein Structures*, October 2013, N. Champagnat, D. Ritchie (ORPAILLEUR team).
- PhD : Dalia Ibrahim, *Étude théorique d'indicateurs d'analyse technique*, Université de Nice - Sophia Antipolis, November 2009, D. Talay and E. Tanré.
- PhD in progress; Lionel Lenôtre, *Simulation of processes in discontinuous media*, 2012, J. Erhel (Irisa), A. Lejay and G. Pichot (Irisa). L. Lenôtre has a grant from the MESR and stays at Rennes.
- PhD in progress: Sebastian Niklitschek-Soto, *Discretized stochastic differential equations related to one-dimensional partial differential equations of parabolic type involving a discontinuous drift coefficient*, September 2010, D. Talay.
- PhD in progress: Hernán Mardones, *Numerical Solution of Stochastic Differential Equations with Multiplicative Noise*, 2009, C. Mora (Universidad de Concepción), A. Lejay. H. Mardones spends six months in France (nov. 2013-april 2014) with a grant Becas Chile.
- PhD in progress: Khaled Salhi, *Estimation of Risk in Finance*, October 2013, M. Deaconu, A. Lejay.
- PhD in progress: Laurent Violeau, *Stochastic Lagrangian Models and Applications to Downscaling in Fluid Dynamics*, October 2010, M. Bossy and A. Rousseau.

9.2.3. Juries

- M. Bossy chaired the Committee for the Ph.D. thesis of Paul-Eric Chaudru de Raynal, *Équations différentielles stochastiques : résolubilité forte d'équations singulières dégénérées ; analyse numérique de systèmes progressifs-rétrogrades de McKean-Vlasov*, Université de Nice - Sophia Antipolis, December 2013.
- M. Deaconu served as referee for the Ph.D. thesis of O. Lupaşcu, *Probabilistic and deterministic models for fracture type phenomena*, IMAR Bucarest and Université de Paris 13, Bucarest, December 2013.
- A. Lejay serves as examiner for the Ph.D. thesis of Paul-Éric Chaudru de Raynal, *Équations différentielles stochastiques : résolubilité forte d'équations singulières dégénérées ; analyse numérique de systèmes progressifs-rétrogrades de McKean-Vlasov*, Université de Nice - Sophia Antipolis, December 2013.
- D. Talay chaired the Committees for the Habilitation à Diriger des Recherches de B. de Saporta (université Montesquieu Bordeaux 4), the Ph.D. thesis of O. Aboura (Université Paris 1 Panthéon Sorbonne), the Ph.D. thesis of C.A. Garcia Trillos (Université Nice Sophia Antipolis).
- E. Tanré reported on the Ph.D. thesis of Mauricio Tejo, Pontificia Universidad Católica de Chile (PUC).

9.3. Popularization

- M. Bossy contributed as a Guest Blogger on the Mathematics of Planet Earth 2013 web site.
- D. Talay gave lectures to scholars in Nice.

9.4. Participation to congresses, conferences, invitations...

- M. Bossy gave a seminar talk at the research sessions of the CEMRACS 2013, Luminy in August.
- M. Bossy gave an invited talk at the Focus Program on Commodities, Energy and Environmental Finance of the Fields Institute, Toronto (Canada) in August.
- M. Bossy gave an invited talk at the European Science Foundation OPTPDE Workshop "Modeling and Control of Large Interacting Dynamical Systems" in September at Université Paris-Dauphine.
- M. Bossy gave an invited talk at the workshop METEO, Université d'Orléans in October.
- N. Champagnat gave a plenary talk at the *57th Annual Meeting of the Australian Mathematical Society* in Sydney (Australia) in October.
- N. Champagnat gave talks at the Conference on *Genetic models and quasi-stationarity* at CIRM, Luminy in March, at the Conference on *Biological invasion and evolutionary biology: stochastic and deterministic models* in Lyon in March, at the *Congrès SMAI 2013* in Seignosse in May, at the *Workshop "Mathematics for Planet Earth"* of the *Fédération Charles Hermite* in Nancy in October, and at the *International Conference on Stochastic Models in Ecology, Evolution and Genetics* (SMEEG 2013) in Angers in December.
- N. Champagnat gave seminar talks at the *Mark Kac seminar on Stochastics and Physics* in Utrecht (The Netherlands) in May, and at the *Oberseminar Stochastics* of the Probability Theory and Stochastic Analysis Group of the University of Bonn (Germany) in June.
- P. Charton participated at the *Cinquième Semaine d'Étude Maths-Entreprise* at Nancy, France in February. He and his group studied the asymptotic properties of the process Garch(1,1). A report has been written [32].
- P. Charton made a poster on *Optimal operating of a windfarm equipped with a storage device* at the *Congrès SMAI 2013* in Seignosse in May. A proceeding has been written [21].
- P. Charton gave talk at the *Ninth IMACS seminar* at Annecy-le-Vieux (France) in July. A proceeding is being written.
- M. Deaconu gave a invited talk in a special session at the *Joint International Meeting of the American Mathematical Society and the Romanian Mathematical Society*, in Alba Iulia (Romania) in June.
- M. Deaconu gave a talk at the *Ninth IMACS Seminar on Monte Carlo Methods*, Annecy-le-Vieux (France) in July.
- J. Inglis gave seminar talks at the *analysis and probability seminar*, Imperial College London, in January and at the probability seminar, University of Rennes, in February.
- J. Inglis gave an invited talk at the European project MATHEMACS meeting, held at the Max-Planck Institute, Leipzig, in December.
- A. Lejay gave a 4h30 lecture on *Rough paths* at the *35th Finnish Summer School on Probability Theory and Statistics* in Finland.
- A. Lejay gave talks at the workshop *rough paths* (Berlin) *Interplay of Theory and Numerics for Deterministic and Stochastic Homogenization* (Oberwolfach, Germany) in August and at the international conferences *Stochastic processes and their statistics in Finance* (Naha, Okinawa, Japan) in October, and at the Workshop on *Hitting times and exit problems for stochastic models* (Dijon, France) in December.
- A. Lejay gave a talk at the *COMCA-2013* congress (La Serena, Chile).
- D. Talay gave a series of lectures at the Pauli Institute in June.
- D. Talay gave a talk at the University of Antwerp.
- D. Talay gave a talk at the Workshop on Extreme Events in November in Nice.
- D. Talay gave two lectures at the Conference in the honor of Etienne Pardoux (Marseille) in February.

- E. Tanré gave a talk at the Centro Interdisciplinario de Neurociencia de Valparaíso (Chile) in January.
- E. Tanré gave a talk at the conference on *Mathematical Methods and Modeling of Biophysical Phenomena* in Cabo Frio (Brazil) in March.
- E. Tanré gave a seminar talk at Toulouse in May.
- E. Tanré gave a talks at the workshop on *Hitting times and exit problems for stochastic models* at Dijon in November and at the *First Workshop CIMFAV on Stochastic Analysis and its Applications* at Valparaíso (Chile) in December.
- D. Villemonais gave a 4h lecture at the Conference on *Genetic models and quasi-stationarity* at CIRM, Luminy in March.
- D. Villemonais gave a talk at the *Congrès SMAI 2013* in Seignosse in May.

VIRTUAL PLANTS Project-Team

7. Dissemination

7.1. Scientific Animation

- Christophe Godin has rendered the following services in 2013:
 - he is a member of the College de Direction of UMR AGAP
 - he is a member of the management board of IBC (Institut de Biologie Computationnelle de Montpellier)
 - he is a member of the scientific committee of the Environnement-Agromomy department at INRA
 - he is a member of the editorial board of the journal *Frontiers in Plant Sciences*
 - he is the scientific coordinator of the Inria Project Lab (former Action d'Envergure) Morphogenetics
 - he is the scientific coordinator of axis 4 of IBC on imaging and modeling (together with Patrick Lemaire)
 - he was co-chair of the 7th international conference on functional-structural models of plants (FSPM 2013) that was held in Finland in June 2013.
 - he is guest editor for the special issue on FSPMs of the journal *Annals of Botany*.
 - he gave 6 invited talks (4 abroad).
 - he was referee for papers submitted at journals: *Development*, *PNAS*, *Plos Comp Biol*.
- Yann Guédon has rendered the following services in 2013:
 - he is a member of the editorial board of *Annals of Botany* and a member of the ERCIM working group "Computing & Statistics".
 - he was a member of the program committee of the 7th International Workshop on Functional-Structural Plant Models (FSPM 13, Saariselkä, Finlande) and evaluated 8 communications.
 - he participated to the PhD committee of Pierre Gloaguen (Ifremer, Nantes) and Gustavo Malagi (Federal University of Pelotas, Brazil and Montpellier SupAgro).
 - he was a referee for papers submitted to *Signal Processing* and the *Gretsi* conference.
- Frédéric Boudon was referee for papers submitted to *SIGGRAPH*, *SIGGRAPH Asia*, *Sensors*, *Computer Graphics Forum* and *International Journal of modeling and Simulation*.
 - Christian Fournier give a invited talk on graphic programming at the JDEV2013 (Journée nationales du Développement Logiciel 4-5-6 septembre 2013 Ecole polytechnique Palaiseau/Ile-de-France)
- Christophe Pradal has rendered the following services in 2013:
 - he is the scientific coordinator of the Agropolis Foundation project 'OpenAlea software platform'.
 - he is the scientific coordinator of the Inria project ADT 'OpenAlea 2.0'.
 - he is the scientific coordinator of the modeling workpackage of the ANR Blanc Hydro-root.
 - he is a member of the board of the Epiarch network.

- he is an editor of proceeding of the conference Euroscipy [26] that appeared as a special issue of the Journal of Computational Science (JoCS) (together with Gaël Varoquaux and Hans Peter Langtangen).
- he gave 2 invited talks
- he was referee for papers submitted at journals: Journal of Scientific Computing and Annals of Botany.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Master Biostatistics. Jointly with Montpellier 1, Montpellier 2 Universities and Agro-Montpellier. Yann Guédon teaches the stochastic modeling course (<http://www.agro-montpellier.fr/um2/um1/masterbiostatistique>). This involves 21h of M2 classes.

Christophe Godin was responsible for a class of Master 2 on 'Plant modeling' with participation of Yann Guédon, Christophe Pradal, Frédéric Boudon and Christian Fournier at the University of Montpellier 2 (M2 - 25h).

Christophe Godin gave a class of Master 2 on 'Phyllotaxy' in the Master of Biology at the University of Montpellier 2 (M2 - 4h).

Christophe Godin gave a class of Master 2 on 'Plant modeling' in the module plant and animal Morphogenesis of the Master in biology at ENS-Paris organized by Patrick Lemaire (M2 - 4h).

Christophe Godin and Yann Guédon participated to the module iPlant in the Master of bioinformatic and biomathematics (University Cheikh Anta Diop, Dakar, Sénégal) (M2 - 12h).

Christophe Pradal and Christian Fournier taught the Master class "Impact de l'architecture sur la propagation des maladies foliaires" in the module 'Démarches de modélisation' in Montpellier SupAgro (15h).

7.2.2. Supervision

PhD in progress : Mathilde Balduzzi, "*Geometric modeling of plant canopy from 3D scanner images: Combined use of 3D information and reflected intensity for meshing*", Montpellier 2 University, C. Godin, F. Tardieu.

PhD in progress : Jonathan Legrand, "*Hormon signaling and control of morphogenesis during flower development*", ENS Lyon, P. Das, Y. Guedon.

PhD : Jean Peyhardi, "*A new generalized linear model (GLM) framework for analysing categorical data; application to plant structure and development*", Montpellier 2 University. Y. Guédon, C. Trottier.

PhD in progress : Pierre Fernique, "*Hidden transition models for the phenotyping of plant architecture in relation to environmental and genetic factors*", Montpellier 2 University. Y. Guédon, J.-B. Durand.

PhD in progress : Léo Guignard, "*Segmentation, visualization and mechanical modeling of embryonic development in the ascidian*", Montpellier 2 University, C. Godin, P. Lemaire.

PhD in progress : Maryline Lièvre, "*Analysis and multiscale modeling of foliar growth in Arabidopsis thaliana in response to environmental stresses. Implication of the floral transition in the foliar expansion*", Montpellier 2 University, C. Granier, Y. Guédon.

PhD in progress : Guillaume Garin, "*Développement d'un cadre générique de modélisation du couple plante – agent pathogène dans OpenAlea et d'une méthodologie de transfert vers un Outil d'Aide à la Décision*", Montpellier 2 University, C. Robert, B. Andrieu, C. Pradal, C. Fournier.

PhD in progress : Jean-Philippe Bernard, "*Adaptive mechanical model of early flower development based on 4D imaging*", Montpellier 2 University, C. Godin, B. Gilles.

PhD in progress : Beatriz Moreno Ortega, "*Analysis and modeling of metabolic and hormonal controls of lateral root growth during their ontogeny. Application to the impact of water stress on the root architecture*", Montpellier SupAgro, B. Muller, Y. Guédon.

PhD in progress : Sixtine Passot, "*Adaptation of millet root architecture : Phenotyping and spatio-temporal analysis of growing root systems*", Montpellier 2 University, L. Laplace, Y. Guédon.

7.2.3. Juries

Frédéric Boudon was a member of the jury of the PhD defense of Jerome Guenard, from University of Toulouse. Christophe Pradal participated to the PhD committee of Christophe Lecarpentier.

Christophe Godin was a Jury member of the PhD Thesis of Julien Lavenus held in October on the Analysis of the Gene Regulatory Network Controlling Lateral Root Initiation and Patterning Using Systems Biology Approach.

7.3. Popularization

Christophe Godin gave 3 conferences for high-school pupils respectively on plants and fractals and on the Secret Code of Flowers in the context of MathC2+ and fête de la science (6h).

WIMMICS Project-Team

9. Dissemination

9.1. Scientific Animation

Michel Buffa:

was Program Committee member of WWW Workshop about Semantic Web Collaborative Spaces (SWCS).

Elena Cabrío:

was Program Committee chair of CLEF 2013 lab Multilingual Question Answering over Linked Data (QALD-3), and of the 2nd Workshop on Argumentation in Artificial Intelligence and Philosophy: computational and philosophical perspectives (ARGAIP 2013).

She was PC member of the Extended Semantic Web Conference (ESWC 2013), the Association for Computational Linguistics conference (ACL 2013), the Workshop on Web of Linked Entities (WoLe 2013) WWW 2013, the Joint Symposium on Semantic Processing (JSSP-2013).

Olivier Corby :

was Program Committee member of: Conférence de Recherche en Informatique (CRI), Cooking with Computer Workshop at IJCAI, 3rd International Workshop on Graph Structures for Knowledge Representation and Reasoning (GKR'13) at IJCAI, 2nd International Workshop on Querying Graph Structured Data at EDBT/ICDT, Journées Ingénierie des Connaissances (IC);

was reviewer for: ISWC, workshop *Des Sources Ouvertes au Web de Données* (SOS-DLWD) at Plateforme IA;

was reviewer of a project proposal for the ANR;

was invited to give a talk on Semantic Web at a workshop organized by the AnaEE program (CNRS, INRA)¹⁷, december 5-6.

Catherine Faron Zucker :

coorganized a scientific journey on e-learning environments and artificial intelligence, sponsored by the national AFIA and ATIEF associations¹⁸,

is chairwoman of the French conference on Knowledge Engineering IC 2014 which will take place on May 2014¹⁹.

was invited for a talk and a tutorial on the Web of Data and the Semantic Web at JDEV2013 (Journées nationales du Développement Logiciel JDEV); the audience was CNRS, Inria and INRA engineers²⁰,

was invited for a talk on the Web of Data and ontology at a workshop organized by the AnaEE program at the station for experimental ecology; the audience was CNRS and INRA engineers and researchers.

is member of the board of the French association for Artificial Intelligence (AFIA) and participates to its monthly meetings.

She was member of the program committee of:

¹⁷<http://www.anaee-s.fr/>

¹⁸<http://www.irit.fr/EIAH2013/index.php?page=journee-eiah-ia>

¹⁹<http://www.irit.fr/IC2014>

²⁰<http://devlog.cnrs.fr/jdev2013>

Int. Semantic Web Conference (ISWC), Int. Joint Conference on Artificial Intelligence (IJCAI), Int. Conf. on Knowledge Engineering and Ontology Development (KEOD), Int. Conf. on Knowledge and Systems Engineering (KSE), Conférence nationale d'Ingénierie des Connaissances (IC), Workshop on Graph Structures for Representation and Reasoning (GKR), Colloque National (sénégalais) sur la Recherche en Informatique et ses Applications (CNRIA).

Fabien Gandon was:

Publicity chair for ESWC 2013,

Reviewer for Journals: *Intellectica*,

Reviewer for Conferences: EGC ²¹ ESWC ²² Hypertext ²³ IC ²⁴ ICWSM ²⁵ IJCAI ²⁶ ISWC (Senior PC) ²⁷ SAC ²⁸ TOTh ²⁹ VLDB ³⁰ WebSci ³¹ WI ³² WWW ³³

Reviewer for Workshops: MSM ³⁴ PrivOn ³⁵ QetR ³⁶ SPIM ³⁷ SSN Semantic social networks ³⁸ SemanticCities ³⁹ SWCS ⁴⁰ WebS ⁴¹.

Reviewer for project proposals at Digiteo-DigiCosme,

Reviewer of a book for Morgan Kaufmann, an imprint of Elsevier.

Alain Giboin was :

Member of the steering committee of the COOP conference series (International Conferences on the Design of Cooperative Systems),

Member of the program committee of COOP 2014,

Member of the organizing committee of COOP 2014,

Member of the program committee of IC 2013, 24èmes Journées francophones d'Ingénierie des Connaissances, 3-5 July 2013, Lille, France and I-SEMANTICS 2013, The 9th International Conference on Semantic Systems, 4-6 September 2013, Graz, Austria,

Member of the organizing committee of the colloquium eSP 2013 (e-Santé de Proximité), 31 May 2013, Roquefort-les-Pins.

Nhan Le Than organized the First National Workshop on *e-Plateforme de Santé de Proximité* Roquefort-Les-Pins, May 31, (eSP 2013) ⁴². He was AERES expert to examine the diploma projects of the "Marne la Vallée Paris-Est University".

Isabelle Mirbel was Program Committee member of:

²¹<http://www.irit.fr/EGC2013/>

²²<http://2013.eswc-conferences.org/>

²³<http://ht.acm.org/ht2013/>

²⁴<http://pfia2013.univ-lille1.fr/doku.php%3Fid=fr:ic.html>

²⁵<http://www.icwsm.org/2013/>

²⁶<http://ijcai13.org/>

²⁷<http://iswc2013.semanticweb.org/>

²⁸<http://users.marshall.edu/~hanh/SWA2013/>

²⁹<http://www.porphyre.org/toth>

³⁰<http://www.vldb.org/2013/>

³¹<http://www.websci13.org/>

³²<http://cs.gsu.edu/wic2013/wi>

³³<http://www2013.org/>

³⁴<http://oak.dcs.shef.ac.uk/msm2013/>

³⁵<http://privon.semanticweb.org/>

³⁶<http://www.irit.fr/QetR/2013/>

³⁷<http://2013.spim-workshop.org/>

³⁸<http://ufrsciencestech.u-bourgogne.fr/~abrouk/SSN/>

³⁹<http://research.ihost.com/semanticcities13/index.html>

⁴⁰<http://www.swcs2013.org/>

⁴¹<http://www.faw.jku.at/woess/webs/webs.html>

⁴²<http://hal.inria.fr/ESP13>

25th International Conference on Advanced Information Systems Engineering (CAISE 2013), 21st European Conference on Information Systems (ECIS 2013), Seventh IEEE International Conference on Research Challenges in Information Science Doctoral Consortium.

Andrea Tettamanzi served as Program co-chair of the “EvoFin” track of the EvoApplications 2013 conference, and as the chair of EvoTransfer, a technology-transfer event, now in its 2nd edition, in the framework of Evo* 2013, which took place in Vienna in April this year, and is serving in the same capacities for the next edition of 2014 in Granada. He is program co-chair for the area of fuzzy systems for IBERAMIA, the latin American conference on artificial intelligence.

He has served as a referee for the Information Sciences journal, the Applied Soft Computing Journal, the Computational Intelligence journal, the Transactions on Knowledge and Data Engineering, and the Genetic Programming and Evolvable Machines journal.

Finally, he has served or is serving in the program committees of GECCO 2013, GeLiDD 2013, IAT 2013, IJCAI 2013, and PPSN 2014 conferences.

Serena Villata was Program Chair of the 2nd Artificial Intelligence meets the Web of Data workshop (AIImWD-2013) co-located with the ESWC-2013 conference, and of the 2nd Workshop on Argumentation in Artificial Intelligence and Philosophy: computational and philosophical perspectives (ARGAIP 2013), co-located with the AI*IA-2013 Conference. She was PC member of the AAMAS-2013, IJCAI-2013, COREDEMA-2013, TAFA-2013, CLIMA XIV, PRIMA-2013, EUMAS-2013, ICAART-2013. She served as a reviewer for the following international journals: ACM Transactions on Intelligent Systems and Technology, Journal of Logic and Computation, Argument & Computation, Journal of Biomedical Informatics.

9.1.1. Invited Talk

Fabien Gandon:

Semantics and Social Networks for Business Intelligence, SOFSEM, January 28-31.

Le Web 3.0, la culture, les langues, Expolangues conference, February 2, Ministère de la Culture et de la Communication.

Le labyrinthe des évolutions du Web, Centre des Jeunes Dirigeants, Cannes Sophia Antipolis, April 10.

Semantic and Social (Intra) Webs, ICEIS, 2013: <http://www.iceis.org>

Panel *Information Systems in the Enterprise of the future: what place for Models, Services, and Semantics?*, ICEIS, 2013: <http://www.iceis.org> Panel "Open Data in Science", conference i-KNOW 2013.

Quand le lien fait sens, Conference BLEND, Lyon, October 2.

Données de la culture et culture de la donnée, Conférence Automne Numérique, *Transmettre la culture à l'ère numérique*, November 7, Ministère de la Culture et de la Communication, Microsoft Campus.

Le Web au prisme de la ressource, Séminaire Nouvelles formes d'éditorialisation, IRI, la revue Sens Public et l'Université de Montréal, centre Georges Pompidou, November 28.

Bridging formal semantics and social semantics on the Web, SMAP 2013, December 12, <http://www.smap2013.org>

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : **Nhan Le Thanh**, *Web programming*, 30h, L1 & L2, IUT UNS.

Licence : **Nhan Le Thanh**, *Design tools and programming relational DBMS*, 105h, L2, IUT UNS.

Licence : **Nhan Le Thanh**, *Theoretical basis of Computation*, 45h, L2, IUT UNS.

Licence : **Olivier Corby**, **Catherine Faron Zucker**, *Semantic Web*, 36h, L3, IUT UNS.

Licence : **Catherine Faron Zucker**, *Programmation par Objets et algorithmique*, 130h, L3, UNS.

- Licence : **Catherine Faron Zucker**, *Statistics for Data Analysis*, 39h, L3, UNS.
- Licence : **Maxime Lefrançois**, *Java*, 45H, L2, IUT UNS.
- Licence : **Maxime Lefrançois**, *SGBD Java*, 68H, L2, IUT UNS.
- Licence : **Maxime Lefrançois**, *UML*, 48H, L2, IUT UNS.
- Licence : **Maxime Lefrançois**, *Multimedia Web*, 10H, L3, IUT UNS.
- Licence : **Maxime Lefrançois**, *Semantic Web*, 20H, L3, IUT UNS.
- Licence : **Nhan Le Thanh**, *Logical Data Models and languages*, 24h, L3, IUT UNS.
- Licence : **Nhan Le Thanh**, *Design and Development of DBMS services*, 24h, L3, IUT UNS.
- Licence : **Nhan Le Thanh**, *Architecture of Software Engineering*, 12h, L3, IUT UNS.
- Licence : **Isabelle Mirbel**, *Databases*, 63h, L3, UNS.
- Licence : **Andrea Tettamanzi**, *Introduction au Web*, 37h, L1, UNS.
- Licence : **Andrea Tettamanzi**, *Algorithmique – Programmation Objet – Python*, 50h, L2, UNS.
- Master : **Michel Buffa**, *Web Technologies*, 40h, M1, UNS.
- Master : **Michel Buffa**, *Distributed Web Development*, 40h, M2, UNS.
- Master : **Michel Buffa**, *Java Certification*, 25h, M2, UNS.
- Master : **Michel Buffa**, *Plasticity of User Interfaces, HTML5* 8h, M2, Polytech UNS.
- Master : **Michel Buffa**, *New Interaction Means, HTML5*, 8h, M2, Polytech UNS.
- Master : **Elena Cabrio, Catherine Faron Zucker, Fabien Gandon, Andrea Tettamanzi, Serena Villata**, *Knowledge Engineering*, 20h, M2, PolyTech Nice, UNS.
- Master : **Elena Cabrio**, *XML Technologies*, 16h, M1, MIAGE UNS.
- Master : **Olivier Corby, Fabien Gandon, Catherine Faron Zucker**, *Semantic Web*: 45h, M2, PolyTech Nice, UNS.
- Master : **Catherine Faron Zucker**, *Document Languages: XML, XSD & XSL*, 24h, M1, UNS.
- Master : **Catherine Faron Zucker**, *Document Languages: XML, XSD & XSL*, 32h, M2, UNS.
- Master : **Catherine Faron Zucker**, *HTML 5*, 18h, M1, UNS.
- Master : **Catherine Faron Zucker**, *Network Programming*, 12h, M1, UNS.
- Master : **Fabien Gandon**, *Web Sémantique ou comment se déploient sur le Web les données liées et la sémantique de leurs schémas*, 2H, M2, Ecole Centrale Paris.
- Master : **Alain Giboin**, *Human-Computer-Interaction (HCI) Design and Evaluation*: 35h, M2, PolyTech 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**, *Economics and ICT: Ergonomics*, 15h, M2, UNS.
- Master : **Isabelle Mirbel**, *Requirement Engineering*, 42h M1, UNS.
- Master : **Isabelle Mirbel**, *Advanced databases*, 78h, M1, UNS.
- Master : **Andrea Tettamanzi**, *Distributed Systems*, 18h, M1, UNS.
- Master : **Andrea Tettamanzi**, *Concurrency and Parallelism*, 18h, M1, UNS.

Catherine Faron Zucker is responsible of the course of study *Knowledge and Information Systems* in Master 2 IFI from University of Nice Sophia Antipolis and the fifth year of the computer Science department of the engineer school Polytech Nice Sophia.

She is tutoring 3 internships of the Polytech engineering school at UNS and 4 apprentices in Master (30h).

Together with **Isabelle Mirbel, Elena Villata** supervises the “Projet de Fin d’Etudes” (PFE) of two students (i.e. Abdoul Macina (Master KIS) and Margot Bastaert (Master AL)). The subject is the design and development of a socio-semantic recommendation system for a carpooling application.

Nhan Le Thanh is responsible of Licence LPSIL IDSE (Informatique Distribuée et Systèmes d'information d'Entreprise) at UNS.

Isabelle Mirbel was *Vice-Dean* of Science departement at UNS in charge of Professional Insertion and *Vice-Head* of MIAGE at UNS.

Andrea Tettamanzi has participated in the successful submission of a proposal for an Erasmus Mundus student and staff mobility project with East Asia (EMMA East 2014, EACEA Project no. 2013-2539), wich was awarded by the European Commission a funding of EUR 3,049,575 over three years. He is now serving as deputy co-ordinator of this project, which started on October 1.

9.2.2. Tutorial

Michel Buffa:

HTML5, Online course for W3DevCapus.com, the online classrooms provided by the W3C. Sessions happened in March 2013, June 2013, September 2013 and last 6 weeks.

HTML5/JavaScript, ISN days for high school math teachers.

HTML5 course given to CNRS engineers (2-4 december 2013).

HTML5, W3C tutorial, 22nd International World Wide Web Conference (WWW 2013), May 2013, Rio de Janeiro, Bresil.

HTML5, JDEV, 4-6 September, Ecole polytechnique.

Les nouveautés de HTML5, Blend Web Mix conference, 1-2 October 2013, Lyon, France.

Les possibilités de HTML5, conférence Paris Web, 10-12 October 2013, Paris, France.

Fabien Gandon:

An Introduction to Semantic Web and Linked Data, W3C tutorial, 22nd International World Wide Web Conference (WWW 2013), May, Rio de Janeiro, Bresil.

9.2.3. PhD Supervision

PhD: **Franck Berthelon**, *Emotional State Detection from Electroencephalogram Data for "Serious Games"*, UNS, December 16, Peter Sander ;

PhD: **Khalil Bouzidi**, *Semantic Web Approach to Support the Creation of Technical Regulatory Documents in Building Industry*, UNS, CSTB, September 11, Nhan Le Thanh, Catherine Faron Zucker, Bruno Fies.

PhD: **Luca Costabello**, *Mobile Access to the Web of Data*, Inria, UNS, November 29, Fabien Gandon, Ivan Herman.

PhD: **Imen Tayari**, *Representation, Annotation and Detection of Emotions in Multimodal Signals*, Sfax, UNS, April 12, Nhan Le Thanh and Chokri Ben Amar.

PhD in progress : **Pavel Arapov**, *Semantic Application Wiki*, UNS, Michel Buffa, Nhan Le Thanh ;

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 : **Papa Fary Diallo**, *Co-Construction of Community Ontologies and Corpus in a Limited Technological Environment*, Inria, UNS, UGB, Isabelle Mirbel, Olivier Corby, Moussa Lo;

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 ;

PhD in progress : **Corentin Follenfant**, *Usage semantics of analytics and Business Intelligence tools*, UNS, SAP, Fabien Gandon, Olivier Corby, David Trastour;

PhD in progress : **Amine Hallili**, *Assistant Conversational Agents with Natural Language and Intuition*, UNS, Catherine Faron, Fabien Gandon;

- PhD in progress : **Rakebul Hasan**, *Explanations for Social Semantic Web*, UNS, Fabien Gandon;
- PhD in progress : **Maxime Lefrançois**, *Collaborative Multilingual Management of Interlingual Knowledge Bases*, Inria, UNS, Fabien Gandon, Christian Boitet;
- PhD in progress : **Nicolas Marie**, *Pervasive sociality through social objects*, Alcatel Lucent Bell Labs, Fabien Gandon, Myriam Ribière;
- PhD in progress : **Zide Meng**, *Temporal and semantic analysis of richly typed social networks from user-generated-content sites on the Web*, UNS, Fabien Gandon, Catherine Faron Zucker;
- PhD in progress : **Thi Hoa Hue Nguyen**, *Semantic Mappings with a Dataflow-based scientific workflow : an approach to develop dataflow applications using knowledge-based systems*, Vietnam, Nhan Le Thanh;
- PhD in progress : **Tuan Anh Pham**, *Study and integrate the mechanism of workflow control in MVC architecture: design and implement an APM (Activity Process Management) platform for dynamic information systems on the networks*, UNS, Nhan Le Thanh;
- PhD in progress : **Oumy Seye**, *Rules for the Web of Data*, University Gaston Berger, Saint-Louis, Sénégal, Olivier Corby, Catherine Faron Zucker, Moussa Lo.

9.2.4. Internship

- Nafissa Belhoussine**, *Highlighting Stakeholders Communities in Collaborative Software Development Platforms*, M2 MIAGE MBDS, UNS, from Feb until Aug.
- Amel Ben Othmane**, *WikiNEXT comme Plateforme de démonstration pour des applications Web sémantiques*, Master2 MBDS UNS, from Apr until Sep.
- Thibaut Comte**, *Reador : Conception de l'IHM d'un agrégateur et analyseur de news*, Licence Miage, UNS, from May until Aug.
- Antoine Dailly**, *A Study on Semantic Similarity Metrics for a Question Answering System*, L3, École Normale Supérieure de Lyon, from June until August.
- Romain Gugert**, *Scénarisation d'interactions avec les objets du formalisme des Graphes d'Unités et prototypage d'un éditeur de définitions lexicographiques formelles*, Master 2 IAD C2IHM, University Pierre et Marie Curie (Paris VI), from Apr until Sep.
- Amine Hallili**, *Study and development of a question answering system for French*, Master MIAGE UNS, from March until Aug.
- Damien Legrand**, *Discovery Hub User Interface* from Mar until Aug.
- Abdoul Macina**, *SPIN and SQL Pretty Printing*, Master 1 UNS, from Jun until Aug.
- Bastien Maria**, *Connecteur API twitter et API du journal "The Guardian"* Master 1 UNS, from May until Aug.
- Célia Ormea**, *Caddie ou cabas comme dispositif d'assistance aux personnes âgées et fragilisées : étude d'un point de vue ergonomique*, Master "Sociologie et Ergonomie des technologies numériques", UNS, from Mar until Aug.
- Vivek Sachidananda**, *QAKiS System Multimedia Answers Visualization*, in collaboration with R. Troncy Eurecom, from Sept.
- Nicolas Sartori**, *Visualizing Stakeholders Communities in Collaborative Software Development Platforms*, L3 MIAGE UNS, from May until Aug.
- Iacopo Vagliano**, *Web Application for Shi3ld Access Control Policies* from Mar until Sep, Politecnico di Torino, Italy.

9.2.5. Juries

Fabien Gandon was member of Juries:

Andrei Vlad Sambra: *Data Ownership and Interoperability for a Decentralized Social Semantic Web*, PhD Thesis, Telecom SudParis, University Pierre et Marie Curie.

Gaoussou Camara: *Conception d'un système de veille épidémiologique à base d'ontologies – Application à la schistosomiase au Sénégal*, PhD Thesis, University Pierre et Marie Curie and University Gaston Berger.

Benjamin Renoust: *Analysis and Visualisation of Edge Entanglement in Multiplex Networks*, PhD Thesis, University of Bordeaux.

Rallou Thomopoulos : *Aide à la décision dans les filières agroalimentaires*, HdR, Université Montpellier II.

Nhan Le Thanh was reviewer of the PhD thesis of Emilien Bondu, *Contribution à la veille stratégique : Système d'aide à la capitalisation et à l'exploitation de connaissances expertes*, INSA Rouen, November 5.

Catherine Faron Zucker was jury member of the PhD thesis of Alban Gaignard, was member of a selection committee of the University of Grenoble (UPMF) for the recruitment of an associate professor.

Isabelle Mirbel was Reviewer of PhD Thesis:

Cheikh Ahmed Tidiane Niang, *Vers plus d'automatisation dans la construction de systèmes médiateurs pour le Web sémantique - une application des logiques de description*, University Gaston Berger, Saint-Louis, Sénégal, July 5th.

Michal Krzysztof Szczerbak, *Collaborative situation awareness*, Télécom Bretagne, September 18th.

Camille Pradel, *D'un langage de haut niveau à des requêtes graphes permettant d'interroger le Web sémantique*, Université Toulouse 3 Paul Sabatier, December 12th.

9.3. Popularization

Julien Cojan presented *DBpedia: Wikipédia pour les machines* at café-in seminar, Inria Sophia Antipolis, June 27,⁴³

Fabien Gandon:

Le Web sémantique comment ça marche ?, Mines d'Alès, Nîmes, Communication science et société, February 12.

Web sémantique: ou comment se déploient sur le Web les données liées et la sémantique de leurs schémas, Total, February 27.

Le Web de Demain, médiation scientifique, Lycée Guillaume Apollinaire Nice, March 26.

Le Web Sémantique, interview Graphemeride, April 15.

Le Web sémantique, Sophia/Metropole Mag, June.

Web de données et Web sémantique, ressources ubiquitaires pour nos villes et territoires Innovative City Convention, June 18-19.

Web: terra incognita, Nuit des chercheurs, Alès, September 27.

Interview for the magazine *Documentaliste SI* Doc-SI n°3-2013 Webinaire *Roger Pédaque II*, October 10.

Maxime Lefrançois participated to the Science Festival - October 10th to 14th, 2012 - with the Association des Jeunes Chercheurs des Alpes Maritimes (AJC06). He conceived and animated scientific experiences on different energy sources.

We welcomed a scholar for a visit of one week, December 16-20.

⁴³<https://project.inria.fr/mastic/cafe-in-27-juin-wikipedia-pour-les-machines/>

ZENITH Project-Team

9. Dissemination

9.1. Scientific Animation

Participation in the editorial board of scientific journals:

- VLDB Journal: P. Valduriez.
- Journal of Transactions on Large Scale Data and Knowledge Centered Systems, R. Akbarinia.
- Proceedings of the VLDB Endowment (PVLDB): E. Pacitti.
- Distributed and Parallel Databases, Kluwer Academic Publishers: 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-Verlag): P. Valduriez.
- Ingénierie des Systèmes d’Information, Hermès : P. Valduriez.

Participation to the organization of conferences and workshops:

- Alexis Joly and Julien Champs were chair of the video program track of ACM Multimedia 2013
- Alexis Joly co-organized ImageCLEF 2013 workshop (within CLEF 2013 conference)
- Alexis Joly co-organized a special session on Image Processing and Pattern Recognition for Ecological Applications at ICIP 2013
- Alexis Joly organized a workshop in the context of the French ISIS working group on large-scale multimedia data linking and mining (Liage, structuration et fouille de grandes données multimédia)
- Alexis Joly co-organized the OT-Media Workshop on Big Data for Media Analysis

Participation in conference program committees :

- ACM SIGMOD Conf. 2014: R. Akbarinia, P. Valduriez (area chair)
- Int. Conf. on Extending DataBase Technologies (EDBT), 2014: R. Akbarinia, A. Joly, F. Masegla
- IEEE Int. Conf. on Data Engineering (ICDE) 2014: P. Valduriez
- Int. Conf. on Middleware 2012: E. Pacitti
- IDEAS 2013: P. Valduriez
- Brazilian e-Science Workshop 2013: E. Pacitti
- Journées Bases de Données Avancées (BDA) 2013: A. Joly
- Int. Workshop on Open Data, 2013: P. Valduriez
- ACM Multimedia, 2013: A. Joly
- ACM Int. Conf. on Multimedia Retrieval (ICMR), 2013: A. Joly
- CLEF 2013, 2014: A. Joly
- Int. Conf. on Multimedia Modeling 2013: Alexis Joly
- ACM Symposium On Applied Computing (ACM SAC, Data Stream track), 2013: F. Masegla
- Conférence Internationale Francophone sur l’Extraction et la Gestion de Connaissance (EGC), 2013: F. Masegla
- IEEE Int. Conf. on Data Mining (ICDM), 2013: F. Masegla
- Int. Pacific-Asia Conf. on Knowledge Discovery and Data Mining (PAKDD), 2013: F. Masegla
- Pacific-Rim Conference on Multimedia (PCM), 2013: A. Joly
- International Conference on Similarity Search and Applications (SISAP), 2013: A. Joly
- Ubiquitous Data Mining (UDM), held by the International Joint Conference on Artificial Intelligence (IJCAI) 2013 : F. Masegla
- Extraction et Gestion des Connaissances : F. Masegla

Journal reviewing:

- VLDB Journal: A. Joly
- IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI): A. Joly
- IEEE transactions on multimedia: A. Joly
- Journal of Mathematical Imaging and Vision (JMIV): A. Joly
- Transactions on Knowledge and Data Engineering: A. Joly
- EURASIP Journal on Image and Video Processing: A. Joly
- Computer Vision and Image Understanding Journal: A. Joly
- ACM Trans. on Database Systems: E. Pacitti
- Knowledge and Information Systems (KAIS): F. Masseglia

Other activities (national):

- The members of Zenith have always been strongly involved in organizing the French database research community, in the context of the I3 GDR and the BDA conference.
- Patrick Valduriez gave a seminar on “Parallel Techniques for Big Data” at IBC, Montpellier, and a tutorial on the same topic at BDA 2013. He also gave a seminar in the Morgenstern series in Sophia-Antipolis on “Cloud and Bigdata: a perfect marriage?”.

Other activities (international):

- Alexis Joly was one of the 6 panelists of ACM Multimedia 2013 panel on cross-media analysis and mining.
- Reza Akbarinia and Florent Masseglia gave a talk on BigdataNet project whose objective is to develop a hybrid P2P-Cloud platform, at the Berkeley Inria Stanford (BIS2013) workshop at Stanford in May.
- Esther Pacitti and Patrick Valduriez gave talks on search and recommendation, and scientific workflow management, respectively, at LBL, Berkeley, in June.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Most permanent members of Zenith teach at the Licence and Master degree levels at UM2.

Reza Akbarinia:

- Master Research: Large scale data management, 7.5h, level M2, Faculty of Science, UM2
- Master : Distributed Data Management, 9h, level M1, Faculty of Science, UM2
- Licence: Computing Tools, 54h, Level L3, Faculty of Science, UM2

Florent Masseglia:

- Master Research: Large scale data management, 3h, level M2, Faculty of Science, UM2

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
- Master Research: Large scale data management, 4,5h, level M2, Faculty of Science, UM2

Didier Parigot:

Master Research: Large scale data management, 9h, level M2, Faculty of Science, UM2

Patrick Valduriez:

Master Research: Large scale data management, 12h, level M2, Faculty of Science, UM2

Professional: Distributed Information Systems, 50h, level M2, Capgemini Institut

Professional: XML, 40h, level M2, Orsys Formation

Alexis Joly:

Master Research: Large scale data management, 6h, level M2, Faculty of Science, UM2

9.2.2. Supervision

- PhD in progress: Yoann Couillec, Langages de programmation et données ouvertes, started oct. 2012, Univ. Nice Sophia-Antipolis, Advisors: Manuel Serrano and Patrick Valduriez
- PhD in progress : Ji Liu, Scientific Workflows in Multisite Cloud, started oct. 2013, UM2, Advisors: Esther Pacitti and Patrick Valduriez
- PhD in progress : Saber Salah, Optimizing a Cloud for Data Mining Primitives, started nov. 2012, UM2, Advisor: Florent Masegla, co-advisor: Reza Akbarinia
- PhD in progress : Maximilien Servajean, Decentralized and Personalized Recommendation Protocols for Content Sharing: application to phenotyping, started oct. 2011, UM2, Advisor: Esther Pacitti, co-advisor: Pascal Neveu
- PhD in progress : Naser Ayat, Uncertain Data Integration, started sept. 2010, University of Amsterdam, Netherlands, Advisors: Hamideh Afsarmanesh and Patrick Valduriez, co-advisor: Reza Akbarinia
- PhD in progress : Valentin Leveau, Supervised content-based information retrieval in big multimedia data, started April 2013, University of Montpellier, Advisor: Patrick Valduriez, co-advisor: Alexis Joly and Olivier Buisson

9.2.3. Juries

Members of the team participated to the following Ph.D. committees:

- R. Akbarinia: Miguel Liroz (UM2);
- F. Masegla: Cassio Melo (Ecole Centrale Paris, committee chair), Yasin Amanullah (Polytech Nantes, Reviewer);
- E. Pacitti: Mohamed Reda Bouadjenek (UVSQ), Miguel Liroz (UM2), Housseem Chihoub (Univ. Rennes 1) ;
- P. Valduriez: Jonas Dias (UFRJ, Rio de Janeiro), Gylfi por Gudmundsson (Univ. Rennes 1, Reviewer), Miguel Liroz (UM2), Asterios Katsifodimos (Univ. Paris Sud), Viet-Trung Tran (ENS Rennes).

9.3. Popularization

Zenith participated to the following events in France:

- “La fête de la science” (Montpellier), with the animation of a stand at Genopolys (a science village). We received 7 groups from Oct. 10 to Oct. 11, and then a wider audience on Oct. 12. With this stand, we have participated in the effort of relaunching LIRMM’s activities for this major event in science popularization.
- “Futur en Seine 2013” (Paris, <http://www.futur-en-seine.fr/fens2013/>) with the co-animation of the stand for the presentation of Interstices’ activities.
- annual seminar of the “mecsci” workgroup of Inria, Paris (CNAM) on January 30 and 31 [47].

F. Masseglia is a member of the editorial committee, and contributor, of interstices (<https://interstices.info>), and a member of the scientific committee for the edition of “Datagramme”, the game from Inria on science popularization. He has given a 3 days training to elementary school teachers. This event, called “Graines de sciences” (Ecole de Physique des Houches, <http://www.fondation-lamap.org/fr/graines-de-sciences>) was funded by “La main à la pâte” (<http://www.fondation-lamap.org/>), a French foundation dedicated to science popularization based on manual activities. The goal, here, was to give a 3h training to groups of a dozen of teachers, by mainly using games and activities they would be able to transfer in their classrooms.

A. Joly presented the PI@ntNet project and the resulting iPhone application in several events including the "Salon de l'agriculture 2013", "Les assises de la biodiversité", "Journée thématique du CNRS autour des usages mobiles de l'information scientifique dans l'Enseignement Supérieur et la Recherche", "Rencontres Agropolis", "journée des nouveaux arrivants de l'Inria", "journées INRA/Inria", etc. Many news media articles, blogs, TV news and twitts also reported on PI@ntNet (typing "PI@ntNet" on Google is the best way to get most of them). Finally a movie was realized in collaboration with Interstices (⁸).

⁸<http://videotheque.inria.fr/videotheque/media/browse/2>