



RESEARCH CENTER
Grenoble - Rhône-Alpes

FIELD

Activity Report 2017

Section Dissemination

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ARIC Project-Team

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.

Claude-Pierre Jeannerod and Nicolas Louvet organized RAIM 2017 (Rencontres “Arithmétiques de l’Informatique Mathématique”) at ENS Lyon in October 2017.

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).

Damien Stehlé is in the program committees of PQCrypto 2017 and 2018, Eurocrypt 2017 and 2018, Asiacrypt 2017 and SCN 2018.

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

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

Master: Fabien Laguillaumie, Cryptography, Error Correcting Codes, 150h, Université Claude Bernard Lyon 1 (on CNRS secondment in 2016-2017).

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: Claude-Pierre Jeannerod and Nathalie Revol, *Arithmétique flottante et erreurs d’arrondi* (3h), École Jeunes Chercheurs et Jeunes Chercheuses en Informatique Mathématique.

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: Marie Paindavoine, *Méthodes de calculs sur des données chiffrées*, defended on January 27, 2017, co-supervised by Fabien Laguillaumie and Sébastien Canard (Orange).
- 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 Joldes (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 Titiiu, *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 Joldes (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 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 (middle school and high school).

CONVECS Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- H. Garavel is a member of the model board ⁰ of MCC (*Model Checking Contest*). In 2017, he helped preparing new models (especially those in the NUPN format) and verified, using the CAESAR.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 ⁰. 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 the SEFM (*International Conference on Software Engineering and Formal Methods*) conference series since 2014.
- G. Salaün is member of the steering committee of the FOCLASA (*International Workshop on Foundations of Coordination Languages and Self-Adaptive Systems*) workshop series since 2011.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

- G. Barbon was publicity chair of FOCLASA'2017 (*15th International Workshop on Foundations of Coordination Languages and Self-Adaptive Systems*) co-located with SEFM'2017 (*15th International Conference on Software Engineering and Formal Methods*), Trento, Italy, September 5, 2017.
- F. Lang was co-chair of the Formal Methods track of ETR'2017 (*9ème Ecole d'été Temps-Réel*), Paris, France, August 28 - September 1, 2017.
- R. Mateescu was tutorial chair of QRS'2017 (*IEEE International Conference on Software Quality, Reliability, and Security*), Prague, Czech Republic, July 25–29, 2017.
- G. Salaün was co-chair of FOCLASA'2017.

9.1.2.2. 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.

⁰<http://mcc.lip6.fr/models.php>

⁰<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.
- R. Mateescu was program committee member of FMICS-AVoCS'2017 (*International Workshop on Formal Methods for Industrial Critical Systems and Automated Verification of Critical Systems*), Torino, Italy, September 18–20, 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'2017 (*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

- G. Barbon was a reviewer for COMPSAC'2017, SEFM'2017, and SAC-SVT'2018 (*33rd ACM Symposium on Applied Computing - Software Verification and Testing Track*), Pau, France, April 9–13, 2018.
- F. Lang was a reviewer for SEFM'2017 and FMICS-AVoCS'2017.
- L. Marssó 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.
- W. Serwe was a reviewer for MARS'2017, SEFM'2017, and ICTSS'2017 (*19th International Conference on Testing Software and Systems*), Paris, France, August 28–29, 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.

- W. Serwe was a reviewer for STTT, SPE (*Journal on Software: Practice and Experience*), and IJPEDS (*International Journal on Power Electronics and Drive Systems*).
- G. Salaün was a reviewer for JSC (*Journal of Symbolic Computation*), IEEE TSE (*Transactions of Software Engineering*), and SCP (*Science of Computer Programming*).

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 two talks entitled “*Ten Different Ways on Defining Signed Integers Formally*” and “*Benchmarking Implementations of Conditional Term Rewrite Systems*” on February 28, 2017 at the Formal Methods seminar of Inria Grenoble – Rhône-Alpes.
- 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.
- The members of CONVECS attended the 1st RIDINGS Workshop, held at Inria Grenoble – Rhône-Alpes on May 17, 2017. F. Lang gave a talk entitled “*The LNT language and the LNT2LOTOS compiler*”. H. Garavel gave a talk entitled “*The Unheralded Value of the Multiway Rendezvous: Illustration with the Production Cell Benchmark*”. L. Marsso gave a talk entitled “*A Large Term Rewrite System Modelling a Pioneering Cryptographic Algorithm*”. G. Barbon gave a talk entitled “*Debugging of Concurrent Systems using Counterexample Analysis*”.
- 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 HECS⁰ (“*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

PhD in progress: L. Marsso, “*Formal Methods for Testing Networks of Controllers*”, Université Grenoble Alpes, since October 2016, R. Mateescu, W. Serwe, I. Parissis, and Ch. Deleuze

PhD in progress: A. Muroor Nadumane, “*Softwarization of Everything: IoT Service Composition*”, Université Grenoble Alpes, since October 2017, G. Salaün, R. Mateescu, L. Noirie, and M. Le Pallec

PhD in progress: U. Ozeer, “*Autonomous Resilience of Applications in a Largely Distributed Cloud Environment*”, Université Grenoble Alpes, since November 2016, X. Etchevers, G. Salaün, F.-G. Ottogalli, and J.-M. Vincent

9.2.3. Juries

⁰<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.
- R. Mateescu was reviewer of Zhengkui Zhang's PhD thesis, entitled "*Time and Cost Optimization of Cyber-Physical Systems by Distributed Reachability Analysis*", defended at the University of Aalborg (Denmark) on March 28, 2017.
- R. Mateescu was reviewer of Simon Busard's PhD thesis, entitled "*Symbolic Model Checking of Multi-Modal Logics: Uniform Strategies and Rich Explanations*", defended at Université Catholique de Louvain (Belgium) on May 10, 2017.
- G. Salaün was reviewer of Imen Boudhiba's PhD thesis, entitled "*A Model-Based Testing framework for IOSTS enriched with function calls*", defended at Centrale-Supélec (Paris, France) on March 2, 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 project⁰.

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>

CORSE Project-Team

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
- Yliès Falcone: CRI’17, MSR’17, RV-CuBES, RV’17, RW-BRMS’17, TASE 2017, iFM 2017, PDP 2017, DATE 2017 – Topic E3

9.1.3. Journal

9.1.3.1. Reviewer - Reviewing activities

- Frédéric Desprez: IJHPCA
- Yliès Falcone: ACM Transactions on Software Engineering and Methodology (TOSEM), Formal Aspects of Computing, ACM Transactions on Automatic and Control, Acta Informatica, Formal Methods in System Design

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 CIRBUS (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: Hosein Nazarpour, Monitoring Distributed and Multi-threaded Component-Based Systems, defended on June 26, 2017, advised by Yliès Falcone and Saddek Bensalem (Verimag).

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 Virouleau, 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

PRIVATICS Project-Team

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 Métayer: APVP 2017 (Jun., Autrans), panel on "Algorithms: too intelligent to be intelligible ?" at CPDP 2017 (Jan., Brussels).

M. Cunche: APVP 2017 (Jun., Autrans).

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).

D. Le Métayer: CSF 2017, IWPE 2017, APF 2017, CPDP 2017, Conference "Converging trends between law and digital technologies".

V. Roca: VTC 2017, SPACOMM 2017, SpaCCS 2017.

M. Cunche: Mobiquitous 2017, ICISSP 2017.

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 *Personal data protection*, organized by ANVIE (Association nationale de valorisation interdisciplinaire de la recherche en sciences humaines et sociales auprès des entreprises), (Paris, May 2017).

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

D. Le Métayer on *Algorithmes prédictifs: Quels enjeux éthiques et juridiques?*, organized by CREOGN (Centre de recherche de l'École des officiers de la gendarmerie nationale), (Paris, Oct. 2017).

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

Claude Castelluccia on *Promoting Peace on the Internet*, organized by Unesco (Paris, Apr. 2017).

Claude Castelluccia Oxford Internet Institute, (Oxford, Jul. 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.

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

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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

9.2.2. Supervision

PhD defended : Jessye Dos Santos, *Sensor Networks and Privacy*, Claude Castelluccia and Cedric Lauradoux.

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

PhD defended : Celestin Matte, *Wi-Fi tracking: Fingerprinting Attacks and Counter-Measures*, Mathieu Cunche.

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

PhD in progress : Mathieu Thiery, *IoT privacy* , September 2016, Vincent Roca.

PhD in progress : Guillaume Celosia, *Wireless Privacy in the Internet of Things* , November 2017, Mathieu Cunche and Daniel.

Intern (M2): Jean-Yves Franceschi, *Accountability of Decision Algorithms*, Daniel Le Métayer Le Métayer.

Intern (M2): Amine Mansour, *Algorithmes d'aide à la décision : des questions éthiques aux défis techniques*, Daniel Le Métayer.

Intern (M2): Jean-Yves Franceschi, *Accountability of Decision Algorithms*, Daniel Le Métayer.

Intern (M2): Coline Boniface, *Laws and Cyberweapons*, Cédric Lauradoux and Claude Castelluccia.

Intern (M2): Jennifer Ridgers, *Surveillance and Social Networks*, Claude Castelluccia and Cédric Lauradoux.

Intern (M1): Iris Lohja, *Mail-Analytics*, Cédric Lauradoux.

9.2.3. *Juries*

HdR: Melek ONEN, *Security and Privacy for Emerging Technologies*, Eurecom, 12/01/2017, Claude Castelluccia.

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: Celestin Matte, *Wi-Fi tracking: Fingerprinting Attacks and Counter-Measures*, Université Claude Bernard Lyon 1, 8/9/2016, Mathieu Cunche.

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

PhD: Alban Petit, *Introducing Privacy in Current Web Search Engines*, Insa Lyon, 15/03/2017, 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: Walid Benghabrit, *A formal model for accountability*, IMT Atlantique Bretagne-Pays de la Loire, 27/10/2017, Daniel Le Métayer.

PhD: Raul Pardo, 22 November 2017, Privacy policies for social network – A formal approach, Chalmers University, Göteborg, Sweden, 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'Éthique (CCNE)⁰ (Mar. 2017).

⁰<http://www.ccne-ethique.fr/fr>

9.3.2. Interviews

- M. Cunche by Valentine Faure in Glamour, Donner ses données, juin-juillet 2017.
- M. Cunche by Martin Untersinger in lemonde.fr, Apple donne à nouveau des gages en matière de vie privée, 27/09/2017, http://www.lemonde.fr/pixels/article/2017/09/27/apple-donne-a-nouveau-des-gages-en-matiere-de-vie-privee_5192469_4408996.html
- M. Cunche by Arnaud Devillard in Sciences et Avenir, Même coupé, le Wi-Fi sous Android peut suivre le téléphone, Oct. 2017, https://www.sciencesetavenir.fr/high-tech/meme-coupe-le-wi-fi-sous-android-peut-suivre-le-telephone_116061
- M. Cunche by Camille Gruhier in Que-choisir, Smartphones Android Même une fois le Wi-Fi désactivé, vous êtes pisté, Oct. 2017 <https://www.quechoisir.org/actualite-smartphones-android-meme-une-fois-le-wi-fi-desactive-vous-etes-piste-n46076/>
- M. Cunche by Emilie Brouze in Rue89 - L'Obs, Tu es resté 22 minutes chez l'opticien jeudi. Le centre commercial le sait, le 12 juillet 2017, <http://tempsreel.nouvelobs.com/rue89/rue89-nos-vies-connectees/20170711.OBS1939/vous-etes-reste-22-minutes-chez-l-opticien-jeudi-et-le-centre-commercial-le-sait.html>
- M. Cunche by ZDnet.fr, <http://www.zdnet.fr/actualites/android-desactiver-le-wi-fi-n-empeche-pas-d-etre-espionne-39856640.htm>
- M. Cunche by 01Net, <http://www.01net.com/actualites/sur-android-le-wi-fi-peut-vous-tracer-meme-sil-est-desactive-1245292.html>
- M. Cunche by l'informaticien, <https://www.linformaticien.com/actualites/id/44894/desactiver-le-wifi-pour-eviter-le-flicage-une-protection-illusoire.aspx>
- M. Cunche by Nextinpact, <https://m.nextinpact.com/news/105038-suivi-clients-dans-magasins-question-wi-fi-nest-pas-seule-a-se-poser.htm>
- C. Lauradoux by Sophie Eremian in Inriality, Quand l'énergie devient intelligente, Oct. 2017, <https://www.inriality.fr/environnement/quand-lenergie-devient-intelligente/>.

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).
- D. Le Métayer in Le Monde, *Gouverner les algorithmes pour éviter qu'ils nous gouvernent*, (Nov. 2017).
- C. Castelluccia and D. Le Métayer in Inria Analysis note, *Secure electronic documents: is the centralisation of biometric data really inevitable?*, (Feb. 2017).

9.3.4. Conferences

- M. Cunche and C. Matte, *le traçage cyberphysique via Wi-Fi*, Exposition Terra Data at Cité des Sciences et de l'Industrie, Apr. 2017.
- M. Cunche and C. Matte, *le traçage cyberphysique via Wi-Fi*, Fête de la science at Cité des Sciences et de l'Industrie, Oct. 2017 (broadcasted by Science et Vie TV and animated by l'Esprit Sorcier).
- C. Lauradoux, *Email et vie privée: pourquoi utiliser GPG ?*, Cours Master 2, Nov. 2017.
- 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.

SPADES Project-Team

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/>
- Sophie Quinton was co-organizer of a tutorial entitled "Multicore Architectures in the Automotive Industry: Existing Solutions, Current Problems and Future Challenges" at ESWeek'17. <http://2017.rtss.org/industrial-panel/>
- 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/>

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>

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).
- Gregor Gössler served in the program committees of the 15th ACM-IEEE International Conference on Formal Methods and Models for System Design (MEMOCODE'17) and the 2nd international Workshop on Causal Reasoning for Embedded and Safety-critical Systems Technologies (CREST'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

- Alain Girault reviewed articles for IEEE Embedded Systems Letters (ESL), Microprocessors and Microsystems, IEEE Trans. on Industrial Informatics (TII), and ACM Trans. on Embedded Computing Systems (TECS).
- 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 : λ -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: Christophe Prévot, “Early Performance assessment for evolving and variable Cyber-Physical Systems”, Univ. Grenoble Alpes, since November 2015, co-advised by Alain Girault and Sophie Quinton.
- PhD in progress: Stephan Plassart, “On-line optimization in dynamic real-time systems”, Univ. Grenoble Alpes, since September 2016, co-advised by Bruno Gaujal and Alain Girault.
- PhD in progress: Xiaojie Guo, “Formal Proofs for the Analysis of Real-Time Systems in COQ”, Univ. Grenoble Alpes, since December 2016, co-advised by Pascal Fradet, Jean-François Monin, and Sophie Quinton.
- PhD in progress: Maxime Lesourd, “Generic Proofs for the Analysis of Real-Time Systems in COQ”, Univ. Grenoble Alpes, since September 2017, co-advised by Pascal Fradet, Jean-François Monin, and Sophie Quinton.

- 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.
- PhD in progress: Martin Vassor, “Analysis and types for safe dynamic software reconfigurations”, Univ. Grenoble Alpes, since November 2017, co-advised by Pascal Fradet and Jean-Bernard Stefani.
- 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.
- M2 MOSIG: Ebrahim Naeimimoshirian, “Hierarchical actor model with encapsulation”, Univ. Grenoble Alpes and Grenoble INP, September 2017, co-supervised by Xavier Nicollin and Jean-Bernard Stefani.

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.
- Florence Bertails-Descoubes, Program Committee member for ACM Siggraph 2018, Eurographics 2018, and ACM-EG Symposium on Computer Animation 2017.
- 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
- Vincent Acary, reviewer for Computer Methods in Applied Mechanics and Engineering (CMAME), Engineering Structures, IEEE Transactions on Haptics, International Journal for Numerical Methods in Engineering, Journal Sound and Vibrations, International Journal of Geological Engineering, Comptes Rendus de l'Académie des sciences, ASME Journal of Computational and Nonlinear Dynamics, Multibody systems Dynamics
- Bernard Brogliato, reviewer for IEEE Transactions on Automatic Control, Optimization Letters, Multibody System Dynamics, SIAM journal on Optimization and Control, Automatica, Journal of Optimization Theory and Applications, SIAM Journal of Applied Dynamical Systems, etc.

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.

Master : Vincent Acary, 17H éq TD Systèmes dynamiques, ENSIMAG 2A.

10.2.2. Supervision

HdR : Florence Bertails-Descoubes, Numerical Modeling of elastic slender structures subject to contact and friction: From dynamic simulation to inverse static design, Grenoble Universités. Defended the 30th of May, 2017.

PhD : Alejandro Blumentals, Numerical modelling of thin elastic solids in contact. Defended the 3rd of July, 2017. Supervised by B. Brogliato and F. Bertails-Descoubes.

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.

Matteo Ciocca, March 2017, P.-B. Wieber and T. Fraichard (Inria team Pervasive Interaction).

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.

MISTIS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- Stéphane Girard 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*.

In 2017, Julyan Arbel has been reviewer for *the Annals of Statistics*, *Bayesian Analysis*, *Biometrics*, *the Canadian Journal of Statistics*, *Statistics and Computing*, *Statistics and Probability Letters*, *the Journal of Non-parametric Statistics*, *the Scandinavian Journal of Statistics*, as well as for Machine Learning Conferences: *the Conference On Learning Theory (COLT)*, *the AAAI Conference on Artificial Intelligence (AAAI)*, *the International Conference on Learning Representations (ICLR)*. He is also writing Mathematical Reviews for MathSciNet.

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], Bergamo, Italy.

- Laboratoire de Statistique Théorique et Appliquée (LSTA), Univ Paris 6. Estimation de mesures de risques à partir des Lp-quantiles extrêmes, mai 2017.
- Laboratoire des Écoulements Géophysiques et Industriels (LEGI), Univ Grenoble-Alpes, Introduction à la statistique des valeurs extrêmes, novembre 2017.

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 non-linear 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:

- Statistics Seminar, University of Kent, Canterbury, Kent, England, November 2. Talk: Approximating predictive probabilities of Gibbs-type priors.
- 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.
- School of Statistics for Astrophysics: Bayesian methodology, Autrans, France, October 9-13. Tutorial: Bayesian nonparametric clustering.
- Journées Scientifiques d'Inria, Sophia Antipolis, France, June 14-16. Invited talk: Probabilités de découverte d'espèces: Bayes à la rescousse de Good & Turing.
- 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.
- Statistical Science Seminar Series, Duke University, Durham, April 14. Invited talk: Bayesian nonparametric inference for discovery probabilities.

Julyan Arbel gave also the following contributed talks:

- 10th International Conference of Computational and Methodological Statistics (ERCIM), University of London, UK, December 16-18. Invited talk: Approximating predictive probabilities of Gibbs-type priors.
- Bayes in Grenoble reading group, Grenoble, France, November 15. Talk: Approximate Bayesian computation.
- Mathematical Methods of Modern Statistics, CIRM, Luminy, France, July 10-14. Talk: Investigating predictive probabilities of Gibbs-type priors. Poster: On the sub-Gaussianity of the Beta and Dirichlet distributions.
- 11th Conference on Bayesian Nonparametrics, Paris, France, June 26-30. Poster: Sequential Quasi Monte Carlo for Dirichlet Process Mixture Models.
- Workshop YES VIII, Eindhoven, Netherlands, January 23-25. Talk: Bayesian nonparametric inference for discovery probabilities.

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:

- Congrès National d'Imagerie du Vivant, in Paris, November 2017, on *Suivi de l'hétérogénéité de la croissance de 4 modèles de gliomes par IRM multiparamétrique analysée par clustering*, [48].

Pierre-Antoine Rodesch gave a talk at:

- GDR ISIS, in Paris, March 2017, *Un algorithme one-step de reconstruction tomographique en Imagerie X spectrale*.

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 : Stéphane Girard, *Statistique Inférentielle Avancée*, 18 ETD, M1 level, Ensimag. Grenoble-INP, France.

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.

Licence : Alexis Arnaud, *Modélisations mathématiques*, 48 ETD, L2 level, IUT2 Grenoble. Université Grenoble Alpes, France.

Licence : Alexis Arnaud, *Analyse pour l'ingénieur*, 33 ETD, L3 level, Ensimag. Grenoble-INP, France.

Licence : Alexis Arnaud, *Soutien en Analyse pour l'ingénieur*, 39 ETD, L3 level, Ensimag. Grenoble-INP, France.

Licence: Brice Olivier, *Probabilités pour l'informatique*, 27 ETD, M1 level, Ensimag. Grenoble-INP, France.

Licence: Brice Olivier, *Principes et méthodes statistiques*, 36 ETD, L3 level, Ensimag. Grenoble-INP, France.

Licencel: Brice Olivier, *Retours d'expériences (ReX)*, 2 ETD, M2 level, Ensimag. Grenoble-INP, France.

10.2.2. Supervision

PhD: Maïlys Lopes, “*Suivi écologique des prairies semi-naturelles : analyse statistique de séries temporelles denses d’images satellite à haute résolution spatiale*”, defended November 2017, Stéphane Girard and Mathieu Fauvel (INRA Toulouse).

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: Pierre-Antoine Rodesch, "Spectral tomography and tomographic reconstruction algorithms", October 2015, Florence Forbes, Clarisse Fournier and Veronique Rebuffel (CEA Leti Grenoble).

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

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

PhD in progress: Veronica Munoz Ramirez, "Extraction de signatures dans les données IRM de patients parkinsoniens de novo", October 2017, Florence Forbes, Julyan Arbel and Michel Dojat (GIN).

PhD in progress: Fabien Boux, "Développement de méthodes statistiques pour l'imagerie IRM fingerprinting ", September 2017, Florence Forbes, Julyan Arbel and Emmanuel Barbier (GIN).

10.2.3. Juries

- S. Girard was a member of 3 PhD committees in 2017:
 - Mohamed Nédjib Dalhoumi, *Sur l'estimation de probabilités de queues multivariées*, Univ. Montpellier, September 2017.
 - Achmad Choiruddin, *Sélection de variables pour des processus ponctuels spatiaux*, Univ. Grenoble, September 2017.
 - Patricia Tencaliec, *Development in statistics applied to hydrometeorology: imputation of stream-flow data and semiparametric precipitation modeling*, Univ. Grenoble, February 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.
 - Adrien Faivre, *Analyse d'images hyperspectrales*, University of Besançon Franche-Comté, December 14, 2017.
- F. Forbes was a member of 3 PhD committees in 2017:
 - Clément Elvira, *Modèles bayésiens 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.

NANO-D Project-Team

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 "On the Nonlinear Normal Mode Analysis and its Applications to Structural Bioinformatics" at the Second International Conference on Computational Genomics and Proteomics, Aug 14 - 18 2017, Playa Blanca, Panama.
- Guillaume Pagès gave an invited talk entitled "Algorithms and Software for Symmetry Detection and Analysis in Large Macromolecular Assemblies" at the Second International Conference on Computational Genomics and Proteomics, Aug 14 - 18 2017, Playa Blanca, Panama.
- 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 "On the Nonlinear Normal Mode Analysis and its Applications to Structural Bioinformatics" at the rencontre nationales sur les modes normaux, May 30 2017, Institute Pasteur, Paris, France.
- Sergei Grudinin gave an invited talk entitled "Using machine learning and fast conformational space exploration techniques for some problems in structural bioinformatics" at the SMAI-2017 congress, June 4-9 2017, Azureva Ronce-les-Bains, France.

- 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

- Sergei Grudinin gave a talk entitled "On the non-linear normal mode analysis and its applications" at the GGMM 2017 conference, May 9-11 2017, Reims, France.
- 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 and Alexandre Hofmann gave a talk entitled "FFT-accelerated exhaustive flexible docking method" at the Mapping2017 conference, May 21-26 2017, Lyon, 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 "On the development of knowledge-based approaches for structural predictions of macromolecules in Nano-D team" at the seminaire d'evaluation Nano-D, Apr 15-16 2017, Paris, 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 Semehor 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 Poincaré" in the team competitions "Tournoi Français Des Jeunes Mathématiciens" (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 scenarios were proposed where the user can interact with molecular systems and test different possible applications of the SAMSON software platform.

NECS Project-Team

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 Transportation 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 AJC (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 AJC (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

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

9.1.4. Invited Talks

- M. L. Delle Monache, “Traffic regulation via controlled speed limit”, SIAM Conference on Optimization, Vancouver, Canada, May 22, 2017.
- M. L. Delle Monache, “Control of traffic flow via ramp metering and automated vehicles”, France Berkeley Fund Symposium, Collège de France, Paris, France, June 7, 2017.
- M. L. Delle Monache, “Coupled PDE-ODE systems: applications to traffic flow modeling and control”, Institute de Mathematiques de Marseille, Marseille, France, November 14, 2017.
- M. L. Delle Monache, “Control of Traffic: from ramp metering to autonomous vehicles”, The Finite volume schemes and traffic modeling workshop, Besançon, France, November 23, 2017.
- P. Frasca, “Message-passing computation of the harmonic influence in social networks”, L2S, Paris-Saclay, November 21, 2017.
- P. Frasca, “Harmonic influence in social networks and identification of influencers by message passing”, WUDS’17 workshop, Banyuls-sur-mer, July 6, 2017.
- P. Frasca, “Non-smooth dynamical systems in opinion dynamics”, University of Twente, Enschede, NL, June 15, 2017.
- P. Frasca, “The observability radius of network systems”, University of Cagliari, Cagliari, Italy, May 4, 2017.
- F. Garin, “Input-and-state observability of structured network systems”, LCCC Focus Period on Large-Scale and Distributed Optimization, Lund, Sweden, June 2017.

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: Thibaud Michel, Mobile Augmented Reality Applications for Smart Cities, Nov. 2017, co-advised by N. Layaïda, H. Fourati and P. Geneves.

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

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

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

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

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

PhD in progress: Martin Rodriguez-Vega, Traffic density, traveling time and vehicle emission estimation in large - scale traffic networks, from Oct. 2017, co-advised by C. Canudas de Wit and H. Fourati.

PhD in progress: Muhammad Umar B Niazi, State-state estimation design and optimal sensor placement algorithms for large-scale evolutionary dynamical networks, from Dec. 2017, co-advised by C. Canudas de Wit and A. Kibangou.

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 Departement 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.

- G. Casadei, V. Bertrand, DEMO on the GTL at the "Rencontres Inria Industrie", Inria, Paris, Oct. 2017

AIRSEA Project-Team

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-programs/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 "An overview on free surface flows", Paris, November 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/co/lefe>.

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

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, Algorithmique, 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'ingénieur, 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: Charles Pelletier, Etude mathématique et numérique de la formulation du couplage océan-atmosphère dans les modèles de climat. December 2014, E. Blayo and F. Lemarié.

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 Trappier, 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);
- December 14, 2017: PhD thesis of Marina Duran Moro, Univ. Grenoble Alpes (president).

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);
- February 16, 2017: HDR thesis of N. Eckert, Univ. Grenoble Alpes (referee).

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 Varcès (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
- AIEM2017 (Approches Interdisciplinaire de l'Evolution Moléculaire), Lyon, November 2017.
- ALPHY 2017 (Alignement et Phylogénie) workshop, Lyon, January 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 committee 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

Hugues Berry: Scientific reports, eLife, Frontiers Cellular Neuroscience, PLoS Computational Biology, PLoS One, Journal Theoretical Biology, Biophysical Journal

Guillaume Beslon: Journals Proceedings of Royal Society B, Entropy and Neural Computing and Applications.

Christophe Rigotti: IEEE Access

Jonathan Rouzaud-Cornabas: IEEE Transactions on Cloud Computing

Eric Tannier: Information Processing Letters, PeerJ, Plos One, Discrete Mathematics and Theoretical Computer Science, BMC Genomics

8.1.4. Invited Talks

Hugues Berry gave invited talks at:

EJCIM (Ecole des Jeunes Chercheurs et Chercheuses en Informatique Mathématique) 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

You Carreer Day, I2BC, Saclay 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.

Christophe Rigotti gave an invited seminar at the Centre spatial universitaire de Grenoble (CSUG): "Recherche d'évolutions par fouille de données multi-temporelles satellitaires et photographiques", September 2017.

Eric Tannier gave an invited talk at the conference "Tour de sciences" Lyon, 2017 and an invited seminar at Trinity College, Dublin, Feb. 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 GdR IMaBIO (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

Wandrilie 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 Foncelles, 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)

C. Rigotti: François Rioult, Univ. Caen Normandie, Caen, December 2017 (examiner).

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 “Desoblique” 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 participation 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.

DRACULA Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. Member of the Organizing Committees

- Session of GDR “Mathématiques de la Modélisation du Vivant (Mamovi)”, Lyon (France), 27 - 29 Septembre 2017 (<https://gdr-mamovi-2017.sciencesconf.org/>). Organizer: Thomas Lepoutre.
- Conference “LyonSysBio/Meet the Industry” (Lyon Systems Biology), Lyon (France), 15-17 November 2017 (<https://mti2017.sciencesconf.org/>). Co-organizers: Fabien Crauste and Olivier Gandrillon.
- Journée Scientifique "Modelisation du Vivant" de la Faculté des Sciences et Technologies de l'Université Lyon 1, Lyon (France), 22 June 2017 (<https://jsf2017.sciencesconf.org/>). Co-organizers: Fabien Crauste.
- Semaine Etudes Mathématiques Entreprises (SEME) 2017, Lyon (France), 30 January - 3 February 2017 (<https://semelyon2017.sciencesconf.org/>). Co-organizers: Fabien Crauste and Céline Vial.
- Workshop “Population effects on languages (PopLang)”, Lyon (France), 20 November 2017 (<https://poplang.sciencesconf.org/>). Co-organizers: Laurent Pujo-Menjouet and Léon Tine.

8.1.2. Journal

8.1.2.1. Member of the Editorial Boards

- Mostafa Adimy: Journal of Nonlinear Systems and Applications; Chinese Journal of Mathematics.
- 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.
- Fabien Crauste: Journal of Biological Systems; Journal of Theoretical Biology; Mathematical Methods in Applied Sciences; Plos One; Royal Society Open Science.
- 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.
- Mostafa Adimy: Journal of European Mathematical Society; Mathematical Methods in the Applied Sciences; Mathematical Modeling of Natural Phenomena.
- Léon Tine: Mathematical Modelling and Numerical Analysis.

8.1.3. Invited Talks

- Thomas Lepoutre: International conference on “PDMPs, theory and applications”, Seillac (France), May 29-June 2 2017; Workshop “Cross diffusion and kinetic equations for biology”, Vienna (Austria), 10-12 May 2017.
- Samuel Bernard: “Journée Scientifique de la faculté des Sciences et technologies de l'UCBL”, Lyon (France), 22 June 2017.

- Fabien Crauste: GDR Mamovi “Mathématiques de la Modélisation du Vivant”, Lyon (France), 27 - 29 Septembre 2017.
- Olivier Gandrillon: Workshop “Modelling, Noise and Development”, Bath (UK), 18-19 Mai 2017.
- Chloé Audebert: GDR Mamovi “Mathématiques de la Modélisation du Vivant”, Lyon (France), 27 - 29 Septembre 2017.
- Laurent Pujo-Menjouet: “ARC6 day”, Grenoble (France), 4 July 2017; “BIOMIM EXPO 2017”, Senlis (France), 29 - 30 June; “5ème édition des Congrès PSYRENE (PSYchologie, REcherche, NEurosciences)”, Lyon (France), 7 July 2017; “ECAL2017 (European Conference on Artificial Life)”, Lyon (France), 4-8 September; Workshop “Protein Aggregation: Biophysics and Mathematics”, Vienna (Austria), 6-8 June 2017.

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.
 - Laurent Pujo-Menjouet, Introduction à l’analyse numérique, 60h ETD, L2, 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: Loïs 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 Barbarroux, “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’inférence 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 Bonnafox, “Vers une inférence automatique de réseaux de gènes dynamiques à partir de “mégadonnées” temporelles discrètes acquises sur cellules uniques”, Université Lyon 1, since November 2015, 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, Ecole Mohammadia 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 sériel : 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”.

8.3. Popularization

- Thomas Lepoutre is coorganizer of the scientific exhibition Mathalyon.
- Samuel Bernard: Conference “L’âge de nos cellules par tests nucléaires”, Université Ouverte Lycée Charles Foucault, Lyon, January 23, 2017.
- Olivier Gandrillon participated in the Declics 2017 activities (Lycée Jean Perrin and Lycée Juliette Récamier).
- Laurent Pujo-Menjouet: Conferences “Les langues en danger: les maths sur le bout de la langue”, Lycée Jean Puy, Roanne, March, 16, 2017; “Epidémies, quand les maths viennent en aide” , St Bonnet le château, April, 10, 2017; “Mathématiques et relations amoureuses: les jeux de l’amour sans le hasard, St Bonnet le château, April, 10, 2017; “Espèces en danger: quand les maths viennent à la rescousse”, Université ouverte, Lyon, January, 5, 2017; Animation of a stand on the “Salon des jeux mathématiques, Paris, May 27 to 30, 2017.

ERABLE Project-Team

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*.
- Marie-France Sagot is member of the Editorial Board of *BMC Bioinformatics*, *Algorithms for Molecular Biology*, *Journal of Discrete Algorithms*, and *Lecture Notes in Bioinformatics*.
- Leen Stougie is member of the Editorial Board of *Surveys in Operations Research and Management Science* since 2011, and of *Journal of Industrial and Management Optimization* since 2013.
- Cristina Vieira is Executive Editor of *Gene*, and since 2014 member of the Editorial Board of *Mobile DNA*.

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

Giuseppe Italiano gave talks at the 4th Workshop on Graph Theory, Algorithms and Applications, Erice, Italy, 5-13 May, 2017 on “2-Connectivity in Directed Graphs”, and at the 10th International Conference on Algorithms and Complexity (CIAC 2017), Athens, Greece, May 24-26, 2017 (<http://www.corelab.ntua.gr/ciac2017/>) on “2-Edge- and 2-Vertex- Connectivity in Directed Graphs”.

Vincent Lacroix gave talks at the MIAT INRA Seminar, Toulouse, Feb 2017 on “De novo identification of SNPs from RNA-seq data in non-model species”, and at the Aviesan ITMO Santé 9th annual meeting (<https://its.aviesan.fr/index.php?pagendx=1046>), Lyon, Nov 2017 on “Complementarity of assembly-first and mapping-first approaches for alternative splicing annotation and differential analysis from RNA-seq data”.

Alexander Schönhuth gave talks at the FCHealth Meeting, Helsinki (organiser: Veli Mäkinen) on “Disentangling the genetic diversity of pathogens at the strain level using overlap graphs”, the Computational Genomics Summer Institute (<http://computationalgenomics.bioinformatics.ucla.edu>), University of California at Los Angeles on “Polyploid Genome Assembly”, and the Bertinoro Computational Biology (BCB) 2017 (<https://bertinoro2017.wordpress.com>), organisers: Sohrab Shah, UBC Vancouver; Jens Lagergren, Stockholm), on “Discovering somatic variants in single cells”.

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 Schönhuth 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 Sinimeri 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. Sinimeri.
- 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 Tejs 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-etudiants/>.
- Blerina Sinimeri 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.

IBIS Project-Team

9. Dissemination

9.1. Research

9.1.1. Scientific events: organizing committees

9.1.1.1. Member of organizing committees

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

9.1.2. Scientific events: selection committees

9.1.2.1. Chair of conference program committees

IBIS member	Conference, workshop, school	Role
Eugenio Cinquemani	European Control Conference (ECC 2017)	Associate editor

9.1.2.2. Member of conference program committees

IBIS member	Conference, workshop, program
Eugenio Cinquemani	ECC 2017
Hidde de Jong	ISMB/ECCB 2017, CMSB 2018, WML 2018
Delphine Ropers	JOBIM 2017

9.1.3. Journals

9.1.3.1. Member of editorial boards

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

9.1.4. Scientific evaluation and expertise

IBIS member	Organism	Role
Johannes Geiselmann	INRA	Member of scientific advisory committee Microbiologie, Adaptation, Pathogénie
Johannes Geiselmann	UMR5240 CNRS-UCBL-INSA-BayerCropScience	Member scientific council
Johannes Geiselmann Hidde de Jong	ARC1, Rhône-Alpes region Microbiology and Food Chain Department, Inra	Member scientific committee Member scientific council
Hidde de Jong	HCERES	Member of evaluation committee of TAGC laboratory (UMR U1090), Marseille

9.1.5. Recruitment committees

IBIS member	Organism	Recruitment
Hidde de Jong	INRA	Chargés de recherche
Johannes Geiselmann	INSA de Lyon	Full professor
Delphine Ropers	Inria	Chargés de recherche CR1 (jury d'admissibilité)
Delphine Ropers	Inria Sophia-Antipolis	Chargés de recherche (jury d'admissibilité)
Delphine Ropers	INSA de Lyon	Assistant professor

9.1.6. Invited talks

Eugenio Cinquemani

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

Hidde de Jong

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

Johannes Geiselmann

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

Stephan Lacour

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

Delphine Ropers

Title	Event and location	Date
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9.1.7. Research administration

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

9.2. Teaching - Supervision - Committees

9.2.1. Teaching

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

Eugenio Cinquemani

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

Master: Statistics for systems biology, M1, Master Approches Interdisciplinaires du Vivant, CRI/Université Paris Descartes (24 h, 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 Casagrande**, 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 Coccagn-Bousquet (INRA Toulouse)

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

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

PhD thesis committees

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

Habilitation (HDR) committees

IBIS member	Role	PhD student	University	Date
Hidde de Jong	Rapporteur	Elisabeth Rémy	Université Aix-Marseille	Avr 2017

PhD advisory committees

IBIS member	PhD student	University
Eugenio Cinquemani	Luis Pereira	Université Nice Sophia Antipolis
Stephan Lacour	Alice Berry	Université de Grenoble
Stephan Lacour	Simon Léonard	Université Claude Bernard de Lyon

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'Administration 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 PHELMMA, 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)

STEPP Project-Team

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/democratieetnumerique/>

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 15rd, 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 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 re-maining 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.
- “Understanding society collapses. What future for ours?” by Emmanuel Prados, Inria.
- “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=1dgjleR5DBY>
- 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 Financéwatch (Brussels, Belgium, 5th december 2017). The video of the conference available on YouTube. <https://www.youtube.com/watch?v=3RyJTn0a-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

- Walid Bechkit and Razvan Stanica organized the 1st French National Workshop on Smart Cities Communications and Networking, in Sophia Antipolis, in January 2017.

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.
- Khaled Boussetta was in the TPC of the following conferences: IEEE CCNC, IEEE GlobeCom, GIIS, IEEE ICC, Med-Hoc-Net, IEEE VTC Fall, IFIP Wireless Days.
- 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.
- Oana Iova was a reviewer for the following journals: ACM Transactions on Sensor Networks, IEEE Access, Elsevier Ad Hoc Networks, Elsevier Future Generation Computer Systems, MDPI Sensors, Springer International Journal of Wireless Information Networks.
- Razvan Stanica was a reviewer for the following journals: IEEE Transactions on Mobile Computing, IEEE Journal on Selected Areas in Communications, IEEE Communications Magazine, IEEE Communications Letters, IEEE Transactions on Intelligent Transportation Systems, Elsevier Computer Networks, Springer Wireless Networks, IEEE Access, IET Intelligent Transport 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 : Walid Bechkit, Fundamentals of wireless sensor networks, 60h, L2, INSA Lyon.

Licence : Walid Bechkit, IP Networks, 40h, L3, Telecom. Dpt. INSA Lyon.

Licence : Oana Iova, IP Networks, 2h, L3, Telecom. Dpt. INSA Lyon.

Licence : Hervé Rivano, IP Networks, 8h, L3, Telecom. Dpt. INSA Lyon.

Licence : Hervé Rivano, DB, Algorithms and programming, 79h, L1 - L2, INSA Lyon.

Licence : Hervé Rivano, Discovering digital tools, 21h, L1, INSA Lyon.

Licence : Razvan Stanica, Network Programming, 90h, L3, Telecom. Dpt. INSA Lyon.

Licence : Fabrice Valois, IP Networks, 100h, L3, Telecom. Dpt. INSA Lyon.

Licence : Fabrice Valois, IP Networks, 20h, L3, IST / Telecom. Dpt. INSA Lyon (lectures given in english).

Master : Walid Bechkit, Network architectures, protocols and services, 12h, M1, Telecom. Dpt. INSA Lyon.

Master : Walid Bechkit, Performance evaluation of telecom networks, 100h, M1, Telecom. Dpt. INSA Lyon.

Master : Walid Bechkit, Wireless networks: architecture and security, 30h, M2, 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 : Razvan Stanica, Mobile Networks, 30h, M1, Telecom. Dpt. INSA Lyon.

Master : Razvan Stanica, Network Science, 10h, M2, Telecom. Dpt. INSA Lyon.

Master : Fabrice Valois, Mobile Networks, 30h, M1, Telecom. Dpt. INSA Lyon.

Master : Fabrice Valois, Wireless Sensor Networks, 6h, M2, University of Grenoble.

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: Abderrahman Ben Khalifa, Cognitive mechanisms for IoT networks, since 11/2016. Advisors: Hervé Rivano, Razvan Stanica.

PhD in progress: Ahmed Boubrima, Optimal deployment of wireless sensor networks for air pollution monitoring, since 10/2015. Advisors: Walid Bechkit, Hervé Rivano.

PhD in progress : Rodrigue Domga Komguem, Autonomous WSN architectures for road traffic applications, since 11/2012. Advisors: Razvan Stanica, Maurice Tchente (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 Spalanzani (Inria CHROMA), Fabrice Valois.

10.2.3. *Juries*

- Khaled Boussetta was a member in the following PhD defense committees:
 - R. Sorokin, Video Conference based on Enterprise Desktop Grid, Telecom ParisTech, 2017
 - 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, Adaptative 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.
 - B. Mbarek, Efficient Authentication Approaches for Wireless Sensor Networks, University of Tunis El-Manar, 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:
 - P. Katsikouli, Distributed and Privacy Preserving Algorithms for Mobility Information Processing, University of Edinburgh, 10/2017.
- 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:
 - S. Hamdoun, Adaptive and Efficient Radio Resource Sharing Schemes for Machine Type Communications underlying Cellular Networks, Institut Gaspard Monge, Université Paris-Est, 2017.
 - D. H. Nguyen, Enhancing and improving voice transmission quality over LTE networks: Challenges and Solutions, Télécom Sud Paris, 2017.
- 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:
 - A. Gallais, Contributions to Low Power Listening in Dynamic Internet of Things, I-Cube, Université de Strasbourg, 11/2017.
 - 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:
 - R. Dhaou, IoT composé de réseaux terrestres et par satellite au service des Smart Cities : mobilité et hétérogénéité, IRIT, INP Toulouse, 2017.

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".
- Walid Bechkit, Ahmed Boubrima and Hervé Rivano participated in the "Forum des interconnectés" - <http://www.interconnectes.com/>
- 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

AVALON Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

Laurent 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 Algorithms 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

Christian Perez served on the Organizing Committee of the 2017 International Conference on High Performance Computing & Simulation (HPCS 2017) as Conference Awards and Recognitions Co-Chair.

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

Eddy Caron reviewed articles for Journal of Cloud Computing, Journal FGCS, Transaction on Service Computing, Concurrency and Computation (Practice and Experience), Information Security Journal: A Global Perspective.

Marcos Dias de Assunção reviewed articles for the ACM Computing Surveys, Computer Networks, IEEE Cloud Computing, Software Practice and Experience, Sustainable Computing Journal, Parallel Computing, Cluster Computing Journal, Future Generation Computer Systems Journal (FGCS), Transactions on Cloud Computing, and IEEE Transactions on Network and Service Management.

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 Parallel Computing.

9.1.4. Invited Talks

Marcos Dias de Assunção gave the following talk:

- “Challenges on Resource Elasticity”, University of Umea, Sweden, March 29, 2017.

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:

- "HPC Component Models", 2017 JLESC Summer School, NCSA, Urbana, Illinois, July 21, 2017.

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 committees for 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 Ecoinfo 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 is a member of the committee selection of the project call from the Rhône-Alpes region ARC6 (France). He is also a member of the Inria Grenoble Rhône-Alpes Strategic Orientation Committee.

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 résx, 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, Responsable 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: Jérôme 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 Benoit-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: Felipe Rodrigo de Souza, *Networking Provisioning Algorithms for Highly Distributed Data Stream Processing*, École Doctorale, Eddy Caron (dir), Marcos Dias de Assunção (co-dir) (2017-2020).

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 Pot-taya, 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 Brume, 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

CTRL-A Project-Team

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/>)
 - ICCAC 2017 (2017 IEEE International Conference on Cloud and Autonomic Computing), The University of Arizona, Tucson, AZ, USA, September 18-22, 2017 (<http://www.autonomic-conference.org/icac-2017/>)
 - FACS 2017, 14th International Conference on Formal Aspects of Component Software, 10-13 October 2016, in Braga, Portugal (<http://facs2017.di.uminho.pt/>)
 - 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.ieeecss.org/>)
- national conferences
 - workshop Architectures Logicielles et Matérielles pour la Robotique Autonome, les Systèmes Cyber-Physiques et les Systèmes Auto-Adaptables SHARC2017, LAAS Toulouse, 29 et 30 juin 2017, (<https://sharc2017.sciencesconf.org>)
 - 11ème colloque francophone sur la Modélisation des Systèmes Réactifs (MSR'17), 15-17 novembre 2017, Marseille (France) (<http://www.lsis.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.lsis.org/msr2017/>).

Gwenaél 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

Gwenaél 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 :

- FETCH 2017, Ecole d'Hiver francophone sur la technologie de conception des systèmes embarqués hétérogènes, 9-11 janvier 2017, Mont Tremblant, Canada <http://fetch-conference.org>
- séminaire de l'équipe ASCOLA, IMT Nantes, 2 mai 2017
- FETCH 2018, Ecole d'Hiver francophone sur la technologie de conception des systèmes embarqués hétérogènes, 24-26 Janvier 2018, Saint Malo <http://fetch-conference.org>

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 : Adja Ndeye SYLLA ; Support intergiciel pour la conception et le déploiement adaptatifs fiables, application aux bâtiments intelligents ; U. Grenoble Alpes ; 18 dec. 2017 ; co-advised by Eric Rutten with M. Louvel (CEA). [11]
- PhD in progress : Neïl Ayebe ; Vers un management des objets de l'IoT de 'centralisé' 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 Diguët (U. Bretagne Sud).
- PhD in progress : Ahmed Altaher ; Mise en oeuvre d'un cadre de sûreté de fonctionnement pour les systèmes de contrôle industriel : application à des systèmes de distribution d'énergie électrique (smart grids) ; avril 2013 ; co-advised by S. Mocanu with J-M Thiriet (Gipsa-lab).
- Oualid Koucham ; Détection 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.

DANTE Project-Team

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 the summer school "Cartography and visualisation" ⁰.
- Éric Guichard was the scientific organiser of the *LaTeX days: "Édition et typographie numériques, épistémologie"* ⁰ supported by Enssib and the GUTenberg association ⁰.
- 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

- Éric Fleury was on the PC of the conference ComplexNet, of the Conference on Complex Networks: From Theory to Interdisciplinary Applications, SensorNet 2017 and CoRes 2016.
- Thomas Begin was on the PC of the 43rd 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 COMPLENET, 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.

⁰<http://barthes.enssib.fr/ECV-2017>

⁰<http://barthes.enssib.fr/LaTeX-2017>

⁰<https://www.pointypo.com/journees-latex-edition-typographie-numeriques-epistemologie/>

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)
- Márton Karsai was acting as a reviewer for the journals of Nature Communications, PNAS, PRL, PRX, PRE, Scientific Reports, EPJ Data Science, SNAM, EPL, EPJ B, PLoS One, Journal of Statistical Mechanics, Physics Letter A, Advanced in Complex Systems, Journal of Physics: Condensed Matter, Complex Networks, New Journal of Physics, Physica Scripta, Network Science; and for project agencies as ANR, FET-H2020 RIA.

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)
- Márton Karsai gave an invited talk on Spatial networks and human mobility, GoPro 2017, ENS Lyon (13 December 2017, Lyon, 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 the French National Research Agency ⁰
- 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 ⁰ 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 understanding 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.

⁰<http://www.agence-nationale-recherche.fr/en/funding-opportunities/work-programme-2017/major-societal-challenges-at-the-frontiers-of-research-components/>

⁰<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 à 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: Laurent Reynaud, Designing optimized and disruption-tolerant mobility strategies for wireless networks. March 2017, I. Guérin Lassous

PhD defense: Matteo Morini, New tools for understanding the dynamics of social networks, Oct 2017, E. Fleury, P. Jensen and M. Karsai

PhD defense: Huu-Nghi Nguyen, Passive measurement in Software Defined Networks. March 2017, T. Begin and A. Busson and I. Guérin Lassous

Philosophy Master defence: Coline Ferrarato (ENS / EHESS), *Philosophie du logiciel. Dialogue entre Simondon et un objet technique numérique*⁰, Eric Guichard and Mathias Girel.

Master defense: Arthur Perret (ENSIB): *Écrire la carte. Les apports intellectuels de la cartographie numérique*⁰, Eric Guichard.

Master 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.

Master defense: Louis Duvivier (ENS de Lyon), *Causal correlations in temporal graphs*, Christophe Crespelle and Marton Karsai.

PhD in progress: Sarra Ben Alaya, Multi-scale classification and analysis of data on networks. Nov. 2015, P. Gonçalves (P. Borgnat, co-advisor). Sarra ended prematurely her PhD in Novembre 2017.

PhD in progress: Esteban Bautista Ruiz, Statistical Graph Signal Processing. P. Gonçalves (P. Abry, co-advisor). Started Sept. 1st, 2016.

PhD in progress: Mohammed Amer, WiFi network management: a SDN approach. January 2015, A. Busson and I. Guérin Lassous

⁰<http://barthes.enssib.fr/travaux/Coline-Ferrarato-masterphilologiciel.pdf>

⁰<http://barthes.enssib.fr/travaux/Epistemo-carto-num-Perret.pdf>

PhD in progress: Lafdal Mohamed Abdelwedoud, 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: Gaetan Frusque, *Modal Decompositions of Dynamic Graphs : Application in Neurosciences*, P. Gonçalves (P. Borgnat, co-advisor). Started October 1st, 2017.

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 Rakoton-dravelona “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.

DATAMOVE Project-Team

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

ISAV 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

CCgrid (17th IEEE/ACM Internat. Symposium on Cluster, Cloud and Grid Computing) May 14-17, Madrid, Spain

COMPAS, June 27-30, Sophia-Antipolis, France

ISPDG (16th Internat Symposium on Parallel and Distributed Computing) July 3-6, Innsbruck, Austria

WAOA (15th workshop on Approximation and Online 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

CloudTech (3rd International Conference on Cloud Computing Technologies and Applications) Oct. 24-26, Rabat, Morocco

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: Raphaël Bleuse, Affinity Scheduling, Defended November 2017, Univ. Grenoble-Alpes. Adviser: Denis Trystram and Gregory Mounié.

PhD: Millian Poquet, Energy consumption optimization for high performance computing, Defended December 2017, Univ. Grenoble-Alpes. Advisers: Denis Trystram and Pierre-François Dutot

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

PhD: Fernando Machado Mendonca, Locality Aware Scheduling, Univ. Grenoble-Alpes, Defended April 2017, Advisers: Frederic Wagner and Denis Trystram.

PhD: Julio Toss, Parallel Algorithms and Data Structures for Physically Based Simulation of Deformable Objects, Univ. Grenoble-Alpes and UFRGS (co-tutelle). Defended October 2015. Advisers: Bruno Raffin and Joao Comba (UFRGS).

PhD in progress : Estelle Dirand, Integration of High-Performance Data Analytics and IOs for Molecular Dynamics on Exascale Computer, Univ. Grenoble-Alpes. Started January 2016. Advisers: Bruno Raffin and Laurent Colombet (CEA).

PhD in progress: Michael Mercier, Resource Management and Job Scheduling in HPC–Cloud environments towards the Big Data era, Univ. Grenoble Alpes. Started October 2016. Advisers: Olivier Richard and Bruno Raffin.

PhD in progress: Valentin Reis, Machine Learning for resource management, Univ. Grenoble-Alpes. Started October 2015. Advisers: Denis Trystram and Eric Gaussier

PhD in progress: Alessandro Kraemer, Scheduling in the Cloud, Univ Grenoble-Alpes and UFPR (co-tutelle). Started October 2014. Advisers: Olivier Richard and Denis Trystram.

PhD in progress: 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 of Jorge F. Fabeiro, Tools for Improving Performance Portability in Heterogeneous Environments, 13th of July 2017. Univesidade da Coruña, Spain. Jury President.

PhD Defense Xavier Martinez, Tracking sans marqueur de modèles physiques modulaires et articulés: vers une interface tangible pour la manipulation de simulations moléculaires, 10th of October 2017. Université Paris-Sud, Paris Saclay. Jury Member.

PhD defense Jérôme Richard, Conception d'un modèle de composants logiciels avec ordonnancement de tâches pour les architectures parallèles multi-cœurs, 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.

PhD defense Suraj Kumar, Scheduling of Dense Algebra Kernels on Heterogeneous Resources , Avril 2017. Univ of Bordeaux . Jury President.

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), ENSIMAG

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: Arnaud Legrand, “*Parallel Systems*”, 21h (31.5h) M2R, M2R Mosig.

Master: Arnaud Legrand, “*Scientific Methodology and Performance Evaluation*”, 24h (36h), ENS Lyon.

Master: Panayotis Mertikopoulos, “*Selected Topics in the Theory of Stochastic Processes*”, 16h M2, University of Athens, Athens, Greece

Master: Florence Perronnin, “*Simulation*”, M1, Université Versailles – Saint-Quentin

Master: Florence Perronnin, “*Probabilités–Simulation*”, RISM4 Polytech Grenoble

Master: Arnaud Legrand and Jean-Marc Vincent, Probability and simulation, performance evaluation 72 h, (M1), RISM, 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 M2P: Florence Perronnin *Probability and Simulation, Performance Evaluation*, Polytech Grenoble.

Master M2R: Panayotis Mertikopoulos *Selected Topics in Probability Theory* University of Athens, *Online Learning and Optimal Decision Making* MIF, ENS Lyon.

Master M2R: Bruno Gaujal *Online Learning and Optimal Decision Making* MIF, ENS Lyon, *Foundations of Network Performance*, MPRI, Paris.

Master M2R: Vincent Danjean *Operating Systems*, MOSIG, Grenoble

Master M2R: Arnaud Legrand *Parallel Systems* and *Scientific Methodology and Performance Evaluation*, MOSIG, Grenoble, *Scientific Methodology and Performance Evaluation*, ENS Rennes.

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 Hinsin (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).
- Tom Cornebize (2017-...): Capacity planning and performance evaluation of supercomputers (funded by the French Ministry for Research) (advised by Arnaud Legrand).
- 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).
- Stephan Plassard (2016-...), Energy Optimization in Embedded Systems (co-advised by Bruno Gaujal and Alain Girault) (funded by Labex Persyval, Grenoble).
- Stephane Durand (2015-...) Distributed Best Response Algorithms in random Potential Games (co-advised by Bruno Gaujal and Federica Garin) (funded by Labex Persyval, Grenoble).
- 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.
- Bruno Gaujal has served in the PhD juries of Alemayehu Addisu Desta (Dec. 2017) (member), Shabbir Ali (Jul. 2017) (reviewer), and Habilitation Thesis of Lin Chen (Jul. 2017) (reviewer).
- E. Veronica Belmega has served as an examiner on the PhD jury of Dora BOVIZ (Nokia, Paris-Saclay); Faton MALIQI (Centrale Supélec) Chao ZHANG (Centrale Supélec)

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”.
- E. Veronica Belmega: "Introduction à la theorie des jeux et ses applications en communications", invited talk, Lycee Chrestien de Troyes, France, Nov. 2017.

ROMA Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

Marie Durand, Guillaume Joslin and Chiara Puglisi organized the fourth edition of the MUMPS User days in Montbonnot on June 1 and 2, 2017, see http://mumps.enseiht.fr/index.php?page=ud_2017.

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.
- Bora Uçar reviewed papers for IEEE Cluster 2017, ICPP 2017, IPDPS 2017, and ALENEX 2017.

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 vide-head 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 concurrente, 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:

- Jean-Yves L'Excellent taught during the training "Solvers for Computer Aided Engineering" (Jan. 30–Feb. 3 2017) co-organized by ENS Paris-Saclay, Hewlett-Packard Enterprises, Ansys, MUMPS, CMLA, Intel.
- 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 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 defended in July 2017: Aurélien Cavelan, "Resilient and energy-aware scheduling algorithms for large-scale distributed systems", started in September 2014, advisors: Anne Benoit and Yves Robert.

PhD in progress: Changjiang Gou, "Resilient and energy-aware scheduling algorithms for large-scale distributed systems", started in September 2016, funding: China Scholarship Council, advisors: Anne Benoit and Loris Marchal.

PhD in progress: Li Han, "Algorithms for detecting and correcting silent and non-functional errors in scientific workflows", started in September 2016, funding: China Scholarship Council, advisors: Yves Robert and Frédéric Vivien

PhD defended in September 2017: Oguz Kaya, "High performance parallel tensor computations", started in September 2014, funding: Inria, advisors: Bora Uçar and Yves Robert.

PhD in progress: Aurélie Kong Win Chang, "Techniques de résilience pour l'ordonnancement de workflows sur plates-formes décentralisées (cloud computing) avec contraintes de sécurité", started in October 2016, funding: ENS Lyon, advisors: Yves Robert, Yves Caniou and Eddy Caron.

PhD in progress: Loic Pottier, "Scheduling concurrent applications in the presence of failures", started in September 2015, advisors: Anne Benoit and Yves Robert.

PhD in progress: Issam Rais, "Multi-criteria scheduling for high-performance computing", started in November 2015, advisors: Anne Benoit, Laurent Lefèvre (LIP, ENS Lyon, Avalon team), and Anne-Cécile Orgerie (IRISA, Myriads team).

PhD in progress: 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 hyper-graph 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.
- Yves Robert was "président du jury" for the Habilitation à Diriger des Recherches of Abdou Guermouche and Pierre Ramet at Inria Bordeaux in November 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 Maurica 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.
- Yves Robert was "président du jury" for the Habilitation à Diriger des Recherches of Abdou Guermouche and Pierre Ramet at Inria Bordeaux in November 2017.

SOCRATE Project-Team

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
- International Conference on Advances in Cognitive Radio (COCORA) 2018.

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:

- 28th IEEE International Conference on Application-specific Systems, Architectures and Processors (ASAP 2017)
- 13th International Symposium on Applied Reconfigurable Computing (ARC 2017)
- 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 Personal 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:

- Toward haptic communications for IoT in 5G, in IEEE 5G Greece Summit, July 11th, 2017.
- (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.
- Fundamental limits of bursty multi-user communications, in the The Tenth Workshop on Information Theoretic Methods in Science and Engineering, 11-13 september 2017, Paris, France.

9.1.6. Research Administration

Jean-Marie Gorce is Adjoint to Scientific Director of Inria Rhône-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 Delizy** *memory management for normally-of NV-RAM based systems*, Insa-Lyon, (Region ARC6) since 09/2016.

PhD in progress **Yohan Uguen** *Synthesis of arithmetic operators*, Insa-Lyon, (Ministry of research) since 09/2016.

PhD in progress **Yuqi Mo** *Scaling of Iot Communication issuers*, Insa-Lyon, since 09/2015.

PhD in progress **David Kibloff** *New strategy for Physical Layer Security in wireless networks: self-jamming using Full-Duplex Transceivers*, École Doctorale EEA de Lyon, funded by Inria-DGA grant since 10/2015.

PhD in progress **Nizar Khalfet** *Stochastic Energy Sources to Power Communication Systems*, École Doctorale EEA de Lyon, funded by EU Project COM-MED since 10/2016.

PhD in progress : **Andrea Bocco** *Porposition d'une unité de caclul U-NUM pour le calcul scientifique*, ANR Metalibm grant, since 12/2016.

PhD in progress : **Hassan Kallam** *Topology aided multi-user interference management in wireless network*, Fed4PMR Insavalor project grant, since 01/2017.

PhD in progress : **Anade Akpo Dadja** *Non asymptotic fundamental limits of impulsive radio communication*, ANR Arbust grant, since 09/2017.

PhD in progress : **Diane Duchemin** *Distributed coding in dense IoT Network*, ANR Metalibm grant, since 01/2017.

PhD : **Victor Quintero** *Noisy Channel-Output Feedback in the Interference Channel*, École Doctorale EEA, 12/12/2017.

PhD : **Matei Istoan** *High-performance coarse operators for FPGA-based computing*, ANR Metalibm grant, 6/04/2017.

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 Aït 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.

CHROMA Project-Team

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, Ph. Martinet, C. Stiller and U. Nunes, organized a workshop entitled “9th Workshop on Planning, Perception and Navigation for Intelligent Vehicle” at IEEE IROS 2017, Vancouver (Canada), September 2017 (about 170 attendees). <http://ppniv17.irccyn.ec-nantes.fr/>
- C. Laugier co-organized with Suzanne Lesecq an Inria-CEA workshop on “Technologies for Autonomous vehicles”, Grenoble, February 2017. <http://www.irtnanoelec.fr/organisation-dun-workshop-autour-des-technologies-du-vehicule-autonome/>
- 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 co-organized with NUS and MIT a workshop at IEEE ICRA 2017 entitled “Workshop on Robotics and Vehicular Technologies for Self-Driving Cars”, Singapore, June 2017. http://cim.mcgill.ca/malika/ICRA17_WS/
- 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 DL2T : Deep Learning – Télédétection - Temps November 20th, 2017, Paris (Issy-Les-Moulineaux), France. Title: Apprentissage profond (Deep Learning) et séries temporelles : Concepts et mise en oeuvre.
- 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 platforms, 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.

M2R MoSIG: A. Martinelli, Autonomous Robotics, 12h, ENSIMAG Grenoble.

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.

Master: C. Laugier, "Bayesian Perception & Decision-making for Autonomous Vehicles and Mobile Robots", 3 hours, Beijing Institute of Technology, Beijing, Chine.

Doctorat: C. Laugier, "Embedded Perception, Situation Awareness and Decision-making for Autonomous Vehicles", 4 hours, Intelligent Vehicles International Summer School, ITEAM European H2020 MSCA-ITN project, Compiègne, France.

10.2.2. Supervision

PhD : Tiana Rakotovao Andriamahefa, Embedded Bayesian Perception on a Multi-core Architecture, Univ. Grenoble, 21/02/2017, C. Laugier and D. Ruspini (CEA LETI).

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: Stefan Chitic, Middleware for multi-robot systems, 2013, O. Simonin, J. Ponge (CITI-Dynamid) (to be defended on March 2018).

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

PhD in progress: Pavan Vasishta, Situational Awareness of Autonomous Cars in Urban Areas, 2016, A. Spalanzani, Dominique Vaufreydaz (Inria Pervasive Interaction).

PhD in progress: Guillaume Bono, Global-local Optimization Under Uncertainty for Goods Distribution Using a Fleet of Autonomous Vehicles, 2016, O. Simonin, J. Dibangoye, L. Matignon.

PhD in progress: Remi Cambuzat, Robots de Téléprésence : Navigation Sociale et Interaction Verbale immersives, 2016, G. Bailly (CNRS GIPSA lab), A. Spalanzani, O. Simonin.

Starting PhD: Remy Grunblatt, Mobilité contrôlée dans les réseaux de drones autonomes", 2017, I. Guerrin-Lassous (Inria Dante), O. Simonin.

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 Khambhaita, 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
- March 7, 2017, F. Jumel, J. Saraydaryan FSM 2017, BU Sciences, Robotic show, Baxter and Co. (with R. Leber)
- 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, 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)
- November 23, 2017, F. Jumel, “Exposition Hello robots”, IUT Lyon 1, “Smart robotic and Robocup”

IMAGINE Project-Team

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

- Marie-Paule Cani served in the Papers Committee of Eurographics 2017.
- Frédéric Devernay served as a member of the program committee for IEEE CVPR 2017, ECCV 2017, 3DV 2017, CVMP 2017, RFIA 2017.
- 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).
- Stefanie Hahmann served in the International Program Committee for Eurographics 2017, Shape Modeling International (SMI) 2017 and SGP 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

- Remi Ronfard was a reviewer for the ACM transactions on Graphics, Computers and Graphics, and Graphical Models journals in 2017.
- Stefanie Hahmann was a reviewer for the journals CAGD and CAD.

- Jean-Claude Léon was a reviewer for the journal ASME JCISE.
- Frederic Devernay was a reviewer in 2017 for IEEE Robotics and Automation Letters, IEEE Transactions on Robotics, and Traitement du Signal.

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.

Damien Rohmer gave an invited talk at the SIAM-GD (Geometric Design) conference on "Efficient Developable Surface Modeling: From Garment Design, to Paper Animation". Pittsburg, July 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.
- Remi 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 planed 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: Sébastien Crozet, *Calcul de distance minimale entre solides B-Rep CAO pour des applications de simulations mécaniques temps réelles*, Janvier 2015-Décembre 2017. Supervised by Jean-Claude Léon. Defended in December 2017.
- 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: Tibor Stanko. *Modélisation de surfaces lisses maillées à partir de capteurs inertiels*. Thèse CEA. October 2014- September 2017. Supervised by Stefanie Hahmann and GP Bonneau. Defended in December 2017.
- PhD in progress: Romain Brégier (Univ. Grenoble Alpes), *Detection and pose estimation of rigid object instances for robotics (Détection et estimation de pose d'instances d'objets rigides pour la manipulation robotisée)*. July 2014 - February 2018. Frédéric Devernay, James Crowley (LIG, Grenoble).
- PhD in progress: Guillaume Cordonnier. *Graphical simulation of mountains based on geology*. Grenoble university. October 2015-September 2018. Marie-Paule Cani and Eric Galin.

- PhD in progress: Geoffrey Guingo. *Synthesis of animated textures*. Grenoble university. October 2015-September 2018. Marie-Paule Cani, Jean-Michel Dischler and Basile Sauvage.
- PhD in progress: Sandra Nabil (Université de Grenoble Alpes), 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).
- PhD in progress: Robin Roussel. *Function-aware design for objects to be fabricated*. UCL London. October 2015-September 2018. Niloy Mitra, Marie-Paule Cani and Jean-Claude Léon.
- PhD in progress: Amélie Fondevilla. Sculpting and animating developable surfaces with video embedding. Grant MENRT. October 2016 - September 2019. Stéfanie Hahmann and Damien Rohmer.
- PhD in progress: Thomas Buffet. Efficient multi-layered cloth animation using implicit surfaces, Grant ANR FoLD-Dyn. December 2017 - November 2020. Marie-Paule Cani and Damien Rohmer.
- PhD in progress: Maxime Garcia. *Expressive performance transfer*. Grant MENRT. October 2016-September 2019. Supervised by Rémi Ronfard.
- PhD in progress: Pierre Casati. *Animating 3D antique statues and engravings*. December 2017-November 2020. Supervised by Rémi Ronfard and Stéfanie Hahmann. Funded by ANR project E-ROMA.
- PhD in progress: Ameya Murukutla. *Authoring scenarios for augmented reality anatomy learning*. December 2017-November 2020. Supervised by Rémi Ronfard and Olivier Palombi. Funded by ANR project Anatomy 2020.
- PhD abandoned: Even Entem. *3D modelling from a sketch*. Grenoble University. November 2013-March 2017. Marie-Paule Cani and Loic Barthe (IRIT Toulouse). PhD Stopped in March 2017.
- PhD abandoned: Pablo Coves. From Point Cloud Data to Functional CAD Model. Grenoble. Univ. Jean-Claude Léon, Damien Rohmer, Raphaëlle Chaine (LIRIS), Julie Digne (LIRIS). May 2015 - Sept. 2017. PhD stopped in Sept. 2017. Pablo currently pursue his career as a software engineer in the company Anatoscope.
- 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.
- Sketch-based character animation, CITIA, Annecy, May 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>.

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

- Romain Vergne, October 13, 2017. Blekinge Technology Institute (Karlskrona, Sweden).
- Joëlle Thollot, February 2, 2017. Loria - Inria Nancy.

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.

- Licence: Joëlle Thollot, Théorie des langages, 27h, L3, ENSIMAG, France.
- Licence: Joëlle Thollot, Séminaire d'innovation, 10h, L3, ENSE3, France.
- Master: Joëlle Thollot, Responsable du cursus en alternance, 48h, M1-M2, ENSIMAG, France.
- Master: Joëlle Thollot, Tutorat d'apprentis, 50h, M1-M2, ENSIMAG, France.
- Master: Joëlle Thollot, responsable de la filière MMIS, 24h, M1-M2, ENSIMAG, France.
- Licence : Romain Vergne, Introduction to algorithms, 64h, L1, UGA, France.
- Licence : Romain Vergne, WebGL, 29h, L3, IUT2 Grenoble, France.
- Master : Romain Vergne, Geometric modeling, 18h, M1, UGA, France.
- Master : Romain Vergne, Image synthesis, 27h, M1, UGA, France.
- Master : Romain Vergne, Image synthesis, 15h, M1, Polytech, France.
- Master : Romain Vergne, 3D graphics, 15h, M1, UGA, France.
- Master : Nicolas Holzschuch, Computer Graphics II, 18h, M2 MoSIG, France.
- Master : Nicolas Holzschuch, Synthèse d'Images et Animation, 32h, M2, ENSIMAG, France.

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 textuelles, 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/) (<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 “Mathématiques 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 “Mathématiques 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

Master: Jérôme David, Stage de programmation, 10h, M2 MIASHS, 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 méta-modèle 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 Thanh 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 Layaïda, 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

MORPHEO Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Member of the Conference Program Committees

- 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.
- Franck Hétroy-Wheeler reviewed for Eurographics 2017 (short papers), ACM Multimedia 2017 and 3DV 2017.
- Julien Pansiot reviewed for CVPR and MobiHealth 2017.
- Stefanie Wuhrer reviewed for CVPR and ICCV 2017.
- Edmond Boyer reviewed for CVPR, ICCV, SIGGRAPH 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

- Franck Hétroy-Wheeler reviewed for Frontiers in Plant Science and Journal of Mathematical Imaging and Vision.

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 Fernández Abrevaya, 3D Dynamic Human Motion Representations, Université de Grenoble Alpes, started 01/10/2016, supervised by Edmond Boyer and Stefanie Wuhler.

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 Wuhler.

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 Wuhler.

10.2.3. Juries

- Jean-Sébastien Franco was a member of the defense committee 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 committee of Rodrigo Ortiz 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

Xavier Alameda-Pineda co-organized a special session at ACM *International Conference on Multimedia Retrieval* 2017, and a workshop at ACM *International Conference on Multimedia* 2017.

9.1.2. Scientific Events Selection

9.1.2.1. Reviewer

In 2017, Xavier Alameda-Pineda reviewed for IEEE Conference on *Computer Vision and Pattern Recognition* 2017, *Advances on Neural Information Processing Systems* 2017, IEEE *International Conference on Audio Speech and Signal Processing* 2018 and *International Conference on Learning Representations*.

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

Xavier Alameda-Pineda regularly acts as reviewer for IEEE *Transactions on Pattern Analysis and Machine Intelligence*, IEEE *Transactions on Audio, Speech, and Language Processing*, IEEE *Transactions on Multimedia*, IEEE *Transactions on Image Processing*, IEEE *Transactions on Affective Computing*, *International Journal on Computer Vision* and *Computer Vision and Image Understanding*.

9.1.4. Invited Talks

- Xavier Alameda-Pineda gave an invited talk at GIPSA-Lab on Multi-speaker tracking with auditory data.
- Radu Horaud gave invited talks at two IEEE ICCV Workshops:
<https://www.msf-workshop.com/>
<https://mvr3d.github.io/>.

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

PERVASIVE INTERACTION Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Sabine Coquillart General co-chair, "Nouveaux Défis de l'Internet des Objets 2017 - Technique, Usage, Ethique", Fès-ESISA (Maroc), 17-18 mai 2017.

9.1.1.2. Member of the Organizing Committees

- Dominique Vaufreydaz organised the workshop "Behavior, Emotion and Representation: Building Blocks of Interaction" (BER 2017) at the 5th International Conference on Human-Agent Interaction (HAI 2017), Bielefeld Germany, Oct 2017.
- 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.

- GRAPP 2017 - The 12nd International Conference on Computer Graphics Theory and Applications, Porto, Portugal, February 2017
- 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 Personalized Mechanisms, Technologies, and Services, Athens, Greece, October 2017
- ICAT-EGVE 2017 - International Conference on Artificial Reality and Telexistence and Eurographics 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.
- Dominique Vaufreydaz reviewed articles for the Interactive Technology and Smart Education, 2017.
- Dominique Vaufreydaz reviewed articles for the 13th Annual ACM/IEEE International Conference on Human Robot Interaction (HRI)Chicago, IL, USA, March 5–8, 2018.

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 the Int. Journal of Aerospace Engineering, IEEE Trans. Intelligent Vehicles, and IEEE Trans. on Industrial Electronics.
- 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

- "Câblé, connecté ou écologique : trois visions pour l'habitat de demain " Journées de l'habitat intelligent et innovation dans le logement social, Absise - Les Bailleurs Sociaux de l'Isere, Grenoble, 23 May 2017.
- "Interaction avec le monde, avec autrui et soi-même : trois facettes de l'intelligence", Ideas Day, Ideas Laboratory, Grenoble, 4 Jul 2017.

Sabine Coquillart gave the following invited talk

- "Pseudo-Haptique : Etat de l' Art et Challenges", LIMSI, December 1st, 2017

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 Amiqua4Home Equipex

9.1.7. Research Administration

- James Crowley is director for the Amiqua4Home 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 Amiqua4Home 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
- Licence: Patrick Reignier, Projet C, 20h eqTD, L3, 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 Jingtao Chen, "Biomechanical Analysis of Different Aspects in Virtual Reality. Application", PhD UGA, January 30th, 2017, Peter Mitrouchev, Franck Quaine and Sabine Coquillart
- PhD : Gregoire Nieto, Light Field Remote Vision, Univ Grenoble Alpes, 3 Oct 2017, Frederic Devernay 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, Détection et estimation de pose d'instances d'objet rigide pour la manipulation robotisée, 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, Leonaard 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 séparation de source sonore, Octobre 2016, Emmanuel Mazer
- PhD in progress: Matteo Ciocca, "Safe Robot Motion", Octobre 2016, Thierry Fraichard and Pierre-Brice Wieber.

9.2.4. Juries

- James Crowley served as President of the Doctoral Jury for Tiana Rakotovao Andriamahefa, University Grenoble Alps, March 2017
- Patrick Reignier served as a jury member of the Doctoral Jury of Nadine Mandran (University Grenoble Alps)

- 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.

THOTH Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- C. Schmid. General Chair European Conference on Computer Vision (ECCV) 2020.
- C. Schmid. Co-organizer for Workshop on Frontiers of Video Technology, San Jose, 2017.
- J. Mairal. Member of the organizing committee of the Journées SMAI-MODE, which will take place in March 2018.
- G. Rogez. Co-organizer of the CVPR workshop on Observing and Understanding Hands in Action (HANDS 2017).

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- C. Schmid. Area chair for ICCV 2017, NIPS 2017, ICML 2018, and ECCV 2018.
- K. Alahari. Area chair for CVPR 2018.
- J. Mairal. Area chair for ICML 2017, NIPS 2017, and ICML 2018.
- J. Verbeek. Area chair for ECCV 2018.

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

- C. Schmid: Editor in Chief of the International Journal of Computer Vision, since 2013.
- C. Schmid: Associate editor for Foundations and Trends in Computer Graphics and Vision, since 2005.
- J. Mairal: Associate editor of the International Journal of Computer Vision (IJCV), since 2015.
- J. Mairal: Senior associate editor for IEEE Signal Processing Letters, since Feb 2015 (editor since Aug. 2014).
- J. Mairal: Associate editor of Journal of Mathematical Imaging and Vision (JMIV), since 2015.
- J. Mairal: Associate editor of the SIAM Journal of imaging science, since 2018.
- J. Verbeek: Associate editor for Image and Vision Computing Journal, since 2011.
- J. Verbeek: Associate editor for the International Journal on Computer Vision, since 2014.

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

- K. Alahari. Invited speaker at ETH Zurich Photogrammetry group retreat, Morzine, France, January 2017.
- G. Durif. Invited speaker at the “StatOmique” meeting, Paris. March 2017.
- J. Mairal. Seminar LIG. Grenoble, December 2017.
- J. Mairal. Invited speaker at Journées franco-chiliennes d’optimisation. Toulouse, July 2017.
- J. Mairal. Invited speaker at the large-scale and distributed optimization workshop, Lund, June 2017.
- J. Mairal. Invited speaker at Pattern recognition and computer vision colloquium, Prague, May 2017.
- J. Mairal. Invited speaker at the optimization and statistical learning workshop, Les Houches, April 2017.
- J. Mairal. Two seminars at Amazon Berlin. February 2017.
- G. Rogez. Invited speaker at Journées CNRS-GDR Isis, Telecom PariTech, December 2017.
- J. Verbeek. Invited talk at Aalto University, Helsinki, Finland, June 2017.
- J. Verbeek. Invited talk at ATOS, Grenoble, January 2017.
- J. Verbeek. Invited talk at Technicolor, Rennes, January 2017.
- H. Lin. Invited talk in mini-symposium. SIAM Optimization conference. May 2017.
- H. Lin. Seminar at University of Washington, June 2017.
- R. Klovov. Invited talk at ICCV workshop Learning to See from 3D Data.
- C. Schmid: Keynote speaker at ECML-PKDD 2017, Skopje, September 2017.
- C. Schmid: Keynote speaker at Gresti 2017, Juan-les-Pins, September 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.
- C. Schmid: Invited speaker at Chalearn Looking at People Workshop, in conjunction with CVPR’17, July 2017.
- C. Schmid: Invited speaker at Frontiers of Video Technology, July 2017.
- C. Schmid: Invited speaker at Korean Conference on Computer Vision, Seoul, June 2017.
- C. Schmid: Keynote speaker at Swedish Symposium on Deep Learning, Stockholm, June 2017.
- C. Schmid: Invited speaker at Russian Summit “Machines Can See”, Moscow, June 2017.
- C. Schmid: Seminar at Intel Network on Intelligent Systems, Munich, August 2017.
- C. Schmid: Seminar at Berkeley University, July 2017.
- C. Schmid: Seminar at Toyota Research Institute, July 2017.
- C. Schmid: Seminar at Google, Mountain View, July 2017.
- C. Schmid: Seminar at DeepMind, London, June 2017.
- C. Schmid: Speaker at Distinguished Seminar Series in Computing, Imperial College, London, June 2017.
- C. Schmid: Seminar at MPI, Tübingen, May 2017.
- C. Schmid: Seminar at “10 ans de l’ERC à Inria”, Paris, Mars 2017.

10.1.5. Scientific Expertise

- C. Schmid: Award committee member for Oréal-UNESCO award France for Women in Sciences 2017.
- 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).
- J. Mairal: member of the PGMO best PhD prize committee in 2017.
- 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. Mairal, “Introduction to machine learning”, PSL-ITI program, 6H eq-TD, Paris.

Doctorat: J. Verbeek. Tutorial given at IPTA, Montreal.

Doctorat: J. Verbeek. Invited lecture Deep learning summer school, Univ. Côte D’Azur.

Doctorat: C. Schmid. Tutorial on action recognition at the Winter School in Computer Vision, Jerusalem, January 2017.

Master : C. Schmid, “Object recognition and computer vision”, 15H eqTD, M2, ENS Cachan, France.

Master : J. Verbeek and C. Schmid. “Machine Learning & Category Representation”, 27H eqTD, M2, Univ. Grenoble.

Master: K. Alahari, “Introduction to Discrete Optimization”, Ecole Centrale Paris, 27H eq-TD, M1, Paris, France.

Master: K. Alahari, “Discrete Inference and Learning”, Ecole Centrale Paris, M2, Paris, France.

Master: K. Alahari, “Understanding Big Visual Data”, Grenoble INP, 13.5H eq-TD, M2, Grenoble, France.

Master: K. Alahari, “Introduction to computer vision”, ENS Paris, M1, Grenoble, France.

Master: J. Mairal, “Kernel methods for statistical learning”, 27H eqTD, M2, Ecole Normale Supérieure, Cachan.

Master : J. Verbeek and J. Mairal, “Advanced Learning Models”, 27H eqTD, M2, ENSIMAG, Grenoble.

Master: A. Sablayrolles 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.

PhD: Hongzhou Lin, Generic acceleration schemes for gradient-based optimization in machine learning, November 2017. Supervision Julien Mairal and Zaid Harchaoui.

PhD: Thomas Dias-Alves, Modélisation du déséquilibre de liaison en génomique des populations par méthodes d'optimisation, Univ. Grenoble Alpes, December 2017. Supervision Julien Mairal and Michael Blum.

PhD: Mattis Paulin, Of Learning Visual Representations Robust to Invariances for Image Classification and Retrieval, March 2017, Univ. Grenoble-Alpes. Supervision Z. Harchaoui, C. Schmid, F. Perronnin, J. Mairal, and M. Douze.

PhD: Vicky Kalogeiton, Localising spatially and temporally objects and actions in videos, September 2017, Univ. Edinburgh, supervision V. Ferrari and C. Schmid.

10.2.3. Juries

K. Alahari: Raghudeep Gadde, 2017, jury member, these, Ecole des Ponts ParisTech, Paris.

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. Mairal: Olga Permiakova, novembre 2017, member of "comité de suivi de thèse", Univ. Grenoble Alpes.

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: Thibaut Durand, September 2017, examinateur, Université Pierre et Marie Curie.

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

TYREX Project-Team

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. Layaïda 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. Layaïda is ‘référent budget’ member of the budget commission of the Inria Grenoble – Rhône-Alpes research center. The role of this commission is to allocate yearly budget (‘dotation’) to Inria project teams and services. On a yearly basis, we meet with team and service leaders individually, collect their financial needs and set their budget.
- N. Layaïda is member of the Scientific Board of Advanced Data-mining of the Persyval Labex.
- N. Layaïda is member of the Scientific Board of Digital League, the digital cluster of Auvergne-Rhône-Alpes.
- N. Layaïda 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, ‘Logique pour l’informatique’, 45 h eq TD, L3, Grenoble INP

Licence : N. Gesbert, 'Bases de la programmation impérative', 33 h eq TD, L3, Grenoble INP

Licence : N. Gesbert, academic tutorship of an apprentice, 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, 'Programmation C', 12h eq TD, L2, IUT2, Univ. Grenoble-Alpes

Licence : C. Roisin, 'Architecture des réseaux', 112h eq TD, L1, IUT2, Univ. Grenoble-Alpes

Licence : C. Roisin, 'Services réseaux', 22h eq TD, L2, IUT2, Univ. Grenoble-Alpes

Licence : C. Roisin, 'Introduction système Linux', 21h eq TD, L1, IUT2, Univ. Grenoble-Alpes

Licence : C. Roisin, 'Système et réseaux', 14h eq TD, L3, IUT2, Univ. Grenoble-Alpes

Licence : C. Roisin, academic tutorship of four apprentices, 20h eq TD, L3, IUT2, Univ. Grenoble-Alpes

Licence : C. Roisin, academic tutorship of 18 students, 13h eq TD, L1, IUT2, Univ. Grenoble-Alpes

N. Gesbert is responsible of the L3-level course 'logique pour l'informatique' (25 apprentices) and of the M1-level course 'construction d'applications Web' (72 students).

P. Genevès is co-responsible of the Master-level course 'Semantic Web: from XML to OWL' in the Mosig, Univ. Grenoble Alpes.

C. Roisin is responsible of the Licence Professionnelle en Alternance 'Administration et Sécurité des Systèmes et des Réseaux', L3, IUT2, Univ. Grenoble-Alpes (20 apprentices).

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 Layaïda and Hassen Fourati.

PhD in progress: Louis Jachiet, Foundations for the Analysis and Distributed Evaluation of SPARQL Queries, started in Sept. 2014, supervised by Pierre Genevès and Nabil Layaïda.

PhD in progress: Raouf Kerkouche, Optimized Predictive Analytics with Big Medical Data, started in Oct. 2017, supervised by Pierre Genevès and Claude Castelluccia.

PhD in progress: Fateh Boulmaiz, Extensions of the SPARQLGX System, started in Nov. 2017, supervised by Pierre Genevès and Nabil Layaïda.

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. Layaïda 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. Layaïda 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.