Activity Report 2016

Section Dissemination

ARIC Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

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

9.1.1.2. Member of the Organizing Committees

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

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

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

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

9.1.2.2. Member of the Conference Program Committees

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

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

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

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

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

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

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

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

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

9.1.4. Invited Talks

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

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

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

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

9.1.5. Leadership within the Scientific Community

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

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

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

9.1.6. Scientific Expertise

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

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

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

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

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

9.1.7. Research Administration

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

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

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

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

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

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

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

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

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

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

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

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

9.2.2. Supervision

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

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

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

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

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

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

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

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

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

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

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

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

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

9.2.3. Juries

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

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

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

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

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

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

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

9.3. Popularization

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

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

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

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

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

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Alain Darte is general chair of the steering committee of CPC (International Workshop on Compilers for Parallel Computing), which regroups in Europe, every 18 months, a large community of researchers interested in compilers for HPC. He participated to CPC'16 in Valladolid in July 2016.

10.1.1.2. Member of the Organizing Committees

Tomofumi Yuki was co-organizer of IMPACT'16 (International Workshop on Polyhedral Compilation Techniques, http://impact.gforge.inria.fr/impact2016/) with Michelle Strout (University of Arizona).

10.1.1.3. Spring School on Numerical Simulation and Polyhedral Compilation

Alain Darte (with the help of Tomofumi Yuki for the program) co-organized with Violaine Louvet (Institute Camille Jordan in Lyon, now lead of UMS Gricad in Grenoble) a second polyhedral spring school, May 9-13 2016, targeting both the polyhedral community and HPC users from numerical analysis. This spring school has been labelled (and funded) as a CNRS interdisciplinary spring school (https://mathsinfohpc.sciencesconf. org/), with a total budget of roughly 39 Keuros, including funding from Labex MILYON, CNRS, GDR Calcul, ENS, LIP, and registrations fees, which were kept low to keep the spirit of the first spring school on polyhedral code analysis and optimizations.

This second spring school was motivated by the need for a more global approach for HPC applications, that combines the design of numerical methods with extensive hardware considerations, in interaction with languages and compilers, so as to take into account both the complexity of architectures and the needs of their non-expert users. Research communities in computer science (architecture, compilation) and applied mathematcs (numerical simulation) are not always aware of this need; at least their work do not always spread enough across the other discipline to lead to mutual influence. Automatic code optimizations and tools also require a better evaluation of their applicability. The goal of this research school – or meeting place of two communities – was to make the link between some of the most recent advances on automatic program optimizations (in particular polyhedral techniques and tools) and applied mathematics (schemes for numerical simulation), in relation with application needs. This school was therefore interdisciplinary, with a strong will to bring communities together on the common theme of supercomputing.

We finally opted for a single track instead of parallel sessions, which helped federate the two communities. The school included courses on architectures (M. Haefele, Maison de la simulation), on numerical schemes in connection with stencils (T. Dumont, ICJ), on simulation methods (discontinuous Galerkin) in particular for GPU (P. Helluy, Strasbourg), on polyhedral techniques and tiling (A. Darte, Compsys), on some polyhedral compilers such as Pluto (U. Bondhugula, Bangalore) and PPCG (S. Verdoolaege, ENS), on the roofline model for performance analysis (M. Püschel, ETH Zürich), on stencils and tensors optimizations (Ramanujam, Baton Rouge), on numerical precision (C. Rubio-Gonzalez, UC Davis), plus some additional talks on reproducibility, applications, the ECM model, etc. The school was a success, with 71 participants, roughly half from each community, with 29 coming from abroad (Italy, Algeria, USA, India, Canada, Germany, Croatia, Switzerland, Austria, Belgium), and a majority (37) being PhD students.

The future will tell if our objectives have been reached, i.e., if the two communities will interact more on the long term and rethink their work with an interdisciplinary look, to invent new computing schemes and compilers more suitable for the constraints of today's architectures, in particular their memory hierarchy and locality needs. In Compsys at least, one can already see some moves in this direction, with the interdisciplinary internship of Julien Versaci co-advised by Tomofumi Yuki, the participation of Alain Darte as a referee to the PhD jury of T. Gasc (CEA, Maison de la Simulation, ENS Cachan), a planned seminar by Alain Darte at Maison de la Simulation in early 2017, starting exchanges with the LMGC lab (Montpellier) on their applications, and a planned mini-symposium, following the line of this spring school, at SMAI 2017.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

In addition to the organization, Tomofumi Yuki was program co-chair of IMPACT'16, with Michelle Strout (University of Arizona).

10.1.2.2. Member of the Conference Program Committees

Alain Darte was a member of the program committee of HPCS'16 (International Conference on High Performance Computing & Simulation) and will be member of the program committee of PACT'17 (International Conference on Parallel Architectures and Compilation Techniques).

Paul Feautrier was a member of the program committees of IMPACT'16 and IMPACT'17.

Tomofumi Yuki was a member of the program committees of SC'16, X10 Workshop'16, IMPACT'16, and IMPACT'17.

10.1.2.3. Reviewer

Alain Darte, Paul Feautrier, and Tomofumi Yuki were reviewers for the different program committees to which they participated.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

No participation to journal editorial boards in 2016.

10.1.3.2. Reviewer - Reviewing Activities

Alain Darte was a reviewer for the "Software, Practice, and Experience" journal.

Paul Feautrier was a reviewer for the "International Journal of Parallel Programming".

Tomofumi Yuki was a reviewer for the TACO, TOPLAS, JPDC, and TPDS journals.

10.1.4. Invited Talks

Alain Darte was invited to give a talk on "Liveness Analysis in Explicitly-Parallel Programs" at ScalPerf'16 in Bertinoro (Italy), Sep. 2016.

Paul Feautrier was invited to give a talk (in two parts) "Toward A Polynomial Model with Application to the OpenStream Language" at the second and third LCS (Language, Compilation, Semantics) LIP seminars, in June and November 2016.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master:

- Paul Feautrier was invited to give a talk on "New Architectures, New Compilations Problems", at the student seminar for the IMAG M2 course, Grenoble, December 5, 2016.

Spring/Summer Schools:

- Alain Darte, as part of the spring school on numerical simulation and polyhedral compilation, gave a half-day course on "Introduction to Automated Polyhedral Code Optimizations and Tiling", see https://mathsinfohpc.sciencesconf.org.
- Tomofumi Yuki, a part of the École Jeunes Chercheurs en Programmation 2016, gave a half-day course on "Research in Compilers and Introduction to Loop Transformations", see http://ejcp2016.univ-lille1.fr/.

10.2.2. Supervision

PhD: Guillaume Iooss, "Detection of linear algebra operations in polyhedral programs" [16], joint PhD ENS-Lyon/Colorado State University, started Sep. 2011, defended July 1st, 2016, advisors: Christophe Alias and Alain Darte (ENS-Lyon) / Sanjay Rajopadhye (Colorado State University).

PhD: Alexandre Isoard, "Extending Polyhedral Techniques towards Parallel Specifications and Approximations" [17], ENS-Lyon, started in Sep. 2012, defended July 5th, 2016, advisor: Alain Darte.

Guillaume Iooss is now post-doc in the Parkas team, while Alexandre Isoard is R&D engineer at Xilinx (Dublin, Ireland, then San Jose, Ca).

10.2.3. Juries

Alain Darte was one of the two reviewers of the PhD of Thibault Gasc (CEA DAM DIF, Maison de la Simulation, November 2016), entitled "Modèles de performance pour l'adaptation des méthodes numériques aux architectures multi-cœurs vectorielles. Application aux schémas Lagrange-Projection en hydrodynamique compressible". He was also member of the juries of the PhD of Alexandre Isoard, as adviser, and of Guillaume Iooss as administrative co-adviser.

10.3. Popularization

The interdisciplinary spring school organized in May 2016 (see Section 10.1) is a form of popularization of compiler technology (in particular polyhedral optimizations) towards HPC users from the numerical simulation community.

<p align="center">**CONVECS Project-Team**</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- H. Garavel is a member of the model board [0] of MCC (*Model Checking Contest*). In 2016, he helped preparing new models (especially those in the NUPN format) and verified, using the CÆSAR.BDD tool of CADP, the forms describing all benchmark models submitted by the contest participants; this revealed a number of inconsistencies. The mission and activities of the model board are described in a journal paper [15].

- Together with Peter Höfner (Data61, CSIRO, Sydney, Australia), H. Garavel set up a model repository (hosted on the Gforge of Inria) to collect and archive formal models of real systems; this infrastructure is used by the series of MARS workshops [0]. The first model deposited in this repository was W. Serwe's description in LOTOS and LNT of an asynchronous circuit implementing the Data Encryption Standard.

- G. Salaün is member of the steering committee of the SEFM (*International Conference on Software Engineering and Formal Methods*) conference series since 2014.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

- R. Mateescu was the tool chair of TACAS'2016 (*22th International Conference on Tools and Algorithms for the Construction and Analysis of Systems*), Eindhoven, The Netherlands, April 2–8, 2016.

- G. Salaün was co-chair of SVT-SAC'2016 (the *Software Verification and Testing* track of the *31st ACM Symposium on Applied Computing*), Pisa, Italy, April 4–8, 2016.

9.1.2.2. Member of the Conference Program Committees

- H. Garavel was program committee member of the 6th FMF (*Forum Methodes Formelles*), Toulouse-Grenoble-Saclay, France, January 26, 2016.

- F. Lang was program committee member of GaM'2016 (*Graphs as Models*), Eindhoven, The Netherlands, April 2–3, 2016.

- G. Salaün was program committee member of SOAP-SAC'2016 (the *Service-Oriented Architecture and Programming* track) of SAC'2016, Pisa, Italy, April 4–8, 2016.

- R. Mateescu was program committee member of SPIN'2016 (*23rd International SPIN Symposium on Model Checking of Software*), Eindhoven, The Netherlands, April 7–8, 2016.

- G. Salaün was program committee member of CIEL'2016 (*5ème Conférence en IngénieriE du Logiciel*), Besançon, France, June 7, 2016.

- G. Salaün was program committee member of COMPSAC'2016 (*40th IEEE International Conference on Computers, Software and Applications*), Atlanta, Georgia, USA, June 10–14, 2016.

- G. Salaün was program committee member of WWV'2016 (*12th International Workshop on Automated Specification and Verification of Web Systems*), Porto, Portugal, June 26, 2016.

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[0]http://mcc.lip6.fr/models.php
[0]http://www.mars-workshop.org/

- H. Garavel and G. Salaün were program committee members of SEFM'2016 (*14th International Conference on Software Engineering and Formal Methods*), Vienna, Austria, July 4–8, 2016.
- G. Salaün was program committee member of RV'2016 (*16th International Conference on Runtime Verification*), Madrid, Spain, September 23–30, 2016.
- R. Mateescu was program committee member of FMICS-AVoCS'2016 (*International Workshop on Formal Methods for Industrial Critical Systems and Automated Verification of Critical Systems*), Pisa, Italy, September 26–29, 2016.
- H. Garavel was program committee member of HILT'2016 (*Workshop on High Integrity Language Technology*), Pittsburgh, PA, October 6–7, 2016.
- R. Mateescu was program committee member of ICTSS'2016 (*28th International Conference on Testing Software and Systems*), Graz, Austria, October 17–19, 2016.
- G. Salaün was program committee member of FACS'2016 (*13th International Conference on Formal Aspects of Component Software*), Besançon, France, October 19–21, 2016.

9.1.2.3. Reviewer

- G. Barbon was a reviewer for COMPSAC'2016, SVT-SAC'2017, and FSEN'2017 (*7th IPM International Conference on Fundamentals of Software Engineering*), Tehran, Iran, April 26–28, 2017.
- H. Garavel was a reviewer for SPIN'2016.
- F. Lang was a reviewer for FORTE'2016 (*36th IFIP International Conference on Formal Techniques for Distributed Objects, Components and Systems*), Heraklion, Crete, Greece, June 6–9, 2016.
- R. Mateescu was a reviewer for FACS'2016 and SEFM'2016.
- G. Salaün was a reviewer for DAIS'2016 (*16th IFIP International Conference on Distributed Applications and Interoperable Systems*), Heraklion, Crete, Greece, June 6–9, 2016.
- W. Serwe was a reviewer for SEFM'2016, FMICS-AVoCS'2016, RV'2016, and DATE'2017 (*20th International Conference on Design, Automation and Test in Europe*), Lausanne, Switzerland, March 27–31, 2017.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- H. Garavel is an editorial board member of STTT (*Springer International Journal on Software Tools for Technology Transfer*).

9.1.3.2. Reviewer - Reviewing Activities

- G. Barbon was a reviewer for JSS (*Journal of Systems and Software*).
- H. Garavel was a reviewer for the Mathematical Reviews (MathSciNet) of the American Mathematical Society.
- F. Lang was a reviewer for STTT.
- R. Mateescu was a reviewer for Acta Informatica and STTT.
- G. Salaün was a reviewer for IJCIS (*International Journal of Cooperative Information Systems*), JLAMP (*Journal of Logic and Algebraic Methods in Programming*), IEEE TSE (*Transactions on Software Engineering*), and TSI (*Technique et Science Informatiques*).
- W. Serwe was a reviewer for SPE (*Journal on Software: Practice and Experience*) and STTT.

9.1.4. Software Dissemination and Internet Visibility

The CONVECS project-team distributes several software tools: the CADP toolbox (see § 5.1), the TRAIAN compiler (see § 5.2), the PIC2LNT translator, the PMC model checker, and the DLC compiler.

In 2016, the main facts are the following:

- We prepared and distributed twelve successive versions (2016-a to 2016-l) of CADP.

- A new version 2.8 of TRAIAN was released on February 29, 2016.

- We were requested to grant CADP licenses for 507 different computers in the world.

The CONVECS Web site [0] was updated with scientific contents, announcements, publications, etc.

By the end of December 2016, the CADP forum [0], opened in 2007 for discussions regarding the CADP toolbox, had over 389 registered users and over 1769 messages had been exchanged.

Also, for the 2016 edition of the Model Checking Contest, we provided four families of models (totalling 62 Nested-Unit Petri Nets) derived from our LNT models. A journal article presenting the achievements of the Model Checking Contest since its origins has been published [15].

Other research teams took advantage of the software components provided by CADP (e.g., the BCG and OPEN/CAESAR environments) to build their own research software. We can mention the following developments:

- An approach for specifying formally the composition of Web services [27]

- The Vercors integrated environment for verifying and running distributed components [43], [46]

- The PN2MC tool for modeling and verifying RTCP-nets [53]

- The Alvis tool for designing hierarchical communication diagrams [54]

- The IDCM tool for designing and integrating complex systems [48], [47]

- The Availability Analyzer tool for software architecture decomposition alternatives [55]

Other teams also used the CADP toolbox for various case studies:

- Formal specification and verification of TCP extended with the Window Scale Option [49]

- Performance evaluation of concurrent data structures [56]

- Heuristic search for equivalence checking [31]

- Using formal models to cross check an implementation [52]

- Proving linearizability via branching bisimulation [57]

- Computing maximal weak and other bisimulations [28]

- Verification methodologies for fault-tolerant Network-on-Chip systems [58]

9.1.5. Awards and Distinctions

H. Garavel is an invited professor at Saarland University (Germany) as a holder of the Gay-Lussac Humboldt Prize.

9.1.6. Invited Talks

- H. Garavel gave a talk entitled "*Process Calculi: Towards the Great Unification*" on January 12, 2016 at the Formal Methods seminar of Inria Grenoble.

- R. Mateescu gave a talk entitled "*On-the-Fly Verification for Extended Action-Based Temporal Logics*" on March 3rd, 2016 at IST Graz, Austria.

- H. Garavel was a guest speaker at the 9th German national D-CON meeting that took place in Saarbrücken, Germany, on March 7–8, 2016, where he gave a talk entitled "*Nested-Unit Petri Nets*".

- G. Salaün gave a talk entitled "*Automated Verification of Asynchronously Communicating Systems*" on March 15, 2016 at the LORIA laboratory, Nancy, France.

- H. Garavel gave a talk entitled "*On the Simplest Way to Build Integers from Naturals*" on April 28, 2016 at Saarland University, Germany.

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[0]http://convecs.inria.fr
[0]http://cadp.inria.fr/forum.html

- G. Barbon gave a talk entitled "*Debugging Concurrent Programs using Model Checking and Mining Techniques*" at MOVEP'2016 (*12th Summer School on Modelling and Verification of Parallel Processes*) that took place in Genova, Italy, on June 17–July 1, 2016.

- H. Garavel gave a talk entitled "*On the Most Suitable Axiomatization of Signed Integers Using Free Constructors*" during WADT'2016 (*23rd International Workshop on Algebraic Development Techniques*) that took place in Gregynog, Wales, UK, on September 21–24, 2016.

- H. Garavel gave two talks entitled "*Term Rewrite Systems and the Definition of Signed Integers*" and "*Benchmarking Implementations of Conditional Term Rewrite Systems*" on September 30, 2016 at the LSV laboratory, Cachan, France.

9.2. Teaching - Supervision - Juries

9.2.1. *Teaching*

CONVECS is a host team for MOSIG [0] (*Master of Science in Informatics at Grenoble*), the international master programme in computer science, common to Grenoble INP and Université Grenoble Alpes.

In 2016, we carried out the following teaching activities:

- H. Garavel, together with Laurence Pierre (TIMA, Grenoble), created a new curriculum HECS [0] ("*High-confidence Embedded and Cyberphysical Systems*") for 2nd-year MOSIG students. This curriculum opened for the first time in September 2016.

- F. Lang, R. Mateescu, G. Salaün, and W. Serwe gave lectures on models for concurrency, temporal logics, equivalences, formal languages and verification (36 hours) as part of the MOSIG/HECS-2 course ("*Modeling and Analysis of Concurrent Systems*") led by G. Salaün.

- H. Garavel gave lectures on probabilistic models, stochastic models, and static/dynamic fault trees (6 hours) as part of the MOSIG/HECS-3 course ("*Performance and quantitative properties*") led by Goran Frehse (Verimag).

- H. Garavel gave lectures on the synchronous languages Lustre and SCADE, and on model-driven engineering (7.5 hours) as part of the MOSIG/HECS-4 course ("*Industrial processes for high-confidence design*") led by Laurence Pierre (TIMA).

- G. Salaün was co-responsible of the ISI (*Ingéniérie des Systèmes d'Information*) department of ENSIMAG ("*École Nationale Supérieure d'Informatique et de Mathématiques Appliquées*", Grenoble INP) from September 1, 2011 until August 31st, 2016.

- G. Salaün is Professor at Université Grenoble Alpes since September 1st, 2016, and teaches algorithmics, programming, and Web development at the MMI department of IUT1. He is also headmaster of the SMIN professional licence (L3, 3rd year of university), 192 hours.

- W. Serwe supervised a group of six teams in the context of the "*projet Génie Logiciel*" (55 hours "*équivalent TD*", consisting in 16.5 hours of lectures, plus supervision and evaluation).

- F. Lang gave a lecture on formal methods (9 hours "*équivalent TD*") in the framework of the software engineering course given to the first year students of MOSIG.

- F. Lang gave a lecture on "*Modélisation et vérification de systèmes concurrents et temps-réel*" (27 hours "*équivalent TD*") to the third year computer science engineering students of ENSIMAG.

- G. Barbon gave a lecture on "*Théorie des Langages 1*" at ENSIMAG (18 hours "*équivalent TD*").

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[0] http://mosig.imag.fr
[0] http://hecs.imag.fr

9.2.2. Supervision

- Fatma Jebali, "*A Formal Framework for Modelling and Verifying Globally Asynchronous Locally Synchronous Systems*", Université Grenoble Alpes, September 12, 2016, F. Lang and R. Mateescu
- PhD in progress: G. Barbon, "*Debugging Concurrent Programs using Model Checking and Mining Techniques*", Université Grenoble Alpes, since October 2015, G. Salaün and V. Leroy
- PhD in progress: L. Marsso, "*Formal Methods for Testing Networks of Controllers*", Université Grenoble Alpes, since October 2016, R. Mateescu, W. Serwe, I. Parissis, and Ch. Deleuze
- PhD in progress: U. Ozeer, "*Autonomous Resilience of Applications in a Largely Distributed Cloud Environment*", Université Grenoble Alpes, since November 2016, X. Etchevers, G. Salaün, F.-G. Ottogalli, and J.-M. Vincent

9.2.3. Juries

- R. Mateescu was reviewer of Oleksandra Kulankhina's PhD thesis, entitled "*A Framework for Rigorous Development of Distributed Components: Formalisation and Tools*", defended at University of Nice Sophia-Antipolis on October 14, 2016.
- G. Salaün was reviewer of Guillaume Verdier's PhD Thesis, entitled "*Variants of Acceptance Specifications for Modular System Design*", defended at University of Toulouse on March 29, 2016.

9.3. Popularization

H. Garavel participates to the program committee and organization committee of FMF (Formal Methods Forum [0]), a series of industrial conferences on formal methods set up by the competitivity clusters Aerospace Valley and Minalogic, with the support of Inria and many other partners. The 6th FMF conference, devoted to safety engineering, was held on January 26, 2016. The 7th FMF conference, devoted to formal methods and cybersecurity, is scheduled on January 31, 2017.

H. Garavel and R. Mateescu co-operated with Gérard Berry to prepare his lecture on explicit-state enumerative verification given at Collège de France on April 22, 2016.

9.4. Miscellaneous Activities

H. Garavel was a member of the 2016 Inria selection committee for hiring research officers (*chargés de recherche*).

In 2016, H. Garavel was appointed to the Executive Commission in charge of International Relations at COMUE University Grenoble Alpes.

F. Lang is chair of the "*Commission du développement technologique*", which is in charge of selecting R&D projects for Inria Grenoble – Rhône-Alpes.

R. Mateescu is the correspondent of the "*Département des Partenariats Européens*" for Inria Grenoble – Rhône-Alpes.

R. Mateescu is a member of the "*Comité d'orientation scientifique*" for Inria Grenoble – Rhône-Alpes.

R. Mateescu is a member of the "*Bureau*" of the LIG laboratory.

G. Salaün was an elected member of the council of the LIG laboratory until August 31, 2016.

G. Salaün is a member of the Scientific Committee of the PCS action of the PERSYVAL Labex.

W. Serwe is "*chargé de mission*" for the scientific axis *Formal Methods, Models, and Languages* of the LIG laboratory.

W. Serwe is (together with Laurent Lefèvre from the AVALON Inria project-team) correspondent in charge of the 2016 Inria activity reports at Inria Grenoble – Rhône-Alpes.

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[0]http://projects.laas.fr/IFSE/FMF

CORSE Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Ylies Falcone: 1st international summer school on Runtime Verification; 3rd international Competition on Runtime Verification
- Frédéric Desprez: EuroPAR 2016 (co-chair and workshop chair)

9.1.1.2. Member of the Organizing Committees

- Fabrice Rastello: Program Committee ACM/IEEE CGO 2015; Steering Committee Journées française de la compilation; Steering Committee ACM/IEEE CGO

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

- Fabrice Rastello: Program Chair ACM/IEEE CGO 2016; Program Chair "Journées française de la compilation", Aussois, 2016
- Ylies Falcone: Program Chair RV 2016

9.1.2.2. Member of the Conference Program Committees

- Fabrice Rastello: ACM CC 2016, ACM SRC SC 2016, ACM/IEEE SRC SC 2016
- Alain Ketterlin: ACM/IEEE CGO 2016
- Ylies Falcone: CARI 2016, SSS 2016, RV 2016, Pre-Post'16, SAC-SVT'16
- Frédéric Desprez: Closer 2016, CCGrid 2016, HPC 2016, EuroPAR 2016, CloudCom 2016

9.1.3. Journal

9.1.3.1. Reviewer - Reviewing activities

- Fabrice Rastello: ACM TACO
- Ylies Falcone: Formal Aspects of Computing, ACM Transactions on Automatic and Control, Acta Informatica, Formal Methods in System Design, International Journal of Information and Computer Security, Science of Computer Programming, Software Tools for Technology Transfer, Journal of Systems and Software, NFM 2016

9.1.4. Invited talks

- Fabrice Rastello: UCDenver: "Toward Automatic Characterisation of the Data Access Complexity of Programs"
- Ylies Falcone: American University of Beirut: "On the Runtime Enforcement of Timed Properties"
- Ylies Falcone: LAAS Toulouse: "On the Runtime Enforcement of Timed Properties"
- Frédéric Desprez: Inria Alumni: "Internet des objets, Où sont les ruptures? Activités à l'Inria"
- Frédéric Desprez: SUCCES Workshop: "CIMENT, GRICAD, Grid'5000: La synergie grenobloise"
- Frédéric Desprez: CCDSC Workshop: "BOAST: Performance Portability Using Meta-Programming and Auto-Tuning"
- Frédéric Desprez: Eurecom Seminar 2016: "Challenges and Issues of Next Cloud Computing Platforms"

- Frédéric Desprez: European Commission, Brussels: "Research Issues for Future Cloud Infrastructures"
- Frédéric Desprez: CIRM, CEMRACS 2016 summer school: "OpenCL Introduction"
- François Broquedis: CIRM, CEMRACS 2016 summer school: "A Gentle Introduction to OpenMP Programming"
- Jean-François Méhaut: CEMRACS 2016 summer school: "Overview of architectures and programming language for parallel computing"

9.1.5. Scientific expertise

- Frédéric Desprez: European project in the FP7 framework
- Frédéric Desprez: Comité d'orientation stratégique de CIRRUS (COMUE Paris)
- Frédéric Desprez: Groupe Technique GENCI
- Frédéric Desprez: Conseil Scientifique GIS France Grille
- Frédéric Desprez: GENCI, expert for grants of computing resources (CT6)
- Ylies Falcone: Representative of France in the COST Action ARVI
- Ylies Falcone: COST Action ARVI, co-leader of Working Group on Core Runtime Verification
- Jean-François Mehaut: Eurolab-4-HPC, expert for cross site mobility research grants
- Jean-François Mehaut: GENCI, expert for grants of computing resources (CT6)

9.1.6. Research administration

- Frédéric Desprez: Deputy Scientific Director at Inria
- Frédéric Desprez: Director of the GIS GRID5000
- Frédéric Desprez: Conseil Scientifique ESIEE Paris

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master II: Fabrice Rastello, Advanced Compilers, 12 hours, ENS Lyon

Master I: Jean-François Méhaut, Operating System Design, 50 hours, Polytech Grenoble

L3: Jean-François Méhaut, Numerical Methods, 50 hours, Polytech Grenoble,

L3: Jean-François Méhaut, Advanced Algorithms, 50 hours, Polytech Grenoble

L3: François Broquedis, Imperative programming using python, 40 hours, Grenoble Institute of Technology (Ensimag)

L3: François Broquedis, C programming, 80 hours, Grenoble Institute of Technology (Ensimag)

M1: François Broquedis, Operating systems and concurrent programming, 40 hours, Grenoble Institute of Technology (Ensimag)

M1: François Broquedis, Operating Systems Development Project - Fundamentals, 20 hours, Grenoble Institute of Technology (Ensimag)

M1: François Broquedis, Operating Systems Project, 20 hours, Grenoble Institute of Technology (Ensimag)

Master: Florent Bouchez Tichadou, Compilation project, 15 hours, M1 Info & M1 MoSig

Licence: Florent Bouchez Tichadou, C programming, 24 hours, L3, Grenoble Institute of Technology (Ensimag)

Master: Florent Bouchez Tichadou, Algorithmic Problem Solving, 41 hours, M1 MoSIG

Licence: Florent Bouchez Tichadou, Algorithms languages and programming, 121 hours, L2 UGA

Licence: Florent Bouchez Tichadou is responsible of the second year of INF (informatique) and MIN (mathématiques et informatique) students at UGA

Master I: Ylies Falcone Proof Techniques and Logic Reminders, MoSIG, 3 hours

Master I: Ylies Falcone Recaps on Object-Oriented Programming, MoSIG, 3 hours

Master II: Ylies Falcone Introduction to Runtime Verification, MoSIG HECS, 8 hours.

Master I: Ylies Falcone Programming Language Semantics and Compiler Design, MoSIG, 66 hours

License: Ylies Falcone Languages and Automata, UJF, 105 hours

Master: Ylies Falcone is co-responsible of the first year of the International Master of Computer Science (Univ. Grenoble Alpes and INP ENSIMAG)

9.2.2. Supervision

9.2.2.1. Fabrice Rastello

PhD defended [3]: Duco van Amstel, Scheduling and optimization for memory locality of dataflow programs on many-core processors, advised by Fabrice Rastello and Benoit Dupont-de-Dinechin

PhD defended [1]: Diogo Sampaio, Profiling Guided Hybrid Compilation, October 8 2013, advised by Fabrice Rastello

PhD defended: Venmugil Elango, Dynamic Analysis for Characterization of Data Locality Potential, advised by Fabrice Rastello and P. Sadayappan.

PhD in progress: François Gindraud, Semantics and compilation for a data-flow model with a global address space and software cache coherency, January 1st 2013, advised by Fabrice Rastello and Albert Cohen.

PhD in progress: Fabian Grüber, Interactive & iterative performance debugging, September 2016, advised by Fabrice Rastello and Ylies Falcone.

PhD in progress: Philippe Virouleau, *Improving the performance of task-based runtime systems on large scale NUMA machines*, co-advised by Thierry Gautier (Inria/AVALON), Fabrice Rastello, François Broquedis

9.2.2.2. Jean-François Méhaut

PhD defended (April 2016): Oleg Iegorov, advised by Alexandre Termier (Dream/Irisa), Vincent Leroy (SLIDE/LIG) and Jean-François Méhaut

PhD defended (October 2016): Nassim Halli, CIFRE with Asselta, advised by Henri-Pierre Charles (CEA/DRT List), Jean-François Méhaut

PhD defended [36]: Naweiluo Zhou, advised by Eric Rutten (Inria, CtrlA), Gwenael Delaval (UGA, CtrlA), Jean-François Méhaut

PhD in progress: Thomas Messi Nguelé, advised by Maurice Tchuenté (Yaoundé I, LIRIMA) and Jean-François Méhaut

PhD in progress: Thomas Goncalves, advised by Marc Perache (CEA/DAM), Frédéric Desprez, Jean-François Méhaut

PhD in progress: Luis Felipe Milani, advised by Lucas Schnoor (UFRGS), François Broquedis and Jean-François Méhaut

PhD in progress: Vanessa Vargas, advised by Raoul Velazco (CNRS, TIMA) and Jean-François Méhaut

PhD in progress: Raphaël Jakse, Monitoring and Debugging Component-Based Systems, advised by Jean-François Mehaut and Ylies Falcone.

9.2.2.3. Frédéric Desprez

PhD defended (October 2016): Jonathan Pastor, advised by Frédéric Desprez, Adrien Lèbre (EMN Nantes, Ascola team)

PhD in progress: Pedro Silva, advised by Frédéric Desprez, C. Perez (Inria, Avalon team)

PhD in progress: Georgios Christodoulis, advised by Frederic Desprez, Olivier Muller (TIMA/SLS) and François Broquedis

PhD in progress: Thomas Goncalves, advised by Marc Perache (CEA/DAM), Frédéric Desprez, Jean-François Méhaut

PhD in progress: Ye Xia, advised by Thierry Coupaye (Orange), Frédéric Desprez, Xavier Etchevers (Orange)

9.2.2.4. François Broquedis

PhD in progress: Georgios Christodoulis, *Adaptation of a heterogeneous runtime system to efficiently exploit FPGA* advised by Frederic Desprez, Olivier Muller (TIMA/SLS) and François Broquedis

PhD in progress: Philippe Virouleau, *Improving the performance of task-based runtime systems on large scale NUMA machines*, co-advised by Thierry Gautier (Inria/AVALON), Fabrice Rastello, François Broquedis

9.2.2.5. Ylies Falcone

PhD in progress: Hosein Nazarpour, Monitoring Multithreaded and Distributed Component-based Systems, advised by Saddek Bensalem (Vérimag) and Ylies Falcone.

PhD in progress: Antoine El-Hokayem, Decentralised and Distributed Monitoring of Cyber-Physical Systems, advised by Ylies Falcone.

PhD in progress: Fabian Grüber, Interactive & iterative performance debugging, September 2016, advised by Fabrice Rastello and Ylies Falcone.

PhD in progress: Raphaël Jakse, Monitoring and Debugging Component-Based Systems, advised by Jean-François Mehaut and Ylies Falcone.

9.2.3. Juries

9.2.3.1. Fabrice Rastello

Venmugil Elango, Advisor, *Dynamic Analysis for Characterization of Data Locality Potential*, PhD of OSU, 06/01/2016

Arjun Suresh, Reviewer, *Intercepting Functions for Memoization*, PhD of Université de Rennes, 10/04/2016

Duco Van-Amstel, Advisor, *Scheduling and optimization for memory locality of dataflow programs on many-core processors*, Université Grenoble Alpes, 11/07/2016.

Juan Manuel Martinez Caamano, Reviewer, *Fast and Flexible Compilation Techniques for Effective Speculative Polyhedral Parallelization*, Université de Strasrbourg, 29/09/2016

Pierre Guillou, Reviewer, *Compilation efficace d'applications de traitement d'images pour processeurs manycore*, Université de recherche PAris Sciences et Lettres, 30/11/2016

9.2.3.2. Jean-François Méhaut

Oleg Iegorov, Advisor, *Data Mining Approach to Temporal Debugging of Embedded Streaming Applications*, PhD of Université Grenoble Alpes, April 2016

Nassim Halli, Advisor, *Code Optimizations of High Performance Java Applications*, PhD of Université Grenoble Alpes, October 2016

Naweiluo Zhou, Advisor, *Autonomic Thread Parallelism and Mapping Control for Software Transactional Memory System*, PhD of Université Grenoble Alpes, October 2016

Marc Sergent, Reviewer, *Passage à l'échelle d'un support d'exécution à base de tâches pour l'algèbre linéaire creuse*, PhD of Université de Bordeaux, October 2016

Jean-Charles Papin, Reviewer, *A Scheduling and Partitioning Model for Stencil-based Applications on ManyCore Devices*, PhD of Ecole Normale Supérieure de Cachan, July 2016

9.2.3.3. Frédéric Desprez

Jean-Marie Couteyen, Reviewer, *Parallélisation et passage à l'échelle du code FLUSEPA*, PhD of Université de Bordeaux, September 2016

Jonathan Pastor, Advisor, *Contributions à la mise en place d'une infrastructure de Cloud Computing à large échelle* , Ecole des Mines de Nantes, October 2016

<p style="text-align:center;color:red">DICE Team</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- Ste´phane Frénot, French Tech, représentant de la COMUE de Lyon
- Ste´phane Grumbach, ANR, Comite´ de Pilotage Scientifique du De´fi 8 « Socie´te´s innovantes »
- Ste´phane Grumbach, scientific committee Global Forum
- Ste´phane Grumbach, scientific committee Colle`ge des Bernardins, Journalisme et bien commun a` l'heure des algorithmes

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Stéphane Grumbach has been chair of the following conferences:

- From data on ecosystems to ecosystems of data, Seminar in cooperation between ENS and EPFL, Lausanne, 21 October 2016
- Seminar Intermediation and Smartness, Anthropocene Curriculum, The Technosphere Issue, Haus der Kulturen der Welt, Berlin, 15-23 April 2016

9.1.3. Invited Talks

Stéphane Grumbach has given the following talks:

- Panel The Transatlantic Data War, obama2016: L'héritage Obama. Tensions et reconfigurations après la présidentielle, Paris, 12-14 déc. 2016
- Panel L'impact des algorithmes sur les media et la culture, Entretiens Jacques Cartier, Lyon 21 novembre 2016
- The Datasphere, in control of ecosystems, The 136th RIHN seminar, Research Institute for Humanity and Nature, Kyoto, 18 November 2016
- Digital Platforms, Europe Asia, Diverging Spaces?, The Relevance of Area Studies for the Sciences and Public Policy, DIJ, Tokyo, 14-15 November 2016
- Platforms vs Administrations, The mutation of data driven government, , ECNU, Shanghai, 9 November 2016
- Panel The Data Revolution, Global Forum, Digitalization: the global transformation, Eindhoven, 19-20 September 2016
- Innovation, pouvoir et territoires, Summer School Cespec 2016, (IX Edizione) Futuri. Immaginare il mondo di domani, Cuneo-Savigliano-Alba-Mondovì, 13-17 settembre 2016
- Révolutions dans la culture et la transmission des savoirs à l'heure du numérique, TUBA'X-PERTS, Lyon, 9 juin 2016
- Conférence "Grand Témoins" : le BIG DATA, Grand rendez-vous de la Métropole, Lyon, 23 mars 2016 video
- Géopolitique du numérique : enjeux des plateformes globales pour la région, LeLabIdF, ThinkLab de la Région Île-de-France, Paris, 17 mars 2016
- Intelligence artificielle, le pouvoir aux machines ? Collège des Bernardins, Paris, 11 février 2016

9.1.4. Research Administration

Ste´phane Grumbach is director of IXXI, the complex Systems Institute.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master : Stéphane Grumbach, Guerre, climat et enjeux de l'Anthropocène, 2h, M1, ENS de Lyon, France

Master : Stéphane Grumbach, La révolution numérique et les difficultés d'ajustement des administrations françaises, 2h, M1, ENTPE, France

Master : Stéphane Grumbach, Réseaux sociaux et Nouveaux Outils de Communication, 2h, M1, INSA Lyon, France

Master : Damien Reimert, - Bitcoin, 24h, M1, INSA de Lyon, France

Master : Damien Reimert, Javascript, 43h, M1, Télécom St-Étienne, France

Licence : Damien Reimert, Développement Mobile, 39h, L3, Télécom St-Étienne, France

Licence : Aurélien Faravelon, HTML5 CSS3 Javascript, 24h, L3, IUT 2 Grenoble, France

Master : Aurélien Faravelon, Economie de l'intermediation, 2h, M2, Ecole centrale de Lyon, France

Licence : Robert Riemann, INSA, Algorithmique et programmation 1, 27HETD, L1, INSA Lyon, France

9.2.2. Supervision

PhD : Etienne Brody, DataFlow compilation from JavaScript, INSA Lyon, 21 Juin, Stéphane Frénot

PhD in progress : Robert Riemann, systemes de vote decentralise´s, sept 2014, Ste´phane Grumbach

9.3. Popularization

Aurélien Faravelon: 12/05/2016, Débats Citoyens, Musée Galo Romain de Lyon

Robert Riemann: 28/12/2016, Chaos Communication Congress/We fix the Net assembly, Hambourg

<p style="text-align:center;color:red;font-weight:bold">PRIVATICS Project-Team</p>

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

Daniel Le Metayer: CPDP 2016 (panel chairman), Privacy protection, new technical and legal instruments (Colloque Inria CAPPRIS).

Cédric Lauradoux: Nombre et cryptographie, maison pour la science Alpes Dauphiné

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

Cédric Lauradoux: RESSI 2016 and ATC 2016.

Daniel Le Metayer: Infer 2016, STM 2016, Annual Privacy Forum 2016, IWPE 2016, CPDP 2016 and WETICE-FISA.

Marine Minier: MyCrypt 2016 and RESSI 2016.

Vincent Roca: GreHack 2016, SPACOMM 2016 and VTC2016-Spring.

Mathieu Cunche: APVP 2016, HotPlanet 2016, ICISSP 2017 and IEEE TrustCom 2016.

Claude Casteluccia: Wisec 2016, DTL 2016, AFP 2016, UEOP'16 and DAT'2016.

9.1.3. Invited Talks

Daniel Le Metayer: IFIP SEC 2016 and France Stratégie, Algorithms: transparency and responsibility panel.

Claude Casteluccia: LIG Keynote.

9.1.4. Leadership within the Scientific Community

Vincent Roca: co-chair of the research group NWCRG (Network Coding Research Group) of IRTF (Internet Research Task Force)

Daniel Le Metayer: member of the scientific committee of the CNIL-Inria Privacy Award

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Undergraduate course : Vincent Roca, *On Wireless Communications*, 12h, L1, Polytech' Grenoble, France.

Undergraduate course : Vincent Roca, *On Network Communications*, 44h, L1, IUT-2 (UPMF University) Grenoble, France.

Undergraduate course : Marine Minier, *Probabilities*, 80h, L3, INSA-Lyon, France.

Undergraduate course : Marine Minier, *Signal Processing*, 20h, L3, INSA-Lyon, France.

Undergraduate course : Marine Minier, *Analysis*, 20h, L3, INSA-Lyon, France.

Undergraduate course : Marine Minier, *Introduction to Cryptography*, 10h, L3, INSA-Lyon, France.

Undergraduate course : Marine Minier, *Information Theory*, 10h, L3, INSA-Lyon, France.

Undergraduate course : Marine Minier, *Computer Architecture*, 20h, L3, INSA-Lyon, France.

Undergraduate course : Marine Minier, *Computer Security*, 20h, L3,IUT-Lyon, France.

Undergraduate course : Mathieu Cunche, *Introduction to computer science*, 120h, L1, INSA-Lyon, France.

Master : Mathieu Cunche, *Wireless Security*, 6h, M2, INSA-Lyon, France.

Undergraduate course : Mathieu Cunche, *On Wireless Network Security*, 10h, L1, IUT-2 (UPMF - Grenoble University) , France.

Undergraduate course : Mathieu Cunche, *Advanced Topics in Security*, 20h, L3, ENSIMAG, France.

Undergraduate course : Mathieu Cunche, *Security & Privacy*, 21h, L3, INSA-Lyon, France.

Undergraduate course : Daniel Le Métayer, *Security & Privacy*, 17h, L3, INSA-Lyon, France.

Undergraduate course : Daniel Le Métayer, *Privacy*, 12h, L3, INSA-Lyon, France.

Master : Cédric Lauradoux, *Introduction to Cryptology*, 30h, M1, University of Grenoble Alpes, France.

Master : Cédric Lauradoux, *Internet Security*, M2, University of Grenoble Alpes, France.

Master : Claude Castelluccia, *Advanced Topics in Security*, 20h, M2, Ensimag/University of Grenoble Alpes, France.

Master : Claude Castelluccia, *Advanced Topics in Security*, 15h, M2, Ensimag/INPG, France.

Master : Claude Castelluccia, *Security & Privacy*, 18h, Master MOSIG, University of Grenoble Alpes, France.

Master : Claude Castelluccia, *Privacy*, 4h, M2, College de droit University of Grenoble Alpes, France.

Master : Marine Minier, *Security for wireless networks*, 20h, M2, INSA-Lyon, France.

Master : Mathieu Cunche, *Wireless Security*, 6h, M2, INSA-Lyon, France.

Master : Daniel Le Métayer, *Privacy*, 6h, M2 MASH, Université Paris Dauphine, France.

9.2.2. Supervision

PhD defended : Jagdish Achara, *Unveiling and Controlling Online Tracking*, Claude Castelluccia and Vincent Roca.

PhD defended : Amrit Kumar, *Security and Privacy of Hash-Based Software Applications* , Cedric Lauradoux.

PhD in progress : Victor Morel, *IoT privacy* , September 2016, Daniel Le Métayer.

PhD in progress : Jessye Dos Santos, *Wireless physical tracking*, October 2013, Cédric Lauradoux and Claude Castelluccia.

PhD in progress : Célestin Matte, *Système d'observation des flux humains via Wi-Fi respectueux de la vie privée*, October 2014, Marine Minier et Mathieu Cunche.

Intern (M2): Alessandro Tedesco, *The rise of Internet of things made possible the large-scale collection of personal data and metadata*, Claude Castelluccia

Intern (M2): Jose-Paul Domingez, *The geopolitics of Internet protocols*, Claude Castelluccia

Intern (M2): Zoltan Kovac, *MyRealOnlineChoices*, Claude Castelluccia

Intern (M1): Margaux Canet Sola, *decompression bombs*, Cédric Lauradoux

Intern (M1): Julie Catania, Fuzzing the zlib, Cédric Lauradoux

Intern (M1): Aurelien Monnet Paquet, *Anti-virus DOS attacks*, Amrit Kumar

Intern (M1): Mary-Andrea Rakotomanga, *Compression quines*, Cédric Lauradoux

9.2.3. Juries

PhD: Yagdish Achara, *Unveiling and Controlling Online Tracking*, 18/10/2016, Claude Castelluccia and Vincent Roca.

PhD: Amrit Kumar, *Security and Privacy of Hash-Based Software Applications*, Université de Grenoble, Nantes, 18/10/2016, Cédric Lauradoux.

PhD : Tarek Sayah, *Exposition seélective et probleème de fuite d'inférence dans le Linked Data*, Université Claude Bernard Lyon 1, 8/9/2016, Vincent Roca.

PhD : Karina Sokolova Perez, *Bridging the Gap between Privacy by Design and Mobile Systems by Patterns*, UTT Troyes, 27/04/2016, Daniel Le Métayer.

PhD: Tania Richmond, *Implantation sécurisée de protocoles cryptographiques basés sur les codes correcteurs d'erreurs*, Université de Saint-Etienne, 24/10/2016, Marine Minier.

PhD: Nora El Amrani, *Codes MDS additifs pour la cryptographie*, Université de Limoges, 24/02/2016, Marine Minier.

9.3. Popularization

9.3.1. Interview

Privatics team has participated to an episode of X:enius entitled: "Données personnelles : à quel point sommes-nous prévisibles ?". It features an interview of Claude Castelluccia, Daniel Le Métayer and Mathieu Cunche. The episode was broadcasted the 12th december 2016 on Arte.

9.3.2. Articles

D. Le Métayer in *France Stratégie, Algorithmes, libertés et responsabilités*, 10/03/2016.

C. Castelluccia in Le Monde, *Que reproche-t-on au TES, le « mégafichier » des 60 millions de Français*, 08/11/2016.

M. Cunche and C. Matte in GNU/Linux Magazine HS 84, *Traçage Wi-Fi : applications et contre-mesures*, 05/2016.

M. Cunche in Arte Futuremag, *Données personnelles, nos smartphones nous espionnent-ils?*, 05/2016.

9.3.3. Conferences

C. Castelluccia, *An Introduction to DataVeillance (Data + Surveillance)*, LIG UGA Keynote, 07/04/2016

V. Roca, *Vie privé et smartphones font ils bon ménage?*, Cours Universite´ Ouverte, Lyon 1, cycle Impact de l'informatique sur la socie´te´ et sur nos vies, 11/2016.

C. Lauradoux, *Email et vie privée: pourquoi utiliser GPG ?*, Cours Master 2, 01/12/2016

C. Lauradoux, *Cryptographie et grands nombres*, Olympiades académiques de Mathématiques, 04/07/2016

C. Lauradoux, *Cryptographie visuelle*, Collège/Lycée Jean Prévost, 01/06/2016

C. Lauradoux, *Cryptanalyse*, stage MathC2+, 06/2016

C. Lauradoux, *Protéger la confidentialité de ces messages*, Collège Paul Fort Is sur Tille, 04/10/2016

C. Lauradoux, *Internet et vie privée*, Collège Poncet Cluses, 15/12/2016

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

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. Member of organizing committees

- Sophie Quinton was artifact evaluation chair of the 24th International Conference on Real-Time Networks and Systems (RTNS'16).
- Sophie Quinton was demo chair of the 22nd IEEE Real-Time Embedded Technology & Applications Symposium (RTAS'16)
- Sophie Quinton was co-chair of the 1st Tutorial on Tools for Real-Time Systems (TuToR'16), held as a satellite event of CPSWeek'16. http://tutor2016.inria.fr/
- Sophie Quinton was co-organizer of the 1st Workshop on Collaboration of Academia and Industry for Real World Embedded Systems (CAIRES'16), held as a satellite event of ESWeek'16. http://caires2016.inria.fr/

9.1.2. Scientific events selection

9.1.2.1. Chair of conference program committees

- Gregor Gössler was co-chair of the 1st international Workshop on Causal Reasoning for Embedded and safety-critical Systems Technologies (CREST'16) [22], held as a satellite event of ETAPS'16. http://crest2016.inria.fr
- Sophie Quinton was co-chair of the 7th International Workshop on Analysis Tools and Methodologies for Embedded and Real-time Systems (WATERS'16), held as a satellite event of ECRTS'16. http://waters2016.inria.fr

9.1.2.2. Member of conference program committees

- Pascal Fradet served in the program committee of the 15th International Conference on Modularity (MODULARITY'16).
- Alain Girault served in the program committees of the International Conference on Design and Test in Europe (DATE'16), the Embedded Software conference (EMSOFT'16), and the International Symposium on Industrial Embedded Systems (SIES'16).
- Sophie Quinton served in the program committees of the 28th Euromicro Conference on Real-Time Systems (ECRTS'16), the 24th International Conference on Real-Time Networks and Systems (RTNS'16), the 4th International Workshop on Mixed Criticality Systems (WMC'16), the 10th Junior Researcher Workshop on Real-Time Computing (JRWRTC'16), and in the artifact evaluation committees of ECRTS'16 and the IEEE Real-Time Systems Symposium (RTSS'16).
- Jean-Bernard Stefani served on the program committees of the 36th IFIP International Conference on Formal Techniques for Distributed Objects, Components and Systems (FORTE) and the 8th Conference on Reversible Computation.

9.1.2.3. Reviewer

- Alain Girault reviewed an article for ECRTS'16.
- Gregor Gössler reviewed articles for EMSOFT'16, FACS'16, and RTNS'16.
- Xavier Nicollin reviewed an article for SIES'16.
- Sophie Quinton reviewed articles for EMSOFT'16 and DATE'17.

9.1.3. Journal

9.1.3.1. Member of the editorial boards

- Alain Girault is a member of the editorial board of the EURASIP Journal on Embedded Systems.
- Jean-Bernard Stefani is a member of the editorial board of Annals of Telecommunications.

9.1.3.2. Reviewer - Reviewing activities

- Alain Girault reviewed articles for ACM TECS, Parallel Computing, Embedded Systems Letters, and Microprocessors and Microsystems.
- Gregor Gössler reviewed articles for Formal Methods in System Design (FMSD) and IEEE Transactions on Automatic Control (TAC).
- Jean-Bernard Stefani reviewed articles for Theoretical Computer Science (TCS) and Science of Computer Programming (SCP).

9.1.4. Research administration

- Pascal Fradet is head of the committee for doctoral studies ("Responsable du comité des études doctorales") of the INRIA Grenoble – Rhône-Alpes research center and local correspondent for the young researchers INRIA mission (mission jeunes chercheurs).
- Alain Girault is Vice Chair of the INRIA Evaluation Committee. As such, he co-organizes in particular the evaluation seminars of the INRIA teams (twice a year) and all the juries for the hiring and promotion of INRIA's researchers (CR2, CR1, DR2, DR1, and DR0).
- Jean-Bernard Stefani is Head of science of the INRIA Grenoble – Rhône-Alpes research center. As such, he manages with the research center director all aspects of the scientific life of the research center (creation of the research teams and their evaluation by international panels, scientific relationships with our academic and industrial partners, hiring of the new junior researchers, ...).
- Jean-Bernard Stefani is co-director of I/O LAB, the joint research laboratory with Orange Lab.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Pascal Fradet, Théorie des Langages 1 & 2, 36 HeqTD, niveau L3, Grenoble INP (Ensimag), France

Licence : Gregor Gössler, Théorie des Langages 2, 36 HeqTD, niveau L3, Grenoble INP (Ensimag), France

Master : Xavier Nicollin, Sémantique et Analyse des Programmes, 11,25 HeqTD, niveau M1, Grenoble INP (Ensimag), France

Licence : Xavier Nicollin, Théorie des Langages 2, 36 HeqTD, niveau L3, Grenoble INP (Ensimag), France

Licence : Xavier Nicollin, Bases de la Programmation Impérative, 66 HeqTD, niveau L3, Grenoble INP (Ensimag), France

Licence : Sophie Quinton, Théorie des Langages 2, 18 HeqTD, niveau L3, Grenoble INP (Ensimag), France

Master : Jean-Bernard Stefani, Formal Aspects of Component Software, 9h, MOSIG, Univ. Grenoble Alpes, France

Master : Sophie Quinton, Performance and Quantitative Properties, 6h, MOSIG, Univ. Grenoble Alpes, France

9.2.2. Supervision

- PhD: Yoann Geoffroy, "A general trace-based causality framework for component-based systems", Univ. Grenoble Alpes, defended on December 7th 2016, advised by Gregor Gössler.

- PhD in progress: Sihem Cherrared, "Fault Management in Multi-Tenant Programmable Networks", Univ. Rennes 1, since October 2016, co-advised by Eric Fabre and Gregor Gössler.

- PhD in progress: Christophe Prévot, "Early Performance assessment for evolving and variable Cyber-Physical Systems", Univ. Grenoble Alpes, since November 2015, co-advised by Alain Girault and Sophie Quinton.

- PhD in progress: Xiaojie Guo, "Formal Proofs for the Analysis of Real-Time Systems in CoQ", Univ. Grenoble Alpes, since December 2016, co-advised by Pascal Fradet, Jean-François Monin, and Sophie Quinton.

- PhD in progress: Stephan Plassart, "On-line optimization in dynamic real-time systems", Univ. Grenoble Alpes, since September 2016, co-advised by Alain Girault and Bruno Gaujal.

9.2.3. Juries

- Alain Girault was president of the HDR jury of Goran Frehse (Univ. Grenoble Alpes).

- Sophie Quinton was member of the PhD jury of Houssam Zahaf (U. Lille).

- Jean-Bernard Stefani was president of the HDR jury of Tom Hirschowitz (U. Savoie).

9.3. Popularization

Alain Girault gave a lecture to high school math professors, titled "Multi-core architectures, reliability, and optimization" (ISN conference cycle, Grenoble, February 2016). http://www.canal-u.tv/video/inria/architectures_multi_coeurs_ fiabilite_et_optimisation.20829

BIPOP Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Guillaume James, Chairman of the Euromech Colloquium 580 "Strongly Nonlinear Dynamics and Acoustics of Granular Metamaterials", 11 July-13 July 2016, Grenoble. http://580.euromech.org/

9.1.1.2. Member of the Organizing Committees

- Gilles Daviet, Alexandre Vieira, Jose Morales, Bernard Brogliato, members of local organization committee of the Euromech Colloquium 580 "Strongly Nonlinear Dynamics and Acoustics of Granular Metamaterials", 11 July-13 July 2016, Grenoble. http://580.euromech.org/.

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

- Vincent Acary, member of ENOC (European Nonlinear Oscillations Conference) Committee.
- Florence Bertails-Descoubes, member of the ACM SIGGRAPH Asia 2016 Technical Program Committee.
- Pierre-Brice Wieber, Associate Editor for Humanoids 2016 and ICRA 2017.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- Bernard Brogliato, Associate Editor at Nonlinear Analysis: Hybrid Systems
- Bernard Brogliato, Associate Editor at ASME Journal of Computational and Nonlinear Dynamics
- Pierre-Brice Wieber, Associate Editor at IEEE Transactions on Robotics

9.1.3.2. Reviewer - Reviewing Activities

- Bernard Brogliato, reviewer for IEEE Transactions on Automatic Control, Multibody System Dynamics, SIAM Journal on Optimization and Control, European Journal of Mechanics A/Solids, Nonlinear Dynamics, ASME Journal of Computational and Nonlinear Dynamics.
- Florence Bertails-Descoubes, reviewer for ACM Transactions on Graphics, ACM SIGGRAPH, ACM SIGGRAPH Asia, Eurographics, Symposium on Computer Animation, Computer-Aided Design, Computer-Aided Geometric Design, International Journal of Solids and Structures.
- Arnaud Tonnelier, reviewer for Scientific Reports, SIADS, PRE, PhysicaD.
- Vincent Acary, reviewer for several journals in Mechanics and Automatic Control.

9.1.4. Invited Talks

- Bernard Brogliato, invited seminar at Mathematics Department, INSA de Lyon, 09 June 2016 (contact: A. Petrov).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master 1 : Florence Bertails-Descoubes, Module IRL (découverte recherche), supervision stage Mickaël Ly, ENSIMAG 2A (Grenoble INP)

9.2.2. Supervision

HdR : Vincent Acary, Analysis, simulation and control of nonsmooth dynamical systems, Université de Grenoble Alpes, 16 juillet 2015.

PhD : Narendra Akhadkar, Modélisation numérique des mécanismes. Influence des jeux, de la déformation et des impacts multiples, Université Grenoble-Alpes, CIFRE I-MEP2 avec Schneider-Electric, 25 avril 2016, Vincent Acary et Bernard Brogliato

PhD : Gilles Daviet, Modèles et Algorithmes pour la Simulation du Contact Frottant dans les Matériaux Complexes : Application aux Milieux Fibreux et Granulaires, Universite' Grenoble-Alpes, 15 décembre 2016, Florence Bertails-Descoubes.

PhD : José Eduardo Morales Morales, Ondes localisées dans des systèmes mécaniques discrets excitables, Universite' Grenoble-Alpes, 29 novembre 2016, Guillaume James et Arnaud Tonnelier

PhD in progress : Alexandre Vieira, Commande Optimale de Systèmes Linéaires de Complémentarité, 01 octobre 2015, Christophe Prieur et Bernard Brogliato.s/'e

PhD in progress : Alejandro Blumentals, Analyse et Simulation de Systèmes Mécaniques avec Contact Frottant, 01 octobre 2013, Florence Bertails-Descoubes et Bernard Brogliato.

PhD in progress: Nestor Bohorquez Dorante, Control of Biped Robots, 01 octobre 2015, Pierre-Brice Wieber.

PhD in progress: Nahuel Vila, Control of Biped Robots, 01 octobre 2016, Pierre-Brice Wieber.

9.2.3. Juries

- Bernard Brogliato, member of Habilitation à Diriger des Recherches committee of Constantin Irinel Morarescu, CRAN Nancy (MCF université de Nancy), 03 novembre 2016.

- Bernard Brogliato, member of Habilitation à Diriger des Recherches committee of Stéphane Redon, Inria Grenoble (CR Inria), 27 mai 2016.

- Bernard Brogliato, member of Ph.D. Thesis committee of T.L. Nguyen (15 janvier 2016), INSA de Rennes (directeurs de thèse M. Hjiaj and C. Sansour).

- Bernard Brogliato, member of Ph.D. Thesis committee of O. Montano (20 mai 2016), CICESE Ensenada, Mexico (directeur de thèse Y. Orlov).

- Arnaud Tonnelier, member of Ph.D. Thesis committee of Catalina Vich Llompart (août 2016), Universitat de les Illes Balears (directeurs de thèse : Antoni Guillamon Grabolosa (UPC) and Dr. Prohens Rafel Sastre (UIB)).

- Arnaud Tonnelier, member of Ph.D. Thesis committee of Elif Köksal Ersöz (décembre 2016), Université Pierre et Marie Curie (directeurs de thèse: F. Clement et J.P. Françoise).

9.3. Popularization

- Modélisation de matériaux granulaires (Florence Bertails-Descoubes, Gilles Daviet) : participation à l'écriture d'un article court pour le CNRS, "Représenter du sable sans poudre aux yeux", http://www.cnrs.fr/ins2i/spip.php?article2175

MISTIS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- Stéphane Girard co-organized the workshop "Learning with functional data", held in Lille (October 2016), He was also a member of the organizing committee of "Journées MAS de la SMAI", held in Grenoble (August 2016)

- Florence Forbes and Stéphane Girard co-organized a session "Dimension reduction for regression" at the ERCIM conference in Séville, Spain (December 2016).

- Julyan Arbel organized the Bayesian nonparametric prediction session at the International Society of Bayesian Analysis Conference, June 2016. He also co-organized the StaTalk Workshop on Bayesian nonparametrics, Collegio Carlo Alberto, Moncalieri, Italy, February 19.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- Stéphane Girard was the president of the scientific committee of the CIMPA conference "Méthodes statistiques pour l'évaluation des risques extrêmes", held in Saint-Louis, Sénégal (April 2016), .

- Stéphane Girard was a member of the conference program committee of the "Mathematical Finance and Actuarial Sciences conference" organized by the AIMS (African Institute for Mathematical Sciences), Mbour, Sénégal (July 2016).

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Stéphane Girard is Associate Editor of the *Statistics and Computing* journal since 2012 and Associate Editor of the *Journal of Multivariate Analysis* since 2016. He was co-editor of the book *Statistics for astrophysics, clustering and classification*, vol. 77, EDP sciences, 2016.

  He is also member of the Advisory Board of the *Dependence Modelling* journal since december 2014.

- F. Forbes is Associate Editor of the journal Frontiers in ICT: Computer Image Analysis since its creation in Sept. 2014. Computer Image Analysis is a new specialty section in the community-run openaccess journal Frontiers in ICT. This section is led by Specialty Chief Editors Drs Christian Barillot and Patrick Bouthemy.

10.1.3.2. Reviewer - Reviewing Activities

In 2016, S. Girard has been a reviewer for *Australian and New Zealand Journal of Statistics, Extremes* and *Dependence Modelling.*

In 2016, F. Forbes has been a reviewer for *Journal of Multivariate Analysis, Statistics and Computing, Computational Statistics and Data Analysis* .

In 2016, Julyan Arbel has been reviewer for NIPS 2016, ICML 2016, AISTATS 2016, the Annals of Statistics, Bayesian Analysis, Bernoulli, Biometrics, the Canadian Journal of Statistics, the Hacettepe Journal of Mathematics and Statistics, the Journal of Agricultural, Biological, and Environmental Statistics, SoftwareX, Statistics and Computing.

10.1.4. Invited Talks

Stéphane Girard has been invited to give a talk to the following conferences:

- "Extreme value modeling and water ressources" workshop (Aussois) [29],

- 3rd conference of the International Society for Non-Parametric Statistics (Avignon) [37],

- "Extremes - Copulas - Actuarial sciences" workshop (Luminy) [40],

- Statistics workshop at Tilburg University (Netherlands)

- ERCIM CFE-CMStatistics (Seville, Spain) [39].

Florence Forbes has been invited to give talks at :

- the 23th summer session of the Working Group on Model-based Clustering, Paris, July 18-23, 2016.

- the Fédération Rhône-Alpes-Auvergne day on multivariate data analysis in Grenoble, October 2016,

- the 11th Peyresq summer school on signal and image processing (July 2016): 5 hour lecture on Bayesian Analysis and applications [67].

- a special session on Dimension reduction for regression at the ERCIM CFE-CMStatistics conference, December 2016, in Seville, Spain [35],

- at the annual meeting of the MultiPlaNet project (Defi Imag'In CNRS) in Orsay in December 2016, on the inversion of the Hapke's model from photometric measurements.

Julyan Arbel has been invited to give talks at the following seminars and conferences:

- Rencontres Statistiques Lyonnaises, Institut Camille Jordan, November 23. Invited talk: Bayesian nonparametric inference for discovery probabilities.

- Séminaire de Statistique du LJK, Université Grenoble Alpes, November 17. Invited talk: Bayesian nonparametric inference for discovery probabilities.

- The Bayes Club, Korteweg-de Vries Institute for Mathematics, University of Amsterdam, October 7. Invited talk: Bayesian nonparametric inference for discovery probabilities.

- Séminaire de Statistique, Université Lille 3, October 6. Invited talk: Bayesian nonparametric inference for discovery probabilities.

- Séminaire de Proba-Stat, Université Paris 12 Créteil, October 4. Invited talk: Bayesian nonparametric inference for discovery probabilities.

- Séminaire de Proba-Stat, Université de Franche-Comté, Besancon, September 5. Invited talk: Bayesian nonparametric inference for discovery probabilities.

- ISBA World Meeting, Sardinia, Italy, June 13-17. Invited talk: Bayesian nonparametric inference for discovery probabilities.

- Mistis Seminar, Inria Grenoble, France, February 12. Talk: Infinite mixture models in Bayesian nonparametrics.

Julyan Arbel presented at the following contributed sessions in conferences and workshops:

- NIPS Meeting, Barcelona, Spain, Poster: Truncation error of a superposed gamma process in a decreasing order representation, Poster: Advances in Approximate Bayesian Inference workshop, Dec 9.

- NIPS Meeting, Barcelona, Spain, Sequential Quasi Monte Carlo for Dirichlet Process Mixture Models, Practical Bayesian Nonparametrics workshop, Dec 9.

- Journées MAS, Grenoble, France, August 29-31. Poster: Bayesian nonparametrics, why and how?

- Third Bayesian Young Statisticians Meeting, Florence, Italy, June 19-21. Talk: A moment-matching Ferguson & Klass algorithm.

- Journées de Statistique de la SFdS, Montpellier, France, May 30 - June 3. Talk: Bayesian nonparametric inference for discovery probabilities.

- StaTalk Workshop, Collegio Carlo Alberto, Moncalieri, Italy, February 19. Talk 1: A gentle introduction to Bayesian Nonparametrics. Talk 2: Species sampling models.

- MCMSki V, Lenzerheide, Switzerland, January 5-7. Invited talk: A moment-matching Ferguson & Klass algorithm.

Emeline Perthame has been invited to give a talk at:

- the statistics seminar at University of Caen in October 2016 on an *Inverse regression approach to robust non-linear high-to-low dimensional mapping*.

Gildas Mazo has been invited to give a talk at:

- a special session on Copulas at the ERCIM CFE-CMStatistics conference, December 2016, in Seville, Spain.

Alexis Arnaud gave a talk at:

- a GdR ISIS meeting on *Méthodes d'apprentissage statistiques et applications à la santé* 2016-10-21, Telecom Paris, on Automatic segmentation and characterization of brain tumors using robust multivariate clustering of multiparametric MRI.

10.1.5. *Leadership within the Scientific Community*

Stéphane Girard is at the head of the associate team (*Statistical Inference for the Management of Extreme Risks and Global Epidemiology*) created in 2015 between IISTIS and LERSTAD (Université Gaston Berger, Saint-Louis, Sénégal). The team is part of the LIRIMA (Laboratoire International de Recherche en Informatique et Mathématiques Appliquées), http://mistis.inrialpes.fr/simerge.

10.1.6. *Scientific Expertise*

- Stéphane Girard was in charge of evaluating research projects for the Research Foundation Flanders (FWO), Belgium.
- Stéphane Girard is a Voting Member for the International Society for NonParametric Statistics (ISNPS).

10.1.7. *Research Administration*

- Stéphane Girard has been at the head of the Probability and Statistics department of the LJK (Laboratoire Jean Kuntzmann) from September 2012 to September 2016.
- Grenoble Pole Cognition. F. Forbes is representing Inria and LJK in the pole.
- PRIMES Labex, Lyon. F. Forbes is a member of the strategic committee. F. Forbes is representing Inria.

10.2. Teaching - Supervision - Juries

10.2.1. *Teaching*

Master : Stéphane Girard, *Statistique Inférentielle Avancée*, 41 ETD, M1 level, Ensimag. Grenoble-INP, France.

Master : Stéphane Girard, *Introduction à la statistique des valeurs extrêmes*, 15 ETD, M2 level, Université Gaston Berger, Saint-Louis, Sénégal.

Licence : Alexis Arnaud, *Probability and statistics*, 56 ETD, L2 level, IUT2 Grenoble, Université Pierre Mendès France.

Master: Jean-Baptiste Durand, *Statistics and probability*, 192 ETD, M1 and M2 levels, Ensimag Grenoble INP, France. Head of the MSIAM M2 programme, in charge of the statistics and data science tracks ([12]).

J.-B. Durand is a faculty member at Ensimag, Grenoble INP.

J-M. Becu, C. Albert, B. Olivier are teaching at UGA.

Master and PhD course: Julyan Arbel gave a course on Bayesian statistics, 30 ETD, Collegio Carlo Alberto, Moncalieri, Turin, Italy.

10.2.2. Supervision

Aina Frau-Pascual, "*Statistical models for the analysis of ASL and BOLD functional magnetic resonance modalities to study brain function and disease*", defended on December 19, 2016, Université Grenoble-Alpes, supervised by Florence Forbes and Philippe Ciuciu (CEA, Inria PARIETAL).

Seydou Nourou Sylla, "*Modélisation et classification de données binaires en grande dimension - Application à l'autopsie verbale*", defended on December 21, 2016, Université Gaston Berger, Saint-Louis, Sénégal, supervised by Abdou Diongue (Université Gaston Berger, Sénégal) and Stéphane Girard.

Alessandro Chiancone, "*Réduction de dimension via Sliced Inverse Regression: Idées et nouvelles propositions*", defended on October 28, 2016, Université Grenoble-Alpes, supervised by Stéphane Girard and Jocelyn Chanussot (Grenoble INP).

PhD in progress: Thibaud Rahier, "*Data-mining pour la fusion de données structurées et non-structurées*", started on November 2015, Florence Forbes and Stéphane Girard.

PhD in progress: Clément Albert, "*Limites de crédibilité d'extrapolation des lois de valeurs extrêmes*", started on January 2016, Stéphane Girard.

PhD in progress: Maïlys Lopes, "*Télédétection en écologie du paysage : statistiques en grande dimension pour la multirésolution spatiale et la haute résolution temporelle*", started on November 2014, Stéphane Girard and Mathieu Fauvel (INRA Toulouse).

PhD in progress: Alexis Arnaud "*Multiparametric MRI statistical analysis for the identification and follow-up of brain tumors* ", October 2014, Florence Forbes and Emmanuel Barbier (GIN).

PhD in progress: Pierre-Antoine Rodesch, "*Spectral tomography and tomographic reconstruction algorithms*", October 2015, Florence Forbes and Veronique Rebuffel (CEA Grenoble).

PhD in progress: Brice Olivier, "*Joint analysis of eye-movements and EEGs using coupled hidden Markov and topic models*", October 2015, Jean-Baptiste Durand, Marianne Clausel and Anne Guérin-Dugué (Université Grenoble Alpes).

10.2.3. Juries

10.2.3.1. PhD

- Stéphane Girard has been reviewer of three PhD theses in 2016:

  - Cees de Valk, "*A large deviation approach to the statistics of extreme events*", Tilburg University, Netherlands, December 2016.

  - Nicolas Goix, "*Apprentissage automatique et extrêmes et pour la détection d'anomalies*", Telecom ParisTech, november 2016.

  - Anthony Zullo, "*Analyse de données fonctionnelles en télédétection hyperspectrale : application à l'étude des paysages agri-forestiers*", Univ. Toulouse, September 2016.

- S. Girard was a member of two PhD committees in 2016:

  - Quentin Sebille, "*Modélisation spatiale de valeurs extrêmes, application à l'étude de précipitations en France*, Univ. Lyon, december 2016.

  - Khalil Said, "*Mesures de risque multivariées et applications en science actuarielle*", Univ. Lyon, december 2016.

- Florence Forbes has been reviewer of 1 PhD thesis in 2016:

  - Hong Phuong Dang, December 1st, 2016, Centrale Lille.

- F. Forbes was a member of one PhD committee in 2016:

  - Mohanad Albughdadi, September 2016, ENSHEEIT, Toulouse.

10.2.3.2. HDR

S. Girard was a member of the HDR committee of Mathieu Ribatet, Univ. Montpellier, November 2016.

F. Forbes was in the HDR committee of Sophie Achard, Univ. Grenoble Alpes, May 2016.

10.2.3.3. Other committees

- S. Girard is a member of the "Comité des Emplois Scientifiques" at Inria Grenoble Rhône-Alpes since 2015.

- F. Forbes is a member of the Committee for technological project and engineer candidate selection at Inria Grenoble Rhône-Alpes ("Commission du développement technologique ") since 2015.

- Since 2015, S. Girard is a member of the INRA committee (CSS MBIA) in charge of evaluating INRA researchers once a year in the MBIA dept of INRA.

- F. Forbes has been a member of 2 selection committees for Professors at Centrale-Supelec and Centrale Nantes and 1 selection committee for Assistant Professor at Paris-Sud University.

10.3. Popularization

- S. Girard presented his research on extreme-value analysis at the "Conférence ISN et enseignement", March 2016, video. He also gave a talk at the Institut de Maitrise des Risques (IMdR) [38] on a similar topic.

- Julyan Arbel led the Math en Jeans teams at Lycée francais Jean Giono, Turin, working on various subjects spanning from statistics, machine learning, to combinatorics and games.

NANO-D Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Selection

8.1.1.1. Reviewer

- Leonard Jaillet was a reviewer for the ICRA (International Conference on Robotics and Automation) and IROS (International Conference on Intelligent Robots and Systems) conferences, the WAFR (International Workshop on the Algorithmic Foundations of Robotics) workshop and the T-RO (Transactions on Robotics) journal.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Stephane Redon is teaching INF585 (Introduction to C++) at Ecole polytechnique
- Stephane Redon is part of the teaching team of INF442 (Big data and high-performance computing) at Ecole polytechnique

8.2.2. Supervision

- Leonard Jaillet is advising the PhD of Minh Khoa Nguyen
- Sergei Grudinin is advising the PhD of Alexandre Hoffmann
- Sergei Grudinin is advising the PhD of Guillaume Pages
- Stephane Redon is co-advising the PhD of Krishna Kant Singh in collaboration with Jean-Francois Mehaut
- Stephane Redon is advising the PhD of Francois Rousse
- Stephane Redon is advising the PhD of Semeho Edorh
- Stephane Redon is co-advising the PhD of Zofia Trstanova in collaboration with Gabriel Stoltz (defended in november 2016)

NECS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

C. Canudas de Wit has been appointed General Chair of the 58th IEEE Conference on Decision and Control, 2019.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

P. Frasca has been Associate Editor-at-Large in the International Program Committee of the 55th IEEE Conference on Decision and Control, 2016.

P. Frasca and F. Garin are Associate Editors in the IEEE Control System Society Conference Editorial Board. This year, they served for the 2016 American Control Conference, the 2017 American Control Conference, and the 55th IEEE Conference on Decision and Control, 2016.

P. Frasca is Associate Editor in the European Control Association (EUCA) Conference Editorial Board. This year, he served for the 2016 European Control Conference.

P. Frasca has been appointed as Associate Editor in the IEEE Robotics and Automation Society CASE Conference Editorial Board: he shall serve for 13th IEEE International Conference on Automation Science and Engineering, 2017.

Hassen Fourati was a member of the International and Scientific Program Committees of the International Conference on Control, Automation and Diagnosis (ICCAD'17), 2017, and the International Conference on Sciences and Techniques of Automatic Control and Computer Engineering STA2016, 2016.

10.1.2.2. Reviewer

Team members, and in particular faculty, have been reviewers for several conferences (including the most prestigious ones in their research area): IEEE Conference on Decision and Control CDC, European Control Conference ECC, American Control Conference ACC, European Signal Processing Conference, IEEE International Conference on Robotics and Automation ICRA, IEEE/RSJ International Conference on Intelligent Robots and Systems IROS, IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys), Indian Control Conference.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Carlos Canudas de Wit is Associate Editor of IEEE Transactions on Control of Networks Systems IEEE-TCNS (since June 2013), Associate Editor of IEEE Transactions on Control System Technology IEEE-TCST (since January 2013), and Editor of the Asian Journal of Control AJC (since 2010).

Paolo Frasca is Subject Editor of the International Journal of Robust and Nonlinear Control (Wiley) (since February 2014) and has been appointed as starting Associate Editor of IEEE Control System Letters (from February 2017).

Hassen Fourati is Associate Editor of the Asian Journal of Control AJC (since January 2016).

10.1.3.2. Reviewer - Reviewing Activities

Team members, and in particular faculty, have been reviewers for several journals (including the most prestigious ones in their research area): IEEE Trans. on Automatic Control, IEEE Trans. on Control of Network Systems, IEEE Trans. on Signal Processing, Automatica, IEEE Signal Processing Letters, Systems and Control Letters, IEEE Transactions on Information Theory, Elsevier Signal Processing, Int. Journal of Robust and Nonlinear Control, IET Communications, IET Wireless Sensor Networks. IEEE/ASME Trans. on Mechatronics, IEEE Trans. on Instrumentations and Measurements, IEEE Sensors journal, IEEE Trans. on Robotics, Networks and Heterogeneous Network (NHM), Mathematical Methods in the Applied Sciences (MMAS), Journal of Mathematical Analysis and Applications (JMMA), AMS Mathematical Reviews, Journal of Intelligent Transportation Systems.

10.1.4. Invited Talks

- C. Canudas de Wit, "Optimal Traffic Control: Eco-driving, Green-waves, Adaptive traffic lights" (plenary talk), Latin American Conference on Automatic Control 2016, Medellin, Colombia, October 2016.
- M. L. Delle Monache, "Some control strategies for conservation laws with applications to traffic flow", Séminaire de théorie du contrôle de Toulon, University of Toulon, November 2016.
- P. Frasca, "Non-smooth and hybrid systems in opinion dynamics", IEEE CDC satellite workshop on Dynamics and Control in Social Networks, Las Vegas, Nevada, December 2016.
- P. Frasca, "Non-smooth and hybrid systems in opinion dynamics", ANR Workshop "Control subject to computational and communication constraints" (CO4), Toulouse, France, October 2016.

10.1.5. Leadership within the Scientific Community

C. Canudas de Wit has been president of the European Control Association (EUCA) until June 2015, and is now (until 2017) Past-president and member of the EUCA Council.

10.1.6. Scientific Expertise

Team members participate to the following technical committees of IEEE Control Systems Society and of the International Federation of Automatic Control:
CSS Technical Committee "Networks and Communications Systems" (P. Frasca and F. Garin);
IFAC Technical Committee 1.5 on Networked Systems (P. Frasca and C. Canudas de Wit);
IFAC Technical Committee 2.5 on Robust Control (P. Frasca);
IFAC-TC7.1 Automotive Control (C. Canudas de Wit);
IFAC-TC7.4 Transportation systems (C. Canudas de Wit).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: F. Garin, Distributed Algorithms and Network Systems, 13.5h, M2, Univ. Grenoble Alpes, France.

Licence: H. Fourati, Informatique Industrielle, 105h, L1, IUT 1 (GEII), Univ. Grenoble Alpes, France;

Licence: H. Fourati, Réseaux locaux industriels, 50h, L1 et L2, IUT1 (GEII), Univ. Grenoble Alpes, France.

Licence: H. Fourati, Automatique, 61,5h, L3, UFR physique, Univ. Grenoble Alpes, France.

Licence: H. Fourati, Automatique échantillonnée, 15h, L2, IUT 1 (GEII), Univ. Grenoble Alpes, France.

Licence: A. Kibangou, Automatique, 52h, L2, IUT1(GEII1), Univ. Grenoble Alpes, France.

Licence: A. Kibangou, Mathématiques, 33h, L2, IUT1 (GEII1), Univ. Grenoble Alpes, France.

Licence: A. Kibangou, Mathématiques, 44h, L1, IUT1 (GEII1), Univ. Grenoble Alpes, France.

Licence: A.Kibangou, Automatique, 16h, L3, IUT1 (GEII1), Univ. Grenoble Alpes, France.

Doctorat: C. Canudas de Wit has organized the 37th International Summer School of Automatic Control Grenoble, France September, 12-16, 2016 on the topic "Advanced algorithms for traffic prediction and control".

10.2.2. Supervision

PhD: Aida Makni, Inertial and magnetic data fusion for attitude estimation under energetic constraint for accelerated rigid body, Univ. Grenoble Alpes, March 2016, co-advised by H. Fourati, A. Kibangou and C. Canudas de Wit.

PhD in progress: Simon Gerwig, Collaborative, reconfigurable and resilient control for hydro-electric power-plants, from Feb. 2014 until Mar. 2017, co-advised by C. Canudas de Wit, F. Garin and B. Sari (Alstom).

PhD in progress: Pietro Grandinetti, Control of large-scale traffic networks, from Apr. 2014, co-advised by C. Canudas de Wit and F. Garin.

PhD in progress: Andrés Alberto Ladino Lopez, Robust estimation and prediction in large scale traffic networks, from Oct. 2014, co-advised by C. Canudas de Wit, A. Kibangou and H. Fourati.

PhD in progress: Thibaud Michel, Mobile Augmented Reality Applications for Smart Cities, from Nov. 2014, co-advised by N. Layaïda, H. Fourati and P. Geneves.

PhD in progress: Sebing Gracy, Cyber-physical systems: a control-theoretic approach to privacy and security, from Oct. 2015, co-advised by A. Kibangou and F. Garin.

PhD in progress: Stéphane Durand, Coupling distributed control and game theory: application to self-optimizing systems, from Oct. 2015, co-advised by B. Gaujal and F. Garin.

PhD in progress: Stéphane Mollier, Aggregated Scale-Free Models for 2-D Large-scale Traffic Systems, from Oct. 2016, co-advised by C. Canudas de Wit, M. L. Delle Monache and B. Seibold.

PhD in progress: Nicolas Martin, On-line partitioning algorithms for evolutionary scale-free networks, from Dec. 2016, co-advised by C. Canudas de Wit and P. Frasca.

10.2.3. Juries

- C. Canudas de Wit was committee member of the PhD defence of Kuo-Yun Liang, KTH Stockholm. Ph.D. advisor: K.H. Johansson, June 10, 2016.

- H. Fourati was committee member of the PhD defense of Christophe Combettes, Institut Français des Sciences et Technologies des Transports, de l'Aménagement et des Réseaux (IFSTTAR), Spécialité : Automatique et Informatique appliquée, October 17, 2016.

- P. Frasca was committee member of the PhD defence of Laura Dal Col, *On distributed control analysis and design for multi-agent systems subject to limited information*, Institut National des Sciences Appliquées, Toulouse, France. Ph.D. advisors: Luca Zaccarian and Sophie Tarbouriech, October 25, 2016.

- H. Fourati was committe member of "Qualification Maître de Conferences 2016" during January 2016, Autrans, France.

10.3. Popularization

The GTL webpage (http://gtl.inrialpes.fr/status) went public in November: more generally the traffic activities have been popularized via the following public talks.

- M. L. Delle Monache. DEMO on the GTL at the "Journées des nouveaux arrivants", Inria, Paris, Dec. 2016

- M. L. Delle Monache, Traffic flow modeling, GIPSA-Lab days, Grenoble, Nov. 2016

AIRSEA Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

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

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

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

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

10.1.2. Scientific events selection

10.1.2.1. Member of the conference program committees

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

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

10.1.3. Journal

10.1.3.1. Reviewer - Reviewing activities

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

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

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

10.1.4. Leadership within the scientific community

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

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

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

10.1.5. Scientific expertise

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

10.1.6. Research administration

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

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

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

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

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

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

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

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

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

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

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

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

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

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

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

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

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

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

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

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

E-learning

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

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

10.2.2. Supervision

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

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

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

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

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

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

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

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

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

10.2.3. Juries

E. Blayo:

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

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

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

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

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

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

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

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

10.3. Popularization

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

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

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

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

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

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

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

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

<p align="center" style="color:red">BEAGLE Project-Team</p>

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. General Chair, Scientific Chair

- The team has been accepted as the main organizer of ECAL 2017
- Organization and chair of the second EvoEvo workshop (satellite workshop of CSS 2016), Amsterdam, September 20th 2016

8.1.1.2. Member of the Organizing Committees

- Co-organization of the minisymposium "Modeling Spatiotemporal Calcium Dynamics" at ECMTB 2016 (10th European Conference on Mathematical and Theoretical Biology), The University of Nottingham, UK, 11-15 July 2016 (H. Berry and R. Thüll, U Nottingham)
- Co-organization the thematic school "EIEFB 2016: Ecole interdisciplinaire d'échanges et de formation en biologie", Paris, 13-15 June 2016 (H. Berry and B. Abou, Univ. Paris Diderot).
- Co-organization of the module "Molecular assembling and dynamics: from experimentation to modeling" at the thematic school "Functional Microscopy in Biology" (MiFoBio 2016), Seignosse, France, 30 Sep-07 Oct 2016 (H. Berry, C. Favard, CNRS Montpellier and L. Héliot, CNRS Lille).
- E Tannier is a member of the organizing committee of ICGT 2018 (International Conference on Graph Theory)

8.1.2. Scientific Events Selection

8.1.2.1. Member of the Conference Program Committees

- C Knibbe is a member of the Program committee of Alife XV, Cancun, Mexico, July 2016
- C Rigotti is a member of the Program committee of ACM International Conference on Knowledge Discovery and Data Mining (KDD)
- E Tannier is a member of Recomb Comparative Genomics 2016 program Committee
- E Tannier is a member of ECCB 2016 program Committee
- E Tannier is a member of SEMOVI (séminaire de modélisation du vivant) program Committee
- G Beslon is a member of the Program committee of ALife 2016 (Cancun, Mexico)
- G Beslon is a member of the Program committee of Jobim 2016 (Lyon, France)
- G Beslon is a member of the Program Committee of MUME 2016 (Paris, France)

8.1.2.2. Reviewer

- CPM 2016, RECOMB 2016 (E Tannier)
- ECCB 2016 (C Knibbe)
- EuroPar 2016 (J Rouzaud-Cornabas)

8.1.3. Journal

8.1.3.1. Member of the Editorial Boards

- E Tannier is a member of the editorial committee of *Peer Community in Evolutionary Biology*, an open archive labeling system alternative to publications.
- H Berry is a member of the editorial committee of AIMS Biophysics

8.1.3.2. Reviewer - Reviewing Activities

- PLoS One, Systematic Biology, Bioinformatics, Discrete Applied Mathematics, PLoS Computational Biology, BMC evolutionary Biology, Genome Biology and Evolution, Bulletin of Mathematical Biology (E Tannier)
- Scientific Reports, Physical Biology, Frontiers Synaptic Neuroscience, PLoS Computational Biology, Journal Mathematical Neuroscience, New Journal of Physics (H Berry)
- Entropy, PLoS Computational Biology (G Beslon)
- IEEE Geoscience, Remote Sensing Letters (C Rigotti)
- IEEE Transaction on Cloud Computing (J Rouzaud-Cornabas)

8.1.4. Invited Talks

- J Rouzaud-Cornabas, "Performance Optimization for Computational Biolog", Perfomance Analysis Day, Lyon, December 2016
- C Knibbe, "Insights on genome dynamics from in silico experimental evolution and mathematical modelling", Séminaire de Modélisation du Vivant (SeMoVi), 28th of September 2016, Lyon, France.
- C Knibbe, "Genome size evolution: Putting intuition to the test with modeling and simulation", Jacques Monod Conference on "Evolutionary genomics and systems biology: bringing together theoretical and experimental approaches", 10-14th of October 2016, Roscoff, France.
- G Beslon, Hybrid Systems Biology workshop (Grenoble, France) at the Semideev meeting (Saclay, France), at the FET technical seminar (Brussels, Belgium)
- H Berry, "Estimating the impact of anomalous diffusion on intracellular biochemical kinetics", workshop "Stochastic Modelling of Transport Processes In Biology", 30th-31st March 2016, Manchester, UK
- H Berry, "Estimating the effects of spatial non-homogeneities in intracellular diffusion-reactions", meeting of the BIOSS Working-Group, July 1st 2016, Lyon
- H Berry, "Calcium signals in astrocytes: from intercellular to subcellular models", workshop "In vitro and in silico modelling of neuron-astrocyte communication" of the 2016 Bernstein Conference, September 20-21 2016, Berlin, Germany
- H Berry, "The many dimensions of cortico-striatal STDP", meeting of the GDR BioComp, 10-12 Oct 2016, Lyon
- H Berry, "Anomalous diffusion in cells: experimental data and modelling", CIMPA School "Mathematical models in biology and medicine", December 05-16 2016, Moka, Mauritius.
- E Tannier, "The second root of molecular evolution" Genetic depatment of the Trinity College, Dublin, Feruary 2017
- E Tannier, "Molecules as documents of evolutionary history: 50 years before", Jacques Monod Conference *Molecules as Documents of Evolutionary History*, Roscoff, May 2016
- E Tannier, "Breaking bad", workshop *Pattern Avoidance and Genome Sorting*, Dagstuhl, February 2016

8.1.5. Leadership within the Scientific Community

- H Berry is a Member of the Scientific Board (comité scientifique) of GdR MIV (Microscopie et Imagerie du Vivant, GdR 2588)
- H Berry is a Member of the Steering Commitee (comité de pilotage) of GdR IMaBIO (Imagerie et Microscopie pour la BIOlogie, submitted)

8.1.6. Scientific Expertise

- H Berry is a Reviewer for the US National Science Foundation (NSF), call "Early-career Program"

- H Berry is a Member of the evaluation committee for research program ROSIRIS of the IRSN (Institut de Radioprotection et de Sûreté Nucléaire)
- E Tannier is a Member of the evaluation committee for the FRNQT, Research program in Quebec.

8.1.7. Research Administration

- C Knibbe is a member of Inria Grenoble-Rhône Alpes Comité de Développement Technologique (CDT)
- C Knibbe is a member of the Selection committee in CNU section 67/64 at Université Paris Diderot
- C Knibbe is a member of the Conseil de Laboratoire LIRIS (UMR 5205 CNRS)
- C Rigotti is an elected member of Insa Scientific board (Conseil scientifique)
- G Beslon member of the CoNRS (Section 6 and CID 51)
- G Beslon member of the scientific commission 5 (CSS5) of the IRD (Institut de Recherche pour le Developpement)
- H Berry is Vice-Chair of Inria's "Evaluation Committee" (Commission d'Evaluation)
- H Berry is Chair of the Search Committee for "Junior Research Scientists" (Président Jury d'admissibilité CR2) of Inria Grenoble Research Center
- H Berry is Elected member of Inria's "Scientific Board" (Conseil Scientifique)
- H Berry is Member of Inria's "Parity-Equality" Committee
- H Berry is Member of the Science Steering Committee of the Rhône-Alpes Complex Systems Institute (IXXI)
- E Tannier is an elected member of Inria Administration Council
- E Tannier is the scientific referent of the Inria symposium committee

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

License: J Rouzaud-Cornabas, Programmation orientée objets, 20heqTD, L3, INSA-Lyon, France

Master: J Rouzaud-Cornabas, Systèmes, 10heqTD, M1, INSA-Lyon, France

Master: J Rouzaud-Cornabas, Interface Homme Machine, 50heqTD, M1, INSA-Lyon, France

Master: J Rouzaud-Cornabas, Évaluation de performance et reproducibilité, 6heqTD, M2, INSA-Lyon, France

Master: J Rouzaud-Cornabas, Computational Science and High Performance Computing, 6heqTD, M2, INSA-Lyon, France

Master: J Rouzaud-Cornabas, Parallel Computing, 80heqTD, M2, INSA-Lyon, France

Master: J Rouzaud-Cornabas, Parallel Computing for Bio-informatics, 10heqTD, M2, INSA-Lyon, France

Licence: C Rigotti, Object-Oriented Programming and Graphical User Interfaces, 86h, L2, Department 1er cycle of INSA-Lyon.

Licence: C Rigotti, Simulation of Chemical Reactions, 26h, L2, Department 1er cycle of INSA-Lyon.

Licence: C Rigotti, Numerical Modelling for Engineering, 60h, L2, Department 1er cycle of INSA-Lyon.

Master: C Rigotti, Data Mining, 25h, M1, Bioinformatics and Modeling Department of INSA-Lyon.

Master: E Tannier, Algorithmics for Bioinformatics, 18h, M1, Bioinformatics and Modeling Department of INSA-Lyon.

Master: E Tannier, Algorithmics for Bioinformatics, 12h, M1, University of Lyon 1.

Licence: C Knibbe, Algorithmique et programmation procédurale, 123h eqTD, L2 Informatique, Université Lyon 1, France

Master: C Knibbe, Programmation web, 40h eqTD, M1 Informatique, Université Lyon 1, France

Master: C Knibbe, Connaissance métier pour la recherche, 24h eqTD, M2 Informatique, Université Lyon 1, France

Master: C Knibbe, Intelligence artificielle bio-inspirée, 22h eqTD, M2 Informatique, Université Lyon 1, France

Licence: C Knibbe, Applications en mathématiques et informatique, 39h eqTD, L1 Informatique, Université Lyon 1, France

Licence: C Knibbe, Programmation fonctionnelle pour le web, 20h eqTD, L2 Informatique, Université Lyon 1, France

Master: C Knibbe, Programmation orientée objets pour la bioinformatique, 52h eqTD, M1 Bioinformatique, Université Lyon 1, France

Master: C Knibbe, Projet en bioinformatique, 25h eqTD, M1 Bioinformatique, Université Lyon 1, France

8.2.2. Supervision

PhD : Ilya Prokin, "Modeling and simulation of signal transduction in living cells: synaptic plasticity of basal ganglia neurons", INSA Lyon, Ph.D. defended: December 02, 2016, Supervisor: H. Berry

PhD in progress : Marie Fernandez, "Extraction and analysis of the acoustic network of social birds: tools for population tracking", Starting date Oct 2016, co-supervision: H. Berry, H. Soula (CRC, Univ. P&M Curie, Paris) and C. Vignal (Univ. J. Monnet, Saint-Etienne)

PhD in progress : Audrey Denizot, "Simulation of calcium signaling in fine astrocytic processes", Starting date Oct 2016, co-supervision: H. Berry and H. Soula (CRC, Univ. P&M Curie, Paris)

PhD in progress : Alexandre Foncelle, 'Modeling the signaling pathway implicated in STDP: the role of endocannabinoid and dopamine signaling", Starting date Oct 2014, supervision: H. Berry

PhD in progress : Alvaro Mateos Gonzalez; "Anomalous subdiffusion equations as diffusion limits to integro PDEs with age structure", Starting date Sep 2014, co-supervision: H. Berry, Vincent Calvez (EPI Numed) and Thomas Lepoutre (EPI Dracula).

PhD in progress : Wandrille Duchemin; "Phylogénie des dépendances, dépendances des phylogénies", Starting date 2015, co-supervision: E Tannier and V Daubin (CNRS, Univ Lyon 1)

PhD in progress : Yoann Anselmetti; "Evolution de l'organisation des génomes en présence de génomes non assemblés", Starting date 2015, co-supervision: E Tannier and S Bérard (Univ Montpellier)

PhD in progress : Damir Hasic; "Gene tree Species tree reconciliation in the presence of gene conversion", Starting date 2016, co-supervision: E Tannier (Univ Sarajevo)

PhD in progress: Sergio Peignier, Subspace clustering algorithms based on biological evolution mechanisms, INSA de Lyon, started in September 2014, C Rigotti and G Beslon.

PhD in progress : Charles Rocabert, Studying Evolution of Evolution of Bacterial Microorganisms by Computer Simulation Approaches, started in October 2013, supervised by G Beslon and C Knibbe

PhD in progress: Yoram Vadee Le Brun, "Evolution expérimentale in silico de réseaux de régulation génétique", INSA-Lyon (now Min. Enseignement National), Starting date Sep 2013, co-supervision: G Beslon, J Rouzaud-Cornabas

PhD in progress: Vincent Liar, "Towards a quantitative digital genetics platform", INSA-Lyon, Starting date Oct 2016, co-supervision: G Beslon, J Rouzaud-Cornabas, C Ofria (Michigan State University, BEACON Center)

8.2.3. Juries

- C Knibbe is a reviewer of the PhD thesis Gaël Jalowicki, University College Dublin, October 2016
- H Berry is a Member (reviewer) of the PhD jury for Guillaume Rodriguez, "Modélisation des bases neuronales de la mémoire de travail paramétrique dans le cortex préfrontal" Univ. P & M Curie, Paris, Oct 20, 2016.
- H Berry is a Member (reviewer) of the HdR jury for Dominique Martinez, "Modélisation biologique, biocapteurs et inspiration pour la robotique autonome", Univ. Nancy-Lorraine, Nancy, 2017
- H Berry is a Member of the Search committee for two tenured Full Professor positions in Systems Biology at University P & M Curie, Paris, 2016 (64PR0596 and 65PR3266)
- G Beslon is a member of the Jury of Ilya Prokins (INSA-Lyon, Lyon, France)
- G Beslon is a reviewer of the PhD thesis of Arthur Bertrand (UPMC, Paris, France)
- G Beslon is a reviewer of the PhD thesis of Sandro Colizzi (Utrecht University, Utrecht, NL)

8.3. Popularization

- E Tannier gave a series of lectures for a large public at "Université Populaire de Lyon", on "anarchy in biology".

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DRACULA Project-Team

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9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- International conference "LyonSysBio" (Lyon Systems Biology), Lyon (France), 17 - 18 November 2016 (http://lyonsysbio2016.sciencesconf.org/?lang=en). Co-organizers: Fabien Crauste and Olivier Gandrillon.
- Regular SeMoVi Rhone-Alpes seminar in biological modeling (http://www.biosyl.org/news/semovi), 5 seminars organized in 2016, with one international lecturer each time. Co-organizer : Olivier Grandrillon and Fabien Crauste.
- Minisymposium: "Polymer dynamics models and applications to neurodegenerative disease", the 11th AIMS Conference on Dynamical Systems, Differential Equations and Applications, 01 - 05 July 2016, Orlando, Florida, USA (http://www.aimsciences.org/conferences/2016/). Co-organizers: Laurent Pujo-Menjouet and Leon Tine.
- Summer School in Probability and PDE for Biology, July 2016 (held at the CIRM) http://scientific-events.weebly.com/1426.html. Co-organizers: Thomas Lepoutre.
- Workshop on complex systems of reaction-diffusion (https://www.ljll.math.upmc.fr/kibord/workshop_march_2016.html). Co-organizers: Thomas Lepoutre.

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

- International conference "LyonSysBio" (Lyon Systems Biology), Lyon (France), 17 - 18 November 2016 (http://lyonsysbio2016.sciencesconf.org/?lang=en). Co-organizers : Fabien Crauste and Olivier Gandrillon.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- Fabien Crauste: Computational and Mathematical Methods in Medicine (HPG).
- Laurent Pujo-Menjouet: Journal for theoretical Biology; Mathematical Modelling of Natural Phenomena.
- Mostafa Adimy: Journal of Nonlinear Systems and Applications; Chinese Journal of Mathematics.
- Olivier Gandrillon: BMC research Notes.

9.1.3.2. Reviewer - Reviewing Activities

- Fabien Crauste: Bulletin of Mathematical Biology; Discrete and Continuous Dynamical Systems Series B; Funkcialaj Ekvacioj (Functional Equations); Journal of Mathematical Biology; Journal of Biological Systems; Systems and Control Letters.
- Laurent Pujo-Menjeout: Journal of Mathematical Biology.
- Celine Vial: Comptes Rendus Mathematique (CRAS).
- Mostafa Adimy: Mathematical Methods in the Applied Sciences; Zeitschrift fuer Angewandte Mathematik und Physik (ZAMP)

9.1.4. Invited Talks

- Fabien Crauste: Workshop "French-Spanish Workshop on Evolution Problems", Valladolid (Spain), May 16-17.
- Laurant Pujo-Menjouet: Marseille Monthly seminar Aix-Marseille Université, Institut de Mathématiques de Marseille (I2M).
- Mostafa Adimy: Workshop "French-Spanish Workshop on Evolution Problems", Valladolid (Spain), May 16-17.
- Mostafa Adimy: Workshop "Modelling the Dissemination and Control of Arboviroses", Polytechnic School, San Lorenzo (Paraguay), October 5-8.

9.1.5. Scientific Expertise

- Celine Vial: Member of CNU 26; Member of a comity for "Maître de conférences" Pierre et Marie Curie university.
- Celine Vial: Member of the jury of the agregation of mathematic in Tunisia.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Master: Fabien Crauste, Population Dynamics, 15h ETD, M2, UCBL, Lyon. Laurent:
- Licence: Laurent Pujo-Menjout, Bio-mathématiques et Modélisation, 10h ETD, L3, UCBL, Lyon.
- Licence: Laurent Pujo-Menjout, Analyse numérique, 72h ETD, L3, UCBL, Lyon.
- Licence: Laurent Pujo-Menjout, Equations différentielles et aux dérivées partielles, 72h ETD, L3, UCBL, Lyon.
- Licence: Laurent Pujo-Menjout, Analyse I : les réels et les fonctions, 72h ETD, L1, UCBL, Lyon.
- Licence: Laurent Pujo-Menjout, Mathématiques Appliquées - Equations Différentielles, 18h ETD, L2, UCBL, Lyon.
- Licence: Laurent Pujo-Menjout, Equations Différentielles ordinanires and Modélisation, 54h ETD, L3, INSA, Lyon.
- Master: Laurent Pujo-Menjout, Modélisation en biologie et médecine, 7.5h ETD, M1, UCBL, Lyon.
- Master: Laurent Pujo-Menjout, Systèmes dynamiques, 78h ETD, M1, UCBL, Lyon.
- Master: Laurent Pujo-Menjout, Gestion de projet en ingénierie mathématique, 3h ETD, M1, UCBL, Lyon.
- Master: Laurent Pujo-Menjout, Equations aux Différences, 29h ETD, M1, INSA, Lyon.
- Master: Mostafa Adimy, Reaction-diffusion and age-structured equations with application to biological populations, 45h ETD, M2, School of Applied Mathematics (EMAp), FGV, Rio de Janeiro, Brazil.

9.2.2. Supervision

- PhD: Abdennasser Chekroun, "Équations différentielles et aux différences à retard pour des modèles de dynamique des cellules souches hématopoïétiques", Université Lyon, until March 2016, encadrant: Mostafa Adimy.
- PhD: Marine Jacquier, "Mathematical modeling of the hormonal regulation of food intake and body weight : applications to caloric restriction and leptin resistance", Université de Lyon, until February 2016, encadrants: Fabien Crauste, Mostafa Adimy and Hedi Soula.
- PhD in progress: Simon Girel, "Multiscale modelling of the immune response", Université Lyon, since September 2015, encadrant: Fabien Crauste.
- PhD in progress: Aurélien Canet, "Contribution à l'étude de la quantification de la réponse d'une tumeur solide après un traitement par radiothérapie", Université Lyon, since January 2016, encadrants: Larry Bodgi, Nicolas Foray and Laurent Pujo-Menjouet.

- PhD in progress : Loïs Boullu, Modélisation de la mégacaryopoïèse et applications aux maladies liées â la production des plaquettes, Université Lyon 1, October 2014, Laurent Pujo-Menjouet and Jacques Bélair (co-tutelle avec l'Université de Montréal).

- PhD in progress: Manaf Ahmed, "Probabilistic and statistical study of the spatiotemporal dependence; application to environment", since october 2013, encadrants: C. Vial, V. Maume-Deschamps and P. Ribereau.

- PhD in progress: Mélina Ribaud, "Robustness in multi-objective optimization for the design of rotating machine", since september 2015, encadrants: C. Vial, C. Helbert and F. Gillot.

- PhD in progress : Loïc Barbarroux, modélisation mathématique de la réponse immunitaire chez un individu en vue d'optimiser des stratégies de vaccination, Université de Lyon 1, since October 2013, Mostafa Adimy and Phillipe Michel.

- PhD in progress : Apollos Besse, The role of tumor-immune interaction in combined treatments for chronic myeloid leukemia, Université Lyon 1, since October 2014, Samuel Bernard and Thomas Lepoutre.

- PhD in progress : Alvaro Mateso Gonzales, Models for anomalous diffusion, ENS Lyon, since October 2014, Thomas Lepoutre, Hugues Berry and Vincent Calvez (Alvaro is not member of Dracula team).

- PhD in progress : Flavien Duparc, Etude d'un modèle mathématiques de régulation de l'hémoglobine chez les patients dialysés, Université Lyon 1, since October 2014, Mostafa Adimy and Laurent Pujo-Menjouet.

- PhD in progress : Ulysse Herbach, Modèles graphiques probabilistes pour l'inférence de réseaux de gènes, Université Lyon 1, since October 2015, Olivier Gandrillon, Thibault Espinasse (ICJ) and Anne-Laure Fougères (ICJ).

- PhD in progress : Arnaud Bonnafoux, Vers une inférence automatique de réseaux de gènes dynamiques à partir de « mégadonnées » temporelles discrètes acquises sur cellules uniques, Université Lyon 1, since November 2015, Olivier Gandrillon (CIFRE with the COSMO company).

- HDR: Laurent Pujo-Menjouet, "Étude de modèles mathématiques issus de la biologie du cycle cellulaire et de la dynamique des protéines", Université Lyon, Decembre 2016.

9.2.3. Juries

- Mostafa Adimy was reviewer and member of the PhD of Benjamin Conti (Université d'Aix Marseille), "Équations de réaction-diffusion dans un environnement périodique en temps Applications en médecine".

- Mostafa Adimy was member of the PhD of Abdennasser Chekroun (Université de Lyon 1), "Contribution à l'analyse mathématique d'équations aux dérivées partielles structurées en âge et en espace modélisant une dynamique de population cellulaire".

- Mostafa Adimy was member of the PhD of Youssef Bourfia (Université de Marrakech and Université Pierre et Marie-Curie), "Modélisation et Analyse de Modèles en Dynamique Cellulaire avec Applications à des Problèmes Liés aux Cancers".

- Mostafa Adimy was member of the HDR of Laurent Pujo-Menjouet (Université de Lyon 1), "Etude de modèles mathématiques issus de la biologie du cycle cellulaire et de la dynamique des protéines".

- Fabien Craute was reviewer and member of the PhD of Ana Jarne Munoz (Université de Bordeaux), "Modeling the effect of exogenous Interleukin 7 in HIV patients under antiretroviral therapy with low immune reconstitution".

- Fabien Craute was reviewer and member of the PhD of David Granjon (Université Pierre et Marie Curie et Université de Lausanne), "Modeling of Calcium Homeostasis in the Rat and its perturbations".

- Celine Vial was member of the PhD of Zahraa Salloum (Université de Lyon 1), "Maximum de vraisemblance empirique pour la détection de changements dans un modèle avec un nombre faible ou très grand de variables".

9.3. Popularization

- Fabien Crauste : Conference "Grippe saisonnière, épidémie, pandémie : quel apport des mathématiques ?" Université Ouverte, Bibliothèque de Lyon, March 30, 2016.
- Laurent Pujo-Menjouet : Conference "Mathématiques et relations amoureuses : les jeux de l'amour et sans le hasard ?" Université Ouverte, Bibliothèque de Lyon, February 3, 2016.

ERABLE Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific events organisation

8.1.1.1. General chair, scientific chair

- Alberto Marchetti-Spaccamela is member of the Steering committee of WG, Workshop on Graph Theoretic Concepts in Computer Science, and of ATMOS, Workshop on Algorithmic Approaches for Transportation Modeling, Optimization, and Systems.
- Marie-France Sagot was from 2010 to 2016 member and from 2014 to 2016 Chair of the Steering Committee of the International Conference *LATIN* (http://www.latintcs.org/). She is member of the Steering Committee of the *European Conference on Computational Biology* (*ECCB*) since 2002 and of the International Symposium on Bioinformatics Research and Applications (ISBRA) since 2008.

8.1.1.2. Member of the organising committees

- Leen Stougie was co-organiser, together with Neil Olver and René Sitters of the 8th Workshop on Flexible Network Design, July 4-8, 2016, Vrije Universiteit, Amsterdam, The Netherlands.

8.1.2. Scientific events selection

8.1.2.1. Member of the conference program committee

- Laurent Bulteau (external collaborator of ERABLE) was a member of the program committee for the following international conferences in 2016: 41st International Symposium on Mathematical Foundations of Computer Science (MFCS 2016) and 11th International Conference on Algorithmic Aspects of Information and Management (AAIM).
- Pierluigi Crescenzi was a member of the program committee for the following international conferences in 2016: 17th Italian Conference on Theoretical Computer Science (ICTCS), 31st IEEE International Parallel & Distributed Processing Symposium (IPDPS).
- Roberto Grossi was a member of the program committee for the following international conferences in 2016: 12th Latin American Theoretical Informatics Symposium (LATIN), 27th International Workshop on Combinatorial Algorithms (IWOCA), 8th International Conference on Fun with Algorithms (FUN).
- Alberto Marchetti-Spaccamela was a member of the program committee for the following international conference in 2016: 15th International Symposium on Experimental Algorithms (SEA).
- Nadia Pisanti was a member of the program committee for the following international conferences in 2016: 10th International Workshop on Algorithms and Computation (WALCOM), 5th International Symposium on Network Enabled Health Informatics, Biomedicine and Bioinformatics (Hi BI BI), 5th RECOMB Satellite Workshop on Computational Cancer Biology (RECOMB-CCB), 16th Workshop on Algorithms in BIoinformatics (WABI), 6th RECOMB Satellite Workshop on Massively Parallel Sequencing (RECOMB-Seq), 12th International Symposium on Bioinformatics Research and Applications (ISBRA), 7th International Conference on Information Technology on Bio- and Medical-Informatics (ITBAM), 6th IEEE International Conference on Computational Advances in Bio and Medical Sciences (ICCABS).
- Marie-France Sagot was a member of the program committee for the following international conferences in 2016: Intelligent Systems for Molecular Biology (ISMB), Prague Stringology Conference 2016, 11th International Conference on Algorithmic Aspects of Information and Management (AAIM), 20th Annual International Conference on Research in Computational Molecular Biology (RECOMB), 14th RECOMB Satellite Workshop on Comparative Genomics (RECOMB-CG), 16th Workshop of Algorithms in Bioinformatics (WABI).

- Leen Stougie was a member of the program committee of the following conferences in 2016: 18th Conference on Integer Programming and Combinatorial Optimization (IPCO), Workshop on Approximation and Online Algorithms (WAOA).

8.1.2.2. Reviewer

Besides the above, various other members of ERABLE have been reviewer for other international conferences, such as SODA etc.

8.1.3. Journal

8.1.3.1. Member of the editorial board

- Pierluigi Crescenzi is member of the Editorial Board of *Journal of Computer and Systems Science* and *Electronic Notes on Theoretical Computer Science*.
- Roberto Grossi is member of the Editorial Board of *Theory of Computing Systems (TOCS)* and *RAIRO – Theoretical Informatics and Applications – Informatique Théorique et Applications*.
- Alberto Marchetti-Spaccamela is member of the Editorial Board of *Theoretical Computer Science* and *Transactions on Algorithms Engineering*.
- Nadia Pisanti is since 2012 member of Editorial Board of *International Journal of Computer Science and Application (IJCSA)*.
- Marie-France Sagot is member of the Editorial Board of *Lecture Notes in Bioinformatics* (subseries of *Lectures Notes in Computer Science*), *Journal of Discrete Algorithms*, *BMC Bioinformatics*, and *BMC Algorithms for Molecular Biology*.
- Leen Stougie is member of the Editorial Board of *Transactions on Algorithms Engineering* since 2010, *Surveys in Operations Research and Management Science* since 2011, and *Journal of Industrial and Management Optimization* since 2013.
- Cristina Vieira is Executive Editor of *Gene*, and since 2014 member of the Editorial Board of *Mobile DNA*.

8.1.3.2. Reviewer for Journals

Members of ERABLE have reviewed papers for the following journals: *Theoretical Computer Science, Algorithmica, IEEE/ACM Transactions in Computational Biology and Bioinformatics (TCBB), Algorithms for Molecular Biology, Scientific Reports, Journal of Computational Biology, BMC Bioinformatics, Computing and Informatics, BMC Evolutionary Biology, Genetica, Gene, Genome Biology and Evolution, Genetical Research, Genome Research, Molecular Biology and Evolution, Insect Biochemistry and Molecular Biology, PLoS Genetics, Mutation research, mBio, Frontiers in Microbiology, Infection, genetics and evolution, PLoS Biology*.

8.1.4. Invited talks

Clara Benoit-Pilven gave a lecture (Workshop Colib'read, November 7-8, 2016).

Roberto Grossi gave an invited talk (Eleventh International Conference on Algorithmic Aspects in Information and Management (AAIM), Bergamo, Italy, July 18-20, 2016).

Gunnar Klau gave an invited talk (Simon's Institute for the Theory of Computing, Workshop on Network Biology, April 11-15, 2016).

Vincent Lacroix gave a lecture+demonstration (Workshop Colib'read, November 7-8, 2016). He also made an invited presentation in the context of a CNRS training meeting (Formation Bioinformatique pour les NGS Montpellier, March 24, 2016)

Hélène Lopez-Maestre gave a lecture (Workshop Colib'read, November 7-8, 2016).

Nadia Pisanti gave two invited talks (Data Driven Innovation Open Summit, Rome, May 20-21, 2016; Conference Mathematical Foundations in Bioinformatics (MatBio), London, UK, July 20, 2016).

Marie-France Sagot gave two invited talks (German Conference on Bioinformatics (GCB), Berlin, Germany, Sept 12-15, 2016; First Workshop on Enumeration Problems and Applications (WEPA), Aubière, France, Nov 21-22, 2016).

Blerina Sinaimeri gave a talk (University of Palermo, Sept 27, 2016).

Leen Stougie gave two lectures (Graduate School on Methods for Discrete Structures, Free University Berlin, 25 April 2016; 7th Cargese Workshop on Combinatorial Optimization, October 9-14, 2016).

Laura Urbini gave a lecture (Warwick University, Computer Science Department, November 10, 2016).

8.1.5. *Leadership within the scientific community*

Alberto Marchetti-Spaccamela is Member of the Council of EATCS, the European Association for Theoretical Computer Science.

Leen Stougie was Chairman of the Dutch Network on the Mathematics of Operations Research (Landelijk Netwerk Mathematische Besliskunde (LNMB)) from February 2011 to January 2016. From February 2016, he is Member of the general board of the LNMB. He is also Chairman Program Committee Econometrics and OR, VU Amsterdam and Member of the Board of the research school ABRI-VU, Amsterdam.

Cristina Vieira is director of the GDRE "Comparative genomics" since the latter was renewed in 2010.

Marie-France Sagot and Fabrice Vavre are members of the Steering Committee of the LabEx Ecofect (http://ecofect.universite-lyon.fr/).

8.1.6. *Scientific expertise*

Marie-France Sagot is member of the Advisory Board of the CWI, Amsterdam, The Netherlands, and chair of the "Commissions Scientifiques Spécialisées" (CSS) of the INRA for the Department of Applied Mathematics and Computer Science. She was also a Panel Member for the ERC.

Fabrice Vavre is member of the Section 29 of the Comité National de la Recherche Scientifique (CoNRS).

8.1.7. *Research administration*

Hubert Charles is director of the Biosciences Department of the Insa-Lyon.

Alberto Marchetti-Spaccamela is Director of the Department of Computer, Control, and Management Engineering Antonio Ruberti at Sapienza University of Rome, Italy.

Nadia Pisanti is since 2013 member of the Board of the Regional PhD School of Computer Science at the University of Pisa, Italy.

Alain Viari is since 2012 Deputy Scientific Director at Inria responsible for the domain "Digital Health, Biology and Earth". He thus represents Inria at several national instances related to Life Sciences, Health and Environment.

8.2. Teaching - Supervision - Juries

8.2.1. *Teaching*

Most of the members of ERABLE are Assistant / Associate or Full Professors and as such have a heavy load of teaching. Depending on the country, this represents between 150 to 192 hours in front of a class plus the additional work of preparing the courses and exams, and of correcting the latter. Many are also responsible for some of the university courses at the undergraduate or graduate levels.

More in detail:

- In France:
  - Hubert Charles is responsible for the Master of Modelling and Bioinformatics (BIM) at the Insa of Lyon. He teaches 192 hours per year in statistics and biology.
  - Pierluigi Crescenzi taught 120h (72h of Programming in Java for the undergraduate program in Computer Science and 48 of Distributed Algorithms for the Master in Computer Science) at the University of Florence.
  - Vincent Lacroix is responsible for several courses both at the University (L2: Bioinformatics, L3: Advanced Bioinformatics, M1: Methods for Genomics, M1: Methods for Transcriptomics, M1: Projects, M2: Bioethics) and at the Insa (M1: Gene Expression). He teaches 192 hours per year in bioinformatics and statistics.
  - Arnaud Mary taught 109+115 hours in 2016 at the University of Lyon 1 (L1: mathematics; L2: bioinformatics; M1: data analysis; M1: computer science).
  - Cristina Vieira is responsible for the Evolutionary Genetics and Genomics academic career of the Master Ecosciences-Microbiology. She was awarded an IUF (Institut Universitaire de France) distinction and teaches genetics 64 hours per year at the University and ENS Lyon.
- In Italy: Nadia Pisanti taught a total of 104 hours (L1: algorithms and programming; M2: algorithms for bioinformatics).
  - Alberto Marchetti-Spaccamela taught 60 hours of Computing Models (undergraduate class) and 30 hours of Privacy in the electronic society (master class) at Sapienza University of Rome.
  - Nadia Pisanti taught 72h (24h of Programming in C for the undergraduate program in Computer Science and 42 of Algorithms for Bioinformatics for the Master in Computer Science) at the University of Pisa.

Inria or CNRS Junior and senior researchers as well as PhD students and postdocs are also involved in teaching. Notably Alice Julien-Laferrière (PhD student) taught 6 hours (Jury PEL 4); Hélène Lopez-Maestre (PhD student) and Laura Urbini (PhD student) taught each 64 hours of Mathematics and Statistics at the Department of Biology (undergraduate students); Blerina Sinaimeri (Junior Inria Researcher) taught 12h in Discrete Mathematics at the Master of Modelling and Bioinformatics (BIM), INSA, University Lyon 1, as well as 24h at the Master 2 in Computer Science at the ENS Lyon; Fabrice Vavre taught 25h on symbiosis (L3, M1, M2, University Lyon 1, ENS Lyon, University of Poitiers).

Roberto Grossi also participated this year to the Olympiads in Informatics.

8.2.2. Supervision

The following are the PhDs defended in ERABLE in 2016.

- Martin Wannagat, University of Lyon 1, June 2016, supervisors: M.-F. Sagot, A. Marchetti-Spaccamela, L. Stougie.
- Alice Julien-Laferrière, University of Lyon 1, December 2016, supervisors: M.-F. Sagot, V. Lacroix, S. Vinga.

8.2.3. Juries

The following are the PhD or HDR juries to which members of ERABLE participated in 2016.

- Gunnar Klau: Reviewer of the PhD of Arnon Mazza, Tel Aviv University, and of the HDR of Pierre Peterlongo, University of Rennes.
- Marie-France Sagot: Reviewer of the PhD of Yoann Dufresne, University of Lille 1, France.
- Blerina Sinaimeri: Reviewer of the PhD of Nilakantha Paudel, University of Rome, Italy.

8.3. Popularisation

Gunnar Klau wrote an article for ERCIM News about Networks in Biology (http://ercim-news.ercim.eu/en104/special/networks-to-the-rescue-from-big-omics-data-to-targeted-hypotheses).

Roberto Grossi participated to the Pisa CoderDojo (https://www.unipi.it/index.php/news/item/7983-toscana-dojocon-2016-una-giornata-per-la-programmazione-digitale).

Marie-France Sagot, together with Roeland Merks from the CWI, co-edited a special Theme for ERCIM News on Tackling Big Data in the Life Sciences (http://ercim-news.ercim.eu/images/stories/EN104/EN104-web.pdf).

Blerina Sinaimeri participated to the "Conférences ISN et enseignement 2016" organised by Inria, 27 April 2016, to "Les journées nationales de l'APMEP: À la lumière des mathématiques", October 2016, and to "Filles et informatique : une équation lumineuse !" (Nov. 28. 2016, Lyon, France).

Fabrice Vavre participated in a television program on Arte, on the topic of "Ces microbes qui nous gouvernent".

IBIS Project-Team

9. Dissemination

9.1. Research

9.1.1. Scientific events: organizing committees

9.1.1.1. Member of organizing committees

IBIS members	Conference, workshop, school	Date
Eugenio Cinquemani	Fifth International Workshop on Hybrid Systems Biology (HSB 2016), Grenoble	October 2017
Hidde de Jong	CompSysBio: Advanced Lecture Course on Computational Systems Biology, Aussois	March 2017
Delphine Ropers	Séminaire de Modélisation du Vivant (SeMoVi), Lyon and Grenoble	2016

9.1.2. Scientific events: selection committees

9.1.2.1. Chair of conference program committees

IBIS member	Conference, workshop, school	Role
Eugenio Cinquemani	European Control Conference (ECC 2016)	Associate editor
Eugenio Cinquemani	Fifth International Workshop on Hybrid Systems Biology (HSB 2016)	Program chair
Hidde de Jong	International Conference on Intelligent Systems in Molecular Biology (ISMB 2016)	Area chair

9.1.2.2. Member of conference program committees

IBIS member	Conference, workshop, program
Eugenio Cinquemani	HSB 2016, SASB 2016
Hidde de Jong	ISMB 2016, ECCB 2016, HSB 2016, FOSBE 2016
Delphine Ropers	JOBIM 2017

9.1.3. Journals

9.1.3.1. Member of editorial boards

IBIS member	Journal
Johannes Geiselmann	Frontiers in Microbiology (review editor)
Hidde de Jong	Journal of Mathematical Biology
Hidde de Jong	Biosystems
Hidde de Jong	ACM/IEEE Transactions on Computational Biology and Bioinformatics

9.1.4. Scientific evaluation and expertise

IBIS member	Organism	Role
Johannes Geiselmann	BGene	Member scientific advisory board
Johannes Geiselmann	ANR	Member of selection committee
Johannes Geiselmann	INRA	Member of scientific advisory committee Microbiologie, Adaptation, Pathogénie
Johannes Geiselmann	UMR5240 CNRS-UCBL-INSA-BayerCropScience	Member scientific council
Johannes Geiselmann	ARC1, Rhône-Alpes region	Member scientific committee
Hidde de Jong	International Human Frontier Science Program (HFSP)	Member selection and review committees
Hidde de Jong	Microbiology and Food Chain Department, Inra	Member scientific council
Hidde de Jong	BGene	Member scientific advisory board
Hidde de Jong	HCERES	Member of evaluation committee of TAGC laboratory (UMR U1090), Marseille

9.1.5. Recruitment committees

IBIS member	Organism	Recruitment
Hidde de Jong	Université Pierre et Marie Curie, Paris	Full professors in systems biology, applied to microbiology and to physiology
Delphine Ropers	Inria Lille	Chargés de recherche (jury d'admissibilité)
Delphine Ropers	Inria	Chargés de recherche (jury d'admission)
Delphine Ropers	INSA de Lyon	Assistant professor

9.1.6. Invited talks

Eugenio Cinquemani

Title	Event and location	Date
Reconstruction of promoter activity statistics from reporter protein population snapshot data	Seminar at Control theory and systems biology laboratory, D-BSSE, Basel, Switzerland	January 2016
Identifying variability of gene expression dynamics from time-course data	Seminar at IBM Research Center, Zurich, Switzerland	January 2016
Reconstruction of promoter activity statistics from reporter protein population snapshot data	Seminar at Automatic control laboratory, ETH Zurich, Switzerland	January 2016
Inference of regulatory networks from time-series reporter gene data: The case of promoter regulation in the E. coli motility network	Invited talk at workshop on Static Analysis in Systems Biology (SASB 2016), Edinburgh, UK	September 2016
On observability and reconstruction of promoter activity statistics from reporter protein mean and variance profiles	Presentation at 5th International Workshop on Hybrid Systems Biology (HSB 2016), Grenoble	October 2016

Hidde de Jong

Title	Event and location	Date
Natural and synthetic control of growth rate and gene expression in bacteria	Seminar Centre de Biologie Intégrative de Toulouse	February 2016
Natural and synthetic control of resource allocation in bacteria	Seminar MIRA institute, University of Twente, the Netherlands	July 2016
A synthetic growth switch based on controlled expression of RNA polymerase	Presentation at 17th International Conference on Systems Biology (ICSB 2016), Barcelona, Spain	October 2016
Natural and synthetic control of resource allocation in bacteria	Journée Biologie des systémes BiLille, Lille	November 2016

Johannes Geiselmann

Title	Event and location	Date
Growth control in bacteria	Seminar at CPBS Montpellier	June 2016

Nils Giordano

Title	Event and location	Date
Dynamical allocation of cellular resources as an optimal control problem: Novel insights into microbial growth strategies	Talk during annual meeting of working group GT-BIOSS, Lyon	July 2016

Stephan Lacour

Title	Event and location	Date
Direct versus indirect gene regulation by the stress response SigmaS factor	Seminar Institut de Biologie Structurale, Grenoble	February 2016
Identification of novel curli regulators in Escherichia coli	Poster at Biofilms7, Porto, Portugal	June 2016
Quantification of non-coding RNAs in bacterial cells using a Broccoli aptamer	Poster at 8th Bordeaux RNA Club Symposium & Aptamers in Bordeaux	June 2016

Aline Métris

Title	Event and location	Date
What does it take for a foodborne pathogen to survive a pinch of salt? Bioinformatics and systems biology approaches to model food safety	Invited researcher seminar Inria Grenoble - Rhône-Alpes	December 2016
Modèles et –omics pour mieux comprendre la réponse des pathogènes alimentaires au stress osmotique	INRA Avignon	December 2016

Delphine Ropers

Title	Event and location	Date
Adaptation of E. coli growth to environmental cues: global control of gene expression and post-transcriptional regulations	Institute for Food Research, Norwich, UK	March 2016
Adaptation of E. coli growth to environmental cues: global control of gene expression and post-transcriptional regulations	Journées INRA-Inria, Mallemort	October 2016

9.1.7. Research administration

IBIS member	Committee	Role
Eugenio Cinquemani	Inria Grenoble - Rhône-Alpes	Member Comité des Emplois Scientifiques (CES)
Eugenio Cinquemani	Inria Grenoble - Rhône-Alpes	Member Comité des Utilisateurs des Moyens Informatiques (CUMI)
Eugenio Cinquemani	Inria	Member Comité Administrative Paritaire (CAP)
Johannes Geiselmann	Department of Biology, Université Grenoble Alpes	Member scientific council
Hidde de Jong	Inria Grenoble - Rhône-Alpes	Member scientific council
Hidde de Jong	Inria	Member working group on International Relations of Conseil d'Orientation Scientifique et Technique (COST)
Delphine Ropers	Inria	Member of Commission d'évaluation d'Inria
Delphine Ropers	Inria Grenoble - Rhône-Alpes	Référente chercheurs
Delphine Ropers	Inria Grenoble - Rhône-Alpes	Member of Comité des études doctorales (CED)

9.2. Teaching - Supervision - Committees

9.2.1. Teaching

Four members of the IBIS team are either full professor, associate professor or assistant professor at the Université Grenoble Alpes. They therefore have a full teaching service (at least 192 hours per year) and administrative duties related to the organization and evaluation of the university course programs on all levels (from BSc to PhD). Besides the full-time academic staff in IBIS, the following people have contributed to courses last year.

Eugenio Cinquemani

Master: Stochastic modelling of gene regulatory networks, M2, BIM, INSA de Lyon (6 h)

Master: Statistics for systems biology, M1, Master Approches Interdisciplinaires du Vivant, CRI/Université Paris Descartes (24 h)

Master: Modelling and identification of metabolic networks, M1, Phelma, INP Grenoble (4 h)

Hidde de Jong

Master: Modeling and simulation of gene regulatory networks, M2, BIM, INSA de Lyon (20 h)

Master: Integrated models of the cell: metabolism, gene expression, signalling, M2, ENS Paris (6 h)

Master: Integrated models of the cell: metabolism, gene expression, signalling, M2, Institut de Technologie et d'Innovation, Paris Sciences Lettres (PSL) (6 h)

Nils Giordano

Bachelor: La bio-informatique : de l'analyse du génome à la modélisation, L2, Université Grenoble Alpes (9 h)

François Rechenmann

E-learning: MOOC Bioinformatique : algorithmes et génomes (https://www.fun-mooc.fr/courses/inria/41003S02/session02/about)

French language version of Bioinformatics MOOC published last year, including the possibility to run the algorithms by means of a dedicated Python notebook (in collaboration with Thierry Parmentelat from Inria Sophia-Antipolis - Méditerranée).

Delphine Ropers

Master: Modelling in systems biology, M1, Phelma, INP Grenoble (16 h)

Master: Modeling and simulation of genetic regulatory networks, M1, Université Grenoble Alpes (6 h)

Master: Modeling and simulation of genetic regulatory networks, M2, INSA de Toulouse (4 h)

9.2.2. Supervision

PhD in progress: **Stefano Casagranda**, Analysis and control of cell growth models. Supervisors: Jean-Luc Gouzé (BIOCORE) and Delphine Ropers

PhD in progress: **Nils Giordano**, Régulation de la croissance chez *Escherichia coli* : étude théorique et expérimentale à l'aide de modèles coûts-bénéfices. Supervisors: Hidde de Jong and Johannes Geiselmann

PhD in progress: **Bernard Chielli Ponce de Leon**, Stochasticity of gene expression in strains of *E. coli* with a controlled growth rate and number of chromosomes. Supervisors: Irina Mihalcescu (Université Grenoble Alpes) and Johannes Geiselmann

PhD in progress: **Thibault Etienne**, Analyse intégrative de la coordination entre stabilité des ARNm et physiologie cellulaire chez *Escherichia coli*. Supervisors: Delphine Ropers and Muriel Cocaign-Bousquet (INRA Toulouse)

PhD in progress: Joël Espel: RNA engineering: Design of the dynamical folding of RNA and of RNA switches. Supervisors: Alexandre Dawid (Université Grenoble Alpes) and Johannes Geiselmann

9.2.3. PhD thesis committees, PhD advisory committees, and habilitation committees

PhD thesis committees

IBIS member	Role	PhD student	University	Date
Hidde de Jong	Rapporteur	Jetse Scholma	University of Twente, the Netherlands	July 2016
Hidde de Jong	Rapporteur	Jean-Baptiste Lugagne	Université Paris Descartes	December 2016
Hidde de Jong	Président	José Morales Morales	Université de Grenoble	December 2016
Hidde de Jong	Rapporteur	Sébastien Raguideau	AgroParisTech	December 2016
Johannes Geiselmann	Président	Jessica Penin	Université de Grenoble	April 2016
Johannes Geiselmann	Rapporteur	Minyeong Yoo	Université Paul Sabatier Toulouse	May 2016
Johannes Geiselmann	Président	Ramachandran Boopathi	ENS de Lyon	May 2016
Johannes Geiselmann	Rapporteur	Ayyappasamy Sudalaiyadum Perumal	Université de Montpellier	June 2016
Stéphan Lacour	Examinateur	Simon Léonard	Université de Lyon	September 2016
Stéphan Lacour	Examinateur	Alice Berry	Université de Grenoble	November 2016

Habilitation (HDR) committees

IBIS member	Role	PhD student	University	Date
Hidde de Jong	Examinateur	Morgan Magnin	Université de Nantes	Avril 2016
Johannes Geiselmann	President	Jan Bednar	Université de Grenoble	December 2015

PhD advisory committees

IBIS member	PhD student	University
Johannes Geiselmann	Jean-Baptiste Lugagne	Université Paris Descartes

9.2.4. Teaching adminstration

Yves Markowicz is director of the BSc department at Université Grenoble Alpes.

Michel Page is coordinator of the master Systèmes d'information et d'organisation at the Institut d'Adminstration des Entreprises (IAE), Université Grenoble Alpes.

Eugenio Cinquemani organizes a module on statistics in systems biology at CRI/Université Paris Descartes.

Delphine Ropers organizes a module on the mathematical modeling of biological systems at PHELMA, INP Grenoble.

Hidde de Jong organizes with Daniel Kahn a module on the modeling of genetic and metabolic networks at INSA de Lyon.

9.3. Science education

Delphine Ropers gave a course on bacteria and antibiotic resistance at the primary school Ecole Bizanet in Grenoble (December 2016).

NUMED Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Expertise

Emmanuel Grenier has been expert for an INSERM cancer call.

8.1.2. Research Administration

Emmanuel Grenier is member of the board of the LABEX Archimede (Marseille).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Paul Vigneaux, Vincent Calvez and Emmanuel Grenier teach in L3, M1 and M2 at ENSL, including lectures on partial differential equations, modeling, analysis.

8.2.2. Supervision

Edouard Ollier and Mathilde Giacalone is supervised by Emmanuel Grenier, Arthur Marly by Paul Vigneaux and Alvaro Mateos Gonzalez by Vincent Calvez.

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

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Member of the Conference Program Committees

- Association for the Advancement of Artificial Intelligence (AAAI) 2016 Computational Sustainability and AI (S. Fenet)
- International Conference on Principles and Practices of Constraint Programming (CP) 2016 Computational Sustainability track (S. Fenet)
- CompSust@CP-2016 (the 22nd International Conference on Principles and Practice of Constraint Programming), Toulouse, France, September 2016 (E. Prados)
- Journées Scientifiques Inria – Inria Science Days (P. Sturm)
- German Conference on Pattern Recognition (P. Sturm)

10.1.1.2. Reviewer

- EVOSTAR 2016 (S. Fenet)

10.1.2. Invited Talks

- E. Prados has been invited by the Wimmics team to give a seminar at Inria Sophia-Antipolis (Conference title : "Comment réduire l'impact d'un éventuel effondrement ? Comment construire le monde d'après ?", Sophia-Antipolis, France, 10th of November, 2016).
- E. Prados gave a seminar at the Conseil Scientifique de l'AURG (Conference title : "Modèle TRANUS d'usage des sols et transport pour l'agglomération grenobloise", Grenoble, France, 6th of July, 2016).
- P. Sturm gave an invited seminar at the Czech Technical University (Prague, Czech Republic), on former work in computer vision.

10.1.3. Scientific Expertise

- P. Sturm: Expert for the European Eureka/Eurostars program and for the regional ARC6 program.

10.1.4. Research Administration

- P. Sturm is Deputy Scientific Director of Inria, in charge of domain "Perception, Cognition and Interaction".
- E. Prados and P. Sturm organized the Inria – FING partnership. The FING (Fondation Internet Nouvelle Génération) is a think tank working on socio-economic changes inspired by technology and its uses. In 2016, they organized two workshops in the framework of the project "Transition^2" [http://www.transitions2.net/], see https://team.inria.fr/steep/fing/

10.2. Teaching - Supervision - Juries

10.2.1. Supervision

PhD: Jean-Yves Courtonne, Evaluation environnementale de territoires à travers l'analyse de filières - La comptabilité biophysique pour l'aide à la décision délibérative, Grenoble University, 28/06/2016, D. Dupré and P.Y. Longaretti

PhD: Laurent Gilquin, Echantillonnages Monte Carlo et quasi-Monte Carlo pour l'estimation des indices de Sobol'. Application à un modèle transport-urbanisme, Grenoble University, 17/10/2016, Elise Arnaud and C. Prieur

PhD in progress: Michela Bevione, Sustainability and territorial energy transition: coupling supply chains with LCA, 11/2016, N. Buclet and P.Y. Longaretti

PhD in progress: Thomas Capelle, Development of optimisation methods for land-use and transportation models, 10/2013, P. Sturm and A. Vidard

PhD in progress: Luciano Gervasoni, Modeling the dynamics of urban sprawl, 10/2015, S. Fenet and P. Sturm

PhD in progress: Julien Salotti, Spatio-temporal analysis of traffic data for smart mobility, 11/2014, S. Fenet, C. Solnon and N.-E. El Faouzi

PhD in progress: Lucas Foulon, Detection of anomalies in real-time ground–on board flows of the SNCF, 12/2016, S. Fenet, C. Rigotti and D. Jouvin

10.2.2. Juries

- P. Sturm was reviewer of the PhD thesis of Liming Yang, Ecole Centrale de Nantes.
- P. Sturm was reviewer of the PhD thesis of Jan Heller, Czech Technical University, Prague.

10.3. Popularization

STEEP team has organized a series of conferences entitled "Understanding and Acting" (six conferences in 2016). The conferences has been filmed, edited and posted on the video-sharing website, YouTube. A total of more than 500 people have attended to the conferences. The conferences received more than 2000 YouTube views (December 2016).
https://www.youtube.com/channel/UCJbcXCcOA63M8VMysAbmt_A
https://team.inria.fr/steep/les-conferences-debats-comprendre-et-agir/

Emmanuel Prados gave a "conférence-débat" at "Marie Reynoard" High school on "Sustainable development, territorial governance and democracy" (Villard-Bonnot, France, 16th of December, 2016).

Emmanuel Prados gave a conference at the "Café In" of Inria Sophia-Antipolis entitled "Comprendre les phénomènes d'effondrement de sociétés. Quel avenir pour la nôtre ?" (Sophia-Antipolis, France, 10th of November, 2016).

Emmanuel Prados has organized a workshop in collaboration with the EP SCOT Grenoble on the land-use and transport modelling and on its potential application to the follow up of the Grenoble' SCOT project (Grenoble, France, 14th of October, 2016). Representatives of all the main political and administrative authorities of Grenoble area attended to this workshop (Région Rhône-Alpes, Département of Isère, Grenoble-Alpes Métropole, AURG, municipalities communities of Grenoble employment catchment areas).

AVALON Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Laurent Lefevre was :
    - Co-Workshop chair of Xgreen 2016 : Energy Efficiency in Large Scale Distributed Systems, Cartagena, Colombia, May 2016
    - Co-chair of the Special Session on Energy Efficient Management of Parallel Systems, Platforms, and Computations during PDP2016 : 24th Euromicro International Conference on Parallel, Distributed and Network based Processing, Heraklion, Greece, February 17-19, 2016
- Christian Perez was co-chair of the Topic 8 of Euro-Par 2016.

9.1.1.2. Member of the Organizing Committees

- Eddy Caron was:
    - Co-organizer of SC16 Inria Booth at Salt Lake City (Utah). November 13-18, 2016.
    - Co-organizer of SSS'2016 (The 18th International Symposium on Stabilization, Safety, and Security of Distributed Systems), Lyon, November 7-10, 2016.
    - Co-organizer of OpenStack WorkShop Lyon 2016 at ENS de Lyon. June 15, 2016.
- Hélène Coullon and Christian Perez were members of the organization team of the 5th workshop of the Joint Laboratory for Extreme Scale Computing, Lyon, 27-29 June 2016.
- Laurent Lefevre was :
    - Co-organizer of SC16 Inria Booth at Salt Lake City (Utah). November 13-18, 2016.
    - Co-organizer of the Ecoinfo conference on Eco-design of hardware", Grenoble, September 27, 2016
    - Co-organizer of the Atelier Compas 2016 : Economiser l'énergie dans les systèmes distribués, July 5, 2016 with Anne-Cécile Orgerie (IRISA, Rennes)
    - Co-organizer of the E3-RSD school on Energy Efficiency in Networks and Distributed Systems, Dinard, May 23-27, 2016 with Anne-Cécile Orgerie (IRISA, Rennes)
    - Tutorial Chair in CCGrid 2016: the 16th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing, Cartagena, Colombia, May 2016
- Frédéric Suter was the co-organizer of the 6th edition of the SimGrid Users Days, Fréjus, January 18-21, 2016.

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

- Eddy Caron was a member of the program committee of HCW'2016, ICACCI-2016, Xgreen 2016, CloudTech'16, CCGRID'2016
- Gilles Fedak was a member of the program committee of InterCloud'2016, CLoudCom'2016, Cluster 2016, Compass 2016, HPDC 2016, ICCCN'2016, ICPADS'2016.

- Olivier Glück was a member of the program committee of PDP 2016 (24th Euromicro International Conference on Parallel, Distributed, and Network-Based Processing) and the Xgreen2016 workshop of CCGrid 2016.
- Christian Perez was a member of the Workshop Committee at the 2016 ACM/IEEE International Conference on High Performance Computing, Networking, Storage and Analysis (SC16). He was a member of the program committee of the Grid'5000 winter School 2016. He served in the committee to select Outstanding Paper Award of HPCS 2016.
- Frédéric Suter was a member of the program committee of Vecpar 2016, ICCS 2016, ComPas 2016 and EuroMPI 2016

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards
- G. Fedak: Co-editor of Elsevier Journal of Cluster Computing

9.1.4. Invited Talks

Laurent Lefevre has been invited to give the following talks :
- "Reducing environmental impacts of ICT : challenges and solutions", Invited talk in "Agence de l'Eau Rhône Méditerranée et Corse", Lyon, December 15, 2016
- "Ecological digital world, is it possible ? / Numérique écologique, est ce possible ?", Invited Keynote for Université Ouverte de Lyon, Lyon, France, November 29, 2016
- "Grid'5000: French Nationwide Testbed for Research in Distributed Computing", Laurent Lefevre, BOF on Experimental Infrastructure and Methodology for HPC Cloud, Supercomputing 2016 Conference, Salt Lake City, USA, November 15, 2016
- "GreenFactory : orchestrating power capabilities and leverages at large scale for energy efficient infrastructures", Laurent Lefevre, CCDSC2016: Workshop on Clusters, Clouds, and Data for Scientific Computing, Dareize, France, October 3-6, 2016
- "Full life cycle in sustainable ICT for reaching energy reduction, energy efficiency and energy proportionality", Laurent Lefevre, Invited keynote talk, IEEE Tenth International Conference on Research Challenges in Information Science (RCIS2016) & Inforsid conference, Grenoble France, June 3, 2016

Gilles Fedak has been invited to give the following talks:
- "iEx.ec: Blockchain-based Cloud Computing", Inria Blockchain Day, Paris, December 12, 2016
- "Active Data: Large scale data management based on data life cycle", Journée Big Data de la Fédération Informatique de Lyon, December 9, 2016
- "Active Data, managing Data Life Cycle on heterogeneous systems and infrastructures", Workshop Data preservation (PREDON) of the MADICS research group on Big Data, Paris, CNRS, December 2, 2016
- "Blockchain applications are coming, what's next" Panel at the workshop ParisInvest, HEC, December 1st, 2016
- "iEx.ec: Blockchain-based Distributed Cloud Computing", Chaintech Meetup, Paris, November 29, 2016
- "iEx.ec: un Cloud distribué basé sur la blockchain", CES-3 Innovation Forum, Paris, 29 Septembre 2016
- "iEx.ec: un Cloud distribué basé sur la blockchain", EDF research Lab, Saclay, 28 Septembre 2016
- "iEx.ec: Blockchain-based Fully Distributed Cloud Computing",CAS Shanghai University, Shanghai, September 23, 2016
- "iEx.ec: Fully Distributed Cloud Computing thanks to the Ethereum Smart Contracts", Ethereum Developper Conference, Shanghai, September 21, 2016
- "iEx.ec: Blockchain-based Fully Distributed Cloud Computing", CNIC Chinese Academy of Sciences, Beijing, September 18, 2016
- "Relocaliser les data-centers dans la ville intelligente grâce à la blockchain" Smart Building Alliance, Lyon, France September 15, 2016

Frédéric Suter has been invited to give the following talk:

- "Modeling Distributed Platforms from Application Traces for Realistic File Transfer Simulation", Information Sciences Institute, University of Southern California, December 21, 2016.

9.1.5. Leadership within the Scientific Community

- Laurent Lefevre is Animator and chair of the transversal action on "Energy" of the French GDR RSD ("Réseaux et Systèmes Distribués")
- Christian Perez is co-leader of the pole Distributed Systems of the French GDR RSD ("Réseaux et Systèmes Distribués").

9.1.6. Scientific Expertise

- Eddy Caron reviewed a project for the French National Research Agency (ANR).
- Olivier Glück is member of the CNU (Conseil National des Universités) section 27 (Computer Science). He participated to the 2016 "Qualifications" session.
- Olivier Glück evaluated a Ph.D. CIFRE proposal (industrial funded PhD student).
- Christian Perez reviewed a project for the French National Research Agency (ANR).

9.1.7. Research Administration

- Eddy Caron is a member of the Inria's CDT (Commission de Développement Technologique) from Inria Rhone-Alpes center.
- Eddy Caron is the corresponding researcher "valorisation/transfert" in the Labex MILyon for the LIP laboratory.
- Olivier Glück is member of the "Conseil Académique" of Lyon 1 and Lyon University. He is also member of the "Conseil de la Faculté des Sciences et Technologies" of Lyon 1 University.
- Christian Perez is a member of the committee selection of the project call from the Rhône-Alpes region ARC6 (France). He is also a member of the Inria Grenoble Rhône-Alpes Strategic Orientation Committee.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Yves Caniou, Algorithmique programmation impérative, initiation, 10h, niveaux L1, Université Lyon 1, France

Licence: Yves Caniou, Système d'Exploitation, 35h, niveaux L3, Université Lyon 1, France

Licence: Yves Caniou, Système d'Exploitation, 35h, niveaux L2, Université Lyon 1, France

Licence: Yves Caniou, Programmation Concurrente, 33h, niveaux L3, Université Lyon 1, France

Licence: Yves Caniou, Réseaux, 36h, niveaux L3, Université Lyon 1, France

Master: Yves Caniou, Sécurité, 34h, niveaux M2, Université Lyon 1, France

Master: Yves Caniou, Projet, Bibliographie, Certification, 15h, niveaux M2, Université Lyon 1, France

Master: Yves Caniou, Sécurité, 20h, niveau M2, IGA Casablanca, Maroc

Master: Yves Caniou, Suivi d'étudiants (apprentissage, stage), 25h, niveaux M1 et M2, Université Lyon 1, France

Master: Yves Caniou, Responsible of professional Master SRIV (Systèmes Réseaux et Infrastructures Virtuelles), 30h, Université Lyon 1, France

Licence: Eddy Caron, Projet 1, 48h, L3, Ens de Lyon. France.

Licence: Eddy Caron, Architecture, Système et Réseaux, 48h, L3, Ens de Lyon. France.

Master: Eddy Caron, Projet Intégré, 42h, M1, Ens de Lyon. France.

Master: Eddy Caron, Système distribués, 30h, M1, Ens de Lyon. France.

Master: Eddy Caron, Distributed Computing: Models and Challenges, 8h, M2, Ens de Lyon. France.

Licence: Olivier Glück, Licence pedagogical advisor, 30h, niveaux L1, L2, L3, Université Lyon 1, France.

Licence: Olivier Glück, Initiation Réseaux, 2x9h, niveau L2, Université Lyon 1, France.

Licence: Olivier Glück, Réseaux, 2x70h, niveau L3, Université Lyon 1, France.

Master: Olivier Glück, Responsible of professional Master SIR (Systèmes Informatiques et Réseaux) located at IGA Casablanca, 20h, niveau M2, IGA Casablanca, Maroc

Master: Olivier Glück, Réseaux par la pratique, 20h, niveau M1, Université Lyon 1, France.

Master: Olivier Glück, Services et Protocoles Applicatifs sur Internet, 40h, niveau M2, Université Lyon 1, France.

Master: Olivier Glück, Services et Protocoles Applicatifs sur Internet, 24h, niveau M2, IGA Casablanca, Maroc

Master: Olivier Glück, Administration des Systèmes et des Réseaux, 16h, niveau M2, Université Lyon 1, France.

Master: Jean-Patrick Gelas, Programmation embarquée et mobile des objets, 17.5h, niveau M1, Université Lyon 1, France.

Master: Jean-Patrick Gelas, Introduction au Cloud Computing, 24h, niveau M2 (CCI), Université Lyon 1, France.

Master: Jean-Patrick Gelas, Système d'exploitation, 30h, niveau M2 (CCI), Université Lyon 1, France.

Master: Jean-Patrick Gelas, Projet en Informatique en Anglais, 10h, niveau M2 (CCI), Université Lyon 1, France.

Master: Jean-Patrick Gelas, Réseaux Avancés, 27h, niveau M2 (CCI), Université Lyon 1, France.

Master: Jean-Patrick Gelas, Sécurité et Admin des infra réseaux, 37.5h, niveau M2 (CCI), Université Lyon 1, France.

Master: Jean-Patrick Gelas, Technologies embarquées, 15h, niveau M2 (Image), Université Lyon 1, France.

Master: Jean-Patrick Gelas, Routage (BGP), Routeurs et IPv6, 16.5h, niveau M2, Université Lyon 1, France.

Master: Jean-Patrick Gelas, Systèmes embarqués (GNU/Linux, Android, ARM, Arduino), 39h, niveau M2, Université Lyon 1, France.

Master: Jean-Patrick Gelas, Analyse de performance, 3h, niveau M2 (TIW), Université Lyon 1, France.

Master: Jean-Patrick Gelas, Cloud Computing, 16h, niveau M2 (TIW), Université Lyon 1, France.

Master Informatique: Laurent Lefevre, "Parallelism", Université Claude Bernard, France. (18h), M1

Master Systèmes Informatique et Réseaux: Laurent Lefevre, "Advanced Networks", IGA Casablanca, Maroc (20h), M2

9.2.2. Supervision

PhD: Daniel Balouek-Thomert, *Ordonnancement et éco-efficacité dans les environnements virtualisés*, 09/2013, Eddy Caron (dir), Laurent Lefevre (co-dir), Gilles Cieza (NewGen society, co-dir), defended December 5th, 2016

PhD: Violaine Villebonnet, *Proportionnalité énergétique dans les systèmes distribués à grande échelle*, 9/2013, Laurent Lefevre (dir), Jean-Marc Pierson (IRIT, Toulouse, co-dir), defended December 6th, 2016

PhD in progress: Radu Carpa, *Efficacité énergétique des échanges de données dans une fédération d'infrastructures distribuées à grande échelle*, 10/2014, Laurent Lefèvre (dir), Olivier Glück (co-dir).

PhD in progress: Hadrien Croubois, *Étude et conception d'un système de gestion de workflow autonomique conçu pour l'animation 3D* , 10/2015, Eddy Caron.

PhD in progress: Pedro Silva, *Application model and co-scheduling algorithm for dynamic and evolutive data-intensive application*, 10/2014, Christian Perez (dir), Frédéric Desprez (co-dir).

PhD in progress: Issam Rais, *Multi criteria scheduling for exascale infrastructures*, 10/2014, Laurent Lefevre (dir), Anne Benoit (Roma Team, LIP, ENS Lyon, co-dir) and Anne-Cécile Orgerie (CNRS, Myriads team, Irisa Rennes, co-dir)

PhD in progress: Jérôme Richard, *Conception of a software component model with task scheduling for many-core based parallel architecture, application to the Gysela5D code*, 11/2014, Christian Perez (dir), Julien Bigot (CEA, co-dir).

PhD in progress: Alexandre Veith : *Elastic Mechanisms for Big-Data Stream Analytics*, Labex MiLyon, Laurent Lefevre (dir), Marcos Dias de Assuncao (co-dir) (2016-2019)

PhD in progress: Valentin Lorentz : *Energy traceability of data*, Gilles Fedak (dir), Laurent Lefevre (co-dir) (2016-2019)

PhD in progress: Hayri Acar, *Towards a green and sustainable software*, Parisa Ghodous (dir), Gulfem Alptekin (co-dir), Jean-Patrick Gelas (co-dir) (2014-2017)

PhD in progress: Jad Darrous : *Geo-distributed storage for distributed Cloud*, Gilles Fedak (dir), Shadi Ibrahim (co-dir, Kerdata team, Inria Rennes) (2016-2019)

PhD in progress: Anchen Chai: *Simulation of the Distributed Execution of a Medical Imaging Simulator*, Hugues Benoit-Cattin (co-dir, CREATIS, INSA Lyon), Frédéric Suter (co-dir).

PhD in progress: Aurélie Kong-Win-Chang: *Techniques de résilience pour l'ordonnancement de workflows sur plates-formes décentralisées (cloud computing) avec contraintes de sécurité*, Yves Robert (dir, ROMA, ÉNS-Lyon), Eddy Caron (co-dir) et Yves Caniou (co-dir).

9.2.3. Juries

Eddy Caron has been member of the following PhD jury:
- Mohamed Hamza Kaaouachi: "Une approche distribuée pour les problèmes de couverture dans les systèmes hautement dynamiques.", January 2016, Reviewer, UPMC.
- Divya Gupta: "Towards Performance and Dependability Benchmarking of Distributed Fault Tolerance Protocols", March 2016, Reviewer, Université Grenoble Alpes.
- Bassirou Gueye: " Services auto-adaptatifs pour les grilles pair-a`-pair", May 2016, Reviewer, Université de Reims Champagne-Ardenne.

Gilles Fedak has been member of the following PhD jury:
- Walid Saad: "Gestion de données pour le calcul scientifique dans les environnements grilles et cloud", October 2016, Reviewer, University of Sfax, Tunisia

Laurent Lefevre has been member of the following PhD juries:
- Chakadit Thaenchaikun : "Energy efficiency in wired networks : traffic engineering and switching off", University of Toulouse, November 2016, Reviewer
- Pablo Llopis Sanmillan : "Enhancing the programmability and energy efficiency of storage in HPC and virtualized environments", Universidad Carlos III de Madrid, Spain, July 2016, Jury member - president.
- Sareh Fotuhi Piraghaj : "Energy-Efficient Management of Resources in Enterprise and Container-based Clouds", University of Melbourne, Australia, June 2016, Reviewer
- Mohammed Hussein : "Energy Efficiency in LEO Satellite and Terrestrial Wired Environments", University of Toulouse, June 2016, Reviewer
- Fouad Hanna, : "Etude et développement du nouvel algorithme distribué de consensus FLC", University of Franche-Comté, Besancon, February 2016, Reviewer

Christian Perez has been member of the following HdR and PhD juries:

- Fabrice Huet, HdR: "From HPC to Big Data: Models and Tools for Large Scale Middleware", University of Nice Sophia-Antipolis, France., Feb 2016, Reviewer.
- Tomasz Buchert, PhD: "Managing large-scale, distributed systems research experiments with control-flows", University of Lorraine, France., Jan. 2016, jury member.
- Naweiluo Zhou, PhD: "Autonomic Thread Parallelism and Mapping Control for Software Transactional Memory", University of Grenoble, France., Oct 2016, president.

9.3. Popularization

- Laurent Lefevre has been :
    - Interviewed in "Interception" Radio Magazine on "To click, is to pollute" ("Cliquer c'est polluer"), France Inter Radio, 6 November 2016
    - Interviewed with Françoise Berthoud, "Télévision : Changement de norme = grand gâchis écologique - Site Reporterre.net, - 5 April 2016
- Gilles Fedak has been interviewed in Bitcoin.fr, November 2016

CTRL-A Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

Stéphane Mocanu is OC member of RESSI 2017 national meeting (https://ressi2017.sciencesconf.org/).

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

Eric Rutten was program co-chair of the International Workshop on Autonomic High Performance Computing (AHPC 2016) (http://hpcs2016.cisedu.info/2-conference/workshops—hpcs2016/workshop08-ahpc) as part of the International Conference on High Performance Computing & Simulation (HPCS 2016) (http://hpcs2016.cisedu.info or http://cisedu.us/rp/hpcs16), July 18 - July 22, 2016, The University of Innsbruck, Innsbruck, Austria

Eric Rutten is organizer of an Open Invited Track on "Control for Computing Systems" at the 20th IFAC World Congress, to be held in Toulouse, July 9-14, 2017, (https://www.ifac2017.org/OIT#geht5).

10.1.2.2. Member of the Conference Program Committees

Gwenaël Delaval is PC member of the International Workshop on Autonomic High Performance Computing (AHPC 2016). (http://hpcs2016.cisedu.info/2-conference/workshops—hpcs2016/workshop08-ahpc)

Eric Rutten is PC member of the 13th International Workshop on Discrete Event Systems (WODES 2016), Xi'an, China on May 30 - June 1, 2016 (http://wodes2016.diee.unica.it) ; for the SEfSAS Book 3 (Software Engineering for Self-Adaptive Systems: Assurances) Volume 3 to be published by Springer LNCS. ; for the two major conferences on the topic : the 13th IEEE International Conference on Autonomic Computing (ICAC 2016) Wuerzburg, Germany, July 19-22, 2016 (http://icac2016.uni-wuerzburg.de) and the 4th International Conference on Cloud and Autonomic Computing (ICCAC 2016), Augsburg, Germany on September 12-16, 2016 (http://iccac2016.se.rit.edu), Part of FAS* - Foundation and Applications of Self* Computing Conferences, Collocated with the IEEE Self-Adaptive and Self-Organizing System Conference ; he is PC member of the 2017 edition of these two conferences as well.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Eric Rutten is invited editor of Cluster Computing, The Journal of Networks, Software Tools and Applications (Springer), for the special issue of ICCAC 2015 Best Papers (http://link.springer.com/journal/10586/19/2/page/1).

10.1.3.2. Reviewer - Reviewing Activities

Stéphane Mocanu is reviewer for the journal of Discrete Events Dynamical Systems.

Eric Rutten is reviewer for the journal of Distributed Computing (Springer) ; the IEEE Transactions on Software Engineering ; the ACM Transactions on Adaptative and Aautonomic Systems.

10.1.4. Invited Talks

Eric Rutten was invited to give a talk at the 9th Cloud Control Workshop, Stockholm, June 27-29 2016 (by invitation only) (http://cloudresearch.org/workshops/9th) and at the séminaire LIP / Avalon, 16 février 2016, ENS Lyon (https://intranet.inria.fr/Actualite/SEMINAIRE-16-02-16-ERIC-RUTTEN-ENS-DE-LYON).

10.1.5. Scientific Expertise

Eric Rutten is remote referee for the ERC advanced grants program.

10.1.6. Research Administration

Eric Rutten is member of the LIG laboratory concil, and in charge of scientific relations between Inria Grenoble Rhône-Alpes and CEA Tech.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

S. Mocanu teaches at ENSE3 school of INPG : TCP/IP networks, Real-time communications, Smart-grid communications and IEC 61850, Reliability, Embedded and real-time systems. He is Head of the Control Systems Master program at ENSE3.

G. Delaval teaches at levels L2, L3, M1 at UFRIM2AG (Computer Science Dept.) of UGA : Algorithmic, Programming, Compilation. Soguy Gueye gives tutorials in Programming in the same program.

10.2.2. Supervision

- PhDs in progress :
  - Adja Ndeye SYLLA ; Generation of coordination rules from an automaton, in the context of the redeployment of distributed contra; applications ; feb. 2015 ; E. Rutten, F. Pacull and M. Louvel (CEA)
  - Chabha Hireche, Etude et implémentation d'une approche probabiliste de contrôle de mission de drone autonome ; oct 2015 ; S. Mocanu, Catherine Dezan (U. Bretagne Occidentale), and Jean-Philippe Diguet (U. Bretagne Sud)
  - Ahmed Altaher : Mise en oeuvre d'un cadre de sureté de fonctionnement pour les systèmes de contrôle industriel : application à des systèmes de distribution d'énergie électrique (smart grids) ; april 2013 ; S. Mocanu, and J-M Thiriet (Gipsa-lab)
  - Maëlle Kabir-Querrec; Cybersécurité des systèmes de contrôle pour les smart-grids ; nov. 2014 ; S. Mocanu, and J-M Thiriet (Gipsa-lab)
  - Oualid Koucham, Détection d'intrusions dans les systèmes de contrôle industriels ; oct 2015 ; S. Mocanu, and J-M Thiriet (Gipsa-lab)
- PhD defended : Naweiluo Zhou ; Application-aware policies and control for transactional memory systems ; defended 19 oct. 2016 ; E. Rutten, G. Delaval, J.F. Mehaut (Inria/LIG Corse) [14] .

<p align="center" style="color:red">DANTE Project-Team</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- Jean Pierre Chevrot, Éric Fleury, Márton Karsai, Jean-Philippe Magué were scientific chairs of the Workshop on Data Driven Approach to Networks and Language.
- Éric Fleury, Márton Karsai and Paulo Gonçlves were scientific chairs of the Workshop on Processes On and Of Networks.

10.1.1.2. Member of the Organizing Committees

- Éric Fleury, Mátrton Karsai and Laetitia Lecot were on the Organizing committee for the Network Science Thematic Semester
- Márton Karsai was in the organising committee of Computational Social Science: from social contagion to collective behaviour ECCS 2016 Satellite.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Isabelle Guérin Lassous was the general chair of ACM PE-WASUN 2016.
- Márton Karsai was the one of the program chairs of the conferences Do2Net, ComplexNetworks2016, D2NetLang, CSS2016.

10.1.2.2. Member of the Conference Program Committees

- Éric Fleury was on the PC of the conference ComplexNet, of the Conference on Complex Networks: From Theory to Interdisciplinary Applications, SensorNet 2017 and CoRes 2016.
- Márton Karsai was on the PC of the conferences NetSci-X 2016, IC2S2 2016, CompleNet 2016, WebSci16, Do2Net, AlgoTel 2016, ComplexNetworks2016, D2NetLang 2016, DyNo 2016 IEEE/ACM ASONAM 2016, CCS 2016, SocInfo 2016, CSS 2016, Contagion'16, COMPLEX NETWORKS 2016
- Isabelle Guérin Lassous was on the PC of: ACM MSWiM 2016, ICC 2016, Globecom 2016, ISCC 2016 and MedHocNet 2016.
- Thomas Begin was on the PC of: IEEE LCN 2016.
- Christophe Crespelle was on the PC of WG 2016.

10.1.2.3. Reviewer

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Isabelle Guérin Lassous is member of the editorial boards of Computer Communications (Elsevier), Ad Hoc Networks (Elsevier) and Discrete Mathematics & Computer Science.

- Anthony Busson is member of the editorial boards of Computer Communications (Elsevier).

- Márton Karsai is member of the editorial boards of Advances in Complex Systems (World Scientific).

- Jean Pierre Chevrot, K. Drager (U. of Hawaii), P. Foulkes (U. of York) are the chief editors of a special issue in the journal TopiCS in Cognitive Science on the theme "Sociolinguistic variation and cognitive science, coordination".

- Philippe Nain is Editor-in-Chief of Performance Evaluation (Elsevier)

10.1.3.2. Reviewer - Reviewing Activities

- Márton Karsai was acting as reviewer for the journals of Nature Communications, PNAS, PRL, PRX, PRE, Scientific Reports, EPJ Data Science, SNAM, EPL, EPJ B, PLoS One, Journal of Statistical Mechanics, Physics Letter A, Advanced in Complex Systems, Journal of Physics: Condensed Matter, Complex Networks, New Journal of Physics, Physica Scripta, Network Science,

- Jean-Pierre Chevrot was acting as reviewer for he journal Animal Behavior.

10.1.4. Invited Talks

- Márton Karsai gave invited talks at NetSciX'16 (January 2016, Wroclaw, Poland), Workshop on mechanisms underlying local to global signals in networks (19 May 2016, Lyon, France), HOMS NetSci'16 Satellite (30 May 2016, Seoul, Korea), Social Connectome NetSci'16 Satellite (30 May 2016, Seoul, Korea), SocioNet'16 workshop ENS Lyon (8 June 2016, Lyon, France), Coarse-graining of Complex Systems CCS'16 Satellite (21 September 2016, Amsterdam, The Netherlands), BURSTINESS in human behaviour and other natural phenomena, CCSÃ16 Satellite (21 September 2016, Amsterdam, The Netherlands), PhD course on Network Science (guest lecturer) Uppsala University, Department of Information Technology (18 November 2016, Uppsala, Sweden).

- Éric Fleury gave a invited talk at ISI foundation, Torino Italy and SocioNet'16 workshop ENS Lyon (8 June 2016, Lyon, France).

- Thomas Begin gave an invited talk at Diva Lab, University of Ottawa, Canada.

- Jean Pierre Chevrot gave two invited talks Ã the University of Oslo (Norway) at the Workshop Bridging gaps: Conceptual and epistemological approaches, Center for Multilingualism in Society across the Lifespan (MultiLing)

- Christophe Crespelle gave an invited talk at the Vietnam Institute for Advanced Studies in Mathematics, Hanoi, and the University of Bergen, Norway.

10.1.5. Leadership within the Scientific Community

10.1.6. Scientific Expertise

- Isabelle Guérin Lassous is a member of the research committee of the Milyon labex.

- Isabelle Guérin Lassous was a member of the HCERES evaluation committee of the IRISA laboratory.

- Isabelle Guérin Lassous is vice-chair of the HCERES evaluation committee of the LORIA laboratory.

- Isabelle Guérin Lassous was a member of the National Committee of the CNRS, section 06.

- Éric Fleury is member of the Inria senior research position (DR2) jury and junior research position (CR2/CR1)

- Éric Fleury has been an expert for the Fund for Scientific Research - FNRS.
- Éric Fleury has been a member of evaluation panels as part of the French National Research Agencyâs (ANR) for ANR.
- Éric Fleury is member of the Inria Evaluation Committee.
- Éric Fleury is Co-chair of the Networking group ResCom of the CNRS GDR ASR. He is also a member of the scientific committee of the GDR ASR.
- Márton Karsai was reviewer for ANR, H2020 FET Open RIA.
- Philippe Nain is the coordinator of the "Strategic Technology Monitoring & Prospective Studies Inria Unit".
- Jean-Pierre Chevrot reviewed a ten-year track application for the University of New Mexico (UNM, US)

10.1.7. Research Administration

- Paulo Gonçalves is scientific liaison officer for international relations in Inria Research Centre of Rhône-Alpes.
- Paulo Gonçalves was scientific correspondent of the International Relations for the Computer Science Department at ENS Lyon. Responsibility ended in September 2016.
- Paulo Gonçalves is a member of the executive committee of the Milyon labex and referent for its valorisation committee.
- Christophe Crespelle is member of the steering committee of the IXXI - Rhône-Alpes Complex Systems Institute.
- Isabelle Guérin Lassous is vice-chair of the LIP laboratory.
- Isabelle Guérin Lassous is member of the department council of the Computer Science department of Université Lyon 1.
- Anthony Busson is Vice-president of the Thesis Commission at LIP.
- Anthony Busson is member of the committee of "Ecole Doctorale" 512 in computer science and mathematics.
- Éric Fleury is Deputy Scientific Delegate for Inria Grenoble Rhône Alpes
- Éric Fleury is in the in the Executive Committee of the IXXI â Rhône-Alpes Complex Systems Institute.
- Éric Fleury is member of the Council of the LIP laboratory.
- Éric Fleury is a member of the executive committee of the Milyon labex.
- Anthony Busson is the vice president of the thesis committee of the LIP laboratory.
- Thomas Begin is an elected member of the Council of the LIP laboratory.
- Jean Pierre Chevrot is member of the steering committee of the IXXI - Rhône-Alpes Complex Systems Institute.
- Márton Karsai is the co-responsible for the M2 master program in Modelling of Complex Systems at ENS Lyon
- Márton Karsai is the elected council member of the Complex System Society (2015-)
- Márton Karsai is the elected member of the steering committee of the IXXI Complex System Institute (2016-)

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

10.2.1.1. Teaching by Éric Fleury

Éric Fleury is Professor at the Computer Science department of ENS de Lyon and holds a Inria chair.

Master: CR15 - Complex Networks, 18H, M2, ENS de Lyon, France

10.2.1.2. Teaching by Márton Karsai

Márton Karsai is Associate Professor at the Computer Science department of ENS de Lyon and holds a Inria chair.

> Master: CR15 - Complex Networks, 21H, M2, ENS de Lyon, France
>
> Master: Dynamical Processes on Networks, 6H, M2, ENS de Lyon, France
>
> Master: Modeling Social Systems, 9H, M2, ENS de Lyon, France
>
> Master: Complex Networks 16H, Collegio Carlo Alberto, Torino Italy (guest lecturer)

10.2.1.3. Teaching by Paulo Gonçalves

> Engineering school CPE-Lyon (years 3-5): Signal Processing (80 hours/yr)

10.2.1.4. Teaching by Isabelle Guérin Lassous

Professor at Université Claude Bernard Lyon 1 in the Computer Science department since 2006. She lectures at the University.

> Master: "Networking", 20h, Master (M1), University Lyon 1, France
>
> Master: "QoS and Multimedia Networks", 30h, Master (M2), University Lyon 1, France
>
> Master: "Wireless Networks", 15h, Master (M2), University Lyon 1, France
>
> Master: "Introduction to Networking", 30h, Master (M2), University Lyon 1, France

10.2.1.5. Teaching by Anthony Busson

Professor at the IUT (Institut Universitaire de Technologie) of Université Claude Bernard Lyon 1 in the computer science department since 2012.

> Master: "MPLS", 6h, Master (M2), University Lyon 1, France
>
> DUT: full service (192h) in networking, operating-systems, and programming.

10.2.1.6. Teaching by Thomas Begin

Assistant Professor at Université Claude Bernard Lyon 1 in the Computer Science department since 2009.

> Master: "Networking", 20h, Master (M1), University Lyon 1, France
>
> Master: "Advanced networks", 20h, Master (M2 SRIV), University Lyon 1, France
>
> Master: "Computer networks", 20h, Bachelor (L3), University Lyon 1, France
>
> Master: "Introduction to Networking", 30h, Master (M2 CCI), University Lyon 1, France
>
> Master: "Distributed systems", 10h, Master (M1), University Lyon 1, France

10.2.1.7. Teaching by Christophe Crespelle

Assistant Professor at Université Claude Bernard Lyon 1 in the Computer Science department since 2009.

> Master: "Complex networks", 15h, Master (M2), ENS de Lyon, France
>
> Master: "Introduction to Computer Science", 30h, Master (M2), ENS de Lyon, France
>
> Bachelor: "Combinatorial Optimisation", 18h, Bachelor (4th year), Vietnam National University in Hanoi, Vietnam

10.2.1.8. Teaching by Philippe Nain

> University of Massachusetts at Amherst: graduate course on "Performance Modelling of Communication Networks and Distributed Systems" (32 hours).

10.2.2. Supervision

> PhD defense: Yannick Léo, Deep dive into social network and economic data: a data driven approach for uncovering temporal ties, human mobility and socioeconomic correlations, ENS de Lyon, Dec 2016, Éric Fleury, Christophe Crespelle and Márton Karsai.
>
> PhD in progress: Sarra Ben Alaya, Multi-scale classification and analysis of data on networks. Nov. 2015, P. Gonçalves (P. Borgnat, co-advisor)
>
> PhD in progress: Esteban Bautista Ruiz, Statistical Graph Signal Processing. P. Gonçalves (P. Abry, co-advisor). Started Sept. 1st, 2016.
>
> PhD in progress: Laurent Reynaud, Optimised mobility strategies for wireless networks. March 2013, I. Guérin Lassous
>
> PhD in progress: Huu-Nghi Nguyen, Admission control in SDN networks. April 2014, T. Begin and A. Busson and I. Guérin Lassous
>
> PhD in progress: Mohammed Amer, WiFi network management: a SDN approach. January 2015, A. Busson and I. Guérin Lassous
>
> PhD in progress: Matteo Morini, New tools for understanding the dynamics of social networks, Oct 2013, E. Fleury, P. Jensen and M. Karsai
>
> PhD in progress: Samuel Unicomb, Spreading processes on temporal networks, Oct 2016, E. Fleury and M. Karsai
>
> PhD in progress: Jacobo Levy Abitbol, Information diffusion and language evolution on dynamical social networks, Oct 2016, E. Fleury and M. Karsai
>
> PhD in progress: Marija Stojanova, Performance Modelling of IEEE 802.11 networks , Oct 2016, T. Begin
>
> PhD in progress: Imen Achour, Data Dissemination Protocols for Vehicular Ad hoc Networks, informal supervising by A. Busson with T. Bejaoui and S. Tabbane (Supcom - Tunis)

10.2.3. Juries

- Isabelle Guérin Lassous was a member of the HDR examination boards of Christoph Neumann at Technicolor/Université de Rennes 1 and Frédéric Le Mouël at INSA de Lyon.
- Isabelle Guérin Lassous was a member of the Ph.D thesis examination board of Guillaume Gaillard at INSA de Lyon.
- Éric Fleury was member and reviewer of the HdR examination board of Tommasso Venturini at ENS de Lyon.
- Éric Fleury was president of the PhD examination boards of Michal Krol at UGA.
- Anthony Busson was member of the PhD examination boards of Lyad Cherif at Université Paris XI. December 2016.
- Anthony Busson was member of the PhD examination boards of Saiefeddine Bouallegue at Sup'Com / University of Carthage. June 2016.
- Anthony Busson was member of the mid-term examination boards for the PhD of Tu Lam Thanh at Supélèc. November 2016.

DATAMOVE Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Euro-Par, Grenoble, August 2016: General chair and local organization.
- HCW'2016 (25th IEEE Heterogeneous Computing Workshop), Hyderabad, May 2016a: General Chair

9.1.1.2. Member of the Organizing Committees

- EGPGV (Eurographics Symposium on Parallel Rendering and Visualization): President of the steering committee.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Euro-Par, Grenoble, August 2016: Topic chair.

9.1.2.2. Member of the Conference Program Committees

ISAV 2016, November 2016, Salt Lake City, USA

2nd IEEE BidDataSecurity, April 8-10 2016, New York, USA

IPDPS 2016 (27th IEEE International Parallel & Distributed Processing Symposium), May 23-27 2016, Chicago, USA

CloudTech, My 24-26 2016, Marrakech, Marocco

COMPAS, July 5-8 2016, Lorient, France

PMAA'16 (10th internat. workshop on Parallel Matrix Algorithms and Applications), July 6-8 2016, Bordeaux, France

ISPDC (15th Internat Symposium on Parallel and Distributed Computing), July 8-10 2016, Fuzhou, China

EuroMPI, September 25-28 2016, Edinburgh, Scotland, UK

28th SBAC-PAD, October 26-28 2016, Los Angeles, USA,

Edu-HPC (Workshop on Education for High-Performance Computing), November 2016, Salt Lake city, USA

CloudCom, December 12-15 2016, Luxemburg

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Associate Editor of the Parallel Computing journal PARCO.

Member of the Editorial Board of JPDC.

Member of the Editorial Board of Computational Methods in Science and Technology.

Member of the Editorial Board of ARIMA (revue africaine de recherche en informatique et maths appliquées).

Member of the Editorial Board of IEEE Trans. Parallel and Distributed Systems TPDS.

9.1.4. Scientific Expertise

ANR project evaluation expert

Nederlands e-science center expert

9.1.5. Research Administration

Executive committee member of Mathematics and Computer Science Council of Univ. Grenoble-Alpes (Membre du directoire du Conseil du Pôle MSTIC de l'UGA)

Mathematics and Computer Science Council of Univ. Grenoble-Alpes Members (Membre du Conseil du Pôle MSTIC de l'UGA)

Steering commitee of Grid'5000

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: Denis Trystram is responsible of the first year (M1) of the international Master of Science in Informatics at Grenoble (MOSIG-M1).

Master: D. Trystram, P.-F. Dutot, "Complexity, approximation theory and randomization" master course (M2) at Univ. Grenoble-Alpes

Master: Pierre-François Dutot. 226 hours per year. Licence (first and second year) at IUT2/UPMF (Institut Universitaire Technologique de Univ. Grenoble-Alpes) and 9 hours Master M2R-ISC Informatique-Systèmes-Communication at Univ. Grenoble-Alpes.

Master: Grégory Mounié. 242 hours per year. Master (M1/2nd year and M2/3rd year) at Engineering school ENSIMAG, Grenoble-INP.

Master: Bruno Raffin. 28 hours per year. Parallel System. International Master of Science in Informatics at Grenoble (MOSIG-M2).

Master: Olivier Richard. 222 hours per year. Master at Engineering school Polytech-Grenoble, Univ. Grenoble-Alpes.

Master: Denis Trystram. 200 hours per year in average, mainly at first level of Engineering School ENSIMAG, Grenoble-INP.

Master: Frédéric Wagner. 220 hours per year. Engineering school ENSIMAG, Grenoble-INP (M1/2nd year and M2/3rd year) (190h), Master DESS/M2-P SCCI Security (30h).

9.2.2. Supervision

PhD: David Glesser, Energy Aware Resource Management for HPC, Univ. Grenoble-Alpes. Defended November 2016. Advisers: Denis Trystram and Yianis Georgiou (ATOS/BULL)

PhD : Marwa Sridi, Un modèle de structure de données Cache-aware pour un parallélisme et un l'équilibrage dynamique de la charge, Univ Grenoble-Alpes. Defended April 2016. Advisers: Bruno Raffin, Vincent Faucher (CEA) and Thierry Gautier.

PhD in progress : Julio Toss, Parallel Algorithms and Data Structures for Physically Based Simulation of Deformable Objects, Univ. Grenoble-Alpes and UFRGS (co-tutelle). Started October 2013. Advisers: Bruno Raffin and Joao Comba (UFRGS).

PhD in progress : Estelle Dirand, Integration of High-Performance Data Analytics and IOs for Molecular Dynamics on Exascale Computer, Univ. Grenoble-Alpes. Started January 2016. Advisers: Bruno Raffin and Laurent Colombet (CEA).

PhD in progress: Michael Mercier, Resource Management and Job Scheduling in HPC–Cloud environments towards the Big Data era, Univ. Grenoble Alpes. Started October 2016. Advisers: Olivier Richard and Bruno Raffin.

PhD in progress: Raphaël Bleuse, Affinity Scheduling, Univ. Grenoble-Alpes. Started October 2013. Adviser: Denis Trystram and Gregory Mounié.

PhD in progress: Millian Poquet, Energy consumption optimization for high performance computing, Univ. Grenoble-Alpes. Started October 2014. Advisers: Denis Trystram and Pierre-François Dutot

PhD in progress: Valentin Reis, Machine Learning for resource management, Univ. Grenoble-Alpes. Started October 2015. Advisers: Denis Trystram and Eric Gaussier

PhD in progress: Abhinav Srivastav, Multi-objective Scheduling, Univ. Grenoble-Alpes. Started October 2015. Advisers: Denis Trystram and Oded Maler

PhD in progress: Alessandro Kraemer, Scheduling in the Cloud, Univ Grenoble-Alpes and UFPR (co-tutelle). Started October 2014. Advisers: Olivier Richard and Denis Trystram.

PhD in progress: Fernando Machado Mendonca, Locality Aware Scheduling, Univ. Grenoble-Alpes, Advisers: Frederic Wagner and Denis Trystram.

PhD in progress: Mohammed Khatiri, Tasks scheduling on heterogeneous Multicore, Univ. Grenoble-Alpes and University Mohammed First (co-tutelle), Advisers: Denis Trystram, El Mostafa DAOUDI (University Mohammed First, Oujda, Maroc)

9.2.3. *Juries*

PhD Defense of François Lehericey, 20th of September 2016. Jury Member. Ray Tracing Based Collision Detection: A quest for Performance. Université Bretagne Loire.

PhD Defense of Rémy Dautriche, 20th of October 2016. Jury President. Multi-scale Interaction Techniques for the Interactive Visualization of Execution Traces. Univ Grenoble-Alpes.

PhD Defense of Xiaohu Wu, 16th of February 2016. Reviewer. University of Nice.

PhD Defense of Ziad Sultan, 17th of June 2016. Jury President. Parallel Generic and Adaptive Exacte Linear Algebra. Univ. Grenoble-Alpes

9.3. Popularization

In conjonction with the Polaris team, the team (Seniors and PhDs) participates to several "computer science with hands" events, notably the "Fête de la science", every year, but also some visits of classes from high school of the area along the year at Inria Rhône-Alpes.

Talk at the ISN conference organized by Inria, dedicated to present the computer science to teachers of High School

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

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organization

9.1.1.1. General Chair, Scientific Chair

- Panayotis Mertikopoulos was the general co-chair of the GEL 2016 international workshop on Geometry, Evolution and Learning in Games

9.1.1.2. Member of the Organizing Committees

- Nicolas Gast served as Publicity Chair for ACM Sigmetrics 2016
- Jean-Marc Vincent served in the Organization Committee of the "Decision-making and Optimization under Uncertainty" summer school for young researchers, and the joint LICIA-EXASE workshop

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Arnaud Legrand was chair of the performance evaluation track of Europar 2016.

9.1.2.2. Member of the Conference Program Committees

The members of the team regularly review numerous papers for international conferences.

- Bruno Gaujal and Nicolas Gast were members of the Technical Program Committee of ACM Sigmetrics 2016
- Nicolas Gast was a member of the Technical Program Committee of ACM E-Energy 2016.
- Panayotis Mertikopoulos was a member of the Technical Program Committee of VALUETOOLS 2016.
- E. Veronica Belmega was a member of the Technical Program Committee of IEEE Globecom 2016, IEEE ICC 2016, IEEE BlackSeaComm 2016, and IEEE WCNC 2016
- Jean-Marc Vincent was a member of the Technical Program Committees of ASMTA 2016, Simul-Tech 2016 and EPEW 2016
- Arnaud Legrand was a member of the Technical Program Committees of HiPC 2016, ICPP 2016, and COMPAS 2016.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- E. Veronica Belmega is an executive editor for the Transactions on Emerging Telecommunications Technologies.

9.1.3.2. Reviewer - Reviewing Activities

The members of the POLARIS team regularly review articles for JPDC, DAM, IEEE Transactions on Networking/Automatic Control/Cloud Computing/Parallel and Distributed Computing/Information Theory/Signal Processing/Wireless Communications, SIAM Journal on Optimization/Control and Optimization, and others.

9.1.4. Invited Talks

- Bruno Gaujal was a plenary speaker at ECQT 2016 (European Conference on Queuing Theory)
- Bruno Gaujal was a plenary speaker at "Journées SDA2 2016" (Groupe de Travail "Systèmes Dynamiques, Automates et Algorithmes" of the CNRS thematic group GDR Informatique Mathématique.
- Panayotis Mertikopoulos was a plenary speaker at the ADGO 2016 workshop on Algorithms and Dynamics for Games and Optimization
- Panayotis Mertikopoulos gave an invited tutorial on "*Online Optimization for Wireless Communications*" at the Orange workshop on Learning and Networks.
- Panayotis Mertikopoulos gave a two-part tutorial on "*Game Theory, Learning and Cognitive Radio*" at CROWNCOM 2016.

9.1.5. Leadership within the Scientific Community

Arnaud Legrand has organized a series of webinars on reproducible research and whose aim is to introduce the audience to one particular aspect of reproducible research and to illustrate how this aspect can be addressed with state-of-the-art tools. To this end, experts of a given topic are invited and their seminar is screencast so that researchers from other universities can easily follow it. So far, the following topics have been covered:

1. Introduction (reproducible research, challenges, ethic, ...) to reproducible research. Producing replicable articles and managing a laboratory notebook.
2. Controlling your experimental environment
3. Numerical reproducibility
4. Logging and backing up your work: a not so short introduction to git for research
5. Preserving software: ensuring availability and tracking provenance
6. Reproducible science in bioinformatics: current status, solutions and research opportunities

All the corresponding videos and materials are available at the following address: https://github.com/alegrand/RR_webinars/

9.1.6. Scientific Expertise

- E. Veronica Belmega was a member of the jury for the GRETSI–GdR ISIS thematic research group "best thesis" award
- Panayotis Mertikopoulos is a member of the steering committee (*comité de liaison*) of the optimization and decision theory group of the French Society for Industrial and Applied Mathematics (SMAI).
- Jean-Marc Vincent is a member of the scientific committees of the CIST (Centre International des Sciences du Territoire)

9.1.7. Research Administration

- Bruno Gaujal is member of the "bureau du LIG" (Laboratoire d'informatique de Grenoble)
- Bruno Gaujal is member of the "bureau du CP" of Inria Grenoble.
- Bruno Gaujal was member of the CR2 admissibility jury of Inria-Grenoble.
- Panayotis Mertikopoulos serves as the graduate students liaison (*chargé de mission doctorants*) for the Laboratoire d'Informatique de Grenoble
- Arnaud Legrand was coordinator of the Inria evaluation of the "Distributed and High Performance Computing" theme.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: Bruno Gaujal and Nicolas Gast, *"Advanced Performance Evaluation"*, 18h (M2), EN-SIMAG

Master: Guillaume Huard, *"Conception des Systèmes d'Exploitation"* (M1), Université Grenoble-Alpes

Master: Arnaud Legrand and Jean-Marc Vincent, *"Scientific Methodology and Performance Evaluation"*, 15h (22.5h) M2, M2R MOSIG

Master: Arnaud Legrand, *"Parallel Systems"*, 21h (31.5h) M2R, M2R Mosig.

Master: Arnaud Legrand, *"Scientific Methodology and Performance Evaluation"*, 24h (36h), ENS Lyon.

Master: Panayotis Mertikopoulos, *"Selected Topics in the Theory of Stochastic Processes"*, 16h M2, University of Athens, Athens, Greece

Master: Florence Perronnin, *"Simulation"*, M1, Université Versailles – Saint-Quentin

Master: Florence Perronnin, *"Probabilités–Simulation"*, RICM4 Polytech Grenoble

Master: Arnaud Legrand and Jean-Marc Vincent, Probability and simulation, performance evaluation 72 h, (M1), RICM, Polytech Grenoble.

Master: Jean-Marc Vincent, Mathematics for computer science, 18 h , (M1) Mosig.

DU: Jean-Marc Vincent, *"Informatique et sciences du numérique"*, 20 h, (Professeurs de lycée).

9.2.2. Supervision

Post-Doc: Angelika Studeny, Université Grenoble-Alpes (Jean-Marc Vincent)

PhD: David Beniamine, *"Analyse du comportement mémoire d'application paralleles de calcul scientifique"*, Université Grenoble-Alpes, 05/12/2016 (Guillaume Huard)

PhD: Joaquim Assunção, *"Fitting techniques to knowledge discovery through stochastic models"*, 08/12/2016 (Jean-Marc Vincent)

PhD in progress: Alexandre Marcastel, *"Online resource allocation in dynamic wireless networks"*, 10/2016 (Panayotis Mertikopoulos, E. V. Belmega)

PhD in progress: Stéphane Durand, *"Game theory and control in distributed systems"* (Bruno Gaujal)

PhD in progress: Stephan Plassart, *"Optimization of critical embedded systems"* (Bruno Gaujal)

PhD in progress: Baptiste Jonglez, *"Diversity exploitation in communication networks"* (Bruno Gaujal)

PhD in progress: Umar Ozeer, OrangeLabs, 12/2016 (Jean-Marc Vincent)

PhD in progress: Christian Heinrich, *"Performance Evaluation of HPC Systems Through Simulation"*, 12/2015 (Arnaud Legrand)

PhD in progress: Rafael Keller Tesser, *"Performance Evaluation of Dynamic Load Balancing for Legacy Iterative Parallel Applications"*, 12/2015 (Arnaud Legrand, Cotutelle with Philippe Navaux from UFRGS)

PhD in progress: Vinicius Garcia Pinto, *"Visual Performance Analysis of HPC applications running over Dynamic Task-based Runtimes"*, 12/2015 (Arnaud Legrand, Cotutelle with Nicolas Maillard and Lucas Schnorr from UFRGS)

9.2.2.1. Internships

- Jean-Marc Vincent supervised the eng. internship of Benjamin Briot (02–03/2016)
- Jean-Marc Vincent supervised the master internship Mathieu Baille (Magistère + TER M1)
- Guillaume Huard supervised the Licence internship of Michael Picard
- Guillaume Huard supervised the Licence internship of Loic Poncet

- Arnaud Legrand and Vincent Danjean supervised the eng. internship of Florian Popek (06–08/2016)
- Arnaud Legrand supervised the master internship of Steven Quinito Masnada (02–08/2016) in collaboration with the CORSE team (Brice Videau and Frédéric Desprez)

9.2.3. Juries

- E. Veronica Belmega was a member of the jury for the PhD defense of Kenza Hamidouche (12/2016, Supélec)
- Bruno Gaujal was a reviewer for the HDR defense of Bruno Scherrer
- Bruno Gaujal was a member of the jury for the HDR defense of Patrick Loiseau
- Arnaud Legrand was reviewer for the PhD defense of Rafife Nheili

9.3. Popularization

The POLARIS team is actively involved in various scientific popularization activities. In addition to participating in the Fête de la Science (Guillaume Huard, Florence Perronnin, Jean-Marc Vincent), the POLARIS team also participates in the organization of the "Conférence Inria". Jean-Marc Vincent has also organized (and/or participated in) several training courses for computer science teachers (at a high school level) and has supervised several MathC2+ trainees.

Jean-Marc Vincent also organized the 2-day-long atelier "Computer Science without Computers" for elementary school students; the atelier was nominated for the Shannon trophy (awarded by the Institut Henri Poincaré).

ROMA Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Laure Gonnord is co-chair of the "Compilation French community", with Florian Brandner (ENSTA) and Fabrice Rastello (Inria Corse).

Bora Uçar was the workshops chair at IPDPS 2016, local chair of the a topic of Euro-Par 2016, co-chair of PCO 2016 (a workshop of IPDPS 2016), and has organized mini-symposia at SIAM PP16 and PMAA16.

10.1.2. Scientific Events Selection

10.1.2.1. Steering committees

Yves Robert is a member of the steering committee of HCW, Heteropar and IPDPS. He is the chair of the steering committee of Euro-EduPar.

Bora Uçar serves in the steering committee of CSC.

10.1.2.2. Chair of Conference Program Committees

Anne Benoit was the program chair of HiPC 2016, and the program area chair for Algorithms of SC 2016.

Loris Marchal was the program chair of HeteroPar 2016.

10.1.2.3. Member of the Conference Program Committees

Christophe Alias was a member of the program committee of IMPACT'16.

Anne Benoit was a member of the program committee of IPDPS, SC, HCW, and Ena-HPC.

Laure Gonnord was a member of the program committee of VMCAI'17.

Jean-Yves L'Excellent was a member of the program committee of VECPAR'16.

Loris Marchal was a member of the program committee of IPDPS 2016.

Yves Robert was a member of the program committee of FTS, FTXS, ICCS, ISCIS, and SC

Bora Uçar was a member of the program committee of the following conferences and workshops: HiPC 2016, IPDPS 2016, ICCS 2016, HPC4BD 2016, P^{3}MA, CSE 2016, MPP2016.

Frédéric Vivien was a member of the program committee of IPDPS, SC, HiPC, PDP, EduPar, EuroEduPar and WAPCO.

10.1.2.4. Reviewer

Jean-Yves L'Excellent reviewed papers for VECPAR'16, ADVCOMP'16.

Christophe Alias reviewed papers for IMPACT'16.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Anne Benoit is Associate Editor of TPDS (IEEE Transactions on Parallel and Distributed Systems), of JPDC (Elsevier Journal of Parallel and Distributed Computing) and SUSCOM (Elsevier Journal of Sustainable Computing).

Loris Marchal is an invited associated Editor of Parallel Computing (Elsevier) for a special issue following HeteroPar 2016.

Yves Robert is Associate Editor f TPDS (IEEE Transactions on Parallel and Distributed Systems), JPDC (Elsevier Journal of Parallel and Distributed Computing), IJHPCA (Sage International Journal of High Performance Computing Applications), and JOCS (Elsevier Journal of Computational Science).

Bora Uçar is Associate Editor of Parallel Computing (Elsevier).

Frédéric Vivien is Associate Editor of Parallel Computing (Elsevier) and of JPDC (Elsevier Journal of Parallel and Distributed Computing).

10.1.3.2. Reviewer - Reviewing Activities

Christophe Alias reviewed papers for TVLSI (IEEE Transactions on Very Large Scale Integration Systems), PARCO (Parallel Computing), MICPRO (Microprocessors and Microsystems).

10.1.4. Invited Talks

Christophe Alias gave a talk at "Journée Calcul" in ENS-Lyon on May 2016 and a talk at "Journée Langage, Compilation et Sémantique" in ENS-Lyon on November 2016.

10.1.5. Tutorials

Yves Robert gave a tutorial on *Fault-tolerance techniques for HPC platforms* at PPoPP'16 (with Thomas Hérault), SC'16 (with Aurélien Bouteiller, George Bosilca, and Thomas Hérault) and Euro-Par'16.

10.1.6. Leadership within the Scientific Community

Christophe Alias, together with Cédric Bastoul (CAMUS), co-founded the Impact workshop (International Workshop on Polyhedral Compilation Techniques) on 2011, which is now the reference international event of the polyhedral compilation community http://impact.gforge.inria.fr/. Since then, Christophe Alias is involved in IMPACT committees.

Laure Gonnord, together with Fabrice Rastello (CORSE) and Florian Brandner (Telecom Paris Tech) animate since 2010 the French Compilation Community (http://compilfr.ens-lyon.fr).

10.1.7. Research Administration

Anne Benoit is a member of the executive committee of the Labex MI-LYON. She is the head of the Master of fundamental computer science at ENS Lyon.

Loris Marchal is a member of the scientific council of the "Ecole Nationale Supe´rieure de Me´canique et des Microtechniques" (ENSMM, Besançon).

Jean-Yves L'Excellent is a member of the direction board of the LIP laboratory.

Yves Robert was a member of the Senior Member election of Institut Universitaire de France. He was a committee member of the IEEE Fellows selection. he is a member of the scientific council of the Maison de la Simulation.

Frédéric Vivien is a member of the scientific council of the École normale supérieure de Lyon and of the academic council of the University of Lyon.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence:

- Anne Benoit : Algorithmique avancée (CM 32h), L3, Ecole Normale Supérieure de Lyon.
- Maroua Maalej : Algorithmique et Programmation Avancée (TD=18, TP=24h), L2, Université Lyon 1 Claude Bernard : Autumn 2016.
- Maroua Maalej : Architecture et système (TP=24h), L2, Université Lyon 1 Claude Bernard : Autumn 2016.

- Maroua Maalej : Gestion de Projet et Génie Logiciel (TD/TP=10h), M1, Université Lyon 1 Claude Bernard : Autumn 2016.
- Christophe Alias : Compilation et outils de développement (CM+TD=18h), L3, INSA Centre-Val-de-Loire : Spring 2016.
- Christophe Alias : Concours E3A – épreuve informatique MPSI (correcteur) : Spring 2016.
- Yves Robert : Algorithmique (CM 32h), L3, Ecole Normale Supérieure de Lyon

Master:

- Anne Benoit, Resilient and energy-aware scheduling algorithms (CM 24h), M2, Ecole Normale Supérieure de Lyon.
- Laure Gonnord : Compilation (CM+TD 76h), M1, Université Claude Bernard Lyon 1, et M1 Ecole Normale Supérieure de Lyon.
- Laure Gonnord : Préparation à l'écrit et à l'oral d'informatique du capès d'informatique, 10h, M1 MEEF Université Claude Bernard Lyon1.
- Laure Gonnord : Program Analysis : (CM+TP 10h, avec D.Monniaux), M2 Ecole Normale Supérieure de Lyon.
- Christophe Alias : Optimisation d'applications embarquées (CM+TD=24h), M1, INSA Centre-Val-de-Loire.
- Christophe Alias: Advanced Compilers: Automatic Parallelization and High-level Synthesis (CM 24h, avec F. Rastello), M2, Ecole Normale Supérieure de Lyon, France.
- Frédéric Vivien, Algorithmique et Programmation Parallèles et Distribuées (CM 36 h), M1, École normale supérieure de Lyon, France.

10.2.2. Supervision

PhD in progress: Aurélien Cavelan, "Resilient and energy-aware scheduling algorithms for large-scale distributed systems", started in September 2014, advisors: Anne Benoit and Yves Robert.

PhD in progress: Changjiang Gou, "Resilient and energy-aware scheduling algorithms for large-scale distributed systems", started in September 2016, funding: China Scholarship Council, advisors: Anne Benoit and Loris Marchal.

PhD in progress: Li Han, "Algorithms for detecting and correcting silent and non-functional errors in scientific workflows", started in September 2016, funding: China Scholarship Council, advisors: Yves Robert and Frédéric Vivien

PhD in progress: Oguz Kaya, "High performance parallel tensor computations", started in September 2014, funding: Inria, advisors: Bora Uçar and Yves Robert.

PhD in progress: Aurélie Kong Win Chang, "Techniques de résilience pour l'ordonnancement de workflows sur plates-formes décentralisées (cloud computing) avec contraintes de sécurité", started in October 2016, funding: ENS Lyon, advisors: Yves Robert, Yves Caniou and Eddy Caron.

PhD in progress: Maroua Maalej, "Low cost static analyses for compilers", started in October 2014, advisors : Laure Gonnord and Frédéric Vivien.

PhD in progress: Gilles Moreau, "High-performance multifrontal solution of sparse linear systems with multiple right-hand sides, application to the MUMPS solver", started in December 2015, funding: MUMPS consortium and Labex MILYON, advisor: Jean-Yves L'Excellent.

PhD in progress: Loic Pottier, "Scheduling concurrent applications in the presence of failures", started in September 2015, advisors: Anne Benoit and Yves Robert.

PhD in progress: Issam Rais, "Multi-criteria scheduling for high-performance computing", started in November 2015, advisors: Anne Benoit, Laurent Lefèvre (LIP, ENS Lyon, Avalon team), and Anne-Cécile Orgerie (IRISA, Myriads team).

PhD in progress: Bertrand Simon, "Task-graph scheduling and memory optimization", started in September 2015, funding: ENS Lyon, advisors: Loris Marchal and Frédéric Vivien.

PhD defended on July 1st: Guillaume Iooss, "Semantic tiling", started in September 2011, joint PhD ENS-Lyon/Colorado State University, advisors: Christophe Alias and Alain Darte (ENS-Lyon) / Sanjay Rajopadhye (Colorado State University).

10.2.3. Juries

- Christophe Alias participated to the PhD jury of Guillaume Iooss (Colorado State University), in July 2016.
- Laure Gonnord participated to the Inria recruting jury for junior research positions (CR2), in Rennes, in Spring 2016.
- Laure Gonnord participated to the PhD jury of Nasrine Damouche (Univ. Perpignan) and Sajith Kalathingal (Univ. Rennes), in December 2016.
- Laure Gonnord is member of the "Comité de Suivi de thèse" de Maurica Fonenantsoa (Univ. Réunion) since 2015.
- Loris Marchal participated to the selection committee recruting an assistant professor (MCF) at University of Bordeaux 1, in Spring 2016.

10.3. Popularization

Frédéric Vivien gave two lectures about "Approximation algorithms" at the CIRM "Algorithmique et programmation" workshop for Maths teachers in *Classes préparatoires aux grandes écoles*. The two lectures were recorded and are available online (http://library.cirm-math.fr/Record.htm?Record=19278406157910966889).

SOCRATE Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. General Chair, Scientific Chair

Jean-Marie Gorce was one of the general chairs in the following conferences:
- GDR-ISIS Meeting: "Wireless networks: decentralized problems and solutions", held in Telecom ParisTech, March, 15, 2016.
- Workshop : "Inclusive Radio Communications for 5G and beyond", held in conjunction with the conference IEEE PIMRC, September 4-7, 2016, Valencia, Spain.

9.1.2. Chair of Conference Program Committees

Florent de Dinechin is a PC chair of the Arith 2017 conference.

9.1.3. Member of the Conference Program Committees

Samir M. Perlaza was a member of the technical program committee of the following conferences:
- IEEE Wireless Communications and Networking Conference (WCNC). 19-22 March 2017, San Francisco, CA. PHY and Fundamentals Track.
- 3rd Workshop on Physical-layer Methods for Wireless Security. Workshop taking place at IEEE CNS 2016 in Philadelphia, PA, USA, Oct 17-19, 2016.
- Workshop on Wireless Energy Harvesting Communication Network. Workshop taking place at IEEE Global Communications Conference (GLOBECOM) in Washington, DC USA, Dec. 8, 2016.
- IEEE WCNC 2016 Workshop on Green and Sustainable 5G Wireless Networks (GRASNET). April 3, 2016, Doha, Qatar
- 6th International Conference on Game Theory for Networks (GameNets). May 10-12, 2016, Kelowna, BC, Canada.

Jean-Marie Gorce was a member of the following technical program committees:
- IEEE APCC(22th Asia-Pacific Communication Conference, Yogyakarta-Indonesia, August 25-27 2016).
- IEEE PIMRC Fundamental & PHY (27th IEEE International Symposium on Personal, Indoor and Mobile Radio Communications , Valencia, Spain, September 4-7, 2016).
- IEEE GLOBECOM Cognitive Radio Networks (Washington, DC, USA, December, 4-8, 2016).
- IEEE ICC Cognitive Radio Networks (IEEE International Conference on Communications, Malaysia, May 23-27 2016).

Guillaume Villemaud was a member of the following technical program committees:
- CROWNCOM2016
- VTC spring 2016
- PIMRC 2016
- EUCAP 2016.

Tanguy Risset was a member of the following technical program committees:
- IEEE Computer Society Annual Symposium on VLSI (ISVLSI) 2016.
- Design Automation and Test in Europe (DATE) 2016.
- International Conference on Cognitive Radio Oriented Wireless Networks (CROWNCOM) 2016 .

Florent de Dinechin was a member of the following technical program committees:

- 12th International Symposium on Applied Reconfigurable Computing (ARC 2016)
- 23rd IEEE Symposium on Computer Arithmetic (Arith)
- 27th Annual IEEE International Conference on Application-specific Systems, Architectures and Processors (ASAP 2016)
- IEEE International Conference on Field Programmable Technologies (FPT 2016)
- Design Automation and Test in Europe (DATE) 2016, track D11.
- 24th IEEE International Symposium on Field-Programmable Custom Computing Machines (FCCM 2016)
- Conférence d'informatique en Parallélisme, Architecture et Système (ComPAS 2016)

9.1.4. Member of the Editorial Boards

Guillaume Villemaud is an associate editor of Annals of Telecommunications (Springer).

Jean-Marie Gorce is an associate editor of Telecommunications Systems (Springer) and Journal of Wireless communications and Networking (Springer).

9.1.5. Invited Talks

S. Perlaza, "On the Benefits of Feedback in Wireless Communications". Invited talk at the Department of Telecommunications, CentraleSupélec, Gif-sur-Yvette, France, December 2, 2016.

G. Salagnac "Peripheral State Persistence For Transiently Powered Systems" at the 3rd edition of the LIP Seminar on Languages Compilation and Semantics. France, November 3 2016.

S. Perlaza, "On the Benefits of Feedback in Wireless Communications". Invited talk at the Department of Electrical Engineering and Computer Science, Technical University of Berlin, Berlin, Germany, November 18, 2016.

J.M. Gorce, "Energy-Capacity Fundamental Limits in a Cell with Dense Users" at Lundis de la radio, Orange Labs, Issy les Moulineaux, France, September 26, 2016.

S. Belhadj Amor, "Simultaneous Energy and Information Transmission". Invited talk at the School of Engineering and Applied Science, Princeton University, Princeton NJ, USA, April 21, 2016.

S. Belhadj Amor, "Simultaneous Energy and Information Transmission". Invited talk at the Center for Wireless Communication and Signal Processing Research (CWCSPR), ECE Department, New Jersey Institute of Technology (NJIT), Newark NJ, USA, April 15, 2016.

S. Perlaza, "Simultaneous Wireless Information and Energy Transmission". Invited talk at the University of Sheffield. Department of Automatic Control and Systems Engineering, Sheffield, UK, April 6, 2016.

T. Risset, "FIT/CorteXlab: A new testbed for cognitive radio experimentation". Invited talk at the Colorado-state University Fort Collins, Computer science departement, Sep. 2016.

T. Risset "Compilation of Parametric Dataflow Applications for Software-Defined-Radio-Dedicated MPSoCs" at the 2rd edition of the LIP Seminar on Languages Compilation and Semantics. Lyon, France, June 24 2016.

T. Risset, "Experimenting Cognitive Radio Communication on FIT/CorteXlab". Invited talk at R2-Lab inauguration, Nice, France, Nov. 2016.

9.1.6. Leadership within the Scientific Community

Guillaume Villemaud is National Delegate (Alt.) for the COST IRACON.

9.1.7. Scientific Expertise

Guillaume Villemaud was reviewer of ANR projects and CIFRE grants.

Jean-Marie Gorce is a member of the following committees:

- Jury prix de thèse 2017 Signal Image et Vision, soutenu par l'association GRETSI, le GDR ISIS et le club EEA.
- Jury for the digital Impulse Innovation price, May, 2016.

Tanguy Risset is member of the Administration council (Conseil d'administration) of the GRAME institute (centre national de création musicale).

9.1.8. Tutorials in International Conferences

- S. Belhadj Amor and S. M. Perlaza, "Simultaneous Energy and Information Transmission". Tutorial at the 11th EAI International Conference on Cognitive Radio Oriented Wireless Networks (Crowncom), Grenoble, France, May 29, 2016.
- S. Belhadj Amor, S. M. Perlaza, and I. Krikidis, "Simultaneous Energy and Information Transmission". Tutorial at the European Wireless (EW) conference, Oulu, Finland, May 18, 2016.
- S. Belhadj Amor and S. M. Perlaza, "Simultaneous Energy and Information Transmission". Tutorial at the 23rd International Conference on Telecommunications, Thessaloniki, Greece, May 16, 2016.
- J.M. Gorce, "Fundamental Limits of Bursty Multi-user Wireless Networks for IoT", at the summer school RESCOM on 5G and Internet of Things, from 13th to 17th June 2016, Guidel Plage, France.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Jean-Marie Gorce is the head ot the Telecommunications department of Insa Lyon.

Tanguy Risset and Jean-Marie Gorce and are professors at the Telecommunications Department of Insa Lyon.

Florent de Dinechin is a professor at the Computer Science Department of Insa Lyon.

Claire Goursaud is an associate professor at the Telecommunications department of Insa Lyon.

Leonardo Sampaio-Cardoso is an associate professor at Insa Lyon (Premier Cycle).

Guillaume Salagnac and Kevin Marquet are associate professors at the Computer Science Department of Insa Lyon.

Guillaume Villemaud and Florin Hutu are associate professor at the Electrical Engineering Department of Insa Lyon.

Samir M. Perlaza and Jean-Marie Gorce teach the course on Network Information Theory at École Normale Supérieure de Lyon.

9.2.2. Supervision

PhD in progress **Tristan Delizy** *memory management for normally-of NV-RAM based systems*, Insa-Lyon, (Region ARC6) since 09/2016.

PhD in progress **Yohan Uguen** *Synthesis of arithmetic operators*, Insa-Lyon, (Mininstry of research) since 09/2016.

PhD in progress **Yuqi Mo** *Scaling of Iot Communication issuers*, Insa-Lyon, since 09/2015.

PhD in progress **David Kibloff** *New strategy for Physical Layer Security in wireless networks: self-jamming using Full-Duplex Transceivers*, École Doctorale EEA de Lyon, funded by Inria-DGA grant since 10/2015.

PhD in progress **Victor Quintero** *Fundamental Limits of Decentralized Cognitive Radio Networks*, École Doctorale EEA de Lyon, funded by Colciencias since 02/2014.

PhD in progress **Nizar Khalfet** *Stochastic Energy Sources to Power Communication Systems*, École Doctorale EEA de Lyon, funded by EU Project COM-MED since 10/2016.

PhD in progress : **Matei Istoan**: *High-performance coarse operators for FPGA-based computing*, ANR Metalibm grant, since 01/2014.

PhD : **Arturo Jimenez Guizar**: *Cooperative communications in Body Area Networks*, ANR Cormoran grant, 27/10/2016.

PhD : **Matthieu Vallerian**: "*Radio Logicielle pour réseau de capteurs*", CIFRE/Orange, 15/06/2016.

9.2.3. Juries

Jean-Marie Gorce was a member of the jury of the following thesis:

- PhD Ehsan Ebrahimi Khaleghi, Advanced techniques of Interference Alignment : Application to Wireless Networks (Telecom ParisTech, January 2016), (as a reviewer).
- PhD Bhanukiran Perabathini, fundamental limits of energy efficiency in wireless networks (CentraleSupélec, January 2016), (as a reviewer).
- PhD Abraham Kaboré, Study of detection-correction error codes for MAC/PHY layers in smart grid networks (University Limoges, March 2016), (as a veviewer).
- PhD Marwa Chami, Optimization of cognitive systems with successive interference cancellation and relaying (CNAM, Paris, May 2016), (as a reviewer).
- PhD Jan Oksanen, Machine learning methods for spectrum exploration and exploitation (University of Aalto, September 2016), (as an opponent).
- PhD Wenjie Li, Robust information gathering and dissemination in wireless sensor networks (CentraleSupélec, November 2016), (as a reviewer).
- PhD Raphael Massin, On the Clustering of Mobile Ad Hoc Networks (Telecom ParisTech, November 2016), (as a reviewer).
- PhD Zheng Chen, User-Centric Content-Aware Communication in Wireless Networks (CentraleSupélec, December 2016), (as a reviewer).
- HdR Frédéric Guilloud, contributions to error correction codes and to digital communications toward communications with short frames (Telecom Brest, December 2016).

Samir M. Perlaza was a member of the jury of the following thesis:

- PhD Chao He, "Broadcasting with delayed CSIT: Finite SNR analysis and heterogeneous feedback". Defended at CentraleSupélec on December 2 2016, Gif-sur-Yvette, France.

Florin Hutu was a member of the jury of the following thesis:

- PhD Jeremy Hyvert, "Techniques de conception d'oscillateurs contrôlés en tension faible bruit de phase en bande Ku intégrés sur silicium en technologie BiCMOS" (Université de Poitiers, September 2016).

Guillaume Villemaud was a member of the jury of the following thesis:

- PhD Roman IGUAL PEREZ, "Platform hardware/software for the energy optimization in a node of wireless sensor networks", Univ. de Lille 1.
- Mohammad ABDI ABYANEH, "Génération des signaux agrégés en fréquences dans le contexte de LTE-A". Telecom Paristech.
- Shiqi CHENG, "Characterization and modeling of the polarimetric MIMO radio channel for highly diffuse scenarios". Univ. de Lille 1.

Tanguy Risset was a member of the jury of the following thesis:

- Marcos Aurelio Pinto Cunha (U. Grenoble, Jan. 2016) as jury president .
- Xiguang Wu (CentraleSupélec, Mar. 2016), as reviewer.
- Shaoyang MEN (U. Nantes, Oct. 2016) jury president.

Florent de Dinechin was a reviewer in the habilitation thesis of Roselyne Chotin-Avot (LIP6, Paris).

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

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- Razvan Stanica was general co-chair of CoRes 2016, the first French national conference on protocol design, performance evaluation and experimentation, held in Bayonne in May 2016.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Razvan Stanica was the co-chair of the track "Vehicular and Delay Tolerant Networks" at the Wireless Days 2016 conference, held in Toulouse in March 2016.

10.1.2.2. Member of the Conference Program Committees

- Walid Bechkit was in the TPC of IEEE ICC and IEEE GlobeCom.
- Razvan Stanica was in the TPC of the following conferences: IEEE ICC, IEEE GlobeCom, IEEE VTC Spring/Fall, AdHoc-Now, GIIS, IEEE ISC2, IEEE UIC, WF-IoT.
- Fabrice Valois was in the TPC of the following conferences: IEEE Globecom, IEEE ICC, IEEE ICT, IEEE WCNC, IEEE WCMC, WiSARN.

10.1.2.3. Reviewer

- Razvan Stanica was a reviewer for IEEE Infocom and IEEE WoWMoM.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Razvan Stanica was Guest Editor for the Elsevier Computer Communication special issue on Mobile Traffic Analytics.
- Fabrice Valois is Associated Editor for Annals of Telecommunications.

10.1.3.2. Reviewer - Reviewing Activities

- Walid Bechkit was a reviewer for ACM Transactions on Sensor Networks, Journal of Network and Computer Applications (Elsevier), Journal of Network and Systems Management, Telecommunication Systems.
- Razvan Stanica was a reviewer for the following journals: IEEE Transactions on Mobile Computing, IEEE Communications Magazine, IEEE Transactions on Big Data, IEEE Transactions on Vehicular Technology, Vehicular Communications, Wireless Networks, China Communications, Frontiers of Information Technology & Electronic Engineering.

10.1.4. Invited Talks

- Hervé Rivano was an invited speaker at the Intelligent Internet of Things Showroom (SIDO), Lyon, April 2016.
- Hervé Rivano gave an invited talk at the inauguration of the Sense City EquipEx, Paris, April 2016.
- Hervé Rivano gave an invited talk at the UCN@Sophia Labex seminar, Sophia Antipolis, April 2016.
- Hervé Rivano was an invited speaker at the Inria Alumni jam session on IoT, Paris, November 2016.

- Fabrice Valois gave a talk on the "Scientific Challenges of IoT: the viewpoint of the CITI Lab.", CA Foundation INSA Lyon, September 2016.

10.1.5. Leadership within the Scientific Community

- Hervé Rivano is member of the steering committee of the ResCom axis of the RSD CNRS GdR.
- Hervé Rivano is a member of the Scientific Council of TUBA Lyon.
- Fabrice Valois is a member of the Scientific Council of the LIMOS-UMR6158 laboratory, Clermont Ferrand.
- Fabrice Valois is member of the Scientifc Council of the Labex IMU (Intelligence des Mondes Urbains).
- Fabrice Valois is in the steering committee of the Féderation d'Information de Lyon (FR 2000 CNRS).

10.1.6. Scientific Expertise

- Walid Bechkit was a reviewer for ANRT for Cifre PhD thesis.
- Hervé Rivano was a reviewer for the Sino-French call for project of the Joint Research Institute for Science and Society.
- Razvan Stanica was a reviewer for the following calls: ANR appel générique (France), ANRT Cifre (France), CETIC (Cameroun).
- Fabrice Valois was a reviewer for ANRT for Cifre PhD thesis.

10.1.7. Research Administration

- Walid Bechkit is responsible for seminar organization and scientific animation within the CITI laboratory.
- Hervé Rivano is member of the Administration Council of the EquipEx Sense City as representative of Inria.
- Hervé Rivano is member in the CITI laboratory council.
- Razvan Stanica is the CITI laboratory correspondent with the Labex IMU.
- Razvan Stanica is member of the steering committee of the Volvo Chaire at INSA Lyon.
- Fabrice Valois is director of the CITI research laboratory of INSA Lyon.
- Fabrice Valois is in the steering committee of the SPIE INSA Lyon IoT Chaire.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence : Isabelle Augé-Blum, Operating Systems, 70h, L3, Telecom. Dpt. INSA Lyon.

Licence : Walid Bechkit, IP Networks, 40h, L3, Telecom. Dpt. INSA Lyon.

Licence : Hervé Rivano, IP Networks, 34h, L3, Telecom. Dpt. INSA Lyon.

Licence : Razvan Stanica, Network Programming, 90h, L3, Telecom. Dpt. INSA Lyon.

Licence : Razvan Stanica, Advanced Wireless Networks, 20h, L3, IST / Telecom. Dpt. INSA Lyon (lectures given in english).

Licence : Fabrice Valois, IP Networks, 100h, L3, Telecom. Dpt. INSA Lyon.

Licence : Fabrice Valois, IP Networks, 20h, L3, IST / Telecom. Dpt. INSA Lyon (lectures given in english).

Master : Isabelle Augé-Blum, Innovation project, 30h, M1, Telecom. Dpt. INSA Lyon.

Master : Isabelle Augé-Blum, Bibliographical study, 30h, M1, Telecom. Dpt. INSA Lyon.

Master : Isabelle Augé-Blum, Real-Time Networks, 25h, M2, Telecom. Dpt. INSA Lyon.

Master : Walid Bechkit, Network architectures, protocols and services, 12h, M1, Telecom. Dpt. INSA Lyon.

Master : Walid Bechkit, Performance evaluation of telecom networks, 100h, M1, Telecom. Dpt. INSA Lyon.

Master : Walid Bechkit, Wireless multihop networks, 10h, M2, University of Lyon.

Master : Walid Bechkit, Wireless networks: architecture and security, 18h, M2, INSA Lyon.

Master: Hervé Rivano, Wireless multihop networks, 10h, M2, University of Lyon.

Master: Hervé Rivano, Smart Cities, 4h, M2, Polytech Perpignan.

Master: Hervé Rivano, Smart Cities and IoT, 48h, M2, Telecom. Dpt. INSA Lyon.

Master : Razvan Stanica, Mobile Networks, 30h, M1, Telecom. Dpt. INSA Lyon.

Master : Razvan Stanica, Network Science, 10h, M2, Telecom. Dpt. INSA Lyon.

Master : Fabrice Valois, Mobile Networks, 30h, M1, Telecom. Dpt. INSA Lyon.

Master : Fabrice Valois, Wireless Sensor Networks, 6h, M2, University of Grenoble.

Isabelle Augé-Blum is in charge of the foreign affairs of the Telecommunications department at INSA Lyon, coordinating all incoming and outgoing student exchange programs.

Hervé Rivano is responsible for the coordination of all courses in the Smart Cities and IoT option at the INSA Lyon Telecommunications department.

Razvan Stanica is responsible for the administrative part related to all Master projects prepared by INSA Lyon Telecommunications department students.

Razvan Stanica is responsible of the research option at the Telecommunications department of INSA Lyon.

Fabrice Valois is responsible of the networking teaching team in the Telecommunications department at INSA Lyon, coordinating all the courses in the networking domain.

Fabrice Valois and Walid Bechkit are elected members of the Telecommunications Department Council at INSA Lyon.

10.2.2. Supervision

PhD : Jin Cui, Data aggregation in wireless sensor networks, INSA Lyon, 06/2016. Advisor: Fabrice Valois.

PhD : Guillaume Gaillard, Opérer les réseaux de l'Internet des Objets à l'aide de contrats de qualité de service (Service Level Agreements), INSA Lyon, 12/2016. Advisors:Dominique Barthel (Orange Labs), Fabrice Theoleyre (I-Cube CNRS), Fabrice Valois.

PhD in progress : Yosra Bahri Zguira, DTN for IoT, since 05/2015. Advisors: Aref Meddeb (Univ. Sousse, Tunisia), Hervé Rivano.

PhD in progress: Abderrahman Ben Khalifa, Cognitive mechanisms for IoT networks. Advisors: Hervé Rivano, Razvan Stanica.

PhD in progress: Ahmed Boubrima, Optimal deployment of wireless sensor networks for air pollution monitoring, since 10/2015. Advisors: Walid Bechkit, Hervé Rivano.

PhD in progress : Soukaina Cherkaoui, Energy-saving strategies for backhaul networks, since 11/2013. Advisor: Hervé Rivano.

PhD in progress : Rodrigue Domga Komguem, Autonomous WSN architectures for road traffic applications, since 11/2012. Advisors: Razvan Stanica, Maurice Tchuente (Univ. Yaoundé, Cameroun), Fabrice Valois.

PhD in progress : Alexis Duque, Use of visible light communication in a smart city context, since 10/2015. Advisors: Hervé Rivano, Razvan Stanica.

PhD in progress : Leo Le Taro, Recalibration of wireless sensors for pollution monitoring, since 11/2015. Advisor: Hervé Rivano.

PhD in progress: Abdul Aziz Mack, Data gathering in sensor and passive RFID with energy harvesting for urban infrastructure monitoring, since 10/2016. Advisors: Nathalie Mitton (FUN team), Hervé Rivano.

PhD in progress: Jad Oueis, Systèmes PMR très haut débit fédérateurs, since 10/2015. Advisors: Razvan Stanica, Fabrice Valois.

PhD in progress: Mihai Popescu, Mobilité au sein de flottes de robots sous contrainte de maintien de la connectivité, since 11/2015. Advisors: Olivier Simonin (Inria CHROMA), Anne Spalanzanni (Inria CHROMA), Fabrice Valois.

MS thesis: T.Alias, Univ. Bretagne Sud, Resource Allocation in Cloud RAN, 07/2016. Advisors: Hervé Rivano, Razvan Stanica.

MS thesis: M Biteau, Data Gathering in Linear WSN, 01/2016. Advisors: Isabelle Augé-Blum, Walid Bechkit.

MS thesis: L. Bontemps, INSA Lyon, Anonymization of Mobile Traffic Datasets, 10/2016. Advisors: Razvan Stanica.

MS thesis: N. Chovelon, INSA Lyon, Control Traffic Model for LTE Core Networks, 06/2016. Advisors: Razvan Stanica, Fabrice Valois.

MS thesis: A. Mermouri, INSA Lyon, User Mobility in Virtualized Cellular Networks, 10/2016. Advisors: Razvan Stanica.

10.2.3. Juries

- Hervé Rivano was reviewer in the following PhD defense committee:
  - L. Wang, Facilitating Mobile Crowdsensing from both Organizers' and Participants' Perspectives, Télécom SudParis and Université Pierre et Marie Curie – Paris 6, 05/2016.
- Razvan Stanica was member in the following PhD defense committee:
  - M. Abualhoul, Visible Light and Radio Communication for Cooperative Autonomous Driving, Mines Paris Tech, Université Paris Sciences et Lettres, 12/2016.
- Fabrice Valois was reviewer in the following PhD defense committee:
  - M. G. Chalhoub, Enhanced Communication in Data Collection Multihop WSN, LIMOS, Univ. Clermont Ferrand, 07/2016.
- Fabrice Valois was member in the following PhD defense committee:
  - M. B. Tian, Data Dissemination Protocols and Mobility Model for VANETs, LIMOS, Univ. Clermont Ferrand, 10/2016.

10.3. Popularization

- Hervé Rivano has been involved in several popularization actions, in particular with the Grand Lyon metropolis (on air quality monitoring, smart cities infrastructure), SPL Lyon Part Dieu (on sensors networks), the TUBA (on sensors, mobility, networking), and Cité du Design et de l'Industrie.
- Hervé Rivano was a panelist at a pubic debate on "revolutions in education, culture, thinking and public space".

CHROMA Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- O. Simonin was co-chair of the Workshop DEMUR "On-line decision-making in multi-robot coordination" at International Conf. RSS, Ann Arbor, University of Michigan, June 2016.
- O. Simonin was General chair of the 2eme Journée nationale Robotique & IA., Clermont-Ferrand, RFIA 2016, 27 juin 2016.
- C. Laugier, Ph. Martinet, C. Stiller and U. Nunes, organized a workshop entitled "8th Workshop on Planning, Perception and Navigation for Intelligent Vehicles - A bridge between Robotics and ITS technologies" at IEEE ITSC 2016, Rio de Janeiro, November 1st 2016 (about 90 attendees).
- C. Laugier has been appointed as Program co-chair for IEEE/RSJ IROS 2018 (Madrid) and General co-Chair of IEEE/RSJ IROS 2019 (Hong Kong).

10.1.1.2. Member of the Organizing Committees

- C. Laugier was Associate Editor for IEEE/RSJ IROS 2016, for IEEE ICRA 2016, and for IEEE ITSC 2016.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- Jilles S. Dibangoye was Program Committee member of the following conferences:
  - International Joint Conference on Artificial Intelligence (IJCAI)
  - Autonomous Agent and Multi-agent Systems International Conference (AAMAS)
- O. Simonin is Program Committee member for Autonomous Agent and Multi-agent Systems International Conference (AAMAS) Special Track Robotics.
- O. Simonin is Program Committee member of the JFSMA conference since 2008 (Journées Francophones sur les Systèmes Multi-Agents).

10.1.2.2. Reviewer

- A. Martinelli served, in quality of reviewer, at the following international conferences: ICRA 2016, IROS 2016, ACC 2016.
- O. Simonin served, in quality of reviewer, at the following international conferences : IROS 2016, ICRA 2016.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- C. Laugier is Member of the Steering Committee of the journal IEEE Transaction on Intelligent Vehicles.
- C. Laugier Senior Editor of the journal IEEE Transaction on Intelligent Vehicles.
- C. Laugier is member of the Editorial Board of the journal IEEE ROBOMECH
- O. Simonin is a member of the editorial board of RIA Revue d'Intelligence Artificielle.

10.1.3.2. Reviewer - Reviewing Activities

- A. Martinelli served, in quality of reviewer, for the following journals: Transaction on Automation Science and Engineering, IEEE Robotics and Automation Letters.
- Jilles S. Dibangoye served as a reviewer for the following journals: Journal on Artificial Intelligence Research (JAIR), Artificial Intelligence Journal (AIJ), IEEE Transactions on Robotics (TRO).
- O. Simonin serves, in quality of reviewer, for Autonomous Robots Journal (AURO) and the Revue d'Intelligence Artificielle (RIA).

10.1.4. Invited Talks

Anne Spalanzani was invited to give a talk at

- Xerox (Meylan), september 2016.
- the conference RFIA (Clermont Ferrand), June 2016.
- the journées scientifique d'Inria (Rennes), June 2016.

Agostino Martinelli was invited to give a talk at

- Centro Piaggio, University of Pisa, June 2016, "Nonlinear Unknown Input Observability: the General Analytic Solution".
- Automation Lab, University of Tor Vergata, Rome, December 2016, "Nonlinear Unknown Input Observability: the General Analytic Solution".
- Vision and Perception lab., University of Zurich, December 2016, "Visual-Inertial Sensor Fusion".

Christian Laugier was invited to give a talk at

- IEEE ICIT 2016, Session on Cognitive Systems and Automation for Service Robotics and Intelligent Mobility, Taipei, March 2016, "Bayesian Perception & Decision for Autonomous Vehicles and Mobile Robots".
- Mediatek International Company, Hsinchu, Taiwan, March 15th 2016, "Bayesian Perception Technologies and Industrial Applications".
- City-U Seminar, Hong Kong, April 22nd 2016, "Bayesian Perception & Decision for Autonomous vehicles and Mobile Robots".
- Robotics Symposium, CUHK, T-Stone Robotics Institute, Hong Kong, April 21-22 2016, "Embedded Bayesian Perception & Decision-making for Autonomous Mobility in Dynamic Human Environments".
- IEEE ARSO 2016, Plenary talk, Shanghai, July 2016, "Towards Fully Autonomous Driving ? The Perception & Decision-Making Bottleneck".

Olivier Simonin was invited to give a talk at

- Université de Babes-Bolyai, Cluj-Napoca, Romania, July 2016.
- Workshop SAMPEN, Lyon, Januray 27, 2016.
- Robotics Times Connect, Lyon, December 7, 2016.

10.1.5. Leadership within the Scientific Community

- C. Laugier is co-chair with Philippe Martinet and Christoph Stiller, of the IEEE RAS Technical Committee on "Autonomous Ground Vehicles and Intelligent Transportation Systems (AGVITS)".
- C. Laugier is member of the Committee "safety of autonomous vehicles" (committee leaded by ARDI in the scope of the Innovation Regional Strategy).

10.1.6. Scientific Expertise

- C. Laugier has been invited as a panel member of the evaluation committee of "Beijing Institute of Technology (BIT)". A three days evaluation seminar has been held in Beijing on November 9-11, 2016.
- C. Laugier is Scientific Consultant for the Probayes company.

- O. Simonin is member of the 2017 ANR scientific committee.

10.1.7. Research Administration

- C. Laugier is a member of several Ministerial and Regional French Committees on Robotics and Autonomous Cars.
- O. Simonin is member of the Rhone-Alpes Robotics cluster (Coboteam), for Inria and INSA de Lyon entities.
- A. Martinelli carried out the activity of leader for the ANR project VIMAD
- A. Martinelli carried out the activity of leader for the CARNOT project SEDIA

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

INSA Lyon 5th year : O. Simonin, resp. of the Robotics option : AI for Robotics, Software and Hardware for robotics, Robotics projects, 50h, M2, Dept. Telecom INSA de Lyon, France.

INSA Lyon 3rd year : O. Simonin, Algorithmique et programmation, 20h, L3, Dept. Telecom INSA de Lyon, France.

M2R MoSIG: A. Martinelli, Autonomous Robotics, 12h, ENSIMAG Grenoble

INSA Lyon 5th year : A. Spalanzani, Navigation en environnement humain, 2h, M2, INSA de Lyon, France.

E-learning

10.2.2. Supervision

PhD in progress: Tiana Rakotovao Andriamahefa, Embedded Bayesian Perception on a Multi-core Architecture, 2013, C. Laugier and D. Ruspini (CEA LETI).

PhD in progress: David Sierra Gonzalez, Autonomous Driving, 2014, E. Mazer (Inria Prima), J. Dibangoye, C. Laugier (cooperation Toyota).

PhD in progress: Mathieu Barbier, Decision making for Intelligent Vehicles, 2015, E. Mazer (Inria Prima), O. Simonin, C. Laugier (cooperation Renault)

PhD in progress: Vishnu K. Narayanan, semi-autonomous navigation of a electric wheelchair using visual servoing and user intention analysis, 2013, M. Babel (Lagadic Team) and A. Spalanzani.

PhD in progress: Stefan Chitic, Middleware for multi-robot systems, 2013, O. Simonin, J. Ponge (CITI-Dynamid), Ministry funding.

PhD in progress: Pavan Vasishta, behavioral modeling in urban environments. A. Spalanzani and D. Vaudreydaz (Pervasive Interaction), started in Feb. 2016.

PhD in progress: Mihai Popescu, Robot fleet mobility under communication constraints, 2015, O. Simonin, A. Spalanzani, F. Valois (Agora), Regional funding.

Starting PhD: Guillaume Bono, Global-local Optimization Under Uncertainty for Goods Distribution Using a Fleet of Autonomous Vehicles, O. Simonin, J. Dibangoye, L. Matignon, INSA-Volvo Chair funding.

Starting PhD: Remi Cambuzat, Robots de TEléprésence : Navigation Sociale et Interaction VErbale immersives, G. Bailly (CNRS GIPSA lab), A. Spalanzani, O. Simonin, Regional funding.

10.2.3. Juries

- O. Simonin was a member (president) of the defense committee of the PhD thesis of Emmanuel Hermellin, Univ. de Montpellier, LIRMM, November 18, 2016.
- O. Simonin was a member of the defense committee of the PhD thesis of Arnaud Paris, Université d'Orléan, Labo PRISME, Bourges, October 17, 2016.

- O. Simonin was a member of the defense committee of the PhD thesis of Patrick Bechon, Université de Toulouse, ISAE Supaero, May 26, 2016.

- O. Simonin was a member (president) of the defense committee of the PhD thesis of Osamah Saif, Université de Technologie de Compiègne UTC, March 23, 2016.

- O. Simonin was a member (president) of the defense committee of the PhD thesis of Zhicheng Hou, Université de Technologie de Compiègne UTC, February 10, 2016.

- A. Spalanzani was a reviewer and a member of the defense committee of the PhD thesis of Omar Adair Islas Ramìrez, Université Pierre et Marie Curie, November 28th, 2016.

- A. Spalanzani was a member of the defense committee of the PhD thesis of Suman Raj Bista, Université de Rennes 1, December 20th, 2016.

- C. Laugier was reviewer and member of the defense committee of the PhD thesis of Alexandre Armand (ENSTA ParisTech, May 31 2016).

<p align="center" style="color:red">**EXMO Project-Team**</p>

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. Member of the Organizing Committees

- Jérôme Euzenat was organiser of the 11th Ontology matching workshop of the 15th ISWC, Kobe (JP), 2016 (with Pavel Shvaiko, Ernesto Jiménez Ruiz, Michele Cheatham, Oktie Hassanzadeh and Ryutaro Ichise),

8.1.2. Scientific Events Selection

8.1.2.1. Member of Conference Program Committees

- Manuel Atencia, Jérôme David and Jérôme Euzenat have been programme committee members of the conference "European conference on artificial intelligence (ECAI)" 2016
- Jérôme Euzenat was programme committee member of the "International conference on Knowledge Representation and Reasoning (KR)" 2016
- Manuel Atencia and Jérôme Euzenat have been programme committee members of the "International semantic web conference (ISWC)" 2016
- Manuel Atencia, Jérôme David and Jérôme Euzenat have been programme committee members of the "European Semantic Web Conference (ESWC)" 2016
- Jérôme Euzenat was programme committee member of the "International Conference on Formal Ontologies for Information Systems (FOIS)" 2016
- Jérôme Euzenat was programme committee member of the "International Conference on Conceptual Structures (ICCS)" 2016
- Jérôme Euzenat was programme committee member of the "International Conference on Web Information Systems and Technologies (WebIST)" 2016
- Tatiana Lesnikova and Jérôme Euzenat have been scientific committee member of the "Language resources and evaluation conference (LREC)" 2016
- Jérôme Euzenat was programme committee member of the "French fundamental artificial intelligence days" (JAIF) 2016
- Jérôme David was programme committee member of the ISWC "Ontology matching" workshop (OM) 2016
- Jérôme David was programme committee member of the EGC workshop on "quality of linked open data" (QLOD) 2016
- Jérôme Euzenat was programme committee member of the ESWC workshop on "Completing and Debugging the Semantic Web (CoDeS)", 2016.
- Jérôme Euzenat was programme committee member of the ECAI workshop on "Diversity-aware artificial intelligence", 2016.

8.1.2.2. Reviewer

- Jérôme David and Tatiana Lesnikova have been a reviewer for the 15th "International Semantic Web Conference (ISWC)", 2016.

8.1.3. Journal

8.1.3.1. Member of the Editorial Boards

- Jérôme Euzenat is member of the editorial board of *Journal of web semantics* (area editor), *Journal on data semantics* and the *Semantic web journal*.

8.1.3.2. Reviewer - Reviewing Activities

- Manuel Atencia has been reviewer for *Semantic web journal* and *ACM transactions on database systems*.
- Jérôme David has been reviewer for *Artificial intelligence review* and *Semantic web journal*.
- Jérôme Euzenat has been reviewer for *IEEE transactions on knowledge and data engineering*, *Knowledge and information systems* and *Artificial intelligence review*.

8.1.4. Invited Talks

- "Extraction de clés de liage de données", Invited talk, 16e conférence internationale francophone sur l'extraction et la gestion des connaissances (EGC), Reims (FR), 2016-01-21 (Jérôme Euzenat).
- Series of four seminars at UniRio, Rio de Janeiro (BR): "Introduction to ontology matching and alignment" 2016-03-11, "Repairing alignments and cultural evolution" 2016-03-17, "Data link key extraction (and relation with Formal concepts analysis)" 2016-03-22, "(Belief) revision in networks of ontologies" 2016-03-30 (Jérôme Euzenat).
- "Introduction to ontology matching and alignment", Seminar IBM Research, Rio de Janeiro (BR), 2016-03-23 (Jérôme Euzenat).
- "Semantic web evolution: tectonic quake or gentle drift?", Invited talk, 12th International Conference on Web Information Systems and Technologies (WebIST), Roma (IT), 2016-04-24 (Jérôme Euzenat).
- "Knowledge change, failure, adaptation, and evolution", Invited talk, 2nd Joint ontology workshops (JOWO), Annecy (FR), 2016-07-06 (Jérôme Euzenat).
- "Data interlinking with formal concept analysis and link keys", Invited talk, 13th international conference on concept lattices and applications (CLA), Moskow (RU), 2016-07-19 (Jérôme Euzenat).
- "Fixing knowledge in the distributed age", Invited tutorial, 10th international conference on scalable uncertainty managament (SUM), Nice (FR), 2016-09-21 (Jérôme Euzenat).

8.1.5. Leadership within the Scientific Community

- Jérôme Euzenat is member of the executive committee and the scientific council of the CNRS Pre-GDR "Artificial intelligence".

8.1.6. Scientific Expertise

- Jérôme David has been consulting for the start-up Budplace.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

8.2.1.1. Responsibilities

- Jérôme David is coordinator, with Véronique Sansonnet, of the Master "Mathematicques et informatiques appliquées aux sciences humaines et sociales" (Univ. Grenoble Alpes);
- Manuel Atencia is coordinator of option "Web, Informatique et Connaissance" of Master M1 "Mathematicques et informatiques appliquées aux sciences humaines et sociales" (Univ. Grenoble Alpes);
- Jérôme Euzenat is, with Sihem Amer-Yahia, coordinator of the "AI and the web" option of the M2R in computer science and applied mathematics (Univ. Grenoble Alpes).

8.2.1.2. Lectures

Licence: Jérôme David, Algorithmique et programmation par objets, 90h, L2 MIASHS, UGA, France

Licence: Jérôme David, Introduction à Python, Licence ESSIG, 24h, UGA, France

Licence: Manuel Atencia, Technologies du Web, LP ESSIG, 18h, UGA, France

Licence: Manuel Atencia, Introduction aux technologies du Web, 60h, L3 MIASHS, UGA, France

Master: Jérôme David, Programmation Java 2, 45h, M1 MIASHS, UGA, France

Master: Jérôme David, Documents XML, 30h, M1 MIASHS, UGA, France

Master: Manuel Atencia, Langages et technologies du Web 2, 21h, M1 MIASHS, UGA, France

Master: Manuel Atencia, Introduction à la programmation web, 30h, M1 MIASHS, UGA, France

Master: Manuel Atencia, Intelligence Artificielle, 7,5h, M1 MIASHS, UGA, France

Master: Jérôme David, JavaEE, 30h, M2 MIASHS, UGA, France

Master: Jérôme David, Développement Web Mobile, 30h, M2 MIASHS, UGA, France

Master: Manuel Atencia, Web Sémantique, 30h, M2 MIASHS, UGA, France

Master: Jérôme Euzenat, Semantic web: from XML to OWL, 23heqTD, M2R, UGA, France

Post-graduate level: Jérôme Euzenat, "Ontology matching", 1h30, Tutorial, 13th international conference on concept lattices and applications (CLA), Moskow (RU), 2016

8.2.2. Supervision

8.2.2.1. PhD

- PhD: Armen Inants, "Qualitative calculi with hererogeneous universes", Univ. Grenoble Alpes, 2016-04-25
- PhD: Tatiana Lesnikova, "RDF data interlinking: evaluation of cross-lingual methods", Univ. Grenoble Alpes, 2016-05-04

8.2.2.2. Master

- MSc: Mashruf Chowdury, Agreement and disagreement between ontologies, M2R Informatics, Univ. Grenoble Alpes, June 2016
- MSc: Irina Dragoste, Ontology evolution through interaction, M2R Informatics, Univ. Grenoble Alpes, September 2016
- MSc: Maroua Gmati, Reasoning with link keys, M2R Informatics, Univ. Grenoble Alpes, June 2016

8.2.3. Juries

- Jérôme Euzenat has been external examiner of the computer science PhD of Filip Radulovic (Universidad Politécnica de Madrid) "RIDER: a recommendation framework for exploiting evaluation results and user quality requirements" supervised by Asunción Gómez-Pérez, 2016
- Manuel Atencia has been external examiner of the computer science PhD of Daniel Vila Suero (Universidad Politécnica de Madrid) "A framework for ontology-based library data generation, access and exploitation" supervised by Asunción Gómez-Pérez and Jorge Gracia del Rio, 2016
- Jérôme Euzenat has been external examiner of the computer science PhD of Damien Graux (Université Grenoble Alpes) "On the efficient distributed evaluation of SPARQL queries" supervised by Nabil Layaïda and Pierre Genevès, 2016

8.3. Popularization

- Jérôme Euzenat gave a training conference in computer science for high-school teachers on "Language and semantics", Inria, Montbonnot (FR), 2016-02-10

IMAGINE Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. Member of the Organizing Committees

Remi Ronfard was

- co-organizer of the Eurographics workshop on intelligent cinematography and editing (WICED) in Lisbon, Portugal in May 2016.
- co-organizer of the Computational Modeling of Narrative (CMN) conference in Cracow, Poland in July 2016.

8.1.2. Scientific Events Selection

8.1.2.1. Chair of Conference Program Committees

- Marie-Paule Cani was chosen as Technical Paper Chair of Siggraph 2017 and started working on this since January 2016, with several meetings in the US throughout the year.
- Stefanie Hahmann was Paper Chair of Symposium on Solid and Physical Modeling (SPM) 2016.

8.1.2.2. Member of the Conference Program Committees

- Marie-Paule Cani served in the Papers Committees of Eurographics 2016 and Siggraph 2016.
- Frédéric Devernay served as a member of the program committee for IEEE CVPR 2016, ECCV 2016, 3DV 2016, CVMP 2016, RFIA 2016.
- Damien Rohmer was member of the International Program Committee for Symposium on Solid and Physical Modeling (SPM) and Shape Modeling International-Sculpting Event (SMI-FASE). He was also member of the jury of the best paper for AFIG-EGFR.
- Remi Ronfard was a member of the Program Committees for Motion in Games (MIG 2016), International Conference on Interactive Storytelling (ICIDS 2016) and Intelligent Narrative Technology (INT 2016).
- Stefanie Hahmann serves in the International Program Committee for Eurographics 2016 and Shape Modeling International (SMI) 2016.
- Jean-Claude Léon was member of the International Program Committee for Symposium on Solid and Physical Modeling (SPM) and Shape Modeling International-Sculpting Event (SMI-FASE)

8.1.2.3. Reviewer

- Damien Rohmer was reviewer for ACM SIGGRAPH Asia.
- Remi Ronfard was a reviewer for Computer Vision and Pattern Recognition (CVPR) and Computer Human Interface (CHI) conferences in 2016.

8.1.3. Journal

8.1.3.1. Member of the Editorial Boards

- Marie-Paule Cani is an Associate Editor of ACM Transactions on Graphics (TOG).
- Stefanie Hahmann was a guest Editor of the journal CAD Vol. 78 (Elsevier): Special Issue on Solid and Physical Modeling SPM'16, (eds.) Mario Botsch (Allemagne), Stefanie Hahmann, Scott Schaefer (USA).
- Jean-Claude Léon is an Associate Editor of CAD (Elsevier)

8.1.3.2. Reviewer - Reviewing Activities

- Remi Ronfard was a reviewer for the « Computers and Graphics » and « Graphical Models » journals in 2016.
- Stefanie Hahmann was a reviewer for the journals CAGD and CAD
- Jean-Claude Léon was a reviewer for the journal ASME JCISE

8.1.4. Invited Talks

Marie-Paule Cani gave the following invited talks

- Towards the Expressive Design of Virtual Worlds: Combining Knowledge and Control. Key-note talk, Eurographics'2016, Lisbon, Portugal, May 2016.
- Expressive 3D Modeling: User-centered models for seamless creation through gestures. Key-note talk, Graphics Interface'2016, Victoria, Canada June 2016
- Modélisation 3D expressive: du design numérique à la création de mondes virtuels animés. 3h talks for the Computer Science students of ENS Paris-Saclay (previously called ENS Cachan)
- Towards the Expressive Design of Virtual Worlds: Combining Knowledge and Control. Inria Sophia Antipolis colloquium series, September 2016.
- Modélisation 3D Expressive : du design numérique à la création de mondes virtuels animés. Invited lecture. l'Université de Corse, Corte, Octobre 2016.
- Expressive 3D modeling: from digital design to the creation of animated virtual worlds. Computer Science colloquium, University Paris VI, November 2016.

Rémi Ronfard gave the following invited talks

- Directing virtual worlds, Xerox Research Center Europe, Meylan.
- The prose storyboard language, a tool for annotating and directing movies, Research seminar on digital images, ENS Ulm, February 11, 2016.
- Directing virtual worlds, Disney Research, Zurich.
- Génération et montage de rushes cinématographiques par analyse vidéo et application aux captations de théâtre. Séminaire en humanités numériques: Valoriser la recherche en arts performatifs par le numérique, Maison des Sciences de l'Homme, Lille, April 18, 2016.
- Can computers pay attention ? Journée d'étude sur Attention humaine / Exo-attention computationnelle (Human Attention / Computational Exo-Attention) at University Grenoble Alpes, October 13, 2016.

8.1.5. Scientific Expertise

- Marie-Paule Cani
  - was a reviewer for a consolidator and a starting ERC project.
  - did some consulting for Disney Research, Zurich.
- Remi Ronfard
  - was a reviewer for the AXIOM GAMMA project at the European Commission (review meetings in March and July 2016).
  - was a member of the scientific committee at IMAGINOVE in 2016.
- Stefanie Hahmann
  - was an expert for the Netherlands Organisation for Scientific Research.
  - serves as a member of the Advisory Board (2014-2018) for the Européen Marie-Curie Training Network ARCADES.

8.1.6. Research Administration

- Marie-Paule Cani served as first Vice-Chair and chair of the Steering Committee of the Eurographics association.

- Marie-Paule Cani and Rémi Ronfard are elected members of the executive board (CA) of EG-France, the french chapter of Eurographics.

- Marie-Paule Cani became joint director of Laboratoire Jean Kuntzmann from July 2016.

- Damien Rohmer is member of the Conseil d'Administration of Association Française d'Informatique Graphique (AFIG).

- Rémi Ronfard
    – was the Head of the Image and Geometry Department at Laboratoire Jean Kuntzmann until July 2016.
    – is the co-organizer of the action « Visage, geste, action et comportement » at GDR ISIS.
    – has been the head (by interim) of the Imagine team from April 2016.

- Stefanie Hahmann
    – is an elected member of the Executive Committee of SMA (Solid Modeling Association) since 2013.
    – is the head of the French working group "GTMG" (Groupe de travail en Modélisation Géométrique) part of the CNRS GDR IM and GDR IGRV.
    – was member of the Conseil de laboratoire of the LJK lab.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Marie-Paule Cani is responsible for two courses at Ensimag/Grenoble-INP: 3D Graphics (a course that attracts about 80 master 1 students per year) and IRL (Introduction à la recherche en laboratoire), a course enabling engineering students to work on a personal project in a research lab during one semester, to get an idea of what academic research is.

- Stefanie Hahmann is co-responsible of the department MMIS (Images and Applied Maths) at Grenoble INP with 120 students. (http://ensimag.grenoble-inp.fr/cursus-ingenieur/modelisation-mathematique-images-simulation-124674.kjsp)

  Stefanie Hahmann had teaching load of 192h per year. She is responsible of 3 courses at Ensimag/Grenoble INP: Numerical Methods (240 students, 3rd year Bachelor level), Geometric Modeling (60 students, Master 1st year) and Surface Modeling (30 students, Master 2nd year).

- Olivier Palombi is responsible of the French Campus numérique of anatomy. He is responsible and national leader of the project SIDES (http://side-sante.org/). All the French medical schools (43) have planed to use the same e-learning framework (SIDES) to manage evaluations (examen) and to create a large shared database of questions.

- François Faure was responsible of the GVR-(Graphics, Vision and Robotic) program in the MOSIG Master.

- Damien Rohmer is coordinator of the Math, Signal, Image program at the engineering school CPE Lyon in supervising the scientific and technical content of the program. He is also co-responsible of the *Image, Modeling & Computing* specialization program attracting 35 students per year. He gives, and is responsible, for of one Computer Science class (130 student, 3rd year Bachelor level), an introductory Computer Graphics class (110 students, Master 1st year), and 5 specialization classes on C++ programming, OpenGL programming, 3D modeling, animation and rendering (35 students, Master 1st and 2nd year). He coordinates the association between CPE and the new computer graphics master program ID3D (Image, Développement et Technologie 3D) from University Lyon1. He also coordinates the association between CPE and the Gamagora computer game project.

- Rémi Ronfard taught courses in Computational modeling of narrative texts, movies and games, MSTII Doctoral School, University Grenoble Alpes (18 hours in March-April 2016); Game Engine Programming, M2R IMAGINA, University of Montpellier (36 hours in October-December 2016) and Advanced 3D animation, M2R MOSIG, University of Grenoble Alpes (12 hours in December 2016).
- Jean-Claude Léon is in charge of the module Mechanical Systems at Grenoble-INP ENSE3 (300 students, 64h, coordination of three courses)
- Frédéric Devernay teaches Computer Science and Algorithmics to L1 and L2 students (Cycle Préparatoire Polytechnique : CPP) at INP Grenoble (50h).

Note that MOSIG is joint master program between University Joseph Fourier (UJF) and Institut Polytechnique de Grenoble (INPG) taught in English since it hosts a number of internal students. It belongs to the doctoral school MSTII.

Most of the members of our team are Professor or Assistant Professor in University where the common teaching load is about 200h per year. Rémi Ronfard who is only researcher usually perform some teaching in vacations.

8.2.2. Supervision

- PhD: Léo Allemand-Giorgis. *Reconstruction de surfaces à partir de complexes de Morse-Smale*. Thèse MENRT. October 2012-Juin 2016. Stefanie Hahmann and GP Bonneau (Maverick team).
- PhD: Pierre-Luc Manteaux. *Simulation et contrôle de phénomènes physiques*. Grenoble University. October 2012-September 2016. Marie-Paule Cani and François Faure.
- PhD: Camille Schreck. *Interactive deformation of virtual paper*. Grenoble Université, October 2013 - October 2016. Stefanie Hahmann, Damien Rohmer.
- PhD: Ulysse Vimont. *Novel Methods for the Interactive Design of Complex Objects and Animations* October 2013 - November 2016. Marie-Paule Cani, Damien Rohmer.
- PhD in progress: Romain Brégier (Université de Grenoble Alpes), *Dévracage d'objets à l'aide de bras robotisés*, encadrée par Frédéric Devernay et dirigée par James Crowley (LIG, Grenoble), soutenance prévue en octobre 2017.
- PhD in progress: Guillaume Cordonnier. *Graphical simulation of mountains based on geology*. Grenoble university. October 2015-September 2018. Marie-Paule Cani and Eric Galin.
- PhD in progress: Pablo Coves, *From Point Cloud Data to Functional CAD Model*. Grenoble Universit. Jean-Claude Léon, Damien Rohmer, Raphaëlle Chaine (LIRIS), Julie Digne (LIRIS).
- PhD in progress: Sébastien Crozet, *Calcul de distance minimale entre solides B-Rep CAO pour des applications de simulations mécaniques temps réelles*, Janvier 2015- Décembre 2017. Frédéric Devernay.
- PhD in progress: Even Entem. *3D modelling from a sketch*. Grenoble University. November 2013-March 2017. Marie-Paule Cani and Loic Barthe (IRIT Toulouse).
- PhD in progress: Amélie Fondevilla. *Sculpting and animating developable surfaces with video embedding*, Thèse MENRT. October 2016 - September 2021. Stefanie Hahmann.
- PhD in progress: Geoffrey Guingo. *Synthesis of animated textures*. Grenoble university. October 2015-September 2018. Marie-Paule Cani, Jean-Michel Dischler and Basile Sauvage.
- PhD in progress: Sandra Nabil (Université de Grenoble Alpes), *Vidéo panoramique 360 dégrés à très haute résolution*, encadrée par Frédéric Devernay et dirigée par James Crowley (LIG, Grenoble), soutenance prévue en octobre 2018.
- PhD in progress: Grégoire Niéto (Université de Grenoble Alpes), *Dispositifs de capture de type «caméra plénoptique» pour la vision à grande distance, et algorithmes de traitement et de visualisation*, encadrée par Frédéric Devernay et dirigée par James Crowley (LIG, Grenoble), soutenance prévue en octobre 2017.

- PhD in progress: Robin Roussel. *Function-aware design for objects to be fabricated*. UCL London. Octber 2015-September 2018.Niloy Mitra, Marie-Paule Cani and Jean-Claude Léon.
- PhD in progress: Tibor Stanko. *Modélisation de surfaces lisses maillées à partir de capteurs inertiels*. Thèse CEA. October 2014- September 2017. Stefanie Hahmann and GP Bonneau.
- M2R: Thibault Blanc-Beyne, Ensimag, Géraldine Morin (ENSEEIHT), Stefanie Hahmann
- M2R: Amélie Fondevilla, Ensimag, Stefanie Hahmann, Damien Rohmer
- M2R Maxime Garcia, ENSIMAG/MOSIG, Rémi Ronfard
- M2R: Thibault Lejemble, Ensimag, Stefanie Hahmann, Damien Rohmer
- M2R: Kevin Le Run, L3, ENS Cachan, Rémi Ronfard
- M2R: Estelle Noé, ParisTech et KTH, Damien Rohmer, Stefanie Hahmann, Marie-Paule Cani
- M2R: Aymeric Séguret, M2GICAO, Jean-Claude Léon,

8.2.3. Juries

- Marie-Paule Cani was member of the PhD committees of Elisabeth Rousset (Equipe IIHM, UGA), Yoann Weber (Université de Limoges), and Hamza Chouh (CEA Saclay - Université de Lyon).
- Remi Ronfard was a reader (rapporteur) for the PhD thesis of Fabio Zund, Augmented reality storytelling, ETH Zurich, October 2016.
- Stefanie Hahmann was a reviewer (rapporteur) for the PhD thesis of Florian Canezin (Univ. Toulouse), Hoang Ha Nguyen (Université Aix-Marseille) and Ngels Cervero (UPC Universitat Politènica de Catalunya, Barcelona).
- Jean-Claude Léon was reviewer (apporteur) for the PhD thesis of Lei Zhang (Ecole Centrale Marseille)

8.3. Popularization

Marie-Paule Cani

- "Façonner l'Imaginaire…": Towards the Expressive Design of Animated Virtual Worlds "Imagination Week de l'ESSEC, Paris, Janvier 2016.
- Formes, mouvements, et mondes virtuels… Quel média pour façonner l'imaginaire ? Forum des savoirs, Rouen, 2016. Exposé également donné à l'Institut de Biologie de Paris VI, octobre 2016.
- participation to a Round Table within the conference:"Mathématiques Oxygène du Numérique", Paris, November 2016.

Damien Rohmer gave a presentation on

- Researches and applications in Computer Graphics to ENS Lyon students.
- Scientific image production to mathematiciens scientists at the MMI (Maison des Mathématiques et de l'Informatique) in Lyon.
- Garment and developable surface modeling at the R3iLab (Réseau innovation immatérielle pour l'industrie).

Rémi Ronfard

- Eye tracking and the arts. Invited talk at Experimenta, Grenoble, October 2016.
- Artificial Intelligence and the arts. Invited talk at Atelier Arts et Science, CEA/Hexagone, Grenoble, October 2016.

MAVERICK Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Selection

9.1.1.1. Member of the Conference Program Committees

- Nicolas Holzschuch was a member of the International Program Committee of the Eurographics Symposium on Rendering (EGSR) 2016, the ACM Symposium on Interactive 3D Graphics (I3D) 2016 and 2017, and SIBGRAPI 2016.
- Cyril Soler was a member of the International Program Committee of the Eurographics Symposium on Rendering (EGSR) 2016
- Joëlle Thollot was a member of the International Program Committee of Expressive'2016

9.1.1.2. Reviewer

All members of the Maverick team work as reviewers for the most prestigious conferences, including Siggrah, Eurographics, the EG symposium on rendering.

9.1.2. Journal

9.1.2.1. Reviewer - Reviewing Activities

All members of the Maverick team work as reviewers for the most prestigious journals, including ACM TOG, IEEE TVCG, etc.

9.1.3. Invited Talks

- Fabrice Neyret, Feb 2, 2016. Victoria University, New-Zeland
- Cyril Soler, Nov, 2015. University of Montreal.

9.1.4. Research Administration

Nicolas Holzschuch is an elected member of Inria Evaluation Committee (CE), an elected member of Inria Comité Technique (CTI) and a reserve member of Inria Scientific Council (CS).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Joëlle Thollot and Georges-Pierre Bonneau are both full Professor of Computer Science. Romain Vergne is an associate professor in Computer Science. They teach general computer science topics at basic and intermediate levels, and advanced courses in computer graphics and visualization at the master levels. Nicolas Holzschuch teaches advanced courses in computer graphics at the Master level. In addition, Romain Vergne teached an advanced course on "perception & graphics" at the spring school of Ôkhra (Roussillon).

- Licence: Joëlle Thollot, Automates finis, 27h, L3 cursus alternance, ENSIMAG, France
- Licence: Joëlle Thollot, Théorie des langages, 18h, L3, ENSIMAG, France
- Master: Joëlle Thollot, Responsable du cursus en alternance, 48h, L3-M1-M2, ENSIMAG, France
- Master: Joëlle Thollot, Tutorat d'apprentis, 48h, L3-M1-M2, ENSIMAG, France

9.2.2. Supervision

- PhD in progress: Guillaume Loubet, *Représentations efficaces de l'apparence sous-pixel*, Université de Grenoble, October 2010, Fabrice Neyret
- PhD defended: Léo Allemand-Giorgis, *Visualisation de champs scalaires guidée par la topologie*, October 2012, Georges-Pierre Bonneau, Stefanie Hahmann. Defense
- PhD in progress : Aarohi Johal, *Algorithmes de génération automatique d'arbres de construction à partir de modèles géométriques CAO B-Rep*, September 2013, Jean-Claude Léon, Georges-Pierre Bonneau, thèse CIFRE EdR R&D.
- PhD in progress : Benoit Arbelot, Etudes statistiques de forme, de matériaux et d'environnement pour la manipulation de l'apparence, October 2013, Joëlle Thollot, Romain Vergne.
- PhD in progress: Alexandre Bleron, Stylization of animated 3D scenes in a painterly style, October 1, 2015, Joëlle Thollot, Romain Vergne, Thomas Hurtut.

9.2.3. Juries

- Nicolas Holzschuch was in the jury for the PhD defenses of Boris Raymond (Bordeaux), Thomas Subileau (Toulouse), and the "HDR" of Lionel Simonot (Physique, Poitiers).
- Joëlle Thollot has been a member of the jury for the PhD of Pierre-Luc Manteaux (Oct 2016 - UGA), Ulysse Vimont (dec 2016 - UGA), Jordane Suarez (dec 2016 - Paris 8).

9.3. Popularization

Every year, "MobiNet" (see section 4.5) classes are conducted with high school pupils of the large Grenoble area to practice initiation and intuition on Computer Science, Maths and Physics. Depending on the year, we have 2 to 4 groups in the scope of INP-Grenoble "Enginneering weeks", and 0 to 2 groups in the scope of Math-C2+ operations.

MORPHEO Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Chair of Conference Program Committees

- Edmond Boyer was area chair for CVPR 2016 and BMVC 2016.

10.1.1.2. Member of the Conference Program Committees

- Franck Hétroy-Wheeler was part of the IPC for Eurographics 2016 (short papers).
- Stefanie Wuhrer was PC member for the Eurographics Workshop 3DOR

10.1.1.3. Reviewer

- Edmond Boyer has reviewed for: ECCV 2016, SIGGRAPH 2016, 3DV 2016, RFIA 2016, ORASIS 2015.
- Jean-Sébastien Franco has reviewed for: ECCV 2016, SIGGRAPH 2016, 3DV 2016, RFIA 2016
- Franck Hétroy-Wheeler has reviewed for: Eurographics 2016 (short papers), 3DV 2016.
- Stefanie Wuhrer has reviewed for CVPR 2016 and ECCV 2016

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

- Edmond Boyer is associate editor of IJCV.

10.1.2.2. Reviewer - Reviewing Activities

- Edmond Boyer has reviewed for: IEEE Transactions on PAMI.
- Franck Hétroy-Wheeler has reviewed for: Journal of Mathematical Imaging and Vision, The Visual Computer, Journal of Imaging.
- Julien Pansiot has reviewed for: MobiHealth 2016, J. 3D Research 2016, IOP SMS 2016, TPAMI 2016, IJCV 2016.

10.1.3. Invited Talks

- Edmond Boyer gave invited talks at: CVPR area chair meeting and ETH Zurich.

10.1.4. Scientific Expertise

- Edmond Boyer evaluated projects for: EPSRC (UK's agency for funding research) and FWF (Austrian Science Fund agency).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: Edmond Boyer, 3D Modeling, 18h, M2R GVR, Université Joseph Fourier Grenoble.

Master: Edmond Boyer, Introduction to Visual Computing, 30h, M1 MoSig, Université Joseph Fourier Grenoble.

Master: J.S. Franco, co-responsability of the Graphics, Vision, Robotics specialty of the Mosig Masters program, Second year Masters, Grenoble INP, Université Joseph Fourier.

Licence: F. Hétroy-Wheeler, Algorithmics and data structures, 59h, Ensimag 1st year, Grenoble INP.

Licence: F. Hétroy-Wheeler, Algorithmics and programming, 45h, Ensimag dual education through apprenticeship 1st year, Grenoble INP.

Master: F. Hétroy-Wheeler, Image projects, 25h, Ensimag 2nd year, Grenoble INP.

Master: F. Hétroy-Wheeler, Surface modelling, 24h, Ensimag 3rd year, Grenoble INP.

Master: F. Hétroy-Wheeler, 3D graphics, 11h, Master of Science in Informatics, Université Grenoble Alpes.

Master: F. Hétroy-Wheeler, Geometric modelling, 42h, Master of Science in Industrial and Applied Mathematics, Université Grenoble Alpes.

Master: F. Hétroy-Wheeler, co-responsability of the Mathematical Modeling, Image and Simulation (MMIS) track of Ensimag, Grenoble INP.

Master: J. Pansiot, Introduction to Computer Vision, 27h, Ensimag 3rd year, Grenoble INP.

Master: S. Wuhrer, 3D graphics, 13h, Master of Science in Informatics, Université Grenoble Alpes.

10.2.2. Supervision

PhD in progress : Benjamin Allain, Geometry and Appearance Analysis of Deformable 3D shapes, Université de Grenoble Alpes, started 01/10/2012, supervised by J.S. Franco and E. Boyer.

PhD in progress :Victoria Fernandez Abrevaya, 3D Dynamic Human Motion Representations, Université de Grenoble Alpes, started 01/10/2016, supervised by Stefanie Wuhrer and Edmond Boyer.

PhD: Timo Bolkart, Statistical analysis of 3D human faces is motion, Saarland University, started 01/01/2012, defended 14/06/2016, supervised by Stefanie Wuhrer.

PhD in progress: Adnane Boukhayma, 4D model synthesis, Universiteé de Grenoble Alpes, started 01/10/2013, supervised by Edmond Boyer.

PhD in progress : Vincent Leroy, 4D Multi-View Reconstruction from Photometric Information, Université de Grenoble, started 01/10/2015, supervised by J.S. Franco and E. Boyer.

PhD: Georges Nader, Calcul du seuil de visibilité d'une distorsion géométrique locale sur un maillage et ses applications, Université Claude Bernard - Lyon 1, defended 22/11/2016, supervised by Florent Dupont, Kai Wang and Franck Hétroy-Wheeler.

PhD in progress: Romain Rombourg, Digital tree: from the acquisition to a high-level geometric model, Université Grenoble Alpes, started 01/10/2015, supervised by Franck Hétroy-Wheeler and Eric Casella.

PhD in progress: Aurela Shehu, Geometric processing of near-isometrically deforming surfaces, Saarland University, started 01/04/2012, defended 14/06/2016, supervised by Stefanie Wuhrer.

PhD : Vagia Tsiminaki, Appearance Modelling and Time Refinement in 3D Videos, Université de Grenoble Alpes, started 01/10/2012, defended 14/12/2016, supervised by J.S. Franco and E. Boyer.

PhD in progress: Li Wang, Transport optimal pour l'analyse de formes en mouvement, Université de Grenoble Alpes, started 01/10/2013, supervised by Edmond Boyer and Franck Hétroy-Wheeler.

PhD in progress : Jinlong Yang, Learning shape spaces of dressed 3D human models in motion, Université de Grenoble Alpes, started 01/10/2015, supervised by Franck Hétroy-Wheeler and Stefanie Wuhrer.

10.2.3. Juries

- Edmond Boyer was reviewer of the PhD thesis of: Ludovic Blache (université de Reims Champagne Ardenne), Timo Bolkart (Saarland University) and Vincent Jantet (ETH Zurich).
- Franck Hétroy-Wheeler is a member of the PhD monitoring committee of Van Tho Nguyen (University of Lorraine, INRA Nancy and Office National des Forêts).

10.3. Popularization

Morpheo members have demonstrated the Kinovis platform to the general public on numerous occasions, and most notably for the "Fête de la Science".

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

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Journal

9.1.1.1. Member of the Editorial Boards

Radu Horaud is a member of the following editorial boards:

- advisory board member of the *International Journal of Robotics Research, Sage*,
- associate editor of the *International Journal of Computer Vision, Kluwer*, and
- area editor of *Computer Vision and Image Understanding, Elsevier.*

9.1.2. Invited Talks

- Xavier Alameda-Pineda gave invited talks Polytechnic University of Catalunya (May, Barcelona), Telecom ParisTech (May), Columbia University (June, New York, USA), and Carnegie Mellon University (June, Pittsburgh, USA).
- Radu Horaud gave invited talks at the Working Group on Model Based Clustering (July, Paris), at Google Research (July, Mountain View, USA), SRI International (July, Menlo Park, USA), and Amazon (July, Seattle, USA).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Tutorial: *Multimodal Human Behaviour Analysis in the Wild: Recent Advances and Open Problems* at the IEEE ICPR'16 Conference, December 2016, 4 hours. Teachers: Xavier Alameda-Pineda, Nicu Sebe and Elisa Ricci (University of Trento).

9.2.2. Supervision

PhD in progress: Israel Dejene Gebru, October 2013, Radu Horaud and Xavier Alameda-Pineda.

PhD in progress: Dionyssos Kounades-Bastian, October 2013, Radu Horaud, Laurent Girin, and Xavier Alameda-Pineda.

PhD in progress: Vincent Drouard, October 2014, Radu Horaud and Sileye Ba.

PhD in progress: Benoit Massé, October 2014, Radu Horaud and Sileye Ba.

PhD in progress: Stéphane Lathuilière, October 2014, Radu Horaud.

PhD in progress: Yutong Ban, October 2015, Radu Horaud and Laurent Girin

PERVASIVE INTERACTION Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. General Chair, Scientific Chair

- Sabine Coquillart has served as general co-chair for IEEE VR 2016, Greenville South Carolina.

9.1.2. Member of the Conference Program Committees

- Patrick Reignier served as a member program committee for the National Conference on Artificial Intelligence
- James L. Crowley served as a member program committee for Ubicomp 2016
- Dominique Vaufreydaz served on the program committee of the 11th IEEE International Workshop on Multimedia Technologies for E-Learning (MTEL2016).
- Dominique Vaufreydaz served on the program committee for the 8th international on Knowledge and Systems Engineering (KSE 2016)
- Thierry Fraichasd served as a member of the programme committee of the 1st Int. Workshop on Robot Learning and Planning (RLP) in conjunction with the "Robotics: Science and Systems" conference.

9.1.3. Reviewer for conferences

- Patrick Reignier served as a review for the International Journal of Datascience and Analytics
- James L. Crowley served as review for IEEE CVPR 2016
- James L. Crowley served as review for ICPR 2016
- James L. Crowley served as review for CNIA 2016
- James L. Crowley served as review for ECCV 2016
- James L. Crowley served as review for RFIA 2016
- Dominique Vaufreydaz served as review for Robotics and Autonomous Systems Journal
- Dominique Vaufreydaz served as review for UbiComp 2016
- Dominique Vaufreydaz served as review for ICSR 2016
- Thierry Fraichard served as a reviewer for the following conferences: RLP, IEEE Int. Conf. on Robotics and Automation (ICRA), and IEEE Int. Conf. on Advanced Intelligent Mechatronics (AIM).
- Thierry Fraichard reviewed articles for the following journals: Int. Journal of Aerospace Engineering, IEEE Trans. Intelligent Vehicles, and IEEE Trans. on Industrial Electronics.

9.1.4. Journals

- Thierry Fraichard reviewed articles for the Int. Journal of Aerospace Engineering, IEEE Trans. Intelligent Vehicles, and IEEE Trans. on Industrial Electronics.

9.1.4.1. Member of the Editorial Boards

- Sabine Coquillart is a member of the Editorial Board of the Advances in Human-Computer Interaction
- Sabine Coquillart is a member of the Scientific Committee of the Journal of Virtual Reality and Broadcasting.

- Sabine Coquillart is a member of the Advisory/Editorial Board for the International Journal of Computer Graphics SERSC.
- Sabine Coquillart is a Member of the Editorial Board of Peer Computer Science open access Journal in Computer Science.
- Sabine Coquillart is a member of the Editorial board (computer Sciences) of the Scientific World Journal.
- Sabine Coquillart is Review Editor for the Frontiers in Virtual Environments journal.
- Patrick Reignier is a member of the "comite de redaction" of the Modeling and Using Context journal (ISTE OpenScience)
- Thierry Fraichard is serving as an Associate Editor for IEEE Robotics and Automation Letters. He also served as an Associate Editor for IEEE/RSJ Int. Conf. on Robots and Systems (IROS).

9.1.5. Leadership within the scientific community

- Sabine Coquillart is elected member of the EUROGRAPHICS Executive Committee.
- Sabine Coquillart is member of the EUROGRAPHICS Working Group and Workshop board.
- Patrick Reignier is an elected member of the Association Française pour l'Intelligence Artificielle Executive Committee

9.1.6. Scientific expertise

- James L. Crowley served on the selection committee for Institut Universitaire de France (IUF)
- James L. Crowley served on the selection panel for the EC H2020 ICT Robotics program
- Dominique Vaufreydaz served as evaluator pour l'ANR
- Patrick Reignier served on the selection committee for an associate professor position at the University Grenoble Alps
- Thierry Fraichard served as an expert reviewer for the European Commission (H2020 FET and ICT calls).

9.1.7. Research administration

- James L. Crowley has been elected member of the Conseil d'Administration of the COMUE University Grenoble Alpes
- James L. Crowley has been elected member of the Conseil du Laboratoire of the Laboratoire Informatique de Grenoble.
- James L. Crowley serves on the Administrative Office (Bureau) for the Laboratoire Informatique de Grenoble.
- James L. Crowley Serves on the Commission d'Habilitation de Diriger la Recherche (HDR) for the Pole Informatics and Mathematics of the University Grenoble Alpes.
- James L. Crowley Serves on the Comittee Scientific (CoS) d'Inria Grenoble Rhone-Alpes Research Center
- James L. Crowley Serves on Steering Committee of the Inovallee TARMAC technology Incubator.
- James L. Crowley is director of the Amiqual4Home Equipment of Excellence (EquipEx).
- Patrick Reignier is head of the engineering support group of the Laboratoire d'Informatique de Grenoble
- Patrick Reignier serves on the Administrative Office (Bureau) for the Laboratoire Informatique de Grenoble.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

9.2.1.1. James Crowley

James Crowley is Director of the Master of Science in Informatics at Grenoble (MoSIG).

Master : Computer Vision, Course 27h EqTD, M2 year, Master of Science in Informatics at Grenoble

Master 1: Intelligent Systems, Cours 54h EqTD, ENSIMAG and UFRIM2AG

ENSIMAG 3 : Pattern Recognition and Machine Learning, Cours 27h EqTD, ENSIMAG

9.2.1.2. Sabine Coquillart

- Master : Sabine Coquillart Taught a course on Virtual Reality and 3D User Interfaces for the GVR Master 2R

- Master : Sabine Coquillart teaches a one day course on 3D User Interfaces and Augmented Reality for the Numerical Modeling and Virtual Reality Master 2 in Laval.

9.2.1.3. Thierry Fraichard

Master MOSIG 1st year: Introduction to Perception and Robotics, 22.5 hEqTD.

Master MOSIG 2nd year: Autonomous Robotics, 22.5 heqTD

9.2.1.4. Dominique Vaufreydaz

Co-responsibility of the Graphic, Vision and Robotics track of the MOSIG Master programme.

Licence: Competences Numerique, 80h eqTD,L1, Universite Grenoble Alpes, France.

Licence: Informatique appliquee a l'economie et a la gestion, enseignement a distance, Licence, Universite Grenoble Alpes, France.

Licence: Pratique avancee du Tableur, 72 h eqTD, L3, Universite Grenoble Alpes, France.

Licence Professionnelle: Enquêtes et traitement d'enquêtes avec le logiciel Sphinx, 12h eqTD, Licence pro Metiers de l'Emploi et de la Formation, Universite Grenoble Alpes, France.

Licence Professionnelle: Administration en environnement heterogene, 20h eqTD, Licence pro Administration et Securite des Systemes et des Reseaux, Universite Grenoble Alpes, France.

IUT annee speciale: Programmation C++, 18h eqTD, Annee Speciale IUT Informatique, Universite Grenoble Alpes, France.

Master: Pratique avancee du Tableur, 22 h eqTD, M1 economie internationale et strategies d'acteurs, Universite Grenoble Alpes, France.

Master: Mise a niveau Informatique pour l'economie, 22h eqTD, M1 Economie des Organisations, Universite Grenoble Alpes, France

Master: Traitement des donnees du Web, 15h eqTD, M2 Mathematiques et Informatique Appliquees aux Sciences Humaines et Sociales, Universite Grenoble Alpes, France

Master: Developpement Web Mobile, 15h eqTD, M2 Mathematiques et Informatique Appliquees aux Sciences Humaines et Sociales, Universite Grenoble Alpes, France

Master: co-responsable de l'option Graphic Vision Robotic (GVR) du Master 2 MOSIG.

9.2.1.5. Thierry Fraichard

- Master: Thierry Fraichard, Advanced Robotics, 54h eqTD, M2 MOSIG, Univ. of Grenoble, France.

9.2.1.6. Patrick Reignier

- Patrick Reignier has been elected member of the Conseil des Etudes et de la Vie Universitaire of Grenoble INP

- Patrick Reignier has been nominated as a member of the Conseil de la Formation Continue de Grenoble INP

- Patrick Reignier Supervises the industrial part of the "formation en apprentissage" of the ENSIMAG engineering school.

- Master: Patrick Reignier, Projet Genie Logiciel, 55h eqTD, M1, ENSIMAG/Grenoble INP, France.

- Master : Patrick Reignier, Developpement d'applications communicantes, 18h eqTD, M2, ENSIMAG/Grenoble - INP, France

- Master : Patrick Reignier, Introduction aux applications reparties, 18h eqTD, M2, ENSIMAG/Grenoble - INP, France

- Master : Patrick Reignier, Applications Web et Mobiles , 27h eqTD, M1, ENSIMAG/Grenoble - INP, France

- Master : Patrick Reignier, Projet Systeme, 12h eq TD, M1, ENSIMAG/Grenoble - INP, France

- Master : Patrick Reignier, Algorithmique, 50h eq TD, M1, ENSIMAG/Grenoble INP, France

- Licence: Patrick Reignier, Projet C, 20h eqTD, L3, ENSIMAG/Grenoble INP, France.

9.2.2. Juries

Thierry Fraichard served as a rapporteur for a doctoral jury at Universitat Politecnica de Valencia

Thierry Fraichard served as a rapporteur for a doctoral jury at INP Toulouse.

James Crowley served as a reporter for the doctoral jury of Ninghang Hu at the University of Amsterdam

<p style="text-align:center; color:red;">**THOTH Project-Team**</p>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- G. Rogez. Co-organizer of the CVPR workshop on Observing and Understanding Hands in Action (HANDS 2016).
- J. Verbeek. Organized Symposium on Computer Vision and Deep Learning on June 9th in Grenoble with around 80 attendants.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- C. Schmid: area chair for ECCV'16, ICCV'17.
- J. Mairal: area chair for CVPR 2016, ECCV 2016, ICLR 2016 and NIPS 2016.
- J. Verbeek: tutorial chair for ECCV'16.

10.1.2.2. Reviewer

The permanent members of the team reviewed numerous papers for numerous international conferences in computer vision and machine learning: CVPR, ECCV, NIPS, ICML, AISTATS.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- C. Schmid: Editor in Chief of the International Journal of Computer Vision, since 2013.
- C. Schmid: Associate editor for Foundations and Trends in Computer Graphics and Vision, since 2005.
- J. Verbeek: Associate editor for Image and Vision Computing Journal, since 2011.
- J. Verbeek: Associate editor for the International Journal on Computer Vision, since 2014.
- J. Mairal: Associate editor of the International Journal of Computer Vision (IJCV), since 2015.
- J. Mairal: Senior associate editor for IEEE Signal Processing Letters, since Feb 2015 (editor since Aug. 2014).
- J. Mairal: Associate editor of Journal of Mathematical Imaging and Vision (JMIV), since 2015.

10.1.3.2. Reviewer - Reviewing Activities

The permanent members of the team reviewed numerous papers for numerous international journals in computer vision (IJCV, PAMI,CVIU), machine learning (JMLR, Machine Learning). Some of them are also reviewing for journals in optimization (SIAM Journal on Optimization, Mathematical Programming), image processing (SIAM Imaging Science).

10.1.4. Invited Talks

- C. Schmid. Invited speaker at Large-scale Computer Vision Workshop in conjunction with NIPS'16, December 2016.
- C. Schmid. Keynote speaker at IEEE International Conference on Image Processing, Phoenix, September 2016.
- C. Schmid. Invited speaker at Robust Features Workshop in conjunction with CVPR'16, June 2016.
- C. Schmid. Invited speaker at collège de France seminar (chair of Yann LeCun), Mars 2016.
- C. Schmid. Invited speaker at the LIG (laboratoire d'informatique de Grenoble) keynote talks, February 2016.
- C. Schmid. Seminar at Google, Montain View, July 2016.
- C. Schmid. Seminar at "journées scientifiques Inria", June 2016.
- C. Schmid. Seminar at Karlsruhe Technology Institute, June 2016.
- C. Schmid. Seminar at MPI, Tübingen, April 2016.
- C. Schmid. Seminar at INSA Lyon, April 2016.
- C. Schmid. Seminar at New York University, January 2016.
- J. Verbeek. Invited speaker at NVIDIA GPU Technology Conference, Amsterdam, The Netherlands. September 2016.
- J. Verbeek. Seminar GREYC, University of Caen, France, December 2016.
- J. Verbeek. Seminar PSI team, department of Electrical Engineering (ESAT), University of Leuven, Belgium, October 2016.
- J. Mairal. Invited talk at the Dagstuhl seminar "New Directions for Learning with Kernels and Gaussian Processes", December 2016.
- J. Mairal. Invited talk at workshop Phi-Tab, Telecom ParisTech, November 2016.
- J. Mairal. Invited talk at Journées GDR-Isis, Telecom ParisTech, September 2016.
- J. Mairal. Invited talk at Journées MAS, Grenoble, France, August 2016.
- J. Mairal. Invited talk at ICCOPT, Tokyo, Japan, August 2016.
- J. Mairal. Seminar at UC Berkeley, EECS department, USA, March 2016.
- J. Mairal. Seminar at UBC Vancouver, Canada, February 2016.
- J. Mairal. Invited talk at the MIA'16 workshop, Paris, France, January 2016.
- K. Alahari. Seminar at Carnegie Mellon University, USA, July 2016.
- K. Alahari. invited talk at Mysore Park workshop on vision, language and AI, India, December 2016.
- G. Rogez. Invited talk at Journées CNRS-GDR Isis, Telecom Paris, May 2016.
- G. Rogez. Invited speaker at CVPR Tutorial on First-person Visual Sensing: Theory, Models, and Application, Las Vegas, June 2016.
- G. Rogez. Seminar at LIRMM, Université de Montpellier, December 2016.
- H. Lin. Seminar at New York University, USA, April 2016.
- H. Lin. Seminar at Princeton University, USA, April 2016.
- H. Lin. Invited talk at ICCOPT, Tokyo, Japan, August 2016.

10.1.5. Scientific Expertise

- C. Schmid is member of the PAMI-TC awards committee, and the PAMI-TC executive commitee.
- K. Alahari: reviewer for National Sciences and Engineering Research Council of Canada (NSERC), Canada, Agence Nationale de la Recherche (ANR), and Icelandic Research Fund (IRF), Iceland.

- J. Mairal: reviewer for ANR.

10.1.6. Research Administration

- C. Schmid is member of the "comité d'orientations scientifiques". Inria Grenoble, 2016.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Doctorat: C. Schmid, Tutorial on action recognition at the Winter School in Computer Vision, Jerusalem, January 2017.

Doctorat: J. Mairal, Lecturer at the summer school MAESTRA, Ohrid, Macedonia.

Master : C. Schmid, "Object recognition and computer vision", 9H eqTD, M2, ENS Cachan, France.

Master : J. Verbeek and C. Schmid. "Machine Learning & Category Representation", 27H eqTD, M2, Univ. Grenoble.

Master : J. Verbeek and J. Mairal, "Kernel Methods for Statistical Learning", 27H eqTD, M2, ENSIMAG, Grenoble.

Master: J. Mairal, "Kernel methods for statistical learning", 27H eqTD, M2, Ecole Normale Supérieure, Cachan.

Master: J. Mairal, "Introduction to sparse estimation", 6H eq-TD, M2, PSL-ITI, France.

Master: K. Alahari, "Introduction to Discrete Optimization", Ecole Centrale Paris, 27H eq-TD, M1, Paris, France.

Master: K. Alahari, "Understanding Big Visual Data", Grenoble INP, 13.5H eq-TD, M2, Grenoble, France.

Licence: P. Weinzaepfel, "Introduction à UNIX et à la programmation en langage C", 67.5H TD, L1, DLST Grenoble.

10.2.2. Supervision

PhD: P. Weinzaepfel, Motion in action : optical flow estimation and action localization in videos, supervision 50% C. Schmid and 50% Z. Harchaoui, September 2016.

PhD: Y. Hua, Towards robust visual object tracking : proposal selection and occlusion reasoning, supervision 50% C. Schmid and 50% K. Alahari, June 2016.

PhD: A. Mishra, Understanding Text in Scene Images, supervision 50% K. Alahari and 50% Prof. C. V. Jawahar, November 2016.

PhD: P. Bojanowski, Learning to annotate dynamic video scenes, supervision 20% with J. Ponce, I. Laptev and J. Sivic, June 2016.

PhD: S. Saxena, Learning representations for visual recognition, supervision 95% J. Verbeek and 5% C. Schmid, December 2016.

10.2.3. Juries

C. Schmid: Pedro Oliveira Pinheiro, January 2017, rapporteur, these, EPFL.

C. Schmid: Makarand Tapaswi, June 2016, rapporteur, these, KIT Karlsruhe.

C. Schmid: Natalia Neverova, avril 2016, president, these, INSA Lyon.

K. Alahari: Guillaume Seguin, 2016, examinateur, these, Ecole Normale Superieure, Paris, France.

G. Rogez. Marta Salas, 2016, rapporteur, these, Universidad de Zaragoza, Spain.

G. Rogez. Tu-Hoa Pham, December 2016, examinateur, these, Univ. Montpellier.

J. Verbeek. Amir Ghodrati, October 2016, rapporteur, these, Univ. Leuven.

J. Verbeek. Binod Bhattarai, December 2016, rapporteur, these, Univ. Caen.

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

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. Member of the Organizing Committees

- C. Roisin is a member of the steering committee of the ACM Symposium on Document Engineering. (until Sept. 2016)

8.1.2. Scientific Events Selection

8.1.2.1. Member of the Conference Program Committees

- P. Genevès has been external review committee member for the 21st ACM SIGPLAN International Conference on Functional Programming (ICFP'16).
- P. Genevès has been program committee member for the 16th ACM Symposium on Document Engineering (DocEng'16).
- C. Roisin has been program committee member for the 16th ACM Symposium on Document Engineering (DocEng'16).

8.1.2.2. Reviewer

- P. Genevès has been a referee for the '32ème Conférence sur la Gestion de Données - Principes, Technologies et Applications' (BDA 2016)

8.1.3. Journal

8.1.3.1. Reviewer - Reviewing Activities

- N. Gesbert has been a referee for Logical Methods in Computer Science (LMCS).
- C. Roisin has been a referee for Journal of Visual Languages & Computing, Elsevier (JVLC).

8.1.4. Leadership within the Scientific Community

- C. Roisin is member of the section 27 of the CNU (Conseil National des Universités).

8.1.5. Scientific Expertise

Oppidoc

Title: Choice of Methods and Algorithms for XQuery Static Analyses in the Oppidum Framework

Duration: November - December 2016

Coordinator: Pierre Genevès

Abstract: The Oppidoc startup develops 'Oppidum': an XQuery web application framework which simplifies the development of XML-REST-XQuery applications (XRX) with the full XML technology stack (XQuery, XSLT, native XML database). It relies on a RESTful approach and on a well defined application model using concepts (routes, conventions, pipelines) popularized in other frameworks such as Ruby On Rails, Orbeon Forms and more recently Express on nodejs. Our collaboration concerns a study about the introduction of advanced static analyses techniques in the Oppidum development process.

8.1.6. Research Administration

- P. Genevès is co-responsible of the doctoral school of Grenoble University for Computer Science (around 400 PhD students).

- P. Genevès is a permanent member of the committee in charge of hiring research engineers at Inria Grenoble - Rhône-Alpes research center.

- N. Layaïda is 'référent budget' member of the budget commission of the Inria Grenoble – Rhône-Alpes research center. The role of this commission is to allocate yearly budget ('dotation') to Inria project teams and services. On a yearly basis, we meet with team and service leaders individually, collect their financial needs and set their budget.

- N. Layaïda is member of the Scientific Board of Advanced Data-mining of the Persyval Labex.

- N. Layaïda is member of the experts pool (selection committee) of the minalogic competitive cluster.

- N. Layaïda is a permanent member of the jury in charge of evaluation harmonisation of the Master of Science in Informatics at Grenoble.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master : P. Genevès, 'Semantic web: from XML to OWL', 36 h, M2, Univ. Grenoble-Alpes

Licence : N. Gesbert, 'Logique pour l'informatique', 45 h eq TD, L3, Grenoble INP

Licence : N. Gesbert, 'Bases de la programmation impérative', 33 h eq TD, L3, Grenoble INP

Licence : N. Gesbert, academic tutorship of an apprentice, 5 h eq TD, L3, Grenoble INP

Master : N. Gesbert, 'Fondements logiques pour l'informatique', 12 h eq TD, M1, Grenoble INP

Master : N. Gesbert, 'Construction d'applications Web', 22 h 30 eq TD, M1, Grenoble INP

Master : N. Gesbert, 'Analyse, conception et validation de logiciels', 41 h 15 eq TD, M1, Grenoble INP

Licence : C. Roisin, 'Programmation C', 12h eq TD, L2, IUT2, Univ. Grenoble-Alpes

Licence : C. Roisin, 'Architecture des réseaux', 112h eq TD, L1, IUT2, Univ. Grenoble-Alpes

Licence : C. Roisin, 'Services réseaux', 22h eq TD, L2, IUT2, Univ. Grenoble-Alpes

Licence : C. Roisin, 'Introduction système Linux', 21h eq TD, L1, IUT2, Univ. Grenoble-Alpes

Licence : C. Roisin, 'Système et réseaux', 14h eq TD, L3, IUT2, Univ. Grenoble-Alpes

Licence : C. Roisin, academic tutorship of four apprentices, 20h eq TD, L3, IUT2, Univ. Grenoble-Alpes

Licence : C. Roisin, academic tutorship of 18 students, 13h eq TD, L1, IUT2, Univ. Grenoble-Alpes

N. Gesbert is responsible of the L3-level course 'logique pour l'informatique' (25 apprentices) and of the M1-level course 'construction d'applications Web' (72 students).

P. Genevès is co-responsible of the Master-level course 'Semantic Web: from XML to OWL' in the Mosig, Univ. Grenoble Alpes.

C. Roisin is responsible of the Licence Professionnelle en Alternance 'Administration et Sécurité des Systèmes et des Réseaux' , L3, IUT2, Univ. Grenoble-Alpes (15 apprentices).

C. Roisin is responsible of the L1-level course 'Architecture des réseaux' (150 students).

8.2.2. Supervision

PhD : D. Graux, On the Efficient Distributed Evaluation of SPARQL Queries, Université Grenoble-Alpes, 15 December 2016, N. Layaïda and P. Genevès

PhD in progress : A. Abbas, Web query rewriting for heterogeneous data sources, since October 2014, N. Layaïda and P. Genevès

PhD in progress : T. Michel, Mobile Augmented Reality Applications for Smart Cities, since October 2014, P. Genevès, N. Layaïda and H. Fourati

PhD in progress : L. Jachiet, Reasoning with NoSQL Data Flows in Massively Parallel Systems, since October 2014, N. Layaïda and P. Genevès

8.2.3. Juries

- C. Roisin has been referee and jury member of the Mira Sarkis PhD thesis, Telecom ParisTech (oct 2016).