Activity Report 2017

Section Dissemination

Edition: 2018-02-19
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10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of Organizing Committees

Nicolas Brisebarre was a member of the organization committee of JNCF 2017 (Journées Nationales de Calcul Formel) that took place at CIRM, in Luminy in January 2017. There were more than 70 participants.


10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

Bruno Salvy is a member of the program Committee of AofA2018 (Analysis of Algorithms) and of FP-SAC’2019 (Formal Power Series and Algebraic Combinatorics).

Benoît Libert was a program committee member for Eurocrypt 2017 and TCC (Theory of Cryptography Conference) 2017. He is in the program committees of SCN 2018 (Security and Cryptography for Networks) and ACNS 2018 (Applied Cryptography and Network Security).

Nathalie Revol was a member of the program committee for Arith 24, Correctness 2017, CRE 2017 (Computational Reproducibility at Exascale, Workshop of Supercomputing 2017).


Chitchanok Chuengsatiansup is in the program committee of CRYPTO 2018.

Jean-Michel Muller is a member of the board of the Steering Committee of the ARITH (IEEE Symposium on Computer Arithmetic) series of conferences.

Fabien Laguillaumie is a program committee member for Africacrypt 2017, ACISP 2018 and C2SI-SEA 2018.

10.1.3. Journal

10.1.3.1. Member of Editorial Boards

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).

Jean-Michel Muller is a member of the Editorial board of IEEE Transactions on Computers.

Nathalie Revol was guest editor and Jean-Michel Muller was supervising associate editor of a special issue on Computer Arithmetic of IEEE Transactions on Computers [18].

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

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

10.1.4. Invited Talks

Bruno Salvy was an invited speaker at AofA’2017 (Princeton), where he gave a talk on effective methods in the asymptotic analysis of sequences. He also gave an invited plenary talk at FoCM’2017 (Barcelona), on the use of linear differential equations as a data structure. He will be giving a tutorial at STACS’2018 on random generation of combinatorial structures.
Damien Stehlé gave an invited tutorial talk at the ISSAC 2017 conference (Kaiserslautern, Germany), on lattice reduction algorithms. He was an invited speaker at the Africacrypt 2017 conference (Dakar, Senegal), on the Learning With Errors problem and its applications in cryptography.

Jean-Michel Muller gave an invited talk at the 2017 Asilomar Conference on Signals, Systems, and Computers (Pacific Grove, CA, USA), on the analysis and design of algorithms for complex arithmetic.

10.1.5. Leadership within the Scientific Community

Paola Boito and Claude-Pierre Jeannerod were 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: a simplified version of the standard, based only on the binary64 format of IEEE-754, has been approved in December 2017 and will be published as IEEE 1788.1.

10.1.6. Scientific Expertise

Paola Boito was a member of the recruitment committees for two associate professor positions in Limoges (mathematics and computer science).

Jean-Michel Muller was a member of the recruitment committee for an associate professor position in Université Grenoble Alpes (computer science).

Jean-Michel Muller is a member of the Scientific committee of CERFACS, Toulouse. Until October 2017 he was a member of the Steering Committee of “Défi 7” (information and communication society) of the french Agence Nationale de la Recherche. He is a member of the Scientific Council of CERFACS, Toulouse. In January 2017, he chaired the Evaluation Committee of LIF Laboratory, Marseille.

Nathalie Revol was a member of the visiting committee for the Computer Science Department and the Mathematics Department of Uppsala University, Sweden.

Fabien Laguillaumie was a member of the recruitment committee for an associate professor position in the Université Claude Bernard Lyon 1.

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

10.1.7. Research Administration

Jean-Michel Muller is co-head of the GDR (Groupement de Recherches) IM of CNRS (around 1400 permanent members, www.gdr-im.fr).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching


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


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

Master: Benoît Libert, Cryptography, 12h, ENS de Lyon.

Master: Damien Stehlé, Hard lattice problems, 24h, ENS de Lyon.

Post-graduate: Damien Stehlé, Foundations of lattice-based cryptography, 10h, NTT (Japan).
Post-graduate: Damien Stehlé, Foundations of lattice-based cryptography, 3h, Seoul National University (South Korea).

Professional teaching: Nathalie Revol, *Introduction à l’arithmétique par intervalles* (3h00), École Précis (Précision, Reproductibilité en Calcul et Informatique Scientifique).
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.

10.2.2. Supervision

- PhD: Stephen Melczer, *Effective analytic combinatorics in one and several variables*, defended on June 13, 2017, co-supervised by George Labahn (U. Waterloo, Canada) and Bruno Salvy.
- PhD: Antoine Plet, *Contribution à l’analyse d’algorithmes en arithmétique virgule flottante* [3], defended on July 7, 2017, co-supervised by Nicolas Louvet and Jean-Michel Muller.
- PhD: Valentina Popescu, *Vers des bibliothèques multi-précision certifiées et performantes* [4], defended on July 6, 2017, co-supervised by Mioara Joldeş (LAAS) and Jean-Michel Muller.
- 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: Radu Titiu, *Pseudorandom functions and functional encryption from lattices and bilinear maps*, since January 2017, supervised by Benoît Libert.
- 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: Miruna Rosca, *Hardness of lattice problems over rings*, since January 2017, 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).
- PhD in progress: Ida Tucker, *Conception de systèmes cryptographiques avancés reposant sur des briques homomorphes*, since October 2017, co-supervised by Guilhem Castagnos (IMB, Bordeaux) and Fabien Laguillaumie.
- PhD in progress: Adel Hamdi, *Chiffrement fonctionnel pour le traitement de données externes en aveugle*, since December 2017, co-supervised by Sébastien Canard (Orange Labs, Caen) and Fabien Laguillaumie.

10.2.3. Juries

Bruno Salvy was a reviewer for the HdR of Thomas Cluzeau (Limoges) and for the PhD thesis of Thomas Sibut-Pinote (École polytechnique). He was also a member of the Habilitation committee of Michael Rao (ENS Lyon). He was a member of the recruitment committee for junior researchers at Inria Grenoble.
Benoît Libert was a reviewer for the PhD theses of Florian Bourse (ENS Paris) and Alonso Gonzalez (University of Chile, Santiago). He was the president of the PhD committee of Geoffroy Couteau (ENS Paris), and a member of the PhD committees of Florian Bourse (ENS Paris) and Alonso Gonzalez (University of Chile, Santiago).

Damien Stehlé was a reviewer for the PhD theses of Pierrick Méaux (ENS Paris) and Philippe Moustrou (University of Bordeaux). He was the president of the PhD committee of Thomas Camus (University of Grenoble).

Jean-Michel Muller was the president of the PhD committee of Anastasia Volkova (Pierre et Marie Curie University, Paris), and a member of the Habilitation committee of Nicolas Brisebarre (ENS Lyon).

Fabien Laguillaumie was a reviewer for the PhD thesis of Francisco Vial-Prado (Université Versailles St-Quentin-en-Yvelines) and Laurent Grémy (Université de Lorraine). He was the president of the PhD committee of Thierry Menfenza (ENS Paris and Université de Yaoundé). He was was also a member of the HDR committee of Céline Chevalier (ENS Paris).

10.3. Popularization

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 2 exhibition. She presented some magic tricks at Bibliothèque Municipale de la Part-Dieu and at MMI for 3 classes during the Science Fair. She gave talks for a large audience during "Forum Maths Vivantes" and for "La tournée de Pi" (mathematical musical, around 600 attendees) (March 2017). As an incentive for high-school pupils, and especially girls, to choose scientific careers, she gave talks at Lycée Ella Fitzgerald (Saint-Romain-en-Gal) and Mondial des Métiers (in February 2017) and during "Journée Filles et Sciences" in Musée des Confluences and "Journée Filles" by INSA Lyon (above 550 attendees in total, March 2017). She co-organized for two "Coding gouters" organized by MixTeen. She co-organized two days on "Info Sans Ordinateur" gathering researchers interested in unplugged activities. She is a member of the editorial committee of Interstices: https://interstices.info. She taught how to disseminate (computer) science for PhD students in a 20h module of Insertion Professionnelle.

Bruno Salvy will give a talk at the Collège de France in December 2017 on methods of analytic combinatorics in random generation.

Damien Stehlé hosted a visit at ENS de Lyon by the regional winners of the Alkindi competition (midde highschool and highschool).
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 of MCC (Model Checking Contest). In 2017, 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 results of MCC’2017 have been published online [45] and a journal paper is in preparation.

- 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. This repository currently contains 17 models, two of which (a Message Authenticator Algorithm and a Production Cell) were deposited in 2017 by CONVECS.

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

- G. Salaün is member of the steering committee of FOCLASA (International Workshop on Foundations of Coordination Languages and Self-Adaptive Systems) workshop series since 2011.

9.1.1.2. Scientific Events Selection

9.1.1.2.1. Chair of Conference Program Committees


- F. Lang was co-chair of the Formal Methods track of ETR’2017 (9ème Ecole d’été Temps-Réal), Paris, France, August 28 - September 1, 2017.


- G. Salaün was co-chair of FOCLASA’2017.

9.1.1.2.2. Member of the Conference Program Committees

- H. Garavel was program committee member of the 7th FMF (Forum Methodes Formelles), Toulouse-Grenoble-Saclay-Rennes, France, January 31, 2017.

- H. Garavel was program committee member of MARS’2017 (2nd Workshop on Models for Formal Analysis of Real Systems), Uppsala, Sweden, April 29, 2017.

- H. Garavel and G. Salaün were program committee members of SEFM’2017 (15th International Conference on Software Engineering and Formal Methods), Trento, Italy, September 6–10, 2017.

- H. Garavel was program committee member of the 8th FMF (Forum Methodes Formelles), Toulouse-Grenoble-Saclay-Rennes, France, October 10, 2017.

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0 http://mcc.lip6.fr/models.php
1 http://www.mars-workshop.org/
• F. Lang was program committee member of GaM’2017 (3rd Workshop on Graphs as Models), Uppsala, Sweden, April 22–23, 2017.
• G. Salaün was program committee member of PDP-4PAD’2017 (25th Euromicro International Conference on Parallel, Distributed and Network-based Processing - Formal Approaches to Parallel and Distributed Systems), St. Petersburg, Russia, March 6–8, 2017.
• G. Salaün was program committee member of SAC-SOAP’2017 (the Service-Oriented Architectures and Programming track) of SAC’2017 (32nd ACM Symposium on Applied Computing), Marrakesh, Morocco, April 3–7, 2017.
• G. Salaün was program committee member of SAC-SVT’2017 (the Software Verification and Testing track) of SAC’2017, Marrakesh, Morocco, April 3–7, 2017.
• G. Salaün and W. Serwe were program committee members of FSEN’2017 (7th IPM International Conference on Fundamentals of Software Engineering), Tehran, Iran, April 26–28, 2017.
• G. Salaün was program committee member of the poster track of ICSE’2017 (39th International Conference on Software Engineering), Buenos Aires, Argentina, May 20–28, 2017.
• G. Salaün was program committee member of COORDINATION’2017 (19th International Conference on Coordination Models and Languages), Neuchâtel, Switzerland, June 19–22, 2017.
• G. Salaün was program committee member of COMPSAC’17 (IEEE International Conference on Computers, Software, and Applications), Torino, Italy, July 4–8, 2017.
• G. Salaün was program committee member of VBSP’2017 (1st International Workshop on Verification of Business and Software Processes), Paris, France, July 5, 2017.
• G. Salaün was program committee member of FACS’2017 (14th International Conference on Formal Aspects of Component Software), Braga, Portugal, October 10–13, 2017.
• G. Salaün was program committee member of Microservices’2017, Odense, Denmark, October 25–26, 2017.

9.1.2.3. Reviewer
• F. Lang was a reviewer for SEFM’2017 and FMICS-AVoCS’2017.
• L. Marsso was a reviewer for MARS’2017, COMPSAC’2017, SEFM’2017, and FMICS-AVoCS’2017.
• U. Ozeer was a reviewer for SEFM’2017.
• G. Salaün was a reviewer for MARS’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
• F. Lang was a reviewer for STTT.
• R. Mateescu was a reviewer for STTT.
9.1.4. Software Dissemination and Internet Visibility

The CONVECS project-team distributes several software tools, among which the CADP toolbox. In 2017, the main facts are the following:

- We prepared and distributed twelve successive versions (2017-a to 2017-l) of CADP.
- We were requested to grant CADP licenses for 315 different computers in the world.

The CONVECS Web site \(^0\) was updated with scientific contents, announcements, publications, etc.

H. Garavel started a major rewrite of CorTeX, a build system and a collection of tools for documents prepared using LaTeX.

By the end of December 2017, the CADP forum \(^0\), opened in 2007 for discussions regarding the CADP toolbox, had over 414 registered users and over 1796 messages had been exchanged.

Also, for the 2017 edition of the Model Checking Contest, three families of models generated using CADP (totalling 64 Nested-Unit Petri Nets) were provided.

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:

- The COSTO tool for analyzing Kmelia components and services [48], [21]
- The VERCORS Platform for Model Checking Distributed Components [20]
- A Model-Driven and Multi-Agent Approach for Web Services Composition [19]
- Formal Analysis of Security Guidelines for Program Certification [57], [56], [58]
- A Product-Line for Families of Program Translators [22]
- The GROOVE Tool for Verification Based on Graph Rewriting [44]
- The FTRES Tool for Rare Event Simulation in Dynamic Fault Trees [52]
- The MiStRAL Tool for Middleware Reconfiguration Based on Formal Methods [51]
- The ALVIS Modelling Language for Embedded Systems [54]
- Adaptive Service Composition based on Runtime Verification of Formal Properties [23]

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

- Assisting Refinement and Formal Verification in the Design of Embedded Systems [49]
- A Formal Model for Plastic Human Computer Interfaces [25]
- Verifying Concurrent Stacks by Divergence-Sensitive Bisimulation [55]
- Compositional Model Checking of Liveness Properties [59]
- Verification of Visibility-Based Properties on Multiple Moving Robots [53]

\(^0\)http://convecs.inria.fr
\(^0\)http://cadp.inria.fr/forum.html
9.1.5. Invited Talks

- G. Barbon gave a talk entitled “Debugging of Concurrent Systems using Counterexample Analysis” on March 2nd, 2017 at the 2nd year PhD student day of the LIG.
- G. Barbon gave a talk entitled “Debugging of Concurrent Systems using Counterexample Analysis” on December 13, 2017 at the Journée scientifique du pôle MSTIC.
- H. Garavel gave a talk entitled “Nested-Units Petri Nets” during OPCT’2017 (Open Problems in Concurrency Theory), a research seminar co-sponsored by the IFIP Working Group 1.8, that took place in the Institute of Science and Technology Austria (IST Austria), Vienna, on June 26–29, 2017.
- H. Garavel gave a talk entitled “From LOTOS to LNT” during the ModelEd, TestEd, TrustEd Symposium in honour of the 60th birthday of Ed Brinksma held at the University of Twente, The Netherlands, on October 18, 2017.
- L. Marsso gave a talk entitled “Formal Methods for Testing Networks of Controllers” on May 29, 2017 at the 1st year PhD student day of the LIG.
- L. Marsso gave a talk entitled “Formal Methods for Testing Networks of Controllers” at the Scientific day of the ARC6 held at Université Grenoble Alpes, on November 23, 2017.
- L. Marsso and W. Serwe attended the 2nd RIDINGS Workshop held at Technical University Graz, Austria, on November 15, 2017. L. Marsso gave a talk entitled “Testor: A Modular Tool for On-the-Fly Conformance Test Case Generation”. W. Serwe gave a talk entitled “Using a Formal Model to Improve Verification of a Cache-Coherent System on Chip”.
- U. Ozeer gave a talk entitled “Autonomous Resilience of Applications in a Largely Distributed Cloud Environment” on May 29, 2017 at the 1st year PhD student day of the LIG.
- U. Ozeer gave a talk entitled “Autonomous Resilience of Distributed IoT Applications in a Fog Environment” at the IO Labs seminar held at Inria Paris on October 19–20, 2017.
- G. Salaün gave a talk entitled “Checking Business Process Evolution” on June 6, 2017 at the University of Málaga, Spain.

9.1.6. Research Administration

- H. Garavel was appointed to the Executive Commission in charge of International Relations at COMUE Université 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 scientific correspondent of the European and International Partnerships 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 is a member of the Scientific Committee of the PCS action of the PERSYVAL Labex.
• W. Serwe is (together with Laurent LeFèvre from the AVALON Inria project-team) correspondent in charge of the 2017 Inria activity reports at Inria Grenoble – Rhône-Alpes.
• W. Serwe is a member of the “Comité de Centre” at Inria Grenoble – Rhône-Alpes.
• W. Serwe is “chargé de mission” for the scientific axis Formal Methods, Models, and Languages of the LIG laboratory.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

CONVECS is a host team for the computer science master entitled “Mathématiques, Informatique, spécialité : Systèmes et Logiciels”, common to Grenoble INP and Université Grenoble Alpes (UGA).

In 2017, we carried out the following teaching activities:

G. Barbon gave a tutorial course on “Language Theory” (18 hours “équivalent TD” on formal languages, automata, regular expressions, and grammars) to second year students of ENSIMAG.

H. Garavel, together with Laurence Pierre (TIMA, Grenoble), created a new curriculum HECS 0 (“High-confidence Embedded and Cyberphysical Systems”) for 2nd-year MOSIG (Master of Science in Informatics at Grenoble) 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 “équivalent TD”) as part of the MOSIG/MACS-2 course (“Modeling and Analysis of Concurrent Systems”) led by G. Salaün.

G. Barbon and W. Serwe supervised each a group of six teams in the context of the “projet Génie Logiciel” (55 hours “équivalent TD”, consisting in 16 hours of lectures, plus supervision and evaluation), ENSIMAG, January 2017.

F. Lang gave a lecture on “Modélisation et Vérification des Systèmes Concurrents et Temps-Réel” (27 hours “équivalent TD”) to third year students of ENSIMAG.

F. Lang gave a course on “Formal Software Development Methods” (7.5 hours “équivalent TD”) in the framework of the “Software Engineering” lecture given to first year students of the MOSIG.

L. Marsso gave a course on “Algorithms and Web Programming” (44 hours “équivalent TD”) at the department MMI of IUT1 (UGA).

G. Salaün taught about 200 hours of classes (algorithmics, Web development, object-oriented programming, iOS programming) at the department MMI of IUT1 (UGA). He is also headmaster of the “Services Mobiles et Interface Nomade” (SMIN) professional licence (3rd year of university) at IUT1/UGA.

9.2.2. Supervision

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


9.2.3. Juries

http://hecs.imag.fr
R. Mateescu was reviewer of Alexandre Duret-Lutz’s Habilitation thesis, entitled “Contributions to LTL and Omega-Automata for Model Checking”, defended at EPITA (Paris, France) on February 10, 2017.


G. Salaün was PhD committee president of Hosein Nazarpour’s PhD thesis, entitled “Monitoring Multi-threaded and Distributed (Component-Based) Systems”, defended at Université Grenoble Alpes on June 26, 2017.

G. Salaün was PhD committee president of Jean-François Weber’s PhD thesis, entitled “Guiding and Controlling the Reconfigurations of Component-based Systems”, defended at Université de Franche-Comté (Besançon, France) on October 5, 2017.

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 competitiveness clusters Aerospace Valley and Minalogic, with the support of Inria and many other partners. The 7th FMF conference, devoted to formal methods and cybersecurity, was held on January 31, 2017. The 8th FMF conference, devoted to formal methods and autonomous vehicles, was held on October 10, 2017. Both events gathered a large audience.

L. Marsso, R. Mateescu, and Olivier Clozeau (Innovista Sensors) participated to the “Forum 5i” held on June 1st, 2017 at Grenoble (World Trade Center), where they held a stand dedicated to the results of the Bluesky project 0.

R. Mateescu gave a lecture entitled “Validation d’applications embarquées par des jumeaux numériques formels” at the Journée thématique Minalogic sur la modélisation des systèmes cyber-physiques held in Grenoble on November 16, 2017.

0 http://projects.laas.fr/IFSE/FMF
0 http://www.minalogic.com/en/project/bluesky
9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Fabrice Rastello: General Chair “Journées française de la compilation”, Lyon, June 2017

9.1.1.2. Member of the Organizing Committees

- Fabrice Rastello: Steering Committee ACM/IEEE CGO; Steering Committee “Journées française de la compilation”
- Yliès Falcone: Publicity Chair of the 24th International SPIN Symposium on Model Checking of Software

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

- Fabrice Rastello: Program Chair “Journées française de la compilation”, Lyon, June 2017
- Yliès Falcone: Track Chair on Software Verification and Testing at the 2017 ACM Symposium on Applied Computing

9.1.2.2. Member of the Conference Program Committees

- Fabrice Rastello: ACM/IEEE CGO’18
- François Broquedis: IEEE IPDPS’18
- Jean-François Méhaut: IEEE IPDPS’18
- Frédéric Desprez: ACM/SIGSIM HPC’17, ACM/SIGARCH HPDC’17, IEEE/ACM ISFEC’17, IEEE IPDS’17, IEEE ICDCS’17, IEEE ICA3PP’17, Special Track: Vision/Blue Sky Thinking, EBDMA’17, Europar’17, ICPADS’17, Closer 2017

9.1.3. Journal

9.1.3.1. Reviewer - Reviewing activities

- Frédéric Desprez: IJHPCA

9.1.4. Invited talks

- Frédéric Desprez: Entretiens Jacques Cartier, Montréal, Oct. 18 2017 “From IoT Devices to Cloud Computing Infrastructures”

9.1.5. Scientific expertise

- Frédéric Desprez: European project in the FP7 framework; Comité d’orientation stratégique de CIRRUS (COMUE Paris); Groupe Technique GENCI; GENCI, expert for grants of computing resources (CT6); COFECUB - CAPES 2018.
- Yliès Falcone: Representative of France in the COST Action ARVI
• Yliès Falcone: COST Action ARVI, co-leader of Working Group on Core Run-Time Verification
• Jean-François Méhaut: Eurolab-4-HPC, expert for cross site mobility research grants
• Jean-François Méhaut: GENCI, expert for grants of computing resources (CT6)
• Jean-François Méhaut: GENCI, reviewer for C3I (Certificat de Compétences en Calcul Intensif)

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
• Yliès Falcone: Mission Valorisation for Laboratoire d’Informatique de Grenoble

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
Master I: Jean-François Méhaut, Parallel Algorithms and Programming, 10 hours (M1 Informatique), UFR IM2AG, Université Grenoble Alpes
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, 20 hours, M1 Info & M1 MoSIG
Licence: Florent Bouchez Tichadou, C programming, 20 hours, L3, Grenoble Institute of Technology (Ensimag)
Licence: Florent Bouchez Tichadou, Introduction to Programming, 24 hours, L1 UGA
Master: Florent Bouchez Tichadou, Algorithmic Problem Solving, 41 hours, M1 MoSIG
Licence: Florent Bouchez Tichadou, Algorithms languages and programming, 111 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: Yliès Falcone Proof Techniques and Logic Reminders, MoSIG, 3 hours
Master I: Yliès Falcone Recaps on Object-Oriented Programming, MoSIG, 3 hours
Master I: Yliès Falcone Programming Language Semantics and Compiler Design, MoSIG and Master informatique, 96 hours
License: Yliès Falcone Languages and Automata, UJF, 105 hours
Master: Yliès Falcone is co-responsible of the first year of the International Master of Computer Science (Univ. Grenoble Alpes and INP ENSIMAG)
Master I: Frédéric Desprez, Parallel Algorithms and Programming, 30 hours (MOSIG and Info)
9.2.2. Supervision

PhD defended: Thomas Gonçalves, Contributions à la parallélisation de méthodes de type transport Monte-Carlo, defended on September 28 2017, advised by Marc Perache (CEA/DAM), Frédéric Desprez, and Jean-François Méhaut

PhD defended: Vanessa Vargas, Approche logicielle pour améliorer la fiabilité d’applications parallèles implémentées sur des processeurs multi-cœurs et many-cœurs, defended on April 28 2017, advised by Raoul Velazco (CNRS, TIMA), and Jean-François Méhaut


PhD defended: Matthieu Renard, Run-Time Enforcement of (Timed) Properties with Uncontrollable Events, defended on December 11, 2017, advised by Yliès Falcone, Antoine Rollet and Mohamed Mosbah (University of Bordeaux).

PhD defended: Pedro Silva, On the mapping of distributed applications on multiple clouds, defended on December 11 2017, advised by Frederic Desprez, C. Perez (INRIA, Avalon team)

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: Antoine El-Hokayem, Decentralised and Distributed Monitoring of Cyber-Physical Systems, October 2017, advised by Yliès Falcone.

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

PhD in progress: Georgios Christodoulis, Adaptation of a heterogeneous run-time system to efficiently exploit FPGA, October 2015, advised by Frederic Desprez, Olivier Muller (TIMA/SLS), and François Broquedis

PhD in progress: Luis Felipe Millani, Auto-tuning for optimizations of performance and power consumption, November 2015, advised by Lucas Schnoor (UFRGS) and Jean-François Méhaut

PhD in progress: Philippe Virooupleau, Improving the performance of task-based run-time systems on large scale NUMA machines, March 2015, advised by Thierry Gautier (INRIA/AVALON), Fabrice Rastello, and François Broquedis

PhD in progress: Raphaël Jakse, Monitoring and Debugging Component-Based Systems, October 2016, advised by Jean-François Méhaut and Yliès Falcone.

PhD in progress: Thomas Messi Nguelé, Domain Specific Languages for Social Networks Analysis on Multi-Core Architectures, October 2014, advised by Maurice Tchuenté (Yaoundé I, LIRIMA) and Jean-François Méhaut

PhD in progress: Ye Xia, Scaling and placement for autonomic management of elasticity of applications in a widely distributed cloud, November 2015, advised by Thierry Coupaye (Orange), Frédéric Desprez, and Xavier Etchevers (Orange)

PhD in progress: Pedro Henrique Penna, Towards an Operating System for Manycore Platforms, October 2017, advised by Marcio Castro (UFSC), François Broquedis, Henrique Cota de Freitas (PUC Minas) and Jean-François Méhaut

9.2.3. Juries

9.2.3.1. Frédéric Desprez

- Nelson Lossing, reviewer, *Compilation pour machines à mémoire réparties: une approche multi-passe*, PhD, Université de recherche Paris Science, April 3 2017

- Luis Pineda, reviewer, *Efficient Support for Data-Intensive Workflows on Geo-Distributed Clouds*, Université de Rennes, May 24 2017
• Adrien Lebre, member of the committee, Contributions to Large-scale Distributed Systems The infrastructure viewpoint, Nantes, September 1 2017
• Thomas Gonçalves, Advisor with Jean-François Méhaut and Marc Pérache (CEA DAM), Contributions à la parallélisation de méthodes de type transport Monte-Carlo, PhD Université de Grenoble Alpes, September 28 2017
• Pierre Ramet, reviewer, Heterogeneous architectures, Hybrid methods, Hierarchical matrices for Sparse Linear Solvers, Université de Bordeaux, November 27 2017
• Pedro Silva, advisor with Christian Perez (Avalon), On the mapping of distributed applications onto multiple Clouds, ENS Lyon, December 11 2017
• Millian Poquet, chair, Approche par la simulation pour la gestion de ressources, Université de Grenoble Alpes, December 19 2017

9.2.3.2. Jean-François Méhaut
• Soraya Zertal, Reviewer, Contributions to data storage systems: modelling, simulation and evaluation tools, HDR Université de Versailles, November 2017
• Abdou Guermouche, Reviewer, Towards Efficient Sparse Direct Solvers for Modern High-Performance Architectures, HDR Université de Bordeaux, December 2017
• Vanessa Vargas, Advisor with Raoul Velzco (TIMA), Approche logicielle pour améliorer la fiabilité d’applications parallèles implémentées sur des processeurs multi-cœurs et many-cœurs, PhD Université de Grenoble Alpes, April 2017
• Thomas Gonçalves, Advisor with Marc Pérache (CEA DAM) and Frédéric Desprez, Contributions à la parallélisation de méthodes de type transport Monte-Carlo, PhD Université de Grenoble Alpes, September 2017
• Krishna Singh, Advisor with Stéphane Redon (LJK, Nano-D), Algorithmes pour la dynamique moléculaire restreinte de manière adaptative, PhD Université de Grenoble Alpes, November 2017
DATASPHERE Team

9. Dissemination

9.1. Promoting Scientific Activities

Stéphane Grumbach has been co-director of IXXI since 2014. He is also involved in the Anthropocene Group at ENS Lyon, which promoted interdisciplinary research and teaching activities on issues related to the adaptation to the changes of the natural ecosystem. He is involved in various initiatives to promote scientific knowledge to a wider audience, as well as in cooperation with public administrations (local and national) to face the challenges of the digital revolution.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Stéphane Grumbach teaches a new Master course on the Economy of Data at SciPo Paris. He also teaches in several universities including, ENS Lyon, Insa Lyon, etc.

9.2.2. Supervision

PhD : Robert Riemann, Towards Trustworthy Online Voting: Distributed Aggregation of Confidential Data, Université de Lyon, 18 décembre 2017, directeur de thèse Stéphane Grumbach

PhD in progress : Jingxiu Su, DNS data analysis, 2016, directeur de thèse Kave Salamatian
9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

C. Castelluccia: Co-chair of the DTL Grant program (http://datatransparencylab.org/grants-program/), Co-chair of the Workshop on "Intelligence Oversight", (Nov., Montbonnot).

D. Le Metayer: APVP 2017 (Jun., Autrans), panel on "Algorithms: too intelligent to be intelligeable ?" at CPDP 2017 (Jan., Brussels).


9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

C. Castelluccia: DTL Grant program, ACM Symposium on Applied Computing (Privacy by Design in Practice track).


9.1.3. Invited Talks

D. Le Métayer on Intelligence and the scientific community, organized by the French Intelligence Academy in partnership with the Academy of Technologies, (Paris, Jun. 2017).


D. Le Métayer on The ethics of algorithms, organized by FFA (Fédération Française des Assurance), (Paris, Jul. 2017).


D. Le Métayer on Capacity: an abstract model of control over personal data invited talk at Chalmers University, (Göteborg, Nov. 2017).


9.1.4. Leadership within the Scientific Community

C. Castelluccia: member of the scientific committee of the CNIL-Inria Privacy Award, co-creator and board member of the Amnesys (Alpine Multidisciplinary NEtwork on CYber-security Studies) group (http://amnecys.inria.fr), co-leader of the WP5 of the Data Institute of UGA (https://data-institute.univ-grenoble-alpes.fr).

D. Le Métayer: member of the scientific committee of the CNIL-Inria Privacy Award, member of the editorial committee of the Transalgo Inria platform.
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: Mathieu Cunche, *Introduction to computer science*, 120h, L1, 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: Claude Castelluccia, *Privacy*, 4h, M2, College de droit University of Grenoble Alpes, France.


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

9.2.2. Supervision


PhD defended: Levent Demir, *Trusted module for data outsourcing in the Cloud*, Vincent Roca.


### 9.2.3. Juries


PhD: Jessye Dos Santos, *Sensor Networks and Privacy*, 18/10/2016, Claude Castelluccia and Cédric Lauradoux.

PhD: Levent Demir, *Trusted module for data outsourcing in the Cloud*, Université Grenoble Alpes, Grenoble, 07/12/2017, Vincent Roca.


PhD: Pierre Laperdrix, *Browser Fingerprinting: Diversity to Augment Authentication and Build Client-side Countermeasures*, Rennes University, 03/10/2017, Claude Castelluccia.


PhD: Raphaël Gellert, *Understanding the risk-based approach to data protection: An analysis of the links between law, regulation, and risk*, Vrije Universiteit Brussel (VUB), Belgium, 15/06/2017, Daniel Le Métayer.


PhD: Raul Pardo, 22 November 2017, Privacy policies for social network – A formal approach, Chalmers University, Göteborg, Sweeden, 22/11/2017, Daniel Le Métayer.

### 9.3. Popularization

#### 9.3.1. Hearings

D. Le Métayer at the French National Assembly about the implementation of the General Data Protection Regulation (Jan. 2017).

D. Le Métayer at the Conseil national du numérique (CNNum) about the regulation of algorithms (Jul. 2017).

M. Cunche at le Comité Consultatif National d’Ethique (CCNE)\(^0\) (Mar. 2017).

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\(^0\) [http://www.ccne-ethique.fr/fr](http://www.ccne-ethique.fr/fr)
9.3.2. Interviews


9.3.3. Press articles

D. Le Métayer in Slate, Designing, explaining and controlling algorithms, in Presidential election, 100 proposals from the research community (Mar. 2017).

9.3.4. Conferences

C. Lauradoux, Mathématiques et la protection de la vie privée, Olympiades académiques de Mathématiques, May 2017.
C. Lauradoux, Cryptographie visuelle, Collège/Lycée Jean Prévost, 01/06/2016.
C. Lauradoux, Cryptanalyse, stage MathC2+, 06/2017.
9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Alain Girault is member of the steering committee of the International Federated Conference on Distributed Computing Techniques (DISCOTEC) and of the ACM International Conference on Embedded Software (EMSOFT).
- Gregor Gössler is member of the steering committee of the International Workshop on Causal Reasoning for Embedded and Safety-critical Systems Technologies (CREST).

9.1.1.2. Member of the Organizing Committees

- Sophie Quinton was part of the organization committee of the 25th International Conference on Real-Time Networks and Systems (RTNS’17).
- Sophie Quinton was co-chair of the 2nd Tutorial on Tools for Real-Time Systems (TuToR’17), held as a satellite event of RTSS’17. [http://tutor2017.inria.fr/](http://tutor2017.inria.fr/)
- Sophie Quinton was the organizer of a industry panel entitled “Beyond the Deadline: New Interfaces Between Control and Scheduling for the Design and Analysis of Critical Embedded Systems” at ESWeek’17. [https://team.inria.fr/spades/beyond-the-deadline/](https://team.inria.fr/spades/beyond-the-deadline/)

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

- Alain Girault was co-chair of the track “Model-based Design and Verification for Embedded Systems” of the Design Automation and Test in Europe Conference (DATE’17, track E3).
- Sophie Quinton was co-chair of the 8th International Workshop on Analysis Tools and Methodologies for Embedded and Real-time Systems (WATERS’17), held as a satellite event of ECRTS’17. [http://waters2017.inria.fr](http://waters2017.inria.fr)

9.1.2.2. Member of the Conference Program Committees

- Alain Girault served in the program committees of the Symposium on Industrial Embedded Systems (SIES’17) and the Forum on specification and Design Languages (FDL’17).
- Sophie Quinton served in the program committees of the 29th Euromicro Conference on Real-Time Systems (ECRTS’17) and the ACM SIGBED International Conference on Embedded Software (EMSOFT’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 Journal on Embedded Systems.
9.1.3.2. **Reviewer – Reviewing Activities**
- Gregor Gössler reviewed articles for Formal Methods in System Design (FMSD) and Engineering Applications of Artificial Intelligence (EAAI).

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.

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 : Pascal Fradet, Modèles de Calcul : $\lambda$-calcul, 12 HeqTD, niveau L3, Univ. Grenoble Alpes, France
- Master : Pascal Fradet, Langages et Traducteurs, 16 HeqTD, niveau M1, Polytech Grenoble, Univ. Grenoble Alpes, France
- Licence : Gregor Gössler, Théorie des Langages 2, 36 HeqTD, niveau L3, Grenoble INP (Ensimag), France
- Master : Xavier Nicollin, Sémantique et Analyse des Programmes, 45 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, 81 HeqTD (2016-2017), niveau L3, Grenoble INP (Ensimag), France
- Licence : Sophie Quinton, Théorie des Langages 2, 18 HeqTD, niveau L3, Grenoble INP (Ensimag), France
- Master : Sophie Quinton, Performance and Quantitative Properties, 6h, MOSIG, Univ. Grenoble Alpes, France

9.2.2. **Supervision**
- 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: Arash Shafiei, “Programming IoT and software defined radio with dynamic dataflow models of computation”, Univ. Grenoble Alpes, since September 2017, co-advised by Pascal Fradet, Alain Girault, and Xavier Nicollin.


M2 MOSIG: Leila Jamshidian Sales, “Towards a Dataflow Model of Computation (MoC) for Internet of Things (IoT)”, Univ. Grenoble Alpes and Grenoble INP, September 2017, co-supervised by Pascal Fradet, Alain Girault, and Xavier Nicollin.


9.2.3. Juries

Alain Girault was examiner for the PhD jury of Maalej Maroua (ENS-Lyon) and president for the PhD jury of Aurélien Cavelan (ENS-Lyon).

Sophie Quinton was member of the PhD jury of Antoine Blin (U. Pierre et Marie Curie à Paris).
BIPOP Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Conference Program Committees

- Pierre-Brice Wieber, Associate Editor for Humanoids 2017 and ICRA 2018.
- Vincent Acary, Program Committee member for 9th European Nonlinear Dynamics Conference (ENOC 2017) in Budapest, Hungary.

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

- Bernard Brogliato is Associate Editor for ASME Journal of Nonlinear and Computational Dynamics.
- Bernard Brogliato is Associate Editor for Nonlinear Analysis: Hybrid Systems.
- Pierre-Brice Wiever is Associate Editor for IEEE Transactions on Robotics.

10.1.2.2. Reviewer - Reviewing Activities

- Arnaud Tonnelier is reviewer for Physical Review E and Journal of Computational and Nonlinear Dynamics.

10.1.3. Invited Talks

- Bernard Brogliato was invited speaker at the Sliding Mode Control summer school in Graz (September 2017).
- Florence Bertails-Descoubes was invited talk at the Institut Jean le Rond d’Alembert seminar in Paris (September 2017).

10.1.4. Research Administration

- Bernard Brogliato was member of the Commission d’Orientation Scientifique (COS) of Inria Grenoble until June 2017.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master : Florence Bertails-Descoubes, module IRL (Introduction à la Recherche), 1.5 éq TD, ENSIMAG 2A.
10.2.2. Supervision


Alexandre Vieira, Optimal Control of Linear Complementarity Systems, October 2015, B. Brogliato and C. Prieur.

Nestor Bohorquez, October 2015, P.-B. Wieber.

Nahuel Villa, October 2016, P.-B. Wieber.


10.2.3. Juries

- Bernard Brogliato was member of the HdR jury of Laurentiu Hetel (CR CNRS, LAGIS Ecole Centrale de Lille), 14 juin 2017.
- Guillaume James was a referee for the PhD thesis of Huong Le Thi, Université de Nice (16 June, 2017).
- Bernard Brogliato was member of the HdR jury of Alexandre Kruszewski (MdC Ecole Centrale de Lille), 12 décembre 2017.
- Bernard Brogliato was member of the PhD thesis jury of Maxime Feigensicht (11 décembre 2017), Inria Lille.
- Bernard Brogliato was member of the PhD thesis jury of Sébastien Crozet (08 décembre 2017), CEA LIST.
- Florence Bertails-Descoubes was member (examiner) of the PhD thesis jury of Vincent Barrielle (24 novembre 2017), CentraleSupélec, Rennes.
- Vincent Acary, member of Ph.D. Thesis committee of Clara Issanchou (25 September 2017), Université Pierre et Marie Curie.

10.3. Popularization

Alejandro Blumentals and Florence Bertails-Descoubes have participated in the new showroom “login”, by setting up a fiber demo. The demo allows a user to manipulate a real fiber by moving and twisting the ends, creating self-coiling structures called plectonema. In parallel to real manipulations, a simulation reproduces in real-time the deformations of a rod undergoing the same constraints, which reveals similar patterns compared to the real experiment. The simulation relies upon the optimal control framework set up by Alejandro Blumentals in his PhD thesis, which allows to simulate the quasistatic deformation of a thin elastic rod in the presence of self-contact.
10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- Stéphane Girard was a member of the organization committee of the international conference “Mathematical Methods in Reliability”, Grenoble, MMR2017. He also organized a session on Extremes, safety and reliability.
- Stéphane Girard and Julyan Arbel co-organized the one week 2017 school of statistics for astrophysics on Bayesian methodology, Autrans, Stat4Astro 2017.
- F. Forbes co-organized the Multiplanet 2 day workshop in November 2017 in Grenoble, on the analysis of multimodal data for planets observation and exploration.
- J.-B. Durand co-organized the CFIES conference in September 2017 in Grenoble, on teaching statistics.

10.1.2. Journal

10.1.2.1. 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 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.
- In 2017, J.-B. Durand has been a guest Associate Editor of the *PLOS Computational Biology* journal.

10.1.2.2. Reviewer - Reviewing Activities

In 2017, S. Girard has been a reviewer for *Statistics and Risk Modeling*, *Extremes* and *Electronic Journal of Statistics*.

In 2017, F. Forbes has been a reviewer for *Journal of Multivariate Analysis*, *Computational Statistics and Data Analysis*, *Journal of graphical and computational statistics*, *Statistical analysis and data mining*.


10.1.3. Invited Talks

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

- 10th International Conference of the ERCIM WG on Computing and Statistics [31], London, UK.
- 10th International Conference on Extreme Value Analysis [32], Delft, Netherlands.
- 27th Annual Conference of the International Environmetrics Society [33], Bergame, Italy.

**Florence Forbes** has been invited to give talks at:
- University of Queensland, Brisbane, Australia, April 2017 on *Student Sliced Inverse Regression*.
- University of La Trobe, Melbourne, Australia, April 2017 on *inverse regression approach to robust nonlinear high-to-low dimensional mapping*.
- The American Statistical Association Joint Statistical meeting 2017 in Baltimore, USA - for a special session entitled *"New Dimension Reduction Methods with Applications to Biomedical Studies"*, [35].

**Julyan Arbel** has been invited to give talks at the following seminars and conferences:
- Workshop ‘New challenges in statistics for social sciences’, Ca’ Foscari University of Venice, Italy, October 16-17. Invited tutorial: Bayesian nonparametric mixture models and clustering.
- Statistics Seminar, Université du Québec à Montréal, May 25. Invited talk: Bayesian nonparametric inference for discovery probabilities.
- Statistics Seminar, Université de Sherbrooke, Canada, May 23. Invited talk: Bayesian nonparametric inference for discovery probabilities.

Julyan Arbel gave also the following contributed talks:
- Bayes in Grenoble reading group, Grenoble, France, November 15. Talk: Approximate Bayesian computation.

**Jean-Baptiste Durand** has been invited to give a talk:
- at the seminar of probability and statistics at Laboratoire J. A. Dieudonné, in Nice, February 2017.

**Alexis Arnaud** gave a talk at:
Pierre-Antoine Rodesch gave a talk at:

10.1.4. Seminars organization
- MISTIS participates in the weekly statistical seminar of Grenoble. Jean-Baptiste Durand is in charge of the organization and several lecturers have been invited in this context.
- F. Forbes and J. Arbel are co-organizing a monthly reading group on Bayesian statistics.

10.1.5. Leadership within the Scientific Community
Stéphane Girard is at the head of the associated team SIMERGE (*Statistical Inference for the Management of Extreme Risks and Global Epidemiology*) created in 2015 between MISTIS 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 a member of the HCERES committee for the evaluation of the SAMM laboratory, Université Paris 1. He also was a referee for the NWO, Netherlands Organisation for Scientific Research.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching
- Master: Jean-Baptiste Durand, *Statistics and probability*, 192 ETD, M1 and M2 levels, Ensimag Grenoble INP, France. Head of the MSIAM M2 program, in charge of the statistics and data science tracks ( [64]).
- J.-B. Durand is a faculty member at Ensimag, Grenoble-INP.
- Master and PhD course: Julyan Arbel gave a course on *Bayesian nonparametric statistics*, 25 ETD, Inria Montbonnot, France.
- J.-M. Bécu, C. Albert are teaching at UGA.

10.2.2. Supervision
PhD in progress: "A new location-scale model for heavy-tailed distributions", started on September 2016, Séphane Girard and Alio Diop (Université Gaston Berger, Sénégal).

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: Alexis Arnaud “Multiparametric MRI statistical analysis for the identification and follow-up of brain tumors ”, October 2014, Florence Forbes, Benjamin Lemasson and Emmanuel Barbier (GIN).


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).

PhD in progress: Karina Ashurbekova, “Robust Graphical models”, October 2016, Florence Forbes and Sophie Achard (Gipsa-lab, Grenoble).


10.2.3. Juries

- S. Girard was a member of 3 PhD committees in 2017:

- Florence Forbes has been reviewer of 2 PhD thesis in 2017:
  - Julie Aubert, Analyse statistique de données biologiques à haut débit, AgroParisTech, January 2017.

- F. Forbes was a member of 3 PhD committees in 2017:
  - Clément Elvira, Modèles bayesiens pour l’identification de représentations antiparcimonieuses et l’analyse en composantes principales bayésienne non paramétrique, November 10, 2017, Centrale Lille
  - Melanie Bernard, Système modulaire de traitement pour la tomographie d’émission à partir de détecteurs CdZnTe, November 6, 2017, CEA-Leti, Grenoble.
  - Vincent Drouard, Localisation et suivi de visages à partir d’images et de sons, December 18, 2017, Inria Grenoble.

- Julyan Arbel acted as a reviewer for the PhD thesis of Ilaria Bianchini, Modeling and computational aspects of dependent completely random measures in Bayesian nonparametric statistics, December 2017, Politecnico di Milano, Italy.
10.2.3.1. Other committees

- 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 since 2016.
- F. Forbes is a member of the executive committee of the Idex CDP Grenoble Data institute.
- 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.
- F. Forbes is a member of the " Comité d’Organisation Stratégique" (COS) since September 2017.
- F. Forbes has been a member of 3 selection committees, 2 for Professors at Centrale Lille and at Paris-Descartes 5, and 1 for assistant professors at University of Lille.
- F. Forbes has been a member of the committee awarding Grand prix Inria de l’académie des sciences, June 2017.
- 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.
- S. Girard is a member of the "Comité des Emplois Scientifiques" at Inria Grenoble Rhône-Alpes since 2015.
7. Dissemination

7.1. Promoting Scientific Activities

7.1.1. Scientific Events Organisation

7.1.1.1. Schools

- We organized SAMSON School 2017 in Lyon, for users and developers of SAMSON.

7.1.1.2. Member of the Organizing Committees

- Stephane Redon is a member of the steering committee of the Nanosciences Foundation in Grenoble

7.1.2. Scientific Events Selection

7.1.2.1. Member of the Conference Program Committees

- Sergei Grudinin was an editorial member of the ACM–BCB’17 conference.

7.1.2.2. Reviewer

- Leonard Jaillet was a reviewer for ICRA (International Conference on Robotics and Automation), IROS (International Conference on Intelligent Robots and Systems), ISRR (International Symposium on Robotics Research) and for RA-L (Robotics and Automation Letters).

- Sergei Grudinin served as a reviewer at the ACM–BCB’17 conference.

7.1.3. Journal

7.1.3.1. Reviewer - Reviewing Activities

- Sergei Grudinin served a reviewer for the following journals, several D3R assessment submissions in Journal of Computer–Aided Molecular Design; Bioinformatics, several CASP12 assessment submissions in PROTEINS: Structure, Function, and Bioinformatics; PLOS Computational Biology; PLoS One; Spectrochimica Acta Part A; Chemical Research in Toxicology; Journal of Computational Chemistry; The Journal of Physical Chemistry; Journal of Chemical Information and Modeling.

7.1.4. Invited Talks


- Sergei Grudinin gave an invited talk entitled “Some problems in computational electron–cryo microscopy” at the DROITE workshop on tomography: mathematics and applications, on the 27 Jan, 2017 in Grenoble.


• Sergei Grudinin gave an invited talk entitled "Using Machine Learning and Integrative Approaches for Current Problems in Structural Biology" at the University Paris 6, Biologie Computationnelle et Quantitative lab on the 29th of May 2017.

• Sergei Grudinin gave an invited talk entitled "Application of machine learning to structural bioinformatics" on the 28th of February 2017 at the Thoth team of Inria Grenoble, France.

• Sergei Grudinin gave an invited talk entitled "Using Machine Learning and Integrative Approaches for Current Problems in Structural Biology" on the 14th of June 2017, at the ABS team of Inria Sophia-Antipolis, France.

• Sergei Grudinin gave an invited talk entitled "Using Machine Learning and Integrative Approaches for Current Problems in Structural Biology" at INRA Toulouse, France.

• Sergei Grudinin gave an invited talk entitled "On the Nonlinear Normal Mode Analysis and its Applications to Structural Biology" at LAAS CNRS, Toulouse, France.

• Sergei Grudinin gave an invited talk entitled "On the Nonlinear Normal Mode Analysis and its Applications to Structural Biology Including SAXS and Cryo-EM Experiments" at IBT Vilnius, Lithuania, on the 15th of September 2017.

• Sergei Grudinin gave an invited talk entitled "On some aspects of computational predictions of protein structure and organization" at the Institute of Bioorganic Chemistry NASB, Minsk, Belarus, on the 19th of September 2017.

• Sergei Grudinin gave an invited talk entitled "On some aspects of computational predictions of protein structure and organization" at the Interdisciplinary Laboratory Of Biological Systems Modelling, Warsaw, Poland, on the 9th of October 2017.

• Sergei Grudinin gave an invited talk entitled "Computational predictions of protein structure and organization" at the Laboratory For Biomolecular Modeling, EPFL, Lausanne, Switzerland, on the 24th of October 2017.

• Sergei Grudinin gave an invited talk entitled "On some methods for structural bioinformatics" at the Methodes Algorithmiques pour les Structures et Interactions des Macromolecules (GT MASIM) meeting on Nov. 16-17, Paris, France.

• Alexandre Hoffmann gave an invited talk entitled "On fast Fourier transform (FFT)-accelerated flexible exhaustive search for cryo-EM fitting" at the CryoEM Structure Challenges Workshop, Oct 6-8, Stanford, USA.

7.1.5. Other Talks, Presentations and Participations in the Scientific Events


• Guillaume Page’s, Sergei Grudinin, Alexandre Hoffmann, and Maria Kadukova presented 3 posters at the GGMM 2017 conference, May 9-11 2017, Reims, France.

• Sergei Grudinin participated in the Journees Scientifiques Inria 2017, Jun 14-16 2017, Antibes, France.


• Sergei Grudinin, Guillaume Page’s, Alexandre Hoffmann, and, Maria Kadukova presented two posters at the Mapping2017 conference, May 21-26 2017, Lyon, France.

• Sergei Grudinin and Yassine Naimi gave a talk entitled "On the Small–angle X–ray Scattering modeling in SAMSON" at the SAMSON School 2017, Lyon, France.

Sergei Grudinin gave a talk entitled "Using Machine Learning for Protein-Ligand Interactions" at the SBDD2017 conference, Sep 4-8 2017, Lausanne, Switzerland.

Sergei Grudinin presented a poster entitled "On the Normal Modes, Small-Angle Scattering and Convex Optimization for Protein Structure Prediction" at the Coarse-graining of biomolecules and beyond workshop, on the 7th of October 2017, Warsaw, Poland.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

- Stephane Redon is teaching INF572 (Introduction to C++) at Ecole polytechnique
- Stephane Redon is teaching INF473S (Computational nanoscience with SAMSON) at Ecole polytechnique

7.2.2. 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 Maria Kadukova
- Sergei Grudinin is advising the PhD of Guillaume Pages
- Stephane Redon was 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

7.2.3. Juries

- Stephane Redon was a member of the PhD committee of Laurent Denarie
- Sergei Grudinin was a member of the "Suivi individuel" PhD committee of Serge Nader

7.3. Popularization

- Sergei Grudinin co-advised the team of high-school student "Cantor se Gauss d’un Poincare’” in the team competitions "Tournoi Francais Des Jeunes Mathématiens" (TFJM).
- NANO-D was involved in several popularization activities, including a participation to Fete de la Science, and a participation to the GameLab project in Grenoble, where SAMSON modules were developed for high school students.
- Leonard Jaillet was involved in the development of a demonstration of SAMSON in the Inria showroom. Several scenarii were proposed where the user can interact with molecular systems and test different possible applications of the SAMSON software platform.
9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

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

9.1.1.2. Member of the Organizing Committees

The team organized the international ERC Scale-free Back workshop on “Modelling reduction tools for large-scale complex networks”, Grenoble, September 2017.

P. Frasca organized an open Invited session on “Dynamics and control in social networks”, IFAC World Congress, July 2017 (with G. Como).

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

Paolo Frasca has served as Associate Editor in the IEEE Robotics and Automation Society CASE Conference Editorial Board for the 13th IEEE International Conference on Automation Science and Engineering, 2017.

Federica Garin is Associate Editor in the IEEE Control System Society Conference Editorial Board (this year, she served for CDC 2017, ACC 2018), and Associate Editor in the European Control Association (EUCA) Conference Editorial Board (this year, she served for ECC 2018).

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 STA2017, 2017.

9.1.2.2. 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, IFAC World Congress, IFAC Workshop on Control for Transportartion Systems (CTS).

9.1.3. Journal

9.1.3.1. 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 AIC (since 2010).

Hassen Fourati is guest editor of the special issue titled “Multi-sensor Integrated Navigation and Location based services applications” for International Journal of Distributed Sensor Networks (IJDSN), 2017 and Associate Editor of the Asian Journal of Control AIC (since January 2016). Paolo Frasca is Subject Editor of the International Journal of Robust and Nonlinear Control (Wiley) (since February 2014), Associate Editor of IEEE Control System Letters (from February 2017) and Associate Editor of the Asian Journal of Control (Wiley) (since January 2017).
9.1.3.2. Reviewer - Reviewing Activities


9.1.4. Invited Talks


9.1.5. 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.

9.1.6. 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).
9.2. Teaching - Supervision - Juries

9.2.1. 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, 30h, L2, IUT1 (GEII), Univ. Grenoble Alpes, France.
Licence: H. Fourati, Automatique, 38h, L3, UFR physique, Univ. Grenoble Alpes, France.
Licence: H. Fourati, Automatique échantillonnée, 15h, L2, IUT 1 (GEII), Univ. Grenoble Alpes, France.
Licence: H. Fourati, Automatique complément, 12h, L2, IUT 1 (GEII), Univ. Grenoble Alpes, France.
Licence: H. Fourati, Mathématiques, 18h, L2, IUT1 (GEII1), 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.

9.2.2. Supervision

PhD: Pietro Grandinetti, Control of large-scale traffic networks, Sept. 2017, co-advised by C. Canudas de Wit and F. Garin.
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.

9.2.3. Juries

- P. Frasca was committee member of the PhD defence of Florian Dietrich. Analyse et controle de systemes de dynamiques d’opinions. CRAN, Université de Lorraine, Nancy, France. Ph.D. advisors: Marc Jungers and Samuel Martin, November 22, 2017
- H. Fourati was committee member of the PhD defense of Alexis Nez, Univ. Poitiers, July 2017
• F. Garin was member of the recruiting committee, held in March-May 2017, for two Researcher (‘CR2’) positions at Inria Grenoble-Rhône Alpes.
• F. Garin was Member of the recruiting committee, held in April-May 2017, for an Associate Professor position (‘poste de Maître de Conférences, section 61’) at Univ. Grenoble Alpes and the Automatic Control Department of GIPSA-lab.
• F. Garin was opponent for the licentiate thesis of Riccardo Lucchese, Luleå University of Technology, Luleå, Sweden, May 2017.
• P. Frasca was member of the recruiting committee, held in March-May 2017, for two Researcher (‘CR2’) positions at Inria Saclay.

9.3. Popularization

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

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

E. Blayo and M. Nodet were in the organizing committee of a one-day meeting: Teaching mathematical and numerical methods to students in geosciences (Paris, December 21, 2017).

E. Blayo, E. Cosme and A. Vidard organize a one-week school “Introduction to data assimilation” for doctoral students.

F. Lemarié was the convener of the session « Recent developments in numerical atmospheric, oceanic and sea-ice models: towards global cloud and eddy resolving simulations on exascale supercomputers » during the 2017 European Geosciences Union General Assembly in Vienna (http://meetingorganizer.copernicus.org/EGU2017/session/23945).

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

- C. Prieur is associate editor of the journal Computational and Applied Mathematics

10.1.2.2. Reviewer - Reviewing Activities

F. Lemarié: reviewer for Ocean Modeling, Geoscientific Model Development

10.1.3. Invited Talks

C. Prieur was invited to give a tutorial for the opening workshop of the SAMSI program on QMC. https://www.samsi.info/programs-and-activities/year-long-research-programms/2017-18-program-quasi-monte-carlo-high-dimensional-sampling-methods-applied-mathematics-qmc/

L. Debreu gave an invited talk in the session "Emerging methods for scalable atmosphere and ocean modelling", SCICADE 2017, University of Bath, September 2017


L. Debreu gave an invited talk at the conference "Numwave", Montpellier, December 2017.

F. Lemarié has been invited for a talk at the 3rd international workshop on « Energy transfers in Atmosphere and Ocean » in Hamburg (Germany) [17]

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/colefe.


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

L. Debreu is a member of the steering committee of the CROCO ocean model https://www.croco-ocean.org

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.
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).
E. Arnaud has been a member of the executive committee of IXXI (complex system institute) until July 2017 [http://www.ixxi.fr]
E. Arnaud is in charge of the MAD (Modèles et algorithmes déterministes) department of Laboratoire Jean Kuntzmann
L. Debreu is a member of the scientific evaluation committee of the French Research Institute for Development (IRD).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

License: E. Arnaud, Mathématiques pour l’ingénieur, 50h, L1, University Grenoble Alpes, France.
License: E. Arnaud, Algorithme, 18h, L2, University Grenoble Alpes, France.
License: V. Trappler, Méthodes statistiques pour la biologie, 18h, L2, University Grenoble Alpes, France.
Licence: E. Blayo, Analyse approfondie, 80h, L1, Univ. Grenoble Alpes.
Licence: M. Nodet, Outils mathématiques pour l’ingenieur, 80h, Univ. Grenoble Alpes
Master: E. Arnaud, Tutorat d’apprentis MIAGE, 28h, M2, University Grenoble Alpes, France.
Master: E. Arnaud, Data assimilation and inverse problem, 38h, M2, University Grenoble Alpes, France.
Master: E. Blayo, PDEs and numerical methods, 43h, M1, Univ. Grenoble Alpes and Ensimag engineer school.
Master: M. Nodet, Partial differential equations, 20h, Univ. Grenoble Alpes
Master: M. Nodet, Inverse methods, 30h, Univ. Grenoble Alpes
Doctorat: E. Blayo and A. Vidard, Introduction to data assimilation, 20h, Univ. Grenoble Alpes
Doctorat: F.-X. Le Dimet, Data Assimilation for Geophysical Fluids, 16h, Harbin Institute of Technology, Summer School in Pure and Applied Mathematics.
Doctorat: L. Debreu co-organized a one week doctoral training session on numerical modelling of atmospheric and oceanic flows (with F. Hourdin (LMD, Paris), G. Roullet (UBO, Brest) and T. Dubos (Ecole Polytechnique, Paris)).

E-learning

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

Intern: Victor Trappler, Robust Estimation of bottom friction ; Parameter control in presence of uncertainties, M2, DTU Aqua, National Institute of Aquatic Resources, Technical University of Denmark, 6 months, E. Arnaud, L. Debreu and A. Vidard.
Intern: Adrien Hirvoas, Sensitivity of a floating offshore wind turbine to uncertain parameters and identification of observable variables for data assimilation, M2, University Grenoble Alpes, IFPEN, 6 months, E. Arnaud, C. Prieur, A. Vidard, F. Caleyron.
PhD in progress: Rémi Pellerej, Étude et développement d’algorithmes d’assimilation de données variationnelle adaptés aux modèles couplés océan-atmosphère, October 2014, A. Vidard, F. Lemarié.

PhD in progress: Long Li, Assimilation d’image pour le suivi de polluants, September 2017, A. Vidard, J.-W. Ma (Harbin University, China).


PhD in progress: Sophie Thery, Numerical study of coupling algorithms and boundary layer parameterizations in climate models. October 2017, E. Blayo and F. Lemarié.

PhD in progress: Victor Trappler, Parameter control in presence of uncertainties, October 2017, E. Arnaud, L. Debreu and A. Vidard.

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, in the OQUAIDO chair program.

PhD in progress: Maria Belén Heredia, a generic Bayesian approach for the calibration of advanced snow avalanche models with application to real-time risk assessment conditional to snow conditions, October 2017, Nicolas Eckert (IRSTEA Grenoble), Clémentine Prieur, funded by the OSUG@2020 Labex.

PhD: Patricia Tencaliec, Approches stochastiques pour la gestion des risques environnementaux extrêmes, October 2013 - February 2017, Clémentine Prieur, Anne-Catherine Favre (LTHE).

PhD : Thomas Capelle, Calibration of LUTI models, UGA, April 2017, P. Sturm (EPI STEEP), A.Vidard, [36].

10.2.3. Juries

E. Blayo:

- October 13, 2017: PhD thesis of Olivier Passalacqua, Univ. Grenoble Alpes (president);
- November 9, 2017: HDR thesis of Matthieu Plu, University of Toulouse (referee);

C. Prieur:

- 18 décembre 2017: PhD thesis of Eliott Tixier, UPMC (referee);
- June 28, 2017: PhD thesis of Claire Delplancke, Univ. of Toulouse (referee);
- June 13, 2017: PhD thesis of Angie Pineda, Univ. of Caracas, Venezuela (president);
- March 1, 2017: PhD thesis of Nabil El Moçayd, Univ. of Toulouse (referee);
- February 1, 2017: PhD thesis of Patricia Tencaliec, Univ. Grenoble Alpes (directrice);

F.-X. Le Dimet: PhD thesis of Hind Oubanas, Univ. of Toulouse (referee);

E. Arnaud: juries of M2 thesis and M2 Miage apprentices.

10.3. Popularization

M. Nodet and J. Erhel won the first prize of the second Imaginary Mathematics for Planet Earth competition with their web module entitled “Simulating the melting of ice caps” [26].

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 are strongly involved in the creation of “La Grange des maths”, a science center that will be located in Varces (south of Grenoble), which will offer a huge variety of mathematical hands-on exhibits. See http://www.la-grange-des-maths.fr/.
Ch. Kazantsev leads two IREM groups. One of them works in frames of the center "La Grange des maths" and prepares "The Mathematical box", a set of 23 games and mathematical activities designed to allow children to study mathematics in an original and autonomous way. Since October, these box are available to rent by secondary schools. Another group organizes "The Sunday Math Club" that teaches mathematics in a researchers way by proposing interesting mathematical problems to children from 10 to 17 years old.

M. Nodet and E. Arnaud co-organises a year-round weekly math club in two secondary schools, part of the national network "Math en Jeans", where pupils research open mathematical problems.

M. Nodet takes part in training modelling in mathematics to secondary school maths teachers through the regional "Maison pour la Science"

M. Nodet is in charge of an IREM group about building interdisciplinary projects for secondary school classes. Part of their work has been accepted for publication in the IREM national journal [28].

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

M. Nodet co-autored, with other Univ. Grenoble Alpes teachers, a paper at the Pedagogy conference QPES [27] and offered a 3h practical work session during this conference about "Peer assessment in education".
BEAGLE Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. General Chair, Scientific Chair

Carole Knibbe and Guillaume Beslon: respectively scientific chair and local chair of the 14th European Conference on Artificial Life (ECAL), Lyon, September 2017 (https://project.inria.fr/ecal2017/).

Eric Tannier: main organizer (Organizing and Scientific chair) of the SMBE Regional meeting on interdisciplinary approaches for molecular evolution in Lyon in November 2017

8.1.1.2. Member of the Organizing Committees

Hugues Berry: Co-organizer of the workshop “Dynamiques des molecules et assemblages moleculaires”, Montpellier, France (Dec 2017).

Guillaume Beslon:
- LyonSysBio conference, Lyon, November 2017

Carole Knibbe: member of the organizing committee of the Scientific Day on "Modelling living systems" of the Faculty of Sciences and Technologies of Université Lyon 1.

8.1.2. Scientific Events Selection

8.1.2.1. Member of the Conference Program Committees

Christophe Rigotti was a member of the program committee of the 33rd ACM Symposium On Applied Computing.

Jonathan Rouzaud-Cornabas was a member of the program comittee of ECAL 2017

Eric Tannier was a member of the program committee of RECOMB-Comparative Genomics 2017 and is a member of the program committee of ISMB 2018.

8.1.3. Journal

8.1.3.1. Member of the Editorial Boards

Hugues Berry: Guest Editor for PLoS Computational Biology (2 articles edited in 2017)

Eric Tannier is an editor of "Peer Community in Evolutionary biology", a peer-reviewing system alternative to publications in journals

8.1.3.2. Reviewer - Reviewing Activities


Christophe Rigotti: IEEE Access

Jonathan Rouzaud-Cornabas: IEEE Transactions on Cloud Computing

8.1.4. Invited Talks

Hugues Berry gave invited talks at:

- EJCIM (Ecole des Jeunes Chercheurs et Chercheuses en Informatique Mathematique) 2017, Jan. 2017, Lyon
- Models of Life, College de France, Paris, Jan. 2017
- Cosyne Workshop on Astrocyte-neuron interactions, Salt Lake City, UT, USA, Feb. 2017
- Imaging the cell, Rennes, France, June 2017
- Dynamiques des molecules et assemblages moleculaires, Montpellier, France, Dec. 2017

and invited seminars at

- Institut de Mathematiques de Marseille, Jan 2017
- Institut du Fer a Moulin, Paris, March 2017

Guillaume Beslon gave invited seminars at:

- Séminaire de Modélisation du Vivant (SeMoVi), Lyon, May 2017
- Institut de Biologie Physico-Chimique (IBPC), Paris, June 2017
- Journées scientifiques Inria, Nice, June 2017

Carole Knibbe was an invited speaker at the Systems Biology Meeting of Sorbonne Université on December 1st, 2017.


8.1.5. Scientific Expertise

Hugues Berry was a reviewer for the call for proposal CARREER of the NSF, USA and for the Research Projects call of the FNRS, Belgium

Guillaume Beslon

- Member of a Comité d’Evaluation Scientifique (CES) at the ANR
- Member of the HCERES evaluation committee for the Unité Mixte Internationale UM-MISCO.

Christophe Rigotti was an expert/reviewer for the challenge "Univers" organized by Imaginove, Cluster Montagne and Indura.

Eric Tannier was an evaluator (committee bioinformatics) for the Fonds de recherche du Quebec, 2107.

8.1.6. Research Administration

Hugues Berry:

- Vice-Chair of Inria’s Evaluation committee (2016-2018)
- Vice-Chair of the Search Committee for “Inria Senior Research Scientists” (Jury d’admissibilité DR2 2017).
- Member of the “Commission des thèses” of the Doctoral School “Info-Maths” (ED 512), Lyon.
Member of the Steering Committee of GDRI MaBiO (Imagerie et Microscopie pour la BIOlogie)

Representative for Inria on the Administrative Board of the RNSC (“Réseau National des Systèmes Complexes”)

Facilitator (with R. Guillemaud, CEA/Leti) of the “Groupe de Travail CEA/Leti-Inria on Numerical Health”.

Guillaume Beslon is a member of the Commission Scientifique Sectorielle (CSS) 5 (Science des Données et des Modèles) at IRD

Carole Knibbe:

Member of the Laboratory Council, LIRIS, UMR 5205 CNRS (until August 2017)

Member of the Technological Grants Committee (CDT) of Inria Grenoble-Rhone Alpes

Member of the Doctoral Studies Committee of Inria Grenoble-Rhone Alpes.

Christophe Rigotti is an elected member of Insa Scientific board (Conseil scientifique)

Eric Tannier:

elected member of the administration council of Inria (2015-2018)

member of the scientific committee of the ethics platform of University of Lyon (2017-)

scientific referent for the conference committee of Inria (2014-)

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Four team members are faculty (Guillaume Beslon, Carole Knibbe, Christophe Rigotti and Jonathan Rouzaud-Cornabas). They teach 192h/year each in INSA-Lyon and University Claude Bernard Lyon 1 in the computer science departments and bioinformatics departments.

All our PhD students who wish it benefit from “teaching contracts”. They teach 64h/year at INSA-Lyon, mainly in the undergraduate school and in the bioinformatics department.

Eric Tannier teaches approximately 60h/year in Master programs at INSA-Lyon and University Claude Bernard Lyon 1.

Licence:

- C. Knibbe, Fundamentals of algorithmics and programming, 56 heqTD, L3, Bioinformatics and Modelling program of INSA-Lyon
- C. Knibbe, Fundamentals of databases, 27 heqTD, L3, Bioinformatics and Modelling program of INSA-Lyon
- C. Knibbe, Architecture of computer systems, 10 heqTD, L3, Bioinformatics and Modelling program of INSA-Lyon
- C. Knibbe, Software development, 24 heqTD, L3, Bioinformatics and Modelling program of INSA-Lyon

J. Rouzaud-Cornabas, Object-Oriented Programming, 57h, L3, Computer Science Dept, INSA Lyon, France

Master:

- A. Denizot, Enzymology, Cell biology, Neuroscience, 64h, M1 and M2, INSA Lyon, France
- M. Fernandez, Biostatistiques, 20h, M1, Université Jean Monnet, Saint-Etienne, France; Méthode en informatique appliqué à la biologie, 17h, M2, Université Jean Monnet, Saint-Etienne, France
C. Knibbe, Careers in bioinformatics and modelling, 35 heqTD, M1, Bioinformatics and Modelling program of INSA-Lyon
J. Rouzaud-Cornabas, Human Machine Interface, 42h, M1, Computer Science Dept, INSA Lyon, France
J. Rouzaud-Cornabas, Systems, 14h, M1, Computer Science Dept, INSA Lyon, France
J. Rouzaud-Cornabas, Parallel Computing, 93h, M2, Computer Science Dept, INSA Lyon
J. Rouzaud-Cornabas, Computational Sciences, 10h, M2, Computer Science Dept, INSA Lyon
J. Rouzaud-Cornabas, Parallel Computing, 8h, M2, BioSciences Dept, INSA Lyon
E. Tannier, Computational Biology, 24h, M1, Insa Lyon and Université de Lyon, France

Doctorat : E. Tannier, BMIC, 2h Université de Lyon, France

E-learning
Eric Tannier produced a 14mn MOOC on Ethics in science, for the Doctoral school of University of Lyon, France.

Faculty functions
Since Sept 2017, Carole Knibbe is the Head of the Bioinformatics and Modeling master program of INSA-Lyon

8.2.2. Supervision

PhD :
Yoann Anselmetti, co-supervised by E. Tannier, Univ Montpellier, defense November 29, 2017
Wandrille Duchemin, co-supervised by E. Tannier, Univ Lyon 1, defense December 4, 2017
Damic Hasic, co-supervised by E. Tannier, Univ Sarajevo, defense July 13, 2017
Alvaro Mateos Gonzalez, Asymptotic analysis of partial differential equations arising in biological processes of anomalous diffusion, co-supervised by H. Berry, T. Lepoutre (Inria Dracula) and V. Calvez (Inria Numed), defense 22 September 2017
Charles Rocabert, Étude de l’évolution des micro-organismes bactériens par des approches de modélisation et de simulation informatique, co-supervised by G. Beslon and C. Knibbe, defense 17 November 2017
Sergio Peignier, Subspace Clustering on Static Datasets and Dynamic Data Streams Using Bio-Inspired Algorithms, co-supervised by C. Rigotti and G. Beslon, defense 27 July 2017

PhD in progress :
Audrey Denizot, Simulation of calcium signaling in fine astrocytic processes, started Sept 2016, supervised by H. Berry
Marie Fernandez, Extraction and analysis of the acoustic network of social birds: tools for population tracking, started Sept 2016, co-supervised by H. Berry, H. Soula (UPMC, Paris) and C. Vignal (UPMC, Paris)
Alexandre Foncelle, Modeling the signaling pathway implicated in STDP: the role of endocannabinoid and dopamine signaling, started Sept 2014, supervised by H. Berry
Vincent Liard, Towards a quantitative digital genetics platform, INSA-Lyon, started Oct 2016, co-supervision: G Beslon, J Rouzaud-Cornabas, C Ofria (Michigan State University, BEACON Center)

8.2.3. Juries

8.2.3.1. HDR juries
H. Berry: Dominique Martinez, Univ. de Lorraine, Nancy, March 2017 (reviewer)

8.2.3.2. PhD juries

H. Berry:
Alexandre Mendes, Univ. P & M Curie, Paris, Sep 2017 (examiner)
Ilyas Djafer-Cherif, Univ. Paris-Saclay, Paris, July 2017 (reviewer)
Martin Potier, Univ. Paris-Est, Creteil, July 2017 (examiner)

G. Beslon:
Roman Goulard, Univ. Aix-Marseille, Marseille, November 2017 (reviewer)
Andrei Kucharavy, Univ. P & M Curie, Paris, December 2017 (examiner)

8.2.3.3. Search committees

H. Berry served in the following search pannels: assistant professor (INSA Lyon, France), full professor (UPMC, Paris, France), junior researcher (CR2 Inria, Rennes), senior researcher (DR2 Inria, Paris).

8.3. Popularization

The subspace clustering algorithms developed by the team in the context of the EvoEvo project have been included in a software package (EvoMove) enabling real-time monitoring and clustering of a dancer movements. In interaction with the “Desoblige” dance company (Lyon, France), we used this system to interact with the dancers by triggering sounds following the moves of he dancers. This system has been used in the context of the dance performance “Meute” in which three dancers were equipped with inertial measurement units connected to EvoMove (see 2). Meute has been played in public 8 times in the Auvergne-Rhône-Alpes region between January and July 2017.

Figure 2. The EvoMove system has been used in the public performance “Meute” (here in “La Rotonde”, INSA Lyon in February 2017). Dancers: Claire Lurin, Jean Boulvert, Maxence D’Hauthuille. Sound: Jonas Abernot. Lights: Laurent Turpin. The EvoMove inertial measurement units are tied to the wrists of the dancers.

G. Beslon, together with Dominique Schneider (UGA, France) published an article entitled “Darwin, bit à bit . . . ” in the blog “Binaire” on le-monde.fr (http://binaire.blog.lemonde.fr/2017/11/24/darwin-bit-a-bit/). This article describes the interdisciplinary view of evolution that the two authors are developing.

A. Denizot is member of association Demesures (demesures.jimdo.com). She organized and participated to scientific events: Geek Touch 2017, Pop Sciences 2017, Fete de la Science 2017 and interviewed researchers (https://www.youtube.com/watch?v=qoKAwRYI48Q).

E. Tannier gave a series of lectures (8h) on genetically modified organisms for Universite Populaire de Lyon, for a large audience and gave a talk for the “Tour de science” 2017, in Lyon, a popularization event, for a public of interdisciplinary students.
8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. Member of the Organizing Committees


8.1.2. Journal

8.1.2.1. Member of the Editorial Boards

- Olivier Gandrillon: BMC research Notes.
- Laurent Pujo-Menjouet: Journal of Theoretical Biology; Mathematical Modeling of Natural Phenomena.

8.1.2.2. Reviewer - Reviewing Activities

- Thomas Lepoutre: Nonlinear Analysis; Computational and Applied Mathematics; M2AN; Journal of Biological Dynamics.
- Samuel Bernard: Journal of Theoretical Biology.
- Olivier Gandrillon: Plos Computational Biology; Progress in Biophysics and Molecular Biology; Journal of the Royal Society Interface; Journal of theoretical biology; Genes and npj Systems Biology and Applications.

8.1.3. Invited Talks

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- **Licence:**
  - Thomas Lepoutre, Groupe de lecture, L3, ENS, Lyon.
  - Samuel Bernard, Linear and matrix algebra, 30h ETD, INSA, Lyon.
  - Samuel Bernard, ODEs for neuroscience, 10h ETD, INSA Lyon.
  - Laurent Pujo-Menjouet, Fondamentaux des mathématiques, 138h ETD, L1, UCBL, Lyon.
  - Laurent Pujo-Menjouet, Bio-mathématiques et modélisation, 10.5h ETD, L3, UCBL, Lyon.
  - Léon Tine, Fondamentaux des mathématiques, 80h ETD, L1, UCBL, Lyon.
  - Léon Tine, Techniques mathématiques de base, 70h ETD, L1, UCBL, Lyon.
  - Léon Tine, Maths pour enseignement, 10h ETD, 10h ETD, L3, UCBL, Lyon.

- **Master:**
  - Thomas Lepoutre, Agrégation, 30h ETD, M2, UCBL, Lyon.
  - Samuel Bernard, Cell population dynamics, 15h ETD, UCBL, Lyon.
  - Fabien Crauste, Population Dynamics, 9h ETD, M2, UCBL, Lyon.
  - Laurent Pujo-Menjouet, Systèmes Dynamiques, 72h ETD, M1, UCBL, Lyon.
  - Laurent Pujo-Menjouet, Network Algorithms for Molecular Biology, 7.5h ETD, Master 2 IXXI, ENS, Lyon.
  - Léon Tine, Épidémiologie, 30h ETD, M2, UCBL, Lyon.

8.2.2. Supervision

- PhD in progress: Simon Girel, “Multiscale modeling of the immune response”, Université Lyon, since September 2015, supervisor: 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, supervisors: Larry Bodgi, Nicolas Foray and Laurent Pujo-Menjouet.
- PhD in progress: Lois Boullu, “Modélisation de la mégacaryopoïèse et applications aux maladies liées à la production des plaquettes”, Université Lyon 1, October 2014, supervisors: Laurent Pujo-Menjouet and Jacques Bélair (co-tutelle avec l’Université de Montréal).
- PhD: Loïc Barbaroux, “Contributions to the multiscale modeling of the CD8 immune response : design, analysis, simulation and calibration of mathematical models”, Université de Lyon 1, July 2017, supervisors: Mostafa Adimy and Phillipe Michel.
• **PhD:** Apollos Besse, "Mathematical Modeling of Chronic Myelogenous Leukemia", Université de Lyon, July 2017, supervisors: Samuel Bernard and Thomas Lepoutre.

• **PhD in progress:** Ulysse Herbach, “Modèles graphiques probabilistes pour l’inference de réseaux de gènes”, Université Lyon 1, since October 2015, supervisors: Olivier Gandrillon, Thibault Espinasse (ICJ) and Anne-Laure Fougères (ICJ).

• **PhD in progress:** Arnaud Bonnafoux, “Vers une inference automatique de réseaux de gènes dynamiques à partir de “mégadonnées” temporelles discrètes acquises sur cellules uniques”, Université Lyon 1, since November 2015, supervisors: Olivier Gandrillon (CIFRE with the COSMO company).

• **PhD in progress:** Ronan Duchesne, “Vers un modèle multi-échelle de la différenciation cellulaire : Application à la différenciation érythrocytaire”, École normale supérieure de Lyon and Université Lyon 1, since September 2016, supervisors: Olivier Gandrillon and Fabien Crauste.

• **PhD:** Anass Bouchnita, “Mathematical modeling of blood coagulation and thrombus formation under flow in normal and pathological conditions”, Université Claude Bernard Lyon, École Mohammedi d’Ingénieurs and Université Mohammed V de Rabat (Maroc), December 2017, supervisor: Vitaly Volpert.

• **PhD:** Tatiana Galochkina, “Mathematical modeling of blood inflammation processes and the problem of blood purification”, Université Claude Bernard Lyon and Moscow State University, November 2017, supervisor: Vitaly Volpert.

• **HDR:** Samuel Bernard, “Structured differential equations and multiscale approaches for human cell population dynamics”, Université Claude Bernard Lyon, June 2017.

• **HDR:** Thomas Leoutre, “Contributions en dynamique de populations”, Université Claude Bernard Lyon, April 2017.

### 8.2.3. Juries

• Thomas Lepoutre was reviewer and member of the PhD of Athmane Bakhta (Université Paris Est), “Modèles mathématiques et simulation numérique de dispositifs photovoltaïques”.

• Samuel Bernard was member of Charles Rocabert PhD defense committee (INSA Lyon), “Etude de l’évolution des micro-organismes bactériens par des approches de modélisation et de simulation numériques”.

• Samuel Bernard was member of Apollos Besse PhD defense committee (INSA Lyon), “Modélisation Mathématique de la Leucémie Myéloïde Chronique”.

• Olivier Gandrillon was president of the jury for the PhD of Alice Moussy (École Pratique des Hautes Études, Paris), “Caractérisation des premières étapes de différenciation des cellules hématopoïétiques à l’échelle de la cellule unique” and for the PhD of Coraline Petit (ENS Lyon), “Évolution et Développement d’un organe sscal : la molaire. Transcriptomique comparée des bourgeons de molaires chez les rongeurs”.

• Laurent Pujo-Menjouet was a jury member of the Habilitation thesis of Samuel Bernard (Université Claude Bernard Lyon 1), “Structured differential equations and multiscale approaches for human cell population dynamics”. He was also a jury member of the PhD of Tatiana Galochkina (université de Lyon et Université d’état de Moscou), “Structure spatiale des lipopolysaccharides et son rôle dans la coagulation sanguine”.

• Mostafa Adimy was member of Loïc Barbarroux PhD defense committee (École Centrale de Lyon), “Contributions to the multiscale modeling of the CD8 immune response : design, analysis, simulation and calibration of mathematical models” and Walid Djema PhD defense committee (Université Paris–Sud), “Understanding Cell Dynamics in Cancer from Control and Mathematical Biology Standpoints Particular Insights into the Modeling and Analysis Aspects in Hematopoietic Systems and Leukemia”.

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8.3. Popularization

- Thomas Lepoutre is coorganizer of the scientific exhibition Mathalyon.
- Olivier Gandrillon participated in the Declics 2017 activities (Lycée Jean Perrin and Lycée Juliette Récamier).
9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. General chair, scientific chair

- Giuseppe Italiano is member of the Steering Committee Member of the Workshop on Algorithm Engineering and Experimentation (ALENEX), the International Conference on Algorithms and Complexity (CIAC), and the Workshop/Symposium on Experimental Algorithms (SEA).
- Alberto Marchetti-Spaccamela is a member of the Steering committee of Workshop on Graph Theoretic Concepts in Computer Science (WG), and of Workshop on Algorithmic Approaches for Transportation Modeling, Optimization, and Systems (ATMOS).
- Marie-France Sagot is member of the Steering Committee of European Conference on Computational Biology (ECCB) and International Symposium on Bioinformatics Research and Applications (ISBRA).

9.1.1.2. Member of the Organising Committees

- Alexander Schönhuth was main organiser of “Data Structures in Bioinformatics”, Amsterdam, 21-22/02/2017, and publicity chair of RECOMB 2017.
- Fabrice Vavre was member of the Organisation Committee of the Colloquium Immuninv (“Immunité des invertébrés”) in 2017.
- Cristina Vieira co-organised the Symposium “Evolutionary implications of transposable elements, epigenetics, and non-genetic inheritance” at the biennial ESEB (European Society for Evolutionary Biology) congress in 2017.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

- Leen Stougie was Chair of the Program Committee of MAPSP in 2017.

9.1.2.2. Member of the Conference Program Committees

- Pierluigi Crescenzi was a member of the Program Committee of ICTCS in 2017.
- Roberto Grossi was a member of the Program Committee of ICALP in 2017.
- Vincent Lacroix was a member of the Program Committee of JOBIM in 2017.
- Giuseppe Italiano was a member of the Program Committee of SPIRE, FAW, and STACS in 2017.
- Nadia Pisanti was a member of the program committee of WALCOM, BIOINFORMATICS, CPM, ISBRA, CIBB, Hi BI BI, emphWABI, and ICCABS in 2017.
- Marie-France Sagot was a member of the Program Committee of ISMB/ECCB, PSC, RECOMB-CG, and WABI in 2017.
- Alexander Schönhuth was a member of the Program Committee of RECOMB, ISMB, ACM-BCB, GCB (German bioinformatics conference), and BioSB (Dutch bioinformatics conference) in 2017.
- Leen Stougie was member of the Program Committee of RECOMB in 2017.

9.1.2.3. Reviewer

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

9.1.3.1. Member of the Editorial Boards

- 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 *pf RAIRO – Theoretical Informatics and Applications*.
- Giuseppe Italiano is member of Editorial Board of *Algorithmica* and *Theoretical Computer Science*.
- Alberto Marchetti-Spaccamela is member of the Editorial Board of *Theoretical Computer Science*.
- Arnaud Mary is Editor-in-Chief of a special issue of *Discrete Applied Mathematics* dedicated to WEPA 2016.
- Nadia Pisanti is since 2012 member of Editorial Board of *International Journal of Computer Science and Application (IJCSA)* and since 2017 of *Network Modeling Analysis in Health Informatics and Bioinformatics*.
- Cristina Vieira is Executive Editor of *Gene*, and since 2014 member of the Editorial Board of *Mobile DNA*.

9.1.3.2. Reviewer - Reviewing Activities

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, Nature Communications*.

9.1.4. Invited Talks


Leen Stougie gave a talk at the Workshop on Stochastic Programming Honoring Maarten van der Vlerk, Groningen, The Netherlands, 10-11 August 2017, on “Stochastic and Robust Scheduling”.

9.1.5. Leadership within the Scientific Community

Giuseppe Italiano is Member of the Council of EATCS, the European Association for Theoretical Computer Science.
Leen Stougie is Member of the general board of the Dutch Network on the Mathematics of Operations Research (Landelijk Netwerk Mathematische Besliskunde (LNMB)). He is also Chairman Program Committee Econometrics and OR, VU Amsterdam and Member of the Board of the research school ABRI-VU, Amsterdam.

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

9.1.6. 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.

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

9.1.7. Research Administration

Hubert Charles is director of the Biosciences Department of the Insa-Lyon and co-director of studies of the “Bioinformatique et Modélisation (BIM)” track.

Giuseppe Italiano is member of the Advisory Board of MADALGO - Center for MAssive Data ALGOrithmics, Aarhus, Denmark.

Alberto Marchetti-Spaccamela is Director of the Department of Computer Engineering and Management Antonio Ruberti at Sapienza University since 2013.

Nadia Pisanti was since 2013 and until October 31st 2017 member of the Board of the Regional PhD School of Computer Science at the University of Pisa, Italy. Since November 1st 2017, she is member of the Board of the PhD School in Data Science (University of Pisa jointly with Scuola Normale Superiore Pisa, Scuola S. Anna Pisa, IMT Lucca).

Alexander Schönuth is member of the Scientific Board of BioSB (the Dutch organisation for bioinformatics) since May 2017.

Leen Stougie is since April 2017 Leader of the Life Science Group at CWI.

Alain Viari is since 2012 Deputy Scientific Director at Inria responsible for the ICST for Life and Environmental Sciences. He thus represents Inria at several national instances related to Life Sciences and Health (Allenvi, Aviesan, Ibisa, etc.). He is member of a number of scientific advisory boards (IRT (Institut de Recherche Technologique) BioAster; Centre Léon Bérard). He also coordinates together with J.-F. Deleuze (CNRGH-Evry) the Research & Development part (CRefIX) of the “Plan France Médecine Génomique 2025”.

Cristina Vieira is member of the “Conseil National des Universités” (CNU) 67 (“Biologie des Populations et Écologie”), and since 2017 member of the “Conseil de la Faculté des Sciences et Technologies (FST)” of the University Lyon 1.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

9.2.1.1. France

The members of ERABLE teach both at the Department of Biology of the University of Lyon (in particular within the BISM (BioInformatics, Statistics and Modelling) specialty, and at the department of Bioinformatics of the Insa (National Institute of Applied Sciences). Cristina Vieira is responsible for the Master Biodiversity, Ecology and Evolution (https://www.bee-lyon-univ.fr/). She teaches genetics 192 hours per year at the University and at the ENS-Lyon. Hubert Charles is responsible for the Master of Modelling and Bioinformatics (BIM) at the Insa of Lyon (http://biosciences.insa-lyon.fr/). He teaches 192 hours per year in statistics and biology. Vincent Lacroix is responsible for several courses of the newly created Master in Bioinformatics (https://www.bioinfo-lyon.fr/) (L3: Advanced Bioinformatics, M1: Methods for Data Analysis in Genomics,
M1: Methods for Data Analysis in Transcriptomics, M1: Bioinformatics Project, M2: Ethics). He teaches 192 hours per year in bioinformatics. Arnaud Mary is responsible for two courses of the Bioinformatics Curriculum at the University (L2: Introduction to Bioinformatics and Biostatistics, M1: Object Oriented Programming) and one at Insa (Discrete Mathematics). He has been teaching 150 hours per year for his three first years as Assistant and then as Associated Professor, and will now, as of September 2017, teach 192 hours per year. Blerina Sinaimeri taught 30 hours per year in graph algorithms for the M1 students of the Master in Bioinformatics, and approximately 12h per year (Discrete Mathematics) at Insa. In 2017, she also taught 24h per year at the Master in Computer Science of the ENS-Lyon.

The ERABLE team regularly welcomes M1 and M2 interns from the bioinformatics Master.

Vincent Lacroix was an instructor in NGS data analysis training for the CNRS Formation in the last 3 years since 2015, a course coordinated by Eric Rivals from the LIRMM, Montpellier.

Alain Viari was a lecturer at the 3rd International School on Breast Cancer organised at the Curie Institute in June 2017. Together with Vincent Lacroix, he participated to a transdisciplinary module for PhDs on Ethics organised by the University of Lyon.

All French members of the ERABLE team are affiliated to the doctoral school E2M2 (Ecology-Evolution-Microbiology-Modelling, http://e2m2.universite-lyon.fr/).

9.2.1.2. Italy & The Netherlands

Italian researchers teach between 90 and 140 hours per year, at both the undergraduate and at the Master levels. The teaching involves pure computer science courses (such as Programming foundations, Programming in C or in Java, Computing Models, Distributed Algorithms) and computational biology (such as Algorithms for Bioinformatics).

Dutch researchers teach between 40 and 270 hours per year, again at the undergraduate and Master levels, in pure computer science (e.g. Algorithm Engineering, Randomised Algorithms), applied mathematics (e.g. Operational Research, Advanced Linear Programming) and computational biology (e.g. Biological Network Analysis).

9.2.2. Supervision

The following PhDs were defended in ERABLE in 2017:

- Hélène Lopez-Maestre, University of Lyon 1, Feb 2017, supervisors: V. Lacroix, C. Vieira.
- Laura Urbini, University of Lyon 1, October 2017, supervisors: C. Matias, M.-F. Sagot, B. Sinaimeri.
- Martin van Ee, December 2017, supervisor: L. Stougie.

The following are the PhDs in progress:

- Audric Cologne, University of Lyon 1 (funded by Inserm and Inria, co-supervisors: Patrick Edery – Federation of Health Research of Lyon-Est, Vincent Lacroix)
- Mattia Gastaldello, Sapienza University of Rome and University of Lyon 1 (funded by “Vinci Program-Université Franco-Italienne”, co-supervisors: Tiziana Calamoneri, Sapienza University of Rome; Marie-France Sagot)
- Leandro Ishi Soares de Lima, University of Lyon 1 (funded by the Brazilian “Science without Borders” program, co-supervisors: Giuseppe Italiano, Vincent Lacroix, Marie-France Sagot)
- Carol Moraga Quinteros, University of Lyon 1 (funded by Conicyt Chile, co-supervisors: Rodrigo Gutierrez – Catholic University of Chile, Marie-France Sagot)
- Henri Taneli Pusa, University of Lyon 1 (funded by H2020-MSCA-ETN-2014 project MicroWine, co-supervisors: Alberto Marchetti-Spaccamela, Arnaud Mary, Marie-France Sagot)
- Camille Sessegolo, University of Lyon 1 (funded by ANR Aster; co-supervisors: Vincent Lacroix, Arnaud Mary)
- Irene Ziska, University Lyon 1 (funded by Inria Cordi-S, co-supervisors: Susana Vinga – Instituto Superior Técnico at Lisbon; Marie-France Sagot)
Besides the PhD students indicated above, who are physically located within one of the premises of ERABLE, the project-team has PhD students in co-supervision who spend the majority or the whole of their time in the premises of other teams. These include: Scheila G. Mucha (funded by Brazil, co-supervisors: Arnaldo Zaha – Federal University of Rio Grande do Sul in Brazil, Marie-France Sagot), Rita Ramos (funded by Portuguese FCT, co-supervisors: Claudia Nunes dos Santos – ITQB Lisbon, Marie-France Sagot), André Veríssimo (funded by Portuguese FCT, co-supervisors: Susana Vinga – Instituto Superior Técnico in Lisbon, Marie-France Sagot). Furthermore, ERABLE had for 18 months a “sandwich” (meaning part-time) PhD student in the team, Alex di Genova, whose supervisor is Gonzalo Ruz from the University Adolfo Ibañez in Santiago, Chile (A. di Genova defended his PhD on November 14 2017 and has since joined ERABLE as a postdoc).

9.2.3. Juries

The following are the PhD or HDR juries to which members of ERABLE participated in 2017.

- Giuseppe Italiano: External Examiner of the PhD of Mathias baek Knudsen, DIKU, Copenhagen University, August 4, 2017.
- Nadia Pisanti: External Reviewer of the PhD of Mika Amit, University of Haifa, Israel, July 3rd 2017.

9.3. Popularisation

- Ricardo Andrade participated to the “Fête de la Science” at Inria.
- Vincent Lacroix co-organised with Nicolas Lechopier a conference on synthetic biology followed by a live radio session involving the speaker Catherine Bourgain, and the students from the Master in Bioinformatics http://sciencespourtous.univ-lyon1.fr/sciences-lemission-science-democratie-parole-aux-etrudants/.
- Blerina Sinaimeri participated to the Conference “Filles et mathématiques : Une équation lumineuse !” (see https://filles-et-math.sciencesconf.org/program) and to the “Fête de la Science” at Inria.
- Alain Viari as Deputy Scientific Director for Life Sciences at Inria regularly gives talks to external partners and general audiences to present the Life Sciences topics at Inria.
### 9. Dissemination

#### 9.1. Research

##### 9.1.1. Scientific events: organizing committees

**9.1.1.1. Member of organizing committees**

<table>
<thead>
<tr>
<th>IBIS members</th>
<th>Conference, workshop, school</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hidde de Jong</td>
<td>Workshop on microbial growth control and biotechnological applications, La Grande Motte</td>
<td>Oct 2017</td>
</tr>
<tr>
<td>Hidde de Jong</td>
<td>CompSysBio: Advanced Lecture Course on Computational Systems Biology, Aussois</td>
<td>Mar 2017</td>
</tr>
<tr>
<td>Delphine Ropers</td>
<td>Séminaire de Modélisation du Vivant (SeMoVi), Lyon and Grenoble</td>
<td>2016</td>
</tr>
</tbody>
</table>

##### 9.1.2. Scientific events: selection committees

**9.1.2.1. Chair of conference program committees**

<table>
<thead>
<tr>
<th>IBIS member</th>
<th>Conference, workshop, school</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eugenio Cinquemani</td>
<td>European Control Conference (ECC 2017)</td>
<td>Associate editor</td>
</tr>
</tbody>
</table>

**9.1.2.2. Member of conference program committees**

<table>
<thead>
<tr>
<th>IBIS member</th>
<th>Conference, workshop, program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eugenio Cinquemani</td>
<td>ECC 2017</td>
</tr>
<tr>
<td>Hidde de Jong</td>
<td>ISMB/ECCB 2017, CMSB 2018, WML 2018</td>
</tr>
<tr>
<td>Delphine Ropers</td>
<td>JOBIM 2017</td>
</tr>
</tbody>
</table>

#### 9.1.3. Journals

**9.1.3.1. Member of editorial boards**

<table>
<thead>
<tr>
<th>IBIS member</th>
<th>Journal</th>
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</thead>
<tbody>
<tr>
<td>Johannes Geiselmann</td>
<td>Frontiers in Microbiology (review editor)</td>
</tr>
<tr>
<td>Hidde de Jong</td>
<td>Journal of Mathematical Biology</td>
</tr>
<tr>
<td>Hidde de Jong</td>
<td>Biosystems</td>
</tr>
<tr>
<td>Hidde de Jong</td>
<td>ACM/IEEE Transactions on Computational Biology and Bioinformatics</td>
</tr>
</tbody>
</table>

#### 9.1.4. Scientific evaluation and expertise
9.1.5. Recruitment committees

<table>
<thead>
<tr>
<th>IBIS member</th>
<th>Organism</th>
<th>Recruitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johannes Geiselmann</td>
<td>INRA</td>
<td>Chargés de recherche</td>
</tr>
<tr>
<td>Johannes Geiselmann</td>
<td>UMR5240 CNRS-UCBL-INSA-BayerCropScience</td>
<td>Full professor</td>
</tr>
<tr>
<td>Johannes Geiselmann</td>
<td>ARC1, Rhône-Alpes region</td>
<td>Chargés de recherche CR1 (jury d’admissibilité)</td>
</tr>
<tr>
<td>Hidde de Jong</td>
<td>Microbiology and Food Chain Department, Inra</td>
<td>Chargés de recherche (jury d’admissibilité)</td>
</tr>
<tr>
<td></td>
<td>HCERES</td>
<td>Assistant professor</td>
</tr>
<tr>
<td>Delphine Ropers</td>
<td>Inria</td>
<td></td>
</tr>
<tr>
<td>Delphine Ropers</td>
<td>Inria Sophia-Antipolis</td>
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</tr>
<tr>
<td>Delphine Ropers</td>
<td>INSA de Lyon</td>
<td></td>
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</tbody>
</table>

9.1.6. Invited talks

Eugenio Cinquemani

<table>
<thead>
<tr>
<th>Title</th>
<th>Event and location</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reconstruction of promoter activity statistics from reporter protein population snapshot data</td>
<td>Workshop on &quot;Modélisation stochastique et analyse statistique de l’expression génétique&quot;, Laboratoire de Mathématiques et Applications (LMA) de l’Université de Poitiers</td>
<td>Jan 2017</td>
</tr>
<tr>
<td>Modeling of stochastic gene expression</td>
<td>Tutorial at CompSysBio: Advanced Lecture Course on Computational Systems Biology, Aussois</td>
<td>Mar 2017</td>
</tr>
<tr>
<td>Toward automatic control of synthetic microbial communities</td>
<td>Journées Scientifiques Inria 2017, Sophia Antipolis – Méditerranée</td>
<td>Jun 2017</td>
</tr>
</tbody>
</table>

Hidde de Jong
<table>
<thead>
<tr>
<th>Title</th>
<th>Event and location</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis and control of bacterial regulatory networks</td>
<td>Seminar Systems Biology Institute, ETH Zürich, Switzerland</td>
<td>Feb 2017</td>
</tr>
<tr>
<td>Qualitative modeling and simulation of bacterial regulatory networks</td>
<td>Course at Instituto de Tecnologia Química e Biológica, Oeiras, Portugal</td>
<td>Feb 2017</td>
</tr>
<tr>
<td>Natural and synthetic control of resource allocation in bacteria</td>
<td>Seminar at Instituto de Tecnologia Química e Biológica, Oeiras, Portugal</td>
<td>Feb 2017</td>
</tr>
<tr>
<td>Integrated models of the cell: metabolism, gene expression, signalling</td>
<td>Lecture Course on Computational Systems Biology, Aussois</td>
<td>Mar 2017</td>
</tr>
<tr>
<td>Presentation IBIS and IPL COSY</td>
<td>Réunion de suivi du Programme Transversal Microbiote, Inserm, Paris</td>
<td>Jun 2017</td>
</tr>
<tr>
<td>Natural and synthetic control of resource allocation in bacteria</td>
<td>Keynote talk at 3rd BeNeLuxFra Student Symposium, Lille</td>
<td>Jul 2017</td>
</tr>
<tr>
<td>Natural and synthetic control of resource allocation in bacteria</td>
<td>International Workshop on Control Engineering and Synthetic Biology, London</td>
<td>Jul 2017</td>
</tr>
<tr>
<td>Resource allocation in microorganisms: Some control-theoretical problems A dynamic analysis of carbon catabolite repression and diauxic growth in bacteria</td>
<td>Journée McTAO, Institut mathématique de Bourgogne, Dijon 6th network retreat of BEEsy, Saint Hugues de Biviers</td>
<td>Dec 2017</td>
</tr>
</tbody>
</table>

**Johannes Geiselmann**

<table>
<thead>
<tr>
<th>Title</th>
<th>Event and location</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth rate control in Escherichia coli</td>
<td>Seminars in Molecular Biology, University of British Columbia, Vancouver, Canada</td>
<td>Jun 2017</td>
</tr>
<tr>
<td>Changing resource allocation and growth rate by a genetic control of transcription and DNA replication Engineering resource allocation and growth rate in Escherichia coli</td>
<td>Workshop growth rate control in bacteria, BioSynSys conference, Montpellier, France</td>
<td>Oct 2017</td>
</tr>
<tr>
<td></td>
<td>International symposium on Systems, Synthetic and Chemical Biology, Kolkata, India</td>
<td>Dec 2017</td>
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</table>

**Stephan Lacour**

<table>
<thead>
<tr>
<th>Title</th>
<th>Event and location</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGS sequencing techniques in biology</td>
<td>Seminar Mechanobiology, UGA Phitem, Grenoble</td>
<td>Jan 2017</td>
</tr>
<tr>
<td>Direct versus indirect gene regulation by the stress response SigmaS factor Modulation of curli production in Escherichia coli by non-coding RNA</td>
<td>Seminar Institut de Biologie Structurale, Grenoble Réseau National Biofilm (RNB), Clermont-Ferrand</td>
<td>Feb 2017</td>
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<td></td>
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<td>Dec 2017</td>
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</table>

**Delphine Ropers**

<table>
<thead>
<tr>
<th>Title</th>
<th>Event and location</th>
<th>Date</th>
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<tbody>
<tr>
<td>9.1.7. Research administration</td>
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<td></td>
</tr>
</tbody>
</table>
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, also in charge of 24 h of practicals)

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)

**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 (9 h)

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

PhD defended: **Stefano Casagranda**, Analysis and control of models of gene regulatory networks. Supervisors: Jean-Luc Gouzé (BIOCORE) and Delphine Ropers

PhD defended: **Nils Giordano**, Microbial growth control in shifting environments: Theoretical and experimental study of resource allocation in *Escherichia coli*. Supervisors: Hidde de Jong and Johannes Geiselmann

PhD defended: **Bernard Chelli Ponce de Leon**, Quantitative study of the effects of low DnaA concentrations in *Escherichia coli*, using the uhp pathway as an inducible expression system. 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 Cocaïgn-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

<table>
<thead>
<tr>
<th>IBIS member</th>
<th>Role</th>
<th>PhD student</th>
<th>University</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eugenio Cinquemani</td>
<td>Invité</td>
<td>Stefano Casagranda</td>
<td>Université Nice Sophia Antipolis</td>
<td>Jun 2017</td>
</tr>
<tr>
<td>Hidde de Jong</td>
<td>Président</td>
<td>Bernard Chelli Ponce de Leon</td>
<td>Université de Grenoble</td>
<td>Mar 2017</td>
</tr>
<tr>
<td>Hidde de Jong</td>
<td>Directeur de thèse</td>
<td>Nils Giordano</td>
<td>Université de Grenoble</td>
<td>Mar 2017</td>
</tr>
<tr>
<td>Hidde de Jong</td>
<td>Rapporteur</td>
<td>Mathias Weyder</td>
<td>Université de Toulouse</td>
<td>Mar 2017</td>
</tr>
<tr>
<td>Johannes Geiselmann</td>
<td>Rapporteur</td>
<td>Stanislas Thiriet-Rupert</td>
<td>Université du Mans</td>
<td>Jan 2017</td>
</tr>
<tr>
<td>Johannes Geiselmann</td>
<td>Président</td>
<td>Defne Dalkara</td>
<td>Université de Grenoble</td>
<td>Jan 2017</td>
</tr>
<tr>
<td>Johannes Geiselmann</td>
<td>Directeur de thèse</td>
<td>Nils Giordano</td>
<td>Université de Grenoble</td>
<td>Mar 2017</td>
</tr>
<tr>
<td>Johannes Geiselmann</td>
<td>Directeur de thèse</td>
<td>Bernard Chelli Ponce de Leon</td>
<td>Université de Grenoble</td>
<td>Mar 2017</td>
</tr>
<tr>
<td>Johannes Geiselmann</td>
<td>Rapporteur</td>
<td>Lionel Uhl</td>
<td>Université de Marseille</td>
<td>Apr 2017</td>
</tr>
<tr>
<td>Johannes Geiselmann</td>
<td>Rapporteur</td>
<td>Zoran Marinkovic</td>
<td>Université Paris Diderot</td>
<td>Nov 2017</td>
</tr>
<tr>
<td>Stephan Lacour</td>
<td>Examineur</td>
<td>Benjamin Diel</td>
<td>Université de Lyon</td>
<td>Sep 2017</td>
</tr>
<tr>
<td>Stephan Lacour</td>
<td>Examineur</td>
<td>Sophie Bouillet</td>
<td>Université Aix-Marseille</td>
<td>Dec 2017</td>
</tr>
<tr>
<td>Delphine Ropers</td>
<td>Directrice de thèse</td>
<td>Stefano Casagranda</td>
<td>Université Nice Sophia Antipolis</td>
<td>Jun 2017</td>
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<tr>
<td>Delphine Ropers</td>
<td>Examineur</td>
<td>Guillaume Madelaine</td>
<td>Université de Lille</td>
<td>Mar 2017</td>
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</tbody>
</table>

### Habilitation (HDR) committees

<table>
<thead>
<tr>
<th>IBIS member</th>
<th>Role</th>
<th>PhD student</th>
<th>University</th>
<th>Date</th>
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<tbody>
<tr>
<td>Hidde de Jong</td>
<td>Rapporteur</td>
<td>Elisabeth Rémy</td>
<td>Université Aix-Marseille</td>
<td>Avr 2017</td>
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</table>
**PhD advisory committees**

<table>
<thead>
<tr>
<th>IBIS member</th>
<th>PhD student</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eugenio Cinquemani</td>
<td>Luis Pereira</td>
<td>Université Nice Sophia Antipolis</td>
</tr>
<tr>
<td>Stephan Lacour</td>
<td>Alice Berry</td>
<td>Université de Grenoble</td>
</tr>
<tr>
<td>Stephan Lacour</td>
<td>Simon Léonard</td>
<td>Université Claude Bernard de Lyon</td>
</tr>
</tbody>
</table>

**9.2.4. Teaching administration**

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.
NUMED Project-Team (section vide)
9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Denis Dupré, Pierre-Yves Longaretti and Emmanuel Prados are the Scientific Chair of the series of conferences entitled “Understanding and Acting”; see section 9.3.1.

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

- P. Sturm was member of the program committee of the 2017 Inria Science Days

9.1.3. Journal

9.1.3.1. Reviewer - Reviewing Activities

- P. Sturm: Journal of Sensors

9.1.4. Scientific Expertise

- P. Sturm: Expert for the European Eureka/Eurostars program and for the regional ARC6 program.
- Since 2015 Emmanuel Prados is member of the GICN (“Groupe Interdisciplinaire sur les Contributions Nationales”), the group of scientific experts mandated by French ministry of Sustainable Development to prepare the climate change conference COP21 in December. This group is still active and always advises French political actors in climate negotiations.

9.1.5. Research Administration

- P. Sturm is, since 2015, Deputy Scientific Director of Inria, in charge of the domain Perception–Cognition–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 2017, they organized three workshops in the framework of the project “Transition2” [http://www.transitions2.net/].
- E. Prados was in charge of the working group “Digital tools for the progress of society” for the Strategic Plan of Inria, 2017. His work resulted in the writing of the Scientific Challenges entitled “Digital world, society, and complexity”.
- Denis Dupré, Pierre-Yves Longaretti and Emmanuel Prados are the coordinator of the working group “Democracy and digital technology”. Created in 2017, this working group is a permanent one that gathers various researchers and actors located at the Grenoble pole. This group leads a global reflection on the digital world and the democratic issues. It aims to bring out lines of action of research in the medium term. https://project.inria.fr/democratietnumerique/

9.2. Teaching - Supervision - Juries

9.2.1. Supervision
PhD : Thomas Capelle, Development of optimization methods for land-use and transportation models, University Grenoble Alpes, February 15th, 2017, Peter Sturm (supervisor) and Athur Vidard (co-supervisor).

PhD in progress : Michela Bevione, Socio-ecological transition, wealth creation and territorial metabolism: the case of Maurienne Valley, October 2016, Pierre-Yves Longaretti (co-supervisor) and Nicolas Buclet (supervisor). Phd thesis in collaboration with the PACTE Laboratory. This interdisciplinary research on territorial ecology aims at bridging the gap between quantitative modeling and socio-economic and qualitative approaches to better understand the interactions between human society and the environment.

PhD in progress : Luciano Gervasoni, Modeling the dynamics of urban sprawl, October 2015, Peter Sturm (supervisor) and Serge Fenet (co-supervisor).

9.2.2. Juries

- P. Sturm was member of the PhD committees of René Emmanuel Datondji (Université Rouen, president), Andrey V. Kudryavtsev (Université Franche-Comté reviewer), Abdelkader Bellarbi (Université d’Evry Val d’Essonne, reviewer), and Yohan Salaün (Université de Paris-Est, reviewer).
- E. Prados was member of the PhD thesis jury (as examiner) of Rémy Lasseur ; University of Grenoble Alpes - UGA (July 10th, 2017). Title : “Multi-scale mapping of ecosystem services: characterizing spatial associations and insights from remote sensing”

9.3. Popularization

9.3.1. Conferences “Understanding and Acting” :

Saving Civilization is not a spectator sport
Lester Brown

Following a dynamics of exponential growth in a finite world, humanity today faces a number of unprecedented and tightly interlinked challenges. With a growing number of environmental limits being largely and irreversibly exceeded (GHG concentrations in the atmosphere, biodiversity loss, soil erosion, freshwater shortages...), social, economic, geopolitical, humanitarian (etc.) consequences are becoming more urgent than ever to address, while the threat of an uncontrolled global collapse is now more than a prospect. It is urgent to initiate deep, structural, socioeconomic changes on virtually all aspects of our increasingly global societies (economics, industrial and agricultural production, consumption, education, all requiring major new local and global policies).

In view of these facts, the STEEP research team has initiated in 2016 a series of conferences-debates entitled “Understanding & Acting” (“Comprendre et agir”) that examines these issues in order to help researchers and citizens to increase their awareness of the various issues at stake in order to initiate relevant individual and collective actions. From now on, the scientific community at large must realize that its duty also lies in helping citizens to better understand these issues. If the fraction of people in society whose privilege is to be paid to think about society’s problems do not seize this opportunity in the critical times we face, who will? Researchers must become more involved in the search of socioeconomic alternatives and help citizens to implement them. The interactions between researchers and citizens must also to be reinvented.

The presentations of this series of conferences typically last between 30 to 45 minutes; they are followed by a 45 minute public debate with the audience. The presentations are captured on video and then made directly accessible on the YouTube Channel “Comprendre et Agir”. At the end of 2017 the YouTube channel reached almost 45,000 views with a rate of integral viewings remaining at above 25%.
Examples of conferences given in 2016-2017:

- “Why and how to recognize money as a common good?” by Jean-Michel Servet, Graduate institute of international and development studies (IHEID) at Genève.
- “What alternative to the crisis of representation?” by Loic Blondiaux, University of Paris I Panthéon-Sorbonne.
- “Reinventing agriculture and food in the 21st century?” by Gilles Billen, CNRS.
- “Can the commons movement re-activate democracy? by Christian Laval, University of Paris Ouest Nanterre La Défense.
- “Limiting climate change: Why do we not do it?” by Denis Dupré, University of Grenoble Alpes.
- “Environment, economy, collapse: squaring the circle?” by Pierre-Yves Longaretti, CNRS.

Link to the web page of the series [program, abstracts, dates, complements etc.]:
https://team.inria.fr/steep/les-conferences-debats-comprendre-et-agir/

Link to the YouTube channel:
https://www.youtube.com/channel/UCJbcXCcOA63M8VMysAbmt_A

9.3.2. Other popularization activities:

- Emmanuel Prados gave a conference entitled “Understanding society collapses. What future for ours?” at the series of conferences “Understanding and Acting” (Grenoble, France, 9th of February, 2017). The video of the conference has been posted on the video-sharing website, YouTube. The conferences received around 30 000 YouTube views in 10 months.
  https://www.youtube.com/watch?v=1dgjIeR5DBY

- Pierre-Yves Longaretti gave a conference entitled “Environment, economy, collapse: squaring the circle?” at the series of conferences “Understanding and Acting” (Grenoble, France, 3rd of March, 2017). The video of the conference available on YouTube. The conferences received around 1700 views in 9 months.
  https://www.youtube.com/watch?v=0T8SP5jb3aI

- Emmanuel Prados participated in the round table “How to manage territories with the help of numerical models” held for the celebrated days for the 50th birthday of Inria (Paris, France, November 7th, 2017).

- Denis Dupré gave a conference entitled “Can ethical finance prevent from our civilization collapse?” at the department of banking and finance of the University of Zurich (Zurich, Switzerland, the 29th of September 2017). The video of the conference available on YouTube. https://www.youtube.com/watch?v=JhFiks0RbMU

- Denis Dupré gave a conference entitled “How finance can help to manage vital goods in the coming collapse?” at the “Change Finance Forum” organized by Financelwatch (Brussels, Belgium, 5th december 2017). The video of the conference available on YouTube. https://www.youtube.com/watch?v=3RyJTn0u-ZA

- Denis Dupré gave an interview at France Info, December 11, 2017. France Info is the radio network operated by the French public service radio broadcaster Radio France which provides continuous live news and information. Interview available online:
  https://team.inria.fr/steep/denis-dupre-dec-11-2017/
AGORA Team

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 the 1st International Workshop on Data Analytics for Mobile Networking, DAMN! 2017, held together with IEEE PerCom in Kona, Hawaii, in March 2017.
- Fabrice Valois was general co-chair of the 2nd French National Conference CoRes 2017 (Rencontres Francophones sur la Conception de Protocoles, l’Evaluation de Performance et l’Expérimentation des Réseaux de Communication), May 2017, Quiberon, France.

10.1.1.2. Member of the Organizing Committees


10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- Walid Bechkit was in the TPC of IEEE ICC and MobiSPC.
- Oana Iova was in the TPC of the following conferences: FailSafe, IEEE GlobalSIP, Grace Hopper Conference, AlgoTel.
- Razvan Stanica was in the TPC of the following conferences: IEEE ICC, IEEE GlobeCom, IEEE CCNC, IEEE WCNC, IEEE PIMRC, IEEE VTC Spring/Fall, IEEE ISC2.
- Fabrice Valois was in the TPC of the following conferences: IEEE GlobeCom, WiSARN, IEEE IWCMC, IEEE PIMRC, IEEE ICT, IEEE ISC.

10.1.2.2. Reviewer

- Walid Bechkit was a reviewer for IEEE IWCMC.
- Oana Iova was a reviewer for the following conferences: IEEE WCNC, IEEE ICC.

10.1.3. Journal

10.1.3.1. Reviewer - Reviewing Activities

- Walid Bechkit was a reviewer for IEEE Transactions on Parallel and Distributed Systems.

10.1.4. Invited Talks

- Razvan Stanica was an invited speaker at the School of Informatics at the University of Edinburgh, Scotland, UK (Oct. 2017).
10.1.5. Leadership within the Scientific Community

- Walid Bechkit is a nominated member in the scientific committee of the Fédération d’Informatique de Lyon (FR 2000 CNRS).
- Oana Iova is awards co-chair for Networking Networking Women (N2Women) since 2016, an ACM SIGMOBILE program whose goal is to foster connections among the under-represented women in computer networking and related research fields.
- 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 Scientific Council of the Labex IMU (Intelligence des Mondes Urbains).
- Fabrice Valois is in the steering committee of the Fédération d’Information de Lyon (FR 2000 CNRS).

10.1.6. Scientific Expertise

- Hervé Rivano gave expertise on JORISS international projects.
- Hervé Rivano is member of the Metropole de Lyon [R] Challenge board of experts.
- Hervé Rivano is member of the Scientific Committee of the Digital League Regional Cluster.
- Razvan Stanica was a member in the recruitment committee of an Associate Professor in Computer Science at INSA Lyon.
- Fabrice Valois was a member in the recruitment committee of a Full Professor in Computer Science at INSA Lyon.
- Fabrice Valois was a member in the recruitment committee of an Associate Professor in Computer Science at INSA Lyon.

10.1.7. Research Administration

- Walid Bechkit is responsible for seminar organization and scientific animation within the CITI laboratory.
- Khaled Boussetta is member of the steering committee of the MathStic federation at University Paris 13.
- 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 was director of the CITI research laboratory of INSA Lyon until Oct. 2017.
- Fabrice Valois is in the steering committee of the SPIE INSA Lyon IoT Chaire.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence : Hervé Rivano, Discovering digital tools, 21h, L1, INSA Lyon.
Master : Walid Bechkit, Network architectures, protocols and services, 12h, M1, Telecom. Dpt. INSA Lyon.
Master : Oana Iova, Network architectures, protocols and services, 20h, M1, INSA Lyon.
Master : Hervé Rivano, Smart Cities, 2h, M1-M2, Master Geography Lyon St Etienne.
Master : Hervé Rivano, Smart Cities, 4h, M2, Polytech Perpignan.
Master : Hervé Rivano, Smart Cities and IoT, 44h, M2, Telecom. Dpt. INSA Lyon.
Master : Fabrice Valois, Wireless Sensor Networks, 6h, M2, University of Grenoble.
MOOC : Hervé Rivano, Smart Cities, 3rd season of the french version and production of the english version.
MOOC : Hervé Rivano, Razvan Stanica, Fabrice Valois, Connectez à Internet vos Objets Intelligents, production started in the context of the ANR Connect-IO project.
Walid Bechkit is in charge of the admission service of the Telecommunication department at INSA Lyon.
Khaled Boussetta is the studies director of Apprenticeship Education Program Specialty in Computer Science and Network at Sup’Galilée Engineering School (University Paris 13).
Hervé Rivano is responsible for the coordination of all courses in the Smart Cities and IoT option at the INSA Lyon Telecommunications department.
Hervé Rivano is responsible for the coordination of the 1st cycle of INSA Lyon and the DSI administration.
Razvan Stanica is responsible of the research option at the Telecommunications department of INSA Lyon.
Razvan Stanica is vice dean of the Telecommunications department of INSA Lyon, in charge of education related affairs. 
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 in progress : Yosra Bahri Zguira, DTN for IoT, since 05/2015. Advisors: Aref Meddeb (Univ. Sousse, Tunisia), Hervé Rivano.
PhD in progress : Amjed Belkhiri, Optimisation of wireless sensor networks mobility for a better characterization of atmospheric pollution, since 10/2017. Advisors: Walid Bechkit, 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: Abdul Aziz Mbacke, 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, Self organization in professional mobile radio networks, since 10/2015. Advisors: Razvan Stanica, Fabrice Valois.

PhD in progress: Mihai Popescu, Connectivity constrained mobility in fleets of robots, since 11/2015. Advisors: Olivier Simonin (Inria CHROMA), Anne Spalanzanni (Inria CHROMA), Fabrice Valois.

10.2.3. Juries

- Khaled Boussetta was a member in the following PhD defense committees:
  - A. Aissioui, The Path towards Future Mobile Service Architectures: from Follow Me Cloud (FMC) to Follow Me edge Cloud (FMeC), University Of Versailles, 2017.

- Hervé Rivano was a reviewer in the following PhD defense committees:
  - V. Toldov, Adaptive MAC layers for interference limited WSN, University of Lille 1, 01/2017.
  - R.B. Messaoud, Towards efficient mobile crowd sensing assignment and uploading schemes, University of La Rochelle, 09/2017.
  - M.A. Messous, UAVs network: Towards an optimal exploration and an efficient computation, University of Burgundy, 10/2017.
  - C. Lopez, Dynamic modeling of traffic and urban freight: toward a combined approach, Ecole Nationale des Travaux Publics d’Etat, 10/2017.
  - C. Dorffer, Informed matrix factorization methods for mobile sensor networks calibration and pollution mapping, University of Littoral Côte d’Opale, 12/2017.

- Hervé Rivano was a reviewer in the following HDR defense committee:
  - N. Chiabaut, Dynamic modeling of multimodal transportation networks, University Claude Bernard Lyon 1, 05/2017.

- Razvan Stanica was a reviewer in the following PhD defense committee:

- Razvan Stanica was a member in the following PhD defense committee:
  - C. Razafimandimby, Toward Internet of Heterogeneous Things : Wireless Communication Maintenance and Efficient Data Sharing among Devices, Mines Paris Tech, Inria FUN, Université Lille 1, 10/2017.
- Fabrice Valois was a reviewer in the following PhD defense committees:
- Fabrice Valois was a member in the following PhD defense committee:
  - L. Reynaud, Stratégies de mobilité optimisées pour la tolérances aux perturbations dans les réseaux sans fil, Université de Lyon, 2017.
- Fabrice Valois was a reviewer in the following HDR defense committees:
  - E. Natalizio, Mobility as a primitive to improve communications in wireless network, Heudiasyc, Université Technologique de Compiègne, 11/2017.
- Fabrice Valois was a member in the following HDR defense committee:

10.3. Popularization
- Walid Bechkit participated in the "Rencontres Inria Industrie 2017" - https://www.youtube.com/watch?v=qKzubSkpvSk
- Walid Bechkit, Ahmed Boubrima and Hervé Rivano participated in the documentary "Métropole intelligente" projected as part of the 1st edition of "Thematix - Les rencontres de la Métropole Intelligente".
- Hervé Rivano was interviewed by the press about future of IoT 04/17 and the Sense City EquipEx 08/17
- Hervé Rivano was animating the Twitter account of « En direct du Labo » for a week, 06/17
- Hervé Rivano gave a talk on IoT for sensing the environment at the Entretiens Jacques Cartier, Montreal, 10/17.
- Hervé Rivano gave a talk on Smart Cities to a workshop of sustainable urban spaces, Ministère Enseignement Supérieure, Recherche et Innovation, 10/2017
9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

Laurent Lefèvre was

- co-chair of the colloquium: "Towards a sustainable digital society: from Clouds to Connected Objects", with Centre Jacques Cartier and Concordia University, Montreal, Canada, October 2017
- co-chair of the PEAC 2017 Workshop on "Power and Energy Aspects of Computations", held in conjunction with the 12th International Conference on Parallel Processing and Applied Mathematics, PPAM 2017, Lublin, Poland, September 2017
- track co-chair of the ICA3PP 2017 conference: 17th International Conference on Algorithm and Architectures for Parallel Processing, for the track Distributed and Network-based Computing, Helsinki, Finland, August 2017

9.1.1.2. Member of the Organizing Committees

Laurent Lefèvre was

- co-organizer of the GreenDays@Sophia, SophiaTech, Nice, June 2017
- co-organizer of the Ecoinfo conference on "Edge Datacenters, a leverage for innovation - Edge datacenters, un levier pour l’innovation", Paris, March 2017 and the Ecoinfo conference on "Eco-design of software", Grenoble, February 2017
- co-chair of the Special Session on Energy Efficient Management of Parallel Systems, Platforms, and Computations during PDP2017: 25th Euromicro International Conference on Parallel, Distributed and Network based Processing, St Petersburg, Russia, March 2017


9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Eddy Caron was the chair of the Chair Parallelism for Compas’2017 (Conférence d’informatique en Parallélisme, Architecture et Système). June 27-30, 2017.

Laurent Lefèvre was co-chair of the Poster and Research Demos of CCGrid 2017: 17th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing, Madrid, Spain, May 2017

9.1.2.2. Member of the Conference Program Committees

Eddy Caron was member of the program committees of 6th International Conference on Advances in Computing, Communications and Informatics (ICACCI-2017), Conférence Nationale (en Afrique) sur la Recherche en Informatique et ses Applications (CNRIA 2017), The 3rd International Conference on Cloud Computing Technologies and Applications (CloudTech’17), 7th International Conference on Cloud Computing and Service Science (CLOSER 2017), Third Symposium on Emerging Topics in Computing and Communications (SETCAC’17), The 10th International Conference on Security, Privacy and Anonymity in Computation, Communication and Storage (SpaCCS 2017).
Marcos Dias de Assunção was member of the program committees of the International Conference on Cloud Computing Technology and Science (CloudCom 2017) and Workshop on Clouds and Applications (WCGA 2017).

Olivier Glück was a member of the program committees of PDP 2017 (25th Euromicro International Conference on Parallel, Distributed, and Network-Based Processing) and ICA3PP-2017 (17th International Conference on Algorithms and Architectures for Parallel Processing).

Laurent Lefèvre was member of the program committees of The 3rd IEEE International Conference on Data Science and Systems (DSS 2017), The 23rd IEEE International Conference on Parallel and Distributed Systems (ICPADS 2017), 9th International Conference on Cloud Computing Technology and Science (CloudCom 2017), International Symposium on Computer Architecture and High Performance Computing (SBACPAD 2017), 46th International Conference on Parallel Processing (ICPP2017) and the Conférence d’informatique en Parallélisme, Architecture et Système (Compas’17).

Christian Perez was member of the program committees of the IEEE International Conference on Cluster Computing 2017 (Cluster 2017), the 17th IEEE/ACM International Symposium on Cluster, Cloud and Grid (CCGRID 2017), the 25th annual High Performance Computing Symposium 2017 (HPC ’17), the 9th International Conference on Cloud Computing Technology and Science (IEEE CloudCom 2017) and of the 2017 International Conference on Parallel Computing (ParCo 2017). He was a member of the Tutorials Committee of ISC High Performance 2018.

Frédéric Suter was member of the program committees of the European MPI Users’ Group Meeting (EuroMPI’17), the International Conference on Algorithms and Architectures for Parallel Processing (ICA3PP’17), the IEEE / ACM International Symposium on Cluster, Cloud, and Grid Computing (CCGrid 2017), the International Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms (HeteroPar’17), and the Conférence d’informatique en Parallélisme, Architecture et Système (Compas’17). He was a member of the Posters Committee of the IEEE International Conference on Cluster Computing (Cluster’17).

9.1.2.3. Reviewer

Eddy Caron reviewed a paper for the 23rd International European Conference on Parallel and Distributed Computing (Euro-Par 2017).

Christian Perez reviewed a paper for the 23rd International European Conference on Parallel and Distributed Computing (Euro-Par 2017).

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Laurent Lefèvre is associate editor of IEEE Transactions on Sustainable Computing

9.1.3.2. Reviewer - Reviewing Activities


Thierry Gautier reviewed articles for the ACM Transactions on Architecture and Code Optimization journal.

Christian Perez reviewed articles for the IEEE’s Transactions on Big Data journal.

Frédéric Suter reviewed articles for the IEEE’s Transactions on Parallel and Distributed Systems and ParallelComputing.
9.1.4. Invited Talks

Marcos Dias de Assunção gave the following talk:

Laurent Lefèvre has been invited to give the following talk:
• "L’impact environnemental des nouvelles technologies de l’information et de la communication / Environmental impact of ICT", Ville de Vincennes : "Au coeur des savoirs", Vincennes, March 2017
• "Améliorer l’efficacité énergétique de l’informatique et des réseaux de communications / Improving energy efficiency of computing and networking", Assemblée Nationale, Audition publique sur les enjeux de la recherche en énergie, Office Parlementaire d’Evaluation des Choix Scientifiques et Technologiques (OPECST), Paris, February 2017
• "Eco-design of software : conclusion of the day - Eco-conception logicielle : conclusion de la journée", Journée EcoInfo sur "Impact des logiciels sur l’environnement quid de l’éco-conception ?", IMAG, Grenoble, February 2017
• "Impacts environnementaux des TICs : constats et pistes d’améliorations (sans green washing) / Environmental impact of ICT : overview and improvements (without green washing)", ENSIMAG, Grenoble, January 2017

Christian Perez has been invited to give the following talk:

9.1.5. Leadership within the Scientific Community

Eddy Caron is animator and co-chair for the FIL (Fédération Informatique de Lyon) on the theme IDCHP (Informatique Distribuée et Calcul Haute Performance).

Laurent Lefèvre 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 3 projects for the French National Research Agency (ANR).

Thierry Gautier and Christian Perez were member of the programming environment working group of ETP4HPC in order to define the Strategic Research Agenda (SRA). The SRA identifies the principal challenges in HPC and is used by the European Commission for writing their work programme. The EC is currently working on the WP2018-2020. The SRA -3 was released in November 2017.

Olivier Glück is member of the CNU (Conseil National des Universités) section 27 (Computer Science). He participated to the 2017 "Qualifications" session and "Promotions/CRCT" session.

Christian Perez was a member of the HCERES evaluation committes fot the Laboratoire d’Informatique Fondamentale d’Orléans (LIFO) and for the Mathématiques et Systèmes unit of Mines ParisTech. He reviewed projects for the French National Research Agency (ANR), for the Comité Français d’Évaluation de la Coopération Scientifique et Universitaire avec le Brésil (COFECUB), and for the Région Pays de la Loire (France).

9.1.7. Research Administration

Eddy Caron is a member of the CDT (Commission de Développement Technologique) de l’Inria Rhône-Alpes. He is deputy director in charge of call for projects, research transfert and international affairs since September 2017 for the LIP laboratory.
Olivier Glück is member of the "Conseil Académique" of Lyon 1 University and Lyon University. Laurent Lefèvre is a member of the executive board and the sites committee of the Grid’5000 Scientific Interest Group. Laurent Lefèvre leads the PhD committee and is member of the council of LIP Laboratory (ENS Lyon). He is elected member of the council of Federation Informatique of Lyon. He is a scientific member of the Digital League enterprise cluster of Rhône-Alpes Auvergne Region. He is member of the direction committee of the GDS Ecoinf group.

Christian Perez represents Inria in the overview board of the France Grilles Scientific Interest Group. He is a member of the executive board and the sites committee of the Grid’5000 Scientific Interest Group. He 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.

Frédéric Suter is a member of the Direction Committee of the IN2P3 Computing Center (USR 6402).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Eddy Caron, Projet 1, 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, Advanced Topics in Scalable Data Management, 18h, M2, ENS de Lyon. France.
Licence: Yves Caniou, Algorithmique programmation impérative, initiation, 24h, niveaux L1, Université Lyon 1, France
Licence: Yves Caniou, Unix, 3h, niveaux L1, Université Lyon 1, France
Licence: Yves Caniou, Système d’Exploitation, 42h, niveaux L2, Université Lyon 1, France
Licence: Yves Caniou, Programmation Concurrente, 33h, niveaux L3, Université Lyon 1, France
Licence: Yves Caniou, Réseaux, 54h, niveaux L3, Université Lyon 1, France
Master: Yves Caniou, Sécurité, 36h, niveaux M2, Université Lyon 1, France
Master: Yves Caniou, Systèmes avancés, 4.5h, niveaux M2, Université Lyon 1, France
Master: Yves Caniou, Projet, Bibliographie, Certification, 10h, niveaux M2, Université Lyon 1, France
Master: Yves Caniou, Suivi d’un étudiant en introduction à la recherche, 3h, M1, Université Lyon 1, France
Master: Yves Caniou, Suivi d’étudiants (apprentissage, stage), 33h, niveaux M1 et M2, Université Lyon 1, France
Master: Yves Caniou, Responsable of professional Master SRIV (Systèmes Réseaux et Infrastructures Virtuelles), 42h, Université Lyon 1, France
Master: Yves Caniou, Sécurité, 20h, niveau M2, IGA Casablanca, Maroc
Master: Jean-Patrick Gelas, Programmation embarquée et mobile des objets, 17h, 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, 52h, 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, 37h, niveau M2 (CCI), Université Lyon 1, France
Master: Jean-Patrick Gelas, Technologies embarquées, 19h, niveau M2 (Image), Université Lyon 1, France
Master: Jean-Patrick Gelas, Routage (BGP), Routeurs et IPv6, 15h, niveau M2, Université Lyon 1, France
Master: Jean-Patrick Gelas, Systèmes embarqués (GNU/Linux, Android, ARM, Arduino), 34h, 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, 17h, niveau M2 (TIW), Université Lyon 1, France
Master: Jean-Patrick Gelas, Développement informatique, 23h, niveau M2 (Data science), Université Lyon 1, France
Licence: Olivier Glück, Licence pedagogical advisor, 30h, niveaux L1, L2, L3, Université Lyon 1, France.
Licence: Olivier Glück, Introduction Réseaux et Web, 90h, niveau L1, Université Lyon 1, France.
Licence: Olivier Glück, Algorithmique programmation impérative initiation, 37h, niveau L1, 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, 14h, niveau M1, Université Lyon 1, France.
Master: Olivier Glück, Réseaux et protocoles, 33h, niveau M1, Université Lyon 1, France.
Master: Olivier Glück, Applications systèmes et réseaux, 30h, niveau M2, Université Lyon 1, France.
Master: Olivier Glück, Applications systèmes et réseaux, 24h, niveau M2, IGA Casablanca, Maroc
Master Informatique: Laurent Lefèvre, "Parallelism", Université Claude Bernard, France. (18h), M1
Master Systèmes Informatique et Réseaux: Laurent Lefèvre, "Advanced Networks", IGA Casablanca, Maroc (20h), M2

9.2.2. Supervision

PhD: Radu Carpa, Efficacité énergétique des échanges de données dans une fédération d’infrastructures distribuées à grande échelle, 26/10/2017, Laurent Lefèvre (dir), Olivier Glück (co-dir).
PhD : ACAR Hayri, Software development methodology in a Green IT environment, Université Claude Bernard Lyon 1, 22/11/2017, Parisa Ghodous (dir), Jean-Patrick Gelas (co-dir), Gulfem Isiklar Alptekin (co-dir).
PhD: Jérémy Richard, Conception of a software component model with task scheduling for many-core based parallel architecture, application to the Gysela5D code, 6/12/2017, Christian Perez (dir), Julien Bigot (CEA, MdlS, co-dir).
PhD: Pedro De Souza Bento Da Silva, Application model and co-scheduling algorithm for dynamic and evolutive data-intensive application, 11/12/2017, Christian Perez (dir), Frédéric Desprez (Inria, CORSE team, co-dir).
PhD in progress: Dorra Boughzala, Simulating Energy Consumption of Continuum Computing between Heterogeneous Numerical Infrastructures in HPC, IPL Hac-Specis Inria, Laurent Lefèvre (dir), Martin Quinson and Anne-Cécile Orgerie (Myriads, Rennes, co-dir) (since december 2017)
PhD in progress: Anchen Chai: *Simulation of the Distributed Execution of a Medical Imaging Simulator*, Hugues Benoît-Cattin (co-dir, CREATIS, INSA Lyon), Frédéric Suter (co-dir).

PhD in progress: Arthur Chevalier, *Optimisation du placement des licences logiciel des fonctions réseau dans le Cloud pour un déploiement économique et efficace*, Eddy Caron (dir), Noëlle Baillon (co-dir, Orange) (since October 2017).

PhD in progress: Hadrien Croubois, *Étude et conception d’un système de gestion de workflow autonome*, 10/2015, Eddy Caron (dir).

PhD in progress: Jad Darrous: *Geo-distributed storage for distributed Cloud*, Gilles Fedak (dir) until Aug. 2017 then Christian Perez (dir), Shadi Ibrahim (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, ENS-Lyon), Eddy Caron (co-dir) et Yves Caniou (co-dir).

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

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


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

### 9.2.3. Juries

Laurent Lefèvre was reviewer and member of the Ph.D. defence committee of Ronnie Muthada Potayya, University of Bourgogne Franche-Comté (December 8, 2017), Ines de Courchelle, University of Toulouse (November 20, 2017), Nicolas Huin, Nice-Sophia Antipolis University (September 28, 2017), Atefeh Khosravi, University of Melbourne, Australia (July 2017) and Loris Belcastro, University of Calabria, Italy (May 2017). Laurent Lefèvre was a member of the Ph.D. defence committee of Yunbo Li, Université Bretagne Loire (June 2017). Frédéric Suter was a member of the Ph.D. defence committee of Fernando Mendonca, Ph.D. student of Université de Grenoble held on May 23, 2017.

### 9.3. Popularization

Laurent Lefèvre has been:

- Participating to the "Nuit européenne des chercheurs - European night of researchers" : talk in the dark "Let’s talk about Green IT in the dark" - Interview by Lyon Capitale and Radio Brune, Villeurbanne, September 29, 2017
- Interviewed for the paper "Réseaux, data centers et terminaux, sur les traces de notre empreinte environnementale numérique", Inriality, Pierre Guyot, February 14, 2017
- Interviewed for the paper "Surfing is bad for the planet / Surfer nuit gravement à la planète", 01 Net, Number 859, February 15, 2017
9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

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

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

Eric Rutten is PC member for:

- international conferences
  - ICAC 2017 (14th IEEE International Conference on Autonomic Computing), Columbus, Ohio, USA on July 17-21, 2017 (http://icac2017.ece.ohio-state.edu/)
  - 14th Workshop on Discrete Event Systems, WODES’18, Sorrento Coast, Italy, May 30 - June 1, 2018. (http://wodes2018.unisa.it/)
  - ICAC 2018 (15th IEEE International Conference on Autonomic Computing), Sept 3-7, 2018, Trento, Italy (http://autonomic-conference.org)
    (this conference is the merging of the previous ICAC and ICCAC conferences above)
  - 2nd IEEE Conference on Control Technology and Applications, CCTA 18, Copenhagen, Denmark, August 21-24, 2018 (http://ccta2018.ieeeccs.org/)

- national conferences
  - 11ème colloque francophone sur la Modélisation des Systèmes Réactifs (MSR’17), 15-17 novembre 2017, Marseille (France) (http://www.licos.org/msr2017/)

9.1.2.2. Reviewer

Stéphane Mocanu and Soguy Gueye are reviewers for ICAC 2017 (14th IEEE International Conference on Autonomic Computing), Columbus, Ohio, USA on July 17-21, 2017 (http://icac2017.ece.ohio-state.edu/).
Stéphane Mocanu is reviewer for 11ème colloque francophone sur la Modélisation des Systèmes Réactifs (MSR’17), 15-17 novembre 2017, Marseille (France) (http://www.licos.org/msr2017/).
Gwenaël Delaval is reviewers for FACS 2017, 14th International Conference on Formal Aspects of Component Software, 10-13 October 2016, in Braga, Portugal (http://facs2017.di.uminho.pt/)
9.1.3. Journal

9.1.3.1. Reviewer - Reviewing Activities

Eric Rutten is invited editor of

- journal on Distributed Computing (Springer)
- Science of Computer Programming
- IEEE TSC Transactions on Services Computing
- IEEE TSE Transactions on Software Engineering
- ACM Transactions on Autonomous and Adaptive Systems
- IEEE Transactions on Industrial Informatics

Stéphane Mocanu is invited editor of journal of Discrete Events Dynamical Systems.

9.1.4. Invited Talks

Gwenaël Delaval was invited to give a talk at journées du LIP "Langage, Sémantique et Compilation", June 2017 (with E. Rutten).

Eric Rutten was invited to give a talk at:

- séminaire de l’équipe ASCOLA, IMT Nantes, 2 mai 2017

9.1.5. Leadership within the Scientific Community

Eric Rutten is co-chair of the Technical Committee on Discrete Event Systems (DESTC), a part of the IEEE Control Systems Society (CSS) Technical Activities Board (http://discrete-event-systems.ieeecss.org/tc-discrete/home) ; and member of the IFAC Technical Committee 1.3 on Discrete Event and Hybrid Systems, for the 2017-2020 triennum (http://tc.ifac-control.org/1/3).

9.1.6. Research Administration

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

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : G. Delaval, Algorithmics and imperative programming, 18h class, 18h lab, L2, Université Grenoble Alpes
Licence : G. Delaval, Basis of software development : modularity, tests, 15h class, 15h lab, L2, Université Grenoble Alpes
Master : G. Delaval, Programming languages and compiler design, 33h, M1, Université Grenoble Alpes
Master : S. Mocanu, Computer Networks and Cybersecurity, 16h class, 34h lab, M1, Grenoble-INP/ENSE3
Master : S. Mocanu, Industriel Computer Networks, 8h class, 8h lab, niveau (M1, M2), M2, Grenoble-INP/ENSE3
Master : S. Mocanu, Reliability, 10h class, 8h lab, M2, Grenoble-INP/ENSE3

9.2.2. Supervision
• PhD : Maëlle Kabir-Querrec; Cybersécurité des systèmes de contrôle pour les smart-grids ; 28 juin 2017 ; U. Grenoble Alpes ; co-advised by S. Mocanu with J-M Thiriet (Gipsa-lab).
• PhD in progress : Neil Ayeb ; Vers un management des objets de l’IoT de´centralise´ et adaptable ; dec. 2017 ; co-advised by Eric Rutten with S. Bolle, T. Coupaye (Orange labs).
• PhD in progress : Chabha Hireche ; Etude et implémentation d’une approche probabiliste de contrôle de mission de drone autonome ; oct. 2015 ; co-advised by S. Mocanu with Catherine Dezan (U. Bretagne Occidentale), and Jean-Philippe Diguet (U. Bretagne Sud).
• PhD in progress : 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 ; co-advised by S. Mocanu with J-M Thiriet (Gipsa-lab).
• Oualid Koucham ; Détectiﬁcation d’intrusions dans les systèmes de contrôle industriels ; oct 2015 ; co-advised by S. Mocanu with J-M Thiriet (Gipsa-lab).

9.2.3. Juries

Eric Rutten was member of the jury for the PhD of Sabbir Hasan Rochi, 3 may 2017, IMT Atlantique campus Nantes, ASCOLA team at Inria Rennes Bretagne Atlantique, dir. Jean-Louis Pazat and Thomas Ledoux.
10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- Márton Karsai was co-chair of 6th International Conference on Complex Networks and Their Applications (Complex Networks 2017)
- Márton Karsai was co-chair of the Computational Social Science: from social contagion to collective behaviour Satellite meeting of the CCS’17 conference.
- Márton Karsai was the co-chair of the Machine Learning in Networks Science Satellite meeting of the NetSci’17 conference
- Éric Fleury, was sponsor-chair of 6th International Conference on Complex Networks and Their Applications (Complex Networks 2017)
- Isabelle Guérin Lassous was general chair of the 14th ACM International Symposium on Performance Evaluation of Wireless Ad Hoc, Sensor, and Ubiquitous Networks (PE-WASUN 2017).

10.1.1.2. Member of the Organizing Committees

- Éric Guichard was the chair and organiser of he summer school "Cartography and visualisation".
- Éric Guichard was the scientific organiser of the LaTeX days: "Édition et typographie numériques, épistémologie supported by Enssib and the GUTenberg association.
- Jean-Pierre Chevrot was member of the Organizing Committee of Congress of the International Association for the Study of Child Language (IASCL 2017)

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Márton Karsai is the Chair of Complex Networks 2017

10.1.2.2. Member of the Conference Program Committees

- Thomas Begin was on the PC of the 43nd IEEE Conference on Local Computer Networks (LCN).
- Isabelle Guérin Lassous was, in 2017, a member of the program committee of the conferences ACM MSWiM, IEEE ICC and Globecom, and ICNC.
- Márton Karsai was, in 2017, a member of the program committee of the conferences COMPLEXNET, NetSciCom - IEEE INFOCOM, DAMN! 2017 - IEEE PerCom, MLNS satellite NetSci’17, NetSci’17, CCS’17, Complex Networks 2017
- Jean-Pierre Chevrot was on the PC of the conference Variation in Language Acquisition 3 (ViLA3), Salzburg, Austria.
- Christophe Crespelle was on the PC of DyNo 2017, 3rd International Workshop on Dynamics in and of Networks, Skopje, Macedonia.
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).
- Philippe Nain is Editor-in-Chief of Performance Evaluation (Elsevier).

10.1.4. Invited Talks

- Éric Fleury gave a talk at the workshop "Trajectoires et dynamiques des réseaux : approches quantitatives" granted by the CNRS GDR Analyse de réseaux en SHS. The report made by Marianne Humblet et Pierre Mercklé is available online: https://arshs.hypotheses.org/529.
- Éric Fleury gave a talk at the summer school "Cartography and visualisation".
- Éric Fleury gave a talk at MARAMI 2017.
- Éric Guichard gave a talk at the LaTeX days on "Enjeux épistémologiques de l’écriture numérique".
- Éric Guichard gave a talk at the annual Lidilem seminar on "La culture numérique, une autre culture de l’écrit.”.
- Éric Guichard gave a talk for the IPL Better-Net on "Expériences géographiques".
- Paulo Gonçalves gave a talk at the Thematic Week on “Graphs, Machine Learning and Signal Processing” (McGill’s Bellairs Research Institute).
- Paulo Gonçalves gave a talk at the open days of the Fédération Rhône-Alpes-Auvergne on "Statistics and neurosciences".
- Isabelle Guérin Lassous gave a talk at CUST and NUST in Pakistan and a seminar at the LIG laboratory on Wi-Fi association.
- Thomas Begin gave a talk at CUST and NUST in Pakistan on the modeling of DPDK-based virtual switches.
- Jean-Pierre Chevrot gave a talk at the University of Indiana at Bloomington "Interfaces of sociolinguistics: Cognition and massive data”.
- Jean-Pierre Chevrot gave a keynote talk at the Language and Perception conference, Bern, Switzerland "Sociolinguistic perception: Linguistic knowledge and social categories”.
- Jean-Pierre Chevrot gave a talk at the Laboratoire d’Informatique de Grenoble "Acquisition du langage et usages sociolinguistiques : le social, le cognitif et le réseau".
- Márton Karsai was an invited lecturer at RIO 2017 Summer School on Computer Science, University of Rio Cuarto (13-18 February 2017, Rio Cuarto, Argentina).
- Márton Karsai was an invited lecturer at PhD Course on Network Analysis and Applications, IMe’Ra – Aix-Marseille University (9 April 2017, Marseille, France).
- Márton Karsai gave an invited talk on Socioeconomic dependencies of linguistic patterns in Twitter, Inria Almanach seminar (13 November 2017, Paris, France)
10.1.5. Leadership within the Scientific Community

- 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.
- Philippe Nain is the coordinator of the "Strategic Technology Monitoring & Prospective Studies Inria Unit".
- In the context of Inria 50th anniversary, Pascal Guitton, Philippe Nain and François Sillion reflect on Inria’s evolution through the decades and present its vision for the future in [19].

10.1.6. Scientific Expertise

- Isabelle Guérin Lassous is a member of the research committee of the Milyon labex.
- Éric Fleury is member of the Inria Advanced and starting research position 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 Agencys (ANR) and member of the program committee of the ANR ROSE Challenge (RObotique et Capteurs au Service d’EcoPhyto)
- Éric Fleury is member of the Inria Evaluation Committee.
- Éric Guichard is a member of the scientific committee of the 8th Major Societal Challenges: "Innovative, inclusive and adaptive societies" of teh French National Research Agency.
- Éric Guichard is a member of the scientific committee of LASCO Idea Lab of the IMT (LAboratoire Sens et Compréhension du monde contemporain de l’Institut Mines-Télécom).
- Éric Guichard is a member of the international evaluation board of the doctoral program Filosofia da Ciencia, Tecnologia, Arte e Sociedade of the University of Lisbon.
- Éric Guichard is the manager of the RAIL (Réseau de l’Atelier Internet Lyonnais), founded in 2017 and supported by IXXI and Enssib. RAIL is a federative open group of research founded in March, 2017. Its main projects are both theoretical and practical, each part feeding the other : establishing critical thought of the Internet, rethinking epistemology ; and, on the other hand, the measurements and the graphic productions in connection with the Internet. These interactions allow the participants of the RAIL to specify the concepts and practices which help to get a good un- derstanding of the Internet, which is defined as a contemporary form of writing. RAIL’s key words are : digital territories, representations and spatial productions, imaginary, scientific and digital culture, literate worlds, links between technique and politics.

10.1.7. Research Administration

- Paulo Gonçalves is scientific liaison officer for international relations in Inria Research Centre of Rhône-Alpes.
- Paulo Gonçalves is a member of the executive committee of the Milyon labex and referent for its valorisation committee.
- Isabelle Guérin Lassous is member of the department council of the Computer Science department of Université Lyon 1.
- Isabelle Guérin Lassous is the managing director of the Foundation Blaise Pascal.
- Anthony Busson is member of the Thesis Commission at LIP.
- Anthony Busson is head of the CS department at the IUT.

http://barthes.ens.fr/RAIL or http://barthes.enssib.fr/RAIL/
Anthony Busson was a HCERES expert member (laboratory LMIA-MIPS - Université de Haute Alsace).

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.

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 (2017-)

Éric Guichardt is a member of the steering committee of the IXXI Complex System Institute

Jean-Philippe Magué is a member of the executive committee of the IXXI Complex System Institute

Jean-Philippe Magué is a member of the executive committee of the Aslan Labex, in charge of the language complexity work package.

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

Bachelor: Interdisciplinary Applications of Complex Networks - Non-specialist course, 6H, L3, 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: "Distributed algorithms", 30h, Master (M1), University Lyon 1, France

Master: "QoS and Multimedia Networks", 20h, Master (M2), University Lyon 1, France

Master: "Wireless Networks", 10h, 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
Associate Professor at Université Claude Bernard Lyon 1 in the Computer Science department since 2010.
Master: "Introduction to Computer Science", 30h, Master (M2), ENS de Lyon, France

10.2.1.8. Teaching by Philippe Nain
Master: "Network Performance Evaluation", 24h, Master (M2), ENS de Lyon, France

10.2.2. Supervision
HDR defense: Christophe Crespelle, Structures of Complex Networks and of their Dynamics. September 2017.
PhD defense: Matteo Morini, New tools for understanding the dynamics of social networks, Oct 20117, E. Fleury, P. Jensen and M. Karsai
PhD defense: Matteo Morini, New tools for understanding the dynamics of social networks, Oct 20117, E. Fleury, P. Jensen and M. Karsai
PhD defense: Raimon Fabregat (ENS de Lyon), Decomposition of dynamic networks via non-negative matrix factorization for the study of neural assemblies in the brains of rats, Paulo Gonçalves.
PhD defense: Louis Duvivier (ENS de Lyon), Causal correlations in temporal graphs, Christophe Crespelle and Marton Karsai.
PhD in progress: Mohammed Amer, WiFi network management: a SDN approach. January 2015, A. Busson and I. Guérin Lassous

PhD in progress: Lafdal Mohamed Adbelwedoud, Inference of conflict graph in IEEE 802.11 networks. September 2017, A. Busson and I. Guérin Lassous
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: Sicheng Dai, Dynamic Multilayer Network Modelling
PhD in progress: Rémy Grünblatt, Controlled mobility for UAV networks, October 2017, I. Guérin Lassous and O. Simonin.

10.2.3. Juries

- Isabelle Guérin Lassous was a reviewer of the HDR examination boards of Enrico Natalizio (UTC), Sara Alouf (Inria) and Gentian Jakllari (University Toulouse).
- Isabelle Guérin Lassous was a member of the HDR examination boards of Claire Goursaud (Insa Lyon), Christophe Crespelle (University Lyon 1) and Laure Gonnord (University Lyon 1).
- Isabelle Guérin Lassous was a reviewer of the Ph.D thesis examination board of Quentin Vey (University Toulouse), Diego Neves da Hora (UPMC) and Tran Anh Quang Pham (University Rennes 1).
- Isabelle Guérin Lassous was a member of the Ph.D thesis examination board of Su Qiankun (University Toulouse).
- Anthony Busson was member and reviewer of the Ph.D of Mohamed Labraoui entitled “Les réseaux maillés sans fils assistés par le SDN” (LIP-6 December 2017).
- Anthony Busson was member and reviewer of the Ph.D of Luis David Alvarez Corrales “Communications coopératives pour des très grands réseaux cellulaires” (Telecom Paris Tech November 2017).
- Anthony Busson was member and reviewer of the Ph.D of Mandimby Nirina Ranaivo Rakotondravelona “Utilisation d’une autostructuration pour un routage hiérarchique géographique dans les réseaux sans fil ad hoc” (Université de la Réunion - Juillet 2017).
- Éric Fleury was member and reviewer of the HdR of Jean-Philippe Cointet titled "La cartographie des traces textuelles comme méthodologie d’enquête en science sociales"
- Éric Fleury was member of the PhD examination board of Mattéo Morini.
- Paulo Gonçalves was reviewer of the PhD dissertation of Lionnel Martin (EPFL) on "Robust and Efficient Data Clustering with Signal Processing on Graphs".
- Christophe Crespelle was member and reviewer of the Ph.D of Kaoutar Ghazi titled "Heuristics and Conjectures about the 2-dimension of partial orders", University Clermont Auvergne, September 2017.
- Márton Karsai was member of the Ph.D of Sebastien Lerique on “Epidemiology of Representations: An Empirical Approach” (École des Hautes Études en Sciences Sociales, Paris, October 2017).
- Márton Karsai was opponent of the Ph.D of Pietro della Briotta Parolo on “Analysis of Cumulative and Temporal Patterns in Science” (Aalto University, School of Science, Espoo Finland, December 2017).
10.3. Popularization

Isabelle Guérin Lassous is the managing director of the Foundation Blaise Pascal. The objectives of the foundation are to promote mathematics and computer science and to attract young people to scientific fields like computer science and mathematics. The actions of the FBP focus on:

- a support to actors that promote mathematics and computer science via allocated funding based on call of proposals;
- a structuring of actors to increase the impacts of their actions, to coordinate the efforts and to share experiences;
- a development of innovative experiences via summer camps and clubs of mathematics and computer science.
10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- President of the steering committee of Edu-Europar.
- President of the steering committee of EGPGV (Eurographics Symposium on Parallel Graphics and Visualization).
- Member of the steering committee of Europar.
- Member of the steering committee of Journée de visualisation scientifique.
- Member of the steering committee of HeteroPar.

10.1.1.2. Member of the Organizing Committees

- Euro-Par, Santiago de Compostela, Spain, August 2017. Topic chairs.
- ICPP (46th Internat. Conference on Parallel Processing), August 14-17, Bristol, UK. Track chair.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- ISA V 2017 (Workshop on In Situ Infrastructures for Enabling Extreme-scale Analysis and Visualization), November 2017, Denver, USA
- EGPGV 2017 (Eurographics Symposium on Parallel Graphics and Visualization), June 2017, Barcelona, Spain.
- LADV 2017 (IEEE Symposium on Large Data Analysis and Visualization), October 2017, Phoenix, USA.
- ROADEF, Feb. 22-24, Metz, France
- COMPAS, June 27-30, Sophia-Antipolis, France
- ISPDC (16th Internat Symposium on Parallel and Distributed Computing) July 3-6, Innsbruck, Austria
- WAOA (15th workshop on Approximation and Oline Algorithms) Sept. 7-8, Vienna, Austria
- PPAM (12th internat. conf. on Parallel Processing and Applied Maths) Sept. 10-13, Lublin, Poland
- ParCo, Sept. 12-15, Bologna, Italy
- MISTA (8th edition) Dec. 5-8, Kuala Lumpur, Malaysia
- HiPC (23rd IEEE internat. Conf on High Performance Computing, Data and Analytics) Dec. 18-21, Jaipur, India

10.1.3. Journal

10.1.3.1. 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).

10.1.4. Scientific Expertise

ANR project evaluation expert
Nederlands e-science center expert

10.1.5. Research Administration

Director of Pôle MSTIC of COMUE Univ. Grenoble-Alpes.
Steering committee of Grid’5000
Steering committee of GRICAD

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: Denis Trystram is responsible of the first year (M1) of the international Master of Science in Informatics at Grenoble (MOSIG-M1).
Master: 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).
Master: Yves Denneulin. 70 hours per year. Engineering school ENSIMAG, Grenoble-INP (M1/2nd year and M2/3rd year).

10.2.2. Supervision

PhD: Abhinav Srivastav, Multi-objective Scheduling, Defended May 2017, Univ. Grenoble-Alpes. Advisers: Denis Trystram and Oded Maler


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, Morocco)

PhD in progress: Adrien Faure, Advisers: Denis Trystram

PhD in progress: Clément Mommessin, Advisers: Denis Trystram

10.2.3. Juries


PhD defense Jérôme Richard, Conception d’un mode’le de composants logiciels avec ordonnancement de ta’ches pour les architectures paral’leles multi-coeurs, application au code Gysela, 6th of December 2017. Université de Lyon. Jury President

PhD defense Sébastien Doutreligne, Interactive Molecular Dynamics Software Development: applications to biomolecule folding, 27th of October 2017. UPMC. Reviewer.


10.3. Popularization

Responsible of the workshop Proof without Words and participation to the CS-Unplugged workshop, Inria, Fête de la Science 2017.
POLARIS Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair
- Panayotis Mertikopoulos has been the co-organizer of the MODE Days (03/2017).
- Arnaud Legrand has co-organized the International Workshop on Reproducibility in Parallel Computing (RepPar) in conjunction with IPDPS.

10.1.1.2. Member of the Organizing Committees
- Nicolas Gast was co-organizer of the workshop YEQT XI: “Winterschool on Energy Systems” organized in TU Eindhoven in December 2017).
- E. Veronica Belmega was co-organizer of a day of the GdR ISIS about “Game Theory, Optimisation and Learning: Interplay and Applications to Signal Processing” (8 November 2017).

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees
- Nicolas Gast was co-chair of the track “Performance Evaluation, Control, and Optimization (incl. queueing, game theory, machine learning)” of the convergence ITC 29.

10.1.2.2. Member of the Conference Program Committees
- Bruno Gaujal and Nicolas Gast have been member of the IFIP Performance Committee.
- Nicolas Gast has been member of the ACM Sigmetrics and ACM E-Energy committees.
- Arnaud Legrand has been member of the CCgrid, Cluster and PPAM committees.
- E. Veronica Belmega was a member of the technical program committees of Green Computing, Networking and Communications Symposium at ICNC 2017, IEEE BlackSeaComm, IEEE ICC 2017, Wireless Communications Symposium (ICC’17 WCS), and IEEE Wireless Communications and Networking Conference, WCNC.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards
- E. Veronica Belmega is an executive editor for the Transactions on Emerging Telecommunications Technologies.
- Nicolas Gast is member of the editorial board of Performance Evaluation.
- E. Veronica Belmega serves as an Associate Editor for the IET Signal Processing journal.

10.1.3.2. 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.
10.1.4. Invited Talks

- Arnaud Legrand has been invited to give invited keynotes on reproducible research: (Keynote at the LIRIS, Lyon, Nov. 2017, at the PRECIS Spring school, Fréjus, May 2017, at the Grenoble Data Science Institute, Apr. 2017, at the LIG, Grenoble, Mar. 2017 and at the ENS Rennes, Feb. 2017.)
- Bruno Gaujal has been invited to give the opening lecture for the class of 2021 at ENS Cachan, Sept. 2017.
- Nicolas Gast gave an invited talk at IBM New-York in April 2017 and at Imperial College London in December 2017.

10.1.5. Leadership within the Scientific Community

- Panayotis Mertikopoulos is a member of the committee of the MODE group of the SMAI.
- Bruno Gaujal is a member of the scientific bureau of the GDRIM.

Arnaud Legrand organize 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. This year, the following topics have been covered:

1. Publication Modes Favoring Reproducible Research
2. Artifact evaluation in computer systems’ conferences
3. Experimental testbeds in Computer Science
4. Statistical and Reproducibility Issues in Human Computer Interactions
5. An Approach to Practical Falsifiable Research: the Popper Convention

All the corresponding videos and materials are available at the following address: https://github.com/alegrand/RR_webinars/

10.1.6. Research Administration

- Bruno Gaujal has been the president of the jury for hiring CR2 Researchers in Inria Grenoble Rhône-Alpes.
- E. Veronica Belmega was member of an Associate Professor (Maître de Conférences) hiring committee, ENSEA.
- Nicolas Gast is member of the “conseil du laboratoire” of the LIG (Laboratoire d’Informatique de Grenoble).
- Bruno Gaujal is member of the “bureau du LIG” (Laboratoire d’informatique de Grenoble)
- Panayotis Mertikopoulos serves as the graduate students liaison (chargé de mission doctorants) for the Laboratoire d’Informatique de Grenoble
- Bruno Gaujal was president of the CR2 admissibility jury of Inria-Grenoble.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: Bruno Gaujal and Nicolas Gast, “Advanced Performance Evaluation”, 18h (M2), EN-SIMAG
Master M2R : Nicolas Gast “Optimization Under Uncertainties”, 18h (M2), Master ORCO, Grenoble.
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: 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: 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).
Master M2R: Panayotis Mertikopoulos Selected Topics in Probability Theory University of Athens, Online Learning and Optimal Decision Making MIF, ENS Lyon.
Master M2R: Vincent Danjean Operating Systems, MOSIG, Grenoble
Highschool Professors: Vincent Danjean is responsible of the University Dept. for Highschool Professors Training in Computer Science
Mooc: Arnaud Legrand is currently designing a MOOC on Reproducible Research with Konrad Hinsen (CNRS/Centre de Biophysique Moléculaire) and Christophe Pouzat (CNRS/ Mathématiques Appliquées in Paris 5) with the support of the Inria MOOC-lab. The diffusion of this MOOC is planned for 2018 on FUN-MOOC.

10.2.2. Supervision

- Alexandre Marcastel (PhD) - 2015-... (E. Veronica Belmega, Panayotis Mertikopoulos, co-advised with Inbar Fijalkow)
- Irched Chafaa (PhD) - 2017-... 75% (E. Veronica Belmega (co-advised with Merouane Debbah)
- Kimon Antonakopoulos (PhD) - 2017-... (E. Veronica Belmega, Panayotis Mertikopoulos and Bruno Gaujal)
- Pedro Bruel (co-advised with USP 2017-. . . ): Design of experiments and autotuning of HPC computation kernels (co-advised by Arnaud Legrand, Alfredo Goldman and Brice Videau, funded by the Brazilian Government).
- Bruno Luis de Moura Donassolo (CIFRE Orange 2017-...): Decentralized management of applications in Fog computing environments (co-advised by Arnaud Legrand, Panayotis Mertikopoulos and Ilhem Fajari, funded by Orange).
- Vinicius Garcia Pinto (co-tutelle with UFRGS 2013-...): Performance analysis and visualization of dynamic task-based applications (co-advised by Arnaud Legrand, Lucas Schnorr and Nicolas Maillard, funded by the Brazilian government).
- Rafael Tesser (co-tutelle with UFRGS 2013-...): Simulation and performance evaluation of dynamical load balancing of an over-decomposed Geophysics application (co-advised by Arnaud Legrand, Lucas Schnorr and Philippe Navaux, funded by the Brazilian government).
• Christian Heinrich (2015-...): Modeling of performance and energy consumption of HPC systems (advised by Arnaud Legrand) (funded by Inria).
• Baptiste Jonglez (2016-...) Leveraging Diversity in Communication Networks (co-advised by Bruno Gaujal and Martin Heusse), (funded by Univ Grenoble Alpes).
• Kimon Antonakopoulos (2017-...) Variational Inequalities and Pptimization (co-advised by Bruno Gaujal and Panayotis Mertikopoulos), (funded by Inria)

10.2.3. Juries
• Arnaud Legrand has served in the PhD jury of Tien-Dat Phan (reviewer) (Nov. 2017).
• Vincent Danjean and Arnaud Legrand have served on the master thesis jury for the MOSIG master program.
• Florence Perronnin have served on the master thesis jury for the MIAGE master program.
• E. Veronica Belmega has served as an examiner on the PhD jury of Dora BOVIZ (Nokia, Paris-Saclay); Faton MALIQI (Centrale Supelec) Chao ZHANG (Centrale Supelec)

10.3. 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 “Conference 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.
• Vincent Danjean and Florence Perronnin have participated to the “fête de la Science” on the unplugged computer science stand. Florence Perronnin was involved in the meeting days between industry and education, organized by the “Maison pour la Science”.
10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees


10.1.2. Scientific Events Selection

10.1.2.1. Steering committees

Yves Robert is a member of the steering committee of Euro-EduPar, HCW, Heteropar and IPDPS.

Bora Uçar serves in the steering committee of CSC.

10.1.2.2. Chair of Conference Program Committees

- Anne Benoit is the technical program chair of ICPP 2017, the technical papers co-chair of SC 2017, and the technical program chair of IPDPS 2018.
- Bora Uçar was the IPDPS 2017 Workshops Chair, IC3 2017 Algorithms track vice-chair. He is the general chair of IPDPS 2018.
- Yves Robert is the Panels Chair of SC’17.
- Yves Roibert serves as the Liaison between the steering committee and the program committee of IPDPS.

10.1.2.3. Member of the Conference Program Committees

- Matthieu Moy was a member of the program committee of the DUHDE and COMPASS workshops.
- Laure Gonnord was a member of the program committee of the VMCAI conference and NSAD workshop.
- Christophe Alias was a member of the program committee of the IMPACT and HIP3ES workshops.
- Loris Marchal was/is a member of the program committee of the SC 2017, IPDPS 2017 and IPDPS 2018 conferences.
- Bora Uçar was a member of the program committee of IA³, ICCS 2017, Euro-Par 2017, ScalCom 2017, P³MA, HiPC 2017, PPAM 2017, HPC4BD 2017.
- Yves Robert was a member of the program committee of FTS, FTXS, ICCS, and ISCIS.
- Frédéric Vivien was a member of the program committee of EduPar 17, IPDPS 2017 and 2018, PDP 2017, SBAC-PAD 2017, and SC 2017.

10.1.2.4. Reviewer

- Matthieu Moy was reviewer for ECRTS.
- Laure Gonnord was reviewer for STACS, VMCAI, NSAD.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Anne Benoit is Associate Editor for JPDC (Elsevier Journal of Parallel and Distributed Computing) and TPDS (IEEE Transactions on Parallel and Distributed Systems).
Yves Robert is Associate Editor for ACM TOPC (ACM Transactions on Parallel Computing), 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 a member of the editorial board of Parallel Computing.

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

• Matthieu Moy was reviewer for MICPRO 2017 (2 papers) and TCAD 2017.
• Christophe Alias was reviewer for ACM TACO and Proceedings of the IEEE.
• Loris Marchal was a reviewer for IEEE TPDS.
• Bora Uçar reviewed papers for SIAM SISC (5x), SIMAX (1x), IEEE TPDS (1x), Parallel Computing (2ex), Journal of Computational Science (1x).

10.1.4. Invited Talks

• Matthieu Moy gave an invited talk at “Journées nationales du GDR GPL”, Montpellier, 13 - 16 June 2017.
• Laure Gonnord gave invited talks to University of Nice and University of Evry (spring 2017) and to University of Reunion (dec 2017).
• Christophe Alias gave invited talks to “Journées Compilation” (june 2017) and “Journée Calcul” (nov 2017).
• Yves Robert gave an invited talk at the FTS’17 workshop, Honolulu (September 2017).

10.1.5. Tutorials

Yves Robert gave a tutorial on Fault-tolerance techniques for HPC platforms at SC’17 (with Aurélien Bouteiller, George Bosilca, and Thomas Hérault).

10.1.6. Research Administration

Jean-Yves L’Excellent was a member of the direction board of the LIP laboratory until August 2017.

Yves Robert 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 the v.i.e.d. of the LIP laboratory since September 2017. He 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:

• Yves Robert, Algorithmique, L3, ENS Lyon
• Anne Benoit, Algorithmique avancée, L3, ENS Lyon
• Matthieu Moy, programmation concurrenente, 24h EqTD, L3, UCBL, France
• Matthieu Moy, Unix, 9h EqTD, L1, UCBL, France
• Matthieu Moy, Projet informatique, 40h EqTD, L3, UCBL, France
• Matthieu Moy, Informatique, 30h EqTD, L1, Grenoble INP CPP, France
• Christophe Alias, Compilation (CM+TD 48h), Insa Centre Val de Loire

Master:
• Yves Robert is the head of the Master in Computer Science, ENS Lyon
• Anne Benoit, CSE Algorithms, undergraduate + graduate, Georgia Tech, USA
• Yves Robert, Scheduling at Scale, M2, ENS Lyon
• Matthieu Moy, programmation avancée, 15h EqTD, M1, UCBL, France
• Matthieu Moy, Projet de spécialité informatique, 18h EqTD, M1, Grenoble INP Ensimag, France
• Laure Gonnord, Compilation (CM+TD 76h), M1, Université Claude Bernard Lyon 1, and M1 Ecole Normale Supérieure de Lyon.
• Laure Gonnord, Complexité, M1 (TD 15h), Université Claude Bernard Lyon 1.
• Laure Gonnord, Compilation and Software Engineering(CM+TP 10h, with S. Mosser), M2 Ecole Normale Supérieure de Lyon.
• Christophe Alias, Optimisation d’applications embarquées (CM+TD 26h), Insa Centre Val de Loire
• Loris Marchal, Complexité, M1 (TD 15h), Université Claude Bernard Lyon 1.
• Frédéric Vivien, Algorithmique et Programmation Parallèles et Distribuées (CM 36 h), M1, École normale supérieure de Lyon, France.

Professional training:
• Loris Marchal is responsible of the competitive selection of the students of ENS Lyon for Computer Science.

10.2.2. Supervision

PhD in progress : Amaury Graillat, Génération de code pour un many-core avec des contraintes temps réel fortes, started in Sept. 2015, supervised by Matthieu Moy (LIP) and Pascal Raymond (Verimag).

PhD in progress : Tristan Delizy, Gestion mémoire pour architectures à base de NVRAM, started in Oct. 2016, co-supervised by Tanguy Risset (CITI), Guillaume Salagnac (CITI), Kevin Marquet (CITI) and Matthieu Moy (LIP).

PhD in progress: Gabriel Busnot, Accélération SystemC pour la co-simulation multi-physique et la simulation de modèles hétérogènes en complexité, started in Nov. 2017. Co-supervised by Matthieu Moy (LIP) and Tanguy Sassolas (CEA LIST).

PhD defended in December 2017: Hamza Rihani, Many-Core Timing Analysis of Real-Time Systems and its Application to an Industrial Processor, Univ. Grenoble Alpes, defended on Dec. 1st 2017. Supervised by Matthieu Moy (LIP) and Claire Maiza (Verimag).

PhD defended in December 2017: Denis Becker, Parallel SystemC/TLM Simulation of Hardware Components Described for High-Level Synthesis, Univ. Grenoble Alpes, defended on Dec. 11st 2017. Supervised by Matthieu Moy (LIP) and Jérôme Cornet (STMicroelectronics).

PhD in progress: Amaury Graillat, Génération de code pour un many-core avec des contraintes temps réel fortes, started in Sept. 2015, supervised by Matthieu Moy (LIP) and Pascal Raymond (Verimag).

PhD in progress: Amaury Graillat, Génération de code pour un many-core avec des contraintes temps réel fortes, started in Sept. 2015, supervised by Matthieu Moy (LIP) and Pascal Raymond (Verimag).

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PhD in progress: Amaury Graillat, Génération de code pour un many-core avec des contraintes temps réel fortes, started in Sept. 2015, supervised by Matthieu Moy (LIP) and Pascal Raymond (Verimag).

PhD defended in September 2017: Maroua Maalej “Low cost static analyses for compilers”, started in October 2014, advisors : Laure Gonnord and Frédéric Vivien.

HdR: Laure Gonnord, Contributions to program analysis: expressivity and scalability, defended in November 2018.
PhD in progress: Bertrand Simon, Memory aware task graph scheduling, started in Sept. 2015, supervised by Loris Marchal and Frédéric Vivien.
PhD in progress: Changjiang Gou, Communication- and memory-aware task graph scheduling, started in Oct. 2016, supervised by Anne Benoit and Loris Marchal.
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 Dec. 2015, supervised by Jean-Yves L’Excellent and Patrick Amestoy.
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: 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: Valentin Le Fèvre, “Scheduling and resilience at scale”, started in October 2017, funding: ENS Lyon, advisors: Anne Benoit and Yves Robert.
PhD in progress: Ioannis Panagiotas, “High performance algorithms for big data graph and hypergraph problems”, started in October 2017, funding: Inria, advisors: Frédéric Vivien and Bora Uçar.

10.2.3. Juries

- Anne Benoit was "rapporteur" in the Jury of Thomas Lambert (U. Bordeaux) in September 2017.
- Matthieu Moy was examiner in the jury of Cédric BEN AOUN (LIP6, UPMC) in July 2017.
- Laure Gonnord was “rapporteur” in the Jury of Thomas Rubiano (LIPN) in December 2017.
- Laure Gonnord was examiner in the Jury of Jacob Lidman (Chalmers, Sweden) in December 2017.
- Laure Gonnord was examiner in the Jury of Mauricia Fonenantsoa (Univ. Réunion) in December 2017.
- Laure Gonnord participated to the selection committee recruiting an assistant professor (MCF) at University of Grenoble, in Spring 2017.
- Laure Gonnord participated to the selection committee recruiting an assistant professor (MCF) at ENS Paris, in Spring 2017.
- Christophe Alias was “membre du jury” and “correcteur” for “concours E3A, épreuve d’Informatique MP” in May 2017.
- Jean-Yves L’Excellent was invited in the PhD jury of Théo Mary in November 2017.
9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- Claire Goursaud co-organized the GDR day on mathematical methods and tools for IoT network modeling.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Florent de Dinechin was program chair (with Javier Bruguera from ARM) of the 24th IEEE Symposium of Computer Arithmetic. He was co-chair of the track D11 “Reconfigurable Computing” of the Design Automation and Test in Europe (DATE) conference.

9.1.2.2. Member of Conference Program Committees

Tanguy Risset was a member of the following technical program committees:

- IEEE Computer Society Annual Symposium on VLSI (ISVLSI) 2017
- Design Automation and Test in Europe (DATE) 2017
- International Conference on Cognitive Radio Oriented Wireless Networks (CROWNCOM) 2017

Guillaume Villemaud was a member of the following technical program committees:

- CROWNCOM2017
- PIMRC 2017
- EUCAP 2017.

Florent de Dinechin was a member of the following technical program committees:

- Design Automation and Test in Europe (DATE 2017)
- 25th IEEE International Symposium on Field-Programmable Custom Computing Machines (FCCM 2017)
- International Conference on Field-Programmable Technology (FPT 2017).

Malcolm Egan was a member of the following technical program committees:

- IEEE Global Communications Conference (GLOBECOM) 2017
- International Conference on Advanced Technologies for Communications (ATC) 2017
- International Conference on Recent Advances on Signal Processing, Telecommunications & Computing (SigTelCom) 2017
Jean-Marie Gorce was a member of the following technical program committees:

- IEEE International Global Communications Conference (GLOBECOM 2017) - Cognitive Radio Networks
- IEEE International Symposium on Personnal Indoor and Mobile Radio Communications (PIMRC 2017, track 1)
- IEEE International conference on Communications (ICC 2017, track 1)
- IEEE Wireless Communications and Networking Conference (WCNC 2017)

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Guillaume Villemaud is an associate editor of Annals of Telecommunications (Springer).
Claire Goursaud is associate editor for ETT and ITL, Wiley.
Jean-Marie Gorce is associate editor for Journal of Wireless Communications and Networking (JWCN), Springer.

9.1.4. Scientific Expertise

Tanguy Risset is member of the Administration council (Conseil d’administration) of the GRAME institute (centre national de création musicale).
Guillaume Villemaud is a member of the Delphi Expert Panel on Software Defined Networks (SDN) and Network Functions Virtualisation (NFV).
Jean-Marie Gorce was appointed as scientific expert for Haute école spécialisée de Suisse occidentale and for FNRS (Belgium).
Jean-Marie Gorce is member of the Administration council (Conseil d’administration) of ESISAR, Valence.
Jean-Marie Gorce was member of the jury for prix de thèse en signal-image de EEA-ISIS-GRETSI 2017.

9.1.5. Invited Talks

Jean-Marie Gorce gave the following invited talks:

- (Keynote speaker) Toward reliable, reactive and energy efficient bursty multi-user communications at Dependable Wireless Communications and Localization for the IoT workshop organized under the umbrella of the COST Action CA15104 (IRACON), Graz, Austria, September, 12th, 2017.

9.1.6. Research Administration

Jean-Marie Gorce is Adjoint to Scientific Director of Inria Rhônes-Alpes center.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

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 Delizynmemory management for normally-of NV-RAM based systems, Insa-Lyon, (Region ARC6) since 09/2016.
PhD in progress Yohan UguenSynthesis of arithmetic operators, Insa-Lyon, (Ministry of research) since 09/2016.
PhD in progress Yuqi MoScaling of IoT Communication issuers, Insa-Lyon, since 09/2015.
PhD in progress : Andrea Bocco: Porposition d’une unité de calcul U-NUM pour le calcul scientifique, ANR Metalibm grant, since 12/2016.
PhD in progress : Anade Akpo Dadja: Non asymptotic fundamental limits of impulsive radio communication, ANR Arburst grant, since 09/2017.
PhD in progress : Diane Duchemin: Distributed coding in dense IoT Network, ANR Metalibm grant, since 01/2017.
PhD : Victor QuinteroNoisy Channel-Output Feedback in the Interference Channel, École Doctorale EEA, 12/12/2017.
HdR: Claire Goursaud Contribution to the uplink PHY/MAC analysis for the IoT and BAN applications, Doctoral School EEA, 1/12/2017

9.2.3. Juries

Tanguy Risset was a member of the jury of the following theses:
- Clément le Bas Marcos (Université de Limoges) as jury president,
- Celestin Matte (U. Lyon, dec. 2017) as examiner.

Guillaume Villemaud was a reviewer of Xiwen Jiang’s thesis (Eurecom, oct. 2017).

Florent de Dinechin was a member of the jury of the following theses:
- Julie Dumas (Grenoble, dec. 2017) as examiner,
- Gael Deest (Rennes, dec. 2017) as reviewer.

Jean-Marie Gorce was a member of the jury of the following theses:
- Ahmad M Alam (INSA Rennes, March 2017) as reviewer,
- Fayçal Ait Aoudia (Université de Rennes, Sept 2017) as reviewer,
- Quentin Bodinnier (Centrale-Supelec, Oct 2017) as reviewer,
- Louis-Adrien Dufrene (INSA Rennes, Dec 2017) as examiner,
- Victor Quintero Florez (INSA Lyon, Dec 2017) as co-advisor.

Jean-Marie Gorce was a member of the jury of the following HdR:
- Guillaume Ferré (ENSIB, Bordeaux) as reviewer,
- Matthieu Crussières (INSA Rennes, Nov 2017) as reviewer,
- Claire Goursaud (INSA Lyon, Dec 2017) as examiner.
10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- O. Simonin was Sponsor Chair of ECAL 2017, the 14th European Conference on Artificial Life, organized in Lyon, September 4-8 (https://project.inria.fr/ecal2017/).
- C. Laugier co-organized with Chao Lu a workshop at Beijing Institute of Technology (BIT) on “Technologies for Autonomous Vehicles”, Beijing, May 2017.
- 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).
- J. Dibangoye and O. Simonin co-organized the 1st Ecole d’Automne en IA, in Lyon, with Prof. C. Solnon (LIRIS, INSA Lyon) and the Pre-GDR IA, CNRS.
- F. Jumel is Member of Organizing Committees of the Robocup@Home league.
- F. Jumel is elected member of Technical Committees of the Robocup@Home league.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- C. Laugier was Associate Editor for IEEE/RSJ IROS 2017 (Vancouver), for IEEE ICRA 2017 (Singapore), and for IEEE ITSC 2017 (Yokohama).

10.1.2.2. Member of the Conference Program Committees

- Jilles S. Dibangoye served, in quality of program committee member, for the following conferences: AAAI, IJCAI
- O. Simonin served, in quality of program committee member, for AAMAS (Autonomous Agent and Multi-agent Systems International Conference), Track Robotics.
- O. Simonin served, in quality of program committee member, for ICAPS (International Conference on Automated Planning and Scheduling), Track Robotics.
- O. Simonin served, in quality of program committee member and co-editor of the proceedings, for ECAL (European Conference on Artificial Life).
- O. Simonin is Program Committee member of the JFSMA conference since 2008 (Journées Franco-phones sur les Systèmes Multi-Agents).

10.1.2.3. Reviewer
• Agostino Martinelli served, in quality of reviewer, for the following conferences: ICRA, IROS, ACC.
• Jilles S. Dibangoye served, in quality of reviewer, for the following conferences: AAAI, IJCAI, ICRA.
• Olivier Simonin served, in quality of reviewer, for the following conferences: ICRA, IROS, ICAPS, ACC.

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 Robotics, Transaction on Automatic Control, Transaction on Control System and Technology, Robotics and Automation Letters.
• Jilles S. Dibangoye served, in quality of reviewer, for the following journals: Revue d’Intelligence Artificielle, Mathematics and Artificial Intelligence Journal
• O. Simonin served, in quality of reviewer, for the following journals: Robotics and Autonomous Systems, Autonomous Robots (AURO) and RIA (Revue d’Intelligence Artificielle).

10.1.4. Invited Talks
• A. Martinelli was invited to give a talk at the Robotics and Perception Group at the university of Zurich, December 2017, “Closed form solution to cooperative visual inertial sensor fusion”.
• Christian Laugier was invited to give a talk at the 4th journée “Mobilité Innovante: La sécurité Par et Pour les véhicules autonomes”, Clermont-Ferrand, January 2017. Title: “Perception for risk prediction and autonomous driving” [14].
• Christian Laugier was invited to give a talk at the IS-Auto-Europe 2017, Dusseldorf, April 2017. Title: “Embedded Bayesian Perception and V2X Communication for Autonomous Driving” [13].
• Christian Laugier was invited to give a talk at the GTC 2017, San José, California, May 2017. Title: “Embedded Bayesian Perception and VTX Communication for Autonomous Driving” [17].
• Christian Laugier was invited to give a talk at the IEEE ICRA 2017 Workshop on Robotics and Vehicular Technologies for Self-Driving Cars, Jun 2017, Singapore, 2017. Title: “Embedded Bayesian Perception and Collision Risk Assessment” [12].
• Jilles S. Dibangoye was invited to give a talk at the MAFTEC group of the Artificial Intelligence GDR, Nov 2017. Title: “Learning to Act Optimally in Decentralized POMDPs”.
• C. Wolf was invited to a talk at the conference Journées Nationale de la Recherche en Robotique. November 8th-10th, 2017, Biarritz, France. Title: Learning human centered computing for vision and robotics.
• C. Wolf was invited as a Keynote at European and Nordic Symposium on Multimodal Communication. October 17th, 2017. Title: Learning human motion: gestures, activities, pose, identity.

10.1.5. Leadership within the Scientific Community
- O. Simonin was elected in 2017 as member of the Board of AFIA, the French Association for Artificial Intelligence.
- 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 led by ARDI in the scope of the Innovation Regional Strategy).

10.1.6. Scientific Expertise
- C. Laugier is member of the Advisory Board of ISR University of Coimbra. He visited ISR in March 2017.
- C. Laugier is Scientific Advisor for the ProbaYes SA.
- C. Laugier have written a report on the concept of “Robot Taxi” for Renault-Nissan.
- O. Simonin was a member of the 2017 ANR scientific committee, and a reviewer, for the Interaction and Robotics call.
- O. Simonin was a reviewer for ANRT, CIFRE PhD thesis grant.
- O. Simonin was a reviewer for ANR ASTRID project submissions.
- A. Martinelli served, in quality of reviewer, for ANR project submissions.

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 Auvergne-Rhone-Alpes Robotics cluster (Coboteam), for Inria and INSA de Lyon entities.
- O. Simonin is member of the Scientific Council of the Digital League (Auvergne-Rhone-Alpes).
- 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
- F. Jumel is member of the board of IMAGINOVE cluster (digital content industry)
- F. Jumel is member of the Rhone-Alpes Robotics cluster (Coboteam)

10.2. Teaching - Supervision - Juries

10.2.1. Teaching
CPE Lyon Lyon 4-5th year : F. Jumel, resp. of the Robotics option, 400h M1/ M2, Dept. SN CPE Lyon France.
CPE Lyon Lyon 4-5th year : F. Jumel, 250h (robotic vision, cognitive science, Interface robot machine, deeplearning, Robotic frameworks, robotic plateforms, Kalman Filter)
INSA Lyon 3rd year : Jilles S. Dibangoye, Algorithmique et programmation, 76h, L3, Dept. Telecom INSA de Lyon, France.
INSA Lyon 3rd year : Jilles S. Dibangoye, WEB, 42h, L3, Dept. Telecom INSA de Lyon, France.
INSA Lyon 3rd year : Jilles S. Dibangoye, Operating Systems, 56h, L3, Dept. Telecom INSA de Lyon, France.
INSA Lyon 4rd year : Jilles S. Dibangoye, Operating Systems, 16h, Master, Dept. Telecom INSA de Lyon, France.
INSA Lyon 5th year : Jilles S. Dibangoye, the Robotics option : AI for Robotics, Robotics projects, 8h, M2, Dept. Telecom INSA de Lyon, France.
INSA Lyon 5th year : O. Simonin, resp. of the Robotics option : AI for Robotics, Software and Hardware for robotics, Robotics projects, 60h, M2, Dept. Telecom INSA de Lyon, France.

INSA Lyon 3rd year : O. Simonin, Algorithmique et programmation, 30h, L3, Dept. Telecom INSA de Lyon, France.

INSA Lyon 5th year : A. Spalanzani, Navigation en environnement humain, 2h, M2, INSA de Lyon, France.

Master : Laetitia Matignon, Multi-Agents and Self-* Systems, 10h TD, M2 Artificial Intelligence, Lyon 1 University, France.

Master : Laetitia Matignon, Multi-Robot Systems, 20h TD, 5th year of engineer, Polytech Lyon Informatics Department, France.


10.2.2. Supervision


PhD in progress: David Sierra Gonzalez, Autonomous Driving (cooperation Toyota), 2014, C. Laugier, J. Dibangoye, E. Mazer (Inria Prima).

PhD in progress: Mathieu Barbier, Decision making for Intelligent Vehicles (cooperation Renault), 2015, C. Laugier, O. Simonin, E. Mazer (Inria Prima).


PhD in progress: Mihai Popescu, Robot fleet mobility under communication constraints, 2015, O. Simonin, A. Spalanzani, F. Valois (CITI/Inria Agora).


10.2.3. Juries

1. PhD thesis juries

   – C. Laugier was reviewer and member of the defense committee of the PhD thesis of Scott Drew Pendleton, NUS Singapore, April 2017.

   – O. Simonin was a reviewer and a member of the defense committee of the PhD thesis of Ange Nizard, Université Blaise Pascal, Clermont-Ferrand, February 4th, 2017.

   – O. Simonin was a reviewer and a member of the defense committee of the PhD thesis of Alexandre Lombard, UTBM (Univ. de Technologie de Belfort-Montbéliard), December 11, 2017.

   – A. Spalanzani was a reviewer and a member of the defense committee of the PhD thesis of Harmish Khambhatia, Université Toulouse III Paul Sabatier, October 2017.
– Laetitia Matignon was a member of the defense committee of the PhD thesis of Nassim Kalde, Université de Lorraine, December 12th, 2017.
– C. Wolf was reviewer and member of the defense committee of the PhD thesis of Enjie Ghorbel, Université de Normandie, October 10th, 2017.
– C. Wolf was reviewer and member of the defense committee of the PhD thesis of Jorris Guerry, Ecole Polytechnique, November 20th, 2017.
– C. Wolf was reviewer and member of the defense committee of the PhD thesis of Juan Manuel Perez Rua, Université de Rennes, December 4th, 2017.
– C. Wolf was reviewer and member of the defense committee of the PhD thesis of Grigory Antipov, Télécom ParisTech, December 15th, 2017.

2. Member of committee for Professor, Associate Prof., Research Director or Researcher recruitment
– O. Simonin was a member of the jury of the Professor position at INSA Lyon, CITI Lab., on June 2017.

10.3. Popularization

• Laetitia Matignon participated to the « Fête de la Science » with a Turtlebot demonstration workshop (October 12th and 13th, Lyon, 2017).
• Olivier Simonin was invited by Université Populaire de Montelimar to give a talk about Autonomous Vehicles, on December 19.
• January 30, 2017, F. Jumel, Digital Summit, Hotel de Region Auvergne Rhone Alpes, Robotic Show
• February 2017, F. Jumel, FSM 2017, BU Sciences : Robotic Show : Dance with Baxter
• June 9, 2017, F. Jumel, AGERA, “service robots, review of the state”
• October 10, 2017, F. Jumel, Conference IESF Lyon-RA, Where Artificial Intelligence Is Now (with L. Chen)
• November 9, 2017, F. Jumel, 2017 Scientific event of Open University of Lyon : “Intelligent robotics, between myth and reality”
• November 14, 2017, F. Jumel, IA event, IPL, “Presentation of Challenges of robocup”, (with P. Dominey, R. Lucazeau)
9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair
Remi Ronfard was the scientific chair for the Eurographics workshop on intelligent cinematography and editing (WICED) in Lyon, France in April 2017.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees
- Marie-Paule Cani was the Technical Paper Chair for Siggraph 2017.
- Stefanie Hahmann is the paper chair for SPM 2018.

9.1.2.2. Member of the Conference Program Committees
- Damien Rohmer was member of the following International Program Committee: ACM SIGGRAPH General submissions and poster program; Symposium on Computer Animation (SCA); Symposium on Solid and Physical Modeling (SPM); Shape Modeling International; Fabrication and Sculpting Event (SMI-FASE). He was also member of the jury committee of the best paper for the "Journées d’Informatique Française 2017" (J.Fig).
- Remi Ronfard was a member of the Program Committees for Motion in Games (MIG 2017) and International Conference on Interactive Storytelling (ICIDS 2017).
- 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).

9.1.2.3. Reviewer
- Damien Rohmer was a reviewer for the journals: ACM TOG, Computer and Graphics, Computing and Informatics.
- Remi Ronfard was a reviewer for ACM Siggraph, Siggraph Asia, Computer Vision and Pattern Recognition (CVPR) and Computer Human Interface (CHI) conferences.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards
- Marie-Paule Cani is an Associate Editor of ACM Transactions on Graphics (TOG).
- Stefanie Hahmann is an Associate Editor of CAD (Elsevier) and Computers & Graphics (Elsevier).
- Jean-Claude Léon is an Associate Editor of CAD (Elsevier).

9.1.3.2. Reviewer - Reviewing Activities
- Stefanie Hahmann was a reviewer for the journals CAGD and CAD.
• Jean-Claude Léon was a reviewer for the journal ASME JCISE.

9.1.4. Invited Talks
Rémi Ronfard gave the following invited talks
• Movie Making Machines, Xerox Research Center Europe, February 2017.
• Directing virtual worlds from script to screen, Officine Sintetiche Lab, CIRMA, Torino, May 2017.
• Computer science and visual arts, CNRS, May 2017.
• Synchronization of senses, ICCV workshop CVAM, Keynote invited speaker, October 2017.


9.1.5. Scientific Expertise
• Marie-Paule Cani
  – was a reviewer for a consolidator and a starting ERC project.
  – did some consulting for Disney Research, Zurich.
• Rémi Ronfard
  – was a member of the scientific committee at IMAGINOVE in 2017.
• Stefanie Hahmann
  – was an expert for the Netherlands Organisation for Scientific Research.
  – serves as a member of the Advisory Board (2014-2018) for the European Marie-Curie Training Network ARCADES.
• Damien Rohmer was reviewer for an ANR submission and a "Grand Est Application" project.

9.1.6. 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 was joint director of Laboratoire Jean Kuntzmann until April 2017.
• Damien Rohmer is member of the Conseil d’Administration of Association Française d’Informatique Graphique (AFIG).
• 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.

9.2. Teaching - Supervision - Juries

9.2.1. 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 for 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 for 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 for 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 planned to use the same e-learning framework (SIDES) to manage evaluations and to create a large shared database of questions.

• 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 for the Image, Modeling & Computing specialization program attracting 35 students per year. He gives, and is responsible for 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 2017); Game Engine Programming, M2R IMAGINA, University of Montpellier (36 hours in October-December 2017) and Advanced 3D animation, M2R MOSIG, University of Grenoble Alpes (12 hours in December 2017).

• Jean-Claude Léon is in charge of the module Mechanical Systems at Grenoble-INP ENSE3 (300 students, 64h, coordination of three courses)

• Frederic Devernay teaches Computer Science at CPP - La prépa des ING, Grenoble (50h, 200 students).

Note that MOSIG is a 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.

9.2.2. Supervision


• PhD: 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, supervised by Frédéric Devernay and James Crowley (LIG, Grenoble). Defended in October 2017.


• PhD in progress: Sandra Nabil (Université de Grenoble Alpes). High resolution panoramic video creation and processing (Vidéo panoramique 360 degrés à très haute résolution). October 2015 - October 2018. Frédéric Devernay, James Crowley (LIG, Grenoble).


• M2R: Sarah Kushner. Master MOSIG. Sketch-Based Posing and Interaction of Multiple Characters: Animating Dancing Couples. Supervised by Marie-Paule Cani and Rémi Ronfard. Sarah Kushner is now a PhD Student at the University of Toronto.

• M2R: Tuan Hung Vu. Master MOSIG. Learning cinematographic style from pictures. Supervised by Karteek Alahari (THOTH team) and Rémi Ronfard. Tuan Hung Vu is now a PhD student at IMT Lille Douai.

• M1: Hugo Frezat. Master MOSIG. Story Generation from Pictures. Supervised by Rémi Ronfard.

### 9.3. Popularization

Starting in May 2017, our recent work on "3D animation by gesturing and drawing" has been featured in a live demo open to the general public in the new Espace Login at Inria in Montbonnot.

On November 8 and 9, that same demo was presented at Studio 104 in Paris during the celebration of Inria’s 50th anniversary, to an audience of several hundred people.

Rémi Ronfard gave presentations on

- Directing virtual worlds, Ministère de la Culture, January 2017.
- Eyetracking and the arts, Institut d’Art Contemporain, Lyon, April 2017.
- Computer science and theatre, ENSATT Lyon, December 2017.

Marie-Paule Cani was invited by France Inter’s Dorothée Barba on December 25, 2016 to speak about the Imagine team and the future of cinema. A podcast of the the program (Demain la veille: cinema futurismo) can be obtained from [https://www.franceinter.fr/emissions/demain-la-veille/demain-la-veille-25-decembre-2016](https://www.franceinter.fr/emissions/demain-la-veille/demain-la-veille-25-decembre-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

- Georges-Pierre Bonneau was a member of the International Program Committees of the conferences Solid and Physical Modeling 2017, Eurographics Visualization Symposium 2017 (short paper track) and EnvirVis 2017.
- Romain Vergne was a member of the Conference Program Committee of SIBGRAPPI 2017.
- Joëlle Thollot was a member of the Conference Program Committee of Expressive 2017.
- Nicolas Holzschuch was a member of the Program Committee for the Symposium on Interactive 3D Graphics and Games (I3D) 2017.
- Nicolas Holzschuch is a member of the Steering Committee for the Eurographics Symposium on Rendering.

9.1.1.2. Reviewer

All members of the Maverick team work as reviewers for the most prestigious conferences, including Siggraph, 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


9.1.4. Research Administration

- Georges-Pierre Bonneau is member of the “conseil du Laboratoire Jean Kuntzmann”.
- Romain Vergne is member of the “conseil du Laboratoire Jean Kuntzmann”.
- Romain Vergne is co-responsible of the GT Rendu.
- Romain Vergne is co-responsible of the PhD students of the Laboratoire Jean Kuntzmann.
- 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).
- Nicolas Holzschuch is responsible for the department "Geometry and Images" of the Laboratoire Jean Kuntzmann.

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.
9.2.2. Supervision

- PhD: Tibor Stanko, Reconstruction de surfaces lisses maillées à partir de capteurs inertiels, Friday december 8th, 2017, Stefanie Hahmann and Georges-Pierre Bonneau.
- PhD: Benoit Arbelot, Transferts d’apparence en espace image basés sur des propriétés texturelles, April 7, 2017, Joëlle Thollot, Romain Vergne.
- PhD in progress: Alexandre Bléron, Stylization of animated 3D scenes in a painterly style, October 1, 2015, Joëlle Thollot, Romain Vergne.
- PhD in progress: Vincent Tavernier, Procedural stochastic textures, October 1, 2017, Fabrice Neyret, Joëlle Thollot, Romain Vergne.
- PhD in progress: Guillaume Loubet, Efficient representations for sub-pixel appearance, October 1, 2014, Fabrice Neyret.
- PhD in progress: Jeremy Wambecke, Temporal Data Visualization in Natural Environments, September 2015, Georges-Pierre Bonneau, Romain Vergne and Renaud Blanch.
- PhD in progress: Alban Fichet, Efficient representation for measured reflectance, October 1, 2015, Nicolas Holzschuch.

9.2.3. Juries

- Fabrice Neyret was in the jury of the HDR of Pascal Barla on October 9th, 2017 (Bordeaux, France).
- Joëlle Thollot was in the jury of the PhD of Hristina Hristova (Univ. Rennes 1) and Jean Hergel (Inria Nancy).

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 “Engineering weeks”, and 0 to 2 groups in the scope of Math-C2+ operations.

Fabrice Neyret published a popularization article "Maths in special effects" in the magazine "Tangentes" #178 (sep-oct 2017).

Fabrice Neyret maintains the blog shadertoyunofficial (https://shadertoyunofficial.wordpress.com/) and various shaders examples on Shadertoy site (https://www.shadertoy.com/) to popularize GPU technologies as well as disseminates academic models within computer graphics, computer science, applied math and physics fields.
MOEX Project-Team

6. Dissemination

6.1. Promoting Scientific Activities

6.1.1. Scientific Events Organisation

6.1.1.1. Member of Organizing Committees

- Jérôme Euzenat was organiser of the 12th Ontology matching workshop of the 16th ISWC, Wien (AT), 2017 (with Pavel Shvaiko, Ernesto Jiménez Ruiz, Michele Cheatham and Oktie Hassanzadeh)
- Jérôme Euzenat was organiser of the 1st Workshop on Interaction-Based Knowledge Sharing (WINKS) of the 3rd Joint Ontology Workshop (JOMO), Bozen-Bolzano (IT), 2017 (with Dagmar Gromann and Kemo Adrian)

6.1.2. Scientific Events Selection

6.1.2.1. Member of Conference Program Committees

- Jérôme David and Jérôme Euzenat have been programme committee members of the “International joint conference on artificial intelligence (IJCAI)” 2017
- Manuel Atencia, Jérôme David and Jérôme Euzenat have been programme committee members of the “International semantic web conference (ISWC)” 2017
- Jérôme David and Jérôme Euzenat have been programme committee members of the “European Semantic Web Conference (ESWC)” 2017
- Jérôme Euzenat has been programme committee member of the “International Worldwide web Conference (WWW)” 2017
- Jérôme Euzenat has been programme committee member of the “13th International Conference on Semantic Systems (Semantics)” 2017
- Jérôme Euzenat has been programme committee member of the “International Conference on Web Information Systems and Technologies (WebIST)” 2017
- Manuel Atencia and Jérôme David have been programme committee members of the ISWC “Ontology matching” workshop (OM) 2017
- Jérôme David and Jérôme Euzenat have been programme committee members of the “French Extraction and gestion des connaissances conference (EGC)” 2017
- Jérôme David has been programme committee member of the “28es Journées francophones d’ingénierie des connaissances (IC)” 2017

6.1.2.2. Reviewer

- Jérôme David has been a reviewer for the 31st “AAAI Conference on artificial intelligence (AAAI)”, 2017.

6.1.3. Journal

6.1.3.1. Member of 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.

6.1.3.2. Reviewer - Reviewing Activities

- Manuel Atencia has been reviewer for Knowledge-based systems and the VLDB journal.
- Jérôme Euzenat has been reviewer for ACM transactions on the web, and Mobile information systems.
6.1.4. Invited Talks

- “Symbolic methods for RDF data interlinking”, Lecture at EGC, Grenoble (FR), 2017-01-23 (Jérôme David)
- “Data interlinking using link keys”, Seminar Trinity college, Dublin (IE), 2017-04-13 (Jérôme Euzenat)
- “Cultural knowledge evolution: motivations and experiments”, Seminar Trinity college, Dublin (IE), 2017-04-13 (Jérôme Euzenat)
- “Linked data”, Tutorial at the 4th Journées du développement logiciel (JDev) 2017, Marseille (FR), 2017-07-06 (Manuel Atencia)
- “Knowledge diversity under socio-environmental pressure”, Invited talk, International Conference on Computational Approaches to Diversity in Interaction and Meaning, Venezia (IT), 2017-10-08 (Jérôme Euzenat)
- “Ontology matching, adaptation and evolution”, GDRI in Web science Workshop, PUC-Rio, Rio de Janeiro (BR), 2017-12-04 (Jérôme Euzenat, Fernanda Baião, Kate Revoredo)

6.1.5. Leadership within the Scientific Community

- Jérôme Euzenat is member of the executive committee and the scientific council of the CNRS Pre-GDR “Artificial intelligence”.

6.1.6. Research Administration

- Jérôme David is member of the organising committee of the LIG keynote speeches

6.2. Teaching - Supervision - Juries

6.2.1. Teaching

- Jérôme David is coordinator of the Master “Mathematiques et informatiques appliquées aux sciences humaines et sociales” (Univ. Grenoble Alpes)
- Manuel Atencia is responsible of the option “Web, Informatique et Connaissance” of the Master 2nd year “Mathematiques 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)

6.2.1.1. Lectures

Licence: Jérôme David, Algorithmique et programmation par objets, 70h, 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
Master: Jérôme David, Programmation Java 2, 30h, M1 MIASHS, UGA, France
Master: Jérôme David, Formats de données du web, 15h, M1 MIASHS, UGA, France
Master: Jérôme David, JavaEE, 30h, M2 MIASHS, UGA, France
Master: Jérôme David, Développement Web Mobile, 22h30, M2 MIASHS, UGA, France
Master: Manuel Atencia, Formats de données du web, 15h, 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: Manuel Atencia, Web sémantique, 27h, M2 MIASHS, UGA, France
Master: Manuel Atencia, Semantic web: from XML to OWL, 22.5h, M2R MoSIG, UGA, France
6.2.2. Supervision

- MSc: Jérémy Vizzini, Data interlinking with relational concept analysis, M2R Informatics Data science, Univ. Grenoble Alpes, June 2017 (Jérôme David and Jérôme Euzenat)

6.2.3. PhD committees

- Jérôme Euzenat has been committee chair of the computer science PhD of Anthony Hombiat (Université Grenoble Alpes) “OF4OSM: Un métamodèle pour structurer la folksonomie d’OpenStreetMap en une nouvelle ontologie” supervised by Jérôme Gensel and Marlène Villanova-Oliver, 2017
- Jérôme Euzenat has been reviewer of the computer science PhD of Nguyen Thinh Dong (Université Paris 8 – Vincennes) “Révision d’ontologies fondée sur tableaux” supervised by Myriam Lamolle and Chan Le Duc, 2017
- Jérôme Euzenat has been external examiner of the computer science PhD of Zlatan Dragisic (Linköping university) “Completion of ontologies and ontology networks” supervised by Patrick Lambrix, 2017
- Jérôme Euzenat has been committee chair of the computer science PhD of Jie Sun (Université Clermont-Auvergne) “Intelligent flood adaptive context-aware system” supervised by Kun Mean Hou, Gil de Sousa and Catherine Roussey, 2017
- Jérôme Euzenat has been external examiner of the computer science PhD of Abdelfettah Feliachi (Université Paris-Est) “Interconnexion et visualisation de ressources géoréférencées du Web de données à l’aide d’un référentiel topographique de support” supervised by Bénédicte Bucher, Fayçal Hamdi and Nathalie Abadie, 2017
- Jérôme Euzenat has been committee chair of the computer science PhD of Abdullah Abbas (Université Grenoble-Alpes) “Static analysis of semantic web queries with ShEx schema constraints” supervised by Nabil Layaida, Pierre Genevès and Cécile Roisin, 2017
- Jérôme Euzenat has been reviewer of the computer science PhD of Quentin Cohen-Solal (Université de Caen-Normandie) “Un cadre algébrique pour le raisonnement qualitatif en présence d’informations hétérogènes: application aux raisonnements multi-échelle et spatio-temporel” supervised by Maroua Bouzid and Alexandre Niveau, 2017

6.3. Popularization

- Jérôme Euzenat gave a talk to the local #FranceIA day “Intelligence artificielle et communication”, Grenoble (FR), 2017-03-02
- Manuel Atencia animated the workshop “Modéliser les ontologies: cas d’application d’une ontologie pour l’annotation de photos” at the 4th Journées du développement logiciel (JDEV), Marseille (FR), 2017-07-06
- Jérôme David animated the workshop “Comment faire une application avec des données liées: annotation de photos en utilisant les technos du web sémantique avec Jena” at the 4th Journées du développement logiciel (JDEV), Marseille (FR), 2017-07-06
- Jérôme Euzenat gave an interview “Dans 50 ans, les ordinateurs écriront des succès littéraires?” for the Inria web site, Montbonnot (FR), 2017-10-24
10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Member of the Conference Program Committees

- Franck Hétroy-Wheeler was a PC member for the Eurographics 2017 conference (short papers track).
- Edmond Boyer was area chair for BMVC and 3DV 2017.

10.1.1.2. Reviewer

- Jean-Sébastien Franco reviewed for CVPR and ICCV 2017.
- Stefanie Wuhrer reviewed for CVPR and ICCV 2017.

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

- Edmond Boyer is associate editor of the International Journal of Computer Vision (Springer).

10.1.2.2. Reviewer - Reviewing Activities


10.1.3. Invited Talks

- Julien Pansiot talked at the INNOVACS Conférence "L’Innovation et la recherche pour le Sport, la Santé et le Bien-être"
- Edmond Boyer gave invited talks at: Inria Sophia Antipolis (February) , Journées scientifiques Inria (June) , ICCV Workshop on people capture (October), IPTA Montreal (December) 2017.

10.1.4. Scientific Expertise

- Edmond Boyer reviewed research proposals for EPSRC (UK) and KAUST (Saudi Arabia) in 2017.
- Edmond Boyer was a member of the recruiting committee of Ecole Central Paris for a professor position in 2017.
- Edmond Boyer was a member of the Inria Grenoble Rhône-Alpes recruiting committee for postdocs and visiting researchers in 2017.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence: Jean-Sébastien Franco, Introduction to Imperative Programming, 55h, Ensimag 1st year, Grenoble INP.
Licence: F. Hétroy-Wheeler, Algorithmics and data structures, 42h, Ensimag 1st year, Grenoble INP.
Master: Jean-Sébastien Franco, Introduction to Computer Vision, 27h, Ensimag 1st year, Grenoble INP.
Master: F. Hétroy-Wheeler, 3D graphics, 16h, Master of Science in Informatics, Université Grenoble Alpes.
Master: F. Hétroy-Wheeler, co-responsability of the Mathematical Modeling, Image and Simulation (MMIS) track of Ensimag, Grenoble INP.
Master: Edmond Boyer, 3D Modeling, 18h, M2R Mosig GVR, Grenoble INP.
Master: Edmond Boyer, Introduction to Visual Computing, 30h, M1 MoSig, Université Grenoble Alpes.

10.2.2. Supervision

PhD: Adnane Boukhayma, Surface Motion Capture Animation, Université de Grenoble, defended 06/12/2017, supervised by Edmond Boyer.
PhD in progress: Victoria Fernàndez Abrevaya, 3D Dynamic Human Motion Representations, Université de Grenoble Alpes, started 01/10/2016, supervised by Edmond Boyer and Stefanie Wuhrer.
PhD in progress: Claude Goubet, Modeling of 3D Foot, Université de Grenoble Alpes, started 01/10/2017, supervised by Edmond Boyer and Julien Pansiot.
PhD in progress: Roman Klakov, Deep Learning for 3D Shape Modeling Environment, Université de Grenoble Alpes, started 01/10/2017, supervised by Edmond Boyer and Jakob Verbeek.
PhD in progress: Vincent Leroy, 4D shape reconstruction from photoconsistency cues, Université de Grenoble Alpes, started 01/10/2015, supervised by Edmond Boyer and Jean-Sébastien Franco.
PhD in progress: Abdullah-Haroon Rasheed, Cloth Modeling and Simulation, Université de Grenoble Alpes, started 01/11/2017, supervised by Florence Bertails-Descoubes, Jean-Sébastien Franco and Stefanie Wuhrer.
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: Nitika Verma, Deep Learning on Irregular Grids, Université de Grenoble Alpes, started 01/10/2017, supervised by Edmond Boyer and Jakob Verbeek.
PhD: Li Wang, Algorithms and criteria for volumetric Centroidal Voronoi Tessellations, Université Grenoble Alpes, defended 27/01/2017, 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

- Jean-Sébastien Franco was a member of the defense commitee of Adnane Boukhayma (Univ. Grenoble Alpes).
- 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).
- Edmond Boyer was a member of the defense commitee of Rodrigo Ortíz Cayon.
PERCEPTION Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

Xavier Alameda-Pineda was area chair of IEEE/CVF International Conference on Computer Vision 2017.

9.1.1.2. Member of the Organizing Committees


9.1.2. Scientific Events Selection

9.1.2.1. Reviewer


Xavier was awarded with the CVPR 2017 Outstanding Reviewer Award.

9.1.3. Journal

9.1.3.1. 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.

9.1.3.2. Reviewer - Reviewing Activities


9.1.4. Invited Talks

- Xavier Alameda-Pineda gave an invited talk at GIPSA-Lab on Multi-speaker tracking with auditory data.

9.2. Teaching - Supervision - Juries

9.2.1. Supervision

PhD defended February 2017: Dionyssos Kounades-Bastian, October 2013, Radu Horaud, Laurent Girin, and Xavier Alameda-Pineda.

PhD defended in December 2017: 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.

PhD in progress: Guillaume Delorme, September 2017, Radu Horaud and Xavier Alameda-Pineda.

PhD in progress: Sylvain Guy, October 2017, Radu Horaud and Laurent Girin.
9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair


9.1.1.2. Member of the Organizing Committees

- Patrick Reignier is a member of the organizing committee for the workshop "Context in the Home", at conference Context 17 in Paris in June 2017.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

- James Crowley served as chairman of the awards committee for the 2017 International Conference on Multimodal Interaction.

9.1.2.2. Member of Conference Program Committees

- Patrick Reignier was a member of the program committee
  - SmartObject 2017
- Thierry Fraichard was a member of the international program committee
  - the European Conference on Mobile Robots (ECMR 2017)
- Sabine Coquillart has served as a member of the program committee for the following conferences.
  - IEEE VR - IEEE Virtual Reality 2017, Los Angeles, USA, March 2017
  - IEEE 3DUI - IEEE 3D User Interfaces 2017, Los Angeles, USA, March 2017
  - WSCG 2017 - International Conferences in Central Europe on Computer Graphics, Visualization and Computer Vision, Plzen, Czech Republic, May 2017
  - CENTRIC 2017 - The Tenth International Conference on Advances in Human-oriented and Person-alized Mechanisms, Technologies, and Services, Athens, Greece, October 2017
  - ICAT-EGVE 2017 - International Conference on Artificial Reality and Teleexistence and Eurograph-ics Symposium on Virtual Environments, Adelaide, Australia, November 2017
  - VRST 2017 - 23rd ACM Symposium on Virtual Reality Software and Technology, Gothenburg, Sweden, November 2017
9.1.2.3. Reviewer

- James Crowley reviewed papers for ICCV 2017 - International conference on Computer Vision.
- James Crowley reviewed papers for CVPR 2017 - International conference on Computer Vision and Pattern Recognition.
- James Crowley reviewed papers for ICVS 2017 - International conference on Vision Systems.
- Dominique Vaufreydaz was in Program committee members and reviewed articles for seventh International Conference on Affective Computing and Intelligent Interaction (ACII2017), which will be held in San Antonio, Texas on October 23-26, 2017.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- Patrick Reignier is a member of the editorial board of the Modeling and Using Context Journal (ISTE OpenScience)
- 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 Academic Editors Board of “PeerJ Computer Science” – open access Journal in Computer Science.
- Sabine Coquillart is Review Editor for the “Frontiers in Virtual Environments” journal.
- 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).
- Thierry Fraichard is an Associate Editor for IEEE Robotics and Automation Letters (RA-L).

9.1.3.2. Reviewer - Reviewing Activities

- Thierry Fraichard reviewed articles for IEEE Trans. on Robotics (TRO) and IEEE Robotics and Automation Letters (RA-L).
- Patrick Reignier served as a reviewer for the 2 educational call for projects of the University Grenoble Alps Idex

9.1.4. Invited Talks

James Crowley gave the following invited talks in 2017


Sabine Coquillart gave the following invited talk


Thierry Fraichard gave an invited talk

- "Formal methods will not prevent self-driving cars from having accidents" at the Forum Méthodes Formelles in Toulouse (FR), October 2017.
Dominique Vaufreydaz gave the following invited talk in 2017

- "Pedestrian detection and behaviors modelling in Urban environment” at “Smart Mobility and Intelligent Vehicles” (SMIV2017), Vedecom Institute, 8/9 November 2017.

### 9.1.5. Leadership within the Scientific Community

- James Crowley is a member of the Steering Committee for the ACM International Conference on Multimodal Interaction.
- Sabine Coquillart is serving as member of the steering committee for the ICAT conference – International Conference on Artificial Reality and Telexistence.
- Sabine Coquillart is chairing the steering committee for the EGVE Working Group – EUROGRAPHICS Working group on Virtual Environments.
- Sabine Coquillart is elected member of the EUROGRAPHICS Executive Committee.
- Sabine Coquillart is member of the EUROGRAPHICS Working Group and Workshop board.

### 9.1.6. Scientific Expertise

- James L. Crowley served on the selection committee for the Institut Université de France (IUF).
- James L. Crowley served as Vice chairman for the selection panel for H2020 FET Open.
- James L. Crowley served on the selection panel for the H2020 ICT Robotics program.
- James L. Crowley served on the ANR committee CE 33 Interaction, Robotics.
- Sabine Coquillart served as an expert reviewer for the Austrian Science Fund (FWF).
- Dominique Vaufreydaz served as evaluator pour l’ANR.
- Thierry Fraichard served as an expert reviewer for the European Commission.
- Patrick Reignier is a member of the Scientific Council of the Amiqual4Home Equipex.

### 9.1.7. Research Administration

- James Crowley is director for the Amiqual4Home Innovation Platform (EquipEx).
- James Crowley serves on the Administrative Committee (Bureau) for the Laboratoire Informatique de Grenoble.
- James Crowley served on the Scientific Committee (CoS) for the CRI Inria Grenoble-Rhone Alpes.
- James Crowley served on the orientation committee for the Competitivy Pole Minalogic.
- Patrick Reignier is head of the engineering support group of the Laboratoire d’Informatique de Grenoble (13 members). He is currently supervising the moving of the Domus Living lab to a new site on Campus.
- Patrick Reignier serves on the Administrative Office (Bureau) for the Laboratoire Informatique de Grenoble.
- Patrick Reignier is a member of the comité de pilotage of the Domus Living Lab.
- Patrick Reignier is a member of the Comité Executif of the Amiqual4Home Equipex.

### 9.2. Teaching - Supervision - Juries

#### 9.2.1. Teaching

**9.2.1.1. James Crowley**

James Crowley is co-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. 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 participated in the editing of an successful Idex Educational program proposal "FromLivingLab".
- Patrick Reignier is co-director of the "formation en apprentissage" of Ensimag (3 years program: 1 year for the Licence and 2 years for the Master)
- 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, Développement 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

9.2.1.3. Dominique Vaufreydaz

- Co-responsibility of the Graphic, Vision and Robotics track of the MOSIG Master program.
- In charge of the transversal numerical competence courses at the Grenoble Faculty of Economics (Grenoble and Valence campuses)
- Licence: Compétences Numériques, 126h eq TD, L1, Université Grenoble Alpes, France.
- Licence: Informatique appliquée à l’économie et à la gestion, 32 h eq TD, enseignement à distance, Licence, Université Grenoble Alpes, France.
- Licence: Pratique avancée du Tableur, 72 h eq TD, L3, Université Grenoble Alpes, France.
- Licence Professionnelle: Enquêtes et traitement d’enquêtes avec le logiciel Sphinx, 12h eq TD, Licence pro Métiers de l’Emploi et de la Formation, Université Grenoble Alpes, France.
- Licence Professionnelle: Administration en environnement hétérogène, 20h eq TD, Licence pro Administration et Sécurité des Systèmes et des Réseaux, Université Grenoble Alpes, France.
- IUT année spéciale: Programmation C++, 18h eq TD, Année Spéciale IUT Informatique, Université Grenoble Alpes, France.
- Master: Pratique avancée du Tableur, 24 h eq TD, M1 économie internationale et stratégies d’acteurs, Université Grenoble Alpes, France.
- Master: Traitement des données du Web, 15h eq TD, M2 Mathématiques et Informatique Appliquées aux Sciences Humaines et Sociales, Université Grenoble Alpes, France
- Master: Développement Web Mobile, 15h eq TD, M2 Mathématiques et Informatique Appliquées aux Sciences Humaines et Sociales, Université Grenoble Alpes, France.

9.2.1.4. Thierry Fraichard

- Master: Thierry Fraichard, Autonomous Robotics, 22.5h eqTD, M2 MOSIG, Univ Grenoble Alpes.

9.2.2. Supervision - Doctoral theses completed in 2017
- PhD : Marvin Faix, Conception d’un ordinateur probabiliste, Univ Grenoble Alpes, Janvier 2017, Emmanuel Mazer and Laurent Fesquet
- PhD : Gregoire Nieto, Light Field Remote Vision, Univ Grenoble Alpes, 3 Oct 2017, Frederic Deverny and James Crowley
- PhD : Ta Viet Cuong, Smartphone-based indoor positioning using Wi-Fi, Inertial sensors and Bluetooth, Univ Grenoble Alpes, 15 Dec 2017, Dominique Vaufreydaz and Eric Castelli

9.2.3. Supervision - Current Doctoral Students
- PhD in progress : Romain Bregier, Detection et estimation de pose d’instances d’objet rigide pour la manipulation robotise’e, Octobre 2014, Frederic Devernay and James Crowley
- PhD in progress : Rémi Paulin, socially aware navigation, Octobre 2014, Patrick Reignier and Thierry Fraichard.
- PhD in progress : Etienne Balit, expressive social robot design, Octobre 2014, Patrick Reignier and Dominique Vaufreydaz.
- PhD in progress : Interaction-Aware Tracking and Lane Change Detection in Highway Driving, David Sierra Gonzales, Octobre 2014, Dizan Vasquez and Emmanuel Mazer
- PhD in progress : Minh-khoa Nguyen, Robotics-inspired methods for modeling and simulation of large nanosystems, Octobre 2014, Leonard Jaillet and Emmanuel Mazer
- PhD in progress : Amr Alyafi, explanatory observation of energy usage, Octobre 2015, Stephane Ploix and Patrick Reignier.
- PhD in progress : Amine Awada, activity recognition for smart energy management, Octobre 2015, Stephane Ploix and Patrick Reignier.
- PhD in progress : Liliya Tsetanova, Social Robotics, Octobre 2015, Veronique Aubergé and Patrick Reignier.
- PhD in progress : Julien Cumin, Learning Patterns of Activities for Context Aware Services, Octobre 2015, James Crowley and Fano Ramparany
- PhD in progress : Sandra Nabil, Synthesis of Panoramic Videos, Octobre 2015, Frederic Devernay and James Crowley
- PhD in progress : Jose Grimaldo Da Silva Filho, "Human-Robot Motion, a Shared Effort Approach", Octobre 2015, Thierry Fraichard.
- PhD in progress : Thomas Guntz, Multimodal Observation of Subjects Engaged in Problem Solving, Octobre 2016, James Crowley and Dominique Vaufreydaz
- PhD in progress : Nashwa Abubakr, Observation of Kitchen Activities, Octobre 2016, James Crowley and Remi Ronfard
- PhD in progress : Raphael Frisch, conception de machine stochastique pour la localisation et la separation de source sonor, Octobre 2016, Emmanuel Mazer

9.2.4. Juries
- James Crowley served as President of the Doctoral Jury for Tiana Rakotovao Andriamahefa, University Grenoble Alpes, March 2017
- Patrick Reignier served as a jury member of the Doctoral Jury of Nadine Mandran (University Grenoble Alpes)
• Patrick Reignier served as a president of the Doctoral Jury of Sarah Bouzit (University Grenoble Alps)
• Patrick Reignier served as a president of the Doctoral Jury of Manar Amayri (University Grenoble Alps)
• Patrick Reignier served as a president of the Doctoral Jury of Antoine Foulonneau (University Grenoble Alps)
• Sabine Coquillart served as reporter for the doctoral jury of B. Le Gouis at INSA Rennes
• Sabine Coquillart served as examiner for the doctoral jury of P. Isartel at LIMSI, Univ. Paris-Orsay.
• Thierry Fraichard served as an expert evaluator in the PhD Jury of Suhyeon Gim, Univ. of Toulouse (FR), May 2017.
• Thierry Fraichard served as an expert evaluator in the PhD Jury of Alexandre Boeuf, Univ. of Clermont-Ferrand (FR), July 2017.
10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- J. Mairal. Member of the organizing committee of the Journées SMAI-MODE, which will take place in March 2018.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees


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.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- J. Mairal: Associate editor of the SIAM Journal of Imaging science, since 2018.
- J. Verbeek: Associate editor for the International Journal on Computer Vision, since 2014.

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

- J. Mairal. Invited speaker at the large-scale and distributed optimization workshop, Lund, June 2017.
- J. Verbeek. Invited talk at Aalto University, Helsinki, Finland, June 2017.
- C. Schmid: Invited speaker at Workshop on YouTube-8M Large-Scale Video Understanding, in conjunction with CVPR’17, July 2017.
- C. Schmid: Invited speaker at Women in Computer Vision Workshop, in conjunction with CVPR’17, July 2017.
- C. Schmid: Invited speaker at 1st Workshop on Target Re-Identification and Multi-Target Multi-Camera Tracking, in conjunction with CVPR’17, July 2017.
10.1.5. Scientific Expertise

- K. Alahari: reviewer for ANR.
- J. Mairal: judge for the IBM Watson AI Xprize.
- J. Mairal: reviewer for ANR.
- J. Mairal: panel member of a funding agency for the 2018 call (confidential information at the moment).
- G. Rogez: reviewer for ANR.
- J. Verbeek: reviewer for ERC.
- J. Verbeek: reviewer for ASF.

10.1.6. Research Administration

- C. Schmid: Member of the “Comité scientifique”, Inria Grenoble, since 2015.
- C. Schmid: Member of board of directors of the Computer Vision Foundation (CVF), since 2016.
- C. Schmid is member of the PAMI-TC awards committee, and the PAMI-TC executive committee.
- J. Verbeek: Scientific correspondent national project calls, Inria Grenoble.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Doctorat: Karteek Alahari, Lecturer at the summer school on computer vision, IIIT Hyderabad, India.
Doctorat: J. Mairal, Lecturer at the SPARSA summer school, Lisbon.
Doctorat: J. Mairal, Lecturer at the CoSIP winter school, Berlin.
Doctorat: J. Verbeek. Tutorial given at IPTA, Montreal.
Master: A. Sublayrolles and P. Luc: Lecture at Ecole 42 on Convolutional Neural Networks as part of the Facebook AI Masterclass.
License: H. Lin, UE MAT206: Introduction à la biologie mathématique et à la dynamique des populations, 58H eqTD, L3, UGA, Grenoble.

10.2.2. Supervision

HdR: Julien Mairal, large-scale machine learning and applications, Univ. Grenoble Alpes, October 2017.

10.2.3. Juries

K. Alahari: Lukas Neumann, 2017, rapporteur, these, Czech Technical University, Prague.
J. Mairal: Matthieu Carrière, novembre 2017, rapporteur, these, Université Paris-Saclay.
J. Mairal: Thomas Moreau, décembre 2017, rapporteur, these, Université Paris-Saclay.
J. Verbeek: Fabien Baradel, member of “comité de suivi de thèse”, INSA Lyon.
J. Verbeek: Praveen Kulkarni, rapporteur, these, Univ. Caen.
J. Verbeek: Damien Fourure, Univ. Jean Monnet, Saint Etienne, France.
C. Schmid: Christos Georgakis, June 2017, rapport these, Imperial College, London
C. Schmid: Pedro Oliveira Pinheiro, January 2017, rapport these, EPFL.

10.3. Popularization

- J. Mairal est intervenu lors du cycle de conférences ISN, à destination des professeurs de lycée.
- J. Mairal a co-publié un article dans ERCIM news, avec Gaël Varoquaux, Bertrand Thirion et Arthur Mensch.
- C. Schmid a co-publié un article “Extraction d’informations à partir des images”. Les Big Data à Découvert. Editions du CNRS, 2017
9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Conference Program Committees

- P. Genevès was a member of the program committee of BDA 2017, the 33rd National Conference on Databases and Applications.
- N. Layaida was a member of the program committee of The Web Conference 2018 - The Web Programming, Design, Analysis, and Implementation track.

9.1.1.2. Reviewer

- P. Genevès has been referee for the following 2017 conferences: IJCAI 2017, ICALP 2017, DocEng 2017, and BDA 2017.
- N. Gesbert has been referee for CAV 2017.
- C. Roisin has been referee for the following 2017 conferences: DocEng 2017 and SMAP 2017.

9.1.2. Journal

9.1.2.1. Member of the Editorial Boards

- P. Genevès has been referee for the Information and Computation (I&C) journal

9.1.3. Scientific Expertise

- P. Genevès was expert for the ANRT (CIFRE).
- C. Roisin was expert for the ANR ‘Appel à Projets Génériques’ 2017.

9.1.4. Research Administration

- P. Genevès is responsible for the Computer Science Specialty at the Doctoral School MSTII (ED 217).
- N. Layaida 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. Layaida is member of the Scientific Board of Advanced Data-mining of the Persyval Labex.
- N. Layaida is member of the Scientific Board of Digital League, the digital cluster of Auvergne-Rhône-Alpes.
- N. Layaida is member of the experts pool (selection committee) of the minalogic competitive cluster.
- C. Roisin is member of the CNU ‘Conseil national des Universités’ section 27.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: P. Genevès, Semantic Web: from XML to OWL, 54hEqTD, M2 (MOSIG), University Grenoble Alpes, France
Licence : N. Gesbert, ‘Bases de la programmation impérative’, 33 h eq TD, L3, Grenoble INP
Licence : N. Gesbert, academic tutorship of an apprentice, 10 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, ‘Services réseaux’, 22h eq TD, L2, 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
C. Roisin is responsible of the L1-level course ‘Architecture des réseaux’ (150 students).

9.2.2. Supervision

PhD: Abdullah Abbas, Static Analysis of SPARQL Queries with ShEx Schema Constraints, University Grenoble Alpes, defended on November 6th 2017, supervised by Pierre Genevès and Cécile Roisin.

PhD: Thibaud Michel, On Mobile Augmented Reality Applications based on Geolocation, University Grenoble Alpes, defended on November 10th 2017, supervised by Pierre Genevès and Nabil Layaida and Hassen Fourati.


9.2.3. Juries

- P. Genevès was member of the jury for the PhD defense of Carlyna Bondiombouy entitled “Traitement de requêtes dans les systèmes multistores” and defended on July 12th, 2017 in Montpellier.
- N. Layaida was member and president of the Jury for the Habilitation thesis from University Grenoble-Alpes of Jérôme Malick entitled “the Variational-analysis look at combinatorial optimization and other selected topics in optimization” defended on January 26th, 2017 in Grenoble.
- N. Layaida was member and president of the Jury for the PhD thesis from University Grenoble-Alpes of Thomas Capelle entitled “Development of optimization methods for land-use and transportation models” defended on April 3rd, 2017 in Grenoble.