



RESEARCH CENTER

FIELD

**Networks, Systems and Services,
Distributed Computing**

Activity Report 2018

Section Dissemination

Edition: 2019-03-07

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Coast Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

Claudia-Lavinia Ignat and François Charoy were general co-chairs of ECSCW 2018.

9.1.1.2. Member of the Organizing Committees

Claudia-Lavinia Ignat, François Charoy and Gérald Oster were members of the ECSCW organising committee (European Conference on Computer-Supported Cooperative Work: The International venue on Practice-centred computing and the Design of cooperation technologies) 2018.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Claudia-Lavinia Ignat was co-chair of the Program Committee of ECSCW 2018. Gérald Oster was co-chair of the Demo and Poster Program Committee of ECSCW 2018.

9.1.2.2. Member of the conference program committees

- Claude Godart was PC member of the conference program committee of BPMDS (Business Process Modelling, Development and Support) 2018, EDOC (The enterprise computing conference), ICSOC (International Conference on Services Oriented Computing) 2018, ICWS (IEEE International Conference on Web Services) 2018, SCC (IEEE International Conference on Services Computing) 2018, WISE (Web Information Systems Engineering) 2018.
- Claudia-Lavinia Ignat was PC member of ECSCW (European Conference on Computer-Supported Cooperative Work: The International venue on Practice-centred computing and the Design of cooperation technologies) 2018, CDVE (International Conference on Cooperative Design, Visualisation and Engineering) 2018, CRIWG (International Conference on Collaboration and Technology) 2018
- François Charoy was PC Member of ICEBE (International Conference on Business Engineering) 2018, CTS 2018 (International Symposium on Collaborative Technologies and Systems), DG.O (International Conference on Digital Government Research) 2018, ICSOC 2018, IEEE International Conference on Business Information Systems, ISCRAM 2018, ECSCW 2018 and of several workshops.
- Gérald Oster was a PC member of CoopIS (International Conference on Cooperative Information Systems) 2018, CSCW (21st ACM Conference on Computer-Supported Cooperative Work and Social Computing) 2018 and ECSCW 2018.
- Khalid Benali was PC member of I-ESA'2018 (Interoperability of Enterprise Software and Applications), WorldCIST'18 (World Conference on Information Systems and Technologies), I3E 2018 (IFIP Conference on e-Business, e-Services and e-Society), ISKO-Maghreb'2018 (7th International Symposium ISKO-Maghreb'2018), MEDES 2018 (10th International Conference on Management of Digital EcoSystems).

9.1.3. Journal

9.1.3.1. Member of the editorial boards

- Claude Godart is a member of the editorial board of IEEE Transactions on Service Computing, International Journal of Services Computing, and member of the review board of the International Journal of Next Generation Computing.

- Claudia-Lavinia Ignat is member of the editorial board of Journal of CSCW (Computer Supported Cooperative Work).
- François Charoy is member of the editorial board of Service Oriented Computing and Applications Journal (Springer).

9.1.3.2. Reviewer - Reviewing activities

- Olivier Perrin reviewed papers for IEEE Transactions on Services Computing journal, IEEE Transactions on Parallel and Distributed Systems and Journal of Systems and Software.
- Claudia-Lavinia Ignat reviewed papers for CSCW 2018.
- Gérald Oster reviewed papers for Computer Supported Cooperative Work Journal, ECSCW 2018, CSCW 2018, CoopIS 2018.

9.1.4. Invited Talks

Claudia-Lavinia Ignat was invited to give the opening keynote “From groupware to large-scale trustworthy distributed collaborative systems” at CRIWG 2018.

9.1.5. Scientific Expertise

François Charoy was member of the HCERES committee for the SAMOVAR Lab, IMT Sud Paris

9.1.6. Research Administration

François Charoy and Claudia-Lavinia Ignat are steering committee members of European Society for Socially Embedded Technologies (EUSSET).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Permanent members of the Coast project-team are leading teachers in their respective institutions. They are responsible of lectures in disciplines like software engineering, database systems, object oriented programming and design, distributed systems, service computing and more advanced topics at all levels and in different of departments in the University. Most of the PhD Students have also teaching duties in the same institutions. As a whole, the Coast team accounts for more than 2500 hours of teaching. Members of the Coast team are also deeply involved in the pedagogical and administrative life of their departments.

- Claude Godart is responsible for the Computer Science Department of the engineering school ESSTIN.
- Khalid Benali is responsible for the professional master degree speciality “Distributed Information Systems” of MIAGE and of its international branch in Morocco.
- François Charoy is responsible of the Software Engineering specialisation at the TELECOM Nancy Engineering School of University of Lorraine.

9.2.2. Supervision

- PhD (defended): Quang Vinh Dang, Trust-based large scale collaboration, started in 10/2014, Claudia-Lavinia Ignat and François Charoy
- PhD (in progress): Hoai Le Nguyen, Study of group performance and behaviour in collaborative editing, started in 9/2015, Claudia-Lavinia Ignat and François Charoy
- PhD (in progress): Hoang Long Nguyen, A Trust Based Authorisation Model and Framework for the Cloud, started in 11/2015, Claudia-Lavinia Ignat and Olivier Perrin
- PhD (in progress): Victorien Elvinger, Secured Replication for Peer-to-Peer Collaborative Infrastructures, started in 10/2015, François Charoy and Gérald Oster

- PhD (in progress): Guillaume Rosinoski, Elastic BPM and the Cloud, started in 10/2014, François Charoy and Samir Youssef
- PhD (in progress): Quentin Laporte-Chabasse, Federation of Organisations over Peer to Peer Collaborative Network, started in 10/2016, François Charoy and Gérald Oster
- PhD (in progress): Béatrice Linot, Trust in cooperative systems, Jérôme Dinet et François Charoy, started 11/2016
- PhD (in progress): Anis Ahmed Nacer, Safe Service Composition, Olivier Perrin and François Charoy, started 3/2017
- PhD (in progress): Matthieu Nicolas, Optimisation of Replication Algorithms, Olivier Perrin and Gérald Oster, started 10/2017

9.2.3. Juries

- Claudia-Lavinia Ignat was member of CRCN recruitment jury at Inria Nancy-Grand Est

Coast members were members of the following PhD and HdR defence committees:

- Noura Faci, HdR, Université de Lyon, Décembre 2018 (François Charoy, président)
- Wafa Triaa, PhD, Université Grenoble Alpes, Septembre 2018 (François Charoy, rapporteur)
- Guillaume Garzone, PhD, Université de Toulouse, Novembre 2018 (François Charoy, rapporteur)
- Audrey Fertier, PhD, IMT Mines d'Albi-Carmaux, Novembre 2018 (François Charoy, rapporteur)
- Yacine Abboud, PhD, Université de Lorraine, Novembre 2018 (François Charoy, examinateur)
- Teuku Aulia Geumpana, PhD, University of New South Wales, December 2018 (François Charoy, rapporteur)

9.3. Popularization

9.3.1. Internal or external Inria responsibilities

- Claudia-Lavinia Ignat is in charge of European affairs for Inria Nancy Grand-Est. She is the Delegate of International Relations for Inria Nancy-Grand Est and member of COST-GTRI commission. She is a member of the Inria Nancy-Grand Est COMIPERS committee. She is a member of Inria CAP Chercheurs commission. She is responsible with the activity kindergarten at AGOS Inria Nancy-Grand Est. She is a member of the organisation committee of the Security Seminar at LORIA.
- Gerald Oster is a member of the council of the scientific pole AM2I (Automatique, Mathématiques, Informatique et leurs Interactions) of University of Lorraine

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

Eric Rutten is co-chairing, with Bogdan Robu (Gipsa-lab), the 40th Summer School of Automatic Control, Grenoble, September 2019, on the special topic of Control for Computing Systems.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Eric Rutten is co-chair, with A. Filieri (Imp. Coll. UK), of the International Workshop on Autonomic High Performance Computing, (AHPC 2018) (<http://hpcs2018.cisedu.info/2-conference/workshops—hpcs2018/workshop09-ahpc>) part of The International Conference on High Performance Computing & Simulation (HPCS 2018), July 16 - 20, 2018, Orléans, France (<http://hpcs2018.cisedu.info/>)

9.1.2.2. Member of the Conference Program Committees

Eric Rutten is PC member for :

- international conferences
 - ICAC 2018 (15th IEEE International Conference on Autonomic Computing), Sept 3-7, 2018, Trento, Italy (<http://icac2018.informatik.uni-wuerzburg.de/>)
 - (Associate Editor) 2nd IEEE Conference on Control Technology and Applications, CCTA 18, Copenhagen, Denmark, August 21-24, 2018 (<http://ccta2018.ieeecss.org/>)
 - 14th Workshop on Discrete Event Systems, WODES'18, Sorrento Coast, Italy, May 30 - June 1, 2018. (<http://wodes2018.unisa.it/>)
 - AI-Science'18, workshop on autonomic cyberinfrastructure for science, in conjunction with the ACM HPDC 2018, Tempe, AZ, United States, June 11, 2018 (<http://www.hpdc.org/2018/>)
 - 16th High Performance Computing & Simulation Conference (HPCS 2018). July 16 ? 20, 2018, Orléans, France (<http://hpcs2018.cisedu.info/>)
 - UCC Cloud Challenge event in conjunction with IEEE/ACM UCC/BDCAT 2018 in Zurich (<http://events.cbmi.htw-berlin.de/ucc18-cloudChallenge/index.html>)
 - ICAC 2019 (16th IEEE International Conference on Autonomic Computing), Umeå, Sweden, June 16 ? 20, 2019 (<http://icac2019.cs.umu.se>)

9.1.2.3. Reviewer

Eric Rutten is reviewer for SafeProcess 18 and CDC 18.

Stéphane Mocanu is reviewer for WODES'18.

9.1.3. Journal

9.1.3.1. Reviewer - Reviewing Activities

Eric Rutten is reviewer for

- Science of Computer Programming
- IEEE TSC Transactions on Services Computing
- IEEE Transactions on Industrial Informatics

9.1.4. Invited Talks

Eric Rutten was invited to give a talk at :

- 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>
- with J.Ph. Diguët, : WRC: 12th Workshop on Reconfigurable Computing at HiPeac 2018, <https://www.hipeac.net/2018/manchester/#/schedule/> Jan. 24, Manchester U.K.
- International Workshop on High Performance and Dynamic Reconfigurable Systems and Networks (DRSN 2018) part of The International Conference on High Performance Computing & Simulation (HPCS 2018), July 16 ? 20, 2018, Orléans, France <http://hpcs2018.cisedu.info/>
- FETCH 2019, Ecole d'Hiver francophone sur la technologie de conception des systèmes embarqués hétérogènes, Louvain-la-Neuve, Belgique, 28-30 janvier 2019 <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 triennium (<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

Master : S. Mocanu, Intrusion Detection and Defense in Depth labs, niveau M2, Grenoble-ENSE3/ENSIMAG

9.2.2. Supervision

- PhD : Oualid Koucham ; Détection d'intrusions dans les systèmes de contrôle industriels ; 12 nov. 2018 ; co-advised by S. Mocanu with J-M Thiriet (Gipsa-lab).
- 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 : Neil Ayeb ; Vers un management des objets de l'IoT décentralisé et adaptable ; dec. 2017 ; co-advised by Eric Rutten with S. Bolle, T. Coupaye (Orange labs).

9.3. Popularization

9.3.1. Articles and contents

The Ctrl-A team is featured in a special issue on the numeric world in the "*Dauhiné Libéré des enfants*" (nov.-dec. 2018).

9.3.2. Internal action

The Ctrl-A team participated in the event "mon équipe en 180 secondes" at Inria Montbonnot.

DELYS Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. General Chair, Scientific Chair

Marc Shapiro, Organiser of Dagstuhl Workshop on “Data Consistency in Distributed Systems: Algorithms, Programs, and Databases” (19-0117), February 2018.

Swan Dubois, PC Track Chair (track A: Theoretical and Practical Aspects of Stabilizing Systems) of the 20th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS 2018).

8.1.1.2. Member of the Organizing Committees

- Marc Shapiro, Steering Committee of Workshop on Principles and Practice of Consistency for distributed Data (PaPoC).
- Franck Petit, Steering Committee of the *International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS)*.
- Pierre Sens, since 2014: Member of Steering Committee of International Symposium on Computer Architecture and High Performance Computing (SBAC-PAD).

8.1.2. Scientific Events Selection

8.1.2.1. Member of Conference Program Committees

Pierre Sens, 28th International Symposium on Software Reliability Engineering (ISSRE 2018), 17th IEEE International Symposium on Network Computing and Applications (NCA 2018), 37th IEEE International Symposium on Reliable Distributed Systems (SRDS 2018), 32rd International Symposium on DIStributed Computing (DISC 2018).

Marc Shapiro, Program Committee of Int. Conf. on Middleware (Middleware 2018).

Marc Shapiro, Program Committee of European Conference on Computer Systems (EuroSys 2019).

Marc Shapiro, Program Committee of Symposium on Principles of Distributed Computing (PODC 2019).

Dimitri Vasilas, Shadow Program Committee of European Conference on Computer Systems (EuroSys 2019).

Franck Petit, 20th Workshop on Advances in Parallel and Distributed Computational Models (APDCM 2018), 24th Conférence d’informatique en Parallélisme, Architecture et Système (COMPAS 2018), 20th Rencontres Francophones sur les Aspects Algorithmiques de Télécommunications (ALGOTEL 2018). Tutorial chairman of Latin-American Symposium on Dependable Computing (LADC 2018).

Luciana Arantes, 17th IEEE International Symposium on Network Computing and Applications (NCA 2018), 14th European Dependable Computing Conference (EDCC 2018), Latin-American Symposium on Dependable Computing (LADC 2018), Conférence d’informatique en Parallélisme, Architecture et Système (COMPAS 2018) .

Swan Dubois, PC member of the ACM Symposium on Principles of Distributed Computing (PODC 2018).

8.1.3. Journal

8.1.3.1. Member of Editorial Boards

Pierre Sens, Associate editor of International Journal of High Performance Computing and Networking (IJHPCN)

Franck Petit, Special Issue on Stabilization, Safety, and Security, Journal on Theory of Computing Systems (ToCS).

Marc Shapiro, Associate Editor for Letters of the IEEE Computer Society (LOCS).

8.1.3.2. Reviewer, Reviewing Activities

Pierre Sens, reviewer Journal of Parallel and Distributed Systems (JPDC), and IEEE Transactions on Parallel and Distributed Systems (TPDS).

Franck Petit, reviewer Journal of the ACM (JACM), Journal of Parallel and Distributed Systems (JPDC), and the International Colloquium on Structural Information and Communication Complexity (SIROCCO 2018).

Luciana Arantes, reviewer Journal of Parallel and Distributed Systems (JPDC), and IEEE Transactions on Parallel and Distributed Systems (TPDS).

Swan Dubois, reviewer Theoretical Computer Science (TCS), ACM Transactions on Computer Systems (TOCS), and The International Symposium on DiStributed Computing (DISC 2018).

8.1.4. Invited Talks

Pierre Sens, *Fault tolerance in dynamic distributed systems*. Invited keynote speaker, "Insights for the Future of Computing", LIG, Grenoble, Avril 2018.

Franck Petit, *Robustness: a New Form of Heredity Motivated by Dynamic Networks*, Invited speaker, 9th Workshop on GRAPh Searching, Theory & Applications (GRASTA 2018), Berlin, Germany, Sept. 2018.

Marc Shapiro, *Just-Right Consistency: As available as possible, As consistent as necessary, Correct by design*. Invited speaker, Verification of Distributed Systems workshop, Essaouira, Morocco, May 2018.

Marc Shapiro, *Just-Right Consistency: As available as possible, As consistent as necessary, Correct by design*. Keynote presentation, DotScale, the European Tech Conference on Scalability, Distributed Systems & DevOps, Aubervilliers, June 2018.

Marc Shapiro, *Just-Right Consistency*. Keynote presentation, Conf on Advances and Computing and Communication Engineering, Paris, June 2018.

Marc Shapiro, *Just-Right Consistency: As available as possible, Synchronous when necessary, Correct by design*. Invited Keynote talk, I/O Labs annual workshop, Châtillon, France, Oct. 2018.

Marc Shapiro, *Life after consistency*. Workshop of the EuroSys Program Committee, Dec. 2018.

8.1.5. Scientific Expertise

Pierre Sens, Project in Indo-French Centre for the Promotion of Advanced Research

Marc Shapiro, member of Panel PE6 (Computer Science) of European Research Council Starting Grants 2018.

8.1.6. Research Administration

Franck Petit, since 2014: deputy director of the LIP6 laboratory

Pierre Sens, since 2016: Member of Section 6 of the national committee for scientific research CoNRS

Pierre Sens, since 2012: Member of the Executive Committee of Labex SMART, Co-Chair (with F. Petit) of Track 4, Autonomic Distributed Environments for Mobility.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Julien Sopena is Member of “Directoire des formations et de l’insertion professionnelle” of Sorbonne Université, France

Master: Julien Sopena is responsible of Computer Science Master’s degree in Distributed systems and applications (in French, SAR), Sorbonne Universités, France

Master: Luciana Arantes, Swan Dubois, Jonathan Lejeune, Franck Petit, Pierre Sens, Julien Sopena, Advanced distributed algorithms, M2, Sorbonne Université, France

Master: Jonathan Lejeune, Designing Large-Scale Distributed Applications, M2, Sorbonne Université, France

Master: Maxime Lorrillere, Julien Sopena, Linux Kernel Programming, M1, Sorbonne Université, France

Master: Luciana Arantes, Swan Dubois, Jonathan Lejeune, Pierre Sens, Julien Sopena, Operating systems kernel, M1, Sorbonne Université, France

Master: Luciana Arantes, Swan Dubois, Franck Petit, Distributed Algorithms, M1, Sorbonne Université, France

Master: Jonathan Lejeune, Julien Sopena, Client-server distributed systems, M1, Sorbonne Université, France.

Master: Julien Sopena, Marc Shapiro, Ilyas Toumlilt, Francis Laniel. Kernels and virtual machines (*Noyaux et machines virtuelles*, NMV), M2, Sorbonne Université, France.

Licence: Pierre Sens, Luciana Arantes, Julien Sopena, Principles of operating systems, L3, UPMC Sorbonne Université, France

Licence: Swan Dubois, Initiation to operating systems, L3, Sorbonne Université, France

Licence: Swan Dubois, Multi-threaded Programming, L3, Sorbonne Université, France

Licence: Jonathan Lejeune, Oriented-Object Programming, L3, Sorbonne Université, France

Licence: Franck Petit, Advanced C Programming, L2, Sorbonne Université, France

Licence: Swan Dubois, Julien Sopena, Introduction to operating systems, L2, Sorbonne Université, France

Licence: Mesaac Makpangou, C Programming Language, 27 h, L2, Sorbonne Université, France

Ingénieur 4ème année : Marc Shapiro, Introduction aux systèmes d’exploitation, 26 h, M1, Polytech Sorbonne Université, France.

Licence : Philippe Darche (coordinator), Architecture of Internet of Things (IoT), 2 × 32h, L3, Institut Universitaire Technologique (IUT) Paris Descartes, France.

Engineering School: Philippe Darche (coordinator), Solid-State Memories, 4th year, ESIEE, France.

DUT: Philippe Darche (coordinator), Introduction to Computer Systems - Data representation, 60h, Institut Universitaire Technologique (IUT) Paris Descartes, France.

DUT: Philippe Darche (coordinator), Computer Architecture, 32h, Institut Universitaire Technologique (IUT) Paris Descartes, France.

DUT: Philippe Darche (coordinator), Computer Systems Programming, 80h, Institut Universitaire Technologique (IUT) Paris Descartes, France.

8.2.2. Supervision

PhD: Florent Coriat, “Géolocalisation et routage en situation de crise”, Dec. 2018, Sorbonne Univ., Anne Fladenmuller (NPA-LIP6) and Luciana Arantes.

PhD: Lyes Hamidouche, “Data replication and data sharing in mobile networks”, Sorbonne Univ., CIFRE, Apr. 2018, Sébastien Monnet, Pierre Sens, Dimitri Refauvelet (Magency).

PhD: Denis Jeanneau, “Failure detectors in Dynamic Systems,” Sorbonne Université, Dec. 2018, Luciana Arantes, Pierre Sens.

PhD: B Ngom. “FreeCore: a system for indexing document summaries on a Distributed Hash Table (DHT),” Sorbonne Université, Jul. 2018, Mesaac Makpangou.

PhD: Alejandro Z. Tomsic, Sorbonne Univ., defended Apr. 2018, Marc Shapiro. “Computing over widely-replicated data in a hybrid cloud.”

PhD: Gauthier Voron, “Big-Os : un OS pour les grands volumes de données,” Sorbonne Univ., Mar. 2018, Gaël Thomas, Pierre Sens.

PhD in progress: João Paulo de Araujo, “L’exécution efficace d’algorithmes distribués dans les réseaux véhiculaires”, funded by CNPq (Brésil), since Nov.2015, Pierre Sens and Luciana Arantes.

PhD in progress: Sébastien Bouchard, “Gathering with faulty robots”, Sorbonne Univ., since Oct. 2016, Swan Dubois, Franck Petit, Yoann Dieudonné (University of Picardy Jules Verne)

PhD in progress: Marjorie Bournat, “Speculation and Graceful Degradability for Robots in Highly Dynamic Environments”, Sorbonne Univ., since Sep. 2015, Swan Dubois, Franck Petit, Yoann Dieudonné (University of Picardy Jules Verne)

PhD in progress: Damien Carver, “HACHE : Horizontal Cache cHorEgraphy - Toward automatic resizing of shared I/O caches.”, Sorbonne Univ., CIFRE, since Jan. 2015, Sébastien Monnet, Pierre Sens, Julien Sopena, Dimitri Refauvelet (Magency).

PhD in progress: Arnaud Favier, “Algorithmes de coordination répartis dans des réseaux dynamiques”, Sorbonne Univ., since Sep. 2018, Pierre Sens and Luciana Arantes.

PhD in progress: Saalik Hatia, “Efficient management of memory and storage for CRDTs,” Sorbonne Univ., since Oct. 2018. Advised by Marc Shapiro.

CIFRE PhD in progress: Guillaume Fraysse, Orange Lab - Inria, “Ubiquitous Resources for Service Availability.” Since Jul. 2017, advised by Pierre Sens, Imen Grida Ben Yahia (Orange-Lab) , Jonathan Lejeune, Julien Sopena.

PhD in progress: Francis Laniel, Sorbonne Univ., since Sept. 2017. Advised by Marc Shapiro, Julien Sopena, Jonathan Lejeune. “Vers une utilisation efficace de la mémoire non volatile pour économiser l’énergie.”

PhD in progress: Sreeja Nair, Sorbonne Univ., since April 2018. “Just-Right Consistency for massive geo-replicated storage.” Advised by Marc Shapiro.

CIFRE PhD in progress: Jonathan Sid-Otmane. “Étude des critères de distribution et de l’usage d’une base de données distribuée pour un OS Telco.” Advised by Marc Shapiro, with Sofiane Imadali and Frédéric Martelli, Orange Labs.

PhD in progress: Ilyas Toumlilt, Sorbonne Univ. “Bridging the CAP gap, all the way to the edge.” Advised by Marc Shapiro.

CIFRE PhD in progress: Dimitrios Vasilas, Sorbonne Univ., “Indexing in large-scale storage systems.” Advised by Marc Shapiro, with Brad King, Scality.

8.2.3. *Juries*

Franck Petit was the reviewer of:

- Alessia Milani, HDR, LaBRI, Bordeaux
- Laurent Feuilloley, PhD, IRIF, Paris

Franck Petit was Chair of

- Florent Coriat, PhD, LIP6, Paris

Pierre Sens was the reviewer of:

- Matthieu Roy, HDR, LAAS, Toulouse
- Thouraya Louati, PhD, Sfax Univ., Tunisie
- Yacine Taleb, PhD, IRSIA, Rennes
- Ye Xia, PhD, LIG, Univ. Grenoble

Pierre Sens was Chair of

- Soraya Zertal, HDR, UVSQ, Versailles
- Nikolaos Georgantas, HDR, Sorbonne Univ. - Inria, Paris
- Alejandro Tomsic, PhD, LIP6, Paris
- Veronica Quintana Rodriguez, PhD, Sorbonne Univ. - Inria, Paris

Marc Shapiro was a member of the following committees:

- Aurélie Hurault, HdR, ENSEEIHT, Toulouse.
- Soraya Zertal, Comité de suivi doctoral, UVSQ, Versailles.

8.3. Popularization

Jonathan Lejeune and Julien Sopena animated an activity during the [Science Festival 2018 at Sorbonne Univ.](#)

MIMOVE Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Chair of Conference Program Committees

- V. Issarny, TPC co-chair of ICSE-SEIS'2018 - Software Engineering in Society Track of the ICSE'18 conference. Gotheborg, SE, May 2018.
- V. Issarny, TPC co-chair of CIC'2018 - 4th IEEE International Conference on Collaboration and Internet Computing. Philadelphia, USA, October 2018
- V. Issarny, TPC co-chair of SCF-ICIOT - 2019 International Conference on Internet of Things Services at the Services Conference Federation. San Diego, USA, June 2019.

10.1.1.2. Member of the Conference Program Committees

- V. Christophides, PC member of IEEE Data Engineering Conference 2018.
- V. Issarny, PC member of COOPIS'18, FASE'18 & 20, IC2E'19, ICDCS'18, ICSE'18 & 20, ICSE-SEIS-19, IOTDI'19, Middleware'18, OPODIS'18, WWW'19.
- R. Teixeira, PC member of ACM SIGCOMM 2018.
- R. Teixeira, PC member of ACM HotNets workshop 2018, ACM SIGCOMM Workshop on Self-Driving Networks 2018.
- N. Georgantas is PC member of the following international conferences: SAC'18&'19, Aml'18, SOSE'18&'19, WWW'19.
- N. Georgantas is PC member of the following international workshops: MRT'18, SERENE'18, IoT-ASAP'18&'19, ARM'18, SESOS-ICSE'18.

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

- V. Issarny, Associate editor, ACM Transactions on Internet of Things (TIOT)
- V. Issarny, Associate editor, IEEE Transactions on Services Computing (TSC)
- V. Issarny, Associate editor, IEEE Transactions on Software Engineering (TSE)
- N. Georgantas, Associate editor, International Journal of Ambient Computing and Intelligence (IJACI)
- V. Christophides, Associate editor, MDPI Open Access Journal of Internet of Things (IoT)
- V. Christophides, Associate editor, MDPI Open Access Journal of Future Internet

10.1.2.2. Reviewer - Reviewing Activities

- V. Christophides, Reviewer for the ACM Journal Transactions on Internet of Things (TIOT)
- V. Christophides, Reviewer for the Springer Journal Knowledge and Information Systems (KAIS)

10.1.3. Invited Talks

- V. Christophides "IoT Data Analytics", Invited Tutorial at the French Database Community (BDA) Summer School on Scalable Data Analytics Aussois, Modane June 17-22, 2018.
- V. Issarny, "USNB - Enabling Universal Online Social Interactions", Keynote, ECSCW - The 16th European Conference on Computer-Supported Cooperative Work: The International venue on Practice-centred computing and the Design of cooperation technologies. Nancy, FR, June 2018.

- V. Issarny, "When service-oriented and cloud computing meets the IoT: A use case in the context of urban mobile crowd-sensing", Keynote, ESOC Conference. COMO, IT, September 2018.
- R. Teixeira, "Diagnosis of Internet Quality of Experience in Home Networks", Keynote, 6th International Conference, NETYS 2018, Essaouira, Morocco, May 9–11, 2018.
- N. Georgantas, "Challenges in Enabling Effective Smart Cities and Communities: Global Perspectives", Plenary panel, IEEE SMARTCOMP 2018, Taormina, Sicily, June 18-20, 2018.

10.1.4. Leadership within the Scientific Community

- V. Christophides, Member of the EDBT Association (since 2014).
- V. Issarny, Council member, ACM Europe (since 2017).

10.1.5. Scientific Expertise

- V. Issarny, Elected member: *Commission d'Evaluation Inria*.
- V. Issarny, Scientific council member: ARCEP (since September 2018).
- V. Issarny, Committee member: *Advanced Data science Alliance Expert Panel of the Canadian Networks of Centres of Excellence (NCE)* (Ottawa, Canada, 08/18); *JPI Urban Europe and NSFC China pilot call on Sustainable and Liveable Cities and Urban Areas* (Paris, 10/18); *FWO Expert panel for PhD fellowships strategic basic research* (Bruxelles, 11/18)
- R. Teixeira, evaluator for the H2020-ICT-2018-2 call, topic ICT-21-2018 "EU-US Collaboration for advanced wireless platforms" organised by the European Commission.
- R. Teixeira, monitor for the H2020 projects CogNet, SUPERFLUIDITY.
- R. Teixeira, Member of the acceptability committee for the competitive selection of young researchers (CR), 2018.
- R. Teixeira, Member of the admission committee for the competitive selection of young researchers (CR), 2018.
- V. Christophides, Member of the appointment committee for faculty position on «Machine Learning with focus on Bioinformatics» University of Crete, December 2017.
- N. Georgantas, monitor for the ANR project INTEROP.

10.1.6. Research Administration

- V. Issarny, Scientific coordinator: IIL Inria@SiliconValley (till 08/18) and IPL CityLab@Inria (till 11/18).
- N. Georgantas, member of the PhD monitoring committee at Inria Paris (till 10/18).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: V. Christophides, "Big Data Processing and Analytics", 25h M2, Ecole CentraleSupélec, France. Created this new master's level class in Spring 2016.

Master : R. Teixeira, "Methodology for research in networking", 4h CM, M2, Sorbonne University, France

Master : R. Teixeira, "Network Metrology", 4h CM, M2, Sorbonne University, France

E-learning

V. Issarny, MOOC & SPOC *Implementing Successful Processes for Citizen Participation: Supporting Methods and Civic Tech*, 5 weeks, 1,600 registered students in the session of November 2018.

R. Teixeira, MOOC "Internet Measurements: a Hands-on Introduction", 5 weeks in FUN platform, session May 2018.

10.2.2. Supervision

PhDs in progress:

- Yifan Du (Since October 2017): "In-network collaborative crowd-Xing", Sorbonne University, V. Issarny and F. Sailhan (CNAM)
- Thibaut Ehlinger (Since November 2017): «Causal Modelling of User Quality Experience (QoE) from Network Quality of Service (QoS)» University of Côte d'Azur. advisors: V. Christophides and C. Barakat (Inria)
- Grigoris Piperagkas (Since October 2018): "Leveraging universal social networking and the IoT for urban-scale participatory systems", Sorbone University, V. Issarny and R. Angarita (ISEP).
- Israel Marquez Salinas (Since October 2018): "Optimization of Internet Quality of Experience in Home Networks", S. Ayoubi, R. Teixeira.
- Dimitris Tsolovos (Since March 2017): "A privacy-by-design middleware for urban-scale mobile crowdsensing", UVSQ, N. Ancaux (Inria PETRUS @ Saclay) and V. Issarny.
- Fethi Dilmi (Since October 2017): "End-to-end monitoring and diagnosis of video Quality of Experience", F. Bronzino and R. Teixeira.
- Sarah Wassermann (Since October 2017): "Passive analysis and optimization of Internet Quality of Experience", R. Teixeira.
- Sara El Aouad (Since May 2013): "Building a personalized summary from movie reviews", V. Christophides, R. Teixeira, C. Diot (Google).
- Patient Ntumba (Since August 2018): "Dynamic adaptation of middleware-layer protocols for emergent mobile systems", Sorbonne University, N. Georgantas.

10.2.3. Juries

V. Christophides: External evaluator of the Ph.D. Thesis of Giorgos Borboudakis entitled "Efficient and Accurate Feature Selection, with Extensions for Multiple Solutions and to Big Data", University of Crete, Greece, November 2018

V. Issarny: President of the PhD defense committee of Saad El Jaouhari on the topic "A secure design of WoT services for smart cities", IMT-Atlantique, Rennes, FR, December 2018

R. Teixeira, external evaluator of the Ph.D dissertation of Danilo Cicalese on "Anycast nowadays" (Telecom ParisTech, 2018).

R. Teixeira, external evaluator of the Ph.D dissertation of Luca Vassio on "Data Analysis and Modelling of Users' Behaviour on the Web" (Politecnico di Torino, 2018).

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

- V. Issarny, Appointed member: CODEV, *Métropole du Grand Paris* (Since December 2018).

MYRIADS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- Guillaume Pierre was General Chair of the 19th ACM/IFIP Middleware conference which took place on December 10-14th 2018 in Rennes. The event attracted more than 200 participants (a record number for this conference), including 70% from abroad.

10.1.1.2. Member of the Organizing Committees

- Anne-Cécile Orgerie was a member of the Organizing Committee of the 3rd GDR RSD and ASF Winter School on Distributed Systems and Networks.
- Anne-Cécile Orgerie was a member of the Organizing Committee of the E3-RSD Research school for early stage researchers on Energy Efficiency of Networks and Distributed Systems.
- Maryse Fouché and Julie Montégu were members of the organizing committee of ACM/IFIP Middleware 2018.
- Anne-Cécile Orgerie was Student activities co-chair for ACM/IFIP Middleware 2018.
- Christine Morin was Sponsor chair for ACM/IFIP Middleware 2018.
- Benjamin Camus was Publicity co-chair and Web and social media chair for ACM/IFIP Middleware 2018.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Anne-Cécile Orgerie was Co-chair of the Track on Cluster and Cloud Computing for Euro-Par 2018.
- Anne-Cécile Orgerie was Co-chair of the Special Track on Big Data/Smart Cities and IoT for IEEE BigData Congress 2018.
- Guillaume Pierre was vice-PC chair of the short paper track at the IEEE ICDCS 2018 conference.

10.1.2.2. Member of the Conference Program Committees

- Anne-Cécile Orgerie was a member of the Workshop committee and Poster committee at ACM/IEEE Supercomputing Conference 2018 (SC'18).
- Anne-Cécile Orgerie was a member of the program committee for IEEE Cluster Conference 2018.
- Cédric Tedeschi was a member of the program committee for ICCS 2018.
- Cédric Tedeschi was a member of the program committee for ICWS 2018.
- Cédric Tedeschi was a member of the program committee for Compas 2018.
- Cédric Tedeschi was a member of the program committee for SBAC-PAD 2018.
- Cédric Tedeschi was a member of the program committee for IEEE CSE 2018.
- Guillaume Pierre was a member of the program committee for ICACNI 2018.
- Guillaume Pierre was a member of the program committee for ISORC 2018.
- Guillaume Pierre was a member of the program committee for CloudCom 2018.
- Guillaume Pierre was a member of the program committee for IEEE/ACM UCC 2018.
- Guillaume Pierre was a member of the program committee for mF2C 2018.
- Nikos Parlavantzas was a member of the program committee for IEEE ISPDC'2018.

- Nikos Parlavantzas was a member of the program committee for Euro-Par 2018.
- Nikos Parlavantzas was a member of the program committee for IEEE/ACM UCC 2018.
- Nikos Parlavantzas was a member of the program committee for IEEE CloudCom 2018.
- Nikos Parlavantzas was a member of the program committee for IEEE CSE 2018.
- Nikos Parlavantzas was a member of the program committee for CrossCloud 18.
- Nikos Parlavantzas was a member of the program committee for VHPC'18.
- Nikos Parlavantzas was a member of the program committee for CLOSER 2018.

10.1.3. Journal

10.1.3.1. Reviewer - Reviewing Activities

- Nikos Parlavantzas served as a reviewer for IEEE Computer.
- Nikos Parlavantzas served as a reviewer for JSS.

10.1.4. Invited Talks

- Anne-Cécile Orgerie gave a presentation Entretiens Jacques Cartier, Lyon, France, November 12, 2018.
- Anne-Cécile Orgerie gave a keynote at GreenDays@Toulouse, Toulouse, France, July 3, 2018.
- Anne-Cécile Orgerie gave a seminar organized by France Stratégie, Paris, France, March 13, 2018.
- Guillaume Pierre gave an invited talk at the Fog Placement meeting, Grenoble, June 19-20th 2018.
- Guillaume Pierre gave a keynote at the Journées Cloud, Troyes, September 12-13th 2018.
- Martin Quinson gave a presentation at the spring school “Algorithmique et programmation” for secondary teachers, Luminy, May 11th 2018.
- Martin Quinson gave a presentation to the seminar of the “Large Scale System” department of IRISA, Rennes, November 23th 2018.
- Martin Quinson gave a presentation to the seminar of the DGD-T of Inria, Rennes, October 18th 2018.

10.1.5. Leadership within the Scientific Community

- Anne-Cécile Orgerie is co-chair of the Green axis of the CNRS GDR RSD (Network and Distributed Systems working group).
- Anne-Cécile Orgerie is vice-chair of the ASF: the French chapter of ACM SIGOPS.
- Cédric Tedeschi is member of the steering committee of the Compas conference.

10.1.6. Scientific Expertise

- Jean-Louis Pazat is the coordinator of experts in Information Technology for the evaluation of international bilateral collaborations at the ministry of research and education.

10.1.7. Research Administration

- Anne-Cécile Orgerie is an officer (chargée de mission) for the IRISA cross-cutting axis on Green IT.
- Martin Quinson is the leader of the “Large Scale Systems” department of IRISA.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

License: Jean-Louis Pazat, Introduction à la programmation, L1, Département STPI, INSA de Rennes.

License: Guillaume Pierre, Systèmes Informatiques, L3 MIAGE, Univ. Rennes 1.

License: Guillaume Pierre, Systèmes d'exploitation, L3 Informatique, Univ. Rennes 1.

License: Jean-Louis Pazat, Calcul Hautes Performances, Département Informatique L3, Insa Rennes.

License: Jean-Louis Pazat, Calcul Hautes Performances, Département Mathématiques L3, Insa Rennes.

Licence: Martin Quinson, Architecture et Systèmes, 60 hETD, L3 Informatique, ENS Rennes.

Licence: Martin Quinson, Pedagogy, 15 hETD, L3 Informatique, ENS Rennes.

Master: Anne-Cécile Orgerie, Cloud & Big Data, 30 hETD, M1, ENS Rennes.

Master: Anne-Cécile Orgerie, Green ICT, 4.5 hETD, M2, Telecom SudParis Evry.

Master: Anne-Cécile Orgerie, Green ICT, 3 hETD, M2, ENSSAT Lannion.

Master: Anne-Cécile Orgerie, Green ICT, 22.5 hETD, M2, IMT-Atlantique Nantes.

Master: Cédric Tedeschi, Concurrency in Systems and Networks, M1, Univ. Rennes 1.

Master: Cédric Tedeschi, Service Technology, M1, Univ. Rennes 1.

Master: Cédric Tedeschi, Parallel Programming, M1, Univ. Rennes 1.

Master: Guillaume Pierre, Distributed Systems, M1, Univ. Rennes 1.

Master: Guillaume Pierre, Service technology, M1, Univ. Rennes 1.

Master: Guillaume Pierre, Techniques de développement pour le cloud, M2, Univ. Rennes 1.

Master: Guillaume Pierre, Advanced Cloud Infrastructures, M2, Univ. Rennes 1.

Master: Jean-Louis Pazat, Parallel Computing, M1 Département Informatique Insa Rennes.

Master: Jean-Louis Pazat, Internet Of Things, M1 & M2 Département Informatique Insa Rennes.

Master: Nikos Parlavantzas, Clouds, M1, INSA Rennes.

Master: Nikos Parlavantzas, Performance Evaluation, M1, INSA Rennes.

Master: Nikos Parlavantzas, Project in Large-Scale Systems, M2, INSA Rennes.

Master: Nikos Parlavantzas, Big Data and Applications, M1, INSA Rennes.

Master: Martin Quinson, Préparation à l'Agrégation de Science Industrielle (Programming and Software Engineering, 20h ETD; Operating Systems and C programming, 20 hETD; Networking, 20h ETD), ENS Rennes.

Master: Martin Quinson, Scientific Outreach, M2, 30 hEDT, ENS Rennes.

10.2.2. Supervision

PhD: Issam Rais, Multi criteria scheduling for large scale High Performance Computing environments, defended on September 28th, 2018, Anne-Cécile Orgerie, Anne Benoit (ROMA), Laurent Lefèvre (Avalon).

PhD: David Guyon, Supporting energy-awareness for cloud users, defended on December 7th, 2018, Anne-Cécile Orgerie, Christine Morin.

PhD in progress: Paulo Rodrigues De Souza Junior, "fog computing service roaming techniques", started in December 2018, advised by Guillaume Pierre and Daniele Miorandi.

PhD in progress: Davaadorj Battulga, "Scalable data pipelines for fog computing applications", started in September 2018, advised by Cédric Tedeschi and Daniele Miorandi.

PhD in progress: Mulugeta Tamiru, "Automatic optimization of autonomous management systems", started in September 2018, advised by Guillaume Pierre and Erik Elmroth.

PhD in progress: Mozhdeh Farhadi, "Fog computing-enabled IoT situation-aware services", started in June 2018, advised by Guillaume Pierre and Daniele Miorandi.

PhD in progress: Hamidreza Arkian, “Stream processing operator placement”, started in June 2018, advised by Guillaume Pierre and Erik Elmroth.

PhD in progress: Mehdi Belkhiria, Dynamic Stream Processing for Maritime Traffic Surveillance, started in December 2017, advised by Cédric Tedeschi.

PhD in progress (*co-tutelle*): Yasmina Bouizem, Energy-efficient, fault-tolerance mechanisms for containerized cloud applications, started in December 2017, Didi Fedoua (Tlemcen University, Algeria), Djawida Dib (Tlemcen University, Algeria), Christine Morin, Nikos Parlavantzas.

PhD in progress: Ali Jawad Fahs, “Decentralized Fog Computing Infrastructure Control”, started in October 2017, Guillaume Pierre.

PhD in progress: Clément El Baz, Reactive security monitoring in clouds, started in October 2017, Louis Rilling, Christine Morin.

PhD in progress: Loic Guegan, Simulating Internet of Things, started in October 2017, advised by Martin Quinson and Anne-Cécile Orgerie.

PhD in progress: The Anh Pham, Dynamic Formal Verification of High Performance Runtimes and Applications, started in November 2016, Martin Quinson, Thierry Jéron.

PhD in progress: Arif Ahmed, “Scalable Decentralized Edge Cloud Infrastructures”, started in October 2016, Guillaume Pierre.

PhD in progress: Baptiste Goupille-Lescar, Designing agile, distributed cyber-physical systems with advanced collaboration capabilities, started in January 2016, Eric Lenormand (Thales), Christine Morin, Nikos Parlavantzas.

PhD in progress: Pernelle Mensah, Security policy adaptation driven by risk evaluation in modern communication infrastructures, started in December 2015, Samuel Dubus (Alcatel-Lucent), Christine Morin, Guillaume Piolle (Cidre), Eric Totel (Cidre).

PhD in progress: Genc Tato, Locality-aware Lazy Overlay Networks for WANS, started in December 2015, Marin Bertier, Cédric Tedeschi.

PhD in progress: Amir Teshome, Definition and enforcement of Service-Level Agreements for Cloud security monitoring, started in October 2015, Louis Rilling, Christine Morin.

PhD in progress: Bruno Stevant, Resource allocation strategies for service distribution at the Internet edge to optimize end-to-end latency, started in December 2014 (part-time), Jean-Louis Pazat.

10.2.3. *Juries*

- Anne-Cécile Orgerie was preliminary examiner (equivalent to external reviewer) for the PhD of Kashif Khan, Aalto University, Finland, March 2018.
- Guillaume Pierre was an external reviewer in the PhD committee of Alejandro Tomsic, Sorbonne Université, April 20th 2018.
- Guillaume Pierre chaired the PhD committee of Yacine Taleb, Univ. Rennes 1, October 2nd 2018.
- Guillaume Pierre was a member in the PhD committee of David Guyon, Univ. Rennes 1, December 7th 2018.
- Guillaume Pierre was an external reviewer in the PhD committee of Ye Xia, Université Grenoble Alpes, December 17th 2018.

10.3. Popularization

10.3.1. *Internal or external Inria responsibilities*

Martin Quinson is on the scientific board of the Blaise Pascal foundation, boosting the scientific outreach in the domains of Maths and Computer Science.

10.3.2. Articles and contents

- Anne-Cécile Orgerie participated to the radio program La methode scientifique by Nicolas Martin with Jean-Marc Jancovici, France Culture, October 17, 2018.
- Anne-Cécile Orgerie was interviewed by Agnes Rougier, Radio France Internationale, September 26, 2018.
- Anne-Cécile Orgerie was interviewed by Laure Cailloce for the Journal of CNRS, May 2018.

10.3.3. Education

- L codent L créent - An outreach program to send PhD students to teach Python to middle school students in 8 sessions of 45 minutes. Tassadit Bouadi (Univ. Rennes 1), Camille Maumet (VisAGeS) and Anne-Cécile Orgerie (Myriads) are coordinating the local version of this program, initiated in Lille. The first session in Rennes is planned for April 2019. The program is currently supported by: Fondation Blaise Pascal, ED MathSTIC, Inria and Fondation Rennes 1.
- Anne-Cécile is a member of the Jury for the Agrégation de Sciences Industrielles, an examination for future secondary teachers of engineering
- Martin Quinson is a trainer for the Agrégation de Sciences Industrielles.
- Martin Quinson is in charge of a M2 lecture on scientific vulgarization at ENS Rennes. The students are asked to come up with new activities (or improve existing ones) on their research field.
- Martin Quinson was a trainer during the SIF summer school on “Scientific Vulgarization in Computer Science”, held in Toulouse, June 6th-8th 2018.

10.3.4. Interventions

- Anne-Cécile Orgerie and Martin Quinson participated in the organization of a day for middle school student to deconstruct computer science-related stereotypes <http://emergences.inria.fr/2018/newsletter-n53/l53-informaticiennes>.
- Martin Quinson presented various unplugged activities to primary and secondary students over the year.
- Anne-Cécile Orgerie and Martin Quinson hosted 2 secondary students during one week (17th-21th december 2018).

10.3.5. Creation of media or tools for science outreach

- Martin Quinson initiated a new unplugged activity with Philippe Marquet (EPI Dreampal – Lille) and Corentin Ferry (student at ENS Rennes) called M999 to explain the internal behavior of a CPU. This activity is still to be tested live with pupils.
- Martin Quinson helped the M2 students of ENS Rennes to create or improve unplugged activities on their research topics. Activities on Classification, Image Reconstruction, Modeling, Cryptographic Protocols, Map-Reduce or Verifications are still incubating at this point.

SPIRALS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Simon Bludze

- co-chair International Conference on Verification and Evaluation of Computer and Communication Systems (VECoS)
- co-chair International Workshop on Methods and Tools for Rigorous System Design (MeTRiD)

Laurence Duchien

- IEEE TCSE Distinguished Women in Science and Engineering Leadership Award Committee
- co-chair ECSA Track for Women in Software Architecture

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

Simon Bludze

- International Conference on Formal Aspects of Component Software (FACS)
- International Symposium on Formal Approaches to Parallel and Distributed Systems (4PAD)
- Interaction and Concurrency Experience International Workshop (ICE)
- Euromicro Conference on Software Engineering and Advanced Applications (SEAA)
- International Conference on Coordination Models and Languages (COORDINATION)
- FME Workshop on Formal Methods in Software Engineering (FormaliSE)
- International Workshop on Foundations of Coordination Languages and Self-Adaptative Systems (Foclasa)

Pierre Bourhis

- International Joint Conferences on Artificial Intelligence (IJCAI)
- AAAI Conference on Artificial Intelligence

Laurence Duchien

- International Workshop on Variability Modelling of Software-Intensive Systems (VAMOS)
- Live Adaptation of Software Systems (LASSY)
- International Workshop on Software Qualities and their Dependencies (SQUADE)
- Workshop on Distributed Software Development, Software Ecosystems and Systems-of-Systems (WDES)
- Doctoral Symposium ECSA
- ICSE Poster Session
- International Workshop on Software Engineering Research and Industrial Practise (ICSE/SER&IP)
- Conference on Software Engineering Education and Training (CSEE&T)
- European Conference on Software Architecture (ECSA)

Philippe Merle

- International Conference on Cooperative Information Systems (CoopIS)
- International Conference on Cloud Computing Work-in-Progress Track (IEEE CLOUD)
- International Conference on Web Engineering (ICWE)
- International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies (UBICOMM)
- International Conference on Cloud Computing, GRIDs, and Virtualization (CLOUD COMPUTING)
- International Conference on Advanced Service Computing (SERVICE COMPUTATION)
- Workshop on CrossCloud Infrastructures & Platforms (CrossCloud)

Clément Quinton

- International Workshop on Software Engineering for Systems-of-Systems (SESOS)
- Euromicro Conference on Software Engineering and Advanced Applications (SEAA)
- International Systems and Software Product Line Conference (SPLC)

Romain Rouvoy

- IEEE/ACM International Conference on Automated Software Engineering (ASE), demonstration track
- ACM/USENIX European Conference on Computer Systems (Eurosys)
- IEEE International Conference on Cloud Engineering (IC2E)
- IEEE/ACM International Conference on Mobile Software Engineering and Systems (MOBILESoft)
- ACM Symposium on Applied Computing (SAC), DADS track

Lionel Seinturier

- International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS)
- IEEE/ACM International Conference on Mobile Software Engineering and Systems (MOBILESoft)
- ACM Symposium on Applied Computing (SAC) SA-TTA & OS Tracks
- Australasian Software Engineering Conference (ASWEC)
- International Conference on Software Technologies (ICSOFT)
- International Conference on Service Oriented Computing (ICSOC)
- ACM International Conference on Management of Emergent Digital EcoSystems (MEDES)

Faiez Zalila

- International Conference on Verification and Evaluation of Computer and Communication Systems (VECoS)

10.1.3. Journal*10.1.3.1. Member of the Editorial Boards*

Lionel Seinturier is editor for software engineering of the ISTE-Wiley Computer Science and Information Technology book collection.

10.1.3.2. Reviewer - Reviewing Activities

Yahya Al-Dhuraibi: IEEE Transactions on Services Computing (TSC), The Computer Journal of Oxford University Press.

Simon Bludze: Elsevier Science of Computer Programming (SCICO).

Stéphanie Challita: Wiley Software: Practice & Experience (SPE), Wiley Concurrency and Computation: Practice and Experience (CCPE).

Laurence Duchien: Elsevier Journal of Systems and Software (JSS), IEEE Transaction on Cloud Computing (TCC).

Philippe Merle: Elsevier Future Generation Computer Systems (FGCS), Wiley Software: Practice and Experience (SPE), Elsevier Sustainable Computing, Informatics and Systems (SUSCOM), Wiley Concurrency and Computation: Practice and Experience (CCPE), IGI Global International Journal of Web Services Research (IJWSR).

Romain Rouvoy: Elsevier Information and Software Technology (IST).

Lionel Seinturier: Springer Software Quality Journal (SQJ), Elsevier Sustainable Computing, Informatics and Systems (SUSCOM), Springer Empirical Software Engineering (EMSE), Elsevier Future Generation Computer Systems (FGCS).

Faiez Zalila: Elsevier Future Generation Computer Systems (FGCS), IEEE ACCESS, Springer Journal of Internet Services and Applications (JISA).

10.1.4. Invited Talks

Philippe Merle: International Conference on Cloud and Robotics (ICCR), invited talk.

Faiez Zalila: Cloudification of the Internet of Things Conference (CIoT), tutorial.

10.1.5. Leadership within the Scientific Community

Romain Rouvoy is the co-head of the “Groupe de Travail Génie Logiciel pour les Systèmes Cyber-physiques” of the GDR GPL.

10.1.6. Scientific Expertise

Laurence Duchien was member of the recruitment committee for Professor in Computer Science at Université du Littoral Côte d’Opale. She was scientific expert for DGRI PHC Ulysse, NSERC-Canada, PHC Van Gogh Netherlands, PHC Amadeus Austria, Programme Emergence Ville de Paris Vinci, Prix de thèse GDR GPL, Prix de valorisation de la MESHS.

Philippe Merle was member of the recruitment committee for junior researcher (CRCN) at Inria Lille - Nord Europe, and Associate Professor at Télécom SudParis. He was scientific reviewer for ANR.

Romain Rouvoy was member of the recruitment committees for associate professor in Computer Science at ENSEIRB MATMECA (Bordeaux), Université de Nantes and Université de Rennes. He was also a member of the scientific evaluation committee of ANR (CES25). He was scientific expert for DRRT IDF, ADEME PERFECTO and FET-OPEN - Novel Ideas for Radically New Technologies - *Research and Innovation Actions* (RIA).

Lionel Seinturier was member of the recruitment committee for Professor in Computer Science at CNAM Paris, and Associate Professor at University of Lille. He was member of the Promotion Committee to Full Professor for Charles University, Prague. He was scientific expert for ANRT, ECOS Nord, DRRT IDF, PICOM/Silab Retail Booster.

10.1.7. Research Administration

Laurence Duchien is member of the CNRS CoCNRS section 6 committee, and of the “bureau” of this committee. She is elected member-at-large for the **IEEE Technical Council of Software Engineering (TCSE)** 2016–18.

Philippe Merle is member of the Inria scientific board, president of the CUMI (Comité des Utilisateurs des Moyens Informatiques), permanent secretary of the CLHSCT (Comité Local d’Hygiène, de Sécurité et de Conditions de Travail), and member of the centre committee for the Inria Lille - Nord Europe research center. He is member of the steering committee of the Inria’s continuous integration service. He is member of the steering committee of CIEL (Conférence en Ingénierie du Logiciel).

Romain Rouvoy is an elected member of the “bureau” of the ACM SIGOPS French chapter (ASF) and elected member of the administrative council of SpecifCampus.

Lionel Seinturier is president of the CDT (Commission Développement Technologique), and member of the BCEP (Bureau du Comité des Équipes-Projets), for the Inria Lille - Nord Europe research center. He is Scientific Advisor for the evaluation of ICT research laboratories at the Hcéres.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Simon Bludze is, in addition to his tenure junior research position at Inria, chargé d’enseignement at École Polytechnique, Palaiseau, France, in the Department of Computer Sciences (DIX).

- INF411: Les bases de la programmation et de l’algorithmique, 40h, 2e année du Cycle ingénieur
- INF442: Traitement des données massives, 40h, 2e année du Cycle ingénieur

Pierre Bourhis is, in addition to his tenure junior research position at CNRS, chargé d’enseignement spécialité Sciences des données at École Polytechnique, Palaiseau, France, in the Department of Computer Sciences (DIX).

- École Polytechnique, Bases de données, 18h, Cycle Polytechnique Info553
- École Polytechnique, Modal Graphe Géant, 36h
- École Centrale de Lille, Master DAD, Bases de données, 12h

Laurence Duchien teaches at the University of Lille in the FST faculty. She headed the Carrières et Emplois service. She was Director of Doctoral Studies for Computer Science in the Doctoral School Engineering Science (SPI) - ComUE Lille Nord de France. She is now project leader for the doctoral studies at University of Lille.

- Software Project Management, 50h, Level M2, Master MIAGE
- Design of distributed applications, 42h, Level M1, Master of Computer Science
- Research and Innovation Initiation, 22h, Level M2 IAGL, Master of Computer Science
- Tutoring Internship, 16h, Level M2, Master of Computer Science

Clément Quinton teaches at the University of Lille in the FST faculty.

- Introduction to Computer Science, 46.5h, Level L1, Licence of Computer Science
- Object-oriented programming, 36h, Level L2, Licence of Computer Science
- Object-oriented design, 42h, Level L3, Licence of Computer Science
- Design of distributed applications, 42h, Level M1, Master of Computer Science
- Advanced design of distributed applications, 37.5h, Level M2, Master MIAGE
- Infrastructure and frameworks for the Internet, 33.75h, Level M2, Master of Computer Science
- Software product lines, 7.5h, Level M2, Master of Computer Science
- Suivi de stages et de projets, 30h, Licence and Master of Computer Science

Romain Rouvoy teaches at the University of Lille in the FST faculty. He heads the **Master of Computer Science** program at the University of Lille.

- Design of distributed applications, 12h, Level M1, Master of Computer Science
- Object-oriented design, 4h, Level L3, Licence of Computer Science
- Suivi de projets, 20h, Level M2, Master of Computer Science

Walter Rudametkin Ivey teaches at the University of Lille in the Polytech engineering school.

- GIS4 Programmation par Objets, 32h
- GIS4 Architectures Logicielles, 26h
- GIS2A3 (apprentissage) Projet programmation par Objet, 24h
- IMA2A4 (apprentissage) Conception Modélisation Objet, 24h
- IMA3 Programmation Avancée, 62h
- GBIAAL4 Bases de données, 22h
- GIS5 Suivi de projets, 42h
- GIS2A (apprentissage) Suivi d'apprentis, 28h

Lionel Seinturier teaches at the University of Lille in the FST faculty. He heads the Computer Science Department at the Faculty of Science and Technology of the University of Lille.

- Conception d'Applications Réparties, 50h, Level M1, Master MIAGE
- Infrastructures et Frameworks Internet, 70h, Level M2 E-Services IAGL TIIR, Master of Computer Science

10.2.2. Supervision

- PhD: Yahya Al-Dhuraibi, Flexible Framework for Elasticity in Cloud Computing, University of Lille, December 2018, Philippe Merle.
- PhD: Stéphanie Challita, Inferring Models from Cloud APIs and Reasoning over Them: a Toolled and Formal Approach, University of Lille, December 2018, Philippe Merle.
- PhD: Thomas Durieux, From Runtime Failures to Patches: Study of Patch Generation in Production, University of Lille, September 2018, Lionel Seinturier & Martin Monperrus. [11]
- PhD: Gustavo Sousa, A Software Product Lines-Based Approach for the Setup and Adaptation of Multi-Cloud Environments, University of Lille, June 2018, Laurence Duchien & Walter Rudametkin Ivey. [12]
- PhD in progress: Mohammed Chakib Belgaid, Développement durable des logiciels vers une optimisation énergétique de bout en bout des systèmes logiciels, January 2018, Romain Rouvoy & Lionel Seinturier.
- PhD in progress: Vikas Mishra, Collaborative Strategies to Protect Against Browser Fingerprinting, October 2018, Romain Rouvoy & Walter Rudametkin & Lionel Seinturier.
- PhD in progress: Marion Tommasi, Collaborative Data-centric Workflows: Towards Knowledge Centric Workflows and Integrating Uncertain Data, October 2018, Pierre Bourhis & Lionel Seinturier.
- PhD in progress: Antonin Durey, Leveraging Browser Fingerprinting to Fight Fraud on the Web, October 2018, Romain Rouvoy & Walter Rudametkin & Lionel Seinturier.
- PhD in progress: Sacha Brisset, Automatic Spotting and fixing of Recurrent user Experience issues. Detecting and Fixing Anomalies by applying Machine Learning on user Experience Data, November 2018, Lionel Seinturier & Romain Rouvoy & Renaud Pawlak & Yoann Couillec.
- PhD in progress: Zakaria Ourmani, Eco-conception des logiciels : modélisation de l'efficacité énergétique des logiciels et conception d'outils pour mesurer et réduire leur consommation d'énergie, November 2018, Romain Rouvoy.
- PhD in progress: Zeinab Abou Khalil, November 2017, Laurence Duchien & Clément Quinton, co-supervision with Tom Mens (University of Mons, Belgium).
- PhD in progress: Guillaume Fieni, GreenData : Vers un traitement efficace et éco-responsable des grandes masses de données numériques, October 2017, Romain Rouvoy & Lionel Seinturier.

- PhD in progress: Benjamin Danglot, Software Testing Amplification, December 2016, Martin Monperrus & Lionel Seinturier.
- PhD in progress: Lakhdar Meftah, Cartography of the Quality of Experience for Mobile Internet Access, November 2016, Romain Rouvoy, co-supervision with Isabelle Chrisment (Inria Madynes).
- PhD in progress: Sarra Habchi, Une supervision de contexte sensible à la confidentialité pour les développements logiciels en crowdsourcing, October 2016, Romain Rouvoy.
- PhD in progress: Antoine Vastel, Cartographie de la qualité d'expérience pour l'accès à l'internet mobile, October 2016, Romain Rouvoy & Walter Rudametkin.

10.2.3. Juries

Simon Bliudze

- Maaz Mashood Mohiuddin (EPFL, Switzerland), examiner
- Emmanouela Stachtari (Aristotle U. of Thessaloniki, Greece), examiner

Laurence Duchien

- HDR Chouki Tibermacine (U. Montpellier), reviewer
- HDR Thomas Ledoux (U. Nantes), reviewer
- HDR Nikolaos Georgantas (U. Pierre et Marie Curie), examiner
- HDR Matthieu Roy (U. Toulouse), president
- HDR Raul Mazo (U. Paris 1 Sorbonne), reviewer
- Anne-Lucie Vion (U. Grenoble), reviewer
- Van Cam Pham, CEA, examiner
- Benjamin Allaert (U. Lille), president
- Farzan Kalantari (U. Lille), president
- Eddy Habach (U. Nice Côte d'Azur), examiner
- Mathieu Allon (U. Lille), president
- Juan Carlos Munoz (U. Paris 1 Sorbonne)
- Paola Andreas Gomez Barreto (U. Grenoble), examiner

Philippe Merle

- HDR Sylvain Vauttier (U. Montpellier), reviewer
- Nabila Belhaj (Télécom SudParis), examiner

Lionel Seinturier

- Mohamed Mosli (Telecom SudParis), president
- William Excoffon (U. Toulouse), president
- Alex Palesandro (U. Lyon 3), president
- Bassirou Ngom (Sorbonne U.), reviewer
- Gabriel Campeanu, (Märladalen U., Sweden), examiner
- Isabelle Astic (CNAM Paris), examiner

10.3. Popularization

10.3.1. Interventions

Lionel Seinturier participated in October to the Chercheur itinérant event organized by the Inria Lille Nord Europe research center in the context of La fête de la science. Two classrooms (2nde and terminale) have been visited. The theme of the visit was crowdsensing and data gathering from mobile devices.

WHISPER Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Chair of Conference Program Committees

- Gilles Muller: DSN 2018
- Julia Lawall: ASE 2018 Tool Demo track.

10.1.1.2. Member of the Conference Program Committees

- Gilles Muller: OSDI 2018, EuroSys 2018
- Julia Lawall: EuroSys 2018, ICSE-NIER 2018, ASPLOS 2018 ERC, PEPM 2018, SCAM 2018, APSys 2018, USENIX ATC 2018, CARI 2018

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

- Julia Lawall: Editorial board of Science of Computer Programming (2008 - present).

10.1.2.2. Reviewer - Reviewing Activities

- Julia Lawall: Transactions on Software Engineering, Software: Evolution and Process, IEEE Transactions on Reliability, ACM Transactions on Embedded Computing Systems

10.1.3. Invited Talks

- Gilles Muller:
 - “Provably Work Conserving Multicore Schedulers”, University of Bordeaux, June 13, 2018.
 - “Safe multicore scheduling in a Linux cluster environment”, 3rd GDR RSD and ASF Winter School on Distributed Systems and Networks, Sept Laux, March 20, 2018.
- Julia Lawall:
 - “Coccinelle: 10 Years of Automated Evolution in the Linux Kernel”, 8th Inria/Technicolor Workshop On Systems, Rennes, December 11, 2018.
 - “Software evolution and bug finding using Coccinelle”, Lightweight analysis and verification techniques, Verimag, Grenoble, December 11, 2018.
 - “Coccinelle: 10 Years of Automated Evolution in the Linux Kernel”, Conférence d’informatique en Parallélisme, Architecture et Système (COMPAS), Toulouse, July 3, 2018.
 - “Coccinelle: Practical Program Transformation for the Linux Kernel”, EJCP 2018 : École Jeunes Chercheurs et Jeunes Chercheuses en Programmation 2018, June 25, 2018.
 - “Introduction to Coccinelle and its usage in the Linux Kernel”, Conférence MiNET, Telecom SudParis, May 24, 2018.
- Pierre-Évariste Dagand gave a seminar at the Collège de France entitled “Types dépendants : tout un programme” (November 28, 2018), as part of Xavier Leroy’s chair “Sciences du logiciel”.
- Lucas Serrano: “Inference of Semantic Patches from Code Examples”, The Seventh International Workshop on Software Mining, with ASE, September 3, 2018.

- Cedric Courtaud “Toward an Efficient Data Plane for Memory Systems Interference Regulation in COTS Multi-core Systems”, The NExt Step TOWards multi-core Real-time systems workshop, ULB, May 18, 2018.

10.1.4. Scientific Expertise

- Julia Lawall was part of the midterm review panel of the NSF Expedition in Computing project DeepSpec.

10.1.5. Research Administration

- Julia Lawall: IFIP TC secretary (2012 - present). Elected member of IFIP WG 2.11 (Program Generation).
Member of a hiring committee for a Maître de conférences position at Université Paris Diderot
Board member of Software Heritage (<https://www.softwareheritage.org/>).
- Gilles Muller: Elected member of IFIP WG 10.4 (Dependability), representative of Inria in Sorbonne University’s advisory committee for research, member of the project committee board of the Inria Paris Center.
- Bertil Folliot: Elected member of the IFIP WG10.3 working group (Concurrent systems)

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- Professional Licence: Bertil Folliot, Programmation C, L2, UPMC, France
- Professional Licence: Bertil Folliot, Lab projects, L2, UPMC, France
- Master: Pierre-Évariste Dagand, Specification and Validation of Programs, M2, UPMC, France
- Licence: Pierre-Évariste Dagand, INF311: Introduction to Programming, L1, École Polytechnique, France
- Master: Pierre-Évariste Dagand, INF559: Computer Architecture and Operating Systems, M1, École Polytechnique, France

10.2.2. Supervision

- PhD : Mariem Saeid, soutenue le 25/9/2018, Jens Gustedt (Camus), Gilles Muller.
- PhD in progress : Cédric Courtaud, CIFRE Thalès, 2016-2019, Gilles Muller, Julien Sopéna (Delys).
- PhD in progress : Redha Gouicem, 2016-2019, Gilles Muller, Julien Sopéna (Delys).
- PhD in progress : Darius Mercadier, 2017-2020, Pierre-Évariste Dagand, Gilles Muller.
- PhD in progress : Lucas Serrano, 2017-2020, Julia Lawall.

10.2.3. Juries

- Julia Lawall: PhD juries of Ferdian Thung, SMU (reporter), Thibaut Girka, Université Paris Diderot (president), Thomas Durieux, Lille (examiner).

10.3. Popularization

- Julia Lawall: Coordinator of the Outreachy internship program for the Linux kernel, until March 2018. Outreachy provides remote 3-month internships twice a year for women and other underrepresented minorities on open source projects. Julia Lawall also mentored Aishwarya Pant as part of this program.

- Julia Lawall, “Building Stable Trees with Machine Learning”, Open Source Summit North America, August 2018, with Sasha Levin. Open Source Summit Europe, October 2018, with Sasha Levin. Linux Plumbers Conference, kernel summit track, November 2018, with Sasha Levin.
- Julia Lawall, “Coccinelle: 10 Years of Automated Evolution and Bug Finding in the Linux Kernel”, Open Source Summit Europe, October 2018.
- Julia Lawall, “Panel Discussion: Outreachy Kernel Internship Report” (moderator), Open Source Summit Europe, October 2018.
- Julia Lawall, “Panel Discussion: An Exploration of Insights & Issues Related to Mentoring Programs” (participant), Open Source Summit Europe, October 2018.
- Julia Lawall, “Interprocedural Static Analysis Strategies for the Linux Kernel: Detecting SAC Bugs as an Example (Work in Progress)”, Linux Kernel Real Time Summit, October 2018.
- Julia Lawall, “Kernel Panel” (participant), Linux Plumbers Conference, November 2018.

WIDE Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

François Taïani served as Co-Organizer of the 8th Inria/Technicolor Workshop On Systems (WOS8), Rennes, France, December 2018.

François Taïani served as Communication Chair of the 19th ACM/IFIP/Usenix International Conference on Middleware (Middleware), Rennes, France, December 2018.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

François Taïani served as PC Co-Chair of the 2nd Workshop on Scalable and Resilient Infrastructures for Distributed Ledgers (SERIAL), Rennes, France, December 2018.

François Taïani served as PC Co-Chair of the 6th Edition of The International Conference on NETworked sYSTems (NETYS), Essaouira, Morocco, May 2018.

9.1.2.2. Member of the Conference Program Committees

Pierre-Louis Roman served on the PC of the 16th IEEE International Conference on Dependable, Autonomic and Secure Computing (DASC), Athens, Greece, August 2018.

Pierre-Louis Roman served on the PC of the 15th International Symposium on Pervasive Systems, Algorithms and Networks (I-SPAN), Yichang, China, October 2018.

Pierre-Louis Roman served on the PC of the 8th IEEE International Symposium on Cloud and Service Computing (SC2), Paris, France, November 2018.

Pierre-Louis Roman served on the PC of the 11th IEEE International Conference on Service-Oriented Computing and Applications (SOCA), Paris, France, November 2018.

Davide Frey served on the PC of the Industry Track of the 2018 ACM/IFIP International Middleware Conference, Rennes, France, December 2018.

Davide Frey served on the PC of the 18th IFIP International Conference on Distributed Applications and Interoperable Systems (DAIS), 2018.

François Taïani served on the PC of the 19th ACM/IFIP/Usenix International Conference on Middleware (Middleware), Rennes, France, December 2018.

François Taïani served on the PC of the 38th IEEE International Conference on Distributed Computing Systems (ICDCS), in the Dependability Track track, Vienna, Austria, July 2018.

François Taïani served on the PC of the Conférence d'informatique en Parallélisme, Architecture et Système (Compas), Toulouse, France, July 2018.

François Taïani served on the PC of The 48th IEEE/IFIP International Conference on Dependable Systems and Networks (DSN), Luxembourg, June 2018.

George Giakkoupis served on the PC of the 22nd International Conference on Principles of Distributed Systems (OPODIS), Hong Kong, December 2018.

9.1.3. Journal

9.1.3.1. Reviewer - Reviewing Activities

Anaïs Durand was a reviewer for Theoretical Computer Science (TCS).

Davide Frey was a reviewer for IEEE Transactions on Parallel and Distributed Systems (TPDS).

François Taïani was a reviewer for Journal of Systems Architecture (JSA, Elsevier).

George Giakkoupis was a reviewer for Journal of the ACM (JACM).

George Giakkoupis was a reviewer for Algorithmica (ALGO).

George Giakkoupis was a reviewer for ACM Transactions on Parallel Computing (TOPC).

George Giakkoupis was a reviewer for Theoretical Computer Science (TCS).

9.1.4. Invited Talks

Pierre-Louis Roman. Shortcutting the Bitcoin verification process for your smartphone. EPFL, Lausanne, Switzerland, 1 November 2018.

Pierre-Louis Roman. Shortcutting the Bitcoin verification process for your smartphone. Master Workshop Layer 1 Solutions, Amsterdam, The Netherlands, 18 November 2018.

Anaïs Durand. Contention-Related Crash Failures. Descartes ANR project meeting, IRIF, Université Paris Diderot, Paris, France, 1 October, 2018.

François Taïani. Possible Future Careers after the PhD. Nantes Plenary Meeting and Training School, BigStorage European Training Network (ETN), Nantes, France, 25-28 June 2018.

François Taïani. Pleiades: Distributed Structural Invariants at Scale. Delyss/Whisper Inria Team Retreat, Saint-Valéry, France, 18-20 June 2018.

François Taïani. Pleiades: Distributed Structural Invariants at Scale. Plenary Meeting of the Dionasys Project, Saint-Jacut, France, 23 May 2018.

François Taïani. Being Prepared in a Sparse World: The Case of KNN Graph Construction. EPFL, Lausanne, Switzerland, January 2018.

George Giakkoupis. Random binary search trees with concurrent insertions. Theory Seminar, Technion, Haifa, Israel, 31 October 2018.

George Giakkoupis. Random binary search trees with concurrent insertions. Randomized Algorithms Seminar, University of Cambridge, UK, 2 August 2018.

George Giakkoupis. Random binary search trees with concurrent insertions. ART-Oberseminar, University of Hamburg, Germany, 19 July 2018.

9.1.5. Leadership within the Scientific Community

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

François Taïani served on the award committee of the Prix de thèse Gilles Kahn 2018, sponsored by the French Science Academy (Académie des Sciences), and awarded by the French Informatics Society (SiF).

Michel Raynal has been Adjunct Professor at the Polytechnic University of Hong Kong since 2013.

Michel Raynal has been a member of the Executive board of the SIF (Société d'Informatique Française) since 2013.

Michel Raynal is European representative at the IEEE Technical Committee on distributed computing.

9.1.6. Research Administration

Davide Frey is Correspondant Scientifique Europe at the DPEI for Inria Rennes

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

François Taïani has been a member of the Scientific Orientation Committee (COS) of IRISA (UMR 6074) since 2013.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Olivier Ruas, Spe-Info2, 26h, L1, Université de Rennes 1, France

Licence: Olivier Ruas, Programmation Web, 6h, L2, Université de Rennes 1, France

Master: Davide Frey, Programming Technologies for the Cloud, 28h, M2, Univ. Rennes I, France.

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

Master: Davide Frey, Big-Data Storage and Processing Infrastructures, 10h, M2-SIF, Univ. Rennes I, France.

Master: Davide Frey, Cloud Computing, 6h, M2-MIAGE, Univ. Rennes I, France.

Master: Davide Frey, Distributed Systems, 12h, ENSAI Rennes, France.

Master: George Giakkoupis, Systèmes Répartis, 9h (Spring), ENSAI Rennes, France.

Master: George Giakkoupis, Systèmes Répartis, 9h (Fall), ENSAI Rennes, France.

Engineering School: François Taïani, Synchronization and Parallel Programming, 62h, 2nd year of Engineering School (M1), ESIR / Univ. Rennes I, France.

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

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

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

9.2.2. Supervision

PhD: Pierre-Louis Roman, Exploring Heterogeneity in Loosely Consistent Decentralized Data Replication [12], University of Rennes 1, 18 December 2018, François Taïani and Davide Frey.

PhD: Simon Bouget, Towards a Holistic Construction of Opportunistic Large-Scale Distributed Systems [11], University of Rennes 1, 20 September 2018, François Taïani and David Bromberg.

PhD: Olivier Ruas, The Many Faces of Approximation in KNN Graph Computation [13], University of Rennes 1, 17 December 2018, François Taïani and Anne-Marie Kermarrec (Mediego).

PhD in progress: Quentin Dufour, BBDA - Browser Based Data Analytics, January 2018, David Bromberg and Davide Frey.

PhD in progress: Amaury Bouchra Pilet, Robust and Lightweight Overlay Management for Decentralized Learning, University of Rennes 1, September 2018, David Bromberg and Davide Frey.

PhD in progress: Loïck Bonniot, Distributed Troubleshooting of Edge-Compute Functions, University of Rennes 1, François Taïani and Christoph Neumann (Technicolor).

PhD in progress: Hayk Saribekyan, Randomized Algorithms for Distributed Information Dissemination, University of Cambridge, UK, George Giakkoupis and Thomas Sauerwald (Cambridge).

9.2.3. Juries

François Taïani was a reviewer for Richeek Patra's PhD thesis: Towards Scalable Personalization, EPFL (Switzerland), 16 January 2018

François Taïani was a reviewer for Raluca Halalai's PhD thesis: On Reducing Latency in Geo-Distributed Systems through State Partitioning and Caching, Univ. Neuchâtel (Switzerland), 14 May 2018.

François Taïani was a reviewer for William Excoffon's PhD thesis: Résilience des systèmes informatiques adaptatifs : Modélisation, analyse et quantification, Institut National Polytechnique de Toulouse, LAAS, 8 June 2018.

François Taïani was a reviewer for Wenjie Zheng's PhD thesis: A Distributed Frank-Wolfe Framework for Trace Norm Minimization via the Bulk Synchronous Parallel Model, Sorbonne Université, 13 June 2018.

George Giakkoupis was a reviewer for Rémi Varloot's PhD thesis: Dynamic Network Formation. École Polytechnique, Paris, 1 June 2018.

9.3. Popularization

Pierre-Louis Roman gave an invited talk at the E-novation Convention organized by The Notaries of Brittany, Rennes, 12 November 2018. Title: Blockchains, Distributed Ledgers, and their Utility for Notaries (talk in French).

ALPINES Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- Xavier Claeys was co-chair of the "Symposium of the International Association for Boundary Element Methods" in June 26-28 2018, an international conference that took place in Jussieu campus of Sorbonne Université and hosted 140 participants.
- Frederic Hecht organized the 10th FreeFem++ days (December 12-14, 2018, Paris), <https://freefem.org/ff-days/>

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

- Laura Grigori, March 2014 – current. Member of the editorial board for the SIAM book series Software, Environments and Tools. See <http://bookstore.siam.org/software-environments-and-tools/>.
- Laura Grigori, January 2016 – current. Associate Editor, SIAM Journal on Scientific Computing.
- Laura Grigori, January 2017 – current. Associate Editor, SIAM Journal on Matrix Analysis and Applications.
- Laura Grigori, January 2016 – current. Editorial board, Numerical linear algebra with applications Journal, Wiley.
- Frédéric Nataf, January 2015 – current, Editorial board, Journal of Numerical Mathematics, de Gruyter.

10.1.3. Invited Talks

- Xavier Claeys was invited speaker at the second national congress of the Société Mathématique de France (SMF) in June 2018.
- Laura Grigori was
 - Keynote speaker, [International Symposium on Computational Science at Scale](#), September 2018, Erlangen-Nurnberg Germany.
 - Invited plenary speaker, [SIAM Conference on Applied Linear Algebra](#), Hong Kong May 2018.
- Frédéric Nataf was invited speaker at
 - Workshop for Robert Scheichl's farewell, Bath University, November 2018.
 - NUMACH 2018: Numerical Methods for Challenging Problems, Mulhouse (France) July 2018.
 - 10th International Workshop on Parallel Matrix Algorithms and Applications (PMAA'18) in ETH Zurich (Switzerland) June 2018.
- Frédéric Hecht was invited speaker at
 - XVIII Spanish-French school Jacques-Louis Lions about numerical simulation in physics and engineering, Las Palmas de Gran Canaria, 25-29 June 2018.

10.1.4. Leadership within the Scientific Community

- Laura Grigori, member elected of SIAM Council, January 2018 - December 2020, the committee supervising the scientific activities of SIAM. Nominated by a Committee and elected by the members of SIAM.
- Laura Grigori, member of the **PRACE** (Partnership for Advanced Computing in Europe) Scientific Steering Committee, September 2016 - current.
- Laura Grigori and Frédéric Hecht are coordinators of the High Performance in Scientific Computing Major of second year of Mathematics and Applications Master, Sorbonne University.

10.1.5. Scientific Expertise

- Laura Grigori: November 2015 - current, expert to the Scientific Commission of IFPEN (French Petroleum Institute). Evaluation of research programs, PhD theses, work representing a total of 5 days per year.

10.1.6. Research Administration

- Laura Grigori is vice-president of the committee CE46 of ANR, September 2017 - July 2018.
- Frédéric Nataf is president of the committee CE40 of ANR, September 2017 - current.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master 2: Laura Grigori, Course on *High performance computing, large scale linear algebra, and numerical stability* (*Calcul haute performance, algorithmes parallèles d'algèbre linéaire à grande échelle, stabilité numérique* in french), https://who.rocq.inria.fr/Laura.Grigori/TeachingDocs/UPMC_Master2/Spr2018.html, Master 2nd year, Mathematics & Applications, UPMC, 24 hours of lectures per year.

Master 2: Laura Grigori, Winter 2018, Participation in the course on High Performance Computing given at UPMC, Computer Science, intervention for 8 hours per year.

Master 2: Laura Grigori, Course on *High performance computing for numerical methods and data analysis*, https://who.rocq.inria.fr/Laura.Grigori/TeachingDocs/UPMC_Master2/HPC_MN_DA.html, Master 2nd year, Mathematics & Applications, UPMC, 24 hours per year.

Master 1: Xavier Claeys, supervision of a student project for a group of 4 students in the curriculum Polytech, 40hrs, UPMC.

Master 1: Xavier Claeys, Initiation to C++, 36 hrs of programming tutorials in C++, UPMC.

Master 1: Xavier Claeys, Computational Linear Algebra, 32 hrs of lectures, UPMC.

Master 1: Xavier Claeys, Approximation of EDPs, 24 hrs of programming tutorials in Python, UPMC.

Master 2: Frédéric Nataf, Course on Domain Decomposition Methods, UPMC

Master 1: Frédéric Hecht, Initiation au C++, 24hrs, UPMC, France

Master 2: Frédéric Hecht, Des EDP à leur résolution par la méthode des éléments finis (MEF), 36hrs, M2, UPMC, France

Master 2: Frédéric Hecht, Numerical methods for fluid mechanics, 10hrs, UPMC, France

Master 2: Frédéric Hecht, Calcul scientifique 3 / projet industriel FreeFem++, 28hrs, M2, UPMC, France

Master 2: Frédéric Hecht, Ingénierie 1 / Logiciel pour la simulation (FreeFem++), 21hrs, UPMC, France

Master 2: Frédéric Hecht, Ingénierie 2 / Projet collaboratif, 21hrs, UPMC, France

10.2.2. Supervision

PhD: Alan Ayala, Complexity reduction methods applied to the rapid solution to multi-trace boundary integral formulations, Sorbonne Université, November 2018 (funded by NLAFFET H2020 project), co-advisors Xavier Claeys and Laura Grigori.

PhD: Hussam Al Daas, Solving linear systems arising from reservoirs modelling, Sorbonne Université, December 2018, (funded by contract with Total), advisor Laura Grigori.

PhD in progress : Sebastien Cayrols, since October 2013 (funded by Maison de la simulation), advisor Laura Grigori.

PhD in progress: Olivier Tissot, since October 2015 (funded by NLAFFET H2020 project), advisor Laura Grigori.

PhD in progress: Rim El Dbaissy, since November 2015 (funded by Univ. St Joseph, Liban), advisors Tony Sayah, Frédéric Hecht.

PhD in progress: Pierre Marchand, since October 2016 (funded by ANR NonLocalDD project), advisors Xavier Claeys and Frédéric Nataf.

PhD in progress: Zakariae Jorti, since February 2016 (funded by IFPen), advisor Laura Grigori.

PhD in progress: Igor Chollet, since October 2017 (funded by ICSD), advisors Xavier Claeys, Pierre Fortin, Laura Grigori.

PhD in progress: Thanh Van Nguyen, since November 2017 (funded by ANR CinePara), advisor Laura Grigori.

10.2.3. Juries

- Xavier Claeys was examiner at the PhD defense of Wen Xu on the 17th of July 2018 at École Centrale Supélec. Title of the thesis: "Relevant numerical methods for mesoscale wave propagation in heterogeneous media".
- Laura Grigori was examiner of the Phd defense of Gilles Moreau, ENS Lyon, December 2018.
- Laura Grigori was president of the HDR habilitation defense of Pierre Fortin, Sorbonne University, July 2018.
- Laura Grigori was examiner of the Phd defense of Amanda Bienz, June 2018, University of Illinois at Urbana Champaign.
- Frédéric Nataf was examiner at the Phd defense of Louis Viot, 2018, ENS Cachan
- Frédéric Nataf was president of the PhD defense of H. Al Daas, 2018, UPMC
- Frédéric Hecht was referee of the HDR habilitation defense of S. Glockner, 2018, I2M, Bordeaux
- Frédéric Hecht was referee of the PhD defense of G. Dollé, 2018, Univ. Strasbourg
- Frédéric Hecht was examiner at the Phd defense of G. Morel, 2018, Sorbonne University

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

Laura Grigori is vice-president of the Evaluation Commission of Inria, March 2018 - current.

AVALON Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Laurent Lefèvre was co-General chair of the conference SBAC-PAD : The International Symposium on Computer Architecture and High Performance Computing, Lyon, France (September 24-27, 2018). He was co-organizer of colloquium : "Digital society vs eco-responsability: impact on billions of connected objects, networks and clouds", with Centre Jacques Cartier, Concordia University, Inria, GDS CNRS EcoInfo, Ecole Normale Supérieure of Lyon (November 12-13, 2018). He co-organized the E3-RSD school on Energy Efficiency in Networks and Distributed Systems, Dinard (October 1-4, 2018) and the GreenDays@Toulouse v2.0 (2018 Edition) "From IoT to Exascale, what about energy efficiency and carbon emission reduction ?", Toulouse (July 2-3, 2018)

10.1.1.2. Member of the Organizing Committees

Laurent Lefèvre was co Special Session Organizer of Special Session on High Performance Computing Benchmarking and Optimization (HPBench 2018), during HPCS conference, Orleans (July 16-20, 2018).

Christian Perez served on the Organizing Committee of the 2018 International Conference on High Performance Computing & Simulation (HPCS 2017) as Conference Awards and Recognitions Co-Chair, on the Organizing Committee of the French Journées Calculs et Données (Lyon, October 24-26) and of the 1st Grid'5000-FIT school (Sophia Antipolis, April 3-6).

Frédéric Suter served in the Organization committee of the session on Exascale Computing for High Energy Physics of the 14th IEEE International Conference on eScience and chaired the "Parallelism" track of the Conférence d'informatique en Parallélisme, Architecture et Système (Compas 2018).

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

Christian Perez was member of the program committees of the IEEE International Conference on Cluster Computing 2018 (Cluster 2018), the 18th IEEE/ACM International Symposium on Cluster, Cloud and Grid (CCGRID 2018), the 26th annual High Performance Computing Symposium 2018 (HPC '18), the 2018 Supercomputing Asia conference, and of the 4th International Workshop on Autonomic High Performance Computing. He was a member of the Birds of Feather Committee of SuperComputing 2018 and of the Tutorial Committee of ISC High Performance 2018.

Olivier Glück was a member of the program committees of PDP 2018 (26th Euromicro International Conference on Parallel, Distributed, and Network-Based Processing) and ICA3PP-2018 (18th International Conference on Algorithms and Architectures for Parallel Processing).

Frédéric Suter was member of program committee of SBAC-PAD 2018 (30th International Symposium on Computer Architecture and High Performance Computing), VECPAR 2018 (13th International Meeting High Performance Computing for Computational Science) and ICA3PP-2018 (18th International Conference on Algorithms and Architectures for Parallel Processing)

10.1.3. Journal

10.1.3.1. Reviewer - Reviewing Activities

Christian Perez reviewed articles for the IEEE's Transactions on Big Data journal and for Oil & Gas Science and Technology journal of IFP Energies nouvelles.

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

Frédéric Suter reviewed articles for the Journal of Parallel and Distributed Computing and Concurrency and Computation: Practice and Experience.

10.1.4. Invited Talks

Christian Perez has been invited to give the following talks:

- "Towards Reconfigurable HPC Component Models", Invited talk, 4th International Workshop on Autonomic High Performance Computing, Orléans, France, July 17.
- "HPC Component Models", Keynote talk, HPCS, Orléans, France, July 19, 2018.

Thierry Gautier has been invited to give the following talk:

- "Tasks' management in OpenMP: what about performance guarantee?", Maison de la Simulation, November 20, 2018.

Frédéric Suter has been invited to give the following talk:

- "Simulating MPI applications : the SMPI Approach" at the "Modeling and Simulation of HPC Architectures and Applications" mini-symposium at the SIAM Conference on Parallel Processing for Scientific Applications.

10.1.5. 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").

10.1.6. Scientific Expertise

Christian Perez reviewed two projects for the Regional Program STIC-AmSud.

Olivier Glück is member of the CNU (Conseil National des Universités) section 27 (Computer Science). He participated to the 2018 "Qualifications" session and "Suivi de carrière" session.

10.1.7. Research Administration

Eddy Caron is Deputy Director in charge of call for projects, research transfert and international affairs for the LIP. He is a member of "Conseil Technologique Logiciel MINALOGIC". He is member and reviewer for InriaHub.

Olivier Glück is member of the "Conseil Académique" of Lyon 1 University and Lyon University.

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 and member of the executive board of the Silecs testbed. He is a member of the Inria Grenoble Rhône-Alpes Strategic Orientation Committee. He is in charge of exploring potential scientific collaborations between INRIA and SKA France.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence: Yves Caniou, Algorithmique programmation impérative initiation, 25h, niveau L1, Université Claude Bernard Lyon 1, France.

Licence: Yves Caniou, Pratique d'Unix, 3h, niveau L1, Université Claude Bernard Lyon 1, France.

Licence: Yves Caniou, Programmation Concurrente, 35h et responsabilité d'UE, niveau L3, Université Claude Bernard Lyon 1, France.

Licence: Yves Caniou, Projet Informatique, 3h, niveau L3, Université Claude Bernard Lyon 1, France.

Licence: Yves Caniou, Réseaux, 45h, niveau L3, Université Claude Bernard Lyon 1, France.

Licence: Yves Caniou, Système d'Exploitation, 32h and responsible of UE, niveau L2, Université d'Ho Chi Minh Ville, Vietnam.

Licence: Yves Caniou, Système d'Exploitation, 39h et co-responsible of UE, niveau L3, Université Claude Bernard Lyon 1, France.

Master: Yves Caniou, Projet pour l'Orientation en Master, 3h, niveau M1, Université Claude Bernard Lyon 1, France.

Master: Yves Caniou, Responsable of alternance students, 30h, niveau M1, Université Claude Bernard Lyon 1, France.

Master: Yves Caniou, Responsable of Master SRIV (Systèmes, Réseaux et Infrastructures Virtuelles), 30h, niveau M2, Université Claude Bernard Lyon 1, France.

Master: Yves Caniou, Projet Bibliographie et Certifications, 4h and responsible of UE, niveau M2, Université Claude Bernard Lyon 1, France.

Master: Yves Caniou, Sécurité, 36h et responsible of UE, niveau M2, Université Claude Bernard Lyon 1, France.

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

Master: Yves Caniou, Systèmes Avancés, 4.5h, niveau M2, Université Claude Bernard Lyon 1, France.

Master: Yves Caniou, Approfondissement Scientifique, 6h, niveau M2, Université Claude Bernard Lyon 1, France.

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, 20h, M2, ENS de Lyon. France.

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

Licence: Olivier Glück, Introduction Réseaux et Web, 32h, niveau L1, Université Lyon 1, France.

Licence: Olivier Glück, Bases de l'architecture pour la programmation, 62h, niveau L1, Université Lyon 1, France.

Licence: Olivier Glück, Algorithmique programmation impérative initiation, 50h, niveau L1, Université Lyon 1, France.

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

Master: Olivier Glück, Réseaux par la pratique, 8h, niveau M1, Université Lyon 1, France.

Master: Olivier Glück, Responsable of Master SRIV (Systèmes, Réseaux et Infrastructures Virtuelles) located at IGA Casablanca, 20h, niveau M2, IGA Casablanca, Maroc.

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

- Master: Laurent Lefèvre, Parallélisme, 12h, niveau M1, Université Lyon 1, France.
- Master: Laurent Lefèvre, Réseaux avancés, 24h, niveau M2, IGA Casablanca, Maroc.
- Licence: Frédéric Suter, Programmation Concurrente, 32h, niveau L3, Université Lyon 1, France.
- Master: Jean-Patrick Gelas, Programmation embarquée et mobile des objets, 30h, niveau M1, Université Lyon 1, France
- Master: Jean-Patrick Gelas, Introduction au Cloud Computing, 21h, niveau M2 (CCI), Université Lyon 1, France
- Master: Jean-Patrick Gelas, Système d'exploitation, 45h, niveau M2 (CCI), Université Lyon 1, France
- Master: Jean-Patrick Gelas, Projet en Informatique en Anglais, 15h, niveau M2 (CCI), Université Lyon 1, France
- Master: Jean-Patrick Gelas, Réseaux Avancés, 24h, niveau M2 (CCI), Université Lyon 1, France
- Master: Jean-Patrick Gelas, Sécurité et Admin des infra résx, 30h, niveau M2 (CCI), Université Lyon 1, France
- Master: Jean-Patrick Gelas, Technologies embarquées, 18h, niveau M2 (Image), Université Lyon 1, France
- Master: Jean-Patrick Gelas, Routage (BGP), Routeurs et IPv6, 12.5h, niveau M2, Université Lyon 1, France
- Master: Jean-Patrick Gelas, Systèmes embarqués (GNU/Linux, Android, ARM, Arduino), 24h, 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, 15h, niveau M2 (TIW), Université Lyon 1, France
- Master: Jean-Patrick Gelas, Stockage, Cloud et Virtualisation, 9.5h, niveau M2 (SRIV), Université Lyon 1, France
- Master: Jean-Patrick Gelas, Développement informatique, 23h, niveau M2 (Data science), Université Lyon 1, France

10.2.2. Supervision

- PhD: Issam Raïs, *Discover, model and combine energy leverages for large scale energy efficient infrastructures*, 29 sept. 2018, Laurent Lefèvre (dir), Anne Benoit (Roma Team, LIP, ENS Lyon, co-dir) and Anne-Cécile Orgerie (CNRS, Myriads team, Irista Rennes, co-dir).
- PhD: Hadrien Croubois, *Toward an autonomic engine for scientific workflows and elastic Cloud infrastructure*, 16 oct. 2018, Eddy Caron (dir).
- PhD: Philippe Viroulet, *Studying and improving the use of NUMA architectures through runtime systems*, 5 jun. 2018, Fabrice Rastello (Inria, Corse team, dir), Thierry Gautier (AVALON team, LIP, ENS Lyon, co-dir) and François Broquedis (UGA, Corse team, Grenoble, co-dir).
- PhD: Adrien Roussel, *Parallelization of iterative methods to solve sparse linear systems using task based runtime systems on multi and many-core architectures: application to Multi-Level Domain Decomposition methods*, 6 fev. 2018, Thierry Gautier (dir), Jean-Marc Gratien (IFPen).
- 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: 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: Idris Daoudi, *Simulation of OpenMP programs*, Olivier Aumage (dir, Storm team, Bordeaux), Thierry Gautier (co-dir) (since oct. 2018).

PhD in progress: Zeina Houmani, *A Data-driven microservices architecture for Deep Learning applications*, Eddy Caron (dir), Daniel Balouek-Thomert (Rutgers University) (since oct. 2018).

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

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

PhD cancelled: Valentin Lorentz : *Energy traceability of data*, Gilles Fedak (dir), Laurent Lefèvre (co-dir) (2016-2018).

10.2.3. Juries

Eddy Caron was reviewer and examiner of the PhD defense committee of Bassirou Ngom. UPMC (Co-tutelle avec l'UCAD). (July 13, 2018). Hajer Salhi., University of Tunis El Manar (Phd defense will be in 2019). and examiner of the PhD defense committee of Anne-Lucie Vion, Université de Grenoble and Orange (March 29, 2018).

Laurent Lefèvre was PhD Opponent and Jury Member of the PhD defense committee of Selome Kostentinos Tesfatsion, Umea University, Sweden (April 16, 2018), reviewer and examiner of the PhD defense committee of Wilfried Yoro, Telecom SudParis (March 8, 2018), reviewer of the PhD of Jungmin Son, University of Melbourne, Australia (May 2018) and examiner of the PhD defense committee of David Guyon, IRISA, University of Rennes 1 (December 7, 2018).

Christian Perez was examiner of the HdR defense committee of Samuel Thibault, University of Bordeaux (December 12, 2018), reviewer and examiner of the PhD defense committee of Pierre Matri, University Polytechnics of Madrid, Spain (June 10, 2018), Hugo Taboada, University of Bordeaux (December 11, 2018), Mohamed Abderrahim, University of Bretagne Loire (December 19, 2018), Stéphanie Challita, University of Lille (December 20, 2018), and examiner of the PhD defense committee of Yacine Taleb, European University of Brittany (October 2, 2018).

10.3. Popularization

10.3.1. Articles and contents

Laurent Lefèvre has been interviewed for the articles:

- "Le Groupe Casino remplace ses radiateurs par des data centers", Le Point Journal (December 23, 2018)
- "Comment cliquer sans trop polluer", Laurent Lefèvre, Le Progrès Journal, November 21, 2018
- "Google utilise-t-il réellement 100% d'énergie verte pour alimenter ses services ?", Libération, July 13, 2018
- "J'ai le (dé) clic écolo pour réduire mon empreinte", Journal La Vie, February 15, 2018

He was interviewed and filmed for "Pollution numérique/Digital pollution", Journal 19/20, France3 National Channel, December 9, 2018.

10.3.2. Education

Yves Caniou is responsible of the LPI Certification at Université Claude Bernard Lyon 1. Further discussions are in progress concerning the proposed tools and redaction of courses/questions.

In the context of the CHEL[s] (Collège des Hautes Etudes Lyon Science[s]) Eddy Caron is mentor for the MedTech project building the start-up VETARIA.

Jean-Patrick Gelas manage and build several modules of education about blockchain technologies for an erasmus+ european project. The BLISS project (Blockchain skills for ICT professionals), aims to improve the skills and competencies of ICT professionals by developing and making available educational resources and materials to address existing occupational needs and mismatches, resulting from the dynamic penetration of blockchain technology across all sectors of the EU economy (including banking, accounting, auditing and government services).

10.3.3. Interventions

Laurent Lefèvre has given several invited talks for :

- "Green-It and Video Games infrastructures - Jeu vidéo et collapsologie #2 : Meetup - Le dématérialisé, ça sauve les pandas ?", Meetup Game Impact, Paris, November 29, 2018
- "Vers des Data Centers éco-responsables", Data Center World, Paris, November 28, 2018
- "Agile (d'accord !) mais Green (d'abord !)", Agile Tour 2018, Epitech, Bordeaux, November 2-3, 2018
- "Numérique et Environnement", with Françoise Berthoud, Groupe de travail développement durable, Centre Inria Bordeaux, October 19, 2018
- "CES 2018 : l'humain numérique de demain...", Journée Réseau Aramis, University Lyon2, Lyon, May 24, 2018
- "Le futur peut-il être numérique ?", with Françoise Berthoud and Jonathan Schaeffer, Journée Réseau Aramis, University Lyon2, Lyon, May 24, 2018
- "EE@G5K : the story continues...", Grid5000 Scientific Advisory Board, Sophia Antipolis, April 4, 2018
- "Rendre l'informatique plus verte", Conférence de formation des professeurs du secondaire en science informatique, Inria Montbonnot, March 21, 2018
- "WG5 : Energy efficiency final results", Network for Sustainable Computing (Nesus), COST European Action IC1305, Final Action Meeting, with Ariel Oleksiak, Madrid, Spain, March 15-16, 2018
- "CES 2018 - so little Green", Rencontres Ecoinfo, Lyon, January 30, 2018

DATAMOVE Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. 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.

Co-chair of the First HPML Workshop collocated with SBAC-PAD Lyon , October 2018.

9.1.1.2. Member of the Organizing Committees

Euro-Par Advisory Board Member

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

ISAV 2018 (Workshop on In Situ Infrastructures for Enabling Extreme-scale Analysis and Visualization) , November, Dallas, USA

EGPGV 2018 (Eurographics Symposium on Parallel Graphics and Visualization), June, Brno, Czech Republic.

LADV 2018 (IEEE Symposium on Large Data Analysis and Visualization), October, Berlin, Germany.

IPDPS 2018 (International Parallel and Distributed Processing Symposium), May, Vancouver, Canada.

LATIN, April 2018, Buenos Aires, Argentina.

CCgrid 2018 (18th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing), May, Washington DC.

SPAA (30th ACM Symposium on Parallelism in Algorithms and Architecture), July 2018, Vienna, Austria.

ISPDC, June 2018, Geneva, Switzerland.

COMPAS (Conference d'informatique en Parallelisme, Architecture et Systeme), July 2018, Toulouse, France.

HiPC 2018 (IEEE internat. Conf on High Performance Computing, Data and Analytics), December 2018, Bengaluru, India.

EURO 2018 (29th European Conference On Operational Research), July, Valencia.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Associate Editor of the Parallel Computing journal PARCO.

Member of the Editorial Board of Computational Methods in Science and Technology.

Member of the Editorial Board of ARIMA (revue africaine de recherche en informatique et maths appliquées).

9.1.4. Scientific Expertise

ANR project evaluation expert

9.1.5. Research Administration

Director of Pôle MSTIC of COMUE Univ. Grenoble-Alpes.

Head of the international Master program (MOSIG1) at Grenoble INP (ENSIMAG)

Steering committee of Grid'5000

Steering committee of GRICAD

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: Denis Trystram is responsible of the first year (M1) of the international Master of Science in Informatics at Grenoble (MOSIG-M1). 200 hours per year in average.

Master: Fanny Dufossé. 30 hours per year. Combinatorial scientific computing in Master at ENS Lyon and Algorithmic in Licence at Grenoble INP.

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 is responsible of the third year of the computer science department of Grenoble INP. 222 hours per year. Master at Engineering school Polytech-Grenoble, Univ. Grenoble-Alpes.

Master: Frédéric Wagner. 220 hours per year. Engineering school ENSIMAG, Grenoble-INP (M1/2nd year and M2/3rd year).

Master: Yves Denneulin. 192 hours per year. Engineering school ENSIMAG, Grenoble-INP (M1/2nd year and M2/3rd year).

9.2.2. Supervision

PhD: Estelle Dirand, Integration of High-Performance Data Analytics and IOs for Molecular Dynamics on Exascale Computer, Univ. Grenoble-Alpes. November 2018. Bruno Raffin and Laurent Colombet (CEA).

PhD: Valentin Reis, Learning to Control Large-Scale Parallel Platforms, Univ. Grenoble-Alpes. October 2018. Advisers: Denis Trystram and Eric Gaussier

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: 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, Scheduling with Resource Augmentation, Advisers: Denis Trystram

PhD in progress: Clément Mommessin, Scheduling on heterogeneous platforms, Advisers: Denis Trystram

PhD in progress: Loris Felardos, Deep Learning for the Analytics of Molecular Systems, Advisers: Bruno Raffin, Guillaume Charpiat (Inria team Tau), Jérôme Hénin (IBPC).

PhD in Progress: Salah Zrigui, Learning Scheduling Strategies, Advisers: Denis Trystram and Fanny Dufossé.

9.2.3. *Juries*

PhD Defense of Jonathan Sarton, Visualisations interactives haute-performance de données volumiques massives : une approche out-of-core multi-resolution basée GPU, 28 Novembre 2018, Université de Reims Champagne-Ardenne. Reviewer

PhD Defense of Adrian Perez Dieguez, Parallel Prefix Operations on Heterogeneous Platforms, December 2018, Universidad da Coruna. Reviewer.

PhD Defense of Khalil Labidi, Parallelisation of hybrid metaheuristics for COP solving, 20 septembre 2018, Université de Tunis et Université Paris-Dauphine. President

PhD Defense of Stéphane Durand, Contrôle distribué et théorie des jeux : application aux systèmes auto-optimisants, 13 décembre 2018, Univ Grenoble Alpes. President

HDR Defense of Samuel Thibault, 13 décembre 2018, University Bordeaux I. Reviewer

9.3. Popularization

9.3.1. *Interventions*

- Talk *Des besoins en calcul de plus en plus performant* for the conference cycle "Accompagnement de l'informatique au lycée en 2018".

HIEPACS Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

L. Giraud was member of the **SIAM Conference of parallel processing in scientific computing**, March 2018, Tokyo, Japan and the 10th International Workshop on Parallel Matrix Algorithms and Applications **PMAA'18**, June 2018, Zurich, Switzerland.

9.1.1.2. Chair of Conference Program Committees

A. Guermouche was the vice-chair of the Architecture track for the 25th IEEE International conference on High Performance Computing, Data, and Analytics **HIPC'18**, December 2018, Bengaluru, India.

9.1.1.3. Member of the Conference Program Committees

HiPC'18 (A. Guermouche, L. Giraud), ICPP'18 (E. Agullo), IEEE PDP'18 (J. Roman), IPDPS'18 (O. Coulaud), PDSEC'18 (O. Coulaud, M. Faverge, L. Giraud), COMPAS'18 (P. Ramet), SBAC-PAD'18 (M. Faverge).

9.1.2. Journal

9.1.2.1. Member of the Editorial Boards

- E. Agullo and L. Giraud were guest editor of the special issue of **Parallel Computing** dedicated to **PMAA'16** [4].
- L. Giraud is member of the editorial board of the SIAM Journal on Scientific Computing (**SISC**) and SIAM Journal on Matrix Analysis and Applications (**SIMAX**).

9.1.2.2. Reviewer - Reviewing Activities

The members of the **HIEPACS** project have performed reviewing for the following list of journals: Computing and Fluid, International Journal of Antennas and Propagation, Parallel Computing, SIAM J. Matrix Analysis and Applications, SIAM J. Scientific Computing, Journal of Parallel and Distributed Computing, IEEE Transactions on Parallel and Distributed Systems, ACM Transactions on Mathematical Software, ACM Computational and Mathematical Methods, International Journal of High Performance Computing Applications, Journal Of Computational Science.

The members of the **HIEPACS** project have performed reviewing for the following list of conferences (additionally to PC): Europar'18, IPDPS'19, SC'18.

9.1.3. Scientific Expertise

- Luc Giraud is member of the board on Modelisation, Simulation and data analysis of the **Competitiveness Cluster for Aeronautics, Space and Embedded Systems**. He also acted as an expert for The Israel Science Foundation, on the Individual Research Grants and for the Czech Science Foundation, the main public funding agency in the Czech Republic supporting all areas of basic research.
- Pierre Ramet is "Scientific Expert" at the CEA-DAM CESTA since Oct. 2015.
- Jean Roman is member of the "Scientific Board" of the CEA-DAM. As representative of Inria, he is member of the board of ETP4HPC (European Technology Platform for High Performance Computing), of the French Information Group for PRACE, of the French Working Group for EuroHPC, of the Technical Group of GENCI and of the Scientific Advisory Board of the Maison de la Simulation.

9.1.4. Research Administration

- Emmanuel Agullo and Luc Giraud are the scientific correspondents of the European and International partnership for Inria Bordeaux Sud-Ouest.
- Olivier Coulaud is the scientific manager of the **PLAFRIM** platform for Inria Bordeaux Sud-Ouest.
- Jean Roman is a member of the Direction for Science at Inria : he is the Deputy Scientific Director of the Inria research domain entitled *Applied Mathematics, Computation and Simulation* and is in charge at the national level of the Inria activities concerning High Performance Computing.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Undergraduate level/Licence

- A. Esnard: System programming 36h, Computer architecture 40h, Network 23h at Bordeaux University.
- M. Faverge: Programming environment 26h, Numerical algorithmic 40h, C projects 25h at Bordeaux INP (ENSEIRB-MatMeca).
- A. Guermouche: System programming 36h at Bordeaux University.
- P. Ramet: System programming 24h, Databases 32h, Object programming 48h, Distributed programming 32h, Cryptography 32h at Bordeaux University, and Numerical algorithmic 40h at Bordeaux INP (ENSEIRB-Matmeca).

Post graduate level/Master

- E. Agullo: Operating systems 24h at Bordeaux University ; Dense linear algebra kernels 8h, Numerical algorithms 30h at Bordeaux INP (ENSEIRB-MatMeca).
- O. Coulaud: Paradigms for parallel computing 24h, Hierarchical methods 8h at Bordeaux INP (ENSEIRB-MatMeca).
- A. Esnard: Network management 27h, Network security 27h at Bordeaux University; Programming distributed applications 35h at Bordeaux INP (ENSEIRB-MatMeca).
- M. Faverge: System programming 72h, Load balancing and scheduling 13h at Bordeaux INP (ENSEIRB-MatMeca).
He is also in charge of the master 2 internship for the Computer Science department at Bordeaux INP (ENSEIRB-MatMeca).
- L. Giraud: Introduction to intensive computing and related programming tools 20h, INSA Toulouse; Introduction to high performance computing and applications 20h, ISAE; On mathematical tools for numerical simulations 10h, ENSEEIHT Toulouse; Parallel sparse linear algebra 11h at Bordeaux INP (ENSEIRB-MatMeca).
- A. Guermouche: Network management 92h, Network security 64h, Operating system 24h at Bordeaux University.
- P. Ramet: Load balancing and scheduling 13h at Bordeaux INP (ENSEIRB-MatMeca).
- J. Roman: Parallel sparse linear algebra 10h, Algorithmic and parallel algorithms 22h at Bordeaux INP (ENSEIRB-MatMeca).

He is also in charge of the last year “Parallel and Distributed Computing” option at ENSEIRB-MatMeca which is specialized in HPC (methodologies and applications). This is a common training curriculum between Computer Science and MatMeca departments at Bordeaux INP and with Bordeaux University in the context of Computer Science Research Master. It provides a lot of well-trained internship students for Inria projects working on HPC and simulation.

9.2.2. Supervision

PhD: Nicolas Bouzat; Fine grain algorithms and numerical schemes for exascale simulations of turbulent plasmas ; M.Mehrenberger (**TONUS** project-team), J. Roman, G. Latu (**CEA-IRFM**); defended on December 17, 2018; jury members: N. Crouseilles (referee, Inria Rennes Bretagne Atlantique), Ph. Helluy (Université Strasbourg), G. Latu (CEA Cadarache), M. Mehrenberger (Université Aix-Marseille), R. Namyst (referee, Université Bordeaux), S. Salmon (Université Reims).

PhD: Arnaud Durocher; High performance Dislocation Dynamics simulations on heterogeneous computing platforms for the study of creep deformation mechanisms for nuclear applications; O. Coulaud, L. Dupuy (CEA); defended on December 19, 2018; jury members: D. Barthou (Bordeaux INP), M. Blétry (Université Paris XII), L. Dupuy (CEA, Saclay), M. Fivel (referee, CNRS, Grenoble), J.F. Méhaud (referee, Université de Grenoble).

PhD in progress: Aurélien Falco; Data sparse calculation in FEM/BEM solution; E. Agullo, L. Giraud, G. Sylvand.

PhD in progress: Esragul Korkmaz; Solveurs creux direct et matrices hierarchiques; M. Faverge, P. Ramet.

PhD: Grégoire Pichon; Utilisation de techniques de compression \mathcal{H} -matrices pour solveur direct creux parallèle dans le cadre des applications FEM; M. Faverge, P. Ramet; defended on November 29, 2018; jury members: A. Buttari (CNRS, Toulouse), D. Goudin (CEA-CESTA, Le Barp), G. Kubické (DGA, Rennes), S. Lanteri (Inria, Sophia Antipolis), E. Ng (Lawrence Berkeley Nat. Lab., Berkeley), F. Pellegrini (Université de Bordeaux).

PhD in progress: Louis Poirel; Algebraic coarse space correction for parallel hybrid solvers; E. Agullo, L. Giraud; defended on November 28, 2018; jury members: B. Cuenot (CERFACS, Toulouse), M. Gander (referee, Université de Genève), M. Heroux (referee, Sandia Nat. Lab.), A. Legrand (CNRS, Grenoble), F.X. Roux (ONERA, UPMC Paris), P. Tallec (referee, Ecole Polytechnique).

9.2.3. Juries

- Aloïs Bissuel, “Résolution des équations de Navier-Stokes linéarisées pour l’aéroélasticité, l’optimisation de forme et l’aéroacoustique”, referees: V. Dolean, R. Abgrall, president: L. Giraud, Université Paris-Saclay à l’Ecole polytechnique, spécialité: mathématiques appliquées, 22 Janvier 2018.
- Eemeho Edoth, “Incremental algorithms for long range interactions”, referees: M. Bolden, O. Coulaud, Université Grenoble Alpes, spécialité: mathématiques et informatique, 2 Octobre 2018.
- Vinicius Garcia Pinto, “Performance Analysis Strategies for Task-based Applications on Hybrid Platforms”, referees: G. Cavalheiro, B. Mohr, P. Navaux, N. Maillard, A. Legrand reviewers: A. Goldman, G. Thomas Université Grenoble Alpes, spécialité: mathématiques et informatique, et Universidade Federal do Rio Grande do Sul, 30 Octobre 2018.
- Guillaume Latu, HDR, “Contribution à la simulation haute-performance et aux méthodes de calcul très extensibles”, referees: R. Abgrall, F. Desprez, R. Namyst, reviewers: S. Genaud, J. Roman, E. Sonnendrücker, Université Strasbourg, spécialité: informatique et calcul scientifique, 18 Mai 2018.
- Gilles Moreau, “On the solution phase of direct methods for sparse linear systems with multiple right-hand sides”, referees: P. Amestoy, J. Erhel, L. Grigori, J.-Y. L’Excellent, reviewers: J. Gilbert, P. Ramet, ENS Lyon, spécialité: informatique, 10 Decembre 2018.

9.3. Popularization

9.3.1. Interventions

During the 10th anniversary of the Inria Bordeaux Sud-Ouest centre and the open day, scientific popularisation materials of the HiePACS team’s research work were presented to the attendees.

KERDATA Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. General Chair, Scientific Chair

Luc Bougé: Chair of the Steering Committee of the **Euro-Par** Series of conferences since August 2017.

8.1.2. Scientific Events Selection

8.1.2.1. Chair of Conference Program Committees

Alexandru Costan:

- Program Co-Chair of the ScienceCloud 2018 international workshop held in conjunction with ACM HPDC 2018, Tucson, AZ, USA.

8.1.2.2. Member of the Conference Program Committees

Gabriel Antoniu: ACM HPDC 2018, IEEE IPDPS 2018, ACM/IEEE SC'18: Papers Committee, Posters Committee, Best Poster Award and Student Research Competition Committee, IEEE CSE-2018, BDA 2018.

Alexandru Costan: IEEE/ACM SC'18 (Posters and ACM Student Research Competition), ACM/IEEE CCGrid 2018, IEEE Cluster 2018, IEEE/ACM UCC 2018, ARMS-CC 2018 workshop (held in conjunction with PODC 2018), IEEE Big Data 2018, IEEE CSE 2018, MLDS 2018, EBDMA 2018.

Pedro Silva: ScienceCloud 2018 Workshop – Co-located with ACM HPDC 2018.

8.1.2.3. Reviewer

Alexandru Costan: ACM HPDC 2018, IEEE/ACM SC 2018, IEEE IPDPS 2018

Pedro Silva: IEEE Big Data, IEEE Cloud 2018, IEEE Cluster, IEEE CCGrid 2018, ACM HPDC 2018, IEEE/ACM SC 2018.

8.1.3. Journals

8.1.3.1. Member of the Editorial Boards

Gabriel Antoniu: Future Generation Computer Systems: Special Issue on Mobile, hybrid, and heterogeneous clouds for cyberinfrastructures (Guest Editor); Special Issue on Resource Management for Big Data Platforms (Guest Editor).

8.1.3.2. Reviewer - Reviewing Activities

Alexandru Costan: IEEE Transactions on Parallel and Distributed Systems, Future Generation Computer Systems, Concurrency and Computation Practice and Experience, IEEE Transactions on Cloud Computing, IEEE Transactions on Big Data.

8.1.4. Invited Talks

Gabriel Antoniu and Alexandru Costan: Huawei European Research Center, Munich, January 2018. *Low-latency Storage for Stream Data.*

Gabriel Antoniu:

- **First workshop of the BDEC2 workshop series**, Bloomington, November 2018. *The Sigma Data Processing Architecture: Leveraging Future Data for Extreme-Scale Data Analytics to Enable High-Precision Decisions.*

- 8th workshop of the **Joint Laboratory for Extreme-Scale Computing (JLESC)**, Barcelona, April 2018. *HPC-Big Data convergence at the processing level: a vision.*
- Sintef, Oslo, October 2018: *HPC-Big Data convergence at the processing level: a vision.*

8.1.5. Leadership within the Scientific Community

Gabriel Antoniu:

International lab management *Vice Executive Director of JLESC* for Inria. JLESC is the **Joint Inria-Illinois-ANL-BSC-JSC-RIKEN/AICS Laboratory for Extreme-Scale Computing**. Within JLESC, he also serves as a *Topic Leader* for Data storage, I/O and in situ processing for Inria.

Team management *Head of the KerData Project-Team* (Inria-ENS Rennes-INSA Rennes).

International Associate Team management *Leader of the Data@Exascale Associate Team* with Argonne National Lab (2013–2018).

PI of a collaborative research project with industry : Huawei Technologies, HIRP program (Huawei Innovative Research Project Program, 2016–2018).

Technology development project management *Coordinator of the Damaris ADT project* (2016–2018), to be continued with the Damaris 2 ADT project (2019–2021).

Luc Bougé: *Vice-President of the French Society for Informatics (Société informatique de France, SIF)*, in charge of Teaching.

Alexandru Costan: *Leader of the Smart Cities Working Group* within the **BigStorage** H2020 ETN project.

8.1.6. Scientific Expertise

Luc Bougé: *Member of the jury for the Agrégation de mathématiques and the CAPES of mathématiques.* These national committees select permanent mathematics teachers for secondary schools and high-schools, respectively.

8.2. Teaching, Supervision, Juries

8.2.1. Teaching

Gabriel Antoniu

- Master (Engineering Degree, 5th year): Big Data, 24 hours (lectures), M2 level, ENSAI (*École nationale supérieure de la statistique et de l'analyse de l'information*), Bruz, France.
- Master: Scalable Distributed Systems, 12 hours (lectures), M1 level, SDS Module, EIT ICT Labs Master School, France.
- Master: Infrastructures for Big Data, 12 hours (lectures), M2 level, IBD Module, SIF Master Program, University of Rennes, France.
- Master: Cloud Computing and Big Data, 10 hours (lectures), M2 level, Cloud Module, MIAGE Master Program, University of Rennes, France.

Luc Bougé

- Bachelor: Introduction to programming concepts, 36 hours (lectures), L3 level, Informatics program, ENS Rennes, France.
- Bachelor: Introduction to scientific research, 24 hours. Research center visits, individual research project supervised by local researchers, student seminars, summer internships, etc.
- Master Program, Rennes: Invited presentation to the M2 students about *Preparing your applications after your PhD* (November 2018); *Informatics as a scientific activity: Toward a responsible research* (November 2018).

Alexandru Costan

- Bachelor: Software Engineering and Java Programming, 28 hours (lab sessions), L3, INSA Rennes.
- Bachelor: Databases, 68 hours (lectures and lab sessions), L2, INSA Rennes, France.
- Bachelor: Practical case studies, 24 hours (project), L3, INSA Rennes.
- Master: Big Data Storage and Processing, 28h hours (lectures, lab sessions), M1, INSA Rennes.
- Master: Algorithms for Big Data, 28 hours (lectures, lab sessions), M2, INSA Rennes.
- Master: Big Data Project, 28 hours (project), M2, INSA Rennes.

Pedro Silva

- Master: Algorithms for Big Data, 4 hours (lectures), M2, INSA Rennes.
- Master: Algorithms for Big Data, 6 hours (lab sessions), M2, INSA Rennes.

8.2.2. Supervision

8.2.2.1. PhD completed this year

Pierre Matri: *Tyr: Storage-Based HPC and Big Data Convergence Using Transactional Blobs*, Universidad Politécnica de Madrid, defended June 10, 2018, co-advised by María Pérez (Universidad Politécnica de Madrid) and Gabriel Antoniu.

Mohammed-Yacine Taleb: *Energy-impact of data consistency management in Clouds and Beyond* [15], ENS Rennes, defended on October 2, 2018, co-advised by Gabriel Antoniu and Toni Cortés (Barcelona Supercomputing Center).

Ovidiu-Cristian Marcu: *Efficient data transfer and streaming strategies for workflow-based Big Data processing*, INSA Rennes, defended on December 18, 2018, co-advised by Alexandru Costan and Gabriel Antoniu.

8.2.2.2. PhD in progress

Nathanaël Cheriére: *Resource Management and Scheduling for Big Data Applications in Large-scale Systems*, thesis started in September 2016, co-advised by Gabriel Antoniu and Matthieu Dorier.

Paul Le Noac'h: *Workflow Data Management as a Service for Multi-Site Applications*, thesis started in November 2016, co-advised by Alexandru Costan and Luc Bougé.

8.2.3. Juries

Gabriel Antoniu:

Barcelona Supercomputing Center **STAR Postdoctoral Programme**: Member of the evaluation panel in 2018 (30 applications reviewed).

PhD juries: Referee for 3 PhD juries for PhD defenses at Barcelona Supercomputing Center, Université de Grenoble and UPMC, Paris.

8.3. Popularization

8.3.1. Internal or external Inria responsibilities

Gabriel Antoniu:

Big Data Value Association: Inria representative in the working group on HPC-Big Data convergence since 2018.

ETP4HPC: Inria representative in the working group on HPC-Big Data convergence since 2018.

Luc Bougé: Co-ordinator between ENS Rennes and the Inria Research Center and the IRISA laboratory.

Alexandru Costan:

- In charge of internships at the Computer Science Department of INSA Rennes.
- In charge of the organization of the IRISA D1 Department Seminars.

8.3.2. Articles and contents

HDF5 Blog: Invited blog article explaining how Damaris can support HDF5-based storage.

POLARIS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Panayotis Mertikopoulos was involved in the following events:

- 2018 French Days on Optimization and Decision Science (“Journées SMAI MODE 2018”): general co-chair
- 2018 Paris Symposium on Game Theory (Paris, June 2018): co-organizer
- GDO ’18: the 2018 Workshop on Games, Dynamics, and Optimization (Vienna, March 2018): co-organizer

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- SBAC-PAD 2018 (Arnaud Legrand: chair of the performance evaluation track)

10.1.2.2. Member of the Conference Program Committees

- Performance 2018 (Bruno Gaujal, Nicolas Gast)
- SIGMETRICS 2018 (Nicolas Gast)
- WiOpt 2018 (Bruno Gaujal, Patrick Loiseau)
- NetGCoop 2018 (Bruno Gaujal, Patrick Loiseau)
- NIPS 2018 (Panayotis Mertikopoulos, Patrick Loiseau)
- ICML 2018 (Patrick Loiseau)
- SuperComputing 2018 (Arnaud Legrand)
- RescueHPC 2018 (Arnaud Legrand)
- EPEW 2018 (Jean-Marc Vincent)
- Valuetools 2018 (Jean-Marc Vincent)
- NetEcon 2018 (Patrick Loiseau)

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Patrick Loiseau is Associate Editor of ACM Trans. on Internet Technology and of IEEE Trans. on Big Data.

10.1.4. Invited Talks

- Arnaud Legrand gave a keynote on “Simulation of Large-Scale Distributed Computing Infrastructures” at Orange Labs, Chatillon, October 2018 and on “Reproducible Research” at Inria Rennes in May 2018.
- Bruno Gaujal gave invited presentations at Paris Symposium on Game Theory (Paris), International Symposium on Dynamic Games (Grenoble), New trends in Scheduling (Aussois).
- Panayotis Mertikopoulos gave invited presentations at Trinity College Dublin, Ireland on *Efficient network utility maximization algorithms*, at National Technical University of Athens (Athens Polytechnic) Athens, Greece on *Traffic in congested networks: Equilibrium, efficiency, and dynamics*, at GDO 2018 in Vienna, Austria, and on *Bandit learning in concave N-person games*, at UC Berkeley (Simons Institute for the Theory of Computing), USA on *Online learning in games*.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

The POLARIS members teach regularly. We only mention here lectures at the Master level.

- Master: Bruno Gaujal and Mouhcine Mendil, “*Advanced Performance Evaluation*”, 18h (M2), ENSIMAG
- Master: Bruno Gaujal and Panayotis Mertikopoulos, “*Online decision making*”, M2 ENS Lyon
- Master: Bruno Gaujal and Ana Basic, “*Cours théorie des réseaux*”, M2 MPRI, Paris
- Master M2R : Nicolas Gast “*Optimization Under Uncertainties*”, 18h (M2), Master ORCO, Grenoble.
- Master: Arnaud Legrand and Jean-Marc Vincent, “*Scientific Methodology and Performance Evaluation*”, 18h M2, M2R MOSIG
- Master: Arnaud Legrand, “*Scientific Methodology and Performance Evaluation*”, 18h M2, ENS Rennes
- Master: Panayotis Mertikopoulos, “*Advanced optimization algorithms*”, 16h M2, University of Athens, Athens, Greece
- Master: Guillaume Huard, “*Conception des Systèmes d’Exploitation*” (M1), Université Grenoble-Alpes
- Master: Guillaume Huard, “*Conception des Systèmes d’Exploitation*” (M1), Université Grenoble-Alpes
- Master: Florence Perronnin, “*Simulation*”, M1, Université Versailles – Saint-Quentin
- Master: Arnaud Legrand and Florence Perronnin, “*Probabilités–Simulation*” and “*Performance evaluation*” 72 h (M1), RICM4 Polytech Grenoble
- Master: Jean-Marc Vincent, Mathematics for computer science, 18 h , (M1) Mosig.
- Master/PhD: Jean-Marc Vincent, Litterate Programming and Statistics, UFRGS (Porto Alegre, Brazil)
- Master: Vincent Danjean, Architecture and Software project, engineering school
- Master: Vincent Danjean, Conception of operating systems, concurrent programming and systems project, MOSIG and CS Master, Grenoble

E-learning Arnaud Legrand has designed and organized a MOOC on Reproducible Research with Konrad Hinsén (CNRS/Centre de Biophysique Moléculaire) and Christophe Pouzat (CNRS/Mathématiques Appliquées à Paris 5) with the support of the Inria MOOC-lab.

This MOOC is hosted on the FUN platform <https://www.fun-mooc.fr/courses/course-v1:inria+41016+session01bis/about> and the first edition (Oct-Dec 2018) targets graduate students, PhD students, post-doc, engineers and researchers working in any scientific domain relying on computations. In this MOOC, some modern and reliable tools are presented: GitLab for version control and collaborative working, Computational notebooks (Jupyter, RStudio, and Org-Mode) for efficiently combining the computation, presentation, and analysis of data. More than 3,400 people have registered to the first edition.

10.2.2. Supervision

Stephane Durand (PhD UGA defended on Dec. 11, 2018): Distributed Best Response Algorithms in random Potential Games, co-advised by Bruno Gaujal and Federica Garin (funded by Labex Persyval, Grenoble).

Benoit Vinot (PhD UGA defended on April 2018): Design of a distributed information system for the control of flexibilities in a power distribution network: modelling, simulation and implementation, co-advised by Nicolas Gast and Florent Cadoux

Vinicius Garcia Pinto (PhD in co-tutelle with UFRGS defended in 2018): 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 (PhD in co-tutelle with UFRGS defended in 2018): 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).

Alexis Janon (PhD in progress, 2018-...): Tasks Placement on Hierarchical Computational Platforms, co-advised by Guillaume Huard and Arnaud Legrand (funded by the French Ministry)

Stephan Plassart (PhD in progress, 2016-...): Energy Optimization in Embedded Systems, co-advised by Bruno Gaujal and Alain Girault (funded by Labex Persyval, Grenoble).

Baptiste Jonglez (PhD in progress, 2016-...): Leveraging Diversity in Communication Networks, co-advised by Bruno Gaujal and Martin Heusse (funded by Univ Grenoble Alpes).

Vitalii Emelianov (PhD in progress, 2018-...): Fairness and transparency in data-driven decision making, co-advised by Patrick Loiseau and Nicolas Gast (funded by Inria).

Benjamin Roussillon (PhD in progress, 2018-...): Classification in the presence adversarial data: models and solutions, co-advised by Patrick Loiseau and Panayotis Mertikopoulos (funded by IDEX UGA and DGA).

Dong Quan Vu (PhD in progress, 2017-...): Learning in Blotto games and applications to modeling attention in social networks, co-advised by Patrick Loiseau and Alonso Silva (Cifre PhD with Nokia Bell-Labs)

Athanasios Andreou (PhD in progress, 2015-...): Bringing transparency to personalized systems through statistical inference, co-advised by Patrick Loiseau and Oana Goga (funded by Institut Mines Telecom and ANR)

Alexandre Marcastel (PhD in progress, 2015-...): co-advised by E. Veronica Belmega, Panayotis Mertikopoulos and Inbar Fijalkow

Kimon Antonakopoulos (PhD in progress, 2017-...): Variational inequalities and optimization, co-advised by E. Veronica Belmega, Panayotis Mertikopoulos and Bruno Gaujal

Bruno Donassolo (PhD in progress, 2017-...): Decentralized management of applications in Fog computing environments, co-supervised by Panayotis Mertikopoulos, Arnaud Legrand and Ilhem Fajjari (Cifre PhD with Orange)

Pedro Bruel (PhD in progress 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 (PhD in progress 2017-...): Capacity planning and performance evaluation of supercomputers, advised by Arnaud Legrand (funded by the French Ministry for Research).

Christian Heinrich (PhD in progress 2015-...): Modeling of performance and energy consumption of HPC systems, advised by Arnaud Legrand (funded by Inria).

Umar Ozeer (PhD in progress 2017-...): co-advised by Jean-Marc Vincent, Gwen Salaün, François-Gaël Ottogalli and Loïc Letondeur (within the Inria-Orange lab).

Amélie Héliou (PostDoc, Sep. 2017-May 2018): co-supervised by Panayotis Mertikopoulos and Bruno Gaujal

Mouhcine Mendil (PostDoc, 2017-...): supervised by Nicolas Gast

Takai Kennouche (PostDoc, 2017-...): supervised by Nicolas Gast

Luigi Vigneri (PostDoc, Sep. 2017-Sep.2018): co-supervised by Panayotis Mertikopoulos and G. Paschos

Olivier Bilenne (PostDoc, 2018-...): co-supervised by Panayotis Mertikopoulos and E. V. Belmega

10.2.3. *Juries*

- Bruno Gaujal was president of the jury for the CRCN Inria Grenoble Rhone-Alpes competition.
- Jean-Marc Vincent was member of the jury of Capes de mathématiques (option Informatique).
- Bruno Gaujal was reviewer of the PhD of Adil Salim (Telecom Paris Tech) and Panayotis Mertikopoulos was examiner.
- Nicolas Gast was reviewer of the PhD of Fabbio Cecchi (Univ. Eindhoven).
- Arnaud Legrand was president of the jury for the PhD of Louis Poirel (Univ. Bordeaux).
- Arnaud Legrand was president of the jury for the PhD of Nicolas Denoyelle (Univ. Bordeaux).
- Arnaud Legrand was president of the jury for the PhD of Valentin Reis (Univ. Grenoble Alpes).
- Arnaud Legrand was examiner of the jury for the PhD of Marcos Amaris Gonzales (Univ. São Paulo).

10.3. Popularization

10.3.1. *Internal or external Inria responsibilities*

- Jean-Marc Vincent is responsible for the mediation in the Inria Rhône-Alpes center in relation with the Rectorat de l'Académie de Grenoble (organisation of ISN conferences, Class'Code for digital referents)
- Jean-Marc Vincent coordinates the group "Info sans ordi" (computer science without computer)—in which Florence Perronnin participates

10.3.2. *Articles and contents*

Jean-Marc Vincent has coordinated and participated to the redaction of the 96 pages special issue of *Tangente* on *Informatique Débranchée*: http://www.infinimath.com/librairie/descriptif_livre.php?type=magazines&theme=7&soustheme=26&ref=2568#article.

10.3.3. Education

- Highschool Professors: Vincent Danjean is responsible of the University Dept. for Highschool Professors Training in Computer Science (in relation with the rectorat).
- Highschool Professors: Jean-Marc Vincent is member of the steering committee for the training of Highschool Professors towards the new option NSI (Numérique et Sciences Informatiques) for Baccalauréat and participated in the creation of a inter-university diploma in CS.
- Arnaud Legrand gave a lecture on “Reproducible Research” at CIRM in May 2018 to the computer science teachers of classes préparatoires.
- Bruno Gaujal: Course on game theory at the 7 laux of ENS Lyon students
- Bruno Gaujal: Course on dynamique optimization for high school teachers.
- Florence Perronnin: creation of an option in Licence on “Sciences Informatiques et Médiation” (CS and mediation)

10.3.4. Interventions

- Arnaud Legrand made a podcast with Interstice on reproducible research <https://interstices.info/la-recherche-reproductible-pour-une-science-transparente/>
- Participation to mediation events of the center (Fête de la science, journées math C2+, journée login)
- Participation to mediation actions Inria/Irem/Maison for Science (Jean-Marc Vincent)

ROMA Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- Bora Uçar was the general chair of 32nd IEEE IPDPS 2018 (IEEE International Parallel & Distributed Processing Symposium), held in Vancouver, Canada, May 21–25, 2018.

10.1.1.2. Member of the Organizing Committees

- Bora Uçar was a member of the organizing committee of ICGT 2018 (10th International Colloquium on Graph Theory and combinatorics), held in Lyon, July 9–13, 2018

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Anne Benoit was the program chair of 32nd IEEE IPDPS 2018 (IEEE International Parallel & Distributed Processing Symposium), held in Vancouver, Canada, May 21–25, 2018. She was also the global chair for topic 3: "Scheduling and Load Balancing" of the 24th Int. European Conf. on Parallel and Distributed Computing (EuroPar 2018), held in Torino, Italy, August 27–31, 2018.

10.1.2.2. Member of the Conference Program Committees

- Bora Uçar was a member of the program committee of **IA³**, 2018 The Eight Workshop on Irregular Applications: Architectures and Algorithms, in conjunction with SC'18, November 11–16, 2018, Dallas, Texas, USA; **CSC18**, The 8th SIAM Workshop on Combinatorial Scientific Computing, Bergen, Norway June 6-8, 2018; **HiPC 2018**; 25th IEEE International Conference on High Performance Computing, Data, and Analytics, Bengaluru, India, 17–20 December 2018; **SC18** Doctoral Showcase of The International Conference for High Performance Computing, Networking, Storage, and Analysis, Dallas, TX, USA; **33rd IEEE IPDPS 2019 Workshops Committee**, 33rd IEEE International Parallel and Distributed Processing Symposium, Rio de Janeiro, Brazil, May 20–24, 2019.
- Loris Marchal was a member of the program committee of **IPDPS 2018**, **ICPP 2018** and the workshop of IPDPS **APDCM 2018**.
- Jean-Yves L'Excellent was a member of the program committee of **CSC18**, The 8th SIAM Workshop on Combinatorial Scientific Computing, Bergen, Norway June 6-8, 2018.
- Frédéric Vivien was a member of the program committee of **IPDPS 2018**, **PDP 2018**; **EduPar 18**, and the Poster session of **SC18**.
- Yves Robert was a member of the program committee of the FTXS, Scala and PMBS workshops co-located with SC'18 in Dallas, TX.

10.1.2.3. Reviewer

Bora Uçar reviewed a paper for 33rd IEEE IPDPS 2019.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Anne Benoit is Associate Editor (in Chief) of ParCo, the journal of Parallel Computing: Systems and Applications (from July 2018). She is also a member of the editorial board (Associate Editor) of TPDS, IEEE Transactions on Parallel and Distributed Systems since 2015, and of JPDC, the Journal of Parallel and Distributed Computing, since 2011.
- Bora Uçar is a member of the editorial board of Parallel Computing, April 2016–on going, and SIAM Journal on Matrix Analysis and Applications (SIMAX), May 2018–ongoing.
- Frédéric Vivien is Associate Editor of Parallel Computing (Elsevier) and of JPDC (Elsevier Journal of Parallel and Distributed Computing).
- Yves Robert is Associate Editor of JPDC (Elsevier Journal of Parallel and Distributed Computing) and TOPC (ACM Trans. On Parallel Computing).

10.1.3.2. Reviewer - Reviewing Activities

Bora Uçar reviewed papers for the journals SIAM Journal on Scientific Computing (4 in 2018); ACM Transactions on Mathematical Software (2 in 2018); IEEE Transactions on Parallel and Distributed Systems (1 in 2018); Future Generation Computer Systems (1 in 2018); IEEE Transactions on Signal Processing (1 in 2018); SIAM Journal on Matrix Analysis and applications (1 in 2018);

Anne Benoit, Loris Marchal, Yves Robert and Frédéric Vivien reviewed papers for the journals IEEE Transactions on Parallel and Distributed Systems and Elsevier Journal of Parallel and Distributed Computing.

10.1.4. Invited Talks

- Bora Uçar delivered an invited talk at the Scientific Computing Group's Seminar at the Emory University, Atlanta, USA, September 2017.
- Frédéric Vivien delivered the keynote presentation of the 8th IEEE Workshop PDCO, held in conjunction with IPDPS 2018, in Vancouver, Canada, on Monday May 21, 2018.
- Yves Robert delivered a keynote presentation at SBAC-PAD'2018, the 30th International Symposium on Computer. Architecture and High Performance Computing.
- Yves Robert delivered the keynote presentation at SCALA'2018, the 9th Workshop on Latest Advances in Scalable Algorithms for Large-Scale Systems, held in conjunction with SC'18

10.1.5. Leadership within the Scientific Community

- Anne Benoit is a member of the Steering Committee of HCW (Heterogeneity in Computing Workshop, co-located with IPDPS) since 2018.
- Yves Robert is a member of the Steering Committee of IPDPS and HCW . He is the liaison between the Steering and Program committees of IPDPS.
- Bora Uçar is a member of the Steering Committee of Combinatorial Scientific Computing (2014–on going); and IPDPS for the years 2017–2019. He is also a vice-chair of IEEE Technical Committee on Parallel Processing (TCPP).

10.1.6. Scientific Expertise

Yves Robert is an expert for the Horizon 2020 program of the European Commission and has reviews two projects in 2018.

10.1.7. Research Administration

Loris Marchal is responsible of the competitive selection of ENS Lyon Student for Computer Science.

Frédéric Vivien is the vice-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: Anne Benoit, Responsible of the L3 students at ENS Lyon, France

Licence: Yves Robert, Algorithmique, ENS Lyon, France

Master: Anne Benoit, Parallel and Distributed Algorithms and Programs, 42, M1, ENS Lyon, France

Master : Bora Uçar, Combinatorial Scientific Computing (with Fanny Dufossé), 36, M2 Informatique Fondamentale, ENS Lyon, France.

Master: Yves Robert, Scheduling at scale, 36, M2 Informatique Fondamentale, ENS Lyon, France

Master: Yves Robert, Responsible of M2 Informatique Fondamentale, ENS Lyon, France

Master : Loris Marchal, Complexity and calculability (practicals), 16, M1, Univ. Lyon 1, France.

10.2.2. Supervision

HdR: Loris Marchal, Memory and data aware scheduling, ENS Lyon, March 30, 2018.

PhD in progress: Yiqin Gao, “Replication Algorithms for Real-time Tasks with Precedence Constraints”, started in October 2018, ENS Lyon, advisors: Yves Robert and Frédéric Vivien

PhD in progress: Changjiang Gou, Task scheduling on distributed platforms under memory and energy constraints, started in Oct. 2016, supervised by Anne Benoit & Loris Marchal.

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

PhD in progress: 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: Valentin Le Fèvre, “Scheduling and resilience at scale”, started in October 2017, funding: ENS Lyon, advisors: Anne Benoit and Yves Robert.

PhD: Gilles Moreau, On the solution phase of direct methods for sparse linear systems with multiple sparse right-hand sides, ENS Lyon, December 10, 2018, supervised by Jean-Yves L’Excellent and Patrick Amestoy.

PhD in progress: Ioannis Panagiotas, “High performance algorithms for big data graph and hypergraph problems”, started in October 2017, funding: Inria, advisors: Frédéric Vivien and Bora Uçar.

PhD in progress: Filip Pawlowski, “High performance tensor computations”, started in October 2017, funding: CIFRE, advisors: Yves Robert, Bora Uçar and Albert-Jan Yzelman (Huawei).

PhD: Loïc Pottier, Co-scheduling for large-scale applications: memory and resilience, ENS Lyon, September 18, 2018, supervised by Anne Benoit & Yves Robert.

PhD: Issam Raïs, Discover, model and combine energy leverages for large scale energy efficient infrastructures, ENS Lyon, September 28, 2018, supervised by Laurent Lefèvre & Anne Benoit & Anne-Cécile Orgerie.

PhD: Bertrand Simon, Scheduling task graphs on modern computing platforms, ENS Lyon, July 4, 2018, supervised by Loris Marchal & Frédéric Vivien.

10.2.3. Juries

Yves Robert was a Reviewer for the HDR of Alfredo Buttari (Toulouse) and Head of the Committee for the HDR of Abdou Guermouche and Pierre Ramet (Bordeaux). At ENS Lyon, he was a Committee member for the HDR of Loris Marchal, and for the PhD of Loic Pottier.

10.3. Popularization

10.3.1. Interventions

- Frédéric Vivien took part in the committee which listened to the presentations of high-school students in the scope of a “MATH.en.JEANS” action (December 2018).
- Yves Robert gave the honorary speech for the Honoris Causa Diploma of ENS Lyon awarded to Marc Snir on November 9, 2018.

STORM Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Olivier Aumage, hosting of the OpenMP Language Committee week at Inria Bordeaux, May 14-18, 30 participants.
- Raymond Namyst, Organization of the “Inria National Scientific Days” in Bordeaux, June 27-29, 250 participants.

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

- Olivier Aumage: Cluster 2018, ICPP 2018, SC Asia 2018.
- Emmanuelle Saillard: COMPAS 2018, ISC HPC 2018 (poster committee), SC18 (workshop committee).
- Samuel Thibault: HCW, P3MA'18
- Denis Barthou: CF 2018
- Raymond Namyst: ISC 2018, IPDPS 2018, SC 2018, Euro-MPI 2018, SC Asia 2018.

9.1.2.2. Reviewer

- Olivier Aumage: Cluster, HCW, ICPP, PDP, PDSEC, SC Asia.
- Emmanuelle Saillard: COMPAS, ISC HPC, SC.
- Samuel Thibault: HCW

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- Olivier Aumage: CCPE special issue.

9.1.3.2. Reviewer - Reviewing Activities

- Olivier Aumage: CCPE, IJPEDES, JPDC
- Samuel Thibault: JPDC, TPDS, IJHPCA

9.1.4. Invited Talks

- Olivier Aumage: SIAMPP (Tokyo), EPCC (Edinburgh), COMPAS (Toulouse), HPCS (Orléans).
- Emmanuelle Saillard: Journées GDR-GPL (Grenoble), Journée LaMHA (Paris).
- Samuel Thibault: ROMA seminar (Lyon), COMPAS (Toulouse), Task-based seminar (Uppsala)

9.1.5. Scientific Expertise

- Olivier Aumage: ANR (1 project in phase 2).
- Samuel Thibault: ANR (1 project in phase 2).

9.1.6. Research Administration

- Olivier Aumage: Permanent Contact for Team STORM.
- Nathalie Furmento: Member of the Commission de Développement Technologique at Inria Bordeaux Sud-Ouest

- Nathalie Furmento: Member of the technical team for PlaFRIM, Federative Platform for Research in Computer Science and Mathematics
- Nathalie Furmento: Member of the HCERES evaluation committee for the IRIF laboratory
- Nathalie Furmento: Member of the selection committee for an engineer position at the Université de Bordeaux

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Engineering School: Olivier Aumage, High Performance Communication Libraries, 20HeTD, M2, ENSEIRB-MATMECA.
- Engineering School: Olivier Aumage, Languages and Supports for Parallelism, 14HeTD, M2, ENSEIRB-MATMECA.
- Engineering School: Emmanuelle Saillard, Introduction to Algorithms, 16HeCI, L3, ENSEIRB-MATMECA.
- Engineering School: Emmanuelle Saillard, Tree Structure, 16HeCI, L3, ENSEIRB-MATMECA.
- Engineering School: Adrien Cassagne, Projet d'algorithmique et de programmation, 30HeTD, L3, ENSEIRB-MATMECA.
- Engineering School: Adrien Cassagne, Introduction aux réseaux, 15HeTD, L3, ENSEIRB-MATMECA.
- Engineering School: Adrien Cassagne, Applications TCP/IP, 15HeTD, L3, ENSEIRB-MATMECA.
- Engineering School: Philippe Virouleau, Programmation Impérative, 18HeTD, L3, ENSEIRB-MATMECA.
- Engineering School: Philippe Virouleau, Projet d'algorithmique et de programmation, 25HeTD, L3, ENSEIRB-MATMECA.
- Licence: Samuel Thibault is responsible for the computer science topic of the first university year.
- Licence: Samuel Thibault is responsible for the new Licence Pro ADSILLH (Administration et Développeur de Systèmes Informatiques à base de Logiciels Libres et Hybrides)
- Licence: Samuel Thibault, Introduction to Computer Science, 32HeTD, L1, University of Bordeaux.
- Licence: Samuel Thibault, Networking, 51HeTD, Licence Pro, University of Bordeaux.
- Engineering School: Denis Barthou is the head of the computer science teaching department of ENSEIRB-MATMECA (300 students, 20 faculty, 120 external teachers)
- Engineering School: Denis Barthou, Architectures (L3), Parallel Architectures (M2), Procedural Generation for 3D Games (M2), C/Algorithm projects (L3)
- Licence: Marie-Christine Counilh, Introduction to Computer Science (64HeTD), Introduction to C programming (52HeTD), L1, University of Bordeaux.
- Master MIAGE: Marie-Christine Counilh, Object oriented programming in Java (30HeTD), M1, University of Bordeaux.

9.2.2. Supervision

- PhD in progress: Ksander Ejjaouani, Novembre 2016, Olivier Aumage, Michel Mehrenberger, Julien Bigot.
- PhD in progress: Adrien Cassagne, "Parallelization and Code Generation for Error Correcting Codes from Factor Graphs" October 2017, Olivier Aumage, Denis Barthou, Christophe Jego, Camille Leroux.
- PhD in progress: Idriss Daoudi, October 2018, Olivier Aumage, Thierry Gautier.

- PhD in progress: Romain Lion, October 2018, Samuel Thibault
- PhD in progress: Pierre Huchant, “Static analysis and dynamic adaptation of parallelism”, oct. 2015, supervised by Marie-Christine Counilh, Denis Barthou.
- PhD in progress: Hugo Brunie, “Optimization of data allocations for high performance applications on heterogeneous memory architectures”, oct. 2015, supervised by Julien Jaeger (CEA), Patrick Carribault (CEA) and Denis Barthou.
- Internship: Antoine Tirel, June 2018 - Sept. 2018, Emmanuelle Saillard

9.2.3. Juries

- Olivier Aumage: Ph.D defense of Adrián Castelló Gimeno at the University of Castellon Jaume I, (reviewer).
- Samuel Thibault: Ph.D defense of Germán Ceballos at the University of Uppsala (opponent).
- Denis Barthou: Ph.D defense of Van Long TRAN at Institut Telecom Sud-Paris, University Paris-Saclay (reviewer), Ph.D defense of Arnaud Durocher at the University of Bordeaux (president)

9.3. Popularization

9.3.1. Interventions

- Olivier Aumage, Emmanuelle Saillard, Denis Barthou: Welcoming of the general public for the open days at the Inria research center, October 2018.
- Emmanuelle Saillard, Corentin Salingue: Fête de la Science, Inria, October 2018.
- Emmanuelle Saillard, Corentin Salingue: Semaine des maths, Lycée Saint Genès, March 2018.
- Corentin Salingue: Printemps de la mixité, Inria, April 2018.
- Corentin Salingue: Welcoming of schoolchildren: internship of Matthieu Vigier-Lafosse, January 2018.

9.3.2. Internal action

- Emmanuelle Saillard: DevDays, October 2018
- Denis Barthou: Unithé ou café, June 2018

TADAAM Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

In the context of ANR Dash, Guillaume AUPY organized a workshop on I/O in Europe <https://project.inria.fr/dash/events/>. He was the co-chair of the FTS workshop at Cluster 2018.

10.1.1.2. Member of the steering committee

Emmanuel JEANNOT is member of the steering committee of Euro-Par and the Cluster international conference.

10.1.1.3. Member of the Organizing Committees

- Guillaume AUPY was a member of the Organizing Committee of Per3S 2019.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Guillaume AUPY was workshop Chair at SC 2018, Inclusivity Vice-Chair at SC 2018, Algorithm track vice-chair at ICPP 2018.
- Emmanuel JEANNOT was the program chair of the COLOC workshop.

10.1.2.2. Member of the Conference Program Committees

- Emmanuel JEANNOT was member of the program committee of IPDPS 2019, HPML 2018, Heteropar 2018, Compas 2018.
- Brice GOGLIN was a member of the program committee of EuroMPI 2018, SuperComputing 2018 (posters), and of the COLOC, ExaComm and ROME Workshops.
- Alexandre DENIS was a member of the program committee of CCGrid 2018, CCGrid 2019, HiPC 2018, SC 2018 (workshops).
- Guillaume AUPY was a member of the program committee of SuperComputing 2018 (Doctoral Showcase), HPML 2018, CEBDA 2018 (IPDPS workshop).
- Guillaume MERCIER was a member of the programm committe of SuperComputing 2018 (Performance Measurement, Modeling, and Tools Track), EuroMPI 2018, CCGrid 2018, HPCS 2018 and Compas 2018

10.1.2.3. Reviewer

- Alexandre DENIS was a reviewer for IPDPS 2018.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Emmanuel JEANNOT is associate editor of the International Journal of Parallel, Emergent & Distributed Systems (IJPEDS).
- Emmanuel JEANNOT was an invited editor for the Special Issue of *Concurrency and Computation: Practice and Experience* for best papers of HCW 2018.

10.1.3.2. Reviewer - Reviewing Activities

- Guillaume AUPY was a reviewer for IEEE TPDS, Cluster Computing.

- Emmanuel JEANNOT was a reviewer for IEEE TPDS, Journal of Computational Science.
- Alexandre DENIS was a reviewer for IEEE TPDS.

10.1.4. Invited Talks

- Guillaume AUPY was invited to give a talk at Per3S 2018.
- Guillaume AUPY and Emmanuel JEANNOT were invited to give a talk at CCDSC 2018.

10.1.5. Scientific Expertise

- Emmanuel JEANNOT have been reviewer for the PRACE 6IP call (WP8).
- Emmanuel JEANNOT was a member of the hiring committee of an Inria junior researcher position at Bordeaux.
- François PELLEGRINI has been appointed as co-pilot of the project group on free/libre software at *Comité pour la science ouverte* (CoSO), an arm of the CODORNUM of the French Ministry of Higher Education and Research.
- François PELLEGRINI was a member of the former *Comité d’Orientation sur l’Information Scientifique et Technique* (CORIST) of *Institut National de la Recherche Agronomique* (INRA).
- François PELLEGRINI participated in a roundtable on “*the societal impact of digital identity*” during the *Assises de l’identité numérique* organized by the French ministries of the Interior and Justice, and the State Secretariat for digital issues.
- François PELLEGRINI was heard by members of the Law Commission of the French Senate, on e-voting.
- François PELLEGRINI was a member of the hiring committee for an assistant professor position at Université de Pau et des Pays de l’Adour.

10.1.6. Research Administration

- Emmanuel JEANNOT is deputy head of science of the Inria Bordeaux research center.
- Emmanuel JEANNOT is member of the Inria evaluation committee
- Emmanuel JEANNOT is member of LaBRI scientific council and head of the Satanas team.
- Alexandre DENIS is head of the Inria Bordeaux CUMI-R (IT users committee).
- Brice GOGLIN and Guillaume MERCIER are elected members of the research centre committee.

10.1.7. Standardization Activities

TADAAM attended the MPI Forum meetings on behalf of Inria (where the MPI standard for communication in parallel applications is developed and maintained). TADAAM also created of a new working group in the MPI Forum, dedicated to hardware topologies management and currently leads this working group. The HSPLIT proposal is currently under early discussions for submission to the forum and eventual inclusion in the MPI standard.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Members of the TADAAM project gave hundreds of hours of teaching at Université de Bordeaux and the Bordeaux INP engineering school, covering a wide range of topics from basic use of computers, introduction to algorithmics and C programming to advanced topics such as probabilities and statistics, scheduling, computer architecture, operating systems, parallel programming and high-performance runtime systems, as well as software law and personal data.

Brice GOGLIN participated in the section about fundamentals of computer science in the MOOCs *Informatique et Création Numérique* and *Sciences Numériques et Technologie* which focus at bringing basics about computer science to high-school teachers.

François PELLEGRINI gave a doctoral course at the University of Luxembourg on “*Law and freedom(s) in the digital age*”. He also taught at Télécom Sud Paris and École Nationale de la Magistrature.

10.2.2. Supervision

PhD: Nicolas DENOYELLE, advanced memory hierarchies and new topologies, defended on November 6th 2018. Advisor: Brice GOGLIN and Emmanuel JEANNOT.

PhD: Hugo TABOADA, *Recouvrement des Collectives MPI Non-bloquantes sur Processeur Many-core*, defended on 11 December 2018. Advisors: Alexandre DENIS and Emmanuel JEANNOT.

PhD in progress: Benjamin LORENDEAU, new programming models and optimization of Code Saturn, started in 2015. Advisors: Yvan FOURNIER and Emmanuel JEANNOT.

PhD in progress: Valentin Honoré, Partitioning Strategies for high throughput Applications, started in November 2017. Advisors: Guillaume AUPY and Brice GOGLIN.

PhD started: Andrès RUBIO, Management on heterogeneous and non-volatile memories, started in October 2018. Advisor: Brice GOGLIN.

PhD started: Nicolas VIDAL, IO scheduling strategies, started in October 2018. Advisors: Guillaume AUPY and Emmanuel JEANNOT.

10.2.3. Juries

Guillaume AUPY was a reviewer of the mid-PhD defense of Massinissa Ait Aba (CEA, supervisors: Alix Munier, Safia Kedad Sidhoum).

Emmanuel JEANNOT was member of the Ph.D defense jury of:

- Yann Barsamian (University of Strasbourg, Reviewer)
- Loic Pottier (University of Lyon, ENS Lyon, Reviewer)
- Philippe Virouleau (University of Grenoble-Alpes, Reviewer)

François PELLEGRINI was member of the Ph.D defense jury of:

- Grégoire Pichon (University of Bordeaux)

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

Brice GOGLIN is in charge of the diffusion of the scientific culture for the Inria Research Centre of Bordeaux. He organized several popularization activities involving colleagues.

Guillaume AUPY co-organized (with Marthe Bonamy) a 2-day visit of Inria & Labri for undergrad students from ENS Lyon.

10.3.2. Education

- Brice GOGLIN was involved in the MOOC *Informatique et Création Numérique* which focuses at bringing basics about computer science to high-school teachers. He answered numerous questions on the forum. More than 19 000 people registered to the course, and more than 1 500 successfully finished it.
- Brice GOGLIN was involved in the building of the MOOC *Sciences Numériques et Technologie* which focus at bringing basics about computer science to high-school teachers.
- François PELLEGRINI, created a set of ten animated short videos on the digital revolution and its consequences, for high-school pupils and freshman students (Pix/C2i), in collaboration with the services of Université de Bordeaux.

10.3.3. Interventions

- Valentin HONORÉ and Brice GOGLIN went to the St Genes middle school in Bordeaux in March for *Semaine des Maths* to give hands-on sessions about basics of algorithmics and computer science.
- TADAAM presented its research to the general public during the 10th anniversary of the research centre on September 27th.
- Emmanuel JEANNOT was the roundtable presenter of the topic HPC and scientific computing at the Inria Bordeaux 10 years event on September 27th.
- Valentin HONORÉ and Brice GOGLIN presented TADAAM research during the research centre open day on October 13th.
- Guillaume AUPY, Valentin HONORÉ, Nicolas VIDAL and Brice GOGLIN gave seminars and hands-on session about computer science to schools attending *Fete de la Science* in October.
- Guillaume AUPY went to the Sainte-Foy-La-Grande middle school in the context of Maths-en-Jeans to talk about finding a way to share messages in class and how it relates to the internet.
- Brice GOGLIN introduced research, research carriers, high performance computing and data centers to middle-school interns on December 17th.
- François PELLEGRINI delivered a conference entitled “*Tous pirates ?*”, at the National Theater of Bordeaux-Aquitaine (TNBA), in relation with the play of same name created by the Traverse and OS’O artist collectives.
- François PELLEGRINI participated in a conference and roundtable “*Ingénieurs, éthique et valeurs face à l’industrie 4.0*” organized by Fondation Anthony Mainguené at École Nationale Supérieure des Arts et Métiers.
- François PELLEGRINI was member of the jury during a fake trial of a self-driving artificial intelligence (*Carambolage du siècle*) at the Appeal Court of Paris, during the *Nuit du droit*.
- François PELLEGRINI delivered a conference on the digital revolution at Le Bar Commun during the *Week of digital Freedoms*.

DIVERSE Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

Benoit Combemale has been appointed in 2018 Deputy Editor in Chief of the international journal JOT, and chair of the steering committee of the ACM SIGPLAN conference SLE.

Benoit Baudry was General chair for SSBSE'2018

9.1.1.2. Member of the Organizing Committees

Benoit Combemale has been a co-organizer of the session "Application of Advanced Software Engineering Tools and Methods in the Environmental Sciences" at CMWR'18.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Benoit Combemale has been co-chair for the Industry Day at MODELS 2018, and the GEMOC Workshop at MODELS 2018.

9.1.2.2. Member of the Conference Program Committees

Mathieu Acher:

- 33rd IEEE/ACM International Conference on Automated Software Engineering
- 22nd International Systems and Software Product Line Conference
- 12th International Workshop on Variability Modelling of Software-Intensive Systems

Olivier Barais:

- PC member for ICWE 2018. Full Research Papers
- PC member for ICWE 2018. Short and Vision Papers
- PC member for SAC'2018
- PC member for SecureMDE 2018 workshop at MODELS'18

Benoit Baudry:

- PC member for SPLC 2018
- PC member for SAC 2018

Arnaud Blouin:

- 30th French speaking conference on Human-Computer Interaction (IHM), 2018
- Second International Workshop on Debugging in Model-Driven Engineering at MODELS'2018 (MDEBug), 2018
- Third International Workshop on Human Factors in Modeling at MODELS'2018 (HuFaMo), 2018
- PC member of the ACM Student Research Competition (SRC) at MODELS 2018

Benoit Combemale:

- PB member for MODELS'18
- PC member for ICMT'18
- PC member for ECMFA'18
- PC member for the MiSE'18 workshop at ICSE'18
- PC member for the EXE'18 workshop at MODELS'18
- PC member for the MDEBug'17 workshop at MODELS'18
- PC member for the DevOps'18 workshop

Jean-Marc Jézéquel:

- PC member for SPLC 2018 Industry Track
- PC member for SEAMS 2018

Johann Bourcier:

- PC member for SEsCPS workshop at ICSE, 2018
- PC member for the eCAS workshop at SASO 2018

Noël Plouzeau:

- PC member for ICSA 2018, Technical Track
- PC member for SEAA 2018, Cloud Based Systems and CPS Systems tracks

9.1.2.3. Reviewer

Arnaud Blouin, external reviewers for:

- EICS'18, ICWE'18

Olivier Barais, external reviewers for:

- ASE'18

Johann Bourcier, external reviewers for:

- Models'18

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Benoit Combemale is a member of the editorial board of the journals SoSyM (Springer), COMLAN (Elsevier), and SCP (Elsevier, Advisory Board of the Software Section).

Jean-Marc Jézéquel:

- Associate Editor in Chief of SOSYM
- Associate Editor in Chief of IEEE Computer
- Associate Editor of JSS
- Associate Editor of JOT

Benoit Baudry:

- Associate Editor in Chief of STVR
- Associate Editor in Chief of SOSYM

9.1.3.2. Reviewer - Reviewing Activities

In addition to his editorial duties, Benoit Combemale is a regular reviewer for the journals ACM Survey, and IEEE Transactions on Software Engineering (TSE).

Arnaud Blouin:

- COMLAN (Computer Languages, Systems and Structures), JVLIC (Journal of Visual Languages and Computing), SCP (Science of Computer Programming), KAIS (Knowledge and Information Systems)

Olivier Barais:

- COMLAN (Computer Languages, Systems and Structures), JVLIC (Journal of Visual Languages and Computing), Software and Systems Modeling (SoSyM), IEEE Computer

Noël Plouzeau:

- Software and Systems Modeling (SoSyM)

Johann Bourcier:

- Software and Systems Modeling (SoSyM), Journal of System and Software (JSS), IEEE Communication Magazine

9.1.4. Invited Talks

Mathieu Acher:

- *Reverse Engineering Language Product Lines from Existing DSL Variants*, David Méndez-Acuña, José Galindo, Benoit Combemale, Arnaud Blouin, Benoit Baudry, at GDR-GPL 2018
- *Re-engineering Software Variability into Software Product Lines*, Tewfik Ziadi, Mathieu Acher, at ASE 2018 (tutorial: <http://www.ase2018.com/?p=tutorials#spl>)

Jean-Marc Jézéquel:

- *Keynote speech for the LIG seminar on the Future of Informatics: "On Turning Domain Knowledge into Tools"*

Benoit Combemale:

- Model Execution: Past, Present and Future. Keynote at EXE'18, DK (14/10/18).
- Modeling For Sustainability - Or How to Make Smart CPS Smarter?. Keynote at Models@run.time'18, DK (14/10/18), and invited talk at TU Wien, AT (15/05/18)
- Execution Framework of the GEMOC Studio. Talk at LangDev'18, NL (08/03/18).

9.1.5. Leadership within the Scientific Community

Mathieu Acher is member of the steering committee of SPLC, the major venue in software product line and variability <http://splc.net/>.

Arnaud Blouin:

- Founding member and member of the GL-IHM (software engineering and human-computer interaction) working group (action spécifique GDR-GPL 2017)

Benoit Baudry organized a dagstuhl-Seminar on the relationship between DevOps and quality assurance from a software engineering perspective <https://www.dagstuhl.de/de/programm/kalender/semhp/?semnr=18122>.

Benoit Combemale:

- Chair of the Steering committee of the ACM SIGPLAN conference SLE
- Founding member and member of the advisory board of the GEMOC initiative.
- Chair of the Eclipse Research Consortium GEMOC and the Eclipse Project GEMOC Studio.

9.1.6. Scientific Expertise

Olivier Barais is an external expert for the H2020 ENACT project. Olivier Barais provides scientific expertises for DGRI international program (20 proposals per year)

9.1.7. Research Administration

Jean-Marc Jézéquel is Director of IRISA (UMR 6074). He is Coordinator of the academic club of the French Cyber-defense Excellence Cluster, and Director of the Rennes Node of EIT Digital.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

The DIVERSE team bears the bulk of the teaching on Software Engineering at the University of Rennes 1 and at INSA Rennes, for the first year of the Master of Computer Science (Project Management, Object-Oriented Analysis and Design with UML, Design Patterns, Component Architectures and Frameworks, Validation & Verification, Human-Computer Interaction) and for the second year of the MSc in software engineering (Model driven Engineering, Aspect-Oriented Software Development, Software Product Lines, Component Based Software Development, Validation & Verification, *etc.*).

Each of Jean-Marc Jézéquel, Noël Plouzeau, Olivier Barais, Johann Bourcier, Arnaud Blouin, and Mathieu Acher teaches about 200h in these domains, with Benoit Baudry and Benoit Combemale teaching about 50h, for a grand total of about 1300 hours, including several courses at ENSTB, Supelec, and ENSAI Rennes engineering school.

Olivier Barais is deputy director of the electronics and computer science teaching department of the University of Rennes 1. Olivier Barais is the head of the final year of the Master in Computer Science at the University of Rennes 1. Johann Bourcier is co-manager of the Home-Automation option at the ESIR engineering school in Rennes. Arnaud Blouin is in charge of industrial relationships for the computer science department at INSA Rennes.

The DIVERSE team also hosts several MSc and summer trainees every year.

Mathieu Acher gave courses to EJCP (Ecole Jeune Chercheur en Programmation), a well-known, national training school for PhD students <https://ejcp2018.sciencesconf.org/resource/page/id/5>

9.2.2. Supervision

- PhD in progress: Alejandro Gomez Boix, *Distributed counter-measure against browser fingerprinting*, 2016, B. Baudry, D. Bromberg
- PhD in progress: Manuel Leduc, *Formal and Executable Specification of domain-specific language families*, 2016, O. Barais, B. Combemale
- PhD in progress: Youssou NDiaye, *Modelling and evaluating security in user interfaces*, 2016, N. Aillery, O. Barais, A. Blouin, A. Bouabdallah
- PhD in progress: Jean-Émile Dartois, *Efficient resources management for hybrid cloud computing*, 2016, O. Barais
- PhD in progress: Ludovic Mouline, *Omniscient fault localization in IOT systems using model-driver data analytics*, 2016, O. Barais, Y. Le-Traon, J. Bourcier.
- PhD in progress: Oscar Luis, *Automatic test amplification*, 2016, B. Baudry
- PhD in progress: Alexandre Rio, *Demand Side Management A model driven approach to promote energy self-consumption*, 2016, O. Barais, Y. Maurel
- PhD in progress: Dorian Leroy, *A generic and generative white-box testing framework for model transformations*, 2017, B. Combemale.
- PhD in progress: Fabien Coulon, *Web engineering for domain-specific modeling languages*, 2017, B. Combemale, S. Begaudeau.
- PhD in progress: Romain Lebouc, *Techniques de test front-end en DevOps*, 2018, A. Blouin, N. Plouzeau, A. Ribault

- PhD in progress: June Benvegna-Sallou, Decision support for the assessment of risks associated with the operation of underground environments, 2018, J-R. De dreuzy, B. Combemale, J. Bourcier.
- PhD in progress: Pierre JeanJean, *Refining simulators by analyzing execution traces of complex systems*, 2018, O. Barais, B. Combemale.
- PhD in progress: Akbar-pranata Alif, *Chaos Engineering for IoT and Network Services*, 2018, O. Barais, J. Bourcier.
- PhD in progress: Antoine Cheron, *Abstractions for linked data and the programmable web*, 2018, O. Barais, J. Bourcier.
- PhD in progress: Gauthier LYAN, *Urban mobility: machine learning for building simulators using large amounts of data*, 2018, J-M. Jézéquel, D. Gross Amblard.
- PhD in progress: Hugo Martin, *Learning variability*, 2018, M. Acher.
- PhD: Gwendal Le Moulec, *Synthèse d'applications de Réalité Virtuelle à partir de modèles*, sept. 2018, B. Arnaldi, A. Blouin, V. Gouranton
- PhD: Paul Temple, *Investigate the Matrix: Leveraging Variability to Specialize Software and Test Suites*, dec. 2018, J-M. Jézéquel, M. Acher
- PhD: Kevin Corre, *User controlled trust and security level of Web real-time communications*, May. 2018, O. Barais, G. Sunye

9.2.3. Juries

9.2.3.1. Jean-Marc Jézéquel

was in the examination committee of the following PhD and HDR thesis:

- Jessie carbonnel, November 2018, Univ Montpellier (examiner)
- Paul Temple, December 2018, Univ Rennes I (Advisor)
- Johan Bourcier, HDR, December 2018, Univ Rennes I

9.2.3.2. Mathieu Acher

was in the examination committee of the following PhD thesis:

- Jessie carbonnel, November 2018, Univ Montpellier (examiner)
- Paul Temple, December 2018, Univ Rennes I (co-supervisor)

9.2.3.3. Olivier Barais

was in the examination committee of the following PhD thesis:

- Kevin Corre, May 2018, Univ Rennes I, Supervisor
- Thomas Durieux, Sep 2018, Univ Lille, Reviewer
- Mathieu Allon, Sep 2018, Univ Lille, Reviewer
- Tayeb LEMLOUMA, HDR, June 2018, Univ Lille, President
- Simon Bouget, Oct 2018, Univ Lille, President
- Mounir Chadli, Nov 2018, Univ Rennes I, President
- Arezki Laga, Dec 2018, Univ Bretagne Occidentale, President
- Franck Petitdemange, Dec 2018, Univ Bretagne Sud, President

9.2.3.4. Benoit Baudry

was in the examination committee of the following PhD thesis:

- Hugo Brunelière (IMT), Dec 2018, Reviewer
- Johanna Binti Ahmad (Univ. Putra Malaysia), 2018, Reviewer
- Daniel Schoepe (Chalmers), 2018, Reviewer

9.2.3.5. Benoit Combemale

was in the examination committee of the following PhD thesis:

- Stephanie Challita, Univ Lille 1 (December 2018), Reviewer
- Pablo Inostroza Valdera, Univ. Amsterdam & CWI (November 2018), The Netherlands

9.3. Popularization

- Exhibitions to Open Cloud Forum, Paris 21/03/2018
- Exhibitions to EclipsCon Toulouse 13-14/04 2018
- Exhibitions to Paris Open Source Submit 05-06/12/2018

9.3.1. Internal or external Inria responsibilities

- Olivier Barais was in charge of the recruitment committee for the position of associate professor at the University of Rennes 1 in cyber security.
- Olivier Barais was a member the recruitment committee for the position of associate professor at the University of Nantes in Software Engineering.
- Olivier Barais was a member of the recruitment committee for the position of associate professor at the University of Bordeaux in Software Engineering.

9.3.2. Interventions

- Exhibitions to the Lycée Sévigné to present career paths in Research
- Exhibitions to the "forum des métiers du collège Bourguevreuril"

9.3.3. Internal action

- Olivier Barais provide one day course on Modern Web Engineering to SED Engineer.

EASE Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- Local Arrangement Chair, AdHoc Now 2018, F. Weis

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

- PC member of AdHoc Now 2018, F. Weis
- PC member of VTC 2018, ICIN 2018, AdHoc Now 2018, ICON 2018, JM. Bonnin

9.1.3. Journal

9.1.3.1. Reviewer - Reviewing Activities

- Mobile Networks and Applications, IEEE transactions on Mobile Computing, Simulation Modeling Practice and Theory, Computer Standards & Interfaces, an international journal on Engineering Science and Technology, JM. Bonnin

9.1.4. Invited Talks

- Invited talk at Mairie de Paris (June 2018): "Open Environment: Coopération par interactions locales", C. Couturier
- Invited talk at Inria/INRA Workshop (Feb. 2018), "Environnements auto descriptifs : une approche alternative pour l'IoT", P. Couderc
- Invited in a round table at IoT World (March 22, Paris) : "Voitures connectées : quels défis technologiques pour la mobilité urbaine?", JM. Bonnin
- Invited talk at IoT Tunisia workshop (April 26, Tunis), JM. Bonnin
- Keynote Speech at IoT Tunisia forum (April 27, Tunis): "L'IoT au service de la mobilité", JM. Bonnin
- Invited at a round table (May 24, Rennes) in the "Cybersécurité des Véhicules Autonomes et Connectés" workshop organized by Id4Car, JM. Bonnin
- Invited talk at summer school "Cooperative Interacting Vehicles" (September 2018, Loire Valley, France) : "Communication for cooperation", JM. Bonnin
- Invited talk at Automotive 2018 (October 18, Versailles), JM. Bonnin
- Invited lecture at Department of Electrical Engineering and Postgraduate Program in Electrical Engineering, Faculty of Engineering Udayana University (October 24, Bali) : "Autonomous Vehicle in the Smart City Ecosystem", JM. Bonnin
- Keynote speech at ICSGTEIS'2018 (October 25, Bali) : "Smart City: A Digital Mobility (R) Evolution", JM. Bonnin

9.1.5. Scientific Expertise

- Head of the scientific committee of InOut 2018, JM. Bonnin
- Member of the scientific council of the GIS ITS, JM. Bonnin
- Member of the scientific council the Id4Car cluster, JM. Bonnin

- Scientific advisor of the YoGoKo startup, JM. Bonnin
- Co-head of "the pole Digital Society of the MSHB" (Maison des Sciences de l'Homme de Bretagne), JM. Bonnin
- Project evaluation for ANR, Belgium, Quebec, Id4Car, BPI, JM. Bonnin
- Expert for CSV board of "Pôle Images et Réseaux", projects reviewing and selection, strategic roadmap definition, P. Couderc

9.1.6. Research Administration

- Head of the Networks, Telecommunication and service department at IRISA, JM. Bonnin
- Member for the IRISA Laboratory Council, JM. Bonnin
- Member of the scientific council of ECAM (Engineering school), JM. Bonnin

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- L2/L3: network computing (lectures, tutorials, labs), 250 hours, F. Weis, Univ. Rennes 1
- Master 2: Wireless LANs, F. Weis, 30 hours, M2, IMT Atlantique
- Master 2: Pervasive computing and IoT system architectures, 4 hours+48 hours including project supervision, P. Couderc, Univ. Rennes 1
- Master 1: Network programming (lectures, tutorial, labs), 78 hours, Y. Maurel, Univ. Rennes 1
- L3/M2: network communications protocol for building automation (lectures, labs), 80 hours, Y. Maurel
- Master 2: Software engineering (lectures, tutorial, labs), 82 hours, Y. Maurel
- Master 2 : Mobility management in the Internet, JM. Bonnin, IMT Atlantique
- Master 2 Smart Mobility : Communications for ITS, JM. Bonnin, IMT Atlantique
- Master 2 IoT: Smart City, JM. Bonnin, ENSI Tunis
- Continuous training: Communications for Autonomous and Cooperative vehicle, Communications for ITS, JM. Bonnin, IMT Atlantique
- Master 1: Network programming (lab and project), 72 hours, C. Couturier, IMT Atlantique
- Master 1: IP networks (lectures, tutorial), 24 hours, C. Couturier, IMT Atlantique
- Master 2: Enterprise Network Design, 12 hours, C. Couturier, IMT Atlantique
- Master 2: Bid to Call for Tender, 12 hours, C. Couturier, IMT Atlantique
- Master 2: Supervision of the Networking and Telecom curriculum of FIP3A, C. Couturier, IMT Atlantique
- Master 2: Tools for cloud computing , 18 hours, C. Couturier, IMT Atlantique

9.2.2. Supervision

PhD: Zaineb Lioune, "Une Architecture pour des Services e-Santé évolutifs dans le cadre des Maisons Intelligentes", Frédéric Weis, Tayeb Lemlouna (UR1) and Philippe Roose (University of Pau), Defended on June 30, 2018

PhD: Steve Muller, "Risk Monitoring and Intrusion Detection for Industrial Control Systems", Jean-Marie Bonnin, co-supervision with Y. Le Traon at University of Luxembourg, defended on March 26, 2018

PhD: Saad El Jaouhari, "A secure design of WoT services for Smart Cities", Jean-Marie Bonnin, co-supervision with IRISA OCIF group, defended on Dec. 13, 2018

PhD in progress: Indra Ngurah, Car-based Data Collection for Low Energy Devices (Car-based DC4LED), May 2016, Jean-Marie Bonnin

PhD in progress: Christophe Couturier, "Frugal networking for cooperative autonomy", Nov. 2016, Jean-Marie Bonnin

PhD in progress: Alexandre Rio, "Modélisation des activités de site consommateur d'énergie", Octobre 2016, Olivier Barais (UR1) and Yoann Maurel

PhD in progress: Rodrigo Silva, "Mécanisme de décision multi-critères pour le placement de flux en environnement hétérogène et changeant", Nov. 2015, Jean-Marie Bonnin

PhD in progress: Nejm Frigui, "Maintenance autonome du réseau programmable d'accès optiques de très haut débit", Jan. 2016, Jean-Marie Bonnin

9.2.3. Juries

PhD: Rania Ben Hadj, "Gestion des conflits dans une plateforme ubiquitaire orientée services", Univ. Grenoble, F. Weis, referee, April 2018

PhD: Rania Ben Hadj, "Gestion des conflits dans une plateforme ubiquitaire orientée services", Univ. Grenoble, Y. Maurel, examiner, April 2018

PhD: Mouna Gassara, "Proactive Security in new Generations of Wireless Networks", National Engineering School of Sfax, Tunisia, Jean-Marie Bonnin, referee, Nov. 2018

PhD: Mourad Lesious, "Highlight and Execute Suspicious Paths in Android Malware", IMT Atlantique, examiner, Dec. 2018

HDR: Emmanuel Bertin, "La transformation numérique des télécoms : synthèse et perspectives", Université Paris-Sorbonne, referee, Feb. 2019

HDR: Sonia Mettali Gammar, "Approches pour le routage dans les réseaux 802.11 et les réseaux orientés contenus", referee, Dec. 2018

FOCUS Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. General Chair, Scientific Chair

S. Martini: Workshop “Formalisms at the interface with machines, languages and systems”, Bertinoro October 16-17 2018. <https://programme.hypotheses.org/autumn-workshop-formalisms-at-the-interface-with-machines-languages-and-systems>

U. Dal Lago: First Workshop on Probabilistic Interactive and Higher-Order Computation, <http://pihoc2018.cs.unibo.it/>

8.1.1.2. Member of the Organizing Committees

Steering Committee membersip:

I. Lanese: Conference on Reversible Computation (RC); Microservices, DevOps, and Service-Oriented Architecture (MiDOS) track of the Annual ACM Symposium on Applied Computing (SAC); IFIP Int. Conference on Formal Techniques for Distributed Objects, Components and Systems (FORTE)

8.1.2. Scientific Events Selection

8.1.2.1. Chair of Conference Program Committees

U. Dal Lago: 21st Int. Conference on Foundations of Software Science and Computation Structures (FoSSaCS)

8.1.2.2. Member of the Conference Program Committees

M. Bravetti: IEEE Int. Conference on Big Data (BigData 2018); 12th IEEE Int. Conference On Big Data Science and Engineering (BigDataSE 2018); 18th IEEE Int. Conference on Software Quality, Reliability, and Security (QRS 2018); 30th IFIP Int. Conference on Testing Software and Systems (ICTSS 2018); 16th Int. Conference on Software Engineering and Formal Methods (SEFM 2018); 15th Int. Conference on Applied Computing (AC 2018)

U. Dal Lago: Thirty-Third Annual ACM/IEEE Symposium on Logic in Computer Science (LICS); Third Int. Conference on Formal Structures for Computation and Deduction (FSCD); 13th Workshop on Logical and Semantic Frameworks with Applications (LSFA);

I. Lanese: 11th IEEE Int. Conference on Service-Oriented Computing and Applications (SOCA 2018); 11th Interaction and Concurrency Experience (ICE 2018); 10th Conference on Reversible Computation (RC 2018); 15th Int. Conference on Formal Aspects of Component Software (FACS 2018); Second Int. Workshop on Microservices: Agile and DevOps Experience (MADE18)

D. Sangiorgi: 27th European Symposium on Programming (ESOP); 13th int. conf. on Software Technologies (ICSOFTE'18); Symposium on Dependable Software Engineering (SETTA'18); IFIP Int. Conference on Formal Techniques for Distributed Objects, Components and Systems (FORTE); int. conf. on Logic for Programming, Artificial Intelligence and Reasoning (LPAR-22).

A. Yoshimizu: Games for Logic and Programming Languages XIII (GaLoP 2018).

8.1.3. Journal

8.1.3.1. Member of the Editorial Boards

M. Bravetti: Journal of Universal Computer Science

U. Dal Lago: Logical Methods in Computer Science; Mathematical Structures in Computer Science.

M. Gabbrielli: Int. Journal Theory and Practice of Logic Programming.

C. Laneve: Frontiers in ICT (Section Formal Methods).

I. Lanese: Editor in chief of the Open Journal of Communications and Software (Scientific Online).

D. Sangiorgi: Acta Informatica, Distributed Computing, RAIRO Theoretical Informatics and Applications.

8.1.4. Invited Talks

I. Lanese: 10th Conference on Reversible Computation (RC 2018)

D. Sangiorgi: 19th Italian Conference on Theoretical Computer Science (ICTCS'18)

Schools:

U. Dal Lago: "Lambda Calcolo e Teoria dei Tipi", Scuola AILA, Gargnano 2018

8.1.5. Leadership within the Scientific Community

U. Dal Lago has been elected member of the Scientific Council of the Italian Chapter IC-EATCS (November 2017).

S. Martini is the vice-president of EQANIE (European Quality Assurance Network for Informatics Education), since 1 January 2018.

S. Martini is a member of the Council of the Commission on History and Philosophy of Computing, an organism of the International Union for History and Philosophy of Science, 2017-2021.

S. Martini is a member of the Board of CINI (Italian National Interuniversity Consortium for Informatics), designated by the Ministry for Semplificazione e Pubblica Amministrazione, from 2015.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Mario Bravetti
 - Master: "Linguaggi, Compilatori e Modelli Computazionali", 120 hours, 1st year, University of Bologna, Italy.
- Ugo Dal Lago
 - Undergraduate: "Introduction to Programming in Python", 20 hours, 1st year, University of Bologna, Italy.
 - Undergraduate: "Optimization", 36 hours, 2nd year, University of Bologna, Italy.
 - Master: "Foundations of Logic for Computer Science", 24 Hours, 2nd year. University of Bologna, Italy.
 - Master: "Cryptography", 36 Hours, 2nd year, University of Bologna, Italy.
- Maurizio Gabbrielli
 - Undergraduate: "Programming languages", 40 hours, 2nd year, University of Bologna, Italy.
 - Master: "Artificial Intelligence", 60 hours, 2nd year, University of Bologna, Italy.
- Francesco Gavazzo
 - Undergraduate: "Programming languages", 30 hours, 2nd year, University of Bologna, Italy.
 - Undergraduate: "Basic Computer Skills". 30 hours, BSc Medical Chemistry and Pharmaceutical Technology, BSc Biology, University of Bologna.
- Ivan Lanese

Undergraduate: “Architettura degli Elaboratori”, 56 hours, 1st year, University of Bologna, Italy.

Master: “Ingegneria del Software Orientata ai Servizi”, 22 hours, 2nd year, University of Bologna, Italy.

- Cosimo Laneve
 - Undergraduate: “Programmazione”, 70 hours, 1st year, University of Bologna, Italy.
 - Master: “Analisi di Programmi”, 42 hours, 1st year, University of Bologna, Italy.
- Simone Martini
 - Undergraduate: “Programming in Python”, 72 hours, 1st year, University of Bologna, Italy.
- Davide Sangiorgi
 - Undergraduate: “Operating Systems”, 110 hours, 2nd year, University of Bologna, Italy.
 - Undergraduate: “Computer abilities for biologists”, 8 hours, 1st year, University of Bologna, Italy.
- Gianluigi Zavattaro
 - Undergraduate: “Computer Architectures”, 60 hours, 1st year, University of Bologna, Italy
 - Undergraduate: “Algoritmi e strutture dati”, 60 hours, 2nd year, University of Bologna, Italy

8.2.2. Supervision

Below are the details on the PhD students in Focus: starting date, topic or provisional title of the thesis, supervisor(s). These are all PhDs in progress.

- Raphaëlle Crubillé, October 2015, “Bisimulation Metrics and Probabilistic Lambda Calculi”, Université Denis Diderot and University of Bologna. Supervisors Thomas Ehrhard and Ugo Dal Lago.
- Adrien Durier, September 2016, "Proving behavioural properties of higher-order concurrent languages", ENS de Lyon and University of Bologna. Supervisors: Daniel Hirschhoff and Davide Sangiorgi.
- Francesco Gavazzo, October 2015, “Coinductive Techniques for Effectful Lambda Calculi”. Supervisor U. Dal Lago.
- Michael Lodi, January 2017, “Growth Mindset and Computational Thinking”. Supervisor: S. Martini.
- Tong Liu, November 2015, “Constraint based languages for Software Defined Networks”. Supervisor: Maurizio Gabbrielli.
- Stefano Pio Zingaro, November 2016, “High level languages for Internet of Things applications”. Supervisor: Maurizio Gabbrielli.
- Gabriele Vanoni, November 2018. “Optimal Reduction, Geometry of Interaction, and the Space-Time Tradeoff”. Supervisor Ugo Dal Lago.

8.2.3. Juries

Daniel Hirschhoff was reviewer (rapporteur) for the PhD thesis Guvan Cabon, in december 2018 (Univ. Rennes).

Simone Martini has been member of the PhD jury of Francesco di Giacomo, Università Ca’ Foscari Venezia (June 2018) and Tilburg University (November 2018)

8.3. Popularization

8.3.1. Education

Michael Lodi and Simone Martini have carried out extended work of scientific popularization, including the following.

- They are members of the technical committee of Olimpiadi del Problem Solving (at Italian Ministry of Education), <http://www.olimpiadiproblemsolving.com>; this involves preparation of material and supervision and jury during the finals.
- S. Martini has given various talks at institutes and workshops on the teaching methods for Computer Science, including a talk on "Abbiamo davvero bisogno del pensiero computazionale?", at the conference "I bit rotolano dovunque", Università di Roma Tor Vergata, May 2018.

8.3.2. Interventions

Daniel Hirschhoff was part of the organising committee for the "École Jeunes Chercheurs en Programmation", 25-29 June 2018, in Lyon.

8.3.3. Other duties

S. Martini has been Head of the Department of Computer Science and Engineering, University of Bologna, until May 2018.

M. Gabbrielli is Deputy Head of the Department of Computer Science and Engineering, University of Bologna, since May 2018.

G. Zavattaro is coordinator of undergraduate studies at the Department of Computer Science and Engineering, University of Bologna (Informatica per il Management).

INDES Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. General Chair, Scientific Chair

- Nataliia Bielova was the co-chair (together with Claude Castelluccia) of the Francophone workshop on Privacy Protection “l’Atelier sur la Protection de la Vie Privée” (APVP), which took place in Porquerolles (France) from 3 to 6 June 2018. <https://project.inria.fr/apvp2018/>
- Manuel Serrano was the general chair of the Programming’18 conference that took place in Nice in April 2018, <https://2018.programmingconference.org/>.
- Tamara Rezk was co-chair and co-organizer (together with Sébastien Bardin and Stéphanie Delaune) of the yearly event of the Working Group “Méthodes formelles pour la sécurité” (GT-MFS) in the context of the Pré-GDR Sécurité meeting in Paris (May 30, 2018).
- Iliaria Castellani was the co-chair (together with Mohammad Reza Mousavi) of the workshop TRENDS 2018, which took place in Beijing on September 8, in association with the CONCUR 2018 conference. <https://concurrency-theory.org/events/workshops/trends>

8.1.1.2. Member of the Organizing Committees

- Tamara Rezk was the local chair of the Programming’18 conference that took place in Nice in April 2018 <https://2018.programmingconference.org/>.

8.1.2. Scientific Events Selection

8.1.2.1. Chair of Conference Program Committees

- Nataliia Bielova was the PC co-chair (together with Claude Castelluccia) of the Francophone workshop on Privacy Protection “l’Atelier sur la Protection de la Vie Privée” (APVP), which took place in Porquerolles (France) from 3 to 6 June 2018. <https://project.inria.fr/apvp2018/>
- Manuel Serrano was the co-chair together with Suhyong Ryu from Kaist University of the WWW’18 alternate Programming Track, <https://www2018.thewebconf.org/call-for-papers/web-programming-cfp/>, which took place in April in Lyon.

8.1.2.2. Member of the Conference Program Committees

- Nataliia Bielova served in the Program Committees of IEEE SecDev’18, POST’18, ProWeb’18, eCrime’18, APVP’18. She is also a member of the Steering Committee of the PLAS workshop.
- Manuel Serrano served in the Program Committee of ProWeb’18 workshop.
- Tamara Rezk served in the Program Committees of NDSS’18, Euro S&P’18, APLAS’18, POST’18, WWW’18, PriSC’18, CSF’18, SEC@SAC’18. She is also a member of the Steering Committee of the POST conference at ETAPS.
- Iliaria Castellani served in the Program Committee of the conference FORTE’18.

8.1.2.3. Reviewer

- The team members have been reviewers for the following conferences and workshops: PoPETs’18, CONCUR’18, FORTE’18, EXPRESS/SOS’18.

8.1.3. Journal

8.1.3.1. Member of the Editorial Boards

- Iliaria Castellani is a member of the editorial board of *Technique et Science Informatiques*.

- Tamara Rezk is a member of editorial Board of Interstices and blog Binaire du Le Monde.

8.1.3.2. Reviewer - Reviewing Activities

- The team members have been reviewers for the following journals: JCS, Acta Informatica, JLAMP, TCS, JOT.

8.1.4. Invited Talks

- Nataliia Bielova was an invited speaker at the workshop "Transparence et opacité des systèmes d'information" in April <http://transparence.conf.citi-lab.fr/>. She gave a talk at the Journées Scientifiques Inria in June <https://journées-scientifiques2018.inria.fr/francais-programme/>. She gave a tutorial on Web Tracking Technologies at TheWeb'18 conference in April <https://www2018.thewebconf.org/program/tutorials-track/tutorial-203/> and gave a keynote talk at the Journée scientifique RISE/DS4H of Université Cote d'Azur in September. Nataliia was an invited speaker at Harvard University where she gave a talk on Web tracking technologies in October 2018. She also gave an invited lecture on "Online tracking and privacy protection", at Master 2 course, Carnegie Mellon University in October and an invited lecture on "Ethics and Internet Security" in Master in Digital Business course at SKEMA Business school in March.
- Manuel Serrano gave an invited talk on on Web Programming at the Programming ProWeb'18 workshop in April, <https://2018.programming-conference.org/track/proweb-2018-papers>. He gave a two hours talk on Reactive Web Programming during the Synchron'18 workshop <https://project.inria.fr/synchron2018/fr/>. He also was an invited speaker at Brown University where he gave a talk on JavaScript implementation.
- Tamara Rezk was an invited speaker at the seminar in the context of Inaugural lecture of Marieke Huisman, University of Twente, January 2018. She also gave a talk in the Dagstuhl Seminar on Secure Compilation of May 2018 and at Harvard University in October 2018.

8.1.5. Leadership within the Scientific Community

- Iaria Castellani is the chair of the IFIP TC1 WG 1.8 on Concurrency Theory since June 2014. In 2018 she has been reelected for a second term.
- Iaria Castellani is a Management Committee member of the COST Action IC1405 on Reversible Computation (November 2014-April 2019).

8.1.6. Research Administration

- Nataliia Bielova is a member of "Comité du Suivi Doctoral (CSD)" (Supervision of PhD students) of the Inria Sophia Antipolis Méditerranée research center. She was a member of the Inria "Master Transverse" evaluation committee.
- Manuel Serrano was the "Délégué scientifique" (head of research) of the Inria Sophia Antipolis Méditerranée research center until end of August. He was member of the Inria Evaluation Committee until that time.
- Tamara Rezk is a member of "Commission de Développement Technologique (CDT)" of the Inria Sophia Antipolis Méditerranée research center.
- Iaria Castellani is a member of Inria's "Comité Parité et Égalité des Chances". In the Centre of Inria Sophia Antipolis, she is a member of the "Comité d'Animation et Médiation Scientifique" and of the Scientific Committee of the Morgenstern Colloquium. She is also a member of the Réseau Parité of Université Côte d'Azur, and of the Scientific Committee of the Forum Numerica Seminar of Academy 1 of Université Côte d'Azur.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master : Nataliia Bielova, Security of Web Applications, 18ETD, niveau M2, University of Pierre et Marie Curie, France

Master : Nataliia Bielova, Foundations of Privacy, 1.5ETD, niveau M2, Carnegie Mellon University, USA

Master: Nataliia Bielova, Ethics and Internet Security, 1.5ETD, M2, SKEMA Business school, France.

Master : Tamara Rezk, Security of Web Applications, 28ETD, niveau M2, University of Nice Sophia Antipolis, France

Master : Tamara Rezk, Preuves en Cryptographie, 28ETD, niveau M2, University of Nice Sophia Antipolis, France

Master : Tamara Rezk, Security of Web Applications, 36ETD, niveau M2, University of Pierre et Marie Curie, France

Doctorat : Nataliia Bielova, Apprentissage et fouille de données sur les Réseaux, 2.25ETD, École de Recherche ResCom, France

Doctorat : Nataliia Bielova, Ecole de Cybersécurité, 3ETD, UCA, France

Doctorat : Nataliia Bielova, Web Privacy, 30ETD, University of Trento, Italy

E-learning

MOOC: Nataliia Bielova, “Protection de la vie privée dans le monde numérique”, 1 Module, 8 sequences, FUN-MOOC, Inria, grande public, formation continue, 8900 inscrit au 18 Decembre 2018.

8.2.2. Supervision

HdR : Tamara Rezk, *Secure Programming* [11], Université Côte d’Azur, 03/04/2018

PhD : Dolière Francis Somé, *Web Applications Security and Privacy* [12], Université Cote d’Azur, 29/10/2018, Nataliia Bielova and Tamara Rezk

PhD: Colin Vidal, *Programmation Web réactive* [13], University of Nice, 1/07/2015-1/09/2018, Manuel Serrano and Gérard Berry.

PhD in progress : Imane Fouad, Web tracking detection and measurement, 1/01/2018, Nataliia Bielova and Arnaud Legout

PhD in progress : Jayanth Krishnamurthy, Privacy policy enforcement in IoT applications, 12/09/2018, Nataliia Bielova and Manuel Serrano

PhD in progress : Héloïse Maurel, Secure compilation of IoT applications, 1/10/2018, Tamara Rezk

PhD in progress : Mohamad Ellaz, Encodings of ElGammal, 1/12/2017, Benjamin Gregoire and Tamara Rezk

PhD in progress : Lesly-Ann Daniel, Security analysis of binary code, 1/10/2018, Sébastien Bardin and Tamara Rezk

Postdoc: Yoonseok Ko, Subsets of secure JavaScript, 1/10/2018-, Tamara Rezk

Postdoc: Minh Ngo, TSNI enforcement mechanisms, 1/01/2018-31/12/2018, Tamara Rezk

Postdoc: Francis Somé, IoT secure broadcasting, 1/11/2018-, Tamara Rezk

8.2.3. Juries

- Nataliia Bielova was a member of the PhD jury of Oleksii Starov, Stony Brook University.
- Nataliia Bielova was a member of the PhD jury of Daniel Schoepe, Chalmers University of Technology.
- Manuel Serrano was a member of the PhD jury of Remy El-Sibaie, Paris-Sorbonne University.
- Manuel Serrano was a member of the PhD jury of Pierre Talbot Ircam, Paris-Sorbonne University.

- Tamara Rezk was "rapporteur" for the PhD thesis of Nadim Kobeissi, ENS
- Tamara Rezk was "rapporteur" for the PhD thesis of Gurvan Cabon, Université de Rennes
- Tamara Rezk was a member of the Licenciante jury of Iulia Bastys, Chalmers University of Technology
- Tamara Rezk was a member of the jury "soutenance stage" of the CASPAR master of University of Nice Sophia Antipolis
- Tamara Rezk was a member of the jury for the ACM Student Research Competition of April 2018

8.3. Popularization

8.3.1. Internal or external Inria responsibilities

Tamara Rezk is member of the editorial board of Interstices and Blog Binaire Le Monde

8.3.2. Articles and contents

Tamara Rezk published the article "Est-ce que mon programme est bien protégé ?" in blog binaire Le Monde in February 2018. The article with some minor modifications was retaken by Interstices and published in December 2018. <http://binaire.blog.lemonde.fr/2018/02/09/est-ce-que-mon-programme-est-bien-protége-contre-les-cyberattaques/>.

Nataliia Bielova was interviewed by Sophie Casals, "Comment mieux protéger sa vie privée en naviguant sur internet? Les conseils d'une spécialiste" in Nice Matin, June 2018. <https://www.nicematin.com/faits-de-societe/comment-mieux-protéger-sa-vie-privée-en-naviguant-sur-internet-les-conseils-dune-specialiste-239166>

8.3.3. Education

8.3.3.1. Skini and the Fabrique à Musique

Skini is currently used with a class of secondary school in order to create a musical show in collaboration with the Conservatory of Nice and the CIRM (National Center for Music Creation). A group of 25 children, 12 year old, are creating together a story, and use the distributed sequencer of Skini to design basic musical patterns using tablets. The next step is to organize with them the orchestration of the piece which is coded in HipHop. The activation of the piece will be done in real time by the children using the tablet and the Skini platform. This project is funded by SACEM (Société des auteurs, compositeurs et éditeurs de musique). The project will end in May 2019 with a public concert in the Conservatory of Nice.

8.3.3.2. MOOC Protection de la vie privée dans le monde numérique

Nataliia Bielova has participated to the MOOC "Protection de la vie privée dans le monde numérique" (Session 2) that was shooted in July 2018 under the guidance of Inria Learning Lab and was open to general public between 5 November 2018 and 7 January 2019, <https://www.fun-mooc.fr/courses/course-v1:inria+41015+session02/about>.

8.3.4. Interventions

- Nataliia Bielova held a stand at Portes ouvertes (Fête de la science) of Inria Sophia Antipolis explaining how to protect privacy on the Web, October 2018.
- Ilaria Castellani and Héloïse Maurel held the stand "Science au féminin" together with Carine Antico from CNRS at the Fête de la Science in Antibes Juan-les-Pins, October 2018.

8.3.5. Internal action

- Nataliia Bielova gave a talk at the PhD seminar special edition on "Tracking technologies and protection of your privacy on the Web", March 2018.
- Nataliia Bielova gave a talk at the Data Science meetup Nice on "How companies track you as you browse the web and how to protect yourself?", <https://www.meetup.com/Data-Science-Meetup-Nice-Sophia-Antipolis/events/255546602/>, October 2018.

PHOENIX-POST Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. Member of the Organizing Committees

Hélène Sauzéon participated in organizing the residence seminar “Human and technology”, framed by the Institute of advanced studies of the Bordeaux University, held on Jun 5-6, 2018, at Cadillac, France.

Hélène Sauzéon organized the scientific workshop “Innovation technologique et maladies neurodégénératives” of the Excellence center BIND, on Nov 23, 2018.

8.1.2. Scientific Events Selection

8.1.2.1. Reviewer

Hélène Sauzéon and Stéphanie Giraud performed reviews for the ACM-CHI conference.

8.1.3. Journal

8.1.3.1. Reviewer - Reviewing Activities

Hélène Sauzéon performed reviews for the following journals: Psychonomic Bulletin and Review; Gerontology; PlosOne, Memory and Cognition, Aging, Neuropsychology and Cognition, International Journal of Environmental Research and Public Health.

8.1.4. Scientific Expertise

Hélène Sauzéon is a member for the evaluation committee CES 19 (TECSAN) - ANR, since 2017.

8.1.5. Research Administration

Hélène Sauzéon held the following responsibilities:

- Vice-Director of the Lab “Activité, handicap, cognition et système nerveux” (EA 4136), leader of the axis “Handicap cognitif”, since 2015.
- Member of the “Young researchers” committee within Inria Bordeaux, since 2015.
- Member of the Committee launching a new institute of advanced studies at the University of Bordeaux since 2016. In this context she participated at the design of this institute, leveraging her expertise in cognitive sciences and interdisciplinary research at Inria Bordeaux. Indeed, the aim of the institute is fostering interdisciplinary research, innovation, and creativity, by providing adequate financial support, educative and participative resources to researchers on the Bordeaux campus.
- Member of the International Relations Committee — IFR Handicap-INSERM, since 2017.
- Leader of the Innovations and Transfer committee of the excellence center BIND in Bordeaux, since 2018.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Master (M2) : Charles Consel, “Advanced topics — Technology surveys”, 17h, Bordeaux INP, France
- Licence: H  l  ne Sauz  on, “Psychologie Cognitive G  n  rale”, 30h, University of Bordeaux, France.
- Master: H  l  ne Sauz  on, “Sciences cognitives du langage”, 30h, University of Bordeaux, France.
- Master: H  l  ne Sauz  on, “Neuropsychologie cognitive (Vieillessement normal et pathologique)”, 30h, University of Bordeaux, France.
- Master: H  l  ne Sauz  on, “Technologies du Handicap cognitif”, 30h, University of Bordeaux, France.
- Master: H  l  ne Sauz  on, “Facteurs Humains et IHM”, 9h, University of Bordeaux, France.
- Licence (L3) : Eug  ne Volansch, “Introduction to imperative programming”, 24h, Bordeaux INP, France
- Licence (L3) : Eug  ne Volansch, “Object-oriented programming”, 24h, IUT Informatique, Bordeaux, France
- Licence (L2) : Bernard Serpette, “Functional Programming”, 35h, Universit   de Bordeaux, France.
- Licence (L2): C  cile Mazon, “Fonctions ex  cutives”, 22h, MIASHS, Universit   de Bordeaux, France
- Licence (L2) : C  cile Mazon, “Introduction    la psychologie cognitive”, 22h, MIASHS, Universit   de Bordeaux, France
- Licence (L2): C  cile Mazon, “Applications d’assistance sur tablettes”, 7h, MIASHS, Universit   de Bordeaux, France
- Master : C  cile Mazon, “Pr  paration et   valuation en inspection ergonomique des interfaces”, 7h, Universit   de Bordeaux, France

8.2.2. Supervision

- PhD: Audrey Landuran, “Design, adaptation and validation of digital tools for people with intellectual disabilities”, defended on Nov 26, 2018, directed by Bernard N’Kaoua.
- PhD: A. Delmas, “Conception et validation d’un serious game pour l’  ducation th  rapeutique d’enfants asthmatiques”, defended on Sept 12, 2018, co-directed by H  l  ne Sauz  on and Pierre-Yves Oudeyer.
- PhD in progress : C  cile Mazon, “Personalization and evaluation of a digital assistant for school inclusion of college students with autism and/or intellectual disability”, University of Bordeaux, started in September 2016, co-directed by H  l  ne Sauz  on and Charles Consel.
- PhD in progress: P.A. Cinquin, “Conception et validation d’un lecteur accessible aux personnes avec troubles cognitifs pour un syst  me d’enseignement num  rique”, started in 2016, co-directed by H  l  ne Sauz  on and Pascal Guitton.
- PhD in progress: A. Zamudio Rodriguez, ”Suivi longitudinal de l’impact    12 et 24 mois de la solution DomAssist aupr  s de personnes   g  es pr  -fragiles et fragiles”, started in Octobre 2017, co-directed by H  l  ne Sauz  on and K. P  r  s.
- PhD in progress: Rafik Belloum, “A methodology for developing assistive services”, started in 2016, directed by Charles Consel.

8.2.3. Juries

H  l  ne Sauz  on participated in the following juries:

- President of the PhD thesis jury for S. T. Popescu (PhD in Cognitive Sciences, supervised by M. Wexler and J. Sackure), 2018, École des Hautes Études en Sciences Sociales, Paris.
- President of the PhD thesis jury for I. Chraïbi Kaadoud (PhD in Computer Science, supervised by F. Alexandre and J.N. Rougier), 2018, Université de Bordeaux.
- Reviewer in the PhD thesis jury for L. Quillion-Dupré (PhD in Cognitive Sciences, Psychology and Neurocognition, supervised by V. Rialle and E. Monfort), 2018, Université de Grenoble.
- Examiner in the PhD jury for B. Clement (PhD in Computer Science, supervised by P.Y. Oudeyer and M. Lopez), 2018, Université de Bordeaux.

8.3. Popularization

8.3.1. Articles and contents

- Mazon, C., Fage, C. et Sauzéon, H. (2017). “Impacts des technologies numériques pour favoriser l’inclusion scolaire d’élèves avec Trouble du Spectre Autistique”. In *Les Cahiers de l’Actif* (a journal for professionals working in caregiving and assistance).

8.3.2. Interventions

- Bernard Serpette, Mar 12, 2018: participating to the Week of math at the primary school St-Genes in Bordeaux: initiating 1st and 2nd grade pupils to computational thinking via problem-solving games
- Cécile Mazon, Sept 27, 2018: participating to the Open days at Inria Bordeaux: presenting to the general public the scientific projects about technology assistance for young persons with ASD.
- Cécile Mazon, Jan 18-19, 2018: Poster for the symposium UB-CNRS - “Sensibilisation et regards croisés autour du handicap”, Pôle juridique, Université de Bordeaux, France
- Cécile Mazon, Jan 15-19, 2018: managing the internship of a high-school pupil (Roxane Allouche) at Inria Bordeaux

RMOD Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- Marcus Denker and Stéphane Ducasse are in the board of ESUG and organized ESUG 2018, the yearly Smalltalk conference that brings together research and industry (<http://www.esug.org/>).

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

Anne Etien has been PC chair of IWST since 2015.

10.1.2.2. Reviewer

Nicolas Anquetil: SCAM'18, the 18th IEEE International Working Conference on Source Code Analysis and Manipulation.

10.1.3. Journal

10.1.3.1. Reviewer - Reviewing Activities

Nicolas Anquetil reviewed articles for the following international journals:

- IEEE Transactions on Software Engineering;
- Information and Software Technology;
- Journal of Systems and Software.

10.1.4. Scientific Expertise

- Anne Etien: expert for the French government on Research tax credit.
- Marcus Denker: reviewer for EUREKA.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master : Christophe Demarey, Intégration continue, 16 EdTD, M2, Université de Lille, France

Licence: Anne Etien, Bases de données, 30h, L3, Polytech-Lille, France

Licence: Anne Etien, Programmation par objet, 40h, L3, Polytech-Lille, France

Master: Anne Etien, Metamodelisation for Reverse Engineering, 5h, M2, Université de Montpellier, France

Master: Anne Etien, Metamodelisation for Reverse Engineering, 12h, M2, Université Paris 1, France

Master: Anne Etien, Metamodelisation for Reverse Engineering, 5h, M2, Tunis, Tunisie

Master: Anne Etien, Test et Maintenance, 10h, M2, Polytech-Lille, France

Master: Anne Etien, Test et Maintenance, 14h, M2, Polytech-Lille, France

Master: Anne Etien, Système d'information objet, 10h, M1, Polytech Lille, France

Master: Anne Etien, Bases de données Avancées, 20h, M1, Polytech-Lille, France

Master: Anne Etien, Qualité logicielle, 8h, M2, Université Lille 1, France

Licence : Vincent Aranega, Initiation à l'informatique, 51 EdTD, L1, Université de Lille, France
 Licence : Vincent Aranega, Architecture des ordinateurs, 42 EdTD, L2, Université de Lille, France
 Licence : Vincent Aranega, Génie Logiciel, 42 EdTD, M1, Université de Lille, France
 License : Damien Pollet, OpenDevs, 35h, L3, Université de Lille, France
 License : Damien Pollet, Programmation objet en Java, 155h, L3, IMT Lille-Douai, France
 License : Damien Pollet, Systèmes numériques, 14h, L3, IMT Lille-Douai, France
 Master : Damien Pollet, Technologies des systèmes d'informations, 21h, M1, IMT Lille-Douai, France
 Master : Damien Pollet, Ingénierie du logiciel, 7h, M2, IMT Lille-Douai, France
 Master : Damien Pollet, Algorithmes pour les réseaux, 27h, M2, IMT Lille-Douai, France
 Master: Meta modeling, Ecole des Mines de Douai, 22 EdTD, M1, Nov 2018, Douai, France
 Master: Advanced Design, ENIS M1, Dec 2017/2018, Tunis, 22 EdTD, Tunisia
 License: Object-oriented programming, Prague L3, Dec 2017/2018, 16 EdTD, Prague, Tcheque Republic
 Master: Meta modeling, Pantheon Sorbonne, 27 EdTD, M2, Dec 2018, Paris, France
 Master: Meta programming, Université de Bretagne Occidentale, 9 EdTD, brest, France.
 Licence : Thomas Dupriez, Mathématiques Discrètes, 39 heures en équivalent TD, L2, Université Lille, France
 Master : Marcus Denker, 2 hours (spring and fall each), Advanced Reflection. MetaLinks, VUB Brussels, Belgium.
 License: open-dev L3 option 17 hours Lille, France
 License: Introduction à la Programmation L3 option 31.5 hours Paul Sabatier Toulouse, France

E-learning

Pharo Mooc, 7 weeks, Licences and Master students
 Pedagogical resources: Books, Learning Object-Oriented Programming, Design and TDD with Pharo, A simple reflective object kernel.

10.2.2. Supervision

PhD: Brice Govin, *Support to Implement a Rejuvenated Software Architecture in Legacy Software* CIFRE Thales, 26 June 2018, Anne Etien, Nicolas Anquetil. [1]
 PhD: Pablo Tesone, *Hot Software Update In Robotics Applications*, IMT Lille-Douai, 16 December, Luc Fabresse, Stéphane Ducasse
 PhD in progress: Jason Lecerf, *Reuse of Code Artifacts for Embedded Systems Through Refactoring*, started Oct 2016, CEA Thierry Goubier, Stéphane Ducasse
 PhD in progress: Julien Delplanque, *Software Engineering Techniques Applied to Databases*, started Oct 2017, Anne Etien, Nicolas Anquetil
 PhD in progress: Lionel Akue, *Fortran Analysis*, started Oct 2018, Anne Etien, Nicolas Anquetil
 PhD in progress: Thomas Dupriez, *New Generation Debugger and Application Monitoring*, started Oct 2018, Stéphane Ducasse, Guillermo Polito
 PhD in progress: Houekpetodji Mahugnon Honore, *Multi-Facet Actionable for Information System Rejuvenation*, SPI Lille, France, Stéphane Ducasse, Nicolas Anquetil, Nicolas Dias, Jerome Sudich
 PhD in progress: Carolina Hernandez, *Tools for MicroKernels* Guillermo Polito and Luc Fabresse

10.3. Popularization

10.3.1. Articles and contents

- Stéphane Ducasse and Guillermo Polito. Stéphane Ducasse (Ed.). *Physche: A Little Scheme in Pharo*, p. 50, Square Bracket Associates, 2018. [20]
- Stéphane Ducasse. Stéphane Ducasse (Ed.). *A Simple Reflective Object Kernel*, p. 40, Square Bracket Associates, 2018. [19]

10.3.2. Education

- A MOOC for Pharo is online (Stéphane Ducasse).
<http://mooc.pharo.org>

10.3.3. Interventions

- Multiple public Pharo Sprints in Lille.
<https://association.pharo.org/events>
- IoT Hackathon. One Day Event in Cologne, Germany. Using PharoIoT
<http://zweidenker.de/de/iot-hackathon-2018>
Video: <https://www.youtube.com/watch?v=dII9FAatKyw>
- RMOD co-organized and participated at ESUG 2018.
<http://www.esug.org/wiki/pier/Conferences/2018>
 - Presentation about PharoIoT.
<https://www.slideshare.net/MarcusDenker/pharo-iot>

STACK Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- A. Lebre has co-organized the 1st edition of the SILECS (Grid'5000/FIT) School, Nice, April 2018 (50 persons).

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- H. Coullon was the chair of the IEEE Big Data Congress 2018 "Quality of Big Data Services" track.
- S. Ibrahim was the program chair of the IEEE Big Data Congress 2018.
- S. Ibrahim was the program co-chair of the International workshop on the Convergence of Extreme Scale Computing and Big Data Analysis (CEBDA 2018), co-located with IPDPS'18, Vancouver, Canada, May 2018.
- S. Ibrahim was the track co-chair for the "Big data management and scalable storage technologies track" of the 6th International Conference on Emerging Internet, Data and Web Technologies (EIDWT 2018).
- A. Lebre was the chair of the System Software track at SBAC-PAD'18.

10.1.2.2. Member of the Conference Program Committees

- H. Coullon was a member of the program committees of CloudCom'18, ICCS'18, ScalCom'18, CIoT'18.
- S. Ibrahim was a member of the program committees of SC'18, CCGrid'18, ICA3PP'18, IPCCC'18, SCA'18, CloudCom'18, Trust-Com'18, Innovate-Data'18, PDSW-DISCS@SC'18, WAC-18@HPDC'18, HPBDC@IPDPS'18.
- A. Lebre was a member of the program committees of IC2E'18, CCGRID'18, ICFEC'18, CloudCom'18, and the Vancouver OpenStack summit.
- T. Ledoux was a member of the program committees of the conference Compas'18 and Cross-Cloud'18@EuroSys, Greens'18@ICSE workshops.
- M. Südholt was a member of the program committees of CloudCom'18, ProWeb'18, ICICS'18, SBAC-PAD'18, and COP'18.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- A. Lebre is an Associate Editor of the IEEE Transactions on BigData
- S. Ibrahim is a Guest Editor of Springer FGCS Journal – Special Issue on the Convergence of Extreme Scale Computing and Big Data Analysis.
- M. Südholt is an Associate Editor of the journal Programming (Springer).

10.1.3.2. Reviewer - Reviewing Activities

- H. Coullon has been a reviewer for the Future Generation Computer Systems journal
- H. Coullon has been a reviewer for the following conferences: IPDPS'18, CCGrid'18.
- A. Lebre has been a reviewer for the Future Generation Computer Systems journal.

- T. Ledoux has been a reviewer for the following journals: Journal of Systems Architecture - Elsevier; Future Generation Computer Systems.
- S. Ibrahim has been a reviewer for the following journals: Journal of Parallel and Distributed Computing, Future Generation Computer Systems, IEEE Internet of Things, Computer Networks, and Big Data Research.
- J.-M. Menaud has been a reviewer for IEEE Transactions on Parallel and Distributed Systems

10.1.4. Invited Talks

- H. Coullon has been invited to present a talk at the Northern Arizona University, USA, September 2018: “Performance, Software engineering and verification: a winning combination for HPC and Utility computing?”.
- H. Coullon has been invited to present a talk at Irisa 68NQRT seminar, Rennes, France: “Toward efficient and safe deployment and reconfiguration of distributed software”.
- H. Coullon has been invited to present a talk at the Languages, Compilation, and Semantics LIP Seminar in Lyon, France: “Toward efficient and safe deployment and reconfiguration of distributed software”.
- R.A. Cherrueau has been invited to present a talk at the “Opérations France Grille” workshop on “Edge Computing Infrastructure with OpenStack”
- M. Südholt has been invited to present a talk at the French Institute of Bioinformatics (IFB) on “Compositional security and privacy for biomedical analyses using shared genetic data.”
- M. Südholt has been invited to present a talk at the IMT Cybersecurity day on “Privacy and sharing of genomic data.”
- J.-M. Menaud has been invited to present a talk at the IMT Energy and IoT day on “Energy Management on Cloud/Edge Computing”

10.1.5. Scientific Expertise

- A. Lebre has been the chair of the OpenStack “Fog/Edge/Massively Distributed Clouds” Special Interest Group until May 2018 (further information at: https://wiki.openstack.org/wiki/Massively_Distributed_Clouds).
- A. Lebre is a member of the scientific committee of the Inria - Nokia/Bell Labs.

10.1.6. Research Administration

- S. Ibrahim is the co-coordinator of the international Master’s program in Cloud Computing and Services at University of Rennes 1.
- S. Ibrahim was a member of Grid’5000 Sites Committee – Responsible for the Rennes site till April 2018.
- A. Lebre is a member of the executive committee of the GDR CNRS RSD “Réseau et Système distribué” and Co-leader of the transversal action Virtualization and Clouds of this GDR since 2015.
- A. Lebre is a member of the executive and architect committees of the Grid’5000 GIS (Groupement d’intérêt scientifique).
- A. Lebre is a member of the executive committee of the <I/O> Lab, a joint lab between Inria and Orange Labs.
- T. Ledoux is the head of the apprenticeship program in Software Engineering FIL (<http://www.imt-atlantique.fr/formation/ingenieur-par-apprentissage/ingenieurs-specialite-ingenierie-logicielle>). This 3-year program leads to the award of a Master degree in Software Engineering from the IMT Atlantique.
- J.-M. Menaud is the organizer of "Pôle Science du Logiciel et des Systèmes Distribués" in Laboratoire des Sciences du Numérique à Nantes (LS2N) since June 2015.

- J. Noyé is deputy head of the Automation, Production and Computer Sciences department of IMT Atlantique.

10.2. Teaching - Supervision - Juries

10.2.1. Supervision

- HdR : Thomas Ledoux, “Reconfiguration dynamique d’architectures logicielles : des métaclasse aux « nuages verts », Université de Nantes, defended on July 2018, the 17th.
- PhD: Bastien Confais, co-director: A. Lebre, director: B. Parrein (RIO, LS2N Nantes), “Conception d’un système de partage de données adapté à un environnement de Fog Computing ”, defended on July 2018, the 10th.
- PhD: Mohamed Abderrahim (Orange CIFRE), director: A. Lebre, “Conception d’un système de supervision programmable et reconfigurable pour une infrastructure informatique et réseau répartie”, defended on Dec 2018, the 19th.
- PhD: Mohammad Mahdi Bazm: codirectors: Mario Südholt, J-M. Menaud.
- PhD: Maxime Belair, director: J-M. Menaud.
- PhD: Emile Cadorel, director: advisor: H. Coullon, director: J-M. Menaud.
- PhD: Fatima-zahra Boujdad, director: Mario Südholt.
- PhD: Maverick Chardet, advisor: H. Coullon, director: A. Lebre.
- PhD: David Espinel (Orange CIFRE), director: A. Lebre.
- PhD: Yewan Wang, director: J-M. Menaud.
- PhD: Thuy-Linh NGuyen, director: A. Lebre
- PhD: Dimitri Saingre, advisor: T. Ledoux, director: J-M. Menaud.
- PhD: Jad Darrous, advisor: S. Ibrahim, director: C. Perez (Avalon)
- Postdoc: Thomas Lambert, advisor: S. Ibrahim.
- Postdoc: Jonathan Pastor, advisor: J-M. Menaud.
- Postdoc: Alexandre Van Kempen, advisor: A. Lebre.

10.2.2. Juries

- H. Coullon was a reviewer of the PhD of Stéphanie Challita, “Inferring Models from Cloud APIs and Reasoning over Them: A Tooled and Formal Approach”, University of Lille, Inria Lille-Nord Europe, France, Dec. 21 2018.
- H. Coullon was a reviewer of the PhD of Gustavo Sousa, “A Software Product Lines-Based Approach for the Setup and Adaptation of Multi-Cloud Environments”, University of Lille, France, June 5 2018.
- J.-M. Menaud was a member of the PhD committee of David Guyon (Dec. 7, 2018) "Supporting Energy-awareness for Cloud Users", UBL, Dec 2018.
- S. Ibrahim was reviewer of the PhD of Paul Hermann Lensing, “Direct Lookup and Hash-Based Metadata Placement - Impact on Architecture, Performance and Scalability of Local and Distributed File Systems”, Universitat Politecnica de Catalunya Barcelona, Spain, Oct. 10 2018.
- A. Lebre was a member of the PhD Committee of Xia Yé, “Combining Heuristics for Optimizing and Scaling the Placement of IoT Applications in the Fog”, University of Grenoble, Dec 2018.
- T. Ledoux was reviewer of the PhD of Yahya Al-Dhuraibi, "Flexible Framework for Elasticity in Cloud Computing", Univ. Lille, December 2018

10.3. Popularization

- J.-M. Menaud, Online publication <http://www.lemondeinformatique.fr>: *L’IMT Atlantique veut réduire le coût des calculs lourds.*
- J.-M. Menaud, Online publication <http://www.mtom-mag.com>: *Le projet HYDDA, développer une plateforme innovante, associant Cloud et HPC.*
- J.-M. Menaud, Online publication <http://www.agence-api.fr>: *L’Institut Mines-Telecom Atlantique monte une plateforme cloud et HPC.*

AGORA Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- Khaled Boussetta was co-track chair of Wireless Models and Simulations in the 10th IFIP Wireless Days 2018, April, 2018, Dubai, UAE.

10.1.1.2. Member of the Organizing Committees

- Khaled Boussetta was on the Organizing Committee of 2018 IEEE SOCA/SC2/IOV, 19-22 November, 2018, Paris.

10.1.1.3. Member of the Conference Program Committees

- Walid Bechkit was in the TPC of the following conference: IEEE ICC.
- Khaled Boussetta was in the TPC of the following conferences: IEEE CCNC, IEEE GlobeCom, IEEE ICC, Med-Hoc-Net, Wireless Days.
- Oana Iova was in the TPC of the following conferences: IEEE Globecom, ACM AINTEC, AdHoc-Now, EWSN 2018 (track Poster and Demos).
- Razvan Stanica was in the TPC of the following conferences: IEEE ICC, IEEE CCNC, ICIN.
- Fabrice Valois was in the TPC of the following conferences: IEEE ICC, ICT, IEEE Globecom, IEEE VTC Spring, WiSARN.

10.1.1.4. Reviewer

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

10.1.2. Journal

10.1.2.1. Reviewer - Reviewing Activities

- Oana Iova was a reviewer for the following journals: ACM TOSN, Elsevier Ad Hoc Networks, Elsevier Computer Networks, IEEE Transactions on Communications, IEEE Access, Springer Wireless Networks.
- Razvan Stanica was a reviewer for the following journals: IEEE Transactions on Mobile Computing, IEEE Transactions on Intelligent Transportation Systems, IEEE Communications Letters, Pervasive and Mobile Computing, IEEE Access, EURASIP Journal on Wireless Communications and Networking, IET Intelligent Transport Systems.

10.1.3. Invited Talks

- Walid Bechkit was invited speaker at the 1st Winter School on Information Theory and Signal Processing for Internet of Things, Villeurbanne, France.
- Walid Bechkit was invited speaker at the CESER (conseil économique, social et environnemental régional).
- Oana Iova was invited panelist at: 1st Winter School on Information Theory and Signal Processing for Internet of Things, Villeurbanne, France.
- Hervé Rivano was invited speaker at *La Nuit des idées*, Maison de France, Sfax, Tunisia.
- Hervé Rivano was invited speaker at La Myne, Lyon, France.

- Hervé Rivano was invited speaker Conseil de Développement de la Métropole/Amis de l'Université, Lyon, France.
- Hervé Rivano was invited speaker IMERIR, Perpignan, France.
- Hervé Rivano was invited speaker Salon Internet des Objets (SidO), Lyon, France.
- Hervé Rivano was invited speaker réseau ARAMIS, Lyon, France.
- Hervé Rivano was invited speaker at CIVIC Conference, University Constantine III, Algeria.
- Hervé Rivano was invited speaker at TokyoTech, Japan.
- Hervé Rivano was panel organizer on Smart Cities, POP Science Forum, Lyon, France.

10.1.4. Leadership within the Scientific Community

- Walid Bechkit was co-representative of the Labex IMU at the Smart City Expo World Congress (Barcelona).
- Walid Bechkit is a nominated member in the scientific committee of the Fédération d'Informatique de Lyon (FR 2000 CNRS).
- 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.
- Hervé Rivano is member of the steering committee of Ecole Urbaine de Lyon, in charge of Smart and Learning Cities.
- 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).

10.1.5. Scientific Expertise

- Khaled Boussetta was reviewer for ANR generic call for projects 2018.
- Hervé Rivano is member of the Metropole de Lyon [R] Challenge, board of scientific experts.
- Hervé Rivano is member of the Scientific Committee of the Digital League Regional Cluster.
- 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 a Full Professor in Computer Science at Université d'Auvergne.

10.1.6. 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 president of 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.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence : Walid Bechkit, IP Networks, 30h, L3, Telecom. Dpt. INSA Lyon.

Licence : Oana Iova, IP Networks, 30h, L3, Telecom. Dpt. INSA Lyon.

Licence : Oana Iova, Medium Access Control, 8h, L3, Telecom. Dpt. INSA Lyon.

Licence : Oana Iova, Network and System Programming, 82h, L3, Telecom. Dpt. INSA Lyon.

Licence : Hervé Rivano, Networking Fundamentals, 2h, L3, Telecom. Dpt. INSA Lyon.

Licence : Hervé Rivano, Algorithms and programming, 165h, L1 - L2, INSA Lyon.

Licence : Hervé Rivano, Sensors data engineering project, 34h, L2, INSA Lyon.

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

Licence : Fabrice Valois, IP Networks, 42h, L3, Telecom. Dpt. INSA Lyon.

Master : Walid Bechkit, Introduction to wireless sensor networks, 50h, L2, INSA Lyon.

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

Master : Walid Bechkit, Cryptography and communication security, 30h, M1, Telecom. Dpt., INSA Lyon.

Master : Walid Bechkit, Wireless networks: architecture and security, 30h, M2, INSA Lyon.

Master : Master : Walid Bechkit, Network Acces Control, 6h, M2, Telecom. Dpt. INSA Lyon.

Master : Oana Iova, Network Routing Protocols, 40h, M1, Telecom. Dpt. INSA Lyon.

Master : Oana Iova, Long Range Networks, 10h , M2, Telecom. Dpt. INSA Lyon

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, 16h, M1, Telecom. Dpt. INSA Lyon.

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.

Walid Bechkit is an elected member of the Telecommunication department council at INSA Lyon.

Walid Bechkit is the head of the networking teaching team in the Telecommunications department at INSA Lyon, coordinating all the courses in the networking domain.

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.

Herve´ Rivano is referent DSI in the FIMI Dpt., INSA Lyon.

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.

10.2.2. Supervision

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: Mohamed Anis Fekih, Urban pollution using wireless sensor networks, since 11/2018. Advisors: Walid Bechkit, Hervé Rivano.

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.

PhD in progress: Romain Pujol, Data collection in dynamic wireless networks, since 11/2018. Advisors: Razvan Stanica, Fabrice Valois.

PhD in progress: Solohaja Rabenjamnia, Data analysis of cellular traffic, since 11/2018. Advisors: Hervé Rivano, Razvan Stanica.

10.2.3. Juries

- Hervé Rivano was a reviewer in the following PhD defense committee:
 - V. Quintana Rodriguez, Nouvelle commande réseau IP : Performance des fonctions virtualisées pour une infrastructure programmable, LIP6, Université Pierre et Marie Curie, Paris VI
 - Y. Couble, Optimisation de la gestion des ressources de la voie retour, IRIT, Université de Toulouse
 - L. Molina, Metrics and non-intrusive techniques to characterize Wi-Fi networks, IRISA, Université de Bretagne-Pays de la Loire
 - H. Tall, Load balancing in multichannel data collection wireless sensor networks, LIMOS, Université de Clermont Auvergne
 - H. Pimenta Moraes Junior, A contribution to data sharing in vehicular networks, Heudiasyc, Université Technologique de Compiègne
- Hervé Rivano was a reviewer in the following HDR defense committee:
 - F. Giroire, Nouvelle commande réseau IP : Performance des fonctions virtualisées pour une infrastructure programmable, I3S, Université de Nice Sophia Antipolis
- Fabrice Valois was a reviewer in the following PhD defense committee:
 - E. Morin, Intéropabilité de protocoles de communication adaptatifs basse consommation pour des réseaux de capteurs, LIG, Université Grenoble Alpes
- Fabrice Valois was a member in the following PhD defense committee:
 - D. Alshamaa, Indoor localization of sensors: application to dependent elderly people, UTT
 - H. Chelle, Contrôle de charge des réseaux IoT : D'une étude théorique à une implantation réelle, IRIT, ENSHEEIT
- Fabrice Valois was a reviewer in the following HDR defense committee:
 - P. Berthou, Vers la dématérialisation des Réseaux Hybrides satellites et terrestre, LAAS, Université Paul Sabatier
- Fabrice Valois was a member in the following HDR defense committee:
 - T. Begin, Contributions to the Performance Modeling of Computer Networks, LIP, Université de Lyon 1
 - K. Boussetta, Dimensionnement, adaptation et placement de fonctionnalités réseaux pour des applications sensibles aux délais, L2TI, Université Paris XIII

COATI Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- David Coudert :
 RESCOM'18 : school of the *pôle ResCom of GDR ASR of CNRS* on “Apprentissage et fouille de données dans les réseaux”, Porquerolles, France, June 18-22, 2018. This edition was organized in collaboration with GDR MADICS.
- Frédéric Havet :
 School on Graph Theory (SGT 2018), Séve, France, June 11-15 2018.
 Journées Combinatoire et Algorithmes du Littoral Méditerranéen (JCALM).
- Nicolas Nisse
 GRASTA'18 : 9th workshop on GRaph Searching, Theory & Applications, Berlin, Germany, 24-27 September 2018.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

- Christelle Caillouet :
 Program Committee Chair of AlgoTel'18 (20e Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications): conférence of the *pôle ResCom of GDR ASR of CNRS* Roscoff, France, May 29-June 1, 2018.

9.1.2.2. Member of the Conference Program Committees

- David Coudert :
 ONDM'18: 22nd Conference on Optical Network Design and Management, Dublin, Ireland, May 14-17, 2018.
 IEEE ICC'18 : IEEE International Conference on Communications, Kansas City, MO, USA, May 20-24, 2018.
 SEA'18: 17th International Symposium on Experimental Algorithms, L'Aquila, Italy, June 27-29, 2018.
 IPEC'18: 13th International Symposium on Parameterized and Exact Computation, Helsinki, Finland, August 20–24, 2018.
 IEEE Globecom'18: IEEE Global Communications Conference, Abu Dhabi, UAE, December 9-13, 2018.
- Frédéric Havet :
 10th International Colloquium on Graph Theory (ICGT 2018), Lyon, France, July 9-13, 2018.
 Journées Graphes et Algorithmes (JGA 2018), Grenoble, France, 14-16 November, 2018.
- Nicolas Nisse
 SEA'18: 17th int. Symposium on Experimental Algorithms, L'Aquila, Italy, 27-29 June 2018.

CoRes'18: 3rd conférence francophone centrée les réseaux et protocoles de communicatio.
Roscoff, France, 29 May- 1st June 2018

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Jean-Claude Bermond

Computer Science Reviews, Discrete Mathematics, Discrete Applied Mathematics, Journal of Graph Theory, Journal of Interconnection Networks (Advisory Board), Mathématiques et Sciences Humaines, Networks, Parallel Processing Letters, the SIAM book series on Discrete Mathematics, Transactions on Network Optimization and Control, Algorithms and Applications.

David Coudert

Discrete Applied Mathematics (Elsevier); Networks (Wiley).

Frédéric Giroire

Journal of Interconnection Networks (World Scientific).

Frédéric Havet

Discrete Mathematics and Theoretical Computer Science.

Bruce Reed

Journal of Graph Theory, Electronic Journal of Combinatorics.

9.1.3.2. Reviewer - Reviewing Activities

Members of COATI have reviewed numerous manuscripts submitted to international journals, including:

ACM Journal of Experimental Algorithmics, Ad Hoc Networks, Ars Combinatorica, Computer Networks (COMNET) Discrete Applied Mathematics (DAM), Discrete Mathematics, Discrete Mathematics and Theoretical Computer Science (DMTCS), European Journal of Combinatorics, IEEE/OSA Journal of Lightwave Technology (JLT), IEEE/ACM Transactions on Networking (ToN), IEEE Transactions on Parallel and Distributed Systems (TPDS), Journal of Computer and System Sciences (JCSS), Theoretical Computer Science (TCS) Theory of Computing Systems (TOCS), Utilitas Mathematica.

9.1.4. Invited Talks

- Julien Bensmail
 - Sequential Metric Dimension (in trees)*. Graph Theory 2018 (GT'18), Nyborg, Denmark. August 2018.
 - Augmenting matchings in trees, via bounded-length augmentations*. 3rd International Symposium on the Frontier of Graph Theory, Qinghai Normal University, Xining, China. April 2018.
 - Sequential Metric Dimension (in trees)*. Seminarium Matematyka Dyskretna, AGH university, Kraków, Poland. November 2018.
 - A Decompositional Approach to the 1-2-3 Conjecture*. Seminar of the Department of Applied Mathematics, Northwestern Polytechnical University, Xi'an, China. May 2018.
 - On partitioning graphs into connected subgraphs*. Seminar of the School of Mathematical Sciences, Anhui University, Hefei, China. May 2018.
- Christelle Caillouet
 - Optimization of mobile sensor coverage with UAVs*. Workshop "L'Internet des Objets Industriels" (IIoT) of GDR RSD / ResCom and GDR MACS, Strasbourg, France, July 3, 2018.
- Frédéric Giroire

Optimization of Network Infrastructures. Seminar of ETIS, University Cergy-Pontoise, France. November 2018.

- Frédéric Havet :
 - Bispindles in strongly connected digraphs with large chromatic number*. Graph Theory Meeting (GT 2018), Nyborg, Denmark, August 29 - September 1, 2018.
 - Trees in tournaments*. Journées Combinatoire Graphes et Algorithmes, Lyon, December 10-11, 2018.
- Nicolas Nisse
 - When treewidth and treelength are equivalent*: Seminar Xidian University, Xi'an, China, September 2018.
- Stéphane Pérennes, Luc Hogue, Michel Syska
 - Parallel & Distributed Graph algorithms for large graphs, practical challenges*: Atelier de programmation GRAMINEES in ANF APSEM2018 (Apprentissage et sémantique). November 2018.

9.1.5. Leadership within the Scientific Community

David Coudert

Member of the steering committee of *Pôle ResCom du GDR RSD du CNRS* since 2005, and co-chair since June 2017.

Frédéric Giroire

Member of the steering committee of *GT Energy of the GDR RSD du CNRS*.

Frédéric Havet :

Member of the steering committee of *GT Graphes of the GDR IM of CNRS*.

9.1.6. Scientific Expertise

- Jean-Claude Bermond
 - Expert for DRTT-MESR Crédit impôt recherche (CIR et agréments).
- Frédéric Havet :
 - Expert for ANR and NSERC (Canada)
- Nicolas Nisse
 - Expert for ANR
 - Expert for ODP (OPUS, Poland) 2018
 - Expert for Millennium Science Initiative (Programme de financement chilien) (2018).
 - Expert for ESF (European Science Foundation) 2018.

9.1.7. Research Administration

- Jean-Claude Bermond
 - Responsible fo the cooperation between Inria and Greece (obtention of join grants and of financial support for internships via the Bodossakis Foundation).
- Christelle Caillouet
 - Elected member of CPRH (Comité Permanent de Ressources Humaines) University of Nice Sophia Antipolis;
 - Elected member of I3S laboratory committee since December 2016;
 - Member of “Comité de Sélection” MCF 0403, Grenoble INP, 2018.
- David Coudert :
 - Nominated member for Inria at the doctoral school STIC since September 2017;

Member of the “Comité de Suivi Doctoral” of Inria (since 2009);

Member of the scientific council of Academy RISE (Networks, Information, Digital Society) of UCA^{JEDI} till January 2018;

Nominated member for Inria at the steering committee of Academy RISE (Networks, Information, Digital Society) of UCA^{JEDI} and EUR DS4H since February 2018;

Member of “Comité de Sélection” 4109 - 0074 - PR 27 STS, Université d’Avignon et des Pays de Vaucluse, 2018.

Member of “Comité de Sélection” 27 Pr 519, Université Nice - Sophia Antipolis, 2018;

- Frédéric Giroire :
In charge of the internships of stream UbiNet of Master 2 IFI, UNS.
- Frédéric Havet :
Head of COMRED team of I3S laboratory.
- Nicolas Nisse
Elected member of Comité de Centre, Inria Sophia Antipolis since 2016
Membre du CS Académie 1 UCA
- Michel Syska
Elected member of CPRH (Comité Permanent de Ressources Humaines) University of Nice-Sophia Antipolis;

9.2. Teaching - Supervision - Juries

9.2.1. Teaching responsibilities

- Julien Bensmail
In charge of the internships of first year students of QLIO département of IUT Nice Côte d’Azur.
- Joanna Moulhierac
“Directrice d’études” for the 1st-year students du Département Informatique of IUT Nice Côte d’Azur, (since September 2017).
Head of the "Conseil de Département Informatique" of IUT Nice Côte d’Azur (since September 2017).

9.2.2. Teaching

- Julien Bensmail
Sécurité des systèmes d’information, 36h ETD, Level LP, IUT Nice Côte d’Azur, UNS;
Recherche opérationnelle, 82h ETD, Level L2, IUT Nice Côte d’Azur, UNS;
Systèmes de gestion de bases de données, 86h ETD, Level L2, IUT Nice Côte d’Azur, UNS.
- Christelle Caillouet
Programmation Orientée Objet, 96h ETD, Level L1, IUT Nice Côte d’Azur, UNS;
- David Coudert
Algorithms for Telecoms, 32h ETD, stream UbiNet of Master 2 IFI and Master RIF, UNS.
- Frédéric Giroire
Algorithmics of Telecommunications, 18h ETD, stream UbiNet of Master 2 IFI, UNS;
Data Mining for Networks, 18h ETD, stream UbiNet of Master 2 IFI, UNS;
Introduction to probability and statistics, 15h ETD, International Master 1, UNS.

- Joanna Moulhierac
 - Introduction à l'algorithmique*, 30h ETD, Level L1, IUT Nice Côte d'Azur, UNS;
 - Introduction aux Réseaux*, 60h ETD, Level L1, IUT Nice Côte d'Azur, UNS;
 - Programmation répartie*, 40h ETD, Level L1, IUT Nice Côte d'Azur, UNS.
 - Réseaux avancés*, 60h ETD, Level L2, IUT Nice Côte d'Azur, UNS;
 - Compléments d'algorithmique*, 30h ETD, Level L2, IUT Nice Côte d'Azur, UNS.
- Nicolas Nisse
 - Graph Algorithms and Combinatorial Optimization*, 18 ETD, Master 2, parcours Ubinet master IFI, UNS;
 - Informatique théorique*, 24 ETD, MPSI, classe préparatoire, CIV, Valbonne;
- Stéphane Pérennes
 - Java pour le Calcul Distribué et Concurrent, 60 h ETD Level : Master MIAGE Univ. Nice Côte d'Azur, UNS;
- Michel Syska
 - Operating Systems: Advanced Programming*, 28h ETD, Level L2, IUT Nice Côte d'Azur, UNS;
 - Data Structures and Algorithms*, 40h ETD, Level L2, IUT Nice Côte d'Azur, UNS;
 - Algorithmics*, 52h ETD, Level L2, IUT Nice Côte d'Azur, UNS;
 - Distributed Programming*, 58h ETD, Level L2, IUT Nice Côte d'Azur, UNS;

9.2.3. Supervision

9.2.3.1. PhD thesis

PhD: William Lochet, *Substructures in digraphs* [2], Université Côte d'Azur, July 19, 2018. Co-supervisors: Frédéric Havet and Stéphane Thomassé (ÉNS Lyon).

PhD in progress: Ali Al Zoobi, *Algorithms for shared on demand public transportation system in the city*, since October 2018. Co-supervisors: David Coudert and Nicolas Nisse.

PhD in progress: Brieuc Berruet, *Application des techniques de Machine Learning à la géolocalisation des objets connectés dans le contexte de la future 5G*, doctorale school SPIM, Université de Belfort Franche Comté, since November 2016. Supervisor: Alexandre Caminada and Oumaya Baala (Orange).

PhD in progress: Giuseppe di Lena, *Resilience of virtualized networks*, since April 2018. Co-supervisors: Thierry Turletti (DIANA), Chidung Lac (Orange Labs Lannion) and Frédéric Giroire.

PhD in progress: Adrien Gausseran, *Optimization Algorithms for Network Slicing for 5G*, since October 2018. Supervisors: Joanna Moulhierac and Nicolas Nisse.

PhD in progress: Mehdi Katranji, *Utilisation des méthodes de Machine Learning pour apprendre les modèles de mobilité humaine selon leurs attributs socio-démographiques et géographiques*, doctorale school SPIM, Université de Belfort Franche Comté, since September 2016. Supervisor: Alexandre Caminada and Fouad Hadjselem (Orange).

PhD in progress: Fionn McInerney, *Combinatorial Games in Graphs*, since October 2016. Supervisor: Nicolas Nisse.

PhD in progress: Andrea Tomassilli, *Diffusion of information on large dynamic graphs*, since October 2016. Supervisors: Stéphane Pérennes and Frédéric Giroire.

PhD in progress: Thibaud Trolliet, *Exploring Trust on Twitter*, since October 2017. Co-supervisors: Arnaud Legout (DIANA) and Frédéric Giroire.

PhD in Progress: Thi-Viet-Ha Nguyen, *Graph Algorithms techniques for (low and high) resolution model of large protein assemblies.*, since October 2018. Co-supervisors: Frédéric Havet and Dorian Mazauric (ABS).

9.2.3.2. Internships

- Eleni Batziou
 - Date: from November 2017 until May 2018
 - Institution: Master 2, National Technical University of Athens (Greece)
 - Supervisors: David Coudert and Nicolas Nisse
 - Subject: Enhancing urban mobility with shared on-demand services
- Florent Cabret
 - Date: from April 2018 until June 2018
 - Institution: DUT 2, IUT, Université Nice Sophia Antipolis
 - Supervisors: Luc Hogie and Michel Syska
 - Subject: Evaluation of Jmaxgraph, a distributed computing framework on large graphs
- Théo Frasquet
 - Date: from July 2018 until August 2018
 - Institution: SI4, Polytech'Nice, France
 - Supervisors: David Coudert
 - Subject: Decomposing a digraph into k -strongly connected components
- Adrien Gausseran
 - Date: from March 2018 until september 2018
 - Institution: Master 2 RIF, Université Nice Sophia Antipolis
 - Supervisors: Frédéric Giroire and Joanna Moulhierac
 - Subject: Optimization Algorithms for Network Slicing for 5G
- Thibault Hilaire
 - Date: from June-July 2018
 - Institution: L3, ENS Saclay
 - Supervisor: Nicolas Nisse
 - Subject: Polynomial algorithm for connected graph searching.
- Allen Passos Ibiapina
 - Date: from October 15 until December 14 2018
 - Institution: Master 2, UFC Fortaleza, Brazil
 - Supervisor: Frédéric Havet
 - Subject: Constrained ear decompositions in graphs and digraphs.
- Badr Jouhar
 - Date: from March 2018 until August 2018
 - Institution: stream UbiNet of Master 2 IFI
 - Supervisors: Frédéric Giroire and Andrea Tomassilli
 - Subject: Joint optimization of network and data centers
- Thi-Viet-Ha Nguyen
 - Date: from January 2018 until June 2018
 - Institution: Master 2, ENS Lyon.

Supervisors: Frédéric Havet, Dorian Mazauric (ABS) and Rémi Watrigant (ENS Lyon)
 Subject: Overlaying a hypergraph by graph families with bonded maximum degree.

- Meghana M. Reddy
 - Date: from May 2018 until August 2018
 - Institution: Master at IIIT-Bangalore, India
 - Supervisors: David Coudert
 - Subject: implementation of a linear time algorithms for decomposing a graph into 3-connected components in **Sagemath**. In the context of the Google Summer of Code (GSoC).
- Alexandre Simon
 - Date: from June-July 2018
 - Institution: L3, INSA Lyon
 - Supervisor: Nicolas Nisse
 - Subject: Treelength des graphes planaires.
- Sai Harsh Tondomker
 - Date: from May 2018 until August 2018
 - Institution: Master at IIIT-Hyderabad, India
 - Supervisors: David Coudert
 - Subject: implementation of algorithms for decomposing a graph into 3-connected components and organizing these components as a SPQR-tree in **Sagemath**. In the context of the Google Summer of Code (GSoC).
- Xuchun Zhang
 - Date: from July 2018 until September 2018
 - Institution: Master 1 MAM, Université de Nice Sophia Antipolis
 - Supervisors: Jean-Baptiste Caillaud, Enzo Giusti (Oui!Greens startup), Dorian Mazauric and Joanna Moulhierac
 - Subject: Optimal Assignment Problem for Oui!Greens
- Yin Zhuochao
 - Date: from March 2018 until August 2018
 - Institution: stream UbiNet of Master 2 IFI, UNS
 - Supervisors: David Coudert and Nicolas Nisse
 - Subject: On the pickup-and-delivery problem with time window
- Mykhailo Zima
 - Date: from March 2018 until August 2018
 - Institution: stream UbiNet of Master 2 IFI, UNS
 - Supervisors: David Coudert and Nicolas Nisse
 - Subject: Routing in multimodal networks with bicycles

9.2.4. Juries

- Jean-Claude Bermond :
 - Member of the HDR jury of Ignasi Sau Valls, LIRMM, Montpellier, June 25 2018;
 - President of the PhD prize committee *prix de thèse Graphes "Charles Delorme"* <http://gtgraphes.labri.fr/pmwiki/pmwiki.php/PrixTheseDelorme/PrixTheseDelorme>
- Christelle Caillouet :

Member of the PhD jury of Alassanne Samba, IMT Atlantique, October 29, 2018;

- David Coudert :
 - President of the PhD jury of Jianding Guo, Université de Technologie de Belfort-Montbéliard, June 6, 2018;
 - President of the PhD jury of Mohammed Amine Ait Ouahmed, Université d'Avignon et des Pays de Vaucluse, October 15, 2018;
 - Referee and member of HDR committee of Fen Zhou, Université d'Avignon et des Pays de Vaucluse, September 28, 2018;
 - External referee in the PhD thesis monitoring committee of Karyna Gogunska, Université Côte d'Azur, March 19, 2018;
- Frédéric Giroire :
 - Invited member of the PhD jury of Marwa Dammak, ENSEA, Cergy-Pontoise, November 20, 2018;
- Frédéric Havet :
 - Referee and member of PhD committee of Antoine Dailly, Université Lyon 1, September 2018.
 - Referee and member of PhD committee of Tien-Nam Le, ENS Lyon, November 2018.
 - Member of PhD committee of Leo Planche, Université Paris Descartes, November 2018.
 - Referee and member of HDR committee of Laurent Beaudou, Université Clermont-Auvergne, December 2018.
 - Referee and member of PhD committee of Tilde Nielsen, Southern Denmark University, Odense, Denmark, December 2018.

9.3. Popularization

9.3.1. Internal or external Inria responsibilities

- Frédéric Havet :
 - Vice-president and member of the scientific committee of the association Institut Esope 21 (<http://www.esope21.eu>).
- Nicolas Nisse:
 - Membre de Mastic (Médiation et Animation scientifiques Inria Sophia Antipolis - Méditerranée).

9.3.2. Education

- Frédéric Havet, Joanna Moulierac and Nicolas Nisse : Participation to Galejade projet.
 - Design of pedagogical resources introducing graphs and algorithms to primary school students.
 - Training of primary school teachers, ESPE April 9-10 2018.

9.3.3. Interventions

- Fête de la Science (Frédéric Havet, Nicolas Nisse, Fionn Mc Inerney, Ali Al Zoobi)
 - Journée portes ouvertes, Inria Sophia Antipolis, Sunday October 7, 2018.
 - Palais des Congrès de Juan-Les-Pins, October 20-21, 2018.
 - Collège de Vinon-sur-Verdon (83), October 9-12, 2018.
- Frédéric Havet, Joanna Moulierac, and Nicolas Nisse

Participation to the supervision of the internships of 12 pupils of 3eme, December 17-21, 2018.

- Frédéric Havet

L'élégance des Mathématiques. Conference at Lycée Janetti, St Maximin, February 16, 2018. Audience: 3 classes (1e S and ES).

La magie des graphes et du binaire. Conference at collège Alphonse Daudet, Nice, April 17, 2018. Audience: 2 classes of 4e and 1 of 6e.

L'élégance des mathématiques. General audience conference, Rians, Var, France, April 28, 2018.

- Nicolas Nisse

Training and awareness of school teachers (Cycle 2, CP-CE2) to scientific mediation. Le Cannet, November 21 and Mandelieu, November 28, 2018.

Training and awareness of future teachers to scientific mediation, Ecole Supérieure du Professorat et de l'Éducation (ESPE, ex IUFM) of Académie de Nice. March 19-20 and April 9-10, 2018.

Liens entre médiation numérique et recherche, Maison méditerranéenne des Sciences de l'homme (MMSH), Aix en Provence, March 14, 2018.

Mediation for the Master en science de l'éducation, Nice, October 18, 2018.

- Fionn Mc Inerney :

Presentation at Collège Victor Hugo, Nevers, France, March 23, 2018.

Participation in the day "*L'informatique, c'est pas génétique, filles ou garçons, les clics sont identiques!*", Lycée Raoul Follereau, Nevers, France, March 22, 2018.

Presentation at Ecole Primaire Romain Rolland, Varennes-Vauzelles, France, March 21, 2018.

Supervised internship of a school girl in 2nd, Inria Sophia-Antipolis - Méditerranée, France, June 18-22, 2018.

- Michel Syska :

Organisation and supervision of the code competition "*La nuit de l'info*", December 6-7, 2018.

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 in the organizing team (general chair) of the Computational Social Science Satellite of the CCS'18 Conference in September 2018 in Thessaloniki
- Márton Karsai was in the organizing team (general chair) of the Machine Learning and Network Science Satellite of the NetSci'18 Conference in June 2018 in Paris

10.1.1.2. Member of the Organizing Committees

- Éric Guichard was the chair and organiser of the summer school *Cartography and visualisation 2018*⁰.
- Márton Karsai was in the organising team (sponsor chair) of the NetSci'18 Conference held in June 2018 in Paris
- Márton Karsai was in the organising team (poster chair) of the Complex Networks Conference held in December 2018 in Cambridge

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- Thomas Begin was on the PC of the 43rd IEEE Conference on Local Computer Networks (LCN).
- Isabelle Guérin Lassous was, in 2018, a member of the program committee of the conferences ACM MSWiM, IEEE ICC and Globecom.
- Philippe Nain was a member of the program committee of the IFIP Performance 2018 conference (Toulouse, France, december 2018) and of the MAMA 2018 workshop (Irvine, CA, USA, June 2018).
- Márton Karsai was a member of the program committee of the following conferences in 2018: CompleNet 2018, MLSN2018, LADAS2018, ICCS2018, Dyno 2018, COMPLEX NETWORKS 2018, NetSci 2018.
- Christophe Crespelle was a member of the program committee of the 10th International Colloquium on Graph Theory and Combinatorics (ICGT 2018).

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).
- Márton Karsai was the invited editor of the Special Issue on Complex Networks and Their Applications, Applied Network Science, Springer (2018)
- Philippe Nain is a member of the Advisor Board of Performance Evaluation (Elsevier).

⁰<http://barthes.enssib.fr/ECV-2018>

10.1.3.2. Reviewer - Reviewing Activities

- 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.
- Paulo Gonçalves was reviewer for the following journals: IEEE Transactions on Signal Processing, IEEE Signal Processing Letter, Signal Processing (Elsevier).
- Christophe Crespelle was a reviewer for Algorithmica (Springer) and Theoretical Computer Science (Elsevier).

10.1.4. Invited Talks

- Éric Guichard gave a talk at the one-day conference *Humanités et numérique: vers plus de confiance dans la production du discours scientifique: Les humanités numériques, un slogan creux?* (Paris, Dec 4, 2018).
- Éric Guichard gave a talk at the international conference in honor of Gérard Noiriel, called *Héritages et actualités de la socio-histoire: Comment l'informatique et les statistiques ont aidé à penser l'histoire des catégories juridiques et sociales de l'immigration?* (June 14, 2018, Ehess, Paris).
- Éric Guichard gave a talk at the seminar of the PhD students of LIRIS (Univ. Lyon-1): *Numérique et fracture sociale* (April 3rd, 2018.)
- Éric Guichard gave a talk at the conference « *Quelle est l'utilité d'un produit digital connecté dans le monde du sport?* », rencontres *maths et industrie* (institut Henri Poincaré, Paris, March 13, 2018).
- Éric Guichard gave a talk at the one-day conference *Imaginaires présents, numérique à venir: impensés et idéologies: Culture de l'écrit spatial, imaginaires et subjectivités* (ESAD St-Etienne, March 7, 2018).
- Éric Guichard gave a talk at the *Séminaire interdisciplinaire PHITECO (Philosophie, Technique et Cognition): Epistémologie et philosophie politique du numérique* (UTC, Compiègne, Jan 19, 2018).
- Paulo Gonçalves gave a talk at the seminars of the EPC Inria Maracas (Nov. 2018).
- 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 DIVA lab of Univ. of Ottawa in Canada on the modeling of DPDK-based virtual switches.
- Thomas Begin gave a talk at CITI Lab of INSA Lyon on Modeling WiFi in a multihop wireless network : feedback on experience.
- Thomas Begin gave a talk at LIP Lab of ENS Lyon on A brief tour of Machine Learning techniques.
- Philippe Nain gave a seminar on A class of stochastic multilayer networks: percolation, exact and asymptotic results, Inria Grenoble (March 22, 2018).
- Márton Karsai gave an invited talk at the Higher Order Models in Network Science, NetSci'18 Satellite (12 June 2018, Paris, France)
- Márton Karsai gave an invited talk at the Art, Networks and Technology, NetSci'18 Satellite (12 June 2018, Paris, France)
- Márton Karsai gave an invited talk at the BrainTime workshop, Institut de Neurosciences de la Timone (18 September 2018, Marseille, France)
- Márton Karsai gave an invited talk at the Language Seminar Series, Laboratoire d'Informatique de Grenoble (20 September 2018, Grenoble, France)
- Márton Karsai gave an invited talk at the Op-La-Dyn workshop, CCS'18 Satellite (26 September 2018, Thessaloniki, Greece)

- Márton Karsai gave an invited talk at the Complex systems for the most vulnerable – UNICEF workshop, CCS'18 Satellite (27 September 2018, Thessaloniki, Greece)
- Márton Karsai gave an invited talk at the SpaceNet workshop, CCS'18 Satellite (27 September 2018, Thessaloniki, Greece)
- Christophe Crespelle gave an invited talk in the Workshop on Graph Theory and Applications at the Vietnam Institute for Advanced Studies in Mathematics (VIASM), Hanoi, Vietnam.
- Christophe Crespelle gave a talk at the ICTLab of the University of Science and Technology of Hanoi (USTH), Vietnam.

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".

10.1.6. Scientific Expertise

- Isabelle Guérin Lassous is a member of the research committee of the Milyon labex.
- Isabelle Guérin Lassous is the president of the HCERES evaluation committee of SAMOVAR.
- 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 Agencies (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 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 RAIL⁰ (Réseau de l'Atelier Internet Lyonnais), founded in 2017 and supported by IXXI and Enssib.

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.
- Paulo Gonçalves is correspondent for the theme "Big Data" of the *Fédération d'Informatique de Lyon*.
- Paulo Gonçalves is member of the Council of the LIP laboratory.
- 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 computer science department at IUT (Institut Universitaire de Technologie) - Université Lyon Claude Bernard Lyon 1.

⁰<http://barthes.enssib.fr/RAIL>

- Anthony Busson was a HCERES expert member (laboratory LMIA-MIPS - Université de Haute Alsace).
- Thomas Begin is an elected member of the Council of the LIP laboratory.
- Thomas Begin is an elected member of the department council of the Computer Science department of Université Lyon 1.
- 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 executive committee of the Complex System Society (2018-)
- Márton Karsai is the elected member of the steering committee of the IXXI Complex System Institute (2017-)
- Márton Karsai is the member of the computational infrastructure board of LIP
- Márton Karsai is the member of the communication board of LIP
- Éric Guichard 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

Licence :

Thomas Begin: Computer Networks, 18.5h, L3, Université Lyon 1.

Márton Karsai: Introduction to Complex Networks, 6h, L3, ENS Lyon

Master :

Thomas Begin: Distributed Algorithms, 18h, M1, Université Lyon 1.

Thomas Begin: Computer Networks, 44h, M1, Université Lyon 1.

Thomas Begin: System Administration & Security, 10.5h, M2, Université Lyon 1.

Thomas Begin: Advanced Networks, 58h, M2, Université Lyon 1.

Thomas Begin: Cloud Computing, 9h, M2, Université Lyon 1.

Isabelle Guérin-Lassous: Distributed Algorithms, 30h, M1, Université Lyon 1.

Isabelle Guérin-Lassous: Networking, 14h, M1, Université Lyon 1.

Isabelle Guérin-Lassous: Wireless networks, 9h, M2, Université Lyon 1.

Isabelle Guérin-Lassous: Quality of Service, 5h, M2, Université Lyon 1.

Isabelle Guérin-Lassous: ToIP and streaming, 12h, M1, Université Lyon 1.

Éric Guichard: Économie du web et du document, 36h, M2, Enssib & Univ. Lyon 1.

Éric Guichard: Programmation éditoriale, 18h, M2, Enssib & Univ. Lyon 1.

Márton Karsai: Complex Networks, 36h, M2, ENS Lyon

Márton Karsai: Data Bases Data Mining, 20h, M1, ENS Lyon

Philippe Nain: Performance Evaluation of Computing and Communication Systems (graduate course, Fall semester 2018), 32h, University of Massachusetts, Amherst, USA.

Cycle ingénieur (Bac+3 à Bac+5):

Paulo Gonçalves: Traitement du Signal (déterministe, aléatoire, numérique), Estimation statistique. 80 heures Eq. TD. CPE Lyon, France.

Marion Foare: Traitement du Signal (déterministe, aléatoire), Traitement d'images, Compression, Projets. 115 heures Eq. TD. CPE Lyon, France.

10.2.2. Supervision

HDR defense: Thomas BEGIN, Contributions to the Performance Modeling of Computer Networks. December 2018.

PhD defense: Mohammed AMER, WiFi network management: a SDN approach, Novembre 2018.

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

PhD in progress: Mohamed Adbelwedoud LAFDAL, 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, M. Karsai supervisor (E. Fleury director). Started October 1st, 2017.

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.

PhD in progress: Dominique BARBE, From local to global learning, P. Gonçalves (P. Borgnat, co-advisor). Started October 1st, 2018.

PhD in progress: Nour el Houda BOUZOUITA, supervised by A. Busson and Hervé Rivano. Wi-Fi network Optimization through crowd sensing applications. November 2018 - November 2021.

10.2.3. Juries

Paulo Gonçalves was a member of the Ph.D thesis examination board of Jean-Charles Vialatte, IMT Atlantique, Université Bretagne Loire, December 2018.

Isabelle Guérin Lassous was a reviewer of the Ph.D thesis examination board of Jonatan Krolikowski, Univ. Paris-Sud ; Raphaël Naves, Univ. de Toulouse ; Antoine Auger, Univ. de Toulouse

Isabelle Guérin Lassous was a president of the Ph.D thesis examination board of Elodie Morin, Univ. Grenoble Alpes ; Jonatan Krolikowski, Univ. Paris-Sud

Isabelle Guérin Lassous was a member of the Ph.D thesis examination board of Narcisse Kamtchoun, UPMC

Isabelle Guérin Lassous was a member of the HdR thesis examination board of Valeria Loscri, Univ. de Lille.

Éric Guichard was a member of the Ph.D thesis examination board of Amélie Turet, Univ. Bordeaux-Montaigne.

Christophe Crespelle was a reviewer of the Ph.D thesis examination board of Thibaud Arnoux, UPMC

Anthony Busson was a jury member of Cristhian IZA PAREDES's PhD thesis. Universitat Polytechnica de Catalunya. July 12 July 2018.

Anthony Busson was reviewer and jury member of Lam-Thanh TU's PhD thesis. Université Paris Saclay. 18 June 2018.

Anthony Busson was reviewer and jury member of Nesrine KHERNANE's PhD thesis. Université de Bourgogne Franche comté. 13 November 2018.

Anthony Busson reviewer and jury member of Lucas's RIVOIRARD PhD thesis. Université de Lille. 21 September 2018.

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

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

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

10.3.2. Articles and contents

- Éric Guichard wrote an article with Nicolas Schabanel in newspaper *Libération*, September 10, 2018, p. 24: « Copyright numérique: stériliser pour mieux tuer », https://www.liberation.fr/debats/2018/09/09/copyright-numerique-steriliser-pour-mieux-tuer_1677568.
- Éric Guichard gave an interview in newspaper *O Globo* (Brazil), Jan 1st, 2018.

10.3.3. Interventions

Paulo Gonçalves and Eric Guichard animated a citizen meeting on Artificial Intelligence and Social impacts. November 2018. Orliénas. <https://www.vepm.net/2018/10/26/cafe-citoyen-orlienas-9-novembre-2018-lintelligence-artificielle/>

DIANA Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

Chadi Barakat is on the editorial board of the Computer Networks journal, and is on the Technical Program Committee for the ACM MECOMM Workshop held in conjunction with the ACM SIGCOMM 2018 conference, and for the Network Traffic Measurement and Analysis Conference (TMA 2019). He co-chaired the workshops at the ACM CoNext 2018 conference and will co-chair the Technical Program Committee for the CCDWN workshop 2019 to be held in conjunction with the WiOpt 2019 conference. He is currently the scientific referee for international affairs at Inria Sophia Antipolis and member of the Conseil d'Orientation Scientifique et Technologique at Inria within the working group of international affairs (COST-GTRI).

Walid Dabbous is chair of the scientific committee of the User Centric Networking (UCN@Sophia) Laboratory of Excellence, and member of the scientific committee of the Academy 1 of the UCAJedi Idex. He is also member of the Ubinet International Master program steering committee. He is chair of the Inria admissibility jury for the young graduate scientist ("CRCN") competitive selection.

Arnaud Legout is on the editorial board of the Computer Networks journal. Arnaud Legout is the president of the Commission of the users of IT resources of Sophia Antipolis Inria research center.

Damien Saucez has co-organised the ACM SIGCOMM Reproducibility workshop. He is co-chair of the ACM SIGCOMM *Artifact Evaluation Committee* whose role is to assess the reproducibility level of papers accepted to ACM SIGCOMM sponsored conferences and journals. He was TPC co-chair of the 2018 ACM Workshop on ns-3. He was member of the TPCs of IEEE ICC 2018, DRCN 2018, ACM WNS3 2018 and is regular reviewer for IEEE, ACM, Elsevier, and Springer journals. Damien Saucez and Walid Dabbous participated to the organization of the first Grid'5000-FIT school in Sophia Antipolis in April 3-6 2018. See <https://www.silecs.net/1st-grid5000-fit-school/> for more information.

Thierry Turetletti, Senior ACM and IEEE member, served in 2018 in the program committees of the following international workshops and conferences: the 3rd CoRes Workshop at Roscoff, France in May 28-29, the 9th Workshop on ns-3 at Mangalore, India in June 13-14, the 13rd Workshop on Challenged Networks (CHANTS) at New Delhi, India in October 29 and IEEE Globecom at Abu Dabi, UAE in December 9-13. He is member of the Editorial Boards of the Journal of Mobile Communication, Computation and Information (WINET) published by Springer Science and of the Advances in Multimedia Journal published by Hindawi Publishing Corporation. Thierry Turetletti is president of the Committee for Technological Development (CDT) and member of the committee NICE that studies postdoc and visiting researcher applications at Inria Sophia Antipolis.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master Ubinet: Chadi Barakat and Walid Dabbous, Evolving Internet, 31.5 hours, M2, University of Nice-Sophia Antipolis, France.

Master Ubinet: Chadi Barakat and Walid Dabbous, Internet Measurements and New Architectures, 31.5 hours, M2, University of Nice-Sophia Antipolis, France.

Master 1 in Computer Science: Chadi Barakat, Computer Networks, 15 hours, M1, University of Nice Sophia Antipolis, France.

Master 1 in Computer Science: Chadi Barakat, Internet of the Future, 15 hours, M1, University of Nice Sophia Antipolis, France

Master Estel: Chadi Barakat, Voice over IP, 9 hours, University of Nice-Sophia Antipolis, France.

Master Ubinet: Arnaud Legout, From BitTorrent to Privacy, 36 hours, M2, University of Nice-Sophia Antipolis, France.

Master 1 in Computer Science: Arnaud Legout, Oral and written communications, 18 hours, M1, University of Nice-Sophia Antipolis, France.

Master IUP GMI: Damien Saucez, Security and privacy in networks, 38h, M2, University of Avignon, France.

E-learning

Python: Arnaud Legout and Thierry Parmentelat are co-authors of the MOOC Python 3 : "Python 3 : des fondamentaux aux concepts avancés du langage" that lasts 9 weeks on FUN (<https://www.france-universite-numerique-mooc.fr/>), UCA. For the second session there were 12748 registered persons. In total, this MOOC all on its editions has been followed by 57938 persons.

9.2.2. Supervision

PhD in progress: Othmane Belmoukadam started his PhD on "QoE aware content management in the Internet: caching and transport" in October 2018. He is supervised by Chadi Barakat and funded by the doctoral school EDSTIC of Université Côte d'Azur (UCA).

PhD in progress: Yanis Boussad started his PhD on "Large scale characterization of the exposition to microwaves" in October 2017. He is co-supervised with Leonardo Lizzi, LEAT.

PhD in progress: Giuseppe Di Lena started his PhD on "Building a resilience methodology for NFV/SDN " in Apr 2018. His PhD is co-supervised by Thierry Turletti and Damien Saucez.

PhD in progress: Thibaut Ehlinger: started his PhD on "Mapping Quality of Service metrics to user Quality of Experience in the Internet" in November 2017. He is co-supervised by Chadi Barakat and Vassilis Christophides (EPI MiMove, Inria Paris).

PhD in progress: Iman Fouad started her PhD on on Web tracking technologies and privacy protection in november 2017. Her thesis is co-supervised by Arnaud Legout and Nataliia Bielova (Indes).

PhD in progress: Karyna Gogunska works on "Empowering Virtualized Networks with Measurement As a Service (MaaS)". Her thesis is co-supervised by Chadi Barakat and Guillaume Urvoy-Keller (I3S).

PhD in progress: Muhammad Jawad Khokhar works on "From Network Level Measurements to Expected Quality of User Experience". His PhD is supervised by Chadi Barakat.

PhD in progress: Mohamed Naoufal Mahfoudi works on cross-layer optimization techniques for next generation MIMO-based networks since November 2015. His thesis is co-supervised by Walid Dabbous and Robert Staraj (LEAT).

PhD in progress: Ghada Moualla works on "the problem of network faults and how to circumvent them by the means of Software Defined Networking, virtualization, and service function chaining" since November 2015. Her thesis is co-supervised by Thierry Turletti and Damien Saucez.

PhD: Vitalii Poliakov defended his PhD on "the application of Software Defined Networking on 5G networks in order to optimise the Quality of Experience of network services" in December 2018. His thesis was co-supervised by Damien Saucez and Lucile Sassatelli (I3S).

PhD: Hardik Soni defended his PhD on "Software Defined Networking in challenged environments" in April 2018. His thesis was co-supervised by Thierry Turletti and Walid Dabbous.

PhD in progress: Imane Taibi started his PhD in the Dionysos project-team on "Big data analysis for network monitoring and troubleshooting" in November 2017. She is co-supervised by Gerardo Rubino, Yassine Hadjadj-Aoul and Chadi Barakat.

PhD in progress: Mathieu Thiery started his PhD in the Privatics project-team on "Data protection of connected objects and smartphones" in April 2017. He is co-supervised by Vincent Roca and Arnaud Legout.

PhD in progress: Thibaud Trolliet started his PhD on "Exploring trust on Twitter" in octobre 2017. He is co-supervised with Frederic Giroire.

9.2.3. *Juries*

Chadi Barakat served as reviewer of Muhammad Ikram thesis, "Analysis and Design of Secure and Privacy Preserving Systems" defended in April 2018 at the University of New South Wales and Data61, Australia.

Walid Dabbous served as reviewer of Cédric Baudoin HDR thesis "Optimisation et intégration des réseaux de télécommunication par satellite" in INP Toulouse, defended in January 17, 2018.

Walid Dabbous served as a jury member for the mid-term review of the Ph.D. thesis of Sumit Kumar (Eurecom) for his thesis entitled "Simultaneous multi-standard SDR platform" in January 18, 2018.

Walid Dabbous served as a jury chair person for the Ph.D. thesis defense of Dolière Francis Somé on "Web Applications Security and Privacy" on October 29, 2018 (Inria, Indes project-team).

Damien Saucez served as jury member of Chi Dung Phung PhD defence, UPMC, Paris. The thesis on "Enriching the Internet control-plane for improved traffic engineering" was defended on March 30, 2018.

Damien Saucez served as jury member of Yue Li PhD defense, Telecom ParisTech, Paris. The thesis on "Future Internet Services based on LISP Technology" was defended on April 26, 2018.

Thierry Turletti served as a jury member for the mid-term review of the Ph.D. thesis of Andrea Tomassilli on "the integration of Network Functions Virtualization (NFV) techniques with Software-Defined Networking (SDN)." on May 24, 2018 (Inria, COATI project-team).

Thierry Turletti served as a jury member for the mid-term review of the Ph.D. thesis of Chia-Yu Chang on "Cloudification and Slicing in 5G Radio Access Network" on June 28, 2018 (Eurecom).

Thierry Turletti served as reviewer of Elie Bouttier PhD thesis, "Livraison de contenus sur un réseau hybride satellite / terrestre", defended on July 5, 2018 at INP Toulouse, France.

Thierry Turletti served as reviewer of Raphael Naves PhD thesis, "Apport de la gestion des interférences aux réseaux sans-fil multi-sauts: Le cas du Physical-Layer Network Coding" defended on November 19, 2018 at INP Toulouse, France.

Thierry Turletti served as reviewer and president of Imad Alawe PhD thesis "Architectures evaluation and dynamic scaling for 5G mobile core networks", defended on November 21, 2018 at Université de Rennes 1, France.

9.3. Popularization

9.3.1. *Interventions*

Chadi Barakat keeps participating to the organization of the Mediterranean Students Days @ Campus SophiaTech. The sixth edition took place on Feb 12 - 14, 2018. All details on this event can be found at <http://univ-cotedazur.fr/events/meddays>. He also participated to the organization of the French-American Doctoral Exchange Seminar (FADEX) 2018 held in June 2018 on the three French sites Sophia Antipolis, Grenoble, and Paris.

Damien Saucez is part of the MASTIC (<https://project.inria.fr/mastic>) group at Inria. MASTIC groups all the activities for scientific dissemination for Inria Sophia Antipolis. Within the team, we gave a 3h game-based class to 12 collège interns that made an internship at Inria in December to introduce them to the fundamental algorithms used in the Internet (shortest-path, longest prefix matching, distance-vector, AIMD). Damien Saucez was involved in the organization of the "Journée portes-ouvertes" of the Inria Sophia Antipolis premises. Specifically, DIANA presented R2LAB and Electrosmart.

DIONYSOS Project-Team

10. Dissemination

10.1. Scientific Events Organisation

We organized the *13th International Conference in Monte Carlo & Quasi-Monte Carlo Methods in Scientific Computing*, in Rennes, July 1-6, 2018. The MCQMC Conference is a biennial meeting on Monte Carlo and quasi-Monte Carlo methods and the premier event on the topic; it has attracted 300 people from all over the world.

10.1.1. General Chair, Scientific Chair

- Bruno Tuffin was the General Chair for the *13th International Conference in Monte Carlo & Quasi-Monte Carlo Methods in Scientific Computing*, in Rennes, July 1-6, 2018.
- Yassine Hadjadj-Aoul was the General Chair for the *The 5th International Symposium on Networks, Computers and Communications*, Co-sponsored by IEEE, in Roma (Italy), May 2018.

10.1.2. Member of the Organizing Committees

- Pierre L'Ecuyer is member of the Steering Committee of MCQMC and the president of the Steering Committee of MCM.
- Gerardo Rubino and Bruno Tuffin are members of the Steering Committee of the International Workshop on Rare Event Simulation (RESIM).
- Y. Hadjadj-Aoul is co-chairing the Steering Committee of the International Conference on Information and Communication Technologies for Disaster Management (ICT-DM) from December 2016 and member of the steering committee since 2015.
- Yann Busnel has been member of the Organization Committee of the 17th International Conference on Ad Hoc Networks and Wireless (AdHoc-Now 2018), in Saint-Malo, France, in July 2018, acting as Publicity Chair.

10.1.3. Scientific Events Selection

10.1.3.1. Chair of Conference Program Committees

- Bruno Tuffin Area chair for the area "Performance Evaluation, Control and Optimization" of ITC, 11-14 Sep, 2018 in Vienna, Austria.
- Bruno Tuffin was Track-Coordinator for Network and Communications mini-track for WSC'2018 (Winter Simulation Conference, Gotheburg, Sweden, Dec 9-12).
- Yassine Hadjadj-Aoul was Track-Coordinator for the "Satellites IoT and M2M Networks" of the "International Conference on Smart Communications and Networking" (SmartNets), Hammamet, Tunisia (Nov. 2018).

10.1.3.2. Member of the Conference Program Committees

Pierre L'Ecuyer was a member of the program committee of the following events:

- MCQMC'2018: Thirteenth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, Rennes, France, July 2018.
- SIMULTECH 2018: International Conference on Simulation and Modeling Methodologies, Technologies and Applications, Porto, Portugal, July 2018.
- ICORES 2018: International Conference on Operations Research and Enterprise Systems, Funchal, Portugal, Feb. 2018

Patrick Maillé was a member of the program committee of the following events:

- MobiHoc 2018,
- WiOpt 2018,
- IFIP Performance 2018,
- NetEcon 2018,
- AdHocNow 2018.

Bruno Tuffin was a member of the program committee of the following events:

- Ninth International Workshop on Simulation, Barcelona, Spain, June 18-22, 2018
- The 4th International Symposium on Ubiquitous Networking (UNET 2018), Hammamet, Tunisia, May 03-05, 2018.
- IEEE International Conference on Communications, 20-24 May 2018, Kansas City, MO, USA
- IEEE 1st 5G World Forum, Santa Clara, July 9-11, 2018
- GECON 2018 - International Conference on Economics of Grids, Clouds, Software, and Services, Pisa, 18-20.Sept.2018
- NETGCOOP 2018 - International Conference on NETwork Games, COntrol and OPTimisation New York, November 14-16, 2018
- IFIP WG 7.3 Performance 2018, 36th International Symposium on Computer Performance, Modelling, Measurement and Evaluation, Toulouse, France, December 5-7, 2018

Yann Busnel was a member of the program committee of the following events:

- NCA 2018: 17th IEEE International Symposium on Network Computing and Applications, Boston, USA, October 2018.
- AdHoc Now: 17th International Conference on Ad Hoc Networks and Wireless (AdHoc-Now 2018), Saint-Malo, France, July 2018.

Gerardo Rubino was a member of the program committee of the following event:

- MCQMC'2018: Thirteenth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, Rennes, France, July 2018.

Yassine Hadjadj-Aoul was a member of the program committee of the following events:

- IEEE Globecom 2018 - IEEE Global Communications Conference, Abu Dhabi, UAE, December 9-13, 2018.
- IEEE ICC 2018 - IEEE International Conference on Communications, Kansas City, MO, USA, May 20-24, 2018.
- IEEE WCNC 2018 - IEEE Wireless Communications and Networking Conference, Barcelona, Spain, April 15-18, 2018.
- IEEE ISCC 2018 - IEEE Symposium on Computers and Communications, Natal, Brazil, June 25-28, 2018.
- IEEE CCNC 2018 - IEEE Consumer Communications & Networking Conference, Las Vegas, USA, January 12-15, 2018.

10.1.3.3. Reviewer

Yann Busnel served as a reviewer for several major international journals and conferences, such as TPDS (IEEE Transactions on Parallel and Distributed Systems).

Bruno Sericola served as a reviewer for several major international conferences.

César Viho has reviewed papers for the journals IEEE Transaction on Wireless Communication, IEEE Transactions on Vehicular Communications, IEEE Communications Magazine, and for the following international conferences: IWCNC, Globecom, and CCNC.

Yassine Hadjadj-Aoul has served as a reviewer for several major international conferences such as IEEE Globecom, IEEE ICC.

Gerardo Rubino served as a reviewer for several major international conferences.

10.1.4. Journals

10.1.4.1. Member of the Editorial Boards

Bruno Tuffin is the Simulation Area Editor for *Informs Journal on Computing* since Jan. 2016.

Bruno Tuffin is an associate editor for the following journal:

- ACM Transactions on Modeling and Computer Simulation, since November 2008.

Pierre L'Ecuyer is an associate editor for the following journals:

- ACM Transactions on Mathematical Software, since August 2004.
- Statistics and Computing (Springer-Verlag), since June 2003.
- International Transactions in Operational Research, since May 2007.

Bruno Sericola is an associate editor for the following journals:

- International Journal of Stochastic Analysis, since April 2010.
- Performance Evaluation, since April 2015.

Bruno Sericola is Editor in Chief of the books series "Stochastic Models in Computer Science and Telecommunications Networks", ISTE/WILEY, since March 2015.

10.1.4.2. Reviewer - Reviewing Activities

Bruno Sericola, Bruno Tuffin, Gerardo Rubino, served as reviewers for several major international journals.

Yassine Hadjadj-Aoul has reviewed papers for the journals: Elsevier Computer Networks, Elsevier Computer communication, IEEE Communication Letters, Transaction on Vehicular Technologies (TVT), IEEE Communication magazine, IEEE Journal On Selected Area of Communication, IEEE Transactions on Emerging Topics in Computational Intelligence, Springer Journal of Network and Systems Management, Springer Annals of Telecommunications.

10.1.5. Invited Talks

B. Tuffin. gave the tutorial "Recherche opérationnelle et théorie des jeux pour l'analyse de la neutralité du Net" in *19ème congrès de la Société Française de Recherche Opérationnelle et d'Aide A la Decision (ROADEF)*, Lorient, France, 21-23 Février 2018.

B. Tuffin gave the following seminar presentations:

- B. Tuffin. Estimating the mean and tail-distribution measures of time to failure by simulation. Meeting COSMOS(Contrôle et Optimisation Stochastique, MODélisation et Simulation), GR Recherche Opérationnelle CNRS, June 18, 2018.
- B. Tuffin. Mean Time To Failure Estimation by simulation. RNA Kinetics Day, LRI October 3, 2018.

Yann Busnel made several invited and keynote talks:

- *How to generate uniform Samples on large-scale data streams*, Invited talk at SMURF Workshop: Survey Methods and their use in Related Fields, Institute of Statistics, University of Neuchâtel, August 2018.
- *Big Data Panorama & Large-scale Data Streaming*, Keynote at CEP/FDP on Big Data Computing, IIT Patna, India, December 2018.

Gerardo Rubino made several invited and keynote talks:

- *Machine Learning Developments around the PSQA Project*, **plenary speaker** in the workshop by invitation *Machine Learning in Communication Systems*, organized by the German DFG Collaborate Research Center 1053 “MAKI”: Multi-Mechanism Adaptation for the Future Internet, Darmstadt, Germany, March 23, 2018.
- *Random Neural Networks and Extensions. Applications to networking*, **plenary speaker** in the TMA Experts Summit by invitation, as part of *IEEE Network Traffic Measurement and Analysis Conference (TMA’18)*, Vienna, Austria, June 2018.
- *Duality concepts and applications in difference and differential linear systems*, A. Krinik and G. Rubino, invited talk in *The American Mathematical Society (AMS) Fall Western Sectional Meeting*, San Francisco State University, San Francisco, CA, October 2018.
- *Performance evaluation targeting Quality of Experience*, **keynote speaker** in *The 15th European Performance Engineering Workshop (EPEW’18)*, Paris, France, October 2018.
- *Efficient Monte Carlo estimation of network reliability metrics with the standard estimator*, invited talk in *INFORMS Annual Meeting*, Phoenix, USA, November 2018.

Yassine Hadjadj-Aoul gave the following tutorial:

- “Analysis of caching strategies for content centric networks” in the International Conference: “The 7th IEEE International Conference on Smart Communications in Network Technologies (SaCoNet)”.

Gerardo Rubino gave the following tutorial:

- *Introduction to rare event analysis using Monte Carlo*, G. Rubino, tutorial in 13th International Conference in Monte Carlo & Quasi-Monte Carlo Methods in Scientific Computing (MCQMC 2018), Rennes, France, July 2018.

Yassine Hadjadj-Aoul gave the following seminar presentation:

- “Efficient support of massive IoT devices’ access in future wireless networks” at the Manchester Metropolitan University (MMU).

10.1.6. Leadership within the Scientific Community

- Bruno Tuffin is the co-director of the common lab ALSTOM-Inria since 2014.
- Bruno Tuffin is an elected member of I-SIM council of INFORMS Society.
- Yann Busnel is a member of the CSV (the technical committee) of the Images and Networks Cluster of Brittany, France.
- Gerardo Rubino is a member of the CSV (the technical committee) of the Images and Networks Cluster of Brittany, France.
- Yann Busnel is a member of the Steering Committee of the RESCOM research group at GDR CNRS RSD.
- Yassine Hadjadj-Aoul is a founding member of Special Interests Group “IEEE Sig on Big Data with Computational Intelligence” under the IEEE COMSOC Big Data TC (Since June 2017).
- Yassine Hadjadj-Aoul is a member of the scientific committee of GT ARC (Automatique et Réseaux de Communication) scientific committee (since Nov. 2017).
- Gerardo Rubino is the coordinator of the research action “Analytics and machine learning”, in collaboration with Nokia Bell Labs.

10.1.7. Scientific Expertise

- César Viho has reviewed project proposals for the ANR and for CIFRE contracts for the ANRT.
- Yassine Hadjadj-Aoul has reviewed project proposals for the Irish Research Council (COALESCE Research Fund 2019).

10.1.8. Research Administration

- Yann Busnel is the head of « Network System, Cybersecurity and Digital law » Research Department at IMT Atlantique (2017–*).
- Bruno Sericola is responsible for the Inria Rennes-Bretagne Atlantique budget.
- Bruno Sericola is the leader of the research group MAPI (Math Appli Pour l'Info) the goal of which is to improve the collaboration between computer scientists and mathematicians.
- Bruno Sericola is member of the research commission of the academic council of University of Rennes 1.
- César Viho is director of the MATHSTIC (Mathematics, Electronics and Computer Sciences) doctoral school in charge of managing the recruitment of around 1100 PhD students and their activities during their doctorate, in all the concerned areas of the UBL (Université Bretagne Loire).

10.2. Teaching

Master: Bruno Tuffin, MEPS (performance evaluation), 35h, M1, Univ Rennes, France

Master: Bruno Tuffin, GTA (Game Theory and Applications), 15h, M2, Univ Rennes, France

Master: Patrick Maillé, GTA (Game Theory and Applications), 15h, M2, Univ Rennes, France

Master:Rennes 1 Patrick Maillé, Simulation and queuing theory, 25h, M2, IMT Atlantique, France

Licence:Rennes 1 Patrick Maillé, Techniques and models in networks, 20h, L3, IMT Atlantique, France

Master:Rennes 1 Patrick Maillé, Performance Evaluation, 30h, M1, IMT Atlantique, France

Licence:Rennes 1 Yann Busnel, Introduction to Network, 12h, 1st year ENS Rennes, France.

Master:Rennes 1 Yann Busnel, Big Data and Stream Processing, 9h, 3rd year IMT Atlantique , France.

Licence: Bruno Sericola, Mathematics, 14h, L2, IUT/University of Rennes 1, France.

Master: Bruno Sericola, Mathematics, 12h, M2, Istitic/University of Rennes 1, France.

Master: Bruno Sericola, Logistic and performance, 12h, M2, Faculté de sciences économiques, Univ of Rennes 1, France

Master: Bruno Sericola, MEPS (performance evaluation), 36h, M1, Univ Rennes, France

Master M1: César Viho, Networks:Rennes 1 from Services to protocols, 36 hours, Istitic/University of Rennes 1, France

Master M2: César Viho, Algorithms on graphs, 40 hours, Istitic/University of Rennes 1, France

Bachelor L2: César Viho, Network architecture and components, 16 hours, Istitic/University of Rennes 1, France

Master, 2nd year: Yassine Hadjadj-Aoul, Scalable Network Infrastructure (SNI), 10 hours, The Research in Computer Science (SIF) master and EIT Digital Master/University of Rennes 1, France

Master, pro 2nd year: Yassine Hadjadj-Aoul, Multimedia streaming over IP (MMR), 48 hours, Esir/University of Rennes 1, France

Master, pro 2nd year: Yassine Hadjadj-Aoul, Multimedia services in IP networks (RSM), 29 hours, Esir/University of Rennes 1, France

Master, pro 2nd year: Yassine Hadjadj-Aoul, Software Defined Networks, 6 hours, Istitic/University of Rennes 1, France

Master, 2nd year: Yassine Hadjadj-Aoul, Video streaming over IP, 8 hours, Istic/University of Rennes 1, France

Master: Yassine Hadjadj-Aoul, Introduction to networking (IR), 26 hours, Esir/University of Rennes 1, France

Master: Yassine Hadjadj-Aoul, Mobile and wireless networking (RMOB), 20 hours, Esir/University of Rennes 1, France

Master 2nd year: Yassine Hadjadj-Aoul, Overview of IoT technologies: focus on LPWAN, 2 hours, INSA, France

Master pro 2nd year: Sofiéne Jelassi, Supervision of heterogeneous networks, 32 hours, Istic/University of Rennes 1, France

Master pro 2nd year: Sofiéne Jelassi, Cloud & SDN virtualization, 32 hours, Istic/University of Rennes 1, France

Master pro 2nd year: Sofiéne Jelassi, Multimedia networks, 32 hours, Istic/University of Rennes 1, France

Master, 2nd year: Gerardo Rubino, Scalable Network Infrastructure (SNI), 10 hours, The Research in Computer Science (SIF) master and EIT Digital Master/University of Rennes 1, France

Supelec Rennes 3rd year: Gerardo Rubino, Dependability Analysis, 15 hours.

Master 2nd year: Gerardo Rubino, Quality of Experience, 4 hours, for two different groups of students of the Esir/University of Rennes 1, France

UDELAR, Uruguay: Gerardo Rubino, post-graduate course on queuing models, 21 hours.

10.2.1. Supervision

PhD: Ajit Rai, Availability prediction with logistics, ALSTOM/Université de Rennes 1, Defense in July 2018, supervised by Bruno Tuffin.

PhD: Imad Alawe, “Mobile SDN architecture”, Defense in November 2018; supervised by César Viho and Yassine Hadjadj-Aoul, University Rennes 1, Philippe Bertin, B-COM and Davy Darche, TDF.

PhD: Nicolás Jara, “Fault tolerant design of dynamic WDM optical networks”, Technical University Federico Santa María (UTFSM) and university of Rennes 1, France. Advisors: R. Vallejos (Chile) and G. Rubino (France). Defended in July 2018.

PhD in progress: Ximun Castoreo, Measurements to check network neutrality, started 10/2018, supervised by Bruno Tuffin.

PhD in progress: Ayman Chouayakh, Jeux d’acteurs et mécanismes d’enchères pour la gestion du spectre dans les réseaux 5G, Orange/IMT Atlantique, started 03/2017, supervised by Patrick Maillé.

PhD in progress: Hiba Dakdouk, Algorithmes asynchrones et économes pour l’optimisation des communications d’un réseau d’objets connectés, Orange/IMT Atlantique, started 11/2018, supervised by Patrick Maillé

PhD in progress: Alassane Samba, Technologies Big Data et modèles prédictifs pour la QoS des réseaux, IMT Atlantique, defended in October 2018, supervised by Yann Busnel, Gwendal Simon and Philippe Dooze (Inria).

PhD in progress: Richard Westerlynck, Analyse répartie et extraction de tendances à grande échelle pour les données massives en santé, IMT Atlantique, defense in 2020, supervised by Yann Busnel and Marc Cuggia (PUPH, CHU Rennes).

PhD in progress: Vasile Cazacu, Calcul distribué pour la fouille de données cliniques, IMT Atlantique, defense in 2020, supervised by Emmanuelle Anceaume (CNRS/IRISA Rennes), Yann Busnel and Marc Cuggia (PUPH, CHU Rennes).

PhD in progress: Corentin Hardy, Device-Assisted Distributed Machine-Learning on Many Cores, started in April 2016; supervisors: Bruno Sericola and Erwan Le Merrer from Technicolor, University Rennes 1.

PhD: Yves Mocquard, Analyse probabiliste de protocoles de population, Defense in December 2018; supervisors: Bruno Sericola and Emmanuelle Anceaume from team Cidre, University Rennes 1.

PhD in progress: Jean-Michel Sanner; Cifre Grant, Orange Labs, “SDN technologies for network services performances adaptation of carriers networks”; started on January 2013.

PhD in progress: Ali Hodroj, Enhancing content delivery to multi-homed users in broadband mobile networks, started in November 2015; supervisors: Bruno Sericola, Marc Ibrahim and Yassine Hadjadj-Aoul, University Rennes 1 and St Joseph University of Beyrouth.

PhD in progress: Jean-Michel Sanner; Cifre Grant, Orange Labs, “SDN technologies for network services performances adaptation of carriers networks”; started on January 2013; Advisors: Y. Hadjadj-Aoul and G. Rubino; University Rennes 1.

PhD in progress: Hamza Ben Ammar, “Socially-aware network and cache resources optimization for efficient media content delivery in Content Centric Networks”, started in October 2015; advisors: Yassine Hadjadj-Aoul, Gerardo Rubino and Soraya Ait Chellouche, University Rennes 1.

PhD in progress: Imane Taibi, “Big data analysis for network monitoring and troubleshooting”; started on Nov. 2017; Advisors: G. Rubino, Inria, and Yassine Hadjadj-Aoul, University Rennes 1, and Chadi Ibrahim, Inria.

PhD in progress: Anouar Rkhami, “Data analytics for optimized resources’ management in future 5G networks”; started on Oct. 2018; Advisor: Gerardo Rubino and Yassine Hadjadj-Aoul, University Rennes 1, and Abdelkader Outtagarts, Nokia Bell labs.

PhD in progress: Mohamed Rahali, “Machine learning-based monitoring and management for hybride SDN networks”; started on Oct. 2017; Advisors: G. Rubino, Inria, and Sofiène Jelassi, University of Rennes 1.

PhD in progress: Laura Aspirot, “Fluid Approximations for Stochastic Telecommunication Models”, University of the Republic, Uruguay. Advisors: E. Mordecki (Uruguay) and G. Rubino (France). Defense in 2019.

PhD in progress: Jorge Graneri, “Mathematical Models for Semantic Memory”, University of the Republic, Uruguay. Advisors: E. Mizraji (Uruguay) and G. Rubino (France). Defense in 2019.

10.2.2. *Juries*

Bruno Tuffin was a member of the following PhD defense committees:

- Graciela FERREIRA LEITES MUNDELL. Analysis and Optimization of Highly Reliable Systems. University of the Republic, Montevideo, Uruguay, 2018, rapporteur.
- Robert Salomone, Advances in Monte Carlo Methodology, The University of Queensland, Australia, 2018, rapporteur.
- Jean-Bernard Eytard, Une approche par la géométrie tropicale et la convexité discrète de la programmation bi-niveau : application à la tarification des données dans les réseaux mobiles de télécommunications, Ecole Polytechnique, Novembre 2018, président.

Patrick Maillé was a member of the following PhD defense committees:

- Wilfried YORO. Modeling the correlation between the energy consumption and the end-to-end traffic of services in large telecommunication networks, Telecom SudParis, 2018, rapporteur.
- Àngel SANCHIS CANO, Economic analysis of wireless sensor-based services in the framework of the Internet of Things, Polytechnic University of Valencia, Spain, 2018, rapporteur.
- Kodjo Sena APEKE, Modélisation hybride et multi-échelle pour la prédiction de la réponse d’une tumeur sous traitement en radiothérapie, Décembre 2018, président.

Yann Busnel was a member of the following PhD defense committee:

- Mansour Khelghatdoust, University of Sidney, November 2018, rapporteur.

Bruno Sericola was member of the final selecting board for the recruitment of CNRS researchers in 2018.

César Viho was a member of juries for the recruitment of:

- Young graduate scientists and senior researchers at Inria.
- Associate Professors and senior Professors at ISTIC-Université

Gerardo Rubino was a member of the following PhD defense committees:

- Imen TRIKI, Rôle du vidéo streaming mobile qui dépend du contexte dans l'amélioration de la qualité d'expérience. Université d'Avignon, June 5, 2018. Rapporteur.
- Nadhir Ben Rached. Rare Events Simulations with Applications to the Performance Evaluation of Wireless Communication Systems. Kaust, Saudi Arabia, October 8, 2018. Rapporteur.

10.3. Popularization

Yann Busnel is a member of Development Council of Computer Sciences Master at Université de Nantes (2017–*).

10.3.1. Internal or external Inria responsibilities

- Bruno Tuffin was a member of Inria-MITACS selection committee

10.3.2. Interventions

G. Rubino makes regular presentations to high school students about the research work in general, and specific technical topics in particular. Current talks:

- Randomness as a tool
- Internet as a research problem
- Great challenges in maths: the Riemann Hypothesis
- Great challenges in math/computer science: the “P versus NP” problem

DYOGENE Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- B. Błaszczyszyn was in the Organizing Committee of *Stochastic Geometry Days 2018* 14–18 mai 2018 Paris (France); <https://geosto-2018.sciencesconf.org/>.
- A. Busic was in the Organizing Committee of *ALEA Days 2018* 12–16 March 2018 at CIRM, Luminy (France); <https://conferences.cirm-math.fr/1776.html>

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Editorial Boards

- M. Lelarge: IEEE's Transactions on Network Science and Engineering, Bernoulli Journal, Queueing Systems.

9.1.3. Invited Talks

- Analysis of Algorithms 2018, Uppsala (Sweden), June 2018.
- European Conference on Queueing Theory (ECQT) 2018, Jerusalem, July 2018.
- Rencontres de Probabilités de Rouen 2018, September 2018, invited talk.
- Societal Networks, RTDM program, Simons Institute, UC Berkeley, USA, March 2018, invited talk; video: <https://simons.berkeley.edu/talks/ana-busic-3-29-18>.
- Advances in Modelling and Control for Power Systems of the Future (CAESARS 2018), EDF Palaiseau, September 2018, invited talk.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Licence: B. Błaszczyszyn (Cours) **Théorie de l'information et du codage** 24 heqTD, L3, ENS, France.
- Licence: A. Busic (Cours) and S. Samain (TD) Structures et algorithmes aléatoires 60heqTD, L3, ENS, France.
- Master: B. Błaszczyszyn (Cours) **Processus ponctuels, graphes aléatoires et géométrie stochastique** 39heqTD, M2 Probabilités et Modèles Aléatoires, UPMC, France
- Master: A. Busic (Cours) and L. Stephan (TD) **Modèles et algorithmes de réseaux** 60heqTD, M1, ENS, France.
- Master: A. Busic (Cours) **Fondements de la modélisation des réseaux** 18 heqTD, M2 MPRI, France.
- Master: M. Lelarge (Cours) **Deep Learning Do it Yourself**, M1, ENS
- Doctorat: A. Busic (Cours) **Markov chains and exact sampling**, 7heqTD, Ecole thématique CNRS, MathExp 2018 "Mathématiques expérimentales: méthodes et pratiques", 21 mai-1 juin 2018, Saint Flour, France. <https://mathexp2018.sciencesconf.org/>

9.2.2. Supervision

- PhD: Dalia-Georgiana Herculea “Les Hyperfractales pour la Modelisation des Reseaux sans Fil” since October 2016, defence 21 November 2018; PhD CIFRE co-advised by B. Błaszczyszyn, and Ph. Jacquet.
- PhD: Alexandre Hollocou, defense December 19 2018, Nouvelles approches pour le partitionnement de graphes, co-advised by M. Lelarge and T. Bonald (Telecom ParisTech)
- PhD in progress: Léo Miolane, since 2016, High dimensional statistics, advised by M. Lelarge
- PhD in progress: Alexis Galland, since 2017, Deep Learning on Graphs, advised by M. Lelarge
- PhD in progress: Quentin Le Gall “Crowd networking : modélisation de la connectivité D2D” since October 2017; PhD CIFRE co-advised by B. Błaszczyszyn and E. Cali (Orange).
- PhD in progress: Antoine Brochard “Signal processing for point processes and statistical learning for telecommunications”, since September 2018; PhD CIFRE co-advised by B. Błaszczyszyn and Georgios Paschos (Huawei).
- PhD in progress: Md Umar Hashmi, Decentralized control for renewable integration in smartgrids, since from December 2015, advised by A. Busic.
- PhD in progress: Sébastien Samain, Monte Carlo methods for performance evaluation and reinforcement learning, since November 2016, advised by A. Busic.
- PhD in progress: Arnaud Cadas, Dynamic matching models, since October 2017, supervised by A. Busic.

9.2.3. *Juries*

- B. Błaszczyszyn, member of the PhD defense jury of Dalia-Herculea Popescu; 21 November 2018.
- A. Busic, member of the PhD defense jury of J. Horta (Télécom ParisTech, France); 16 Avril 2018.
- C. Fricker, PhD defense of Farah Slim (Orange- Bretagne Loire University), 13/03/2018.

9.3. Popularization

9.3.1. *Internal or external Inria responsibilities*

- B. Błaszczyszyn is an ENS adjunct professor since September 2018.
- B. Błaszczyszyn and A. Busic are members of the ENS Computer Science Department Board (Conseil du Laboratoire).
- A. Busic is member of the Committee for the Technological Development, Inria Paris

9.3.2. *Education*

C. Fricker: member of the jury of *Agrégation de Mathématiques*.

EVA Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organization

10.1.1.1. General Chair, Scientific Chair

- **Thomas Watteyne** is TPC co-chair of the 6th International Workshop on Computer and Networking Experimental Research using Testbeds (CNERT), held in conjunction with IEEEINFOCOM, Paris, France, 29 April-2 May, 2019. More information at <https://infocom2019.ieee-infocom.org/cnert-computer-and-networking-experimental-research-using-testbeds>.
- **Paul Muhlethaler** was general co-chair with Eric Renault of the first conference of application of Machine Learning for Networks (MLN 2018 27-28 November 2018), conference hosted by Inria Paris.
- **Pascale Minet** was general co-chair with Leila Saidane from ENSI (Tunisia) of the PEMWN 2018 conference, the 7th IFIP/IEEE international conference on Performance Evaluation and Modeling of Wired and Wireless Networks, technically co-sponsored by IFIP WG6.2 and IEEE ComSoc (see <https://sites.google.com/site/pemwn2018/>). This conference was held in Toulouse (IUT of Blagnac), the 26th, 27th and 28th of September 2018. The organization co-chairs were Thierry Val, Adrien Van Den Bossche, and Rejane Dalce. Three tutorials were given:
 - *D2D communications in 5G networks: opportunities and challenges* by Salah Eddine Elayoubi, Centrale Supélec, Paris.
 - *Drone aided networks: from collecting data to connecting people* by Riadh Dhaou, Institut National Polytechnique de Toulouse (INPT).
 - *Continuity of the Positioning Service* by François Spies, University Bourgogne Franche-Comte.
- **Thomas Watteyne** was co-chair of the 6TiSCH 2 Plugtests, Inria, Paris, 2-4 February 2018.

10.1.1.2. Member of the Organizing Committees

- **Paul Muhlethaler** organized the DGA Inria workshop on Artificial Intelligence for telecommunications and networks in May 2018.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- **Paul Muhlethaler** was in Steering committee member of MobileHealth Workshop 2018.
- **Anis Louiti** was in Steering committee member of MobileHealth Workshop 2018.

10.1.2.2. Member of the Conference Program Committees

- **Pascale Minet**
 - CoRes 2018, 3emes Rencontres Francophones sur la Conception de Protocoles,
 - DCNET 2018, 9th International Conference on Data Communication Networking, July 2018,
 - ETFA 2018, 22th IEEE International Conference on Emerging Technologies & Factory Automation, September 2018,
 - EUSPN 2018, 9th International Conference on Emerging Ubiquitous Systems and Pervasive Networks (EUSPN), November 2018,

- GlobeCom 2018, IEEE Global Communications Conference, December 2018.
- MLN 2018, Machine Learning for Networking, November 2018,
- MSPN 2018, 4th International Conference on Mobile, Secure and Programmable Networking, June 2018,
- PEMWN 2018, 7th International Conference on Performance Evaluation and Modeling in Wired and Wireless Networks, September 2018,
- PECCS 2018, 8th International conference on Pervasive and Embedded Computing and Communication Systems, July 2018,
- SITIS 2018, 14th International Conference on Signal Image Technology & Internet Based Systems, November 2018,
- VTC 2018, 87th IEEE Vehicular Technology Conference, June 2018,
- Wireless Days 2018, IFIP/IEEE Wireless Days, March 2018,
- WiSEE 2018, 6th IEEE International Conference on Wireless for Space and Extreme Environments, October 2018.
- **Paul Muhlethaler:**
 - ITST 2018 15- 17 October, Lisbon, Portugal ,
 - ISCC 2018, 25-28 June 2018, Natal Brazil,
 - Mownet 2018, International Conference on Selected Topics in Mobile & Wireless Networking, 20 -22 June 2018,
 - PEMWN 2018, 7th International Conference on Performance Evaluation and Modeling in Wired and Wireless Networks, 26 - 28 November 2018, Toulouse,
 - Wireless Days, IFIP/IEEE Wireless Days 3 - 5 April 2018, Dubai,
 - WiOpt 2018, 7 - 11 March 2018 Shangai, China.

10.1.3. Journal

10.1.3.1. Reviewer - Reviewing Activities

- **Paul Muhlethaler**
 - Reviewer Ad Hoc Networks Journal (Elsevier),
 - Reviewer Annals of telecommunications,
 - Reviewer International Journal of Distributed Sensor Networks. Hindawi,
 - Reviewer IEEE Transactions on Information Theory,
 - Reviewer IEEE Transactions on Vehicular Technology,
 - Reviewer IEEE Transactions on Wireless Communications.
- **Pascale Minet**
 - Acta Astronautica,
 - Ad Hoc Networks,
 - Annals of Telecommunications,
 - Computer Communications,
 - Computer Networks,
 - Engineering Applications of Artificial Intelligence,
 - IEEE Access,
 - IEEE Internet of Things,
 - IEEE Transactions on Mobile Computing,
 - IEEE Transactions on Green Communications and Networking,

- IEEE Transactions on Industrial Electronics,
- IEEE Transactions on Industrial Informatics,
- International Journal of Communication Systems,
- International Journal of Ad Hoc and Ubiquitous Computing,
- Sensors Journal,
- Wireless Networks.
- **Thomas Watteyne**
 - MDPI Sensors, 2018.
- **Nadjib Achir**
 - Reviewer Sensor Networks (MDPI)
 - Reviewer Wireless Communications and Mobile Computing (Wiley)
 - Reviewer Internet of Things Journal (IEEE)
 - Reviewer Ad Hoc Networks Journal (Elsevier)
- **Selma Boumerdassi**
 - Reviewer Ad Hoc Networks Journal (Elsevier);
 - Reviewer The journal of Future Generation Computer Systems (Elsevier).
- **Samia Bouzefrane**
 - The International Journal of Computer and Telecommunications Networking (Elsevier),
 - The IEEE Transactions on Mobile Computing,
 - The Information and Software Technology Journal (Elsevier)
 - The Springer Multimedia Tools and Application Journal
 - The ACM Transaction on Internet Technology
 - The Concurrency and Computation Practice and Experience Journal
 - the Journal of Systems and Software (Elsevier)

10.1.4. Invited Talks

- **Thomas Watteyne**
 - Panelist on “New Trends for IoT and Satellite Networks“, talking about “Industrial IoT, A Reality Check – Standards, Products and Research Challenges” at IoT Week 2018, Bilbao, Spain, 6 June 2018.
 - Boostez la Performance the vos Objects Connectes. Inria Tech talk, French Tech central, Station F, Paris, France. 24 October 2018.
 - Getting Your Hands Dirty with the Industrial IoT and SmartMesh IP. Summer School on Dependable IoT. TU Graz, Graz, Austria. 20 July 2018.
 - SmartMesh IP. Captronic/Arrow mesh networking day. ESSIE, Paris, France. 25 October 2018.
 - The Internet of (Important) Things. French Tech Central, Station F, Paris, France. 24 October 2018.
 - “IoT research, standardization and interop using testbeds”, Fed4FIRE Engineering Conference, Brugge, Belgium, 8-9 October 2018.
 - From Research, to Product, to Standardization: A Journey into TSCH. TU Graz, Graz, Austria, 19 July 2018.
 - Reality Check on IoT Solutions producing data for people to analyze. Boston Consultancy Group semine series, Station F, Paris, France. 7 July 2018.

- (keynote) Industrial IoT, A Reality Check : Standards, Products and Research Challenges. IIoT Workshop, Strasbourg, France, 3 July 2018.
- “IPv6 over the TSCH mode of IEEE 802.15.4e: overview of standardization, tooling, open-source initiative and commercial products”, Workshop on Design, Deployment and Testing of Internet of Things Technologies (DDT-IoT), IEEE BalkanCom, Podgorica, Montenegro, 8 June 2018.
- “Industrial IoT, A Reality Check: Standards, Products and Research Challenges”, IoT Week, Bilbao, Spain, 4-8 June 2018.
- A Turn-Key Solution for Real-World IoT, presented together with Keoma Brun-Laguna. LIRIMA Workshop on Smart Agriculture in Africa. 3-4 April 2018.
- Intro to Dr. Malisa Vucinic’ keynote “The Devil is in the Detail: How a Real-World IoT Technology is Made – IETF 6TiSCH” at the Information Technology Conference, Montenegro, 20 February 2018.

10.1.5. Leadership within the Scientific Community

Thomas Watteyne co-chairs the IETF 6TiSCH standardization group.

10.1.6. Scientific Expertise

Thomas Watteyne regularly consults with major player in the (Industrial) IoT space.

10.1.7. Research Administration

- **Thomas Watteyne** is member of the Inria-Paris “Commission de Developpement Technologique”, since 2018, where we ensure Inria project teams get sufficient engineering resources to change the world.
- **Paul Muhlethaler** is member of the Inria-Paris “Comite de Centre”, since 2016 (suppléant of Michel Kern).
- **Thomas Watteyne** is member of the Inria-Paris “Comite de Centre”, since 2016, where we work on making sure Inria-Paris will always remain one of the greatest places to work at!

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- Intensive 1-week course on IoT, with associated hands-on labs. ENSTA ParisTech. Graduate level. **Thomas Watteyne** and Ziran Zhang. 9-12 October 2017.
- 1/2-day crash course on the Industrial IoT. Telecom ParisTech. Graduate level. **Thomas Watteyne**. 28 September 2017..
- 6-week course on IoT, with associated hands-on labs. ENSTA ParisTech. Undergraduate level. **Thomas Watteyne**, Keoma Brun-Laguna and Dominique Barthel. Spring 2017.

10.2.2. Supervision

- PhD : Fouzi Boukhalfa, Low and high reliability access in Vehicular Ad-hoc NETWORKS. Sorbonne University. **Paul Muhlethaler**.
- PhD (ongoing) Mina Rady, Heterogeneous architectures for the IoT, Sorbonne University. **Thomas Watteyne** and **Paul Muhlethaler**, under a CIFRE agreement with Orange Labs, Meylan, France.
- PhD (viva on 18 December 2018) Keoma Brun-Laguna, Deterministic networking for the Industrial Internet of Things, Sorbonne University. **Thomas Watteyne** and **Pascale Minet**.
- PhD (in progress) Jonathan Munoz, Time slotted systems for long range communications, Sorbonne University, **Thomas Watteyne** and **Paul Muhlethaler**.

- PhD (in progress) Amar Abane, Name Data Networks in the Internet of Things, CNAM. Samia Bouzefrane and **Paul Muhlethaler**.
- PhD (in progress) Abdallah Soheby, Etude et evaluation de la dissemination des informations dans la 5G. Eric Renault and **Paul Muhlethaler**.
- PhD (in progress) Mamoudou Sangara, Utilisation de techniques de Machine Learning dans les reseaux VANETs. Samia Bouzefrane and **Paul Muhlethaler**.
- PhD (in progress) Iman Hmedoush, Connection protocols for the 5G IoT. Cedric Adjih and **Paul Muhlethaler**.

10.2.3. Juries

- HdR:
 - Oyunchimeg Shagdar, “Optimizing wireless communications in dense mobile environments”, University of Paris-Saclay, prepared at the University of Versailles-Saint Quentin, September 2018, **Pascale Minet** examiner.
 - Imen Jemili, “Optimisation des ressources dans les reseaux mobiles sans fil”, University of Bordeaux, November 2018, **Pascale Minet** examiner.
 - Khaled Boussetta “Dimensionnement, adaptation et placement de fonctionnalités reseaux pour des applications sensibles aux delais”, University of Paris 13, December 2018, **Paul Muhlethaler** reviewer.
- PhD:
 - Keoma Brun-Laguna, “Deterministic networking for the Industrial Internet of Things”, Sorbonne University, December 2018, **Thomas Watteyne** and **Pascale Minet**, PhD advisers.
 - of Jetmir Haxhibeqiri, “Flexible and Scalable Wireless Communication Solutions for Warehouse Applications”, imec – IDLab Ghent – Ghent University, Belgium, December 2018, **Thomas Watteyne** reviewer.
 - Narjes Boulila “Communication vehiculaire garantissant les contraintes temps reel pour les systemes de prevention de collision”, University de la Manouba, December 2018, **Paul Muhlethaler** reviewer.
 - Dinh Van Nguyen “Reseaux de capteurs sans-fil pour la cartographie à l’interieure et la localisation precise servant la navigation à basse vitesse dans les villes intelligentes”, Mines ParisTech, December 2018, **Paul Muhlethaler** examiner.
 - Veronica Quintana Rodriguez “Performance Analysis of Virtualized Network”, University of Paris 6, October 2018, **Paul Muhlethaler** examiner.
 - Mohamed Tahar Hammi, “Sécurisation de l’Internet des Objets”, Telecom ParisTech, September 2018, **Pascale Minet** examiner.
 - Lilia Lassouaoui, “Ordonnancement et routage pour l’augmentation de la duree de vie dans les reseaux de capteurs sans fil”, CNAM, July 2018, **Pascale Minet** examiner.
 - Thiwiza Bellache. “Controle dynamique des communications dans une environnement V2V et V2I”, University Versailles Saint Quentin February 2018. **Paul Muhlethaler** examiner.
 - Philippe Erzan “Optimisation de la topologie des reseaux sans fil”, University Centrale-Supelec, January 2018, **Paul Muhlethaler** examiner.
 - Moussa Déthié Sarr, “Spécification d’un mécanisme de construction automatique de topologies et d’adressage permettant la gestion dynamique de reseaux de capteurs sans fil lineéaires”, University of Clermont, January 2018, **Pascale Minet** reviewer.
 - Pengwenlong Gu, “Détection des comportements malveillants dans les reseaux vehiculaires”, Telecom ParisTech, February 2018, **Pascale Minet** examiner.

10.3. Popularization

10.3.1. Interventions

- Keoma Brun-Laguna
 - “Solsystem: IoT Industriel et déploiement en milieux réels” démo at RII meeting (“Mobilités et environnements, 20 Novembre 2018, Station F, Paris”)
- **Thomas Watteyne**
 - The Inria-Paris OpenTestbed (you might already have noticed. . .). Inria Seminar, Paris, 2 October 2018.
 - “Le tour du monde en 1,000 capteurs!”. Inria Rocquencourt seminar series. 6 June 2018.
 - Construire son Réseau IoT en 10min. Conférence d’ouverture de la semaine des Mathématiques. Inria-Paris, Paris, France, 12 March 2018.

10.3.2. Dans les Medias

- **Thomas Watteyne**
 - Edge computing: on vous dit tout sur les technos qui mettent le cloud dans votre poche, 01net, 10 September 2018.
 - Qu’est-ce que l’IoT? Boston Consultancy Group podcast, 9 September 2018.
 - Retour Semaine des maths 2018 : conference de Thomas Watteyne à l’Inria, Academie de Paris, 15 March 2018.

10.3.3. Creation of media or tools for science outreach

A video concerning the research on protocols for VANETs of Mohamed Hadded has been done by Inria.

FUN Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- Nathalie Mitton is a member of the Steering committee of CIoT
- Nathalie Mitton is demo/poster chair of infocom 2019
- Valeria Loscri is general co-chair of City-Wide Pervasive Environment CoWPER, in conjunction with IEEE SECON 2018, and of a Special Session on Mobile Social Networks in PIMRC 2018
- Antoine Gallais was the co-chair of IIoT day 2018

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Antoine Gallais is TPC co-chair of CoRes 2019
- Valeria Loscri is TPC co-chair of IEEE ACM Nanocom 2019 and of IEEE ACM SmartComp in conjunction with Mobihoc 2018
- Nathalie Mitton is TPC co-chair of ICC 2019 and 2018

10.1.2.2. Member of the Conference Program Committees

- Valeria loscri is/was member in the Technical Program Committee (TPC) in IFIP/IEEE NTMS 2018, Globecom 2018-2019, CORES 2018, VTC 2018-2019, GIoTS 2018-2019, WiMob 2018, CCNC 2018-2019, ICC 2019
- Nathalie Mitton is/was in the Technical Program Committee (TPC) of Percom 2019, WCNC 2019, DCOSS 2019, CORES 2018, Infocom workshop 2018, VTC 2018, globecom 2019&2018, GIIS 2018, CSCN2018, ICC 2018, coconet 2018, adhocnow 2018
- Antoine Gallais was/is in the Technical Program Committee (TPC) of IEEE Globecom'19 and 2018, IEEE ICNC' 19 and 2018, IEEE GIIS' 18, IARIA INNOV' 18, IEEE COMNETSAT' 18, IARIA EMERGING' 18, ADHOC-NOW' 18, ICST Adhocnets' 18
- Allan Blanchard was/is in the Technical Program Committee (TPC) of 4PAD 2018

10.1.3. Journal

10.1.3.1. Guest editorial activities

- Nathalie Mitton was (co-)editor of Sensor Special Issues of MDPI Sensors on QoS in WSN and of MDPI Future Internet WSN in Smart Agriculture
- Valeria Loscri was editor of IEEE Access Special Section on Protocols for Nanocommunication Networks, of IEEE Access Special Section on Body Area Networks and of a Special Issue on IEEE Internet of Things Journal on Recent Advances on Social Internet of Vehicles

10.1.3.2. Member of the Editorial Boards

- Nathalie Mitton is editorial board members of AHSWN since 2011
- Nathalie Mitton is editorial board member of Adhoc Networks since 2012
- Nathalie Mitton is editorial board member of IET-WSS since 2013
- Nathalie Mitton is editorial board member of ComSoc MMTC e-letter since 2014

- Nathalie Mitton is editorial board member of Wiley Transactions Emerging Telecommunications Technologies since 2016
- Nathalie Mitton is editorial board member of Wireless Communications and Mobile Computing since 2016
- Nathalie Mitton is editorial board member of MDPI Future Internet since 2018
- Valeria Loscri is editorial board member of IEEE Transactions on Nanobioscience journal since 2017
- Valeria Loscri is editorial board member of Elsevier Computer Networks journal since 2016
- Valeria Loscri is editorial board member of Robotics Software Design and Engineering of the International Journal of Advanced Robotic Systems since 2016
- Valeria Loscri is editorial board member of Elsevier Journal of Networks and Computer Applications (JNCA) journal since 2016

10.1.4. Invited Talks

- Nathalie Mitton was invited speaker at Workshop “Digital Agriculture in Africa”, in Montpellier, in April 2018
- Nathalie Mitton was invited speaker at CORES conference in Roscoff, France, in May 2018
- Nathalie Mitton was invited speaker at WFCS conference in Imperia, Italy, in June 2018
- Nathalie Mitton was invited speaker at Nantes University, France, in October 2018
- Antoine Gallais was invited speaker at Innov’School Network of Things (ISNOT), Gammarth, Tunisia in April 2018
- Allan Blanchard gave an invited tutorial at ZINC 2018, Novi Sad, Serbia in June 2018
- Allan Blanchard gave an invited tutorial at HPCS 2018, Orleans, France, in July 2018
- Valeria Loscri was invited as panelist in the panel “Inspirations from wireless networks to biology” in the 3rd EU FET CIRCLE Workshop, Ghent April 2018
- Valeria Loscri was invited as panelist in the Panel New Trends in Communication and at the Doctoral Colloquium at ACM/IEEE NanoCom 2018
- Valeria Loscri has been appointed as Faculty Mentor in N2 Women meeting at ACM Mobihoc 2018
- Valeria Loscri was invited to attend the Seed meeting on Dynamical Modeling and Simulation for Molecular Communication that was held at the Embassy of France in London
- Valeria Loscri was invited speaker at the LiFi seminar in Vélizy, September 2018

10.1.5. Leadership within the Scientific Community

- Nathalie Mitton is a member of the Steering Committee of the GDR Rescom
- Valeria Loscri is a member of Social Network Technical Committee
- Valeria Loscri is a member of Emerging Technologies Initiatives for Molecular, Biological and Multi-Scale Communications (ETI-MBMC)
- Valeria Loscri is a member of the Quantum Communications & Information Technology Emerging Technical Subcommittee (QCIT)
- Valeria Loscri is a member of the “Research Group on IoT Communications and Networking Infrastructure” at ComSoc Communities

10.1.6. Scientific Expertise

- Nathalie Mitton is an elected member of the evaluation community of Inria. She has acted as a reviewer for ANRT and ANR project submissions and as an evaluator for Chilean National Science and Technology Commission (CONICYT - Chile) FONDECYT Initiation into Research 2018 projects. She is also member of the scientific committees of the competitiveness cluster of MATIKEN and for CITC (International Contactless Technologies Center). Finally, Nathalie Mitton is a member of the HCERES visiting committee for the LISIS laboratory.

- Valeria Loscri is Scientific European Responsible for Inria Lille - Nord Europe. She is reviewer in the context of ERC Consolidator Grant. She is reviewer for Equipes Associées. She has been scientific reviewer of TOP grant for senior researchers in the context of Netherlands Organisation for Scientific Research (NWO) program.
- Valeria Loscri has been external expert reviewer of proposal for grant competition at the Center for Excellence in Applied Computational Science and Engineering (CEACSE), UTC (USA).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

E-learning

Mooc, Nathalie Mitton, “Villes intelligentes : défis technologiques et sociétaux”, 5-week mooc by the IPL CityLab@Inria team, FUN, Inria, in November 2018

SPOC, Nathalie Mitton, EIT Digital “Technological challenges of participatory Smart cities”, 5-week by the IPL CityLab@Inria team in November 2018

Remote course, Nathalie Mitton, Internet of things, 5-week + face to face week in May 2018

Master: Valeria Loscri, Objets Communicants, 24h (Mineure Habitat Intelligent), Ecole des Mines de Douai, France

Master: Nathalie Mitton, Wireless sensor networks, 16h eqTD (Master MINT), Université Lille 1 and Telecom Lille 1, France

Master: Nathalie Mitton, Introduction to Internet of Things, 8h CM Ecole Centrale de Lille, France

Master: Ibrahim Amadou, Introduction to Internet of Things, 8h TP Ecole Centrale de Lille, France

Master: Ibrahim Amadou and Abdoul Aziz Mbacke, Introduction to RFID, 16h IMT Rennes, France

Master: Ibrahim Amadou, Wireless sensor networks, 16h eqTD (Master ROC), IMT, France

Bsc: Farouk Mezghani, Contactless technologies, 20h eqTD, Université de Valenciennes, France

Licence: Jean Razafimandimby, Algorithms and Programming, 30h eqTD, Université Lille 1, France

10.2.2. Supervision

PhD defended on October 18th 2018: Aziz Mbacke, Smart Deployment of heterogeneous sensors and RFID in a Smart City, Université Lille 1, 2015-2018, Nathalie Mitton and Hervé Rivano (Urbanet)

PhD defended on October 12th 2018: Jad Nassar, Ubiquitous networks for smart grids, Université Lille 1, 2015-2018, Nathalie Mitton and Nicolas Gouvy (HEI)

PhD in progress: Brandon Foubert, Communication sans fil Polymorphe pour l’Agriculture Connectée, Université Lille 1, 2018-2021, Nathalie Mitton

PhD in progress: Rodrigo Teles, Virtualizing Heterogeneous Wireless Networks with SDN for the 5G, Université Strasbourg, 2016-2019, Antoine Gallais and Fabrice Théoleyre

PhD in progress: M. Amine Falek, Optimization algorithms for personalized and dynamic multi-modal itinerary planning, Université Strasbourg, 2016-2029, Antoine Gallais, Cristel Pelsser and Fabrice Théoleyre

PhD in progress: Loïc Miller, Secure work-flow access control, Université Strasbourg, 2018-2021, Antoine Gallais, Pascal Merindol and Cristel Pelsser

10.2.3. Juries

- PhD/HDR committees:
 - Antoine Gallais is/was members of the following PhD thesis committees:

- * François Lemerrier, IMT Atlantique, Rennes, France, November 2018
- * Solomon Petrus le Roux, Stellenbosch University, South Africa, December 2018
- * Hugo Chelle, Université de Toulouse, France, December 2018
- Valeria Loscri is/was members of the following PhD thesis committees:
 - * Alexis Duque, INSA Lyon, France, October 2018
 - * Óscar Alvear, Universidade Politecnica Valencia, Spain, July 2018
 - * Sabine Aroua, Université de La Rochelle, France, July 2018
 - * Mohamed Abdelkrim, Université Paris Est Créteil, December 2018
- Nathalie Mitton is/was member of the following PhD thesis committees:
 - * Patrick Olivier Kamgoue, Univ. de Yaounde - Univ. de Lorraine, January 2018
 - * Hermes Pimenta de Moraes Junior, UTC (présidente), May 2018
 - * Hamadoun Tall, Clermont Auvergne, (reviewer) May 2018
 - * Marwan Ghanem, UPMC, September 2018
 - * Wafa Badreddine, UPMC, (reviewer) November 2018
 - * Yosra Zguira, INSA Lyon (reviewer), November 2018
 - * Solomon Petrus le Roux (reviewer), Stellenbosch University, December 2018
 - * Fadhlallah Baklouti, Université Bretagne Sud (reviewer), February 2019
 - * M Naas, Université de Bretagne Occidentale (reviewer), February 2019
- Nathalie Mitton was a member of the HDR defense committees
 - * Valeria Loscri, Université Lille 1, March. 2018
 - * Fen Zhou, Université d'Avignon, Sept. 2018
- Researcher selection committees:
 - Nathalie Mitton was a member of the Professor competition selection committee at Ecole des Mines Nancy, Université Nice-Sophia Antipolis and Clermont-Ferrand
 - Nathalie Mitton was a member of the Inria chaire committee for Supelec Rennes
 - Nathalie Mitton was a member of the Assistant Professor (MdC) at Valenciennes
- Nathalie Mitton is/was reviewer of the following PhD follow-up committees:
 - Rodrigue Domgua Rodriguez, INSA Lyon
 - Yosra Zguira, INSA Lyon
 - Vaseileios Kotsiou, Université de Strasbourg
- Antoine Gallais is/was reviewer of the following PhD follow-up committees:
 - Tomas Lagos Jenschke, IMT Atlantique

10.3. Popularization

- Matthieu Berthome, Jad Nassar, Ibrahim Amadou, Antonio Costanzo and Antoine Gallais gave some talks in high schools for the “Fête de la Science” in October 2018
- Nathalie gave an interview for France Info on connected objects

GANG Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- Amos Korman: BDA 2018, General Chair of the organizing committee.
- Adrian Kosowski: WENDY Paris, chair of workshop.

10.1.1.2. Member of the Organizing Committees

Organisation of Dagstuhl Seminar 18211 *Formal Methods and Fault-Tolerant Distributed Computing: Forging an Alliance*, by Javier Esparza (TUM, Munich, Germany), Pierre Fraigniaud (IRIF and Inria GANG, Paris, France), Anca Muscholl (LaBRI, Bordeaux, France), and Sergio Rajsbaum (UNAM, Mexico, Mexique).

10.1.1.3. Chair of Conference Program Committees

- Amos Korman: BDA 2018, co-chair.

10.1.1.4. Steering Committee Member

- Amos Korman: ADGA 2018.
- Pierre Fraigniaud: *Highlights of Algorithms* (HALG) from January 2015.

10.1.1.5. Member of the Conference Program Committees

- Adrian Kosowski: MFCS 2018, SIROCCO 2018.
- Carole Delporte-Gallet: NETYS 2018.
- Pierre Fraigniaud: SPAA 2018, DISC 2018, ICALP 2018, WWW 2018, IPDPS 2018, LATIN 2018, HiPC 2018, ICDCN 2018.
- Michel Habib: WG 2018.

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

- Pierre Fraigniaud is a member of the Editorial Board of Distributed Computing (DC).
- Pierre Fraigniaud is a member of the Editorial Board of Theory of Computing Systems (TOCS).
- Adrian Kosowski is a member of the Editorial Board of Mathematical Foundations of Computing (AIMS MFOC)

10.1.2.2. Editors of a special issue

- Carole Delporte is co-editors with Parosh Abdulla of the Special Issue on NETYS'2016 published in Computing ([27]).

10.1.3. Invited Talks

- Hugues Fauconnier gives a seminar in College de France entitled "Failure detectors", December 2018.

10.1.4. Scientific Expertise

- Adrian Kosowski was an expert panel member for grant panel PE6 of the National Science Center, Poland (Spring 2018).
- Pierre Fraigniaud was member of the *shadow committee* of the ERC Starting Grants selection panel in 2018.

- Pierre Fraigniaud was vice-president of the HCERES committee of Laboratoire d'Informatique de Polytechnique (LIX), November 2018.

10.1.5. Research Administration

- Hugues Fauconnier is director of the UFR d'informatique of Université Paris Diderot.
- Carole Delporte-Gallet is deputy director of the UFR d'informatique of Université Paris Diderot.
- Laurent Viennot is leader of the "Algorithms and discrete structures" department of the Institute de Recherche en Informatique Fondamentale (IRIF).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: Carole Delporte and Hugues Fauconnier, Algorithmique distribuée avec mémoire partagée, 6h, M2, Université Paris Diderot

Master: Hugues Fauconnier, Cours programmation répartie, 33h, M2, Univ. Paris Diderot

Master: Carole Delporte, Cours et TP Protocoles des services internet, 44h, M2, Univ. Paris Diderot

Master: Carole Delporte, Cours Algorithmes répartis, 33h, M2, Univ. Paris Diderot

Master: Carole Delporte and Hugues Fauconnier, Théorie et pratique de la concurrence, 48h, M1, Université Paris Diderot

Licence: Carole Delporte and Hugues Fauconnier, Culture informatique, 16h, L2, Univ. Paris Diderot

Licence: Boufkhad Yacine, Algorithmique et Informatique, 132h, L1, IUT de l'Université Paris Diderot

Licence: Boufkhad Yacine, Programmation Orientée Objet, 60h, L2, IUT de l'Université Paris Diderot

Licence: Boufkhad Yacine, Traitement de données, 16h, L2, IUT de l'Université Paris Diderot

Master: Pierre Fraigniaud, Algorithmique parallèle et distribuée, 24h, Ecole Centrale Supélec Paris, M2

Master: Adrian Kosowski, Randomization in Computer Science: Games, Networks, Epidemic and Evolutionary Algorithms, 18h, M1, École Polytechnique

Licence: Adrian Kosowski, Design and Analysis of Algorithms, 32h, L3, École Polytechnique

Master: Pierre Fraigniaud and Adrian Kosowski, Algorithmique distribuée pour les réseaux, 24h, M2, Master Parisien de Recherche en Informatique (MPRI)

Master: Fabien de Montgolfier, Grand Réseaux d'Interaction, 44h, M2, Univ Paris Diderot

Licence: Fabien de Montgolfier, Protocoles Réseau (TP/TD), 24h, M1, Univ Paris Diderot

Licence: Fabien de Montgolfier, Programmation avancée (cours/TD/projet, bio-informatique), 52h, L3, Univ. Paris Diderot

Master: Fabien de Montgolfier, Algorithmique avancée (bio-informatique), 26h, M1, Univ Paris Diderot

Licence: Fabien de Montgolfier, Algorithmique (TD), 26h, L3, Ecole d'Ingénieurs Denis Diderot

Master : Laurent Viennot, Graph Mining, 6h, M2 MPRI, Univ. Paris Diderot

Licence: Pierre Charbit, Elements d'Algorithmique, 24h, L2, Université Paris Diderot, France

Licence: Pierre Charbit, Automates finis, 36h, L2, Université Paris Diderot, France

Licence: Pierre Charbit, Internet et Outils, 52h, L1, Université Paris Diderot, France

Master: Pierre Charbit, Programmation Objet, 60h, M2Pro PISE, Université Paris Diderot, France

Master: Pierre Charbit, Algorithmique de Graphes, 12h, M2 MPRI, Université Paris Diderot, France

10.2.2. Supervision

PhD defended: Lucas Boczkowski (co-advised by Amos Korman and Iordanis Kerenidis). Title of thesis is: "Computing with Limited Resources in Uncertain Environments" [2]. Started September 2015, defended on November 30th, 2018.

PhD defended: Laurent Feuilloley (advised by Pierre Fraigniaud). Title of thesis is: "Synchronous Distributed Computing" [3]. Started September 2015, defended on September 19th, 2018.

PhD defended: Léo Planche (co-advised by Étienne Birmelé and Fabien de Montgolfier). Title of thesis is: "Graph Decomposition into Shortest Paths and Cycles of Small Eccentricity" [4]. Started October 2015, defended on November 23rd, 2018.

PhD defended: Vitaly Aksenov (co-advised by Petr Kuznetsov, Anatoly Shalyto and Carole Delporte). Title of thesis is: "Synchronization Costs in Parallel Programs and Concurrent Data Structures" [1]. Started October 2015, defended on September 26, 2018.

PhD in progress: Simon Collet (co-advised by Amos Korman and Pierre Fraigniaud). Title of thesis is: "Algorithmic Game Theory Applied to Biology". Started September 2015.

PhD in progress: Briec Guinard (advised by Amos Korman). Title of thesis is: "Algorithmic Aspects of Random Biological Processes". Started October 2016.

PhD in progress: Mengchuan Zou (co-advised by Adrian Kosowski and Michel Habib). Title of thesis is: "Local and Adaptive Algorithms for Optimization Problems in Large Networks". Started October 2016.

PhD in progress: Alkida Balliu and Dennis Olivetti (PhD students from L'Aquila University and Gran Sasso Science Institute) are supervised by Pierre Fraigniaud.

PhD in progress: Lucas Hosseini (co-advised by Pierre Charbit, Patrice Ossona de Mendez and Jaroslav Nešetřil since Sept. 2014). Title: Limits of Structures.

Master internship (MPRI): Duc-Minh Phan (advised by Laurent Viennot). (March-August 2018) Title of report: "Public Transit Routing with Unrestricted Walking using Hub Labelling".

10.2.3. Juries

Michel Habib was on the jury committee of the PhD thesis of Léo Planche: "Décomposition de graphes en plus courts chemins et en cycles de faible excentricité", Paris Descartes and Paris Diderot Universities, 23th novembre 2018.

Michel Habib was president of the jury committee of the PhD thesis of Julien Fradin: "Graphes complexes en biologie: problèmes, algorithmes et évaluations", Nantes University, 4th december 2018.

Michel Habib was on the jury committee of the PhD thesis of Mostafa Darwiche: "When operation research meets structural pattern recognition: on the solution of error-tolerant graph matching problems", Tours University, 5th december 2018.

Michel Habib was member of the jury for the HDR thesis of Jean-Sébastien Sereni: "Sur des aspects algébriques de la coloration de graphes: coloration fractionnaire et nombre de colorations", Université de Lorraine, 13 février 2018.

Laurent Viennot was referee and on the jury committee of the HDR thesis of Frédéric Giroire on "Optimisation des infrastructures réseaux. Un peu de vert dans les réseaux et autres problèmes de placement et de gestion de ressources" at the University of Nice-Sophia Antipolis, October 2018.

Laurent Viennot was president of the jury committee of the PhD thesis of Matthieu Boutier "Routage sensible à la source" at Paris Diderot University, September 2018.

Laurent Viennot was on the jury committee of the PhD thesis of Alexandre Hollocou on "Novel Approaches to the Clustering of Large Graphs" at PSL University, December 2018.

Hugues Fauconnier was president of the jury committee of the PhD thesis of Vitaly Aksenov “Synchronization Costs in Parallel Programs and Concurrent Data Structures” at Paris Diderot University, September 2018.

Carole Delporte is on the jury committee of the PhD thesis of Vitaly Aksenov “Synchronization Costs in Parallel Programs and Concurrent Data Structures” at Paris Diderot University, September 2018.

Carole Delporte was president of the jury committee of the PhD thesis of Laurent Feuilloley “Local certification in distributed computing: error-sensitivity, uniformity, redundancy, and interactivity” at Paris Diderot University, September 2018.

Carole Delporte was referee and on the jury committee of the PhD thesis of Denis Jeanneau "Failure Detectors in Dynamic Distributed Systems" at Sorbonne université, December 2018.

Carole Delporte was president of the jury committee of the PhD thesis of Thibault Rieutord "Combinatorial Characterization of Asynchronous Distributed Computability" at Université Paris Saclay, Octobre 2018.

Pierre Fraigniaud was referee for the HDR thesis of Christine Tasson (IRIF, Paris Diderot) “Séman-
tiques vectorielles, probabilistes et distribuées”, 23 novembre 2018.

Pierre Fraigniaud was referee for the HDR thesis of Alessia Milani (LaBRI, Bordeaux) “Asyn-
chronous Distributed Computing”, 12 novembre 2018.

Pierre Fraigniaud was member of the jury for the HDR thesis of Jean-Sébastien Sereni : “Sur des
aspects algébriques de la coloration de graphes : coloration fractionnaire et nombre de colorations”,
Université de Lorraine, 13 février 2018.

Pierre Fraigniaud was member of the jury for the PhD thesis of Lucas Boczkowski “Distributed
Computing Applied to Biology”, 30 novembre 2018.

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

- Laurent Viennot was “commissaire scientifique” for the permanent exposition on “Informatique et sciences du numérique” at Palais de la découverte in Paris (opened in March 2018).

10.3.2. Education

- Carole Delporte was president of a jury of baccalaureat.

INFINE-POST Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. Member of the Organizing Committees

1. **Aline C. Viana** is Publicity co-Chair of: IEEE PICom 2018; IEEE MiSeNet 2018 (jointly with IEEE Infocom 2018); DCOSS 2018; DCOSS 2019; CoUrb 2019 (jointly with DCOSS 2019).
2. **Aline C. Viana** is Student Travel Grant co-chair of IEEE Infocom 2019.

8.1.2. Scientific Events Selection

8.1.2.1. Chair of Conference Program Committees

1. **Emmanuel Baccelli** was chair of the RIOT Summit 2018.

8.1.2.2. Member of the Conference Program Committees

1. **Aline C. Viana** is/was TPC member of: Altogel 2018; Algotel 2019; NTMS 2018; LADaS 2018.

8.1.3. Journal

8.1.3.1. Member of the Editorial Boards

1. **Aline C. Viana** is an Editorial Board member of Urban Computing Spring book series (<http://www.springer.com/series/15552>), since Feb. 2018; an Associate Editor of ACM SIGCOMM Computer Communication Review (ACM CCR), since May 2014; an Editorial Board member of Wireless Communications and Mobile Computing Open Access Journal of John Wiley&Sons and Hindawi since 2016.

8.1.3.2. Reviewer - Reviewing Activities

1. in 2018, **Emmanuel Baccelli** reviewed for ACM Transactions on IoT, ACM ICN, IEEE Transactions on Cloud Computing, IEEE Journal on Internet of Things, JSAC, PEMWN.
2. **Aline C. Viana** reviewed papers for ACM SIGCOMM CCR Journal, elsevier Pervasive and Mobile Computing Journal and Computer Communication Elsevier Journal, IEEE Trans. on Network and Service Management, on IEEE Internet Computing.

8.1.4. Standardization

1. **Emmanuel Baccelli and Cedric Adjih** have participated at several working groups at IETF during 2018.
2. **Emmanuel Baccelli and Cedric Adjih** have participated at several IETF hackathons during 2018.

8.1.5. Invited Talks

1. in 2018, **Emmanuel Baccelli** gave invited talks as EPO in Berlin, at Paris Open Source Summit, at the 2018 French-Japanese Workshop on Cybersecurity in Tokyo, and at OSIS 2018 in Paris.
2. in 2018, **Cedric Adjih** presented FIT IoT-LAB at the IoT Tunisia Forum 2018, described ICN IoT challenges at IoT Tunisia Workshop 2018, and in december, at a scientific seminar in University Paris 13.
3. **Aline C. Viana** was invited to give a talk at (1) LNCC, Petrópolis, Brazil, workshop on Urban Computing and Society in November 2018; (2) Univ. de la Rochelle, workshop CoFaBras 2018 in October 2018

4. **Aline C. Viana** was the keynote speaker of the CoUrb 2018 Workshop jointly organized with SBRC 2018, Brazil in May 2018. She will be a keynote at the GDR RSD Winter School in February 2019.

8.1.6. Research Administration

1. **Aline C. Viana** is the President of the Scientific Commission at Inria Saclay, responsible for the selection of candidates for the CORDI-S, Post-Doc and Delegation campaigns.
2. **Aline C. Viana** is the international coordinator of the EMBRACE associated team of Inria.
3. Together with the members of the team, **Aline C. Viana** has submitted the short proposal of the new team as well as has presented it at the B CEP and CEP. The long versio of the team proposal will be sent by next week.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Master : Emmanuel Baccelli, “IoT & Security”, summer semester seminar, Freie Universitaet Berlin.
- Master : Emmanuel Baccelli, “IoT & Security”, winter semester seminar, Freie Universitaet Berlin.
- Master : Emmanuel Baccelli, “Operating Systems for Small Connected Devices in the Internet of Things”, 3h cours magistral, Formation PESTO Corps des Mines, Telecom ParisTech, Paris France
- Engineering School: Cédric Adjih, “Internet of Thing”, 3h pratical courses, Telecom SudParis
- Engineering School: Cédric Adjih, “Internet of Thing”, 6h practical courses, ENSEA
- Lectures to under-graduation, masters and PhD students at foreign Universities: “Complete trajectory reconstruction from sparse mobile phone data”, 1h, Nov. 2018, LNCC, Petrópolis, Brazil
- Short-courses at conference: “Humans in the communication loop: enablers of next generation networks”, 4h, May 2017, SBRC 2018 conference, Brazil <http://www.sbrc2018.ufscar.br/minicurso-1-mc-1/>.

8.2.2. Supervision

- PHD Guangshuo Chen has defended his PhD in April 2018. *Thesis title*: Human Habits Investigation: from Mobility Reconstruction to Mobile Traffic Prediction. Ecole Polytechnique/ ED STIC Univ. Paris Saclay. Advisor: Aline C. Viana
- Roni Shigueta has defended his PhD in July 2018. *Thesis title*: Channel resource allocation of wireless interfaces of mobile devices.Co-tutelle: PUC-PR and Ecole Polytechnique/ ED STIC Univ. Paris Saclay. Advisors: Aline C. Viana and Mauro Fonseca (UTFPR, Brazil)
- PhD in progress: Licia Amichi, “Modelling explo- ration factor of human beings”, since Sep. 2018.
- PhD in progress: Lucas Santos, “Investigating causalities in habits of human visits”, since May 2018.
- PhD in progress: Douglas Teixeira, “Context-enhanced human predictability in short-term datasets with high spatial resolution”, since April 2018.
- PhD in progress: Joao B. Borges, “Revealing motifs in human mobility”, since Nov. 2018.
- PhD in progress: Rafael Costa, “Human-enhanced forward- ing strategies for Device-to-Device (D2D) communication”, since Sep 2017.

8.2.3. Juries

- **Reviewer for PhD thesis committee:**Aline Viana was reviewer for the following PhDs: H. Chelle (INP/Univ. de Toulouse, Dec. 2018); Y. Zhou (CentraleSupélec, Jui.2018); F. Coriat (UPMC, Dec. 2018);
- **Examiner for PhD thesis committee:**Aline Viana was examiner for the committees of the following PhDs: A. Boubrima (INSA-Lyon/AGORA, Feb. 2019); L. Pajević (KTH, Nov. 2018);
- **Mid-term Examiner PhD thesis committee:**Emmanuel Baccelli was mid-term reviewer for the PhD of Benjamin Beurdouche (Inria, June 2018). Aline Viana was mid-term examiner for the following PhDs: M. Sardara (Cisco/TPT, Jun. 2018); M. Charfi and I. D. Adamou (CentraleSupélec, Jun. 2018); C. Bertier (Thales/UPMC, Avr. 2018);

Neo Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- Eitan Altman was the general chair of the 6th Intl. Conf. on Wireless Networks and Mobile Communications (WINCOM'18), Marrakesh, Morocco, 16-19 October 2018;
- Eitan Altman is the general chair of the 12th EAI International Conference on Performance Evaluation Methodologies and Tools (VALUETOOLS 2019), Palma de Mallorca, Spain, 13-15 March 2019;
- Eitan Altman is a steering committee member of the
 - 4th Intl. Symposium on Ubiquitous Networking (UNET 2018), Hammamet, Tunisia, 2-5 May 2018;
 - 9th EAI Intl. Conf. on Game Theory for Networks (GAMENETS 2019), Paris, France, 25-26 April 2019;
- Dimitra Politaki was the general chair of the workshop “Monde des mathématiques industrielles (MOMI),” Inria Sophia Antipolis Méditerranée, 26-27 February 2018.

10.1.1.2. Member of the Organizing Committees

- G. Neglia is publicity co-chair of the 20th Intl. Symposium on Mobile Ad Hoc Networking and Computing (ACM Mobihoc, Catania, Italy, 2019).

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Eitan Altman was TPC co-chair of ITC 30 (Vienna, Austria, Sept. 2018);

10.1.2.2. Member of the Conference Program Committees

- ACM Sigmetrics / IFIP Performance 2019 (Phoenix, Arizona, USA) (S. Alouf, K. Avrachenkov)
- 19th Conf. of the Société Française de Recherche Opérationnelle et d'Aide à la Décision (ROADEF 2018, Lorient, France) (A. Jean-Marie)
- 9th EAI Intl. Conf. on Sensor Systems and Software (S-CUBE 2018, Chengdu, China) (E. Altman)
- 15th European Performance Engineering Workshop (EPEW 2018, Paris, France) (A. Jean-Marie)
- IEEE Intl. Conf. on Computer Communications (INFOCOM 2019, Paris, France) (G. Neglia)
- 26th IEEE Intl. Conf. on Network Protocols (ICNP 2018, Cambridge, UK) (K. Avrachenkov)
- 3rd Intl. Conf. on Pervasive and Embedded Computing (PEC 2018) (K. Avrachenkov)
- 6th Intl. Conf. on Wireless Networks and Mobile Communications (WINCOM'18, Marrakesh, Morocco) (E. Altman)
- European Conf. on Queueing Theory (ECQT 2018, Jerusalem, Israel) (K. Avrachenkov)
- 9th Intl. Conf. on Network Games, Control and Optimization (NETGCOOP 2018, New York, USA) (K. Avrachenkov)
- 18th Intl. Symposium on Dynamic Games and Applications (ISDG 2018, Grenoble, France) (E. Altman)

- 2018 Intl. Workshop on Resource Allocation, Cooperation and Competition in Wireless Networks (RAWNET, Shanghai, China, 2018) (K. Avrachenkov, G. Neglia)
- Workshop on AI in Networks (WAIN, Toulouse, France, 2018) (G. Neglia)
- 15th Workshop on Algorithms and Models for the Web Graph (WAW 2018, Moscow, Russia) (K. Avrachenkov)
- 20th Workshop on MAThematical performance Modeling and Analysis (MAMA 2018, Irvine, USA) (A. Jean-Marie)
- 2018 Intl. Workshop on Content Caching and Delivery in Wireless Networks (CCDWN 2018, Shanghai, China) (K. Avrachenkov)
- Workshop Technologies for the Wireless Edge (EdgeTech 2018) (K. Avrachenkov)

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- *Elsevier Computer Communications (COMCOM)* (G. Neglia);
- *Elsevier International Journal of Performance Evaluation* (K. Avrachenkov);
- *ACM Transactions on Modeling and Performance Evaluation of Computing Systems (ACM ToM-PECS)* (K. Avrachenkov);
- *Wiley Transactions on Emerging Telecommunications Technologies (ETT)* (S. Alouf);
- *IEEE JSAC Special issue on Caching for Communication Systems and Networks* (S. Alouf, G. Neglia);

10.1.3.2. Reviewer - Reviewing Activities

- *ACM Transactions on Modeling and Performance Evaluation of Computing Systems (ACM ToM-PECS)* (G. Neglia)
- *European Journal of Operational Research* (A. Jean-Marie)
- *IEEE Networking Letters* (G. Neglia)
- *EURASIP Journal on Wireless Communications and Networking* (G. Neglia)
- *Journal of Economic Dynamics and Control* (A. Jean-Marie)
- *IEEE Transactions on Parallel and Distributed Systems* (G. Neglia)
- *IEEE Transactions on Signal and Information Processing over Networks* (G. Neglia)
- *IEEE/ACM Transactions on Networking* (G. Neglia)
- *Performance Evaluation (PEVA)* (S. Alouf)
- *Probability in the Engineering and Informational Sciences* (A. Jean-Marie)

10.1.4. Invited Talks

- E. Altman gave a keynote lecture on “Game Theoretic Models for Routing Over Wireless Links ” at the 6th Intl. Conf. on Wireless Networks and Mobile Communications (WINCOM’18), October 16-19, Marrakesh, Morocco.
- K. Avrachenkov gave an invited talk on “Analysis of relaxation time in random walk with jumps” at the Intl. Conf. on Trends and Perspectives in Linear Statistical Inference (LinStat’2018, 19-25 August) in Bedlewo, Poland.
- K. Avrachenkov gave an invited talk on “Singularly perturbed linear programs and their application to MDP” at Univ. of Twente, September 20, Enschede, The Netherlands.
- G. Neglia gave an invited talk on “Implicit Coordination of Caches in Small Cell Networks under Unknown Popularity Profiles” at the workshop Technologies for the Wireless Edge (EdgeTech) EdgeTech of the 24th Annual Intl. Conf. on Mobile Computing and Networking (ACM MobiCom 2018), November 2, New Delhi, India.

- G. Neglia gave an invited talk on “Transient and Slim versus Recurrent and Fat: Random Walks and the Trees they Grow” at the UCA workshop on Social Interactions and Complex Dynamics, November 29-30, Nice, France.

10.1.5. Leadership within the Scientific Community

- E. Altman is a fellow member of IEEE (Class of 2010).
- E. Altman and A. Jean-Marie are (elected) members of IFIP WG 7.3 on “Computer System Modeling”.
- E. Altman is member of WG 6.3 of IFIP on Performance of Communication Systems.

10.1.6. Research Administration

S. Alouf

- is member of the scientific committee of the joint laboratory Inria-Alstom since May 2014;
- is member of CLF, the training committee of Inria Sophia Antipolis Méditerranée, since November 2014;
- is vice-head of project-team NEO since January 2017.

K. Avrachenkov

- is responsible for the supervision and validation of the project-teams’ yearly activity reports since 2010;
- is a member of NICE, the Invited Researchers Committee of Inria Sophia Antipolis Méditerranée, since 2010.
- is a member of scientific committee for Labex UCN@Sophia;
- is a member of scientific and pedagogical committee for the graduate school of UCA DS4H.

A. Jean-Marie

- is the scientific coordinator of Inria activities in Montpellier (since 2008); as part of this duty, he represents Inria at: the Scientific Council of the Doctoral School “Sciences and Agrosiences” of the Univ. of Avignon; at the Regional Conference of Research Organisms (CODOR);
- is member of the managing sub-committee of the Project-Team Committee of the Inria Sophia Antipolis – Méditerranée research center since December 2017;
- is a member of the Steering Committee of the GDR RO, a national research initiative on Operations Research sponsored by the CNRS;
- is Head of project-team NEO since January 2017.

G. Neglia

- is the scientific delegate for European partnerships for Inria Sophia Antipolis – Méditerranée since 2014;
- is member of the Inria COST GTRI (International Relations Working Group of Inria’s Scientific and Technological Orientation Council since 2016;
- is member of the scientific animation committee for the IDEX UCA^{JEDI} research program “Social Interactions and Complex Dynamics” since 2017.

D. Politaki was one of the organizers of the fortnightly PhD Seminars of Inria Sophia Antipolis Méditerranée until September 2018.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence :

G. Neglia, “Probability”, 60H, Undergraduate Water Engineering degree (L3), Univ. of Nice Sophia Antipolis (UNS), France.

Master :

A. Jean-Marie, “Performance Evaluation of Networks”, 15.75H, M2 IFI Ubinet, UNS, France.

G. Neglia, “Distributed Optimization and Games”, 31.5H, M2 IFI Ubinet, UNS, France.

G. Neglia, “Performance Evaluation of Networks”, 15.75H, M2 IFI Ubinet, UNS, France.

G. Neglia, responsible for the “Winter School on Complex Networks”, 22.5H, M1 Computer Science, UNS, France.

Doctorat:

A. Jean-Marie, “Advanced Markov Modeling”, 18H, Univ. of Montpellier, France.

10.2.2. Supervision

PhD defended:

Said Boularouk, “Helping space apprehension by visually impaired people”, UAPV, 5 Dec. 2018, advisors: Eitan Altman and Didier Josselin.

PhD in progress :

Zaid Allybokus, “Scalable Online Algorithms for SDN Controllers”, 1 July 2016, advisors: Konstantin Avrachenkov and Lorenzo Maggi (Huawei).

Abhishek Bose, “Adaptive crawling with machine learning techniques”, 1 June 2018, advisor: Konstantin Avrachenkov.

Mandar Datar, “Singular perturbation approach for machine learning in multiobjective optimisation”, 1 May 2018, advisor: Eitan Altman.

Maximilien Drevet, “Statistical Physics Methods for Distributed Machine Learning”, 1 Oct. 2018, advisor: Konstantin Avrachenkov.

Guilherme Iecker Ricardo, “Caching for wireless networks”, 1 Sept. 2018, advisors: Giovanni Neglia and Pietro Elia (EURECOM).

Marie Masson, “Fonctionnalités auto-organisantes dans le réseau d'accès radio 5G virtuels”, 1 Dec. 2017, advisors: Eitan Altman and Zwi Altman (Orange).

Dimitra Politaki, “Greening data center”, 1 February 2016, advisors: Sara Alouf and Fabien Hermenier (UNS).

10.2.3. Juries

NEO members participated in the Ph.D. committees of (in alphabetical order):

- Hafiz Ali, “Random Matrix Theory and Large Dimensional graphs”, CentraleSupélec, 24 September (K. Avrachenkov as reviewer);
- Xinwei Bai, “Performance bounds for random walks in the positive orthant”, Univ. Twente, 20 September (K. Avrachenkov as reviewer);
- Yoann Couble, “Optimisation de la gestion des ressources de la voie retour”, Institut National Polytechnique de Toulouse, 3 September (S. Alouf as reviewer);
- Thibault Debatty, “Design and analysis of distributed k-nearest neighbors graph algorithms”, TELECOM ParisTech, 5 October (G. Neglia as reviewer);
- Philippe Ezran, “Topology Optimization of Wireless Networks”, Univ. Paris-Saclay, 23 January (E. Altman as reviewer);
- Dalia-Georgiana Popescu, “Les hyperfractales pour la modelisation des reseaux sans fil”, LINCS, 21 November (K. Avrachenkov as reviewer);
- Rémi Varloot, “Dynamic Network Formation”, Université de recherche Paris Sciences et Lettres, École normale supérieure, 1 June (G. Neglia as jury president).

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

- D. Politaki is a member of MASTIC, a commission in charge of popularization and regional and internal scientific animation, since July 2016.

10.3.2. Interventions

On October 12th, in the framework of *La Fête de la Science*, M. Drevetton participated in a mediation activity at *Espace de l'Art Concret* in Mouans-Sartoux. It was a mix between art and sciences (maths and physics). The topic was randomness and the targeted public was primary school students, from two different classes (one in the morning and one in the afternoon). Activities involved loaded dices, Galton Board, double pendulum, and some online program (<http://weavesilk.com/>, pupils really liked this). Each game was presented and students would figure out where the randomness comes from, and play/experiment by themselves (30 min per group).

POEMS-POST Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Advisory and management activities

- E. Lunéville is the Head of UMA (Unité de Mathématiques Appliquées) at ENSTA ParisTech.
- P. Ciarlet is coordinator of the *Mathematics & Engineering Program* of the Mathematics Hadamard Labex (LMH)

10.1.2. Scientific events organisation end selection

- S. Chaillat co-organized with X. Claeys (LJLL, EPI ALPINES) the symposium of the International Association for Boundary Element Methods (IABEM), which took place in Paris in June 2018. They were about 140 attendees.
- A.-S. Bonnet-Ben Dhia co-organized a workshop entitled “*Advanced Theoretical and Numerical Methods for waves in structured Media*” in Paris in March 2018, in the framework of the GDR Ondes. They were about 90 attendees.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- A. S. Bonnet-Ben Dhia is an associate editor of SIAP (*SIAM Journal of Applied Mathematics*).
- M. Bonnet is an associate editor of *Engineering Analysis with Boundary Elements*, *Journal of Optimization Theory and Application* and *Journal of Integral Equations and Applications*. He is in the editorial board of *Inverse Problems* and *Computational Mechanics*.
- P. Ciarlet is an editor of ESAIM:M2AN (*Mathematical Modeling and Numerical Analysis*).
- P. Joly is a member of the Book Series Scientific Computing of Springer Verlag.

10.1.3.2. Reviewer - Reviewing Activities

The team members regularly review papers for many international journals.

10.2. Teaching - Supervision

10.2.1. Teaching

The permanent members of POEMS are involved in the engineering program at ENSTA ParisTech, the master program “*Analyse, Modélisation et Simulation*” (AMS) and the master program “*Modélisation et Simulation en Mécanique des Structures et Systèmes Couplés*” (MS2SC) of Université Paris-Saclay.

Eliane Bécache

- *Fonctions de variable complexe*, ENSTA (1st year)
- *La méthode des éléments finis*, ENSTA (2nd year) and Master AMS (M1)
- *Analyse et approximation par éléments finis d’EDP*, ENSTA (2nd year) and Master AMS (M1)
- *Résolution des problèmes de diffraction par équations intégrales*, ENSTA (3rd year), Master AMS (M2) and Master MS2SC (M2)

Marc Bonnet

- *Problème inverses et Identification*, Master MS2SC (M2)

- Co-head of the master program "*Modélisation et Simulation en Mécanique des Structures et Systèmes Couplés*" (MS2SC) of Université Paris-Saclay

Anne-Sophie Bonnet-Ben Dhia

- *Fonctions de variable complexe*, ENSTA (1st year)
- *Théorie spectrale des opérateurs autoadjoints*, ENSTA (2nd year) and Master AMS (M1)
- *Propagation et diffraction dans les guides d'ondes*, ENSTA (3rd year) and Master AMS (M2)
- *Non Destructive Testing*, Master "Acoustical Engineering" (M2)
- *Propagation des ondes élastiques dans les solides*, Master MS2SC (M2)

Laurent Bourgeois

- *Outils élémentaires pour l'analyse des équations aux dérivées partielles*, ENSTA (1st year)
- *Fonctions de variable complexe*, ENSTA (1st year)
- *Complétion de données et identification dans les problèmes gouvernés par des équations aux dérivées partielles*, ENSTA (3rd year) and Master AMS (M2)

Stéphanie Chaillat

- *Introduction à la discrétisation des équations aux dérivées partielles*, ENSTA (1st year)
- *Fonctions de variable complexe*, ENSTA (1st year)
- *La méthode des éléments finis*, ENSTA (2nd year) and Master AMS (M1)
- *Résolution des problèmes de diffraction par équations intégrales*, ENSTA (3rd year), Master AMS (M2) and Master MS2SC (M2)
- *Equations intégrales et multipôles rapides*, Ecole doctorale MODES (Univ. Paris Est, Marne la Vallée)

Colin Chambeyron

- *Remise à niveau en maths*, Licence (1st year), Paris-Dauphine University
- *Outils mathématiques*, Licence (L1), Paris-Dauphine University
- *Analyse - Optimisation*, Licence (L1), Paris-Dauphine University
- *Algèbre linéaire*, Licence (L2), Paris-Dauphine University

Patrick Ciarlet

- *Analyse et approximation par éléments finis d'EDP*, ENSTA (2nd year) and Master AMS (M1)
- *Préformation filière ModSim*, ENSTA (3rd year)
- *Calcul scientifique parallèle*, ENSTA (3rd year) and Master AMS (M2)
- *Modèles mathématiques et leur discrétisation en électromagnétisme*, ENSTA (3rd year) and Master AMS (M2)
- Deputy head of the master program "*Analyse, Modélisation et Simulation*" of Université Paris-Saclay

Sonia Fliss

- *La méthode des éléments finis*, ENSTA (2nd year) and Master AMS (M1)
- *Introduction à la discrétisation des équations aux dérivées partielles*, ENSTA (1st year)
- *Homogénéisation périodique*, ENSTA (3rd year), Master AMS(M2), Masters ANEDP, M4S
- *Propagation des ondes dans des milieux périodiques*, ENSTA (3rd year) and Master AMS (M2)

Laure Giovangigli

- *Calcul stochastique*, ENSTA (3rd year) and Master MMMEF (M2)

Christophe Hazard

- *Outils élémentaires d'analyse pour les équations aux dérivées partielles*, ENSTA (1st year)
- *Théorie spectrale des opérateurs autoadjoints*, ENSTA (2nd year) and Master AMS (M1)

Patrick Joly

- *Introduction à la discrétisation des équations aux dérivées partielles*, ENSTA (1st year)
- *Fonctions de variable complexe*, ENSTA (1st year)
- *Analyse fonctionnelle*, ENSTA (2nd year) and Master AMS (M2)
- *Propagation des ondes dans des milieux périodiques*, ENSTA (3rd year) and Master AMS (M2)

Maryna Kachanovska

- *Fonctions de variable complexe*, ENSTA (1st year)
- *Introduction à la discrétisation des équations aux dérivées partielles*, ENSTA (1st year)
- *Systèmes Dynamiques: Analyse et Stabilité*, ENSTA (1st year)

Nicolas Kielbasiewicz

- *Programmation scientifique en C++*, ENSTA (2nd year) and Master AMS (M1)
- *Projet de simulation numérique*, ENSTA (2nd year) and Master AMS (M1)
- *Calcul scientifique parallèle*, ENSTA (3rd year) and Master AMS (M2)

Eric Lunéville

- *Introduction au calcul scientifique*, ENSTA (2nd year).
- *Programmation scientifique en C++*, ENSTA (2nd year) and Master AMS (M1)
- *Projet de simulation numérique*, ENSTA (2nd year) and Master AMS (M1)
- *Propagation et diffraction dans les guides d'ondes*, ENSTA (3rd year) and Master AMS (M2)

Jean-François Mercier

- *Outils élémentaires d'analyse pour les équations aux dérivées partielles*, ENSTA (1st year)
- *Fonctions de variable complexe*, ENSTA (1st year)
- *Théorie spectrale des opérateurs autoadjoints*, ENSTA (2nd year) and Master AMS (M1)

Axel Modave

- *La méthode des éléments finis*, ENSTA (2nd year) and Master AMS (M1)
- *Calcul scientifique à haute performance*, ENSTA (2nd year) and Master AMS (M1)
- *Calcul scientifique parallèle*, ENSTA (3rd year) and Master AMS (M2)
- *Modèles mathématiques et leur discrétisation en électromagnétisme*, ENSTA (3rd year) and Master AMS (M2)

10.2.2. Supervision

PhD: Antoine Bensalah, "*Une approche nouvelle de la modélisation mathématique et numérique en aéroacoustique par les équations de Goldstein et applications en aéronautique*", July 2018, Patrick Joly and Jean-François Mercier

PhD: Léandre Giret, "*Analyse numérique d'une méthode de décomposition de domaine non-conforme pour les équations SPN multigrupes*", June 2018, Patrick Ciarlet and Erell Jamelot

PhD: Zouhair Adnani, "*Modélisation numérique tridimensionnelle de l'interaction sol-structure avec prise en compte des effets de site*", May 2018, Marc Bonnet and Stéphanie Chaillat

PhD: Arnaud Recoquilly, "*Méthodes d'échantillonnage appliquées à l'imagerie de guides d'ondes élastiques*", January 2018, Laurent Bourgeois

PhD in progress: Antoine Bera, "*Conception de perturbations invisibles pour les ondes électromagnétiques ou acoustiques*", October 2016, Anne-Sophie Bonnet-Ben Dhia and Lucas Chesnel

PhD in progress: Sandrine Paolantoni, "*Analyse spectrale et simulation numérique de la diffraction électromagnétique par des métamatériaux*", October 2016, Christophe Hazard and Boris Gralak

PhD in progress: Yohanes Tjandrawidjaja, "*Modélisation de la propagation d'ondes guidées et de leur interaction avec des défauts localisés dans une plaque élastique anisotrope pour des applications en SHM*", October 2016, Anne-Sophie Bonnet-Ben Dhia and Sonia Fliss

PhD in progress: Emile Parolin, "*Non overlapping domain decomposition methods with non local transmission conditions for electromagnetic wave propagation*", October 2017, Patrick Joly and Xavier Claeys

PhD in progress: Clément Beneteau, "*Asymptotic analysis of time harmonic Maxwell equations in presence of metamaterials*", October 2017, Sonia Fliss and Xavier Claeys

PhD in progress: Hajer Methenni, "*Mathematical modelling and numerical method for the simulation of ultrasound structural health monitoring of composite plates*", October 2017, Sonia Fliss and Sébastien Impériale

PhD in progress: Damien Mavaleix, "*Modeling of the fluid-structure interaction resulting from a remote underwater explosion*", December 2017, Marc Bonnet and Stéphanie Chaillat

PhD in progress: Damien Chicaud, "*Méthodes de décomposition de domaine pour la résolution de problèmes harmoniques d'ondes électromagnétiques en milieux complexes*", October 2018, Patrick Ciarlet and Axel Modave

PhD in progress: Mahran Rihani, "*Équations de Maxwell en présence de méta-matériaux*", November 2018, Anne-Sophie Bonnet-Ben Dhia and Lucas Chesnel

PhD in progress: Yacine Abourrig, "*Boundary element method for modeling electromagnetic non-destructive testing: perturbative techniques for efficient and accurate parametric studies involving multiple simulations*", October 2017, Marc Bonnet and Edouard Demaldent

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

- M. Kachanovska is a member of the *comité scientifique* of Inria-Saclay.
- A.-S. Bonnet-Ben Dhia is a member of the *bureau du comité des équipes-projets* (BCEP).

10.3.2. Interventions

- POEMS has been involved in the exhibition "*Rencontre diffractante*", which has been presented successively at ENSTA (from December 2017 to February 2018) and at Inria (in April and May 2018). The inspiring material of this exhibition was made up of numerical simulations of various diffraction problems studied within by POEMS team. They served as a basis for the creation of artistic objects made by several classes of the Ecole Boule. *Curators of the exhibition* : Jérôme Perez, ENSTA, and Virginie Gannac, doctor in art, design and applied arts from Université Paris I Sorbonne, Ecole Boule de Paris

- POEMS has been involved in the event "*Fête de la science*" at ENSTA-ParisTech in October 2018.
- E. Bécache presented a talk entitled "*Promenade mathématique*" during the day "*Filles et mathématiques, une équation lumineuse*" (March 27, 2018 at Ecole Polytechnique, Palaiseau) and during the awards ceremony of the National Olympiad of Mathematics (May 30, 2018 at Créteil).
- E. Bécache has been involved in a meeting of young female mathematics, organized on November 17-18, 2018 at ENSTA ParisTech.

RESIST Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

Abdelkader Lahmadi: IEEE Conference on Network Softwarization (NetSoft 2018), Workshops co-chair.

Lucas Nussbaum: Grid'5000/FIT School 2018.

Jérôme François: IEEE Conference on Network Softwarization (NetSoft 2018), demonstration co-chair.

Rémi Badonnel: IEEE/IFIP Network Operations and Management Symposium (NOMS 2018), demonstration co-chair; IEEE International Conference on Networks of the Future (NOF 2018), publicity co-chair; IEEE International Symposium on Integrated Network Management (IM 2019), experience track co-chair; IFIP International Conference on Autonomous Infrastructure, Management, Security (AIMS 2018), steering committee member.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

Rémi Badonnel: IEEE/IFIP International Workshop on Analytics for Network and Service Management (AnNet 2018); IEEE/IFIP/In Coop. with ACM SIGCOMM International Conference on Network and Service Management (CNSM 2019).

Isabelle Chrisment: Member of the steering committee for RESSI'18 (Rendez-vous de la Recherche et de l'Enseignement de la Sécurité des Systèmes d'Information); IFIP, in-cooperation with ACM SIGCOMM. Network Traffic Measurement and Analysis Conference (TMA 2019).

Jérôme François: 12th International Conference on Autonomous Infrastructure, Management and Security (AIMS 2018); IEEE/IFIP international workshop on Managing and Managed by Blockchain (Man2block 2018); 5th IEEE/IFIP Workshop on Security for Emerging Distributed Network Technologies (DISSECT 2018); IEEE Workshop on Emerging Trends in Softwarized Networks (ETSN 2018)

Abdelkader Lahmadi: IEEE/IFIP international workshop on Managing and Managed by Blockchain (Man2block 2018), co-chair.

10.1.2.2. Member of the Conference Program Committees

Rémi Badonnel: IEEE/IFIP Network Operations and Management Symposium (NOMS 2018); IEEE Conference on Network Softwarization (NetSoft 2018); IEEE/IFIP/In Assoc. with ACM SIGCOMM International Conference on Network and Service Management (CNSM 2018); IEEE Global Information Infrastructure and Networking Symposium (GIIS 2018); IEEE Global Communications Conference - SAC IoT (GLOBECOM 2018); IEEE International Conference on the Network of the Future (NoF 2018); Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (Algotel 2018).

Thibault Cholez: IEEE/IFIP International Workshop on Managing and Managed by Blockchain (Man2Block 2018); IEEE/IFIP International Workshop on Security for Emerging Distributed Network Technologies (DISSECT 2018); IFIP/IEEE International Symposium on Integrated Network Management (IM 2019).

Isabelle Chrisment: IFIP International Conference on Autonomous Infrastructures, Management and Security (IFIP AIMS'18) ; Rencontres Francophones sur la Conception de Protocoles, l'évaluation de Performance et l'Expérimentation Aspects Algorithmiques de Télécommunications (CoResl'18) ; IEEE/IFIP International Workshop on Analytics for Network and Service Management (AnNet 2018); IEEE/IFIP Network Operations and Management Symposium (NOMS 2019).

Jérôme François: IEEE/IFIP Network Operations and Management Symposium (NOMS 2018); IEEE Conference on Network Softwarization (IEEE NetSoft 2018); Principles, Systems and Applications of IP Telecommunications (IPTComm'18); 3rd Workshop on Mining Data for financial applications (MIDAS 2018).

Abdelkader Lahmadi: IEEE Conference on Network Softwarization (IEEE NetSoft 2018) ; IEEE/IFIP Network Operations and Management Symposium (NOMS 2018); 2nd Cyber Security in Networking Conference (CSNet 2018); 1st Workshop on Cryptocurrencies and Blockchains for Distributed Systems (CryBlock 2018); IEEE – 13th System of Systems Engineering Conference (SoSE 2018).

Lucas Nussbaum: International Conference on Enabling Technologies: Infrastructure for Collaborative Enterprises (WETICE 2018); European Symposium on Serverless Computing and Applications (ESSCA 2018); 15th International Conference on Mining Software Repositories (MSR 2018 – FOSS award); 10th IEEE International Conference on Cloud Computing Technology and Science (CloudCom 2018); 4th International Workshop on Serverless Computing (WoSC 2018); IEEE INFOCOM International Workshop on Computer and Networking Experimental Research Using Testbeds (CNERT 2018).

10.1.2.3. Other selection activities

Rémi Badonnel served as a member of the Selection Committee for the Best Paper Awards of IEEE/IFIP/In Assoc. with ACM SIGCOMM International Conference on Network and Service Management (CNSM 2018).

Abdelkader Lahmadi served as a member of the Selection Committee of the 2018 ComSoc Student Competition "Communications Technology Changing the World".

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Rémi Badonnel: Associate Editor for the Wiley International Journal of Network Management (IJNM).

Isabelle Chrisment: Associate Editor for the IEEE Transactions on Network and Service Management (TNSM).

Jérôme François: Associate Editor for the Wiley International Journal of Network Management (IJNM); Guest Editor for a Special Issue on Security for Emerging Open Networking Technologies in the same journal.

10.1.3.2. Reviewer - Reviewing Activities

Laurent Andrey: Wiley International Journal of Network Management (IJNM); Elsevier Journal on Communication Networks (COMNET).

Rémi Badonnel: IEEE Transactions on Network and Service Management (TNSM); Journal of Intelligent Manufacturing (JIMS); Journal of Network and System Management (JNSM); IEEE Communications Magazine (COMMAG).

Thibault Cholez: Elsevier Journal on Communication Networks (COMNET).

Isabelle Chrisment: Elsevier Journal Computer Communications (COMCOM).

Jérôme François: IEEE Transactions on Network and Service Management (TNSM); IEEE Journal on Selected Areas in Communications (JSAC); Elsevier Journal on Communication Networks (COMNET).

Abdelkader Lahmadi: IEEE Transactions on Network and Service Management (IEEE TNSM); Springer Journal of the Network and Systems Management (JNSM); Wiley International Journal of Network Management (IJNM).

Lucas Nussbaum: International Journal of Grid and Utility Computing (IJGUC); IEEE Transactions on Cloud Computing (TCC); Wiley Software: Practice and Experience (SPE).

10.1.4. Invited Talks

Thibault Cholez:

- SDN DAY 2018, Paris. Une architecture orchestrée de microservices pour les réseaux ICN.

Jérôme François:

- Panelist at IEEE/IFIP NOMS 2018: Cognitive Management versus Privacy in a Cyber World: Collision or Opportunity?
- Inria tech talk at Station-F, Paris. AI Platform for Automated Security Testing of Connected Devices. With Abdelkader Lahmadi, Frédéric Beck and Loïc Rouch.
- ETSI NEW INTERNET FORUM at SDN NFV world congress, Managing the Security of IoT Devices out of your Control.

Abdelkader Lahmadi:

- 12th International Conference on Autonomous Infrastructure, Management and Security (AIMS 2018), Munich, Germany. Security Analysis of Internet of Things Devices [32]. With Frédéric Beck.
- Inria tech talk at Station-F, Paris. AI Platform for Automated Security Testing of Connected Devices. With Jérôme François, Frédéric Beck and Loïc
- SDN DAY 2018, Paris. Toward Self-Driving Networks: A new era of network management.

Xavier Marchal:

- Journées Cloud 2018, Troyes. Une architecture de microservices pour les réseaux ICN.

Lucas Nussbaum:

- dotScale 2018, Paris. Distributions and package management in the containers era.
- Colloque Sciences ouvertes: expériences, enjeux et perspectives, Oct 2018, Vandœuvre-lès-Nancy, France. Table ronde sur les aspects "utilisateurs" : intérêts et retours d'expériences de chercheurs et enseignants-chercheurs du site [26].

10.1.5. Scientific Expertise

Isabelle Chrisment served as a member of the GDR RSD/ASF selection committee for the thesis award.

Olivier Festor jointed Orange scientific council.

Jérôme François serves as reviewer for the program *Etablissement de nouveaux chercheurs et de nouvelles chercheuses universitaires du Fonds de recherche du Québec – Nature et technologies* (FRQNT)

10.1.6. Research Administration

Thibault Cholez is a member of the executive council of the Digitrust project (I-Site project of the Université de Lorraine to foster research on trust and security in IT).

Isabelle Chrisment is a member of the AFNIC's scientific council. She is also an elected member of the scientific pole AM2I (Automatique, Matheématiques, Informatique et leurs Interaction) at Université de Lorraine. She is a member of the COMIPERS at Inria Nancy Grand Est. She is also involved in Inria's CVP (Cellule de Veille et Prospective) and in the CMI (Commission de la Mention Informatique) board, which is a part of the doctoral school IAEM.

Olivier Festor is member of the Scientific Council of Telecom Sud Paris. He is leading the IFIP TC6 Working Group 6.6 : Network and Service Management.

Jérôme François is a member of the Horizon Startup local committee in Nancy Grand Est.

Abdelkader Lahmadi is a member of the CDT of Inria Nancy Grand Est.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Olivier Festor is the Director of the TELECOM Nancy Engineering School.

Rémi Badonnel is heading the Internet Systems and Security specialization of the 2nd and 3rd years at the TELECOM Nancy engineering school, and is coordinating the Security Pathway Program at the same school, elaborated in the context of the International Master of Science in Security of Computer Systems built with the Mines Nancy school.

Team members are teaching the following courses:

Rémi Badonnel 242 hours - L3, M1, M2 - Networks, Systems and Services, Software Design and Programming, Cloud Computing, Network and Security Management - TELECOM Nancy, Université de Lorraine

Thibault Cholez 300 hours - L3, M1, M2 - Computer Networks, Object-Oriented Programming, C Programming, Network Services, Constraint development on small Connected Objects, Mobile applications and Internet of Things, IT tools for Project Management - TELECOM Nancy, Université de Lorraine

Isabelle Chrisment 220 hours -L3, M1, M2 -C and Shell Programming, Computer Networking, Operating Systems, Network Security. - TELECOM Nancy, Université de Lorraine

Jérôme François 70 hours - M1, M2 -Network security, Big Data - TELECOM Nancy, Université de Lorraine

Abdelkader Lahmadi 280 hours - L3, M1, M2 - Real time and Embedded Systems Programming, Distributed Systems and Algorithms, Green IT, Algorithms and Advanced Programming, Security of Cyber Physical Systems - ENSEM Engineering School, Université de Lorraine

Lucas Nussbaum 200 hours - L2, Licence Pro (L3), M1 - several courses about systems administration, monitoring, virtualization, configuration management, networking, operating systems. - IUT Nancy-Charlemagne

E-learning

MOOC *Supervision de Réseaux et Services (Session 1)*, FUN Project, Université de Lorraine, Ingénieur, formation initiale et continue, Thibault Cholez, Rémi Badonnel, Laurent Andrey, Olivier Festor, Abdelkader Lahmadi, Jérôme François, de janvier à mars 2018, over 6400 inscriptions from 74 countries, and 370 certificates of achievement. Each MOOC Resist participant contributed to the 2018 maintenance for a second opening on January 2019.

10.2.2. Supervision

PhD in progress: Ahmad Abboud, *Compressed and verifiable filtering rules in Software-defined Networking*, supervised by Michael Rusinowitch, Abdelkader Lahmadi, and Adel Bouhoula.

PhD in progress: Paul Chaignon, *Software Datapaths for Multi-Tenant Packet Processing*, supervised by Olivier Festor, Jérôme François and Kahina Lazri.

PhD in progress: Pierre-Olivier Brissaud, *Encrypted traffic analysis*, since July 2016, supervised by Isabelle Chrisment, Jérôme François and Thibault Cholez.

PhD in progress: David Espinel, *SDN solution for Massively Distributed Cloud Infrastructure*, since February 2018, supervised by Lucas Nussbaum, Adrien Lebre and Abdelhadi Chari.

PhD in progress: Adrien Hemmer, *Predictive Security Monitoring for Large-Scale Internet-of-Things*, since October 2018, supervised by Isabelle Chrisment and Rémi Badonnel.

PhD in progress: Pierre-Marie Junges, *Internet-wide automated assessment of the exposure of the IoT devices to security risks*, supervised by Olivier Festor and Jérôme François.

PhD in progress: Mingxiao Ma, *Cyber-Physical Systems defense through smart network configuration*, supervised by Isabelle Chrisment, Abdelkader Lahmadi.

PhD in progress: Xavier Marchal, *Secure operation of virtualized Named Data Networks*, since December 2015, supervised by Olivier Festor & Thibault Cholez.

PhD in progress: Abdulqawi Saif, *Open Science for the scalability of a new generation search technology*, since December 2015, supervised by Ye-Qiong Song & Lucas Nussbaum.

PhD in progress: Nicolas Schnepf, *Orchestration and Verification of Security Functions for Smart Environments*, since October 2016, supervised by Stephan Merz, Rémi Badonnel and Abdelkader Lahmadi.

PhD: Giulia De Santis, *Modeling and Recognizing Network Scanning Activities with Finite Mixture Models and Hidden Markov Models*, Université de Lorraine, 20 December 2018, supervised by Olivier Festor and Abdelkader Lahmadi (not yet registered).

PhD: Maxime Compastié, *Software-defined Security for Distributed Clouds*, University of Lorraine, defended on December 18, 2018, supervised by Olivier Festor and Rémi Badonnel (not yet registered).

10.2.3. Juries

Team members participated to the following Ph.D. defense committees:

- Abdelhadi Azzouni, PhD in Computer Science from Université Pierre et Marie Curie - Sorbonne Universités, France. Title: Smart and Secure Network Softwarization, April 2018 – (Olivier Festor as reviewer).
- Lyes Bayou, PhD in Computer Science from IMT Atlantique Bretagne-Pays de la Loire, France. Title: Evaluation et mise en oeuvre de la sécurité dans les systèmes SCADA à base de réseaux de capteurs sans fil, June 2018 – (Isabelle Chrisment as reviewer).
- Quang-Vinh Dang, PhD in Computer Science from Université de Lorraine, France. Trust assessment in large-scale collaborative systems, January 2018 – (Isabelle Chrisment as president).
- Pierre-Edouard Fabre, PhD in Computer Science from TELECOM SudParis, France. Title: Utiliser les ressources réseaux pour atténuer les attaques DDoS volumétriques, December 2018 – (Isabelle Chrisment as reviewer).
- Ghada Jaber, PhD in Computer Science from University of Toulouse, France. Title: A Content-Centric Approach for wireless Sensor Networks, December 2018 – (Olivier Festor as reviewer).
- Oualid Koucham, PhD in Automatic Control from Communauté Université Grenoble Alpes, France. Title: Détection d'intrusions pour les systèmes de contrôle industriels, November 2018 – (Isabelle Chrisment as reviewer).
- Alassane Samba, PhD in Computer Science from IMT Atlantique Bretagne-Pays de la Loire, France. Title: Science des données au service des réseaux d'opérateur, October 2018 – (Isabelle Chrisment as reviewer).
- Farah Slim, PhD in Computer Science from IMT Atlantique Bretagne-Pays de la Loire, France. Title: Etude et implémentation d'algorithmes de gestion de ressources pour un système d'exploitation de réseau, March 2018 – (Olivier Festor as examiner).

10.3. Popularization

10.3.1. Interventions

- Débats Grenats, February 2018, Metz, France. Round table on the theme of security over its different forms, including risks induced by cyber-security. Rémi Badonnel.
- Libre sur la place, Nancy. Plongée au cœur des communautés De Debian à l'Open Core. Lucas Nussbaum.

SOCRATE Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

The Socrate team launched two new workshops in relation with FIT/CorteXlab:

- First French GNU Radio days: <https://gnuradio-fr-18.sciencesconf.org/>. The workshop aimed at the development of radio prototyping why GNU Radio in France and in Europe, by Leonardo Sampaio-Cardoso and Tanguy Risset.
- ISP-IoT : First Winter School on Information Theory and Signal Processing for Internet of Things : <https://isp-iot.sciencesconf.org> by Jean-Marie Gorce.

Socrate organized *Journée plateformes d'évaluations radio*, 28-03-2018, joint event between the GDR ASR and the GDR ISIS. Co-organized by Leonardo Sampaio-Cardoso and Jean-Marie Gorce with Thalès.

9.1.1.1. Member of the Organizing Committees

- Tanguy Risset, Leonardo Sampaio-Cardoso, Guillaume Villemaud and Jean-Marie Gorce were members of the organizing committee of the first French GNU Radio days.
- Samir M. Perlaza, Claire Goursaud, Leonardo Sampaio-Cardoso were members of the organizing committee of ISP-IOT, the first Winter School on Information Theory and Signal Processing for Internet of Things.
- Seed meeting *Dynamic Modeling and Simulation for Molecular Communication Networks*. Workshop funded by the French Embassy in the UK, London. Co-organized by Malcolm Egan. 17th and 18th September 2018, London UK.

9.1.1.2. Chair of Conference Program Committees

- Jean-Marie Gorce (chair) was co-chair of the ISP-IOT, the first Winter School on Information Theory and Signal Processing for Internet of Things.
- Samir M. Perlaza is chair of the special session on “Energy Harvesting and Wireless Powered Communications” hosted at the 20th IEEE International Workshop on Signal Processing Advances in Wireless Communications (SPAWC), July 2-5, 2019, Cannes, France.
- Samir M. Perlaza is co-chair of the Workshop on “Mathematical Tools for IoT Networks Modeling (MOTION)” hosted at the IEEE Wireless Communications and Networking Conference (WCNC). April, 15-18 2019, Marrakech, Morocco.
- Samir M. Perlaza is Publication Chair of the International Symposium on Information Theory (ISIT), July, 2019, Paris, France.

9.1.1.3. Member of Conference Program Committees

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

- IEEE Computer Society Annual Symposium on VLSI (ISVLSI) 2018
- Design Automation and Test in Europe (DATE) 2018
- International Conference on Cognitive Radio Oriented Wireless Networks (CROWNCOM) 2018
- International Conference on Advances in Cognitive Radio (COCORA) 2018.
- PIMRC 2018

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

- CROWNCOM2018
- PIMRC 2018
- EUCAP 2018.

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

- 25th IEEE Symposium on Computer Arithmetic (Arith 2018)
- Design Automation and Test in Europe (DATE 2018) (as co-chair of track D11),
- 26th IEEE International Symposium on Field-Programmable Custom Computing Machines (FCCM 2018)

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

- IEEE Global Communications Conference (Globecom), 9-13 December 2018, Abu Dhabi, UAE.
- International Conference on Advanced Technologies for Communications (ATC) 2018
- International Conference on Recent Advances on Signal Processing, Telecommunications & Computing (SigTelCom) 2018.

Jean-Marie Gorce was a member of the following technical program committees:

- IEEE International Conference on Communications (ICC), 20-24 May 2018, Kansas City, MO, USA.
- IEEE Global Communications Conference (Globecom), 9-13 December 2018, Abu Dhabi, UAE.
- IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), 9-12 September 2018, Bologna, Italy.
- IEEE 5G World Forum 2018 (WF-5G), 9-11 July 2018, Santa Clara, California, USA
- International Conference on Telecommunications(ICT), June, 26-28, 2018, Saint-Malo, France.
- IEEE Wireless Communications and Networking Conference (WCNC). April, 15-18, 2018, Barcelona, Spain.
- IEEE 5G World Forum 2019 (WF-5G), 2019.
- International Conference on Telecommunications(ICT), 2019.

Samir M. Perlaza was a member of the following program committees :

- International Conference on Computing, Networking and Communications (ICNC), 18-21 February, 2019, Honolulu, Hawaii, USA.
- IEEE International Conference on Communications (ICC), 20-24 May 2019, Shanghai, China.
- Workshop on Green and Sustainable 5G Wireless Networks at IEEE Global Communications Conference (Globecom), 9-13 December 2018, Abu Dhabi, UAE.
- IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), 9-12 September 2018, Bologna, Italy.

Claire Goursaud was a member of the following technical program committees:

- IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC) 2018
- EAI International Conference on Body Area Networks (BodyNet) 2018

Leonardo Sampaio-Cardoso was a member of the following technical program committees:

- IEEE Wireless Communications and Networking Conference (WCNC) 2019
- IEEE International Conference on Communications (ICC) 2019

9.1.2. Journal

9.1.2.1. Member of the Editorial Boards

Guillaume Villemaud is an associate editor of Annals of Telecommunications (Springer).

Malcolm Egan is an associate editor of IEEE Communications Letters and guest editor for IEEE Access special section on Molecular Communication Networks.

Jean-Marie Gorce is an an associate editor of Journal of Wireless Communications and Networking.

Claire Goursaud is associate editor for ETT and ITL, Wiley.

Samir M. Perlaza is editor of the IEEE Transactions on Communications for the term 2018-2021 in the area of Simultaneous Information and Energy Transmission, Feedback and Applications of Game Theory in Wireless Communications.

Samir M. Perlaza is Associate Editor of the IET Smart Grid for the term 2018-2021.

9.1.3. Scientific Expertise

Guillaume Villemaud served as Research Expert for the European commission for the H2020-MSCA-NIGHT-2018.

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'admistration) of ESISAR, Valence.

Jean-Marie Gorce was member of the jury for prix de thèse en signal-image de EEA-ISIS-GRETSI 2017.

Jean-Marie Gorce was the chair of a recruitment committee for a full professor position at Insa.

9.1.4. Invited Talks

Malcolm Egan gave invited talks in the Poor group in Princeton University and Prof. Erkip's group in NYU. With Samir M. Perlaza, he had an invited paper at CISS 2018.

Jean-Marie Gorce gave invited talks at IEMN/Ircica, invited by Prof. Laurent Clavier (June 2018), and at Orange Labs (Sept 2019).

Samir M. Perlaza gave a keynote on "Key Technologies in the IoT: Simultaneous Wireless Information and Energy Transmission" at the First Winter School on Information Theory and Signal Processing for Internet of Things, Villeurbanne, France, November 20, 2018.

Florent de Dinechin gave two talks at the FPGA days organized at LIP, Lyon, June 21, "Introduction to FPGA computing", then "computing just right on FPGAs"

Florent de Dinechin gave a talk at the RiscV days organized at CEA, October 16, Grenoble, "Dark silicon: a computer arithmetic perspective"

Florent de Dinechin gave a talk at the RiscV days organized at CEA, October 16, Grenoble, "Dark silicon: a computer arithmetic perspective"

Florent de Dinechin gave an invited lecture at the Advanced Workshop on FPGA-based Systems-On-Chip for Scientific Instrumentation and Reconfigurable Computing, organized by the International center for Theoretical Physics in Trieste, Italy, November 29, 2018.

Florent de Dinechin gave a talk at the Institute for Systems Programming of the Russian Academy of Science in Moscow, Russia, December 24, 2018.

Guillaume Salagnac and Tanguy Risset gave an invited talk at Spintec (Grenoble, FR), October 23rd, 2018, untitled "Peripheral State Persistence and Interrupt Management For Transiently Powered Systems".

Guillaume Villemaud gave an invited talk in the special session on Wake-up radio at the IEEE ICECS 2018 conference in december 2018

9.1.5. Research Administration

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

Tanguy Risset is Vice-director of the FIL (CNRS Computer Science Research Federation of Lyon/Saint-Etienne).

Florent de Dinechin is director of the Citi-Lab.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Tanguy Risset and Jean-Marie Gorce 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 and Malcolm Egan are an associate professor at the Telecommunications department of Insa Lyon.

Leonardo Sampaio-Cardoso is an associate professor at the FIMI department as well as the Telecommunications Department of Insa Lyon

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 **Gautier Berthou** *Operating system for transiently powered systems*, Inria, (IPL ZEP) since 01/2018.

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 **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 bursty communications*, ANR Arbust grant, since 10/2017.

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

PhD starting **Luc Forget** : *Algèbre linéaire calculant au plus juste*, ANR Imprenum, since 10/2018.

PhD starting **Yanni Zhou** : *Full Duplex and spatial modulation*

PhD starting **Tarik Lassouaoui**: *Tag 2 Tag communication*

PhD starting **Regis Rousseau**: *Wireless Power Transfer*

PhD defended: **Yuqi Mo** *Scaling of Iot Communication issues*, École Doctorale EEA, sept. 2018.

9.2.3. Juries

- Guillaume Salagnac was examiner in the jury of the PhD Nadir Cherify "Assistance au développement de logiciels embarqués contraints en énergie"
- Florin Hutu was examiner in the PhD Jury of Frank Itoua, defended on March 12, 2018 at Limoges University.
- Tanguy Risset was a member of the jury of the following theses:
 - Maxime France-Pillois (U. Grenoble)
 - Perrin Njoyah Ntafam (U. Grenoble)
 - Simon Rokicki (U. Rennes)
- Florent de Dinechin was a reviewer in the jury of Hugues de Lassus Saint-Genis, defended on May 17 2018 at Université de Perpignan Via Domitia.
- Malcolm Egan was a co-supervisor in the jury of Mauro de Freitas, defended at Université de Lille 1.
- Claire Goursaud and Jean-Marie Gorce were co-supervisors in the jury of Yuqi Mo, defended at Insa Lyon.
- Jean-Marie Gorce was :
 - a reviewer of the HdR jury of Guillaume Andrieux (IETR, Nantes U., December 2018).
 - a reviewer of the PhD jury of Philippe Ezran (Supelec Paris Saclay U., January 2018).
 - a reviewer of the PhD jury of Antony Pottier (IMT Atlantique, Nov 2018).
 - a reviewer of the PhD jury of Luca Feltrin (Bologna U., Italy, December 2018).
 - an examiner of the PhD jury of Xavier Leturc (IMT Paris, U. Paris Saclay, December 2018),
- Guillaume Villemaud was a reviewer for the PhD defense of
 - Andreina Liendo (Univ. Grenoble)
 - Mai-Thanh TRAN (Univ. Rennes 1)
 - Manuel Milla Peinado (Univ. Poitiers)
- Claire Goursaud was a member in the jury of Alaa Khreis, defended at l'Université Paris Saclay, prepared at Télécom ParisTech .
- Claire Goursaud was a reviewer in the jury of Remi Bonnefoi, defended at CentraleSupelec