Activity Report 2015

Section Dissemination

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

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. General chair, scientific chair

- André Seznec is the PC chair for ISCA 2016.
- Isabelle Puaut and Damien Hardy have organized the Ecole d'été Temps Réel in Rennes in August 2015.
- Isabelle Puaut is the chair of the RTNS steering committee.

10.1.1.2. Member of the organizing committees

- Isabelle Puaut is a member of the Executive committee of IEEE Technical Committee on Real-Time Systems
- Isabelle Puaut is member of the Steering committees of ECRTS and WCET conferences.
- Sylvain Collange was a member of the organization committee of Rencontres Arithmétiques de l'Informatique Mathématique (RAIM) 2015 in Rennes.

10.1.2. Scientific events selection

10.1.2.1. Chair of conference program committees

- André Seznec is the PC chair for ISCA 2016.

10.1.2.2. Member of the conference program committees

- Isabelle Puaut was a member of ECRTS 2015, RTAS 2015, RTCSA 2015 RTNS 2015 and WCET 2015 program committees. She is a member of the ECRTS 2016 program committee.
- Damien Hardy was a member of RTNS 2015 and WCET 2015 program committees
- André Seznec was a member of the MICRO 2015 and the SAMOS 2015 program committees.
- Pierre Michaud was a member of the program committee of the OMHI 2015 workshop.
- Erven Rohou was a member of the program committee of DITAM-PARMA and ISPA 2015.
- Sylvain Collange is a member of the ISCA 2016 program committee.

10.1.2.3. Reviewer

ALF members have been reviewers for many conferences and journals.

10.1.3. Journal

10.1.3.1. Member of the editorial boards

- André Seznec is a member of the editorial board of IEEE Micro and an associate editor of ACM TACO.

10.1.3.2. Reviewer - Reviewing activities

ALF members have been reviewers for many conferences and journals.

10.1.4. Invited talks

- Isabelle Puaut. "Multicore timing verification: towards more integrated WCET and schedulability analysis. TACLe COST action Focussed meeting on timing analysis of parallel programs in many-core architectures". Porto, Portugal, Nov. 2015.
- André Seznec. "Skewed Compressed Cache", AMD, Sunnyvale, Aug. 2015
- Arthur Perais. "Cost-Effective Speculative Scheduling in High Performance Processors" Intel, Hillsboro June 2015
- Damien Hardy . "Worst Case Execution Time Estimation and Permanent Faults" at "9ièmes rencontres de la communauté française de compilation", Jan. 2015.
- Erven Rohou. "Branch Prediction and the Performance of Interpreters: Don't Trust Folklore", at Dixièmes rencontres de la communauté française de compilation, Sep 2015.
- Erven Rohou. "Traceability of Flow Information: Reconciling Compiler Optimizations and WCET Estimation", at Neuvièmes rencontres de la communauté française de compilation, Jan 2015.

10.1.5. Scientific expertise

André Seznec was member of the ERC Advanced grants panel.

10.1.6. Research administration

- Erven Rohou is a member of the Inria CDT (Commission du Développement Technologique)
- As "correspondant scientifique des relations internationales" for Inria Rennes Bretagne Atlantique, Erven Rohou is a member of the Inria COST GTRI (Groupe de Travail "Relations Internationales" du Comité d'Orientation Scientifique et Technologique).
- A. Seznec is an elected member of the administration board of Inria since November 2014.
- Erven Rohou was a member of the Inria CR2 recruitment committee.
- Erven Rohou was a member of the recruitment committee of an assistant professor at Uppsala University (Sweden).
- Isabelle Puaut is member of the ISTIC council.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master research : A. Seznec, E.Rohou, I. Puaut, Performance et Microarchitecture, 24 hours, M2, Université de Rennes I, France

Master research: I. Puaut, E. Rohou, Rédaction d'articles scientifiques, 18 hours, M2, Université de Rennes I, France

Master: I. Puaut, D. Hardy, Operating systems, 130 hours, M1, Université de Rennes I, France

Master: I. Puaut, D. Hardy, Systèmes temps-réel, 69 hours, M1, Université de Rennes I, France

Licence: D. Hardy, Informatique temps-réel, 40 hours, L3, Université de Rennes I, France

Master: D. Hardy Systèmes d'exploitation, 40 hours, M1, Université de Rennes I, France

Master: D. Hardy Systèmes d'exploitation, 60 hours, M2 CCI, Université de Rennes I, France

Master: S. Collange, Programmation parallèle, 22 hours, M1, Université de Rennes I, France

Master/PhD: S. Collange, GPU programming, 30 hours, MSc/PhD programs, Universidade Federal de Minas Gerais, Brazil

10.2.2. Supervision

HdR: Erven Rohou, Infrastructures and Compilation Strategies for the Performance of Computing Systems, Université Rennes 1, Nov 2015

PhD : Hanbing Li, Extraction and Traceability of Annotations for WCET Estimation, Université Rennes 1, Oct 2015, co-advisors E. Rohou and I. Puaut

PhD : Arthur Perais, "Increasing the performance of superscalar processors through value prediction", Université Rennes 1, Sept 2015, advisor A. Seznec

PhD : Surya Khizakanchery Natarajan,"Modeling performance of serial and parallel sections of multi-threaded programs in manycore era", Université Rennes 1, June 2016, advisor A. Seznec

PhD : Bharath Narasimha Swamy, "Exploiting heterogeneous manycores on sequential code", Université Rennes 1, March 2015, advisor A. Seznec

PhD in progress: Nabil Hallou, Université Rennes 1, Feb 2013, co-advisors E. Rohou and P. Clauss (EPI Camus Inria Strasbourg)

PhD in progress: Sajith Kalathingal, Université Rennes 1, Dec 2012, co-advisors S. Collange and A. Seznec

PhD in progress: Andrea Mondelli, Université Rennes 1, Oct 2013, co-advisors P. Michaud and A. Seznec

PhD in progress: Aswinkumar Sridharan, Université Rennes 1, Oct 2013, advisor A. Seznec

PhD in progress: Arjun Suresh , Université Rennes 1, Dec 2012, co-advisors E. Rohou and A. Seznec

PhD in progress : Rabab Bouziane, Université Rennes 1, Nov 2015, advisor E. Rohou

PhD in progress : Arif Ali Ana-Pparakkal, Université Rennes 1, Feb 2015, advisor E. Rohou

PhD in progress : Simon Rokicki, Université Rennes 1, Sep 2015, co-advisors E. Rohou and Steven Derrien (CAIRN)

PhD in progress: Benjamin Rouxel, Université Rennes 1, Oct 2015, co-advisors I. Puaut and S. Derrien

PhD in progress: Viet Anh Nguyen, Université Rennes 1, Jan 2015, co-advisors D. Hardy and I. Puaut

10.2.3. Juries

The member of ALF have participated to many PhD defense juries in France and abroad.

CAIRN Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events selection

9.1.1.1. Chair of conference program committees

A. Tisserand was program co-chair of the 22nd IEEE Symposium on Computer Arithmetic (Lyon, 22-24 June 2015) [65].

O. Sentieys was Track Chair at IEEE NEWCAS.

9.1.1.2. Member of the conference program committees

D. Chillet was member of the technical program committee of HiPEAC RAPIDO, HiPEAC WRC, MCSoC, DCIS, ComPAS, DASIP, LP-EMS, ARC.

A. Tisserand was a member of technical program committee of the following conferences: IEEE ARITH 2015, DASIP 2015, IEEE NEWCAS 2015, IEEE PATMOS 2015 and IEEE Reconfig 2015.

S. Derrien was a member of technical program committee of IEEE FPL.

O. Sentieys was a member of technical program committee of IEEE FPL, ACM ENSSys, FSP, FPGA4GPC.

9.1.2. Journal

9.1.2.1. Member of the editorial boards

D. Chillet is member of the Editor Board of Journal of Real-Time Image Processing (JRTIP).

O. Sentieys is member of the editorial board of Journal of Low Power Electronics, Advances in Computer Engineering, and International Journal of Distributed Sensor Networks.

A. Tisserand is Associate Editor of IEEE Transactions on Computers. He is a member of the editorial board of the International Journal of High Performance Systems Architecture, Inderscience.

9.1.3. Invited talks

O. Sentieys gave an invited lecture at FETCH (École d'hiver Francophone sur les Technologies de Conception des Systèmes embarqués Hétérogènes), Louvain, Belgium, in January 2015 on "Domain-Specific Computing Platforms: the Ultimate Energy-Efficiency of Hardware Accelerators".

O. Sentieys gave an invited lecture at The 1st International Workshop on Optical/Photonic Interconnects for Computing Systems (OPTICS Workshop), co-located with IEEE/ACM Design Automation and Test in Europe (DATE'15), in March 2015 on "Bandwidth Requirements in Manycore Architectures: What Can 3D Bring?".

A. Tisserand has been invited speaker at the international conference on elliptic curve cryptography (ECC) [29].

A. Tisserand gave an invited lecture at the CNRS ARCHI 2015 summer school on "Processor Extensions for Security".

9.1.4. Leadership within the scientific community

D. Chillet is member of the Board of Directors of Gretsi Association.

F. Charot, O. Sentieys and A. Tisserand are members of the steering committee of a CNRS spring school for graduate students on embedded systems architectures and associated design tools (ARCHI).

O. Sentieys and A. Tisserand are members of the steering committee of a CNRS spring school for graduate students on low-power design (ECOFAC).

A. Tisserand is co-organizer and president of scientific council of Seminar on Security of Embedded Electronic Systems (IRISA-DGA).

O. Sentieys is a member of the steering committee of the GDR SOC-SIP.

9.1.5. Scientific expertise

D. Chillet was member of the French National University Council since 2009 in signal processing and electronics (Conseil National des Universités en 61e section).

D. Chillet was member of the Permanent Committee of the French National University Council since November 2011 in signal processing and electronics (Commission Permanente du Conseil National des Universités en 61e section).

A. Tisserand was member of the French National University Council since 2011 in computer science (Conseil National des Universités en 27e section).

O. Sentieys was responsible for some scientific evaluations (HCERES).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

E. Casseau: signal processing, 16h, ENSSAT (L3)

E. Casseau: low power design, 6h, ENSSAT (M1)

E. Casseau: real time design methodology, 24h, ENSSAT (M1)

E. Casseau: computer architecture, 36h, ENSSAT (M1)

E. Casseau: system on chip and verification, 10h, Master by Research (SISEA) and ENSSAT (M2)

E. Casseau: high level synthesis, 12h, Master by Research (SISEA) and ENSSAT (M2)

E. Casseau: advanced processor architectures, 25h, University of Science and Technology of Hanoi (M2)

S. Derrien: component and system synthesis, 20h, Master by Research (MRI ISTIC) (M2)

S. Derrien: computer architecture, 12h, ENS Rennes (L3)

S. Derrien: computer architecture, 24h, ISTIC(L3)

S. Derrien: introduction to operating systems, 8h, ISTIC(M1)

S. Derrien: embedded architectures, 48h, ISTIC(M1)

S. Derrien: high-level synthesis, 6h, ISTIC(M1)

S. Derrien: software engineering project, 40h, ISTIC(M1)

F. Charot: processor architecture, 25h University of Science and Technology of Hanoi (M1)

D. Chillet: embedded processor architecture, 20h, ENSSAT (M1)

D. Chillet: VHDL, 10h, ENSSAT (M1)

D. Chillet: multimedia processor architectures, 24h, ENSSAT (M2)

D. Chillet: advanced processor architectures, 24h, Master by Research (SISEA) and ENSSAT (M2)

D. Chillet: low-power digital CMOS circuits, 6h, Telecom Bretagne and University of Occidental Brittany (UBO) (M2)

C. Killian: digital electronics, 62h, IUT Lannion (L1)

C. Killian: signal processing, 36h, IUT Lannion (L2)

C. Killian: automated measurements, 56h, IUT Lannion (L2)

C. Killian: measurement chain, 35h, IUT Lannion (L2)

C. Killian: embedded systems programming, 12h, IUT Lannion (L2)

A. Kritikakou: computer architecture, 50h, ISTIC, Univ. Rennes 1 (L3)

A. Kritikakou: operating systems, 24h, ɪsᴛɪᴄ, Univ. Rennes 1 (L3)

A. Kritikakou: multitasking operating systems, 45h, ɪsᴛɪᴄ, Univ. Rennes 1 (M1)

O. Sentieys: digital signal processing, 40h, Eɴssᴀᴛ (M1)

O. Sentieys: VLSI integrated circuit design, 40h, Eɴssᴀᴛ(M1)

A. Tisserand: multiprocessor architectures and programming, 20h, Eɴssᴀᴛ and Master by Research (SISEA) (M2)

C. Wolinski: computer architectures, 92h, Esɪʀ (L3)

C. Wolinski: design of embedded systems, 48h, Esɪʀ (M1)

C. Wolinski: signal, image, architecture, 26h, Esɪʀ (M1)

C. Wolinski: programmable architectures, 10h, Esɪʀ (M1)

C. Wolinski: component and system synthesis, 10h, Master by Research (MRI ISTIC) (M2)

9.2.2. Teaching Responsibilities

C. Wolinski is the Director of Esɪʀ.
P. Quinton was the director of Ecole Normale Supérieure de Rennes until end Aug. 2015.
D. Chillet was the Director of Academic Studies of Eɴssᴀᴛuntil end Aug. 2015.
S. Derrien is the responsible of the first year of the Master of Computer Science at ISTIC since Sep. 2012.
O. Sentieys is responsible of the "Embedded Systems" branch of the SISEA Master by Research.
D. Chillet is the responsible of the ICT Master of University of Science and Technology of Hanoi and also co-responsible of the "Embedded Systems" speciality of this master.
C. Killian is the responsible of the second year of the Physical Measurement DUT at IUT of Lannion.

Eɴssᴀᴛ stands for *"École Nationale Supérieure des Sciences Appliquées et de Technologie"* and is an *"École d'Ingénieurs"* of the University of Rennes 1, located in Lannion.
ɪsᴛɪᴄ is the Electrical Engineering and Computer Science Department of the University of Rennes 1.
Esɪʀ stands for *"École supérieure d'ingénieur de Rennes"* and is an *"École d'Ingénieurs"* of the University of Rennes 1, located in Rennes.

9.2.3. Supervision

PhD: Christophe Huriaux, Embedded reconfigurable hardware accelerators with efficient dynamic reconfiguration management, Dec. 2015, O. Sentieys, A. Courtay.

PhD: Quang-Hai Khuat, Real-Time Spatio-Temporal Task Scheduling on 3D Architectures, Feb. 2015, D. Chillet.

PhD in progress: Benjamin Barrois, Approximate Computing: a New Paradigm for Energy-Efficient Computing Architectures, Oct. 2014, O. Sentieys.

PhD in progress: Florent Berthier, Study and Design of an Ultra Low Power Asynchronous Core for Sensor Networks, Oct. 2013, O. Sentieys, P. Vivet, E. Beigne.

PhD in progress: Franck Bucheron, Secure Virtualization for Embedded Systems, Oct. 2011, A. Tisserand.

PhD in progress: Gaël Deest, Computing with Errors: Error-Tolerant Machine Code Generation for Unreliable Embedded Hardware, Oct. 2013, S. Derrien, O. Sentieys.

PhD in progress: Ali Hassan El-Moussawi, Performance/Accuracy Trade-Off in Automatic Parallelization for Embedded Many-Core Platforms, Nov. 2012, S. Derrien.

PhD in progress: Gabriel Gallin, Hardware Arithmetic Units and Crypto-Processor for Hyperelliptic Curves Cryptography, Oct. 2014, A. Tisserand, N. Veyrat-Charvillon.

PhD in progress: Xuan Chien Le, Indirect Monitoring in Self-Powered Wireless Sensor Networks for Smart Grid and Building Automation, Oct. 2013, O. Sentieys, B. Vrigneau.

PhD in progress: Audrey Lucas, Software support resistant to passive and active attacks for asymmetric cryptography on (very) small computation cores, Dec. 2015, A. Tisserand.

PhD in progress: Jiating, Luo, Communication protocol exploration in the context of 3D integration of multiprocessors interconnected by Optical Network-on-Chip with energy constraints, Nov. 2014, D. Chillet, C. Killian, S. Le-Beux.

PhD in progress: Jérémie Métairie, Reconfigurable Arithmetic Units for Secure Cryptoprocessors, Oct. 2012, A. Tisserand, E. Casseau.

PhD in progress: Van Dung Pham, Design space exploration in the context of 3D integration of multiprocessors interconnected by Optical Network-on-Chip, Dec 2014, O. Sentieys, D. Chillet, C. Killian, S. Le-Beux.

PhD in progress: Rafail Psiakis, A Self-Healing Reconfigurable Accelerator Structure for Fault-Tolerant Multi-Cores, Oct. 2015, A. Kritikakou, O. Sentieys.

PhD in progress: Rengarajan Ragavan, Ultra-Low Power Reconfigurable Architectures for Computing and Control in Wireless Sensor Networks, Oct. 2013, O. Sentieys, C. Killian.

PhD in progress: Simon Rokicki, Hybrid Hardware/Software Dynamic Compilation for Adaptive Embedded Systems, Oct. 2015, S. Derrien.

PhD in progress: Baptiste Roux, Architectural Exploration of a Low-Power Flexible Radio Embedded on Drones, Oct. 2014, O. Sentieys, M. Gautier.

PhD in progress: Mai-Thanh Tran, Hardware Synthesis of Flexible and Reconfigurable Radio from High-Level Language Dedicated to Physical Layer of Wireless Systems, Oct. 2013, E. Casseau, M. Gautier.

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

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific events organisation

Static Analysis Symposium 2015, Saint-Malo, September 2015.

8.1.2. Scientific events selection

8.1.2.1. Chair of conference program committees

SAS 2015 (Static Analysis Symposium) was chaired by Sandrine Blazy and Thomas Jensen

8.1.2.2. Member of the conference program committees

- FORTE 2015 (International Conference on Formal Techniques for Distributed Objects, Components and Systems): Alan Schmitt
- CoqPL 2016 (International Workshop on Coq for PL): Alan Schmitt
- POPL 2015 (Symposium on Principles of Programming Languages): David Pichardie (Program Committee) and Delphine Demange (External Review Committee)
- ESOP 2015 (European Symposium on Programming) : Delphine Demange
- JFLA 2015 (Journées Francophones des Langages Applicatifs) : Delphine Demange
- OCaml workshop 2015: Sandrine Blazy
- AFADL 2015 (Approches Formelles dans l'Assistance au Développement de Logiciels) : Sandrine Blazy
- ITP 2015 (Interactive Theorem Proving): Sandrine Blazy
- CPP 2016 (Certified Proofs and Programs): Sandrine Blazy
- IFIP SEC 2015: Thomas Jensen

8.1.2.3. Reviewer

- CONCUR 2015 (International Conference on Concurrency Theory): Alan Schmitt
- FOSSACS 2016 (International Conference on Foundations of Software Science and Computation Structures): Alan Schmitt
- ITP 2015 (International Conference on Interactive Theorem Proving) : Delphine Demange
- ATVA 2015 (13th International Symposium on Automated Technology for Verification and Analysis) : Sandrine Blazy
- ESOP 2015 (European Symposium on Programming): Thomas Jensen.

8.1.3. Journal

8.1.3.1. Reviewer - Reviewing activities

- Applied Mathematics & Information Sciences: Alan Schmitt
- Formal Aspects of Computing: Alan Schmitt, Thomas Jensen
- International Journal of Computer Mathematics: Alan Schmitt
- Journal of Automated Reasoning: Sandrine Blazy, David Pichardie
- Journal of Computer Security : Sandrine Blazy

8.1.4. Invited talks

- Sandrine Blazy: Formal verification of compilers and static analyzers, PLMW@POPL 2015 (Programming Languages Mentoring Workshop)
- Thomas Jensen: Integrating formal verification within programming languages. Seminar Collège de France, October 2015.

8.1.5. Scientific expertise

- Sandrine Blazy: expertise of 2 projects for FNR (Luxemburg)
- Thomas Jensen, expertise of ANR AAP general, short proposals

8.1.6. Research administration

- Thomas Jensen is head of the NUMERIC department at University of Bretagne-Loire
- Thomas Jensen is managing the "Security" track of ANR Comin Labs.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence: Thomas Genet, Software Engineering, 58h, L2, Université de Rennes 1 / Istic, France

Licence: Delphine Demange, Software Engineering, 40h, L2, Université de Rennes 1 / Istic, France

Licence: Delphine Demange, Functional Programming, 70h, L1, Université de Rennes 1 / Istic, France

Licence : Alan Schmitt, Programmation Fonctionnelle, 39h, L3, Insa Rennes, France

Licence : David Pichardie, Algorithms, 36h, L3, ENS Rennes, France

Licence : David Cachera, Logic, 36h, L3, ENS Rennes, France

Licence : Sandrine Blazy, Functional programming, 30h, L3, Université Rennes 1 France

Master : Thomas Genet, Formal Design and Verification, 108h, M1, Université de Rennes 1 / Istic, France

Master : Thomas Genet, Cryptographic Protocols, 24h, M2, Université de Rennes 1 / Istic, France

Master : David Cachera, Semantics of Programming Languages, 36h, M1, Université Rennes 1, France

Master : Frédéric Besson, Compilation, 50h, M1, Insa Rennes, France

Master : Sandrine Blazy, Méthodes Formelles pour le développement de logiciels sûrs, 53h, M1, Rennes 1, France

Master : Alan Schmitt, Méthodes Formelles pour le développement de logiciels sûrs, 25h, M1, Rennes 1, France

Master : David Pichardie, Mechanized Semantics, 15h, M2, Université Rennes 1, France

Master : Sandrine Blazy, Mechanized Semantics, 15h, M2, Université Rennes 1, France

Master : Sandrine Blazy, Software vulnerabilities, 38h, M2, Université Rennes 1, France

Master : Delphine Demange, Software Security, 9h, M2, Université Rennes 1, France

Master : Thomas Jensen, Program Analysis and Software Security, 39h, M2, Université Rennes 1, France

8.2.2. Supervision

PhD in progress : Martin Bodin, Certified Analyses of JavaScript, 1st september 2012, Thomas Jensen and Alan Schmitt

PhD in progress : Gurvan Cabon, Analyse non locale certifiée en JavaScript grâce à une sémantique annotée, 1st september 2015, Alan Schmitt

PhD in progress : Yon Fernandez De Retana, Verified Optimising Compiler for high-level languages, 1st september 2015, Delphine Demange and David Pichardie

PhD in progress : Yannick Zakowski, Programs Logics for Concurrency, 1st september 2014, David Pichardie and David Cachera

PhD in progress : Florent Saudel, Vulnerability discovery, November 2015, Sandrine Blazy, Frédéric Besson and Frédéric Guihéry (Amossys)

PhD in progress: David Bühler, Communication between analyses by deductive verification and abstract interpretation, November 2013, Sandrine Blazy and Boris Yakobowski (CEA)

PhD in progress: Pierre Wilke, Low-level memory models for compilers and static analysers, 1st august 2013, Sandrine Blazy and Frédéric Besson

PhD in progress: Oana Andreescu, Static analysis and automated program proving, 1st September 2013, Thomas Jensen

PhD in progress: Pauline Bolignano, Modeling and abstraction of system software, 1st November 2013, Thomas Jensen

PhD: Yann Salmon, Reachability for Term Rewriting Systems under Strategies, defended Dec 2015, Thomas Genet

PhD: Vincent Laporte, Verified static analyses for low-level languages, defended Nov 2015, Sandrine Blazy and David Pichardie

PhD: Stéphanie Riaud, Data obfuscation for protecting programs against dynamic analysis, defended Dec 2015, Sandrine Blazy

8.2.3. Juries

Alan Schmitt, jury member (reviewer) for the PhD defense of Burak Ekici, December 2015, Université Grenoble Alpes

David Pichardie, jury member (chair) for the PhD defense of Mounir Assaf, May 2015, University Rennes 1, France.

David Pichardie, jury member (reviewer) for the PhD defense of Bogdan Mihaila, January 2015, Technische Universität München, Germany.

Sandrine Blazy, jury member for the PhD defense of Alexis Fouilhé, October 2015, Grenoble University, France

Sandrine Blazy, jury member for the PhD defense of Zakaria Chihani, November 2015, Ecole Polytechnique, France.

Sandrine Blazy, jury member for the PhD defense of Lourdes del Carmen Gonzalez Huesca, November2015, Paris Diderot University, France.

Thomas Jensen, jury member for the PhD defense of Magnus Madsen, May 2015, Aarhus University, Denmark.

Thomas Jensen, jury member for the PhD defense of Clémentine Maurice, EURECOM, France.

Alan Schmitt, jury member for the selection of Inria CR (researcher) candidates, March and April 2015, Inria, Rennes, France.

Delphine Demange, jury member for the selection of a Maître de Conférences at University Paris Diderot (Paris 7) / LIAFA+PPS, May 2015, Paris, France.

Sandrine Blazy, jury member for the selection of a Maître de Conférences at University of Nancy, May 2015, Nancy, France.

Sandrine Blazy, jury member for the selection of a Maître de Conférences at University of Rennes 1, May 2015, Rennes, France.

Sandrine Blazy, jury member for the selection of a professor at University of Brest, May 2015, Brest, France.

Delphine Demange, jury member of the Gilles Kahn PhD award committee, December 2015, Inria Paris - Rocquencourt

8.3. Popularization

- IRISA 40th anniversary Open House - Recreational workshop (interactive demonstration) on the problem of functional correctness of programs, its importance in the field of critical software, and formal proof of correctness : Thomas Genet, Delphine Demange, Pauline Bolignano, Yannick Zakowski. Inria Convention centre, Inria Rennes - Bretagne Atlantique. Rennes, France. December 2015.

- Talk "Bug, Virus, Intrusion, Pirates... So many threats and no defense? Yes... maths.", Thomas Genet, given two times in high schools close to Rennes.

- Two short tutorials. One for Isabelle/HOL [41] and one for SPAN+AVISPA [42].

<p style="text-align:center;color:red;font-weight:bold;font-size:larger;">DECENTRALISE Team</p>

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Invited talks

- 19th Workshop on Elliptic Curve Cryptography, on "Cryptography in GNUnet: Protocols for a Future Internet for Libre Societies"

8.1.2. Scientific expertise

- IETF 93, on "Special Use Domain Names of P2P Systems"
- IETF 93, on "Knocking down the HACIENDA with TCP Stealth"
- Invited expert for the high-level conference on "Protecting on-line privacy by enhancing IT security and EU IT autonomy" organized by the Civil Liberties Justice and Home Affairs Committee (LIBE) and the Science and Technology Options Assessment Panel (STOA) of the European Parliament, in association with the Luxemburg Presidency of the European Council

8.2. Teaching - Supervision - Juries

8.2.1. Supervision

PhD : Matthias Wachs, "A Secure Communication Infrastructure for Decentralized Networking Applications", TU Munich, 2015, Christian Grothoff (advisor)

PhD in progress : Bart Polot, "Practical Routing in Overlays", 2011-, Christian Grothoff (advisor)

PhD in progress : Florian Dold, "Secure payment systems and applications", 2015-, Christian Grothoff (encadrant), Jean-Louis Lanet (encadrant)

PhD in progress : Alvaro Garcia-Recuero, "Privacy for the Trolls", 2014-, Christian Grothoff (encadrant)

8.2.2. Juries

- PhD : Michael Kiperberg, "Preventing Reverse Engineering of Native and Managed Programs", University of JYVÄSKYLÄ, 2015, Pekka Neittaanmäki (supervisor), Nezer Zaidenberg (supervisor), Christian Grothoff (opponent)

8.3. Popularization

- ACTUX Meeting, on "Résistance des GNUs"
- Security in Times of Surveillance (TU Eindhoven), on "Knocking down the HACIENDA with TCP Stealth"
- Linux User Group (LUG) Camp, on "Résistance des GNUs"
- Studentenforum im Tönissteiner Kreis e.V., on "State Surveillance: Benefits and Risks"
- Invest in Cyber Convention, on "La protection de la vie privée et sécurité des objets connectés" (Panel)
- Post Snowden Cryptography, on "The GNUnet: 45 Subsystems in 45 Minutes"
- Organizing YBTI workshop at 32c3 in Hamburg (December 29th)

ESTASYS Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific events selection

- Axel Legay was PC member of MEMOCODE, FORMATS, FORMALIZE, SPLC, ASE, FACS, FORTE.
- Louis-Marie Traonouez was PC member of FORMATS
- Rudolf Fahrenberg was PC member of TACAS

8.1.2. Journal

8.1.2.1. Member of the editorial boards

Axel Legay is a member of the editorial board of the newly created journal for masterminding changes (FOMACS).

8.1.2.2. Reviewer - Reviewing activities

Axel Legay has been reviewer for TCS, FMSD, IandC.

8.1.3. Invited talks

- Axel Legay has been invited at the first EMSIG school, Copenhagen 2015.
- Uli Fahrenberg has been invited at Automatha 2015.

8.1.4. Leadership within the scientific community

Together with the University of Vannes and IRIT Toulouse, the team has initiated the first GT on systems of systems.

8.1.5. Scientific expertise

Axel Legay has been an evaluator for the National Science fund in Belgium. He is also a member of Inria evaluation committee.

8.1.6. Research administration

The members of the team reviewed numerous papers for numerous international conferences

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Software Verification

Axel Legay: Software Verification, 40 hours, Royal Holloway, University of London
Axel Legay: Modélisation et Vérification Formelle par Automates, 12 hours, University of Rennes 1.
Axel Legay: Méthodes d'analyse de risques, 28 hours, ENSIBS2 (Vannes)
Jean Quilbeuf: Modélisation et Vérification Formelle par Automates, TP 12 hours, University of Rennes 1.

8.2.2. Supervision

PhD: Mounir Chadli: Scheduling for Systems of Systems, Started on December 2014, Axel Legay
[1] HdR: Axel Legay, Contribution to Statistical Model Checking, November 2015

8.2.3. Juries

Axel Legay has been a member of the PhD jury of Raphael Michel (Namur).

8.3. Popularization

Together with Vannes University, the team has published three high-level description articles on systems of systems [5], [6], [7].

HYCOMES Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific events organisation

8.1.1.1. Member of the organizing committees

Benoît Caillaud has served on the program and organizing committees of LMCS 2015 (http://www.acsysteme. com/fr/lmcs-2015), a national workshop on mathematical modeling and scientific computing.

8.1.2. Scientific events selection

8.1.2.1. Member of the conference program committees

Benoît Caillaud has served on the program committee of ACSD 2015 (http://www.ulb.ac.be/di/verif/ pn2015acsd2015/), a conference on the applications of concurrency in system design. He is a member of the steering committe of ACSD since 2006.

Albert Benveniste has served on the program committee of MODELICA 2015 (https://www.modelica.org/ events/modelica2015), the conference on the Modelica mathematical modeling language.

8.1.2.2. Reviewer

Benoît Caillaud has reviewed papers submitted to the EMSOFT 2015, TACAS 2015 and ACC 2016 conferences.

8.1.3. Journal

8.1.3.1. Reviewer - Reviewing activities

Benoît Caillaud has reviewed papers submitted to Acta Informatica.

8.1.4. Invited talks

Benoît Caillaud has given an invited talk on *Time Domains in Hybrid Systems Modeling* at the LCCC-ACCESS workshop on Model-Based Engineering (http://www.lccc.lth.se/index.php?page=LCCC-ACCESS-2015-05). He has given an invited talk on *Contracts and Interfaces in System Engineering* at the CNRIA 2015 national conference (http://cnria.cci.ucad.sn/), Thiès, Sénégal.

Albert Benveniste has given invited talks at the Modelica 2015 conference (https://www.modelica.org/ events/modelica2015) and at the Gretsi 2015 colloquium (http://www.gretsi.fr/colloque2015/). He has given an invited talk at the LCCC-Access workshop on Model-Based Engineering (http://www.lccc.lth.se/index. php?page=LCCC-ACCESS-2015-05).

8.1.5. Research administration

Benoît Caillaud is head of the *Languages and Software Engineering* department of IRISA (http://www. irisa.fr/en/departments/d4-language-and-software-engineering). He has been in charge of editing the synthesis documents, regarding this department, used for the evaluation of IRISA by HCERES in January 2016.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master : Benoît Caillaud is teaching with Marc Pouzet a first year master degree course on *hybrid systems modeling*. The course is open to the students registered to the computer science research and innovation curriculum of the university of Rennes 1 and ENS Rennes.

8.2.2. Supervision

PhD in progress : Ayman Aljarbouh, *Accelerated Simulation of Hybrid Systems*, started january 2014, supervised by Benoît Caillaud

8.2.3. Juries

Albert Benveniste has participated to the HdR jury of Axel Legay (University of Rennes 1, november 2015).

8.3. Popularization

Albert Benveniste, as a member of the French Academy of Technology, has participated to an inquiry of the French Ministry of Education on the teaching of computer science in the secondary school curriculum.

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

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. Member of the organizing committees

Nathalie Bertrand is an elected steering committee member for the international conference QEST (Quantitative Evaluation of Systems).

Thierry Jéron is member of the steering committee of the european summer school MOVEP (Modélisation et Vérification des Systèmes Parallèles). The next edition will take place in Genova in July 2016.

Hervé Marchand is member of the IFAC Technical Committees (TC 1.3 on Discrete Event and Hybrid Systems) since 2005. He is member of the steering committee of MSR (Modélisation de systèmes réactifs).

10.1.2. Scientific events selection

10.1.2.1. Chair of conference program committees

Éric Badouel was Scientific President of CRI 2015 (Yaoundé)

Nathalie Bertrand was co-chair of the international workshop QAPL'15 with Mirco Tribastone.

10.1.2.2. Member of the conference program committees

Éric Badouel was PC member of ATAED 2016 (Brussel).

Nathalie Bertrand was PC member of the following international conferences: Formats'15, ICLA'15, QEST'15, TACAS'15.

Loïc Hélouët was member of the program committee of ACSD 2015 (Approaches of Concurrency for Systems Design, Brussels june 2015) and SDL 2015 (System Design Languages, Berlin, 2015).

Thierry Jéron was PC member of the following international conferences: ICTSS'15, TAP'15, USE'15, RV'16.

Hervé Marchand was PC member of the DCDS 2015 and MSR 2015 conferences.

10.1.2.3. Reviewer

The members of the team reviewed numerous papers for numerous international conferences.

10.1.3. Journal

10.1.3.1. Member of the editorial boards

Éric Badouel is Editor in Chief of ARIMA Journal.

10.1.3.2. Reviewer - Reviewing activities

Éric Badouel was a reviewer for Science of Computer Programming, Fundamenta Informaticae and Mathematical Review.

Nathalie Bertrand acted as a reviewer for Journal of the ACM, Formal Methods in System Design, Information and Computation.

Éric Fabre reviewed sumissions to IEEE TAC, Automatica, J. of Discrete Event Dynamic Systems, IEEE Trans. on Automation Sciences and Engineering.

Loïc Hélouët was a reviewer for Formal aspects of computing and Theoretical Computer Science.

Hervé Marchand was reviewer for JDEDS and for the Annual Reviews in Control.

Christophe Morvan was a reviewer for Journal of Computer and System Sciences and for IEEE Transactions on Automatic Control.

Ocan Sankur was a reviewer for Theoretical Computer Science, Logical Methods in Computer Science, Science of Computer Programming and Formal Methods in System Design

10.1.4. Invited talks

Nathalie Bertrand gave an invited talk at Gandalf 2015, and at MSR 2015. She gave a lecture on Controlling probabilistic systems under partial information at the EJCIM (École jeunes chercheurs Informatique Mathématiques) in april 2015. See the lecture notes [45].

Thierry Jéron and Ocan Sankur both gave lectures at ETR'15 (Ecole temps réel) in Septembre 2015, respectively on "Model-based conformance test generation for timed systems", and "Control of timed systems".

10.1.5. Scientific expertise

Éric Fabre serves as expert for the Minsitry of Research, for the Credit Impot Recherche, a tax-reduction programme for research activities performed by private companies. He was solicited for 4 companies in 2015.

Loïc Hélouët acted as reviewer for the ANR.

Thierry Jéron was reviewer for the CHIST-ERA consortium and for a NSERC Discovery Grant proposal (Canada).

10.1.6. Research administration

Éric Badouel is secretary of the Permanent Committee of CARI, co-Director of LIRIMA, and the Scientific Manager for Africa and Middle-East region at Inria DPEI.

Nathalie Bertrand is secretary and committee member of Gilles Kahn PhD prize.

Éric Fabre is the co-director, with Olivier Audouin, of the joint research lab of Alcatel-Lucent Bell Labs and Inria.

Loïc Hélouët and Éric Fabre are members of the Scientific Board of the joint lab of Alstom Transport and Inria.

Loïc Hélouët was *référent chercheur* for the Inria Rennes research center.

Thierry Jéron was Vice Scientific Delegate of the Inria Rennes research center and member of the Inria Evaluation Committee until 09/2015. This year he was member of the following Inria hiring committees: junior scientists (CR2) at Lillle, starting and advanced senior research positions (ARP, SRP), and senior scientists (DR2). He is also member of the IFIP Working Group 10.2 on Embedded Systems and member of the Management Committee (substitute) of the COST IC1402 (ARVI: Runtime Verification beyond Monitoring). He is member of the COS Prospective of Irisa Rennes.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Nathalie Bertrand

Agreg: Responsible of computer science organization, 16h (eq. TD), M2, Ecole Normale Supérieure de Rennes, France.

L3: Lecture on Algorithms, 18h (eq. TD), L3, University Rennes 1, France.

Éric Fabre

Master : "ASR: introduction to distributed systems and algorithms," 12h, M2, Univ. Rennes 1, France.

Master : "Information theory," 15h, M1, Ecole Normale Superieure de Bretagne, France.

Master : Preparation of Aggregation, 6h, M1, Ecole Normale Superieure de Bretagne, France.

Blaise Genest

Master: Advanced verification techniques, M2 in Compuer Science, Université Rennes I, 10h.

Loïc Hélouët

Licence: JAVA and algorithmics at INSA de Rennes for students in the second year of engineer cycle. He also supervises practical studies (development of a small project by students under the supervision of two teachers).

Agreg: algorithmics at ENS Rennes (8 hours / year).

Éric Fabre, Loïc Hélouët, Hervé Marchand

Master: supervised 3 students from ENS Rennes at the M1 level during 6 month. (2 hours/ week during 6 months)

Christophe Morvan

Licence: Compilation, System, Advanced Algorithmics Université de Paris-Est, Marne-la-Vallée, France.

10.2.2. Supervision

HdR: Nathalie Bertrand, "Contributions to the verification and control of timed and probabilistic models", University Rennes I, November 16, 2015.

PhD:

Paulin Fournier, "Parameterized verification of networks of many identical processes", Université Rennes I, December 17, 2015, Supervisors: Nathalie Bertrand, Thierry Jéron, Arnaud Sangnier (LIAFA).

Srinivas Pinisetty, "Runtime Enforcement of Timed Properties", Université Rennes I, January 23, 2015, Supervisors: Thierry Jéron, Hervé Marchand, Yliès Falcone (LIG).

PhD in progress:

Karim Kecir (2015-2018, CIFRE thesis): "Régulation et robustesse des systèmes ferroviaires urbains", Université Rennes I, Supervisor: Loïc Hélouët.

Matthieu Pichené (2014-2017): "Stochastic models for the modelling of apoptosis", Université Rennes I, Supervisor: Blaise Genest.

Engel Lefaucheux (2015-2018): "Information control in probabilistic systems", Université Rennes I, Supervisors: Nathalie Bertrand, Serge Haddad (LSV, ENS Cachan).

10.2.3. Juries

Éric Badouel was opponent of the Doctoral Thesis of Abel Armas-Cervantès, "Diagnosing Behavioural Differences Between Business Process Models", University of Tartu, Estonia, August 2015.

Nathalie Bertrand was member of the PhD defense committee of Nathanaël Fijalkow, *Counting and Randomising in Automata Theory*, Université Paris VII, 15/10/2015.

Éric Fabre was in the mid-term jury of 4 PhD students of Telecom Bretagne.

Thierry Jéron was member of the Habilitation defense committee of Nathalie Bertrand, University Rennes I, November 16, 2015 (see above), and president of the PhD defense committee of Abderahman Kriouile, Université de Grenoble, September 17, 2015. He was also in the mid-term PhD jury of Mouna Hkimi (Supélec Rennes).

Hervé Marchand was Member of the PhD Defense of Johan Girault « Conception formelle du pilotage d'une flotte de robots mobiles », Ecole centrale de Nantes, November 2015.

TASC Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events selection

10.1.1.1. Chair of conference program committees

- Nicolas Beldiceanu: Sixth International Workshop on Bin Packing and Placement Constraints.

10.1.1.2. Member of the conference program committees

- Nicolas Beldiceanu: Member of the senior program committee of CP 2015.
- Nicolas Beldiceanu: Member of the program committee of CP 2016.
- Nicolas Beldiceanu: Member of the senior program committee of CPAIOR 2015.
- Nicolas Beldiceanu: Member of the senior program committee of CPAIOR 2016.
- Nicolas Beldiceanu: Member of the program committee of IJCAI 2015.
- Xavier Lorca: Member of the program committee of IJCAI 2015.
- Xavier Lorca: Member of the program committee of CP 2015.
- Xavier Lorca: Member of the program committee of ROADEF 2015.
- Xavier Lorca: Member of the program committee of ROADEF 2016.
- Eric Monfroy: Track chair de ACM-SAC 2015 CSP track.
- Eric Monfroy: Member of the program committee of Evocop 2015.
- Eric Monfroy: Member of the program committee of Evocop 2016.
- Eric Monfroy: Member of the program committee of IJCAI 2015.
- Eric Monfroy: Member of the program committee of ICTAI 2015, special track on SAT and CSP.
- Eric Monfroy: Member of the program committee of JFPC 2015.
- Florian Richoux: Member of the program committee of LION 9.
- Florian Richoux: Member of the program committee of SAC 2015.
- Florian Richoux: Journé Jeux Vidéo and Intelligence Artificielle 2015.

10.1.1.3. Reviewer

- Nicolas Beldiceanu, reviewer at CPAIOR 2015.
- Nicolas Beldiceanu, reviewer at CP 2015.
- Nicolas Beldiceanu, reviewer at CPAIOR 2016.
- Nicolas Beldiceanu reviewer at AAAI 2016.
- Florian Richoux reviewer at IEEE Transactions on Comp. Int. and AI in Games.
- Florian Richoux reviewer at AIIDE 2015 (Artificial Intelligence and Interactive Digital Entertainment).
- Florian Richoux reviewer at Artificial Intelligence in Adversarial Real-Time Games worshop associated to AIIDE 2015.

10.1.2. Journal

10.1.2.1. Member of the editorial boards

- Nicolas Beldiceanu, Constraints (Springer).

- Thierry Petit, Constraints (Springer).
- Florian Richoux, Encyclopedia of Computer Graphics and Games (Springer).
- Charlotte Truchet, blog Binaire of lemonde.

10.1.2.2. Reviewer - Reviewing activities

- Xavier Lorca reviewer at AIJ.
- Xavier Lorca reviewer at Constraints (Springer).
- Xavier Lorca reviewer at RAIRO.

10.1.3. Invited talks

- Florian Richoux*Feedback on IA competitions in the context of games*. Workshop PFIA 2015, Jeux Vidéo and IA, July 2015, Inria Rennes (France).
- Florian Richoux*Antagonist IA for Win That War !*, workshop PFIA 2015, Jeux Vidéo and IA, July 2015, Inria Rennes (France).

10.1.4. Leadership within the scientific community

Xavier Lorca is the co-head of the OR and Constraints working group.

10.1.5. Research administration

Within the forthcoming research unit *UMR LS2N*Xavier Lorca is the co-head of the cluster *Data Science and Decision* that group together seven research teams.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: Nicolas Beldiceanu, Constraint (Master ORO), 30h, M2, Nantes University, France.

Master: Nicolas Beldiceanu, Logic Programming, 32h, M2, Mines Nantes, France.

Master: Nicolas Beldiceanu, Gipad end project, 8h, M2, Mines Nantes, France.

Licence: Nicolas Beldiceanu, Programming with Java, 42h, L3, Mines Nantes, France.

Licence: Nicolas Beldiceanu, Automata, 12h, L3, Mines Nantes, France.

Licence: Nicolas Beldiceanu, IPIPIP project, 12h, L1, Mines Nantes, France.

Licence: Gilles Chabert, Variational calculus, 12h, L3, Mines Nantes, France.

Licence: Gilles Chabert, Numerical methods, 21h, L3, Mines Nantes, France.

Master: Gilles Chabert, Project Supervision, L3, Master 1 and Master2, Mines Nantes, France.

Master: Gilles Chabert, Non-linear optimization, 20h, M1, Mines Nantes, France.

Master: Gilles Chabert, Non-linear optimization, 24h, M1, Nantes University, France.

Master: Gilles Chabert, Non-linear programming, 20h, M2, Mines Nantes, France.

Licence: Xavier Lorca, Software engineering and miscellaneous , 30h, Mines Nantes, France.

Master: Xavier Lorca In charge of the organisation of the Gipad specialty (coordinating 12 modules of 45h each).

Master: Xavier Lorca Gipad (Graph and Algorithms, Artificial Intelligence and Constraint Programming, Decision Analytics, Data Visualisation, Architecture of Computer System and Software), 100h, Mines Nantes, France.

Licence, Master: Eric Monfroy, Head of the computer science department, Nantes University, France.

Licence: Eric Monfroy, Logic, L2 Nantes University, France.

Licence: Eric Monfroy, Computer Architecture, L3 Nantes University, France.

Licence: Eric Monfroy, Computability theory and foundations, L3 Nantes University, France.

Master: Eric Monfroy, Modelling with constraints, (Master ORO), M1, Nantes University, France.

Licence: Florian Richoux, Algorithm and data structures, L2, Nantes University, France.

Licence: Florian Richoux, Object programming and design patterns, L3, Nantes University, France.

Licence: Florian Richoux, Operation Research, exercises and practice, L3, Nantes University, France.

Master: Florian Richoux, Machine Learning, exercises and practice (Master ATAL), M1, Nantes University, France.

Master: Florian Richoux, Constraint programming (Master ORO), M1, Nantes University, France.

Licence: Charlotte Truchet, 192h, L1, Nantes University, France.

10.2.2. Supervision

PhD : Alban Derrien, Cumulative scheduling in constraint programming (energetic characterization of reasoning and robust solutions), Mines Nantes, November 27 2015, Thierry Petit and Nicolas Beldiceanu.

PhD in progress : Ignacio Salas Donoso, Packing curved shapes, May 2013, Gilles Chabert and Nicolas Beldiceanu.

PhD in progress : Gilles Madi Wamba, Mixing constraint programming and behavioural models to manage energy consumption in data centre, October 2014, Nicolas Beldiceanu and Didier Lime.

PhD in progress : Alejandro Reyes Amaro, Toward autonomous parallel algorithms for constraint-based problems, October 2014, Eric Monfroy and Florian Richoux.

PhD in progress : Anicet Bart, Solving mixed constraints, application to the management of mobile sensors, October 2014, Eric Monfroy and Charlotte Truchet.

PhD in progress : Ekaterina Arafailova, Functional constraints, September 2015, Nicolas Beldiceanu and Rémi Douence.

PhD in progress : Nicolas Galvez, Hybrid Algorithms for Search Based Software Engineering, December 2014, Eric Monfroy with Frédéric Saubion from Angers University and C. Castro from UTFSM Valparaiso, Chili.

PhD in progress : Léopold Houdin, Set-based algorithms for characterizing limit cycles in bio-inspired robotics, October 2015, Frédéric Boyer, Gilles Chabert, Alexandre Goldsztejn.

Master thesis : Ekaterina Arafailova (February-June 2015), *reformulation of automata with accumulators as linear programs*, Nicolas Beldiceanu.

Master thesis : Julien Fradin (February-June 2015), *extensions to the GHOST library*, Florian Richoux.

Master thesis : Adrien Bodineau (January-April 2015), *extensions to the GHOST library*, Florian Richoux.

Internship : Guillaume Legru (April-May 2015), *IA for combat games*, Florian Richoux.

10.2.3. Juries

- Nicolas Beldiceanu, Member of the committee of the PhD of Alban Derrien, Cumulative scheduling in constraint programming (energetic characterization of reasoning and robust solutions), Mines Nantes, November 27 2015.

- Nicolas Beldiceanu, Member of the committee of the PhD of Haykel Boukadida, Automatic creation of video summarisation with constraint programming, Rennes University, December 4 2015.

- Xavier Lorca, Member of the committee of the PhD of Alban Derrien, Cumulative scheduling in constraint programming (energetic characterization of reasoning and robust solutions), Mines Nantes, November 27 2015.

- Xavier Lorca, Member of the committee of the PhD of Nebras Gharbi, Compression and parallelisation in CSP, Lens University, December 4 2015.
- Xavier Lorca, Member of the committee of the PhD of Mohammed Rezgui, Parallelism in constraint programming, Nice University, July 7 2015.
- Eric Monfroy, Member of the committee of the PhD of Roberto Amadini, Portfolio Approaches in Constraint Programming, Bologna University, June 4 2015.
- Thierry Petit, Member of the committee of the PhD of Alban Derrien, Cumulative scheduling in constraint programming (energetic characterization of reasoning and robust solutions), Mines Nantes, November 27 2015.

10.3. Popularization

- A the 2015 edition of the Fête de la Science (Nantes University):
    - A workshop around *Software for sound processing in the context of the R2D2 robot* was given by Charlotte Truchet.
    - One talk on *Travel to the land of dreams : lands, monsters and fairies* was given by Nicolas Beldiceanu.
    - Two sessions discussing and answering questions around the work of professor and researcher in computer science with young persons (18 years old) was spent by Nicolas Beldiceanu and Florian Richoux.
- Charlotte Truchet wrote an article regarding *women in computer science*.
- Interview for the WebTV FranceLive on AI and games in November 2015 by Florian Richoux.
- Interview for Nantes University regarding the collaboration of Florian Richoux with Facebook in summer 2015.
- Interview of Florian Richoux in the Thinkovery magazine (number 3, April-May-June 2015) regarding Artificial Intelligence in Games.
- Interview of Florian Richoux in Rue89 in March 2015 regarding works of Google DeepMind around the Atari game.

TEA Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. Member of the organizing committees

Jean-Pierre Talpin is a member of the steering committee of the ACM-IEEE Conference on Methods and Models for System Design (MEMOCODE).

10.1.2. Scientific events selection

10.1.2.1. Chair of conference program committees

Jean-Pierre Talpin co-chaired the AVICPS'15 workshop at RTSS'15

10.1.2.2. Member of the conference program committees

Jean-Pierre Talpin served the program committee of:

- MEMOCODE'15, 13th ACM-IEEE International Conference on Formal Methods and Models for System Design
- ACVI'15, 2nd Workshop Architecture Centric Virtual Integration
- AVICPS'15, 5th Analytic Virtual Integration of Cyber-Physical Systems Workshop
- FACS'15, 12th International Conference on Formal Aspects of Component Software
- FTSCS'15, 8th International Workshop on Formal Techniques for Safety-Critical Systems
- ICESS'15, 12th International Conference on Embedded Software and Systems
- SCOPES'15, 18th International Workshop on Software and Compilers for Embedded Systems
- SAC'15, 30th ACM/SIGAPP Symposium on Applied Computing

Thierry Gautier served as program committee member for the 2015 Electronic System Level Synthesis Conference, ESLsyn 2015 (http://ecsi.org//eslsyn).

10.1.2.3. reviewer

Thierry Gautier reviewed for ICCAD 2015 and MEMOCODE 2015.

10.1.3. Journal

10.1.3.1. Member of the editorial boards

Jean-Pierre Talpin is Associate Editor with the ACM Transactions for Embedded Computing Systems (TECS), with the Springer journal on Frontiers of Computer Science (FCS), and with the EURASIP journal of embedded systems (JES).

Jean-Pierre Talpin was Guest Editor of two special issues of the ACM TECS on *Architecture-Centric Virtual Integration* and on *Formal Methods for System Design*.

10.1.3.2. reviewer

Jean-Pierre Talpin reviewed articles for Acta Informatica.

Thierry Gautier reviewed for Frontiers of Computer Science.

10.1.4. Invited talks

Jean-Pierre Talpin gave a lecture on "Sémantique formelle de modèles d'architecture" at the Ecole temps-réel 2015 in Rennes

10.1.5. Scientific expertise

Jean-Pierre Talpin is co-author with Huafeng Yu and Sandeep Shukla of two patents filed with the USPTO:

- T1834.10134US01 – A timing-oriented and architecture-centric system design using contracts
- T1834.10131US01 – Bottom-up approach for integrating models for software components using contracts

10.2. Teaching - Supervision - Juries

10.2.1. Supervision

- Jean-Pierre Talpin is the supervisor of Simon Lunel's thesis on "*Timed contract algebras for correct by construction real-time system design*" and co-supervisor of Imré Frotier de la Mésselière with Mines ParisTech until June 2015.

10.2.2. Juries

Jean-Pierre Talpin served as Referee (rapporteur) for the HDR Thesis defense of Claire Paggetti , entitled "*Programmation sûre de plates-formes embarquées de type multi/pluri-cœurs*".

Jean-Pierre Talpin served as Referee (rapporteur) for the PhD. Thesis Defence of

- Elie Richa, Telecom ParisTech, entitled "*Qualification of Source Code Generators in the Avionics Domain : Automated Testing of Model Transformation Chains*".
- Ahlem Triki, Université de Grenoble , entitled "*Distributed Implementations of Timed Component-based Systems*".
- Yu Bai, TU Kaiserslautern , entitled "*Model-based Design of Embedded Systems by Desynchronization*".

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

8. Dissemination

8.1. Promoting scientific activities

8.1.1. Scientific events organisation

Valérie Monbet has co–organized the workshop on *Stochastic Model-Data Coupled Representations for the Upper Ocean Dynamics*, the kick–off meeting of the SEACS project, held in Landeda in May 2015.

8.1.2. Journal

Valérie Monbet has been the guest editor of a special issue (volume 156, number 1) on stochastic weather generators, in *Journal de la Société Française de Statistique*.

8.1.3. Invited talks

Valérie Monbet has given an invited talk on Markov–switching vector autoregressive models for multivariate time series of air temperature, at *47èmes Journées de Statistique*, held in Lille in June 2015.

8.2. Teaching, supervision, thesis committees

8.2.1. Teaching

Patrick Héas gives a course on Monte Carlo simulation methods in image analysis at université de Rennes 1, within the SISEA (signal, image, systèmes embarqués, automatique, école doctorale MATISSE) track of the master in electronical engineering and telecommunications.

François Le Gland gives

- a course on Kalman filtering and hidden Markov models, at université de Rennes 1, within the SISEA (signal, image, systèmes embarqués, automatique, école doctorale MATISSE) track of the master in electronical engineering and telecommunications,
- a 3rd year course on Bayesian filtering and particle approximation, at ENSTA (école nationale supérieure de techniques avancées), Paris, within the systems and control module,
- a 3rd year course on linear and nonlinear filtering, at ENSAI (école nationale de la statistique et de l'analyse de l'information), Ker Lann, within the statistical engineering track,
- and a 3rd year course on hidden Markov models, at Télécom Bretagne, Brest.

Valérie Monbet gives several courses on data analysis, on time series, and on mathematical statistics, all at université de Rennes 1 within the master on statistics and econometrics.

8.2.2. Supervision

François Le Gland and Valérie Monbet are jointly supervising one PhD student

- Chau Thi Tuyet Trang, provisional title: *Non parametric filtering for Metocean multi–source data fusion*, université de Rennes 1, started in October 2015, expected defense in October 2018, co–direction: Pierre Ailliot (université de Bretagne Occidentale).

François Le Gland is supervising two others PhD students

- Alexandre Lepoutre, provisional title: *Detection issues in track–before–detect*, université de Rennes 1, started in October 2010, expected defense in 2016, funding: ONERA grant, co–direction: Olivier Rabaste (ONERA, Palaiseau),
- Kersane Zoubert–Ousseni, provisional title: *Particle filters for hybrid indoor navigation with smartphones*, université de Rennes 1, started in December 2014, expected defense in 2017, funding: CEA grant, co–direction: Christophe Villien (CEA LETI, Grenoble).

Valérie Monbet is supervising one other PhD student

- Audrey Poterie, provisional title: *Régression d'une variable ordinale par des données longitudinales de grande dimension : application à la modélisation des effets secondaires suite à un traitement par radiothérapie*, université de Rennes 1, started in October 2015, expected defense in October 2018, co–direction : Jean–François Dupuy (INSA de Rennes), Laurent Rouvière (université de Haute Bretagne).

8.2.3. *Thesis committees*

François Le Gland has been a reviewer for the PhD theses of Jana Kalawoun (université Paris Sud, Orsay, advisors: Gilles Celeux and Patrick Pamphile) and Antoine Campi (université Paul Sabatier, Toulouse, advisors: Christophe Baehr, Alain Dabas and Pierre Del Moral). He has also been a member of the committee for the PhD thesis of Eugenia Koblents (Universidad Carlos III de Madrid, advisor: Joaquín Míguez).

Valérie Monbet has been a member of the committee for the PhD theses of Xavier Kergadallan (École des Pont ParisTech, advisor: Michel Benoit) and Khalil El Waled (université de Haute Bretagne, advisor: Dominique Dehay).

8.3. Participation in workshops, seminars, lectures, etc.

In addition to presentations with a publication in the proceedings, which are listed at the end of the document in the bibliography, members of ASPI have also given the following presentations.

Frédéric Cérou has presented the results about the convergence of ABC at the probability and stochastic processes seminar of université de Rennes 1, and at the applied mathematics seminar of université de Nantes, both in November 2015.

Patrick Héas has given a talk on 3D wind field reconstruction by infrared sounding, at EUMETSAT (European Organisation for the Exploitation of Meteorological Satellites) in Darmstadt, Germany, in June 2015, and a talk on reduced–order modeling of hidden dynamics, at the international workshop on reduced basis, POD and PGD model reduction techniques, held in Cachan in November 2015.

François Le Gland has given a talk on simulation–based algorithms for the optimization of sensor deployment at the department of signal theory and communications of Universidad Carlos III de Madrid, in February 2015, and a talk on marginalization in rare event simulation for switching diffusions at the ONERA workshop on particle algorithms, held in Toulouse in May 2015.

Valérie Monbet has given a talk on switching autoregressive models for stochastic weather generators, and application to temperature series, at the kick–off meeting of the SEACS project, held in Landeda in May 2015.

Kersane Zoubert–Ousseni has given a poster presentation at the summer school on Foundations and Advances in Stochastic Filtering, held in Barcelona in June 2015.

I4S Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. Member of the organizing committees

Q. Zhang is member of the national organization committee of the IFAC Symposium SAFEPROCESS 2015.

10.1.2. Scientific events selection

10.1.2.1. Chair of conference program committees

V. Le Cam is head of of the scientific committee of the EWSHM scientific committee for 2015.

10.1.2.2. Member of the conference program committees

V. Le Cam was member of the scientific committee for IWSHM 2015 in Stanford.
J.Dumoulin is

- member of the scientific committee of the GI Division (Geosciences Instrumentation and Data Systems) of EGU for infrastructure instrumentation and monitoring since April 2013.
- member of the committee of QIRT (quantitative Infrared Thermography) since February 2014 (http://qirtasia2015.com/)
- organizer of some invited sessions at EGU 2015 (http://www.egu2015.eu/).

L. Mevel

- is member of the EWSHM scientific committee.
- is member of the IOMAC scientific committee.

Q. Zhang is

- Member of IFAC Technical Committee on Modelling, Identification and Signal Processing (TC 1.1, http://tc.ifac-control.org/6/4/).
- Member of IFAC Technical Committee on Fault Detection, Supervision and Safety of Technical Processes (TC 6.4, http://tc.ifac-control.org/6/4/).
- Member of the international program committee of the IFAC Symposium SYSID 2015.
- Member of the international program committee of the IFAC Symposium SAFEPROCESS 2015.

10.1.2.3. Reviewer

V. Le Cam was reviewer and session chairman for the IWSHM 2015 in Stanford

M. Doehler was reviewer for IFAC Safeprocess 2015 and IEEE Multi-Conference on Systems and Control

M. Doehler was co-chairman at SYSID 2015.

L. Mevel was reviewer and session chairman for IFAC Safeprocess 2015.

10.1.3. Journal

10.1.3.1. member of the editorial board

L. Mevel is member of the editorial board of journal of Mathematical Problems in Engineering.

L. Mevel is member of the editorial board of journal of Shock and Vibration.

Q. Zhang is member of the editorial board of the journal "Intelligent Industrial Systems", Springer.

10.1.3.2. Reviewer - Reviewing activities

L. Mevel was reviewer for Mechanical Systems and Signal Processing, journal of Sound And Vibration. He was reviewer for Research Foundation Flanders in 2015.

M. Doehler was reviewer for Journal of Sound and Vibration, Sensors, Mechanical Systems and Signal Processing, Journal of Selected Topics in Signal Processing, Structural Control and Health Monitoring, ASCE Journal of Aerospace Engineering, ASCE Journal of Bridge Engineering, European Journal of Environmental and Civil Engineering

J. Dumoulin was reviewer for IEEE Transactions on Instrumentation and Measurement, Quantitative Infrared Thermography Journal, Optics and Lasers in Engineering journal , Journal Cultural Heritage, International Journal of Architectural Heritage, Journal of Geophysics and Engineering, Research in Nondestructive Evaluation

10.1.4. Invited talks

Q. Zhang was invited paper speaker at SYSID 2015 [22].

J. Dumoulin wa invited keynote speaker at QIRT'2015 [21].

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence Professionnelle TAM : J. Dumoulin, thermographie infrarouge active, 8h, Université Paris-Est, France

Master 2 MMMRI, (Maintenance et Maîtrise des Risques Industriels) , J. Dumoulin, contrôle non destructif par thermographie infrarouge active, 12h, Université Paris-Est, France

Master Système Communicant Mobile, V. Le Cam, embedded systems under Linux Operating System, 12h, Polytech Nantes, France

Master Civil engineering, V. Le Cam, Structural Monitoring, 4h, Université de Nantes, France

Licence 3 SEICOM, V. Le Cam, 3h, SHM and smart grids, Université de Nantes, France

Licence 3 SEICOM, V. Le Cam, 8h, TP, SHM and smart grids, Université de Nantes, France

ESEO, V. Le Cam, 8h, TP, embedded systems under Linux Operating System, France

10.2.2. Supervision

PhD : Delwar Hossain Bhuyan, *Damage localisation on offshore platforms*, L. Mevel and M. Doehler, Ecole doctorale MATISSE, Université de Rennes 1, since November 2014

Liangquan Zhang's post-doctoral project on hybrid system monitoring, Q. Zhang, 2014-2015.

Guillaume Gautier's post-doctoral project on morphosense system monitoring, L. Mevel, 2015-2017.

PhD : Nassif Berrabah, Electrical cable aging monitoring , Q. Zhang, Ecole doctorale MATISSE, Université de Rennes 1, since November 2014

J. Dumoulin was supervisor of the Master training of Nicolas Le Touz at Ecole Centrale Nantes (ECN) in 2014 and 2015.

10.2.3. Juries

- L. Mevel was referee for the PhD of Fatima Nasser at GIPSA Lab in May 2015.
- L. Mevel was referee for the PhD of Guillaume Gautier at INSA Val de Loire in July 2015.
- J. Dumoulin was part of the jury for María Inmaculada Martínez Garrido at E.T.S.Ingeniería y Sistemas de Telecomunicación de la Universidad Politécnica de Madrid in June 2015.

10.3. Popularization

- V. Le Cam has been invited at the ConfLunch of IRISA on April 24th 2015. http://videos.rennes. inria.fr/confLunch/#Le Cam.

- J. Dumoulin has been involved in the COP 21 France stand for a solar hybrid road demonstration.

- V. Le Cam was present at the inauguration of Cité des Objets Connectés in Angers on 11/06/15 in presence of France president. He was inside the Smart sensors stand for IFSTTAR.

- A nice showcase of I4S was present at the 2015's Hanover messe, in April 2015: BAM (Berlin) had a steel frame demonstrator for the public using our techniques.

<center>**IPSO Project-Team**</center>

7. Dissemination

7.1. Promoting Scientific Activities

7.1.1. Scientific events organisation

7.1.1.1. Member of the organizing committees

- M. Lemou and F. Méhats organized the CHL (Labex) workshop *Mathematical problems and modelization in kinetic theory*, Rennes, May 26-29 2015.
- E. Faou organized with B. Grébert, E. Paturel and L. Thomann (Univ. Nantes) the CHL (Labex) Summer school *PDE and large time asymptotics*, Nantes, June 22 - July 3 2015.
- N. Crouseilles and P. Chartier organized the CHL (Labex) workshop *Multiscale numerical methods for differential equations*, Rennes, August 25-27, 2015.
- F. Castella and P. Chartier organized the IPSO-LODIQUAS workshop with the support of the ANR LODIQUAS and MOONRISE, Dinard, December 9-11 2015.
- M. Lemou organized a mini-symposium at the 9th International Conference on Computational Physics (ICCP9): *numerical methods for quantum and kinetic problems*, Singapore, Junary 7-11 2015.
- N. Crouseilles and M. Lemou organized a mini-symposium at the national Congrès SMAI 2015: *Numerical Approaches for Stiff PDEs*, Les Karellis, June 8-12, 2015.

7.1.2. Scientific events selection

7.1.2.1. Member of the conference program committees

- P. Chartier was member of the scientific committee of ENUMATH 2015, 14-18 september, Ankara, Turkey.

7.1.3. Journal

7.1.3.1. Member of the editorial boards

- P. Chartier is member of the editorial board of *Mathematical Modelling and Numerical Analysis*.
- A. Debussche is editor in chief of *Stochastic Partial Differential Equations: analysis and computations*.
- A. Debussche is member of the editorial board of *Potential Analysis*.
- A. Debussche is member of the editorial board of *Journal of Evolution Equations*.
- A. Debussche is member of the editorial board of *Differential and Integral Equations*.
- A. Debussche is member of the editorial board of *ESAIM: proceedings*.
- A. Debussche is member of the editorial board of the collection *Mathématiques et Applications*.

7.1.3.2. Reviewer - Reviewing activities

The members of the team reviewed numerous papers for numerous international journals (Comm. Math. Phys., SIAM journals, J. Comput. Phys., · · ·).

7.1.4. Invited talks

- P. Chartier gave a talk at *The 9th International Conference on Computational Physics*, Singapore, January 7-11, 2015.
- E. Faou gave a talk at the seminar of analysis, at the university of Toulouse, January, 2015.
- E. Faou gave a talk at the Seminar ANEDP, University of Lille 1, January, 2015.
- P. Chartier gave a seminar at the University of Geneva, March 10, 2015.
- E. Faou gave a talk at ENS Lyon in the physics department, May 2015.
- E. Faou gave a talk at the workshop *Mathematical Methods in Quantum Molecular Dynamics*, organized by G. Hagedorn, C. Lasser and C. Le Bris, Oberwolfach, Germany, June, 2015.
- N. Crouseilles gave a talk in the seminar of the analysis team at the University of Toulouse III, June, 2015.
- P. Chartier gave a talk at the workshop *Modelling and Numerics for Quantum Systems*, Toulouse, September 2-4, 2015.
- E. Faou gave the Dahlquist prize lecture at the *Scicade conference*, Potsdam, Germany, September, 2015.
- P. Chartier gave a colloquium at the '*School of Mathematics in Georgia Tech*, Atlanta, USA, October 29, 2015.
- E. Faou gave a talk in the seminar of the analysis team at the University of Bordeaux I, October, 2015.
- F. Méhats gave seminars in Geneva (Switzerland), Beijing (China), Reims and Lyon.
- M. Lemou gave a talk at the Ki-Net international conference: *Asymptotic Preserving and Multiscale Methods for Kinetic and Hyperbolic Problems*, Madison (USA), May 4-8, 2015.
- M. Lemou gave a talk at the *International Congress on Industrial and Applied Mathematics, ICIAM 2015. Mini-symposium "Analysis and algorithm for coupling of kinetic and fluid equations*, Beijing (China), August 10-14, 2015.
- M. Lemou gave a talk at the *International workshop on kinetic problems in the honor of W. Strauss, R. Glassey and J. Schaeffer: Recent progress in collisionless models*, Imperial College, London, September 7-11, 2015.
- M. Lemou gave two conferences at the university of Wisconsin-Madison during his visit, between october 3 and october 17, 2015.
- A. Debussche gave a talk at the workshop *New challenges in PDE: Deterministic dynamics and randomness in high and infinite dimensional systems*, MSRI, Berkeley (USA), October 19-30, 2015.

7.1.5. Research administration

- F. Méhats has been the head of the IRMAR (UMR CNRS 6625), since June 2015,
- P. Chartier is scientific vice-deputy of the Inria-Rennes center.
- P. Chartier is member of the "Commission d'évaluation" of Inria.
- N. Crouseilles is member of the scientific council of ENS Rennes.
- N. Crouseilles is partly in charge of the weekly numerical analysis seminar at ENS Rennes.
- A. Debussche leads the H. Lebesgue Center (Labex) with San Vu Ngoc (coordinator) and L. Guillopé.
- E. Faou is member of the scientific council of the Pôle universitaire Léonard de Vinci, since september 2015.
- E. Faou is member of the CNU 26, since december 2015.
- M. Lemou is member of the scientific council of ENS Rennes.

- M. Lemou is member of the scientific council of the H. Lebesgue Center (Labex).
- M. Lemou is head of the "numerical analysis IRMAR team".
- F. Castella is head of the european ANR project "Lodiquas", described above.
- F. Castella is member of the "Conseil d'UFR de Mathématiques".

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Licence : P. Chartier, "Ordinary differential equations", 36 ETDH, L3, ENS Rennes.

Master : P. Chartier, "Numerical geometric integration and averaging methods", 36ETDH, M2, University of Rennes I.

Master : N. Crouseilles, "Numerical methods for kinetic equations", 18ETDH, M2, University of Rennes I.

Licence : N. Crouseilles, "Numerical methods", 36 ETDH, L3, ENS Rennes.

Master : M. Lemou, "Introduction to PDEs: hyperbolic systems and conservation laws.", 36ETDH, M2, University of Rennes I.

Master : F. Castella, "Pseudo-differential calculus.", 24ETDH, M2, University of Rennes I.

Master : F. Castella, "Kinetic equations.", 60ETDH, M1, University of Rennes I.

7.2.2. Supervision

PhD G. Leboucher, "Stroboscopic averaging methods for highly-oscillatory partial differential equations", University of Rennes I, defended on December 8, 2015. Advisors: P. Chartier and F. Méhats.

PhD H. Hivert, started in september 2012. Advisors: N. Crouseilles and M. Lemou.

PhD R. Horsin, started in september 2013. Advisors: E. Faou and F. Rousset.

PhD M. Malo, started in september 2015. Advisors: M. Lemou and F. Méhats.

PhD J. Sauzeau, started in september 2012. Advisors: P. Chartier and F. Castella.

PhD M. Tusseau, started in september 2013. Advisors: A. Debussche and F. Méhats.

7.2.3. Juries

- F. Méhats was referee on the thesis of A. Trescases (ENS Cachan). Defended on September 11, 2015.
- M. Lemou was member of the thesis committee, Phd of Xavier Valentin at Ecole Centrale de Paris. Defended on december 16, 2015.
- M. Lemou was referee on the thesis of T. Leroy (Paris 6) that will be defended on Junary 5, 2016.

DYLISS Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events selection

9.1.1.1. Member of the conference program committees

- CMSB (2015): Computational Methods on Systems Biology [A. Siegel]
- BBCC (2015): Bioinformatica e Biologia Computazionale in Campania [O. Dameron]
- SIIM (2015): Symposium sur l'Ingénierie des Informations Médicales [O. Dameron]

9.1.2. Journal

9.1.2.1. Member of the editorial boards

- Academic editor: Plos One [J. Bourdon]

9.1.2.2. Reviewer - Reviewing activities

- Journal of Mathematical Biology. Theorie des Sciences Informatiques. [A. Siegel]
- Theoretical Computer Science, Fundamenta Informaticae. [F. Coste]
- 2014 O. Dameron: Bioinformatics, Cancer informatics, Journal of Biomedical Informatics, Journal of Biomedical Semantics.
- 2015 O. Dameron: Journal of Biomedical Semantics (x3).

9.1.3. Invited talks

- A. Antoine-Lorquin *Orthocis : Une base de données pour l'étude des facteurs de transcriptions. Identification in silico de gènes ciblés par un facteur de transcription donné*. UMR MIA. AgroParis-Tech (Sep. 2015)
- M. Chevallier *Systems biology : uses of the Mobyle and Galaxy plateforms*. Bio-informatics day. e-Biogenouest and GRIOTE. (Avr. 2015).
- F. Coste *Learning efficiently (local) substitutable context-free languages from text*. XRCE seminar, Grenoble. (Jul. 2015)
- F. Coste *Learning protein languages*. Machine learning thematic trimester. CIMI, Toulouse. (Dec. 2015)
- O. Dameron *Knowledge-based selection of candidate metabolic networks*. CRC (équipe A Burgun). (Feb. 2015)
- C. Galiez *Sequence-structure relationship in protein sequences and applications to sequence annotation*. LBCQ (équipe A. Carbone), Paris. (Juil. 2015)
- C. Galiez *Apprentissage de prédictions structurales depuis la séquence pour l'annotation fonctionnelle*. LIRMM (équipe O. Gascuel), Montpellier. (Oct. 2015)
- C. Galiez *Structural fragments : comparison, predictability from sequence and application to identification of viral proteins*. MPI (équipe J. Söding), par Internet, Göttingen. (Dec. 2015)
- Y. Guitton *Metabolic profiling and control hypothesis through kinetic accumulation or elimination of secondary metabolites associated with phycotoxins of filter-feeding bivalves* RFMF 2015 (9. édition des Journées Scientifiques du Réseau Francophone de Métabolomique et Fluxomique). Lille. June 2015.

- Y. Guitton *L'annotation automatisée des analyses métabolomiques en LC-MS : un challenge relevé par la plate-forme Corsaire*. Gen2Bio. Mars 2015.
- J. Laniau *Combinatorial optimization methods to complete and analyse a metabolic network*. Journée BIOSS. Nantes. Septembre 2015
- J. Laniau *Combinatorial optimization methods to complete and analyse a metabolic network*. Journée MOABI. Paris. Novembre 2015.
- V. Picard *Asymptotic Analysis of Gillespie Algorithm under Steady-State Assumption*. Advanced Lecture Course on Computational Systems Biology. Aussois (Apr. 2015)
- V. Picard *Analyse stationnaire des réseaux de réactions : systèmes de contraintes en modélisation stochastique*. Paris. Journées du groupe de travail bioss (Nov. 2015).
- A. Siegel *Numeration, redundancy graphs and topological properties of fractals*. Department of Mathematics. Université Paris Sud (Jan. 2015)
- A. Siegel *Topological properties of generalized Rauzy fractals: which novel issues?*. FAN numeration meeting. Admont, Austria. (Jun. 2015).
- A. Siegel *Decidability problems for self-induced systems generated by a substitution?*. Conference MCU'2015. North Cyprus. (Sept. 2015).
- A. Siegel *Confronting knowledge networks on signaling networks with phosphoproteomics datasets using combinatorial optimization approaches*. Departement of computer sciences. Frei Berlin University. (Oct. 2015).
- A. Siegel *Data science and systems biology*. Data science meeting. IRISA, Rennes (Nov. 2015).

9.1.4. Leadership within the scientific community

- Member of the steering committee of the International Conference on Grammatical Inference [F. Coste].
- The team was involved in the foundation of a national working group on the symbolic study of dynamical systems named bioss [web access]. The group gathers more 100 scientists, from computer science to biology. Three meetings were organized this year. The group is supported by two French National Research Networks: bioinformatics (GDR BIM : bioinformatique moléculaire) and informatics-mathematics (GDR IM : Informatique Mathématique). [A. Siegel]

9.1.5. Scientific expertise

- Scientific Advisory Board of GDR BIM " Molecular Bioinformatics"[J. Nicolas].
- Inria National evaluation board [A. Siegel]
- Member (nominated) CNU section 65 [O. Dameron]
- Member of the Operational Legal and Ethical Risk Assessment Committee (COERLE) at Inria [J. Nicolas].
- Recruitment committees: Professor (CRISTAL, Lille) [A. Siegel], Professor (IRHS, Angers) [A. Siegel], Inria junior researcher (Nice) [A. Siegel].
- Member of the IRISA laboratory council [F. Coste].
- Member of the Inria Rennes center council [A. Siegel].
- Scientific Advisory Board of Biogenouest [J. Bourdon, A. Siegel].
- Member of SCAS (Service Commun d'Action Sociale) of Univ. Rennes 1 [C. Belleannée].
- Member of CUMIR (Commission des Utilisateurs des Moyens Informatiques, Inria Rennes) [F. Coste].

9.2. Teaching - Supervision - Juries

9.2.1. Course and track responsibilities

F. Coste is coordinator of the track "From Data to Knowledge: Machine Learning, Modeling and Indexing Multimedia Contents and Symbolic Data" of the Master by research in Computer Science (2nd year), University of Rennes 1, France.

F. Coste is coordinator of the course "Extracting knowledge from symbolic data sequences" of the Master by research in Computer Science (2nd year), University of Rennes 1, France.

O. Dameron shares the coordination of the "Bioinformatique et génomique" Master degree, Univ. Rennes1, and of the "Méthodes et traitements de l'information biomédicale et hospitalière"

O. Dameron shares the coordination of the course "Bioinformatique expérimentale", Master1 in computer science, Univ. Rennes1 + ENS. He is the coordinator of the courses "Bases de mathématiques et probablité" and "Méthodes en informatique" in Master1 in public health (Univ. Rennes 1), "Représentation des connaissances biomédicales" in Master2 in public health (Univ. Rennes 1), "Principes de programmation et d'algorithmique" and "Gestion de projets informatiques" in Master1 in bioinformatics (Univ. Rennes 1), "Standardisation des connaissances et bio-ontologies" in Master2 in bioinformatics (Univ. Rennes1), as well as of the course "e-Santé et réseaux hospitaliers" in the last year if engineering school ESIR (Univ. Rennes 1).

9.2.2. Teaching

Licence: C. Belleannée, Langages formels, 22h, L3 informatique, Univ. Rennes1, France.

Licence: C. Belleannée, bureautique et C2i, 40h, L1 informatique, Univ. Rennes1, France.

Licence: C. Belleannée, Algorithmique et Programmation Fonctionnelle, L1 informatique, Univ. Rennes1, France.

Licence: V. Delannée, Optique, 4h, PACES, Univ. Rennes 1, France.

Licence: V. Delannée, Biostatistiques, 24h, PACES, Univ. Rennes 1, France.

Licence: J. Coquet, Algorithmique et Programmation Fonctionnelle, 20h, L1 informatique, Rennes1, France.

Licence: J. Coquet, Bureautique, 10h, L1 informatique, Rennes1, France.

Licence: O. Dameron, Biostatistiques, 12h, PACES, Univ. Rennes 1, France.

Licence: V. Picard, Probability theory, 24h, L3, ENS Rennes, France.

Master: J. Coquet, Principes de programmation et d'algorithmique, 32h, M1 BioInformatique et génomique, Rennes1, France.

Master: A. Antoine-Lorquin, Principes de programmation et d'algorithmique, 32h, M1 BioInformatique et génomique, Univ. Rennes 1, France.

Master: A. Antoine-Lorquin, Bases de mathématiques, probabilités et statistiques, 32h, M1 Master STS - Mention Santé publique, Univ. Rennes 1, France.

Master: C. Belleannée, algorithmique du texte et bioinformatique, M1 informatique, Univ. Rennes1, France

Master: C. Belleannée, Préférences Logique et contraintes, 32h, M1 informatique,Univ. Rennes1, France

Master: F. Coste, Apprentissage Supervisé, 10h, M2 Informatique, Univ. Rennes 1, France

Master: F. Coste, Données Séquentielles Symboliques, 10h, M2 Informatique, Univ. Rennes 1, France

Master: O. Dameron, Bioinformatique expérimentale, 10h, M1 informatique, Univ. Rennes 1 and ENS Rennes, France

Master: O. Dameron, Gestion de projets informatiques, 23h, M1 bioinformatique et génomique, Univ. Rennes 1, France.

Master: O. Dameron, Standardisation des connaissances et bio-ontologies, 22h, M2 bioinformatique et génomique, Univ. Rennes 1, France.

Master: C. Galiez, Compilation, 48h, M1 informatique, Rennes1 France

Master: V. Picard, Formal methods for safe development, 16h, M1, Univ. Rennes 1, France

Master: V. Picard, Agrégation de mathématiques option D, 16h, M1, ENS Rennes/Univ. Rennes 1, France.

Master: A. Siegel, Integrative and Systems biology, 20h, M2, Univ. Rennes 1, France

Engineer: O. Dameron, e-Santé et réseaux hospitaliers, ESIR, Rennes.

Engineer: O. Dameron, Bio-ontologies et Web Sémantique, ENSTBr, Brest.

9.2.3. Supervision

PhD : Clovis Galiez, *Structural fragments : comparison, predictability from sequence and application to identification of viral proteins*, 8 Dec. 2015, supervised by F. Coste and J. Nicolas. [11]

PhD: Vincent Picard, *Analyse dynamique d'algorithmes et dynamique symbolique pour l'étude de modèles semi-quantitatifs en biologie des systèmes*, 16 Dec. 2015, supervised by A. Siegel and J. Bourdon. [12]

PhD in progress : Aymeric Antoine-Lorquin, *Modèles grammaticaux au service de l'identification de marqueurs de régulation génétique dans les séquences biologiques*, started in Oct. 2013, supervised by C. Belleannée

PhD in progress : Jean Coquet, *Semantic-based reasoning for biological pathways analysis*, started in Oct. 2014, supervised by O. Dameron, N. Théret and J. Nicolas.

PhD in progress : Victorien Delannée, *Optimisation à différentes échelles pour étudier la variabilité de la toxicité de contaminants alimentaires*, started in Oct. 2014, supervised by A. Siegel and N. Théret.

PhD in progress : Julie Laniau, *Méthodes d'optimisation combinatoire pour reconstruire et analyser les systèmes métaboliques de microalgues*, started in Oct. 2013, supervised by A. Siegel and D. Eveillard.

PhD in progress : Clémence Frioux, *Using preferences in Answer Set Programming to decipher interactions within the species of an ecosystem at the genomic scale*, started in Oct. 2015, supervised by A. Siegel.

9.2.4. Juries

- *Member of Ph-D thesis jury*. T. Nguyen, LABRI, Bordeaux [A. Siegel, rapporteure]. N. Mobillia, IMAG, Grenoble [A. Siegel, présidente].
- *Member of medical thesis jury*. V. Margot, Rennes [O. Dameron, examinateur].

9.2.5. Internships

- Internship, from February until July 2015. Supervised by A. Siegel. Student: Clémence Frioux. Subject: Iterative reconstruction of functional metabolic networks for non-model organisms
- Internship, from April until July 2015. Supervised by O. Dameron and J. Coquet. Student: Pierre Vignet. Subject: Evaluation of a knowledge-based selection strategy for candidate metabolic pathways
- Internship, from January until July 2015. Supervised by F. Coste. Student: Maud Jusot. Subject: Syntactic modelling of viral genomes
- Internship, from April until July 2015. Supervised by A. Siegel. Student: Meziane Aite. Subject: Tools for the reconstruction of the metabolic network of T. Lutea
- Internship, from April until July 2015. Supervised by J. Nicolas. Student: Lucas Bourneuf. Subject: Model reduction with power graph algorithms
- Internship, from April until Aug 2015. Supervised by C. Belleannée. Student: David Picard-Druet. Subject: Coupling pattern discovery and pattern matching to design a composite signature for the Yeast polyadenylation site

9.3. Popularization

- *Organization of Sciences en Cour[t]s.* Popularization Festival where PhD students explain their thesis via short films. [*J. Coquet, V. Delannée, A. Antoine-Lorquin, C. Bettembourg*] [more info].

- *Production of Sciences en Cour[t]s film.* "Une rencontre percutante": A short movie about metabolic reconstruction.[*J. Coquet, V. Delannée, A. Antoine-Lorquin*] [more info].

- *Bioinfo-fr.net* Bioinfo-fr.net is a french web site where researchers, engineers and students talks about bioinformatics. We have written 6 articles for this web site on diverse subjects: metabolic networks, genome assembly, phylogenetics, network visualization, file versionning with GIT. [*G. Collet, O. Dameron*]. [more info].

- *Animation of Bioinformatics Atelier at Data Science Symposium (IRISA's 40th anniversary)* "De la bioinformatique aux tiques". [*F. Coste*]

- *Participation to the Data Science Symposium (IRISA's 40th anniversary)* "Science data ecosystem". [*A. Siegel, O. Dameron*]

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

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events selection

9.1.1.1. Member of the conference program committees

Etienne Mémin was member of the ICCV'15 program committee

9.1.1.2. Reviewer

Cédric Herzet Reviewer for SPARS15

9.1.2. Journal

9.1.2.1. Member of the editorial boards

Etienne Mémin

- Associate editor for the Int. Journal of Computer Vision (IJCV)
- Associate editor for the Image and Vision Computing Journal (IVC)

9.1.2.2. Reviewer - Reviewing activities

Dominique Heitz: Reviewer for Exp. in Fluids, ASME J. on Heat Transfer
Cédric Herzet: Reviewer for IEEE Tr. on Signal Processing, IEEE Tr. on Information Theor
Etienne Mémin: Reviewer for Tellus-A, IEEE Im. Proc., IEEE trans. Pat. Anal. Mach. Intel. , Im. Vis. Comp.,
Exp. in Fluids, Nonlinear Proc. in Geophysics., Journ. of Comp. Phys, Fluid Dynamics Research.

9.1.3. Invited talks

Dominique Heitz

- Workshop on data assimilation – NIOPLEX, TU Berlin, February 2015.
- Cathala Letort XVII "L'usine agroalimentaire du futur", Oniris, Nantes, November 2015.

Cedric Herzet

- Laboratoire d'Informatique Fondamentale de Marseille (LIF), Marseille, January 2015
- Workshop "Greed is Great" of the International Conference on Machine Learning (ICML), Lille, June 2015.

Etienne Mémin

- Workshop ANR COMODO, Port Bacares september 2015
- Seminar Laboratoire de Glaciologie et Géophysique de l'Environnement (LGGE, UMR5183), Grenaoble, November 2015

9.1.4. Scientific expertise

Cedric Herzet Project reviewer for the LEFE programm of the Institut National des Sciences de l'Univers

9.1.5. Research administration

Dominique Heitz

- Responsible of the Irstea ACTA Team
- Member of Pôle Cristal scientific council

Etienne Mémin
- Responsible of the "Commission Développement Technologique" Inria Rennes
- Member of the "Commission Personnel" Inria-IRISA Rennes

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Dominique Heitz, Mécanique des fluides, 30h, niveau L2 INSA Rennes

Master : Dominique Heitz, Mécanique des fluides, 25h, niveau M1, Dep GMA INSA Rennes

Master : Cédric Herzet, Analyse de données, Mastere de Statistiques et Econométrie, 10h, niveau M1, Université de Rennes I

Master : Etienne Mémin, Analyse du mouvement, Mastere Informatique, 15h, niveau M2, Université de Rennes 1.

Master : Etienne Mémin, Vision par ordinateur , 15h, niveau M2, ESIR Université de Rennes 1.

9.2.2. Supervision

PhD: Cordelia Robinson, Variational assimilation for 3D wake reconstruction, defended 18/12/2015, supervisors: Dominique Heitz, Etienne Mémin

PhD in progress : Benoit Pinier, Scale similarity and uncertainty for Ocean-Atmosphere coupled models, started 01/10/2014, supervisors: Roger Lewandowski, Etienne Mémin

PhD in progress : Valentin Resseguier, Oceanic models under uncertainty and image assimilitation, started 01/10/2013, Bertrand Chapron (Ifremer), Etienne Mmin

PhD in progress : Pranav Chandamouli, Turbulent complex flows reconstruction via data assimilation in large eddy models, started october 2015, Dominique Heitz, Etienne Mémin.

9.2.3. Juries

Dominique Heitz
- Cordelia Robinson, Variational assimilation for 3D wake reconstruction, Université Rennes 1, Rennes, 18/12/2015, Supervisor.

Etienne Mémin
- Niels Oger, "Observation adaptative: limites de la prévision et du contrôle des incertitudes", Université Paul Sabatier, Toulouse, 10/07/2014, President
- Xu Chen, "New formulation of optical flow for turbulence estimation",Ecole Centrale de Lyon, 08/10/2015, Reviewer.
- Lucie Rotner, "Reconstruction de l'atmosphère turbulente à partir d'un lidar dopler 3D et étude du couplage avec Meso-NH", Université Paul Sabatrier, Toulouse, 02/12/2015. Examiner.
- Raphael Legrand, "Utilisation des déformations spatiales en assimilation de données", Université Paul Sabatier, 10/12/2015, Examiner
- Cordelia Robinson, "Variational assimilation for 3D wake reconstruction", Université Rennes 1, Rennes, 18/12/2015, Supervisor.
- Dominique Heitz, "From wire to images the benefit of models to measure and reconstruct the motion of turbulent flows", HDR Université de Rennes I, 18/12/2015, Examiner
- Nicolas Papadakis, "Transport Optimal pour le Traitement d'Images", HDR Université de Bordeaux, 17/12/2015, Examiner.

9.3. Popularization

Cedric Herzet
- Volunteer at the "Journée sciences et musiques", Rennes 2015

GENSCALE Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. General chair, scientific chair

- Workshop on Computational Optimization, Lodz, Poland [A. Mucherino]

10.1.2. Scientific events selection

10.1.2.1. Member of the conference program committees

- BIBM 2015: IEEE International Conference on Bioinformatics and Biomedicine [D. Lavenier]
- HPiC 2015: EEE International Conference on High Performance Computing [D. Lavenier]
- PBC 2015: Workshop on Parallel Computational Biology [D. Lavenier]
- RECOMB-SEQ 2015: RECOMB Satellite Workshop on Massively Parallel Sequencing [D. Lavenier]
- WABI 2015: Workshop on Algorithms for Bioinformatics [D. Lavenier]
- BIOKDD 2015: Biological Knowledge Discovery and Data Mining [D. Lavenier]

10.1.2.2. Reviewer

- WABI 2015 [C. Lemaitre]

10.1.3. Journal

10.1.3.1. Member of the editorial boards

- Discrete Applied Mathematics [A. Mucherino]

10.1.3.2. Reviewer - Reviewing activities

- Advances in Bioinformatics [D. Lavenier]
- Algorithms for Molecular Biology [D. Lavenier]
- Bioinformatics [C. Lemaitre, D. Lavenier]
- BMC Bioinformatics [D. Lavenier]
- BMC Genomics [D. Lavenier]
- Briefing in Bioinformatics [D. Lavenier]
- Computers and Electronics in Agriculture [A. Mucherino]
- IEEE Transactions on Reconfigurable Technology and Systems [D. Lavenier]
- Journal of Biomedical and Health Informatics [D. Lavenier]
- Plos One [D. Lavenier]
- Journal of Computational and Applied Mathematics [A. Mucherino]
- International Transactions in Operational Research [A. Mucherino]
- Nature Scientific Reports [F. Legeai]
- Nucleic Acids Research [D. Lavenier]

10.1.4. Invited talks

- P. Peterlongo, *Reference-free NGS data analysis*, Litis, Rouen, March 2015.

- A. Mucherino, *Distance Geometry and Discretization Orders*, University of Aveiro, Portugal, May 2015.
- P. Peterlongo, *Mapping reads on de Bruijn graphs*, Bordeaux, Labri team, May 2015.
- A. Mucherino, *The several applications of the Distance Geometry*, University of Florianopolis, Brazil, June 2015.
- C. Lemaitre, *Reference-free detection of genomic variants: from SNPs to inversions*, "ABS4NGS", Institut Curie, Paris, France, June 2015.
- P. Peterlongo, *de Bruijn Graph usage and limitations*, Workshop on the future of algorithmic computational biology, Bertinoro, Italy, June 2015.
- D. Lavenier, *Genomic Data Processing*, "Journée Thématique GDR SoC-SiP", France, Nov. 2015.
- P. Peterlongo, *Prédiction de variants sans (ou avec) génome de référence*, MIA team, Toulouse, Nov. 2015.
- D. Lavenier, *Hybrid assembly based on long reads*, "Journée Scientifique Génomique et Bio-Informatique", France, on Dec. 2015.

10.1.5. Scientific expertise

- Expert for the MEI (International Expertise Mission), French Research Ministry [D. Lavenier]
- Member of the Scientific Council of BioGenOuest [D. Lavenier]
- Member of the Scientific Council of the Computational Biology Institute of Montpellier [D. Lavenier]

10.1.6. Research and teaching administration

- Member of « Conseil pédagogique de l'ISTIC » [R. Andonov]
- Responsible of the 3rd Year Computer Science BSc at ISTIC [R. Andonov]
- Member of the local Inria Rennes CDT (Technologic Transfer Commission) [D. Lavenier]
- Member of the steering committee of the INRA BIPAA Platform (BioInformatics Platform for Agro-ecosystems Arthropods) [D. Lavenier]
- Member of the steering committee of The GenOuest Platform (Bioinformatics Platform of BioGenOuest) [D. Lavenier]
- Representative of the environmental axis of UMR IRISA [C. Lemaitre]
- Inria center referee of Scientific mediation [P. Peterlongo]
- Member of the redaction committee Ouest Inria [P. Peterlongo]
- INRA Engineer recruitment committee [C. Lemaitre]
- Bordeaux University Engineer recruitment committee [C. Lemaitre]
- INRA Engineer recruitment committee, STLO, Rennes [F. Legeai]
- Assistant Professor recruitment committee, University of Brest [D. Lavenier]
- Professor recruitment committee, Polytech Montpellier [D. Lavenier]
- Scientific Responsible for International Relationships at ISTIC [A. Mucherino]
- Member of "Commission Affaires Internationales" at University of Rennes 1 [A. Mucherino]
- Member of the ISA Phd grant attribution jury [P. Peterlongo]
- AGOS first secretary [P. Peterlongo]

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- Licence : A. Mucherino, Java basis, 80h, L1, Univ. Rennes 1, France.

- Licence : C. Lemaitre, Statistics for biology, 16h, L3, Univ. Rennes 1, France
- Master : A. Mucherino, Operational Research, 18h, M1, Univ. Rennes 1, France.
- Master : A. Mucherino, Introduction to Computational Systems and Networks, 42h, M1, Univ. Rennes 1, France. : A. Mucherino, Object Oriented Programming, 40h, M1, Univ. Rennes 1, France.
- Master : A. Mucherino, P. Peterlongo and R. Andonov, Algorithms on Sequences and Structures, 36h, M2, Univ. Rennes 1, France.
- Master : A. Mucherino, Parallel Computing (in English), 18h, M1, Univ. Rennes 1, France.
- Master : C. Lemaitre, P. Peterlongo, Text algorithmics for Bioinformatics, 43h, M1, Univ. Rennes 1, France.
- Master : C. Lemaitre, Dynamical systems for biological networks, 20h, M2, Univ. Rennes 1, France.
- Master : P. Peterlongo, Experimental Bioinformactics, 12h, M1, ENS Rennes, France.
- Master : D. Lavenier, Genomic Processing Data, 24h, M2, ESIR, Rennes, France.

10.2.2. Supervision

- PhD defense : Mathilde Le Boudic-Jamin, Similarités et divergences, globales et locales, entre structures proteiques, Univ. Rennes 1., 14/12/2015, supervised by R. Andonov.
- PhD defense : F. Moreews, Concevoir et échanger des workflows d'analyse de données. Application aux traitements intensifs en bioinformatique, Univ. Rennes 1, 11/12/2015, supervised by D. Lavenier and S. Lagarrigue.
- PhD in progress : G. Benoit, New algorithms for comparative metagenomics, start: 11/2014, D. Lavenier and C. Lemaitre
- PhD in progress : A. Limasset, Algorithm for Genomics, start: 09/2014, D. Lavenier and P. Peterlongo
- PhD in progress : C. Guyomar, Bioinformatic tools and applications for metagenomics of bacterial communities associated to insects, start: 10/2015, C. Lemaitre and F. Legeai
- PhD in progress : C. Marchet, Nouvelles méthodologies pour l'assemblage de données de séquençage polymorphes, start: 10/2015, P. Peterlongo
- PhD in progress : P. Hoan Son, Data mining and bioinformatics, start: 01/2015, D. Lavenier and A. Termier.

10.2.3. Juries

- *President of Ph-D thesis jury.* Julien Boutte, University of Rennes 1 [D. Lavenier]; Mouhamadou Ba, INSA Rennes [D. Lavenier], Clovis Galiez, University of Rennes 1 [R. Andonov]
- *Member of Ph-D thesis juries.* François Moreews, University of Rennes [D. Lavenier]
- *Referee of Ph-D thesis.* Nguyen, Thuy Diem, Nanyang Technical University, Singapor [D. Lavenier]; Andrea Radulescu, University of Nantes [D. Lavenier], Deepesh Agarwal, University of Nice [R. Andonov]
- *Member of Ph-D thesis comitees.* J. Laniau, University of Rennes [A. Mucherino]; A. Radulescu, university of Nantes [P. Peterlongo]; L. Siegwald, University of Lille [P. Peterlongo]; A. Mas, University of Rennes [P. Peterlongo]; H. Lopez, University of Lyon [C. Lemaitre]; T. Cumer, University of Grenoble [C. Lemaitre]; D. Eoche-Bosy, University of Rennes [F. Legeai]; H. Boulain, University of Rennes [F. Legeai]; Y., University of Rennes [F. Legeai]; M. Mulot, University of Colmar [F. Legeai].

10.3. Popularization

- Animation of Bioinformatics Atelier at Data Science Symposium (IRISA's 40th anniversary) "De la bioinformatique aux tiques". [P. Peterlongo]
- Open House day for IRISA's 40th anniversary: genomic puzzle [All members of GenScale]
- Participation to the event "A la decouverte de la recherche". [P. Peterlongo]
- Popularization paper in BioFutur [38]

SAGE Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organization

- J. Erhel organized with T. Faney and A. Michel, from IFPEN, an international MoMaS workshop on reactive transport (Paris, France, November 2015).

10.1.2. Scientific events selection

- J. Erhel is a member of the international advisory committee of the parallel CFD conferences (Trondheim, Norway, May 2014).
- J. Erhel was a member of the scientific committee of the international conference MAMERN 2015 (Pau, France, June 2015).
- J. Erhel was a member of the program committee of the workshop Visualization in Environmental Sciences 2015 (co-event of EuroVis 2015, Cagliari, Italy, May 2015)

10.1.3. journals: editorial Boards

- J. Erhel is member of the editorial board of ETNA.
- J. Erhel is member of the editorial board of ESAIM:Proceedings and Surveys.
- J. Erhel is the scientific coordinator of the website Interstices (since June 2012).
  See https://www.interstices.info.

10.1.4. Journals: Reviewing

- J. Erhel was reviewer for the journals ADWR, CONHYD, GMDD, LAA.
- L. Lenôtre was reviewer for the journal ETNA.
- M. Oumouni was reviewer for the journal JOMP.
- G. Pichot was reviewer for the journal Computers& Geosciences.

10.1.5. Review of proposals

- J. Erhel was reviewer for a proposal submitted to ICT15, Vienna Science and Technology fund.

10.1.6. Research administration

- É. Canot is member of the CLHSCT (Comité Local Hygiène Sécurité Conditions de Travail), of Inria-Rennes, from September 2010.
- J. Erhel is the correspondant of Maison de la Simulation for Inria Rennes.
- J. Erhel is the AMIES correspondant for Inria Rennes, from September 2015.
- J. Erhel was a member of the Inria local committee Post-Doc 2015.
- G. Pichot is responsible for the domain "environment" at IRISA, from June 2013 until August 2015.
- G. Pichot is member of the Conseil de département MAM of Polytech Lyon.
- G. Pichot was a member of the Inria local committee CORDI-S 2015.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

J. Erhel: Master M2; title: Cours de modélisation et calcul scientifique; 12 hours; INSA, Rennes, France.

É. Canot: Master M2; title: TP de modélisation et calcul scientifique; 12 hours; INSA, Rennes, France.

10.2.2. Supervision

PhD: L. Lenôtre, University of Rennes 1, November 2015, co-advisors A. Lejay (Inria Nancy) and G. Pichot, with J. Erhel.

PhD: S. Mansour, University of Rennes 1 with LIU and AUB (Beiruth, Lebanon), December 2015, co-advisors É. Canot, M. Muhieddine and N. Nassif.

PhD in progress: B. Delfino, University of Rennes 1, November 2015, co-advisors J.-R. de Dreuzy and J. Erhel.

PhD in progress: P.-M. Gibert, University of Lyon, October 2015, co-advisors D. Tromeur-Dervout and J. Erhel.

PhD in progress: M. ben Refifa, University of Tunis, October 2013, advisors R. Bouhlila and É. Canot.

10.2.3. Juries

- PhD: A. Abeduwia, University of Littoral Côte d'Opale (Calais), Mathematics, December 2015. Reviewer J. Erhel.

- PhD: C. Robinson, University of Rennes 1, Mathematics, December 2015. Committee member J. Erhel.

- HdR: A. Beaudoin, University of Poitiers, Geosciences, December 2015. Committee member J. Erhel.

10.3. Popularization

- J. Erhel is co-author of two documents published in Intersitces, about modelling ice sheet evolution and estimating the contribution of Antartica and Greenland to sea-level rise. [30], [29]

- J. Erhel was one of the coordinators of the Interstices publications devoted to climate change and COP21. She is co-author of the quiz on this subject. [28]

- J. Erhel gave a talk at the show "solutions COP21", held in Grand Palais, Paris, December 2015.

- J. Erhel contributed to the new version of the spelling book for computer science (l'informatique de A à Z), published in November 2015. She was one of the coordinators of the project and she wrote several cards.

- J. Erhel gave a talk in 180 seconds entitled "Enjeux pour les Eaux souterraines: Energie et Environnement", during the Inria scientific days, Nancy, June 2015.

- J. Erhel presented the challenges for groundwater at the meeting between Inria and Sénat, January 2015.

- L. Lenôtre gave a talk at "Lycée René Descartes de Rennes" on the diffusion phenomena and their underlying stochastic processes, February 2015.

- L. Lenôtre participated in the "Fête de la science de Rennes" at Inria stand.

SERPICO Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. Member of the organizing committees

Charles Kervrann was member of the organizing committee of the international "Quantitative BioImaging" (QBI'15) conference, Institut Pasteur, Paris, January 2015 (180 participants).

Frédéric Lavancier and Charles Kervrann are head of the organizing committee of the international workshop "Spatial Statistics and Image Analysis in Biology" (SSIAB'16), Inria Rennes, May 2016.

Frédéric Lavancier is head of the workshop "Spatio-temporal models and statistics", IRMAR University of Rennes 1, LMJL University of Nantes, ENSAI, University of Rennes 2, INRA Rennes, Inria Rennes.

10.1.2. Scientific events selection

10.1.2.1. Member of the conference program committees

Charles Kervrann: Associated Editor for the conference ISBI'2015, member of the program committee of JOBIM'15 (Clermont-Ferrand), member of the scientific committee "Journées d'Imagerie Optique Non-Conventionnelle" (JIONC'2015, JIONC'2016).

Patrick Bouthemy: Associate Editor for the conference ISBI'2016.

Thierry Pécot: member of the program committee of BIOIMAGING'2016.

10.1.2.2. Reviewer

Charles Kervrann: reviewer for ICIP'2015, ICASSP'2015, SSVM'2015, EMMCPRV'2015, NIPS'15, ICASSP'2016, ISBI'2016.

Patrick Bouthemy: reviewer for ICIP'2015, ISBI'2015.

Frédéric Lavancier: reviewer for "Spatial Statistics: Emerging Patterns" 2015.

Thierry Pécot: reviewer for ISBI'2015, ISBI'2016, BIOIMAGING'2016.

10.1.3. Journal

10.1.3.1. Member of the editorial boards

Charles Kervrann is Guest Editor of the special issue entitled "Advanced Signal Processing in Microscopy and Cell Imaging" of the IEEE Selected Topics in Signal Processing Journal (publication in February 2016).

Charles Kervrann is Associate Editor of the IEEE Signal Processing Letters journal (since January 2015).

Patrick Bouthemy is co-editor in chief of the open access journal Frontiers in ICT, specialty Computer Image Analysis.

10.1.3.2. Reviewer - Reviewing activities

Charles Kervrann: BMC Bioinformatics, IEEE Transactions on Image Processing, Journal Mathematical Imaging and Vision, Medical Image Analysis, Traitement du Signal.

Patrick Bouthemy: IEEE Transactions on Image Processing, Medical Image Analysis, Mathematical Problems in Engineering.

Frédéric Lavancier: Applications of Mathematics, Bernoulli, Computational Statistics and Data Analysis, Journal of the Royal Statistical Society Series B, R Journal, Médecine/Sciences, Metrika, Statistics.

Thierry Pécot: Bioinformatics.

10.1.4. Invited talks

Charles Kervrann:

Seminar Mine-Telecom & University of Paris Descartes, PEWA: Patch-based Exponentially Weighted Aggregation for image denoising, Paris, December 2015.

Seminar IBC LIRMM, Imagerie biologique à l'échelle cellulaire: enjeux et défis en traitement d'images, Montpellier, December 2015.

GdR Plasmonique Moléculaire et Spectrosocopies Exaltées (PMSE), Imagerie biologique à l'échelle cellulaire: analyse quantitative de la diffusion, Inria Rocquencourt, November 2015.

GdR Microscopie et Imagerie du Vivant (MIV), A statistical test to detect non Brownian diffusion adapting to the length of the observed trajectory (with V. Briane), ENS Lyon, Novembre 2015.

Seminar INSA Rouen, PEWA: Patch-based Exponentially Weighted Aggregation for image denoising, Rouen, November 2015.

Invited talk Researcher School "Biophysics: from Measurements to Models in Biology", Biological imaging: context and challenges in image processing, 2 hours, Les Houches, Octobre 2015.

Seminar Telecom-Physique Strasbourg, Imagerie biologique à l'échelle cellulaire: enjeux et défis en traitement d'images, Strasbourg, June 2015.

Invited talk PhD School I2S LIRMM, Imagerie biologique: enjeux et défis en traitement d'images, 3 hours, Montpellier, April 2015.

Invited talk "Quantitative BioImaging" (QBI'15) conference, Joint localization estimation and classification of membrane dynamics in TIRF microscopy image sequences (with J. Salamero), Paris, January 2015.

Thierry Pécot:

Invited talk "Cycle de vie des images en microscopie", Mobyle@SERPICO: Image processing methods on a Mobyle Web Portal (with C. Kervrann), Paris, December 2015.

GdR Microscopie et Imagerie du Vivant (MIV) (Mini-symposium on BioImage Informatics), Counting-based particle flux estimation for traffic analysis in live cell imaging (with C. Kervrann, J. Salamero and J. Boulanger) , Paris, November 2015.

Invited talk FBI Annual Meeting, Particle flux estimation for traffic analysis in live cell imaging (with C. Kervrann, J. Salamero and J. Boulanger), Paris, September 2015.

Contributed talk "Quantitative BioImaging" (QBI'15) conference, A quantitative approach for space-time membrane trafficking orientation (with J. Boulanger, P. Bouthemy, S. Bardin, J. Salamero and C. Kervrann, Paris, January 2015.

Invited talk European BioImage Analysis Symposium (EuBIAS'15), Mobyle@SERPICO: Image processing methods for the temporal analysis of moving particles on a Mobyle Web Portal (with C. Kervrann), Paris, January 2015.

Frédéric Lavancier:

Seminar of University of Paris 6, A general procedure to combine estimators, Paris, March 2015.

Seminar of University of Toulouse 3, Determinantal point process models and statistical inference, Toulouse, October 2015.

Seminar Institut Henri Poincaré (IHP), Determinantal point process models and statistical inference, Paris, October 2015.

Invited talk Journées STAR, A general procedure to combine estimators, Rennes, October 2015.

Seminar of University of Torino, Determinantal point process models and statistical inference, Turin, Italy, October 2015.

Contributed talk at "Spatial Statistics: Emerging Patterns" conference, Combining estimators in spatial statistics, Avignon, June 2015.

Invited talk at "Geometric Science of Information" (GSI'15), A two-color interacting random balls model for co-localization analysis of proteins (with C. Kervrann), Palaiseau, October 2015.

10.1.5. Scientific expertise

Charles Kervrann:

>   Member of the IEEE BISP "Biomedical Image and Signal Processing" committee.

>   Member of executive board of the GdR MIV (2588 - Microscopie Fonctionnelle du Vivant) CNRS.

>   Member of the scientific committee of the Interdisciplinary MiFoBio School CNRS (http://www.mifobio.fr).

Patrick Bouthemy:

>   Member of the board of AFRIF (Association Française pour la Reconnaissance et l'Interprétation des Formes).

>   Member of the board of the GRETSI (Groupement de Recherche en Traitement du Signal et des Images).

>   Member of the Research Committee of Telecom Bretagne.

Frédéric Lavancier:

>   Elected member of CNU section 26.

>   Expert for the project evaluation in the framework of FNRS (Fonds de la Recherche Scientifique), Belgium.

10.1.6. Research administration

Charles Kervrann:

>   Member of the executive board of the project committee of the Inria Rennes - Bretagne Atlantique centre.

>   Member of the Scientific Council of the INRA Rennes Research Centre.

>   Co-head of the "BioImage Informatics" node (ANR France-BioImaging project, National Infrastructure en Biologie et Santé).

Patrick Bouthemy:

>   Head of Excellence Lab CominLabs since April 2014.

>   Deputy member of the board of directors and member of the Selection and Validation Committee of the Images & Réseaux competitivity cluster.

>   Deputy member of the board of directors of IRT (Technological Research Institute) b<>com.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Charles Kervrann:

>   Master: From BioImage Processing to BioImage Informatics, 5 hours, coordinator of the module (30 hours), Master 2 Research IRIV, Telecom-Physique Strasbourg & University of Strasbourg.

>   Master: Geometric Modeling for Shapes and Images, 6 hours, Master 2 Research SISEA, University of Rennes 1.

>   Engineer Degree and Master 2 Statistics and Mathematics: Statistical Models and Image Analysis, 37 hours + 15 hours (TP, Hoai Nam Nguyen), 3rd year, Ecole Nationale de la Statistique et de l'Analyse de l'Information (ENSAI), Rennes.

Patrick Bouthemy:

   Master: Analysis of Image Sequences, 18 hours, Master 2 Research SISEA, ISTIC & University of Rennes 1.

   Master: Video Indexing, 9 hours, Master 2 Research Computer Science, ISTIC & University of Rennes 1.

   Engineer Degree and Master 2 Research IRIV: Motion Analysis, 12 hours, Telecom-Physique Strasbourg & University of Strasbourg.

Frédéric Lavancier:

   Master: Linear Models, 36 hours, Master 2 Mathematics & Engineering, option Statistics, University of Nantes.

   Licence: Descriptive Statistics, 12 hours, Licence 3 Mathematics & Economy, University of Nantes.

10.2.2. Supervision

PhD: Christophe Biscio, Contribution to the modeling and the parametric estimation of determinantal point processes, University of Nantes, September 2015, supervised by Frédéric Lavancier.

PhD: Antoine Basset, Detection and characterization of dynamical events recognition in image sequences: application to membrane fusion in TIRF microscopy, University of Rennes 1, December 2015, supervised by Patrick Bouthemy and Charles Kervrann in collaboration with Jérôme Boulanger and Jean Salamero (UMR 144 CNRS-Institut Curie).

PhD in progress: Hoai Nam Nguyen, Methods and algorithms for tissue microarrays image analysis, started in October 2013, supervised by Charles Kervrann and Vincent Paveau (Innopsys).

PhD in progress: Vincent Briane, Statistical methods and models for motion analysis in microscopy, started in October 2014, supervised by Charles Kervrann and Myriam Vimond (ENSAI-CREST).

PhD in progress: Bertha Mayela Toledo Acosta, Methods and algorithms for 3D image registration and correlative microscopy, started in October 2014, supervised by Patrick Bouthemy and Charles Kervrann.

PhD in progress: Emmanuel Moebel, New strategies for the nonambiguous identification and enumeration of macromolecules in cryo-electron tomograms, started in November 2015, supervised by Charles Kervrann.

PhD in progress: Juan Manuel Perez Rua, Semantically meaningful motion descriptors for video understanding, started in January 2015, supervised by Patrick Bouthemy in collaboration with Tomas Crivelli and Patrick Pérez (Technicolor).

10.2.3. Juries

Referee of Habilitation thesis: S. Jonic (University of Pierre and Marie Curie) [C. Kervrann].

Referee of PhD thesis: X. Wang (Ecole Centrale de Lyon, supervised by L. Chen) [P. Bouthemy].

Chair of PhD thesis juries: Y. Karpate (University of Rennes 1, supervised by C. Barillot) [P. Bouthemy], H. Mi (University of Rouen, supervised by S. Ruan) [P. Bouthemy].

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

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. General chair, scientific chair

- C. Barillot was Chair of the MAPPING Miccai Workshop, Munich, Germany, 2015 https://project.inria.fr/fli/en/mapping-workshop/

10.1.1.2. Member of the organizing committees

- C. Barillot is member of the Board of Directors of IPMI conference series (Information Processing in Medical Imaging)
- C. Barillot was member of the Scientific Program Board of ESMRMb 2015 (Edinburgh, UK)
- G. Edan is founder and co-organizer of the annual ARSEP-MRI symposium since 2015
- G. Edan is co-chair of the executive board of the "European charcot foundation" symposium since 2000

10.1.2. Scientific events selection

- C. Barillot is area chair of SPIE Medical Imaging 2015

10.1.2.1. Chair of conference program committees

- C. Barillot was Chair of MAPPING Miccai Workshop, Munich, Germany, 2015

10.1.2.2. Member of the conference program committees

- C. Barillot was TPC member of MICCAI workshops (Patch-MI 2015, MCV 2015), CCGrid - Life 2015
- O. Commowick was TPC member of MICCAI 2015
- O. Commowick was TPC member of IEEE ISBI 2015
- P. Maurel was TPC member of IEEE ISBI 2015
- E. Bannier reviewed for ISMRM 2015

10.1.3. Journal

10.1.3.1. Member of the editorial boards

- C. Barillot is member of Editorial Boards of Medical Image Analysis, Current Medical Imaging Reviews, ISRN Signal Processing
- C. Barillot is Editor-in-Chief of Frontiers in ICT: Computer Image Analysis.

10.1.3.2. Reviewer - Reviewing activities

- IEEE TIP (CB), IEEE TMI (OC, PM), Medical Image Analysis (CB, SP, OC), NeuroImage (CB, OC, IC), Neuroimage clinical (CB), Hum. Brain Map. (CB), Phys. Med. Biol. (CB), Computer Methods and Programs in Biomedicine (CB), Comput. Med Im & Graph (CB), Comp Meth & Prog in Biomed (CB), IEEE Signal Proc. Let. (CB), Magnetic Resonance in Medicine (EC), Plos-ONE (CB, EC), IJICT (CB), IJSISE (CB), IJCVR (CB), Journal of Mathematical Imaging and Vision (CB, PM), Magma (CB), Trans on Parallel and Dist. Sys. (CB), Neurobiology of Aging (IC).

10.1.4. Invited talks

- G. Edan - "Natural history of Multiple Sclerosis", International congress of Multiple Sclerosis, Porto, Feb 2015 (Porto)2015
- I. Corouge and J. Guillaumont - "Shanoir: a solution for neuro-imaging data management", Gen2bio National congress, La Baule, March 2015
- B Carsin-Nicol and J. Guillaumont - "Présentation du protocole IRM recommandé par l'OFSEP et du projet Shanoir", CIRGO - Colloque inter-régional du Grand Ouest , Nantes, December 2015
- C. Barillot - "Science Data Ecosystem in Medical Imaging", Data Science symposium : Science Data Ecosystem workshop, IRISA, Nov. 19th
- C. Barillot - "Imagerie de population: Noeud FLI-IAM", Journées Françaises de Radiologie, Paris, Oct. 15th, 2015

10.1.5. Leadership within the scientific community

- G. Edan was elected Fellow of the European Academy of Neurologie. Member of the EAN teaching committee in 2015
- C. Barillot is member of the Scientific Council of the INS2I Institute of CNRS since 2011 and is Chairman of the Board since 2015 (http://csins2i.irisa.fr)
- C. Barillot is member of the C3N committee (CNRS)
- C. Barillot is member of the scientific board of "GIS France Grilles"
- C. Barillot is member of the Governing Board of the "Pole de compétitivité Images & Réseaux"

10.1.6. Scientific expertise

- C. Barillot chaired an evaluation committe for the FET-Flagship "Human Brain Project"
- C. Barillot reviewed for the Vienna Business Agency Foundation
- C. Barillot reviewed for the National Medical Research Council (NMRC), Singapore
- C. Barillot reviewed for the Research Council of KU Leuven
- C. Barillot reviewed for the Royal Netherlands Academy of Arts and Sciences.
- C. Barillot was member of the admission committee for the Research Director competition of CNRS

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Teaching on 3D medical imaging (visualization, segmentation, fusion, management, normalization) in the following tracks:

Master 2 SIBM, University of Angers-Brest-Rennes: 26h (*C. Barillot, E. Bannier, E. Caruyer, O. Commowick, I. Corouge, J.-Y. Gauvrit, S. Prima*):

C. Barillot is responsible for one semester.

J.-Y. Gauvrit is the coordinator for the Master.

Master 1 SIBM, University of Rennes: 5h (S. Prima)

Ecole Supérieure d'Ingénieur de Rennes (ESIR): 60h in medical imaging (P. Maurel)

Other topics:

Ecole Supérieure d'Ingénieur de Rennes (ESIR): 60h in general image processing (P. Maurel), 60h in algorithmics and complexity (P. Maurel) and 14h in graphical user intergace programming (B. Combès)

ENS Rennes: 24h in introduction to image processing (P. Maurel)

ISTIC - Université of Rennes 1: 12h in Software Engineering (E. Caruyer)

G. Edan: regular seminar of university Cambridge UK: "From epidemiological data to therapeutic strategies in MS" June 2015

G. Edan – Milan (Italy), Preceptorship on MRI in Multiple Sclerosis - "MRI in clinical trial" (2012-2015)

10.2.2. Supervision

PhD Hrishikesh Deshpande, Dimensionality Reduction and Statistical Learning for Computational Modeling of Natural Evolution of Brain Pathologies, Inria, from December 2012, Christian Barillot, Pierre Maurel

PhD Renaud Hédouin, Biomarker discovery in brain imaging by using diffusion MRI, Inria/Inserm, from November 2013, Christian Barillot, Olivier Commowick

PhD Yogesh Karpate, Quantitative analysis of MRI in Multiple Sclerosis in the context of the clinically isolated syndroma, INSERM, from December 2011, Christian Barillot, Olivier Commowick. Defended in September 2015.

PhD Lea Itmi, Quantitative Analysis Of Arterial Spin Labeling MRI For Robust Parametric Information Of Perfusion Maps, Inria / Siemens, from Mar 2014, Christian Barillot, Pierre Maurel

PhD Lorraine Perronnet, Neurofeedback Using Virtual Reality And Combining Eeg-Mri For Brain Rehabilitation, Inria/CominLabs Hemisfer project, from Dec 2013, Christian Barillot, Maureen Clerc (Inria Sophia-Antipolis), Anatole Lecuyer (HYBRID project), Fabien Lotte (Inria Bordeaux)

PhD Haykel Snoussi, Diffusion MRI detection of early occurring spine lesions in relapsing-remitting multiple sclerosis with late physical impairment, from Nov 2015, Christian Barillot, Gilles Edan, Emmanuel Caruyer

PhD Pierre-Yves Jonin, Relationships between context-free and context-rich memory : cognitive and neural subtrates. Inria/Inserm/CNRS from Oct 2014, Christian Barillot (co-supervisor)

PhD Maia Proisy, Perfusion in neonates and in pediatric diseases. Univ. Rennes /CHRU Rennes from Oct 2014, Jean-Christophe Ferre (supervisor)

PhD Anne Kerbrat, Quantitative MR imaging in MS for Brain and Spine. Univ. Rennes /CHRU Rennes from Oct 2014, Gilles Edan (supervisor)

10.2.3. Juries

- O. Commowick: PhD, Yogesh Karpate, Inserm, Sep. 2015
- S. Prima: PhD, Reviewer, Sophie Maingault, Université de Bordeaux, mai 2015
- C. Barillot: PhD, Committee Chair: Aurélie Emilien, Univ. Bordeaux, Dec. 2014; Charlotte Dutilleul, Univ. Toulse 3-Paul Sabatier, Jul. 2015; Nicolas Cordier, Univ. Nice-Sophia Antipolis, Nov. 2015
- C. Barillot: PhD, Reviewer: Zehan Wang, Imperial College London, Dec. 2014 ; Alia Lemkaddem, EPFL - CH, Feb. 2015; Vikash Gupta, Univ. Nice-Sophia Antipolis, Mar. 2015

10.3. Popularization

- Conference/public debate : C. Barillot "Imagerie de population: Noeud FLI-IAM", Journées Françaises de Radiologie
- Exposition : Stand démonstration Inria, Journées Françaises de Radiologie
- Exposition : Stand démonstration FLI-IAM, SFRMBM
- Press : G. Edan "Les maladies du cerveau, un enjeux majeur a relever", Ouest-France
- Popularization Web site: C. Barillot "Neurofeedback to Leverage EEG and MRI Simultaneously", lettre d'information Emergences Inria (http://emergences.inria.fr/2015/Newsletter36/L36_NEUROFEEDBACK)
- Audiovisual: "MedInria", France 3 Cote d'Azur (http://pluzz.francetv.fr/videos/jt_1920_cote_dazur.html)
- Conference/public debate : JY Gauvrit,"Les progrès de l'image du cerveau", Espace des Sciences, Rennes, March 17th

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

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. General chair, scientific chair

George Giakkoupis will be the General Chair of the 35th ACM Symposium on Principles of Distributed Computing (PODC 2016), Chicago, Illinois, USA, July 2016.

9.1.1.2. Member of the organizing committees

Davide Frey served as workshop and tutorial co-chair for the ACM/IFIP/USENIX International Conference on Middleware (Middleware).

George Giakkoupis served in the conference committee and the steering committee of the 34th ACM Symposium on Principles of Distributed Computing (PODC 2015), Donostia-San Sebastián, Spain, July 2015.

Anne-Marie Kermarrec is the vice-chair of ACM Eurosys.

Anne-Marie Kermarrec has been a member of the Inria Parity committee (and leader of the recrutment group) since September 2015.

Anne-Marie Kermarrec is a member of the steering committees of ACM Eurosys, Middleware, and the Winter School on Hot Topics in Distributed Systems.

Anne-Marie Kermarrec is a member of the technical committee of the ACM Conference on Online Social Networks.

François Taïani has been a member of the Steering Committee of *the annual ACM/IFIP/USENIX Middleware conference* since 2014.

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

9.1.2. Scientific events selection

9.1.2.1. Member of the conference program committees

Davide Frey served in the program committees of the following conferences.

> *14th IEEE International Conference on Peer-to-Peer Computing (P2P)*, Cambridge, MA, USA, Sep 2015.
>
> *ACM/IFIP/USENIX International Conference on Middleware (Middleware)*, Vancouver, Canada, Dec 2015.
>
> *High Performance Computing (HiPC) 2015*, Bangalore, India, Dec 2015.

George Giakkoupis served in the program committee of the 17th International Conference on Distributed Computing and Networking (ICDCN 2016), Singapore, Jan 2016.

Anne-Marie Kermarrec was a program committee member of the conferences.

> *Middleware 2015*, Vancouver, BC, Canada, December 2015.
>
> *Eurosys 2015*, Bordeaux, France, April 2015.
>
> *SRDS 2015*, Montreal, Canada, October 2015.
>
> *Systor 2015*, Haifa, Israel, May 2015.

Netys 2015, Agadir, Moroco May 2015.

François Taïani was a program committee member of the conferences.

Middleware 2015, Vancouver, BC, Canada, December 2015.

IEEE International Conference on Peer-to-Peer Computing (P2P), Cambridge, MA, USA, Sep. 2015.

IEEE 34th Symposium on Reliable Distributed Systems (SRDS 2015), Montreal, Canada, October 2015.

The 45th Annual IEEE/IFIP International Conference on Dependable Systems and Networks (DSN 2015), Rio do Janeiro, Brazil, June 2015.

ICDCS 2015, The 35th IEEE International Conference on Distributed Computing Systems (ICDCS 2015), Colombus, Ohio, USA, June-July 2015.

9.1.3. Journal

9.1.3.1. Member of the editorial boards

Anne-Marie Kermarrec is an associate editor of IEEE Internet Computing.

Anne-Marie Kermarrec is an associate editor of the Springer Computing Journal.

9.1.4. Invited talks

George Giakkoupis. *Vertex connectivity under sampling.* Seminar of the Computer Science and Telecommunications Department, Ecole Normale Supérieure, Rennes, France, Sep 15 2015.

George Giakkoupis. *Bounds on the voter model in terms of graph expansion.* Random Walks on Random Graphs and Applications Worshop, Eurandom, TU Eindhoven, The Netherlands, Apr 14 2015.

George Giakkoupis. *Rumor spreading: Techniques and results.* Tutorial, 8th Winter School on Hot Topics in Distributed Computing (HTDC), Flaine, France, Mar 18 2015.

George Giakkoupis. *Vertex connectivity under vertex sampling*. PIMS Algorithmic Theory of Networks Seminar, University of Calgary, Canada, Mar 6 2015.

Anne-Marie Kermarrec, *TM Recommenders*, Invited speaker at the 7th workshop on the Theory of Transactional Memory, Donostia, Spain 2015.

Anne-Marie Kermarrec, *Scalable personalization infrastructures*, IST Austria, April 2015.

Anne-Marie Kermarrec, *TM Recommenders*, Rennes, November 2015

Nupur Mittal, *Privacy-Conscious Information Diffusion in Social Networks*, Rennes, November 2015.

Michel Raynal, *Concurrent Systems: Hybrid Object Implementations and Abortable Objects.* at Euro-Par 2015.

Michel Raynal, *Communication Patterns and Input Patterns in Distributed Computing* at SIROCCO 2015.

François Taïani. *Engineering Scale: Software and Distribution for Tomorrow's World.* Keynote presentation at the Journées Nationales 2015 of the GDR GPL (France's research federation on software engineering and programming), Bordeaux, France, 9-12 June 2015.

François Taïani. *Large-Scale Systems And Self-Organization.* Invited lecture at the Doctoral School "Interoperability and automatic adaptation for novel generation middleware systems" of Doctoral Program in Computer Science of CUSO (Conférence Universitaire de Suisse Occidentale), Neuchâtel, Switzerland, November 26th - 27th, 2015.

9.1.5. Leadership within the scientific community

Anne-Marie Kermarrec has been a member of the *Academia Europea* since 2013.

Anne-Marie Kermarrec co-organized the *Workshop Inria/Technicolor on workshop on storage and data analytics* , Rennes, Nov. 2015.

Anne-Marie Kermarrec is a member of the scientific committee of the Société Informatique de France.

Anne-Marie Kermarrec was a member of the Inria scientific board (Bureau du comité des projets) in Rennes until July 2015.

François Taïani was the chair of the hiring committee for the position of *Professor at University of Rennes 1 - ESIR*.

9.1.6. Research administration

Davide Frey is scientific correspondent for the DPEI in Rennes.

Anne-Marie Kermarrec has been a member of the ERC panel for Consolidator Grants since 2013.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Simon Bouget, APF (Algorithmique et Programmation Fonctionnelle), 40 HEQTD (2 x 10 séances de 2 heures de TP), L1, Université de Rennes 1 (ISTIC), France.

Licence : Simon Bouget, SYS1 (Introduction aux Systèmes d'exploitation), 10 HEQTD (5 séances de 2 heures de TP), ESIR1 (L3), Université de Rennes 1 (ESIR), France.

Master : Simon Bouget, TLC (Techniques Logicielles pour le Cloud computing), 14 HEQTD (7 séances de 2 heures de TP), M2 Génie Logiciel Alternance, Université de Rennes 1 (ISTIC), France.

Master: Davide Frey, Scalable Distributed Systems, 10 hours, M1, EIT/ICT Labs Master School, Univ. Rennes 1, France.

Engineering School: François Taïani, Synchronization and Parallel Programming, 48h, 2nd year of Engineering School (M1), ESIR / Université of Rennes 1, France.

Engineering School: François Taïani, Distributed Systems, 24h, 3rd year of Engineering School (M2), ESIR / Université of Rennes 1, France.

Engineering School: François Taïani, Parallel Algorithms for Big Data, 24h, 3rd year of Engineering School (M2), ESIR / Université of Rennes 1, France.

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

Master: François Taïani, Programming Technologies for the Cloud, 32h, M2, Université of Rennes 1, France.

Michel Raynal, Introduction to distributed computing, 20h, M1, Univ. Rennes, France.

Michel Raynal, Distributed Computability, 20h, M2, Univ. Rennes, France.

9.2.2. Supervision

PhD: Ali Gouta *Caching and prefetching for efficient video services in mobile networks* [11]. Université de Rennes 1, January 15, 2015. Supervised by Anne-Marie Kermarrec.

PhD: Julien Stainer. *Computability Abstractions for Fault-tolerant Asynchronous Distributed Computing* [13]. Université de Rennes 1, March 18, 2015. Supervised by Michel Raynal.

PhD: Eleni Kanellou. *Data Structures for Current Multi-core and Future Many-core architectures* [12]. Université de Rennes 1, December 14, 2015. Supervised by Michel Raynal.

PhD in progress : Antoine RAULT, *User privacy in collaborative filtering systems*. Started on 1st October 2012. Supervised by Anne-Marie Kermarrec, Davide Frey.

PhD in progress : Stéphane Delbruel, Towards a Decentralized Embryomorphic Storage System, 1st October 2013, François Taïani and Davide Frey (since 1st October 2014).

PhD in progress : Resmi Ariyattu Chandrasekharannair, Towards Decentralized Federations for Plug-based Decentralized Social Networks, 1st December 2013, François Taïani.

PhD in progress : Simon Bouget, EMILIO: Emergent MIddleware for extra-Large-scale self adapta-tIOn, 1st September 2014, François Taïani.

PhD in progress : Pierre-Louis Roman, Epidemic Distributed Convergence for Decentralized Social Networking, 1st October 2014, François Taïani, Davide Frey.

PhD in progress: Javier Olivares, A peer-sourcing infrastructure for personalized privacy-aware event processing, 1st October 2013, Anne-Marie Kermarrec.

PhD in progress : Olivier Ruas, Dynamic learning and recommendations in very large distributed com-puting infrastructures, 1st October 2015, Anne-Marie Kermarrec, François Taïani.

PhD in progress: Nupur Mittal. *Infrastructure et algorithmes pour la recommandation de contenus cross application*, December 1 2013, George Giakkoupis and Anne-Marie Kermarrec.

9.2.3. *Juries*

Anne-Marie Kermarrec was in the HDR juries of Vincent Gramoli (June 2015) and Sebastien Monnet (November 2015) (LIP 6).

François Taïani was a reviewer of the PhD for Raluca Diaconu. *Scalability for Virtual Worlds*. Université Pierre et Marie Curie, January 23, 2015.

François Taïani was the chair of the PhD jury for Julien Stainer. *Computability Abstractions for Fault-tolerant Asynchronous Distributed Computing*, Université de Rennes 1, March 18, 2015.

François Taïani was a reviewer of the PhD for Camille Fayollas. *Architecture logicielle générique et approche à base de modèles pour la sûreté de fonctionnement des systèmes interactifs critiques*. Université Toulouse 3 Paul Sabatier, July 21, 2015.

François Taïani was a reviewer of the PhD for Pierre André. *Test de systèmes ubiquitaires avec prise en compte explicite de la mobilité*. Université Toulouse 3 Paul Sabatier, November 17, 2015.

François Taïani was the chair of the PhD jury for Erwan Bousse. *Execution Trace Management to Support Dynamic V&V for Executable DSMLs*. Université de Rennes 1, December 3, 2015.

François Taïani was the chair of the PhD jury for Eleni Kanellou. *Data Structures for Current Multi-core and Future Many-core architectures*. Université de Rennes 1, December 14, 2015.

François Taïani served as external examiner on the PhD committee of Xi Li. *Workload Consolidation in Large-scale Data Centers*. University College Dublin (UCD), Ireland, December 16, 2015.

François Taïani was a member of the HDR jury for Benoît Parrein. *Le code à effacement Mojette : Applications dans les réseaux et dans le Cloud*. Université de Nantes, June 16, 2015.

François Taïani was a reviewer of the HDR of Gerson Sunyé. *A Model-Based Approach for Testing Large Scale Systems*. Université de Nantes, November 10, 2015.

9.3. Popularization

Anne-Marie Kermarrec wrote three articles on women in computer science: on the blog of the SIF Binaire in March 2015.

ASCOLA Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. General chair, scientific chair

- A. Lebre co-organized cloudDays@Paris. Supported by the GDR RSD consortium, the DISCOVERY Inria Project Labs, the LIP6 labs and Telecom Sud Paris, this national event gathered 80 researchers and phd students to discuss about latest results in Virtualization and Cloud Computing [0] from the network and distributed system communities.
- A. Lebre was general chair of the ACM VTDC [0] 2015 workshop collocated with HPDC (30 participants).

9.1.1.2. Member of the organizing committee

- T. Ledoux is member of the board of the Green Lab Center association. This association promotes and disseminates Green IT practices and research prototypes to the world of education, research and companies [0].
- M. Südholt has been a member of the steering committee of the international conference Modularity since 2011.
- J.-M. Menaud member of GIS (Groupement d'intérêt scientifique) PERLE - Pôle d'Excellence de la Recherche Ligérienne en Energie.
- J.-M. Menaud member of GIS (Groupement d'intérêt scientifique) SyMeTRIC.
- J.-M. Menaud is the animator of "Pôle Science du Logiciel et des Systèmes Distribués" in Laboratoire des Sciences du Numérique à Nantes (LS2N) since June 2015.
- A. Lebre is member of the executive committee of the GDR CNRS RSD (Reseau et Système distribué). He is also co-leading the transversal action Virtualization and Clouds of this GDR.
- A. Lebre is member of the executive and architect committees of the Grid'5000 GIS (Groupement d'intérêt scientifique).
- N. Tabareau has co-organized with Peter LeFAnu Lumsdaine the HoTT-UF workshop, satellite to the RDP conferences.

9.1.2. Scientific events selection

9.1.2.1. Member of the conference program committee

- A. Lebre was member of the program committees of ACM/IEEE CCGRID 2015, IEEE IC2E 2015, SCRAMBL 2015, EuroPar 2015, IEEE CloudCom 2015, and DSDIS 2015.
- T. Ledoux was member of the program committees of the following conferences: Int. Conf. on Eco-friendly Computing and Communication Systems (ICECCS'15), Int. Workshop on Green and Sustainable Software (GREENS'15) @ ICSE, Workshop on Adaptive and Reflective Middleware (ARM'15) @ Middleware, ACM Symposium On Applied Computing (SAC'15)- track Software Engineering Aspects of Green Computing.
- J.-M. Menaud has served on the program committee of SMARTGREENS 2015, ENERGY 2015, VHPC'15, CFSE-10, CLOUD COMPUTING 2015, 11th AICT 2015, 4th E2DC 2015, GreenCom2015.

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[0] CloudDays@Paris, 2015.
[0] http://people.rennes.inria.fr/Adrien.Lebre/VTDC/vtdc15.html
[0] Green Lab Center

- J.-C. Royer was a member of the program committes of WETICE 2015, CAL 2015, and ICIS 2015.

9.1.3. Journal

9.1.3.1. Member of the editorial board

- M. Südholt has been a member of the editorial board of the Springer journal "Transactions of Aspect-Oriented Software Development" (TAOSD) since 2010 and has been appointed co-editor-in-chief since April 2015.
- A. Lebre is associate editor for the IEEE Transactions on Big Data journal.

9.1.3.2. Reviewer

- A. Lebre has been a reviewer for the Software: Practice and Experience and IEEE TPDS Journals.
- T. Ledoux has been a reviewer for the Journal of Parallel and Distributed Computing (JPDC)-Elsevier (2015).
- J.-M. Menaud has been a reviewer for IEEE Transactions on Parallel and Distributed Systems (TPDS).
- M. Südholt has been a reviewer for IEEE "Transactions in Software Engineering" (TSE) and the Springer journal "Transactions on Aspect-Oriented Software Development" (TOASD).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

The team is involved in the following undergraduate and graduate-level programs at Mines Nantes and University of Nantes (the institutions all of eaching staff belongs to):

- The team is a main contributor to the **engineering program of EMN**.
- Within this engineering program, the team is steering, chairing and the main contributor to a two-year **graduate-level informatics specialization**. H. Grall is managing this program.
- Since 2011 our team has defined and set up a new three-year **engineering program on software engineering**. T. Ledoux is managing this program.

The team has also been involved in the following MSc programs that have been carried out with partners from French and foreign universities:

- The team participates in the **MSc program "Alma"** on software architecture and distributed systems, a joint program steered by colleagues from University of Nantes. In this context, we are responsible for a 48-hour module on advanced software composition and take part in the program's governing board. M. Südholt is managing the participation of Mines Nantes in this program.
- Members of the team have taught different **courses at different study levels in Rennes** mainly organized by University of Rennes and the research institutes IRISA and Inria.

m members have taught for about 220 hours on average in 2015 (hours of presence in front of students). Hereby, we have taken into account that researchers and some professors have not taught at times. In addition, another significant part of the program is taught by temporary staff, whose participation is managed by ASCOLA members.

In addition, J. Noyé has been interim head of the DAPI department of École de Mines de Nantes until Oct. 2015 and has been its vice-head since then.

9.2.2. Supervision

The team has been supervising 18 PhD thesis (at least partially) in 2015, of which four have been co-supervised with external academic partners (one with partners from TU Darmstadt, Germany, and VU Brussel, Belgium) and two with another Inria team (Myriads from Rennes). Four PhDs have been co-supervised with industrial partners (Orange group, Sigma group, and the EasyVirt SME).

One PhD thesis has been defended this year: Jurgen Van Ham has presented a model and corresponding extension of Scala integrating event-based, aspect-oriented and object-oriented programming features. Three PhD students are preparing her defense for end of the first quarter 2015.

Rémi Douence has defended his habilitation (HDR) on the topic: "Composition non modulaire modulaire" presenting new means for the modularization of composition problems.

9.2.3. Juries

- J.-C. Royer was a member of the HDR committee of Mohamed Graiet (Université Paris Dauphine), July 2015.

- A. Lebre was a member of the PhD committee of Houssem Medhioub, "Architectures et mécanismes de fédération dans les environnements Cloud Computing et Cloud Networking", University Pierre et Marie Curie/TelecomSud Paris, April 2015.

- J. Noyé was a member of the PhD committee of Dries Harnie: "Blame Prediction: Early detection of type errors in dynamically typed programming languages", Vrije Universiteit Brussel, Aug. 2015.

- J.-M. Menaud was a reviewer of the PhD of : Christina Herzog (Nov. 26, 2015) "Contributions à la modélisation avec un Système Multi Agent du transfert technologique en Green IT", Reviewer, Toulouse. Ibrahim Safieddine (Oct. 29, 2015) "Optimisation d'Infrastructures de Cloud Computing dans des Green Datacenters", Reviewer, Grenoble. Ge LI (Jull. 22, 2015) "Contrôle des applications fondé sur la qualité de service pour les plateformes logicielles dématérialisées (Cloud)", Reviewer, Annecy. Ahmed El Rheddane (Fev. 25, 2015) "Elasticité dans le Cloud Computing", Member, Grenoble.

- J.-M. Menaud was a reviewer of the **HdR** committee of Patricia Stolf (Nov. 13, 2015) "La gestion des ressources pour des infrastructures vertes par la reconfiguration", Reviewer, Toulouse.

<div align="center" style="color:red">**ATLANMODELS Team**</div>

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. Member of the organizing committees

- M. Tisi has coorganized the Scalable Model Driven Engineering Workshop (BigMDE'15) within the STAF federated conference.

10.1.2. Scientific events selection

10.1.2.1. Member of the conference program committees

- Gerson Sunye:
  - International: International Conference on IT Convergence and Security, International Conference on Software Engineering and Knowledge Engineering, International Workshop on Large-Scale Testing, International Workshop on Testing The Cloud, BigMDE Workshop
- Massimo Tisi:
  - International: International Conference on Software Language Engineering, International Conference on Model Transformation, International Conference on Current Trends in Theory and Practice of Computer Science, Transformation Tool Contest, Model Driven Requirement Engineering Workshop, Executable Modeling Workshop, BigMDE Workshop

10.1.2.2. Reviewer

- Hugo Brunelière
  - Maintenance and Evolution of Service-Oriented Systems and Cloud-Based Environments, MESOCA (ICSME 2015).
- Gerson Sunyé
  - International Conference on Software Engineering, ACM SIGSOFT Symposium on the Foundations of Software Engineering.

10.1.3. Journal

10.1.3.1. Reviewer - Reviewing activities

- Hugo Brunelière
  - Journal of Information and Software Technology (Elsevier), Journal of Software: Evolution and Process (Wiley), International Journal of Software and Systems Modeling (Springer).
- Gerson Sunyé
  - IEEE Transactions on Software Engineering, Journal of Systems and Software (2x), Software and Systems Modeling.
- Massimo Tisi
  - IEEE Transactions of Software Engineering, IEEE Software, Journal of Software: Evolution and Process, Journal of Systems and Software, Science of Computer Programming, Software and Systems Modeling, Software: Practice and Experience, Transactions on Software Engineering, Journal on Web Engineering, Journal of Logic and Algebraic Programming.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

License: M. Tisi, Projet Integrateur PRIME, 12h, L3, Ecole des Mines de Nantes

License: M. Tisi, Projet IPIPIP, 8h, L3, Ecole des Mines de Nantes

Master: M. Tisi, Bases de Données, 30h, M1, Ecole des Mines de Nantes

Master: M. Tisi, Interaction Homme-Machine, 14h, M1, Ecole des Mines de Nantes

Master: M. Tisi, Model-Driven Engineering II, 45h, M2, Ecole des Mines de Nantes, Formation par Apprentissage

Master: M. Tisi, Sensibilisation Recherche, 12h, M2, Ecole des Mines de Nantes, Formation par Apprentissage

Master: G. Sunye, Model-Driven Engineering, 30h, M2, Université de Nantes

Master: G. Sunye, Software Engineering, 48h, M1, Université de Nantes

Master: G. Sunye, Software Testing, 48h, M1, Université de Nantes

Master: G. Sunye, Software Development, 24h, M1, Université de Nantes

License: S. Martínez, Bases de Données, 28h, L3, Ecole des Mines de Nantes

License: S. Martínez, Interaction Homme-Machine, 14h, L3, Ecole des Mines de Nantes

Master: S. Martínez, Master MIAGE - Model Transformations, 6h, Université de Nantes

License: S. Martínez, Domain Specific Languages, 3h, L3, Ecole des Mines de Nantes

10.2.2. Supervision

PhD in progress: Amine Benellanem, Scalability of model transformations, Jordi Cabot, Massimo Tisi and Gerson Sunyé.

PhD in progress: Gwendal Daniel, Efficient storage of large models, Jordi Cabot, Massimo Tisi and Gerson Sunyé.

PhD in progress: Michel Albonico, Model-driven testing of cloud environments, Jordi Cabot and Gerson Sunyé.

PhD in progress: Mohamed Boussaa, An Architecture for Testing Large-Scale Dynamic Distributed Systems, Université de Rennes 1, Benoit Baudry, Olivier Barais, Gerson Sunyé.

PhD in progress: Kevin Corre, Model-based Trust, Université de Rennes 1–Orange, Olivier Barais, Gerson Sunyé, Jean-Michel Crom, Vincent Frey

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

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. General chair, scientific chair

Emmanuelle Anceaume is General chair of the 19-th edition of the International Conference on Principles of Distributed Systems (OPODIS 2015).

10.1.1.2. Member of the organizing committees

Emmanuelle Anceaume served as a member of the organization committee of the following conference

- International Conference on Principles of Distributed Systems (OPODIS 2015)

Sébastien Gambs served as a member of the organization committee of the following events:

- Journées thématiques: Respect de la vie privée et services mobiles sans contact (27-28 May, Issy-les-Moulineaux).
- Journée thématique: Sécurité et respect de la vie privée dans les systèmes mobiquitaires (24 September, Rennes).
- Entretien Jacques Cartier : La vie privée à travers les cultures. Convergences et divergences dans un monde globalisé (30 November 2015)

Nicolas Prigent served as a member of the organization committees of the following conferences and workshops:

- SSTIC 2015 (Symposium sur la Sécurité des Systèmes d'Information et des Communications 2015).
- VizSec 2015 (12th IEEE International Symposium on Visualization for Cyber Security).

Frédéric Tronel served as a member of the organization committee of the following conference:

- SSTIC 2015 (Symposium sur la Sécurité des Systèmes d'Information et des Communications 2015).

Ludovic Mé served as a member of the organization committee of the following conference:

- C&ESAR 2015 (Computers & Electronics Security Applications Rendez-vous),
- RESSI 2015 (Rendez-Vous de la Recherche et de l'Enseignement de la Sécurité des Systèmes d'Information).

Christophe Bidan served as a member of the organization committee of the following conference:

- ICISSP 2015 (International Conference on Information Systems Security and Privacy 2015).

10.1.2. Scientific events selection

10.1.2.1. Chair of conference program committees

Emmanuelle Anceaume served as a co-chair of the following conference

- 4-th IEEE Symposium on Network Cloud Computing and Applications (NCCA15)

Nicolas Prigent was the program chair of the following conference

- 12th IEEE International Symposium on Visualization for Cyber Security (VizSec 2015).

10.1.2.2. Member of the conference program committees

Emmanuelle Anceaume served a member of the program committee of the following conferences:

- 5-th International Conference on Pervasive and Embedded Computing and Communication Systems (PECCS 2015) (http://www.peccs.org/Home.aspx?y=2015)
- 14th IEEE International Symposium on Network Computing and Applications (IEEE NCA15)
- 14th IEEE International Conference on Trust, Security and Privacy in Computing and Communications (IEEE TrustCom-15)
- 17eme Rencontres Francophones sur les Aspects Algorithmiques de Télécommunications (ALGO-TEL 2015)

Sébastien Gambs served a member of the program committee of the following conferences:

- 13th International Conference on Privacy, Security and Trust (PST'15),
- 15th IFIP TC 6/TC 11 International Conference on Communications and Multimedia Security (CMS'15),
- 10th International Workshop on Data Privacy Management (DPM'15),
- 8th International Symposium on Foundations and Practice of Security (FPS'15).

Michel Hurfin served as a member of the program committee of the following conference:

- 7-th IEEE International Symposium on UbiSafe Computing (Ubisafe 2015)

Ludovic Mé served as a member of the program committee of the following conferences:

- C&ESAR 2015 (Computers & Electronics Security Applications Rendez-vous),
- RESSI 2015 (Rendez-Vous de la Recherche et de l'Enseignement de la Sécurité des Systèmes d'Information).

Guillaume Piolle served as a member of the program committee of the following conference:

- ACySe 2015 (Second International Workshop on Agents and CyberSecurity).

Christophe Bidan served as a member of the program committee of the following conference:

- IWTCC 2015 (Second International Workshop on Trust in Cloud Computing).

Nicolas Prigent served as a member of the program committee of the following conferences:

- SSTIC 2015
- 12th IEEE International Symposium on Visualization for Cyber Security (VizSec).

Eric Totel served as a member of the program committee of the following conferences:

- C&ESAR 2015 (Computers & Electronics Security Applications Rendez-vous),
- 7-th IEEE International Symposium on UbiSafe Computing (Ubisafe 2015)

Frédéric Tronel served as a member of the program committee of the following conferences:

- SSTIC 2015.

10.1.2.3. Reviewer

- Gilles Guette as a reviewer for the International Conference on Information System Security and Privacy (ICISSP).

10.1.3. Journal

10.1.3.1. Member of the editorial boards

Michel Hurfin belongs to the editorial board of the Springer open access journal of Internet Services and Applications.

10.1.3.2. Reviewer - Reviewing activities

- Ludovic Mé and Valérie Viet Triem Tong act as reviewers for the following journal: IEEE Transactions on Network and Service Management (TNSM),
- Gilles Guette acts as a reviewer for the following journals: Security and Communication Networks (SCN),
- Gilles Guette acts as a reviewer for the following journals: Sensors.
- Emmanuelle Anceaume acts as a reviewer for the following journals: IEEE Transactions on Parallel and Distributed Systems (TPDS), IEEE Transactions on Dependable and Secure Computing (TDSC), and the Theoretical Computer Journal (TCS).
- Guillaume Piolle acts as a reviewer for the following journal: International Journal on Information Security (IJIS).
- Frédéric Tronel acts as a reviewer for the following journals: IEEE Transactions on Dependable and Secure Computing (TDSC).

10.1.4. Invited talks

Valérie Viet Triem Tong has been invited at the 3rd International Symposium on Information Systems Security, Kenitra Morocco (CISSI'2015). She has given a talk entitled *Capture de signatures comportementales de malware Android par suivi de flux d'information – Behavioral Signatures of Android Malware using information flow monitoring*.

Ludovic Me and Guillaume Hiet were invited at the 6th *Assises du domaine Cyber Défense et SIEM* organized by the R2GS (*Recherche et Réflexion en Gestion opérationnelle de la Sécurité*) club. They gave a talk entitled *Travaux de recherches en supervision de sécurité : tendances actuelles*.

Sébastien Gambs was invited to give a tutorial on "inference attacks on location data" at the Shonan Seminar on Logic and Verification Methods in Security and Privacy in November in Japan.He has also given an invited talk on "Implementing the right to be forgotten" at the Workshop on Ethics and Artificial Intelligence held in Rennes in June as well as a talk on "Privacy challenges in the Information Society" at the French-Japanese workshop on cybersecurity held in Tokyo in April.

10.1.5. Research administration

Ludovic Mé acts as Scientific Officer for the Rennes - Bretagne Atlantic Inria Research Center.

Emmanuelle Anceaume acts as member of the

- Inria Commission d'Evaluation
- Université Rennes 1 Comité de selection

Sébastien Gambs is a member of the committee for the Gilles Kahn award, which is given each year to the best PhD thesis in computer science in France by the Société d'Informatique de France. He is also the co-chair of Cybersecurity research axis of the IRISA laboratory as well as a member of the Inria-CNIL committee.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence: Ludovic Mé, *Software Engineering*, 15h, L3 - first year of the engineer degree, Supélec, France

Master: Ludovic Mé, *Information systems*, 4,5 hours, M1 - second year of the engineer degree, Supélec, France

Master: Ludovic Mé, *Supervision of student project*, 1 project, M1 - second year of the engineer degree, Supélec, France

Master: Ludovic Mé, *Supervision of student project*, 1 project, M2 - mastère cybersecurity degree, Supélec, France

Master: until September 2015, Ludovic Mé was responsible for the module "Secured information systems", M2 - third year of the engineer degree, Supélec, France

Master: Sébastien Gambs, *Protection of Privacy*, 16 hours of lectures, M2 - Master Pro SSI, Université de Rennes 1, France.

Master: Sébastien Gambs, *Topics on Authentication*, 16 hours of lectures, M2 - Master Pro SSI, Université de Rennes 1, France.

Master: Sébastien Gambs, *Introduction to Computer Security*, 8 hours of lectures and 4 hours of practical works, M2 - Master Pro SSI, Université de Rennes 1, France.

Licence: Gilles Guette, *Network Initiation*, 27h, L3 - Licence, ISTIC/University of Rennes 1, France

Licence: Gilles Guette, *Network Initiation*, 43h, L3 - first year of the engineer degree, ESIR, France

Master: Gilles Guette, *Network Routing*, 28h, M1 - second year of the engineer degree, ESIR, France

Master: Gilles Guette, *Mobile Network Routing*, 5h, M1 - second year of the engineer degree, ESIR, France

Master: Gilles Guette, *Advanced Network Services*, 13h, M1 - second year of the engineer degree, ESIR, France

Master: Gilles Guette, *Network Project*, 24h, M1 - second year of the engineer degree, ESIR, France

Master: Gilles Guette, *Security*, 26h, M1 - second year of the engineer degree, ESIR, France

Master: Gilles Guette, *Network and System Security*, 12h, M2 - third year of the engineer degree, ESIR, France

Master: Gilles Guette, *Network Modeling*, 10h, M2 - third year of the engineer degree, ESIR, France

Master: Gilles Guette, *Network*, 6h, M2 - third year of the engineer degree, Supélec, France

Master: Gilles Guette, *Supervision of student project*, 1 project, M2 - third year of the engineer degree, ESIR, France

Master: Gilles Guette, *Supervision of student internship*, M1 - second year of the engineer degree, ESIR, France

Licence : Guillaume Piolle, *Algorithms*, 21 hours, L3 - first year of the engineer degree, Centrale-Supélec, France

Licence : Guillaume Piolle, *Software engineering*, 24 hours, L3 - first year of the engineer degree, CentraleSupélec, France

Master : Guillaume Piolle, *Modelling, Algorithms and Programming*, 22 hours, M1 - second year of the engineer degree, CentraleSupélec, France

Master : Guillaume Piolle, *Computer security and privacy*, 9 hours, M1 - second year of the engineer degree, CentraleSupélec, France

Master : Guillaume Piolle, *Software project*, 14 hours, M1 - second year of the engineer degree, CentraleSupélec, France

Master : Guillaume Piolle, *Security Policies*, 4.5 hours, M2 - third year of the engineer degree, CentraleSupélec, France

Master : Guillaume Piolle, *Java programming*, 4.5 hours, M2 - third year of the engineer degree, CentraleSupélec, France

Master : Guillaume Piolle, *Computer networks*, 13.5 hours, M2 - third year of the engineer degree, CentraleSupélec, France

Master : Guillaume Piolle, *Software engineering*, 22 hours, M2 - third year of the engineer degree, CentraleSupélec, France

Master : Guillaume Piolle, *Symbolic Artificial Intelligence*, 4.5 hours, M2 - third year of the engineer degree, CentraleSupélec, France

Master : Guillaume Piolle, *Network Access Control*, 9 hours, M2 - third year of the engineer degree, CentraleSupélec, France

Master : Guillaume Piolle, *Web development*, 12 hours, M2 - third year of the engineer degree, CentraleSupélec, France

Master : Guillaume Piolle, *Privacy protection*, 4.5 hours, M2 - third year of the engineer degree, CentraleSupélec, France

Master : Guillaume Piolle, *Computing project*, 40 hours, M2 - third year of the engineer degree, CentraleSupélec, France

Master : Guillaume Piolle, *Java EE*, 21 hours, Mastère spécialisé, CentraleSupélec, France

Licence : Eric Totel, *Models and programming languages*, 19.5 hours including 10.5 hours of lecture, L3 - first year of the engineer degree, Supe´lec, France

Licence : Eric Totel, *Foundations of computer science, data structures and algorithms*, 6 hours, L3 - first year of the engineer degree, Supe´lec, France

Master : Eric Totel, *Computer systems' architecture*, 30 hours, M1 - second year of the engineer degree, Supe´lec, France

Master : Eric Totel, *C language*, 24 hours including 6 hours of lecture, M2 - master CS (Cyber Security), Supe´lec, France

Master : Eric Totel, *C language and C++ language*, 12 hours including 6 hours of lecture, M2 - third year of the engineer degree, Supe´lec, France

Master : Eric Totel, *Dependability* , 9 hours including 7.5 hours of lecture, M2 - third year of the engineer degree and master research, Supe´lec, France

Master : Eric Totel, *Dependability*, 3 hours of lecture, M2 - third year of the engineer degree (inge´nierie des syste`mes automatise´s), Supe´lec, France

Master : Eric Totel, *Dependability*, 4.5 hours of lecture, M2 - post-graduate training (master Architecture des Re´seaux de Communication), Supe´lec, France

Master : Eric Totel, *Intrusion Detection*, 6 hours of lecture, M2 - M2 - master CS (Cyber Security), Supe´lec, France

Master : Eric Totel, *Intrusion Detection*, 8 hours of lecture, M2 - master 2 degree, University of Rennes 1, France

Master : Eric Totel, *Intrusion Detection*, 4 hours of lecture, M2 - master 2 degree, University of Rennes 1, France

Master : Eric Totel, *Supervision of student project* , 4 projects, M1 - second year of the engineer degree, Supe´lec, France

Master : Eric Totel, *Supervision of student project*, 1 project, M2 - third year of the engineer degree, Supe´lec, France

Licence: Frédéric Tronel, *Software engineering*, 49h, L3 - first year of the engineer degree, Centrale-Supélec, France.

Master: Frédéric Tronel, *Operating systems*, 18h, M2 - third year of the engineer degree, Centrale-Supélec, France .

Master: Frédéric Tronel, *Compilers*,37h, M2 - third year of the engineer degree, CentraleSupélec, France.

Master: Frédéric Tronel, *Automatic reasoning*, 7h, M2 - third year of the engineer degree, Centrale-Supélec, France.

Master: Frédéric Tronel, *Assembly Language*, 4h30, M2 - third year of the engineer degree, CentraleSupélec, France.

Master: Frédéric Tronel, *Buffer overflow vulnerabilities (theory and practice)*, 7h, M2 - third year of the engineer degree, CentraleSupélec, France.

Master: Frédéric Tronel, *Firewall*, 8h, M2 - third year of the engineer degree, CentraleSupélec, France.

Master: Frédéric Tronel, *Calculability in distributed systems*, 9h, M2, jointly with University of Rennes 1 and CentraleSupélec, France.

Licence: Valérie Viet Triem Tong, *Algorithms and Data Structures*, 36 hours of lecture including 7 hours of lectures, L3 - first year of the engineering degree, CentraleSupélec, France;

Master: Valérie Viet Triem Tong, *Games Theory*, 18 hours, M1 - second year of the engineering degree, CentraleSupélec, France;

Master: Valérie Viet Triem Tong, *Formal Methods*, 9 hours, M2 - third year of the engineering degree, CentraleSupélec, France;

Master: Valérie Viet Triem Tong, *Intrusion detection using information flow control*, 9 hours, M2 / third yearof the engineering degree, CentraleSupélec, France;

Master: Valérie Viet Triem Tong, *Programming in Java*, 12 hours, M1 - international students (NplusI) second year of the engineering degree, CentraleSupélec, France;

Master: Valérie Viet Triem Tong, *Small elements of decidability*, 7h30 hours, M2 - third year of the engineering degree, CentraleSupélec, France;

Master : Valérie Viet Triem Tong, *Supervision of student project*, 1 project, mastere CS (Cyber Security), CentraleSupélec, France

Master : Valérie Viet Triem Tong, *Supervision of student project* , 8 projects, M1 - second year of the engineer degree, Supe´lec, France

Master: Emmanuelle Anceaume, *computer science (MRI) specialism - BIB - Colq*, 36h, M2, Istic, France.

Master: Nicolas Prigent, *Operating systems*, 18h, M2 - third year of the engineer degree, Centrale-Supélec, France;

Master: Nicolas Prigent, *Automatic reasoning*, 8h, M2 - third year of the engineer degree, Centrale-Supélec, France;

Master: Nicolas Prigent, *Web development*, 12 hours, M2 - third year of the engineering degree, CentraleSupélec, France;

Master: Nicolas Prigent, *Python Programming*, 6 hours, M2 - third year of the engineering degree, CentraleSupélec, France;

Master : Nicolas Prigent, *Advanced Java Programming*, 1,5 hours, M2 - third year of the engineering degree, CentraleSupélec, France;

Master: Nicolas Prigent, *Penetration Testing*, 18 hours, M2 - third year of the engineering degree, CentraleSupélec, France;

Master : Nicolas Prigent, *IDS and Visualization*, 2 hours, M2, ESIR, France.

Master : Nicolas Prigent, *Virtualization and Cloud Computing*, 4 hours, M2, ESIR, France.

Master : Nicolas Prigent, *MS Windows Configuration and Administration*, 16 hours, Mastère CS - Specialization year, CentraleSupélec, France.

Master : Nicolas Prigent, *MS Windows Configuration and Administration*, 16 hours, CQP - Specialization year, CentraleSupélec, France.

Master : Nicolas Prigent, *Cryptography, Cryptographic Protocols and Applications*, 32 hours, CQP - Specialization year, CentraleSupélec, France.

Master : Nicolas Prigent, *Supervision of student project* , 2 projects, M1 - second year of the engineer degree, CentraleSupélec, France.

Master : Nicolas Prigent, *Supervision of student project*, 2 project, M2 - third year of the engineer degree, CentraleSupélec, France.

Master : Nicolas Prigent, *Supervision of student project*, 1 project, Mastère CS - Specialization year, CentraleSupélec, France.

Licence: Guillaume Hiet, *Algorithms and Data Structures*, 12.5h, L3 - first year of the engineer degree, CentraleSupélec, France

Master: Guillaume Hiet, *Computer security and privacy for the engineer*, 8h, M1 - second year of the engineer degree, CentraleSupélec, France

Master: Guillaume Hiet, *Buffer overflow vulnerabilities*, 16h, M2 - third year of the engineer degree, CentraleSupélec, France

Master: Guillaume Hiet, *Buffer overflow vulnerabilities*, 16h, M2 - Mastère Spécialisé CS (Cyber Security), CentraleSupélec, France

Master: Guillaume Hiet, *Pentest*, 19h, M2 - third year of the engineer degree, CentraleSupélec, France

Master: Guillaume Hiet, *Pentest*, 3h, M2 - Mastère Spécialisé CS (Cyber Security), CentraleSupélec, France

Master: Guillaume Hiet, *Introduction to Linux*, 3h, M2 - Mastère Spécialisé CS (Cyber Security), CentraleSupélec, France

Master: Guillaume Hiet, *Java Security*, 4.5h, M2 - Mastère Spécialisé CS, CentraleSupélec, France

Master: Guillaume Hiet, *Linux Security*, 18h, M2 - Mastère Spécialisé CS , CentraleSupélec, France

Master: Guillaume Hiet, *Linux Security*, 7.5h, third year of the engineer degree, CentraleSupélec, France

Master: Guillaume Hiet, *LDAP*, 7.5h, third year of the engineer degree, CentraleSupélec, France

Master: Guillaume Hiet, *Intrusion Detection*, 15h, M2 - Mastère Spécialisé CS, CentraleSupélec, France

Master: Guillaume Hiet, *Intrusion Detection*, 13.5h, M2 - third year of the engineer degree, M2 research degree of University of Rennes 1, CentraleSupélec, France

Master: Guillaume Hiet, *Security Monitoring*, 3h, M2, cycle "Sécurité Numérique", INHESJ, France

Master: Guillaume Hiet, *Computer Security*, 31.5h, M2, Mastère Spécialisé Architecte des Systèmes d'Information, CentraleSupélec, France

Master: Guillaume Hiet, *Intrusion Detection*, 16h, M2, University of Rennes 1, France

Master: Guillaume Hiet, *Intrusion Detection*, 10h, M2 - third year of the engineer degree, ESIR, France

Master: Guillaume Hiet, *Intrusion Detection*, 9h, M2, Université of Limoges, France

Master: Guillaume Hiet, *Firewall*, 6h, M2, University of Rennes 1, France

Master: Guillaume Hiet, *Supervision of student project*, 4 projects, M1 - second year of the engineer degree, CentraleSupélec, France

Master: Guillaume Hiet, *Supervision of student project*, 2 projects, M2 - third year of the engineer degree, CentraleSupélec, France

Master: Guillaume Hiet, *Supervision of student project*, 2 projects, M2 - Mastère Spécialisé CS (Cyber Security), CentraleSupélec, France

Master: Christophe Bidan is responsible for the module "Secured information systems", M2 - third year of the engineer degree, CentraleSupélec, France;

Master: Christophe Bidan, *Applied cryptography*, 6 hours of lecture, M2 - master 2 degree, University of Rennes 1, France;

Master: Christophe Bidan, *Applied cryptography*, 15h including 6 hours of lecture, M2 - third year of the engineer degree, CentraleSupélec, France

Master: Christophe Bidan, *Introduction to security*, lab work (4h30), M2 - third year of the engineer degree, CentraleSupélec, France

Licence: Christophe Bidan, *Algorithms and Data Structures*, 36 hours of lecture including 7,5 hours of lectures, L3 - first year of the engineering degree, CentraleSupélec, France;

Master : Christophe Bidan, *Cryptographic Protocols*, 6 hours of lecture, mastère CS (Cyber Security), CentraleSupélec, France

10.2.2. Supervision

PhD : Christopher Humphries, User-centred Security Event Visualisation, Université de Rennes 1, Defense 8/12/2015, supervised by Christophe Bidan, Nicolas Prigent and Frédéric Majorczyk

PhD : Paul Lajoie-Mazenc, Réputation et respect de la vie privée dans les rśeaux dynamiques et auto-organisés, Université de Rennes 1, Defense 25/09/2015, supervised by Emmanuelle Anceaume and Valérie Viet Triem Tong

PhD : Regina Paiva Melo Marin, Enhancing Privacy Protection in Social Network Systems Through Decentralization and Policy Conflict Management, CentraleSupélec, Defense 7/09/2015, supervised by Christophe Bidan and Guillaume Piolle

PhD : Mounir Assaf, From Qualitative to Quantitative Program Analyses: Permissive Enforcement of Secure Information Flow, Université de Rennes 1, Defense 06/05/2015, supervised by Eric Totel and Frédéric Tronel and Julien Signoles

HdR: Valérie Viet Triem Tong, "Apport du suivi de flux d'information pour la sécurité des systèmes", Université de Rennes 1, Defense 03/12/15.

PhD in progress : Pierre Obame Meye, Sûreté de fonctionnement dans le nuage de stockage, 01/02/2011, supervised by Emmanuelle Anceaume and Frédéric Tronel

PhD in progress: Erwan Godefroy, "Corrélation d'alertes dirigée par la connaissance de l'environnement", started in November 2012, supervised by Eric Totel (50%), Ludovic Mé (30%), and Michel Hurfin (20%);

PhD in progress: Mouna Hkimi, "Détection d'intrusion dans les systèmes distribués", started in October 2013, supervised by Eric Totel (50%) and Michel Hurfin (50%);

PhD in progress: Laurent Georget, "Validation Formelle d'un moniteur de flux d'information pour le noyau Linux", started in October 2014, supervised by Mathieu Jaume (MdC LIP6, 25%), Guillaume Piolle (25 %), Frédéric Tronel (25 %), Valérie Viet Triem Tong (25 %) ;

PhD in progress: Mourad Leslous, "Déclenchement automatique de codes jugés suspects dans les applications Android", started in October 2015, supervised by , Thomas Genet (Celtique Inria project 20 %), Jean François Lalande (40 %), Valérie Viet Triem Tong (40 %) ;

PhD in progress: Simon Boche, "Respect de la vie privée dans les réseaux ubiquitaires", started in October 2012, supervised by Christophe Bidan (30 %), Nicolas Prigent (35 %), Gilles Guette (35 %) ;

PhD in progress: Antoine Guellier, "Utilisation de la cryptographie homomorphe pour garantir le respect de la vie privée", started in October 2013, supervised by Christophe Bidan (50 %), Nicolas Prigent (50 %) ;

PhD in progress: Deepak Subramanian, "Multi-level Information Flow Monitoring", started in January 2013, supervised by Christophe Bidan (20 %), Guillaume Hiet (80 %) ;

PhD in progress: Damien Crémilleux, "Visualisation d'évènements de sécurité pour la supervision", started in October 2015, supervised by Christophe Bidan (30 %), Nicolas Prigent (35 %) and Frédéric Majorczyk (35 %) ;

PhD in progress: Kun He, "Mise en œuvre de technique de droit a` l'oubli pour les contenus nume´riques", started in October 2013, supervised by Christophe Bidan (50 %) and Gaëtan LeGuelvouit (IRT B-Com 50 %) ;

PhD in progress: Julien Lolive, "Entwining identification and privacy mechanisms", started in December 2012, supervised by Caroline Fontaine (50% - Télécom-Bretagne) and Sébastien Gambs (50%).

PhD in progress: Solenn Brunet, "Privacy-preserving location-based services", started in October 2014, supervised by Sébastien Gambs (50%) and Jacques Traoré (50% - Orange Labs Caen).

PhD in progress: Florian Grandhomme, "Étude de protocoles de routage dynamique externe de type BGP dans un environnement réseaux tactiques adhoc mobiles : faisabilité, performances, qualité de service et passage à l'échelle.", started in October 2014, supervised by Adlen Ksentini (Dionysos Inria project 30%), Gilles Guette (70%) ;

PhD in progress: Mounir Nasr Allah, "Contrôle de flux d'information par utilisation conjointe d'analyse statique et d'analyse dynamique accélérée matériellement", started in November 2015, supervised by Guillaume Hiet (75 %) and Ludovic Mé (25 %) ;

PhD in progress: Thomas Letan, "Contribution à la sécurité des couches basses des systèmes d'information", started in January 2015, supervised by Guillaume Hiet (50 %), Pierre Chifflier (ANSSI, 25 %), and Ludovic Mé (25 %);

PhD in progress: Oualid Koucham, "Détection d'intrusions pour les systèmes de contrôle industriels ", started in January 2015, supervised by Stéphane Mocanu (Gipsa-lab, 50 %), Guillaume Hiet (25 %), and Jean-Marc Thiriet (Gipsa-lab, 25 %).

10.2.3. Juries

- Sébastien Gambs was a member of the PhD committee (reviewer) for the PhD of Thibaud Antignac titled « Méthodes formelles pour le respect de la vie privée par construction », prepared at INSA de Lyon, February 2015.

- Sébastien Gambs was a member of the PhD committee (reviewer) for the PhD of Marco Stronati titled « Designing Location Privacy Mechanisms for flexibility over time and space », prepared at Ecole Polytechnique, September 2015.

- Sébastien Gambs was a member of the PhD committee (reviewer) for the PhD of Ali Kassem titled « Automated Verification of Exam, Cash, Reputation, and Routing Protocols », prepared at Université de Grenoble, September 2015.

- Sébastien Gambs was a member of the PhD committee (reviewer) for the PhD of Iraklis Leontiadis titled « Privacy Preserving Data Collection and Analysis », prepared at Eurecom, October 2015.

- Ludovic Mé was a member of the PhD committee (reviewer) for the PhD of Ivan Studnia entitled « Détection d'intrusion pour des réseaux embarqués automobiles : une approche orientée langage », prepared at INSA de Toulouse, Septembre 2015.

- Ludovic Mé was a member of the PhD committee (reviewer) for the PhD of Eric Freyssinet entitled « Lutte contre les botnets : analyse et stratégie », prepared at Université Pierre et Marie Curie, Paris, November 2015.

- Ludovic Mé was a member of the HDR committee (reviewer) for the HDR of Yves Roudier entitled « Advances in the Design and Engineering of Secure Distributed Systems », prepared at Université Nice Sophia-Antipolis, Decembre 2015.

- Eric Totel was a member of the PhD committee (reviewer) for the PhD of Yosra Ben Mustapha entitled « Corrélation d'alertes: un outil plus efficace d'aide à la décision pour répondre aux intrusions », prepared at Telecom Sud Paris, Avril 2015.

- Eric Totel was a member of the PhD committee (reviewer) for the PhD of Samuel Marchal entitled « DNS and Semantic Analysis for Phishing Detection », prepared at Université de Lorraine, Juin 2015.

- Eric Totel was a member of the PhD committee (reviewer) for the PhD of Thibault Probst entitled « Evaluation et analyse des mécanismes de sécurité des réseaux dans les infrastructures virtuelles de cloud computing », prepared at Université fédérale de Toulouse, Septembre 2015.
- Valérie Viet Triem Tong was a member of the PhD committee for the PhD of Aurélien Thierry entitled « Désassemblage et détection de logiciels malveillants auto-modifiants », prepared at Université de Lorraine, March 2015.

10.3. Popularization

Guillaume Piolle has participated to two scientific popularization activities, both oriented towards secondary education pupils. In both cases, his participation consisted in presentations about the objectives, methods and results of research activities in computer security and privacy (including, but not limited to our activities in CIDRE):

- Les cordées de la réussite : national program aimed at facilitating access to higher education for pupils from various social backgrounds ;
- Bilateral scientific mediation action between CentraleSupélec and the Joliot-Curie high school in Rennes.

Other kinds of popularization activities have taken place in the form of communications aimed at non-academic computing professionals, on the topic of personal data protection regulations and techniques [24], [20].

Sébastien Gambs was also involved in several events dedicated to the public at large such as a presentation at le Pouce (https://iww.inria.fr/ouest-inria/le-pouce-bilan-et-perspectives/).

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DIONYSOS Project-Team

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9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. Member of the organizing committees

Pierre L'Ecuyer was a member of the following groups:

- Steering Committee for the IMACS Seminar on Monte Carlo Methods (biennial conference), since 2009.
- Steering Committee for the International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, since 2006.
- Selection committee for the INFORMS Simulation Society Distinguished Service Award, 2012-2015.

G. Rubino and B. Tuffin are members of the Steering Committee of the International Workshop on Rare Event Simulation (RESIM).

Y. Hadjadj-Aoul is a member of the steering committee of the International Conference on Information and Communication Technologies for Disaster Management (ICT-DM) from December 2015.

R. Marie and G. Rubino are members of the IFIP WG 7.3 (Working Group in Computer Performance Modeling and Analysis).

9.1.2. Scientific events selection

9.1.2.1. Chair of conference program committee

- Bruno Tuffin served as coordinator of Analysis Methodology track at the 48th Winter Simulation Conference, Huntington Beach, CA, December 2015.
- Adlen Ksentini served as Technical Program Committee Chair of the 1st IEEE on Standards for Communications and Networking (CSNC)
- Adlen Ksentini is serving as Symposium Chair of Mobile and Wireless Network Symposium of IEEE ICC 2016, Kuala Lampour, Malaisia.
- Yassine Hadjadj-Aoul served as Technical Program Committee Chair of the 2nd International Conference on Information and Communication Technologies for Disaster Management (ICT-DM).

9.1.2.2. Member of the conference program committees

Pierre L'Ecuyer was a member of the program committee of the following events:

- MCM'2015: Tenth IMACS Seminar on Monte Carlo Methods, Linz, Austria, July 2015.
- SIMUL 2015: Seventh International Conference on Advances in System Simulation, Barcelona, Nov. 2015.
- SIMULTECH 2015: International Conference on Simulation and Modeling Methodologies, Technologies and Applications, Colmar, France, July 2015.
- BIRS Workshop on Applied Probability Frontiers: Computational and Modeling Challenges, Banff, Canada, June 2015.

Bruno Tuffin was a member of the program committee of the following events:

- IEEE ICC 2015 - Communications Software, Services and Multimedia Applications Symposium, London, UK, June 8-12, 2015.
- NetEcon 2015: the 10th Workshop on the Economics of Networks, Systems and Computation, Portland, Oregon, USA, in conjunction with ACM SIGMETRICS, June 2015.
- 2015 ACM SIGSIM Conference on Principles of Advanced Discrete Simulation (ACM SIGSIM PADS 2015) , the University of Westminster, London, UK, June 15-17, 2015.
- 4th Workshop on Smart Data Pricing (SDP 2015), Workshop of IEEE INFOCOM 2015, Hong Kong, May 1st, 2015.
- 10th IMACS Seminar on Monte Carlo Methods (MCM 2015), Linz, Austria, July 2015.
- 8th International Workshop on Simulation, Vienna, Austria, September 21-25, 2015.
- The International Conference on Wireless Networks and Mobile Communications (WINCOM'15). Marrakech, Morocco, October 20-23, 2015.

Bruno Sericola served in the Program Committee of the following conferences:

- ASMTA 2015, 22nd International Conference on Analytical & Stochastic Modelling Techniques & Applications, Albena, (Varna) Bulgaria, 26-29 May 2015.
- MACOM 2015, 8th International Workshop on Multiple Access Communications, Helsinki, Finland, 3-4 September 2015.
- INTERNET 2015, 7th International Conference on Evolving Internet, St. Julians, Malta, 11-16 October 2015.

Adlen Ksentini was member of the program committee of the following events:

- IEEE ICC 2015 Mobile Wireless Networks Symposium, London, UK, 2015.
- IEEE Globecom 2015 Mobile Wireless Networks Symposium, San Diego, USA, 2015.
- IEEE WCNC 2015, New Orleans, USA, 2015.

Yassine Hadjadj-Aoul was a member of the program committee of the following events:

- IEEE ICC 2015 Mobile Wireless Networks Symposium, London, UK, 2015.
- IEEE Globecom 2015 Mobile Wireless Networks Symposium, San Diego, USA, 2015.
- IEEE WCNC 2015, New Orleans, USA, 2015.
- IEEE CSCN 2015 IEEE Conference on Standards for Communications & Networking, Tokyo, Japan, 2015.

Gerardo Rubino served or serves at the program committee of the following conferences:

- QEST 2015: 12th International Conference on Quantitative Evaluation of SysTems, Madrid, Spain, August 2015.
- ComTel 2015: VIII Congreso Internacional de Computación y Telecomunicaciones, Lima, Perú, September 2016
- ComTel 2016: VIII Congreso Internacional de Computación y Telecomunicaciones, Lima, Perú, September 2016
- MASCOTS 2016: The 24th IEEE conference in Modelling, Analysis and Simulation of Computer and Telecommunications Systems, London, England, September 2016.
- Networking 2015: The 14th IFIP Networking Conference, Toulouse, France, May 2015.
- Networking 2016: The 15th IFIP Networking Conference, Vienna, Austria, May 2016.

9.1.2.3. Reviewer

César Viho has reviewed project proposals for the ANR and for CIFRE contracts for the ANRT. He 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'15, Globecom'15, CCNC'16.

Adlen Ksentini has reviewed papers in 2015 for Transaction Paralel Distributed Systems-TPDS, Transaction on Wireless Communication - TWC, Transaction on Vehicular Technology - TVT, Wireless Communication Magazine, Elsevier Computer Communication.

Yassine Hadjadj-Aoul has reviewed papers in 2015 for Transaction on Vehicular Technology-TVT, Wireless Communication Magazine, Elsevier Computer Communication and for the following international conferences: Globecom'15, ICC'15, WCNC'15.

9.1.3. Journal

9.1.3.1. Member of the editorial boards

Bruno Tuffin is an associate editor for the following journals:

- INFORMS Journal on Computing, since 2007.
- Mathematical Methods of Operations Research, since November 2008.
- ACM Transactions on Modeling and Computer Simulation, since July 2009.

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.
- Performance Evaluation.

Bruno Sericola is Editor in Chief of the books series "Stochatic Models in Computer Science and Telecommunications Networks", ISTE/WILEY.

Adlen Ksentini is Associate Editor of IEEE Access Journal.

Yassine Hadjadj-Aoul is guest editor for the Hindawi's Special Issue on "Wireless and Mobile Technologies for the Internet of Things".

Yassine Hadjadj-Aoul is a member of the editorial broad of the CSC Journal's "International Journal of Computer Networks (IJCN)" since 2012.

9.1.3.2. Reviewer - Reviewing activities

In addition to the reports done during his associate editor and conference TPC member duties, Bruno Tuffin has reviewed papers in 2015 for ACM TOMPECS, Computers & Operations Research, IEEE Network Magazine, Operations Research, Statistics & Computing.

Bruno Sericola has reviewed papers for several major internationals journals and conferences.

Yassine Hadjadj-Aoul has reviewed papers for several major internationals journals and conferences such as: Security and Communication Networks (Wiley), IEEE Communication Magazine, and IEEE Transaction on Vehicular Technologies (TVT).

Gerardo Rubino has reviewed papers for several major internationals journals and conferences, including Performance Evaluation, RAIRO, book chapters, and the reviewing activities related to the service at different program committees.

9.1.4. Invited talks

- B. Tuffin. "Rare event simulation applied to dependability analysis". Université de Pau, May 2015.
- B. Tuffin (joint work with P. L'Ecuyer, P. Maillé, N. Stier-Moses). "Revenue-Maximizing Rankings for Online Platforms with Quality-Sensitive Consumers". GRD COS, Toulouse, September 2015.
- B. Tuffin (joint work with P. Maillé, G. Simon). "On revenue-oriented Content Delivery Networks and their impact on Net Neutrality". GEARD, Université de Montréal, Canada, Sept. 2015.
- B. Tuffin. "Rare event simulation applied to dependability analysis". GDR MASCOT-NUM, IHP Paris, October 2015.
- B. Tuffin (joint work with P. L'Ecuyer, P. Maillé, N. Stier-Moses). "Stochastic Optimization for Search Engines: Revenue-Maximizing Rankings with Quality-Sensitive Consumers". NTNU, Trondheim, Norway, November 2015.
- A. Ksentini, "On the Cloudification of mobile networks", Tutorial at IEEE Globecom, December 2015, San Diego, USA.
- A. Ksentini, "Cloud and mobile network, the marriage", Invited Seminar, Univ. Reims, October, 2015
- A. Ksentini, "SDN and NFV", Tutorial in the International School on Cloud Computing, Tunis, Tunisia, April 2015.
- C. Viho, "Quality of Experience(QoE)-based resource management in wireless networks", plenary talk at the 2nd International Congress on Telematics, Computing and Communications (WITCOM 2015), Mexico DF, Mexico, November 4, 2015.
- C. Viho, "How to Deal with Interoperability Testing in The Challenging and Ever-changing Context of IoT", invited talk at the 2nd EAI International Conference on Interoperability in IoT (InterIoT 2015), Roma, Italy, October 26, 2015.
- G. Rubino, "Random Neural Networks: some applications and extensions", invited speaker in Imperial College Seminar in honor of Prof. Erol Gelenbe, London, September November 2015.
- G. Rubino, "Automatic measuring of perceptual quality, a major QoE component of video- and audio-based services", plenary speaker in Soft Computing Methods for the Design, Deployment, and Reliability of Networks and Network Applications (SOFTNET 2015), Paris, France, July 2015.
- G. Rubino, "Statistical Learning and Queueing Models: an Hybrid Approach for Performance Evaluation", plenary speaker in 15th International Conference on Hybrid Intelligent Systems (HIS 2015), Séoul, Korea, November 2015.
- G. Rubino, "Risk and loss, prediction and analysis: probabilistic approaches", keynote speaker in 2nd Int. Conference on Information and Communication Technologies for Disaster Management, Rennes, France, December 2015.

9.1.5. Research administration

- Bruno Tuffin was a member of Inria-MITACS selection committee, 2015.
- Bruno Sericola is responsible for the Inria Rennes-Bretagne Atlantique budget.
- Bruno Sericola has been (until August 2015) a member of the Inria Evaluation Committee which role is to assess the calibre of research conducted at Inria and to guarantee the quality of its hiring and internal promotions.
- 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 has been member of the HCERES (Haut Conseil de l'Évaluation de la recherche et de l'enseignement supérieur) Evaluation Committee for the scientific evaluation of the CITI (Centre of Innovation in Telecommunications and Integration of service), Lyon, France, in February 2015;
- Adlen Ksentini is the secretary of the IEEE ComSoc Technical Committee on Software.

- Adlen Ksentini is the the secretary of the IEEE ComSoc France Section.
- Gerardo Rubino is a member of the Technical Committee on Multimedia Communications of IEEE.
- G. Rubino has been appointed as the Inria representative at the Scientific Committee of the IFCAM (Indo-French Center for Applied Mathematics), a joint international unit between Indian Ministry of Science and Technology and several French institutions including CNRS, Inria, École Polytechnique, École Normale Supérieure, Inria, Nice Sophia Antipolis University and University of Toulouse III.
- Gerardo Rubino is a member of the Research Commission of TELECOM Bretagne (advisory board for the research activities of the institution).
- Gerardo Rubino is a member of the CSV (Selection and Validation Committee) of the "Images et Réseaux" (Images and networks) cluster in the French Brittany Region. The cluster includes most companies and academic institutions working in networking and in image-based applications in Western France.
- Gerardo Rubino has been appointed as a member of the Scientific Advisory Board of the Center for Uncertainty Quantification in Computational Science and Engineering, of KAUST, Saudi Arabia, since January 2014.

9.2. Teaching - Supervision - Juries

9.2.1. *Teaching*

Master and PhD at NTNU (Trondheim, Norway): 25 hours intensive course on Game Theory and Network Economics

Undergraduate students, Probability, 40 hours, University of Science and Technology of Hanoi, Vietnam

Master M1: Performance and dependability evaluation of computer systems, 54 hours, Istic/University of Rennes 1, France

Master M2: Mathematics, 12 hours Istic/University of Rennes 1, France

Master M2: Logistic and performance, 8 hours, Faculté de sciences économiques/University of Rennes 1, France

Master M1: Computer networks, 24 hours, Esir/University of Rennes 1, France

Master M1: Wireless Networks, 48 hours, Esir/University of Rennes 1, France

Master M1: Introduction to graph theory, 14 hours, Esir/University of Rennes 1, France

Master M2: Dependability analysis, 15 hours, SUPELEC Engineering School, Rennes, France

Master M1: Networks and protocols, 24 hours, Istic/University of Rennes 1, France

Master M2: Multimedia streaming over IP (MMR), 50 hours, Esir/University of Rennes 1, France

Master M2: Multimedia services in IP networks (RSM), 29 hours, Esir/University of Rennes 1, France

Master M2: Software Defined Networks, 4 hours, Istic/University of Rennes 1, France

9.2.2. *Supervision*

PhD in progress: Ajit Rai, "Availability prediction with logistics", started in May 2015; advisor: B. Tuffin & G. Rubino, University Rennes 1.

Master: Yves Mocquard, "On population protocols"; advisors: Bruno Sericola and Emmanuelle Anceaume, University of Rennes 1.

PhD in progress: Corentin Hardy, "Device-Assisted Distributed Machine-Learning on Many Cores", started on November 2015; advisors: Bruno Sericola, University of Rennes 1.

PhD in progress: Yves Mocquard, "Analyse de flux de données massifs dans les systèmes distribués large échelle", started on September 2015; advisors: Bruno Sericola and Emmanuelle Anceaume, University of Rennes 1.

Btissam Errahmadi; Cifre Grant, Orange Labs; title: "Coopération et auto-* dans un réseau de small cells"; PhD started on January 2013; advisors: C. Viho and A. Ksentini; University Rennes 1.

Osama Arouk; title: "Cellular-based M2M communication: congestion control"; PhD started on December 2012; advisors: C. Viho and A. Ksentini; University Rennes 1.

Farouk Messaoudi, title: "Orchestration et la virtualisation des ressources de terminaux, la vision Global OS"; PhD started on October 2014, advisor: A. Ksentini, P. Bertin; University Rennes 1.

Florient Grandhomme, title:"Etudes de protocoles de routage dynamique externe de type BGP dans un environnement réseaux tactiques adhoc mobiles : faisabilité, performances, qualité de service, et passage à l'échelle.", PhD started on October 2014, advisors: A. Ksentini, G. Guette; University Rennes 1.

Louiza Yala, title: "CDNaaS: Content Delivery Network as a Service", PhD started on October 2015, advisors: A. Ksentini; University Rennes 1.

Imad Awad, title: "Mobile SDN architecture for 5G", PhD started on October 2015, advisors: A. Ksentini, P. Bertin; University Rennes 1.

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.

Yue Li; Cifre Grant, Orange Labs; title: "Elaboration d'une architecture réseau unifiée, ouverte et flexible", started on October 2013; Advisors: Y. Hadjadj-Aoul and G. Rubino; University Rennes 1.

Meriem Bouzouita; cotutelle between University of Rennes 1 and Carthage University; title: "Optimized random access for M2M communications in LTE-Advanced Networks", started on October 2012; Advisors: Y. Hadjadj, N. Zangar, S. Tabbane, C. Viho; Carthage University, University Rennes 1.

Hamza Ben Ammar; University of Rennes 1; title: "Socially-aware network and cache resources optimization for efficient media content delivery in Content Centric Networks (CCN)", started on October 2015; Advisors: Y. Hadjadj, A. Kentini, S. Ait-Chellouche; University of Rennes 1.

Nicolas Jara Carvallo; joint PhD between the University of Rennes 1 in France and the UTFSM in Chile; title: "Fault tolerant design of dynamic WDM optical networks", started on October 2015; Advisors: R. Vallejos in Chile, G. Rubino in France.

Laura Aspirot; PhD from the University of the Republic, Uruguay; title: "Fluid Approximations for Stochastic Telecommunication Models"; co-advisors: E. Mordecki from UDELAR and G. Rubino in France.

Jorge Graneri; PhD from the University of the Republic, Uruguay; title: "Mathematical models for semantic memory pathologies"; co-advisors: E. Mizraji from UDELAR and G. Rubino in France.

9.2.3. Juries

Bruno Tuffin was a member of the following Habilitation defense committees:

- Pascal Redou. Modèles formels pour l'analyse et la simulation *in virtuo* de systèmes complexes d'inspiration biologique. Université de Bretagne Occidentale, Brest, 2015, rapporteur.
- P. Maillé. Insights from economic studies of telecommunication networks. Telecom Bretagne Rennes, Octobre 2015.

Gerardo Rubino was a member of the following Habilitation defense committee:

- Gwendal Simon. Massive Interactive Multimedia Services Over the Internet. HDR of the University of Rennes 1, Rennes, France. April 7, 2015. President of the jury.

Bruno Tuffin was a member of the following PhD defense committees:

- Josu Doncel. Efficiency of Distributed Queueing Games and of Path Discovery Algorithms. LAAS-CNRS, March 2015.
- Christelle Vergé. Modèle d'îlots de particules et application en fiabilité. École Polytechnique, Juillet 2015, rapporteur.
- Jeanne Demgne. Modélisation d?actifs industriels pour l?optimisation robuste des stratégies de maintenance. Université de Pau et de l'Amour, Octobre 2015, rapporteur.
- Vincent Moutoussamy. Contributions àl'analyse de fiabilité structurale : prise en compte de contraintes de monotonie pour les modèles numériques. Université de Toulouse, Novembre 2015, rapporteur.
- Yangyang Chen. Performance Analysis of Mobile Relays for LTE. Telecom Bretagne, December 2015.

Bruno Sericola was a member of the following:

- The jury for the recruitment of young graduate scientists.
- The jury for allocating the Inria Ph.D. and Research Supervising Bonus.
- The jury for allocating the university students' thesis grants.
- The PhD defense committee of Mathilde Pascal, "Oral health in children and young adults after renal transplantation", UFR d'ondontologie, university of Rennes 1, December 2015, examinateur.

Adlen Ksentini was member of the following PhD defense committees:

- Mamadou Tourad DIALLO, Qualité d'expérience et adaptation de service vidéo. Institut Mines-Télécom Sud Paris, Juin 2015, rapporteur.
- Shengyang Chen, Etude des méthodes d'ordonnancement sur les réseaux de capteurs sans fil, Univ. Reims, Octobre 2015, rapporteur.

C. Viho was a member of the juries for the recruitment of young Associate Professors and senior Professors at ISTIC-Université Rennes 1. He was a member of the following PhD defense committees:

- Tanguy Ropitault, "Routage et performances dans les réseaux CPL pour le Smart Grid", Telecom Bretagne, June 2015, president.
- Roudy Dagher, "Sur la radionavigation dans les villes intelligentes du futur : Le cas des réseaux de capteurs sans-fils", Université de Lille 1, June 2015, rapporteur.

Gerardo Rubino was a member of the following PhD defense committees:

- Thiago Wanderlay Matos de Abreu. "Modélisation et analyse de performances des réseaux en chaîne basés sur IEEE 802.11". ENS Lyon, March 2015. Reviewer.
- Pedro Vilanova. "Multilevel approximations of Markovian jump processes with applications in communication networks". Center for Uncertainty Quantification, Stochastic Numerics Research Group, KAUST, Saudi Arabia, May 2015.

9.3. Popularization

- In [80], [83] , Bruno Tuffin and his co-author Patrick Maillé discuss for a large audience the issues and challenges of network neutrality.
- Bruno Sericola and Emmanuelle Anceaume made a presentation to students of the ENS (Ecole Normale Supérieure) Rennes on their works on the performance evaluation of data streaming analysis algorithms.
- 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

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

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. Member of the organizing committees

Benoit Baudry:

- International Symposium on Software Testing and Analysis (ISSTA'15)
- International Conference on Model Driven Engineering, Languages and Systems (MODELS'15)

Benoit Combemale:

- International Conference on Model Driven Engineering, Languages and Systems (MODELS'15)
- International Workshop on The Globalization of Modeling Languages (GEMOC'15)
- international workshop on Next Generation of Modularity Approaches for Multiple Dimensions of Sustainability (Sustainability'15)

10.1.2. Scientific events selection

10.1.2.1. Chair of conference program committees

Jean-Marc Jézéquel is co-chair of Digital Intelligence 2016, April 2016, Quebec City, Canada. Noel Plouzeau is co-chair of CBSE 2016 (Component Based Software Engineering) conference program committee, April 2016, Venice, Italy.

10.1.2.2. Member of the conference program committees

Benoit Baudry:

- International Conference on Software Engineering (ICSE'15)
- International Conference on Foundations of Software Engineering (ESEC-FSE'15)
- International Conference on Automated Software Engineering (ASE'15)
- International Conference on Model Driven Engineering, Languages and Systems (MODELS'15)

Arnaud Blouin:

- IEEE International Workshop on User Centered Design and Adaptive Systems (UCDAS), 2015

Benoit Combemale:

- International Conference on Software Language Engineering (SLE'15)
- European Conference on Modelling Foundations and Applications (ECMFA'15)
- International Conference on Model Transformation (ICMT'15)
- International Conference on Software Engineering and Formal Methods (SEFM'15)
- International Conference on Software and System Process (ICSSP'15)
- International Workshop on Multi-Paradigm Modeling (MPM'15)
- International Workshop on Executable Modeling (EXE'15)
- International Workshop on Modelling in Software Engineering (MiSE'2015)

Jean-Marc Jézéquel:

- 10th International Workshop on Models at Run-Time, associated to MODELS 2015
- 19th International Software Product Line Conference, July 20-24, Nashville, TN USA.
- 9th International Workshop on Variability Modelling of Software-intensive Systems, January 22-24, 2015 - Hildesheim, Germany

Johann Bourcier:

- 1st International Workshop on Software Engineering for Smart Cyber-Physical Systems, associated to ICSE 2015
- 3rd FoCAS Workshop on Fundamentals of Collective Adaptive Systems, associated to SASO 2015

Mathieu Acher:

- 19th International Software Product Line Conference, July 20-24, Nashville, TN USA.
- SEAA'15 : Euromicro Conference series on Software Engineering and Advanced Applications
- SAC'15 (SE) : 30th ACM Symposium on Applied Computing - Software Engineering (SE) Track
- ICSE'15 (NIER) : 37th International Conference on Software Engineering - New Ideas and Emerging Results (NIER) Track
- EduSymp'15 : Educators Symposium @ Model Driven Engineering Languages and Systems
- A-MOST'15 : 11th Workshop on Advances in Model Based Testing (at ICST)
- SPLTea'15: 2nd International workshop on teaching and product lines (organizer)

Noel Plouzeau:

- CBSE 2015: 18th conference on Component Based Software Engineering, Montreal, Canada, 2015.

Olivier Barais:

- Modularity 2015 Demo Poster Session: 14th International Conference on Modularity March 16-19, 2015 Ft. Collins, Colorado, USA
- SEAA 2015: 41st EUROMICRO Conference on Software Engineering and Advanced Applications (SEAA) Madeira, Portugal, August 26th - 28th, 2015
- SAC 2015: SAC 2015 The 30th ACM/SIGAPP Symposium On Applied Computing Salamanca, Spain
- SPLat 2015: 2nd Software Product Line Analysis Tools Workshop, July 20-24, Nashville, TN USA.
- WETICE 2016: 24th IEEE International Conference on Enabling Technologies: Infrastructure for Collaborative Enterprises.

10.1.2.3. Reviewer

Arnaud Blouin:

- EICS'15, ACM SIGCHI symposium on Engineering interactive computing systems
- ICSE'15, International Conference on Software Engineering
- IHM'15, French speaking conference on human-computer interaction

Johann Bourcier

- ICSE'15, 37th International Conference on Software Engineering
- FSE'15, 10th Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering
- CBSE'15, The 18th International ACM Sigsoft Symposium on Component-Based Software Engineering
- DSN 2015, The 45th IEEE/IFIP International Conference on Dependable Systems and Networks

10.1.3. Journal

10.1.3.1. Member of the editorial boards

Benoit Baudry is an Associate Editor of the following journals:

- Journal of Systems and Software (JSS)
- Journal on Software and System Modeling (SoSYM)

Benoit Combemale is member of the editorial boards of the following journals:

- Journal on Computer Languages, Systems and Structures (COMLAN)
- Journal on Science of Computer Programming (SCP), Advisory Board of the Software Section.

Jean-Marc Jézéquel is an Associate Editor in Chief of the following journal:

- Journal on Software and System Modeling (SoSYM)

Jean-Marc Jézéquel is an Associate Editor of the following journals:

- IEEE Computer
- Journal of Systems and Software (JSS)
- Journal of Object Technology: JOT

10.1.3.2. Reviewer - Reviewing activities

Arnaud Blouin:

- Journal Universal Access in the Information Society
- Journal of Computer Science and Technology
- Journal of Software Engineering for Robotics

Benoit Combemale:

- Journal on Software and System Modeling (SoSYM)
- Transactions on Software Engineering (TSE)

Mathieu Acher

- Journal on Software and System Modeling (SoSYM)
- Transactions on Software Engineering (TSE)
- Information and Software Technology (IST)
- Automated Software Engineering: An International Journal (ASE)

Johann Bourcier:

- Journal of Systems and Software (JSS)

Olivier Barais

- International Journal on Software and Systems Modeling (SoSyM)
- Journal of Systems and Software
- Transactions on Software Engineering (TSE)

10.1.4. Invited talks

Benoit Baudry:

- MIT CSAIL: Automatic generation of software diversity in application source code
- LORIA (Nancy, France): Automatic software diversification in application code.

Benoit Combemale:

- McGill: From Model (driven) Engineering, to Language (driven) Engineering.
- IRT Saint Exupery: On the Globalization of Modeling Languages.
- INRA Toulouse: Modeling for Sustainability.

Jean-Marc Jézéquel:

- ECNU Shanghai: Model Driven Enginnering of DSLs
- Present And Ulterior Software Engineering Seminar (Chair of Software Engineering at ETH Zurich): Language Families

Olivier Barais:

- ECNU Shanghai: Model Driven Enginnering of DSLs
- EJCP 2015: Ecole Jeunes Chercheurs en Programmation

10.1.5. Leadership within the scientific community

Benoit Baudry:

- Steering committee member for the ACM/IEEE MODELS conference

Benoit Combemale:

- Steering committee member for the ACM SLE conference

10.1.6. Scientific expertise

Benoit Baudry:

- Member of the Scientific Advisory Board for the SVV lab, University of Luxembourg.

Arnaud Blouin:

- Member of the advisory board of the FNR project MODELS, Luxembourg.

Jean-Marc Jézéquel:

- Member of the Scientific Committee of the GDR GPL of CNRS.

10.1.7. Research administration

Jean-Marc Jézéquel is Director of IRISA (UMR 6074). He is Administrator of the IRT B-com (representing University of Rennes 1). He is Coordinator of the academic club of the French Cyber-defense Excellence Cluster, and Director of the Rennes Node of EIT Digital.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

The DIVERSE team bears the bulk of the teaching on Software Engineering at the University of Rennes 1 and at INSA Rennes, at the levels M1 (Project Management, Object-Oriented Analysis and Design with UML, Design Patterns, Component Architectures and Frameworks, Validation & Verification, Human-Computer Interaction) and M2 (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, CentraleSupelec Rennes, and ENSAI.

Noël Plouzeau is the manager of the final year of the Master Pro 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.

Mathieu Acher is in charge of teaching services of ISTIC.

The DIVERSE team also receives several Master and summer trainees every year.

10.2.2. Supervision

- HDR: Benoit Combemale: *Towards Language-Oriented Modeling*, 2015
- PhD: Erwan Bousse, *Intégration et combinaison des techniques de V&V dans un contexte d'ingénierie cystème*, thèse, 2012-2015, B. Baudry and B. Combemale
- PhD: Valéria Lelli, *On Testing Interactive Systems*, thèse 2012-2015, B. Baudry and A. Blouin
- PhD: Inti Gonzalez, *Ressources reservation in Pervasive Middleware*, thèse 2012-2015, J. Bourcier, O. Barais
- PhD: Ivan Paez Anaya, *Proactive Adaptation in Pervasive Environment*, thèse 2012-2015, J. Bourcier, N. Plouzeau and J.-M. Jézéquel
- PhD in progress : Sana Ben Nasr, *Modeling variability in regulatory requirements*, thèse 2013-2016, B. Baudry and M. Acher
- PhD in progress : Kwaku Yeboah-Antwi, *Runtime emergence of software diversity*, thèse 2013-2016, B. Baudry and O. Barais
- PhD in progress : Guillaume Bécan, *Reverse Engineering and Evolution of Variability-intensive Software Systems*, thèse 2013-2016, B. Baudry and M. Acher
- PhD in progress : Paul Temple, *Massive Benchmarking of Vision Algorithms Using Synthetic Video Variants*, thèse 2015-2018, J.-M. Jézéquel and M. Acher
- PhD in progress : Quentin Plazar, *Combining Decision Procedures for Constraint Programming and SMT*, thèse 2015-2018, A. Gotlieb, S. Bardin and M. Acher
- PhD in progress : Mohamed Boussaa, *An Architecture for Testing Large-Scale Dynamic Distributed Systems*, thèse 2013-2016, O. Barais, G. Sunye, B. Baudry.
- PhD in progress : Thomas Degueule, *Next Generation of MDE Tooling Support*, thèse 2013-2016, O. Barais and A. Blouin
- PhD in progress : David Mendez Acuna, *Variability in Modeling Languages*, thèse 2013-2016, B. Baudry and B. Combemale
- PhD in progress : Jacky Bourgeois, *Automatic Synchronization of Energy Production and Consumption*, thèse 2012-2015 co-tutelle avec the Open University, J.Bourcier, B. Baudry and G. Kortuem
- PhD in progress : Francisco Acosta, *Automatic Deployment and Reconfigurations in Internet of Things*, thèse 2013-2016 co-encadrement avec l'équipe ACES, J. Bourcier, F. Weis
- PhD in progress : Pierre Laperdrix, *Secretless moving target against browser fingerprinting* , thèse 2014-2017, B. Baudry
- PhD in progress : Johan Pelay, *Langage pour une programmation incrémentale de réseau*, thèse 2014-2017 co-encadrement avec le laboratoir B-COM, O.Barais, F. Guillemin
- PhD in progress : Kévin Corre, *Modélisation de la confiance dans les services sociaux et conversationnels*, thèse 2014-2017 co-encadrement avec l'équipe AtanMod, O. Barais, G. Sunye
- PhD in progress : Marcelino Rodriguez-Cancio, *Automatic computation diversification*, thèse 2015-2018, B. Baudry and B. Combemale
- PhD in progress : Gwendal Le Moulec, *Towards synthesizing families of virtual reality applications*, thèse 2015-2018, with the Inria Hybrid Team, B. Arnaldi, A. Blouin, V. Gouranton

10.2.3. Juries

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

- Dionysios Efstathiou, October 2015, King's College London, Referee
- Aminata Sabané, December 2015, École Polytechnique de Montréal, Referee
- Mehdi Amhed-Nacer, May 2015, University of Nancy, Referee
- Mathieu Foucault, November 2015, University of Bordeaux, Examiner
- Erwan Bousse, December 2015, University of Rennes, Supervisor
- Valeria Lelli, December 2015, INSA Rennes, Supervisor
- Benoit Combemale, December 2015, University of Rennes, member

Benoit Combemale was in the examination committee of the following PhD thesis:

- Paola Vallejo, December 2015, University of Brest, Examiner
- Erwan Bousse, December 2015, University of Rennes, Supervisor

Arnaud Blouin was in the examination committee of the following PhD thesis:

- Valeria Lelli, December 2015, INSA Rennes, Supervisor

Jean-Marc Jézéquel was in the examination committee of the following PhD thesis and HDR:

- Jose Galindo Duarte, March 2015, University of Sevilla, Examiner
- Christopher Henard, May 2015, University of Luxembourg, Examiner
- Ivan Paez Anaya, September 2015, University of Rennes, Supervisor
- Remi Douence (HDR), January 2015, University of Nantes, Examiner
- Philippe Merle (HDR), September 2015, University of Lille, Examiner
- Axel Legay (HDR), November 2015, University of Rennes, President
- Benoit Combemale (HDR), December 2015, University of Rennes, Examiner
- Gerson Sunye (HDR), December 2015, University of Nantes, Examiner
- Jean-Rémy Falleri (HDR), December 2015, University of Bordeaux, Examiner
- Reda Bendraou (HDR), December 2015, University of Paris 6, Examiner

Johann Bourcier was in the examination committee of the following PhD :

- Ivan Paez Anaya, September 2015, University of Rennes, Supervisor
- Inti Gonzalez, December 2015, University of Rennes, Supervisor

Olivier Barais was in the examination committee of the following PhD :

- Inti Gonzalez, December 2015, University of Rennes, Supervisor
- Simon Urli, February 2015, University of Nice, Referee
- Sam Rottenberg, April 2015, Telecom Sud Paris, Referee
- Pierre Samson, November 2015, University of Pau, Referee

10.3. Popularization

Benoit Combemale participated to the "Inria Industry meeting" focused on "Power Transition", as part of the Futur en Seine festival. He presented the results of the collaboration with Obeo and INRA on the use of domain-specific languages for resource management.

Our research about browser fingerprinting have appeared in the MISC magazine (a French, general-audience magazine about technology and cyber-security) [75] and have been showcased at ICT'15 (a large European forum that gathers EU policy makers, industry and academics in the area of ICT) and at IRISA's open house.

<div align="center">

KERDATA Project-Team

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10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. General chair, scientific chair

Gabriel Antoniu: Program Co-Chair of the EIT Digital Future Cloud Symposium (Rennes, October 2015).

10.1.1.2. Member of the organizing committees

Alexandru Costan: Organizer of the IRISA D1 Department Day Seminar.

10.1.2. Scientific events selection

10.1.2.1. Chair of conference program committees

Gabriel Antoniu: Track Chair for the following international conferences: IEEE Cluster 2015 (Data, Storage, and Visualization Track - Chicago, September 2015) and 3PGCIC 2015 (Distributed Algorithms Track - Krakow, November 2015).

Alexandru Costan: Program Co-Chair of the following international workshops: BigDataCloud 2015 held in conjunction with the Euro-Par 2015 conference (Vienna, August 2015) and ScienceCloud 2015 held in conjunction with HPDC 2015 (Portland, June 2015).

10.1.2.2. Member of the conference program committees

Gabriel Antoniu: ACM HPDC 2015, ACM/IEEE CCGrid'2015, ACM/IEEE SC'15, Euro-Par 2015, BigDataCloud 2015 workshop (held in conjunction with the Euro-Par 2015 conference).

Luc Bougé: BigDataCloud 2015, BigData 2015, ICA3PP 2015, CCGRID 2016.

Alexandru Costan: Member of the following Program Committees: IEEE Cluster 2015, CSCS 2015, ARMS-CC 2015, BigDataCloud 2015, ScienceCloud 2015, CSE

Other reviews: IEEE BigData 2015, SC 2015, HPDC 2015, CCGrid 2015, Euro-Par 2015.

Shadi Ibrahim: Member of the following Program Committees: IEEE Cluster 2015, IEEE Cloudcom 2015, ICPADS 2015, IEEE CSE 2015, IEEE FCST 2015, IEEE ICA3PP 2015, IFIP NPC 2015, MEDES 2015, BigDataCloud 2015 workshop (held in conjunction with the Euro-Par 2015 conference), SCRAMBL 2015 workshop (held in conjunction with the CCGrid 2015 conference).

Other reviews: IEEE BigData 2015, SC 2015, HPDC 2015, CCGrid 2015, Euro-Par 2015.

10.1.3. Journal

10.1.3.1. Member of the editorial boards

Alexandru Costan: Soft Computing Journal, Special Issue on Autonomic Computing and Big Data Platforms

10.1.3.2. Reviewer

Shadi Ibrahim: IEEE Transactions on Parallel and Distributed Systems, IEEE Transactions on Services Computing, IEEE Transactions on Cloud Computing, ACM Transactions on Architecture and Code Optimization, ACM Transactions on Internet Technology, Future Generation Computer Systems, IEEE Systems Journal, Cluster Computing.

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

10.1.4. Invited talks

Gabriel Antoniu:

> 3rd JLESC workshop: *To Overlap or Not to Overlap: Optimizing Incremental MapReduce Computations for On-Demand Data Upload*, 3rd workshop of the Joint Laboratory for Extreme Scale Computing, Barcelona, Spain, July 2015.

> Huawei Workshop on New Directions in Algorithms and Software, *Scalable data-intensive processing for science on distributed clouds: A-Brain and Z-CloudFlow*, Paris, March 2015.

> Inria-Mexico workshop: *Scalable data-intensive processing for science on distributed clouds: A-Brain and Z-CloudFlow*, First Inria-Mexico Workshop in Applied Mathematics and Computer ScienceMexico City, June 2015.

> IRISA Data Science Symposium: *Damaris: Jitter-Free I/O Management and In Situ Visualization of HPC Simulations using Dedicated Cores*, Science Data Ecosystem workshop, Rennes, November 2015.

Luc Bougé

> BigDataCloud 2016: *Data computing in distributed, very large-scale clouds: From execution models to programming models*, satellite workshop of the Euro-Par 2015 conference, Vienna, August 2015.

10.1.5. Leadership within the scientific community

> Luc Bougé: Vice-Chair of the Steering Committee of the Euro-Par conference.

> Gabriel Antoniu: Leader for the Big Data, I/O and visualization activity within the JLESC - Joint Inria-Illinois-ANL-BSC-JSC-RIKEN/AICS Laboratory for Extreme-Scale Computing.

> Gabriel Antoniu: Principal Investigator of the Z-CloudFlow Microsoft Research-Inria Project, for which he received an Azure Research Award.

10.1.6. Scientific expertise

> Luc Bougé: Member of the jury for the *Agrégation de mathématiques*, the French national hiring committee to hire high-school mathematics teachers at the national level.

> Gabriel Antoniu: Project evaluator for 12 ANR projects submitted to the ANR 2016 call (Phase 1).

10.1.7. Research administration

> Luc Bougé: Nominated to seat at the CNU (*National University Council*) in the *Informatics* Section (27). His 4-year term has been renewed in November 2015.

> Luc Bougé: Scientific Project Leader for Fundamental Informatics at the ANR - *Agence Nationale de la Recherche* until August 2015, for 40% of his time. It was the end of his 3-year delegation contract.

10.2. Teaching - Supervision - Juries

10.2.1. 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 : Cloud Computing, 15 hours (lectures and lab sessions), M2 level, ENSAI (*École Nationale Supérieure de la Statistique et de l'Analyse de l'Information*), Bruz, France.

> – Master: Distributed Systems, 8 hours (lectures), M2 level, ALMA Master, Distributed Architectures module, University of Nantes, France.

- Master: Scalable Distributed Systems, 5 hours (lectures), M2 level, SDS Module, M2RI Master Program, ENS Rennes, France.

- Master: Scalable Distributed Systems, 12 hours (lectures), M1 level, SDS Module, EIT ICT Labs Master School, France.

- Master (Engineering Degree, 5th year, *Big Data* option), 10 hours (lectures), M2 level, INSA de Lyon, France.

Luc Bougé

- Bachelor: Introduction to programming concepts, 24 hours (lectures), L3 level, Informatics program, ENS Rennes, France.

- Master: Introduction to object-oriented high-performance programming, 24 hours (lectures), M1 level, Mathematics program, ENS Rennes, France.

- Master: Introduction to compilation, 12 hours (exercice classes), M1 level, Informatics program, Univ. Rennes 1, France.

Shadi Ibrahim

- Master (Engineering Degree, 5th year): Big Data, 24 hours (lectures and lab sessions), M2 level, ENSAI (*École Nationale Supérieure de la Statistique et de l'Analyse de l'Information*), Bruz, France.

- Master : Cloud Computing and Hadoop Technologies, 3 hours (lectures), M2 level, ENSAI (*École Nationale Supérieure de la Statistique et de l'Analyse de l'Information*), Bruz, France.

- Master: Distributed Systems (cloud data management), 4 hours (lectures), M2 level, ALMA Master, Distributed Architectures module, University of Nantes, France.

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 and Applications, 36h hours (lectures, lab sessions, project), M1, INSA Rennes.

10.2.2. Supervision

10.2.2.1. PhD in progress

Luis Eduardo Pineda Morales: *Efficient Big Data Management for Geographically Distributed Workflows*, thesis started in January 2014, co-advised by Alexandru Costan and Gabriel Antoniu.

Tien-Dat Phan: *Green Big Data Processing in Large-scale Clouds*, thesis started in October 2014, co-advised by Shadi Ibrahim and Luc Bougé.

Lokman Rahmani: *Big Data Management for Next-Generation High-Performance Computing Systems*, thesis started in October 2013 co-advised by Gabriel Antoniu and Luc Bougé.

Orçun Yildiz: *Energy-Efficient Big Data Management in Petasacle Supercomputers and Beyond*, thesis started in September 2014, co-advised by Shadi Ibrahim and Gabriel Antoniu.

Mohammed-Yacine Taleb: *Energy-impact of data consistency management in Clouds and Beyond*, thesis started in August 2015, co-advised by Shadi Ibrahim and Gabriel Antoniu.

Pierre Matri: *Predictive Models for Big Data*, thesis started in March 2015, co-advised by María Pérez and Gabriel Antoniu.

Ovidiu-Cristian Marcu: *Efficient data transfer and streaming strategies for workflow-based Big Data processing*, thesis started in October 2015, co-advised by Alexandru Costan and Gabriel Antoniu.

10.2.3. Juries

Gabriel Antoniu: Referee for the PhD thesis of Ms. Zhou Chi at the Nanyang Technological University (NTU), Singapore (to be defended in January 2016).

Gabriel Antoniu: Jury member of the PhD defense of Ms. Safae Dahmani at the University Bretagne Sud (December 14, 2015).

Shadi Ibrahim: Jury member of the PhD defense of Ms. Karine Pires at the University Pierre et Marie Curie, Paris (March 31, 2015).

10.2.4. Miscellaneous

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

Shadi Ibrahim: Project evaluator in the STIC-AMSUD Program 2015.

Shadi Ibrahim: Leader of the BigStorage project recruitment task force.

Gabriel Antoniu: Invited to give a tutorial on *Big Data Technologies* at the PUF Summer School co-organized with the 3rd JLESC workshop in Barcelona (July 2015).

Shadi Ibrahim: Invited to give a 2 days tutorial on *Hadoop* at IT4Innovations, Technical University Ostrava, Czech Republic (December 2015).

Alexandru Costan: In charge of communication at the Computer Science Department of INSA Rennes.

Alexandru Costan: In charge of the organization of the IRISA D1 Department Seminar.

10.3. Popularization

Luc Bougé:

> Collège international, Valbonne.   Invited presentation to the students of the preparatory classes on *Doing research in computer science* (January 2015).
>
> Lycée Chateaubriand, Rennes.   Invited presentation to the students of the preparatory classes on *Science of numerics* (March 2015).
>
> IRISA Conf Lunch Program.   Invited presentation about *Surviving the Data Deluge* (October 2015).
>
> Master Program, Rennes.   Invited presentation to the M2 students about *Informatics as a scientific activity: Toward a responsible research* (December 2015).
>
> IRISA Open House Days, Rennes.   Invited presentation about *Wikipedia back stage*, and management of an open booth to let visitors improve their skills about searching Wikipedia (December 2015).

Alexandru Costan:

> CumuloNumBio'15, Aussois.   Invited presentation at the *Summer School of BioInformatics* about *Big Data Management on Clouds* (June 2015).
>
> IRISA, Rennes.   Invited presentation at the *Conf'Lunch* about *Clouds and MapReduce Programming* (October 2015).
>
> EIT Digital, Rennes.   Invited presentation at the Future Cloud Symposium about *Enhancing video gaming user experience with Big Data analytics based on Apache Flink - a use case* (October 2015).

Gabriel Antoniu:

> EIT Digital.   Invited presentation at the Future Cloud Symposium on *Scalable data-intensive processing for science on distributed clouds* (October 2015).

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

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. General chair, scientific chair

- Christine Morin and Deb Agarwal were co-chairs of the Science Data Ecosystem workshop, held in the framework of the Data Science Symposium organized by IRISA for the 40th anniversary celebration (November 26th, 2015, Rennes, France)
- Louis Rilling was also co-organizer of the SEC2 2015 workshop, co-located with Compas 2015.
- Anne-Cécile Orgerie was co-chair of the ExtremeGreen workshop, in conjunction with CCGrid 2015 (Shenzhen, China, May 2015).

10.1.1.2. Member of the organizing committees

- Martin Quinson was the main organizer of the 2015 SimGrid's User Days (Lyon, France, 8-12 June 2015), gathering the community of users.
- Christine Morin was a member of the scientific committee for the Inria Scientific Days held in Nancy in June 2015.

10.1.2. Scientific events selection

10.1.2.1. Chair of conference program committees

- Guillaume Pierre was program committee co-chair of the EIT Digital Symposium on the Future of Cloud Computing (Rennes, France, 19-20 October 2015).

10.1.2.2. Member of the conference program committees

- Christine Morin was a member of the program committee of the ACM/IEEE CCGrid 2015 conference.
- Christine Morin was a member of the program committee of the first IEEE Conference on Network Function Virtualization and Software Defined Networks (NFV-SDN 2015) conference.
- Christine Morin was a member of the program committee of the 23rd Euromicro International Conference on Parallel, Distributed, and Network-Based Processing (PDP 2015).
- Christine Morin was a member of the technical posters committee of the 2015 ACM/IEEE International Conference on High Performance Computing, Networking, Storage and Analysis (SC15).
- Christine Morin was a member of the program committee of the Compas 2015 conference.
- Christine Morin was a member of the program committee of the 6th International workshop on Scientific Cloud Computing (ScienceCloud 2015) co-located with the ACM HPDC 2015 conference.
- Christine Morin was a member of the program committee of the 8th International workshop on Virtualization Technologies in Distributed Computing (VTDC-2015) co-located with the ACM HPDC 2015 conference.
- Christine Morin was a member of the program committee of the 10th international workshop on Virtualization in High-Performance Cloud Computing (VHPC 2015) co-located with the EuroPar 2015 conference.
- Christine Morin was a member of the program committee of the Resilience 2015 workshop co-located with the EuroPar 2015 conference.
- Anne-Cécile Orgerie was a member of the program committee of the CCGrid 2015 conference.

- Anne-Cécile Orgerie was a member of the program committee of the CloudNet 2015 conference.
- Nikolaos Parlavantzas was a member of the program committee of the CLOSER 2015 conference.
- Guillaume Pierre was a member of the program committee of the DADS track of the SAC 2015 conference.
- Guillaume Pierre was a member of the program committee of the IC2E 2015 conference.
- Guillaume Pierre was a member of the program committee of the AINA 2015 conference.
- Guillaume Pierre was a member of the program committee of the CSCS20-2015 conference.
- Guillaume Pierre was a member of the program committee of the CloudDP 2015 workshop.
- Guillaume Pierre was a member of the program committee of the VTDC 2015 workshop.
- Guillaume Pierre was a member of the program committee of the HotWeb 2015 workshop.
- Martin Quinson was a member of the program committee of the ACM SIGSIM Principles of Advanced Discrete Simulation (PADS 2015) conference.
- Martin Quinson was a member of the program committee of the High Performance Computing & Simulation (HPCS 2015) conference.
- Martin Quinson was a member of the program committee of the SimulTech 2015 conference.
- Martin Quinson was a member of the program committee of the Parallel and Distributed Computing Education for Undergraduate Students (Euro-EduPar 2015) workshop.
- Louis Rilling was program committee member of the DIHC 2015 workshop co-located with EuroPar 2015.
- Cédric Tedeschi was a member of the program committee of the ICWS 2015 conference.
- Cédric Tedeschi was a member of the program committee of the ICCS 2015 conference.
- Cédric Tedeschi was a member of the program committee of the CloSer 2015 conference.

10.1.3. Journal

10.1.3.1. Member of the editorial boards

Christine Morin has been appointed associate editor in the IEEE's Transactions on Parallel and Distributed Systems' Editorial Board since June 2015.

- Martin Quinson is a member since 2013 of the editorial board of the Interstices journal (edited by Inria in collaboration), aiming at increasing the scientific outreach of informatics.

10.1.4. Invited talks

- *Breaking the cloud : Energy-Efficient & Network-aware Distributed Cloud Infrastructure*. Ismael Cuadrado-Cordero, talk at GreenDays. Toulouse, France, 16-17 March 2015.
- *Resource allocation in a Cloud partially powered by renewable energy sources*. Yunbo Li, talk at GreenDays. Toulouse, France, 16-17 March 2015.
- *Breaking the cloud: Energy-efficient cloud PaaS*. Ismael Cuadrado-Cordero, poster presentation at the EIT Digital Symposium on the Future of Cloud Computing. Rennes, France, 19-20 October 2015.
- *Breaking the cloud: Energy-efficient cloud PaaS*. Ismael Cuadrado-Cordero, poster presentation at Green ICT day at IRISA. Rennes, France, 30 November 2015.
- *Self Adaptation for Security Monitoring in IaaS Clouds*. Anna Giannakou, 3 minute talk at the D1 Department Day. Rennes, France, 26 May 2015.
- *Self Adaptation in Security Monitoring for IaaS clouds*. Anna Giannakou, 5 minute talk at the SEC2-Premier atelier sur la Securite dans les Clouds. Lille, France, 30 June 2015.
- *Self Adaptable Security Monitoring in IaaS Clouds*. Anna Giannakou, poster presentation at the EIT Digital Symposium on the Future of Cloud Computing. Rennes, France, 19-20 October 2015

- *Self Adaptable Security Monitoring in IaaS Clouds.* Anna Giannakou, poster presentation at Club recherche du Pôle d'Excellence Cyber. Rennes, France 8 December 2015.

- *Private-by-design: towards Personal Local Clouds.* Christine Morin, invited presentation at the Dagstuhl seminar on the Distributed Cloud Computing (DCC), Dagstuhl, Germany, February 10, 2015.

- *Autonomic and Energy-Efficient Management of Large-Scale Virtualized Data Centers* and *Towards High Performance Computing in Clouds.* Christine Morin, invited tutorials at the *Seconda Università di Napoli*, Napoli, Italy, April 19-20 2015.

- *ConPaaS Generic Service for Automated Application Deployment in Distributed Clouds.* Christine Morin, presentation at the Inria Industry Meeting on Smart City & Mobility Innovations: Towards environmental and social sustainability, San Francisco, USA, May 11, 2015.

- *Security of Information Systems hosted in Clouds: SLA Definition and Enforcement in a Dynamic Environment.* Christine Morin, invited presentation at the SEC 2 workshop on security in clouds, co-located with Compas 2015, Lille, France, June 30, 2015.

- *Debate on Ecological Transitions.* Christine Morin, panelist, Nantes, France, September 24, 2015.

- *Energy Efficiency & Energy Saving in Clouds.* Christine Morin, presentation at the IRISA Green IT meeting, Rennes, France, November 30, 2015.

- *Self-adaptation for Security Monitoring in IaaS clouds.* Anna Giannakou, Christine Morin, and Louis Rilling, invited poster at the Cyber Pole of Excellence's research club meeting, Rennes, France, November 30, 2015.

- Anne-Cécile Orgerie gave a keynote entitled "Energy efficiency in Cloud computing infrastructures", at ExtremeGreen workshop in conjunction with CCGrid 2015, Shenzhen, China, May 4, 2015.

- Anne-Cécile Orgerie gave a talk entitled "Le Green IT à l'IRISA", Matinale Rennes Atalante on Smart Grids, Rennes, July 8, 2015.

- Anne-Cécile Orgerie gave a talk entitled "Green computing" and participated to a debate with Françoise Berthoud (CNRS), at the Forum du CNRS, Paris, December 12, 2015.

- *HARNESS: bringing real hardware heterogeneity to the cloud.* Guillaume Pierre, invited presentation at the 5th International Workshop on Cloud Data and Platforms. Co-located with EuroSys 2015 in Bordeaux, France. April 21, 2015.

- *HARNESS: bringing real hardware heterogeneity to the cloud.* Guillaume Pierre, invited presentation at the 8th International Workshop on Virtualization Technologies in Distributed Computing. Co-located with HPDC 2015, Portland, OR, USA, June 15th 2015.

- *Accelerating clouds with FPGA virtualization.* Ancuta Iordache, poster presentation at the EIT Digital Symposium on the Future of Cloud Computing. Rennes, France, 19-20 October 2015.

- *Accelerating clouds with FPGA virtualization.* Ancuta Iordache, presentation at the 5th Workshop on Storage and Data Analytics. Cesson-Sévigné, France, 19 November 2015.

- *Cloud application performance modeling in ConPaaS.* Guillaume Pierre, invited presentation at the Paris Open Source Summit. Paris, France, 18-19 November 2015.

- *An Edge Cloud Architecture for Latency-Critical Interactive Applications.* Teodor Crivat, poster presentation + demo at the EIT Digital Symposium on the future of Cloud computing. Rennes, France, 19-20 October 2015.

- *An Edge Cloud Architecture for Latency-Critical Interactive Applications.* Teodor Crivat, poster presentation + demo at the EIT Digital results day. Helsinki, Finland, December 1st 2015.

10.1.5. Scientific expertise

- Christine Morin acted as a reviewer for the University College Cork (UCC) Research Quality Review (April 2015). She was one of the scientific experts to examine a promotion as Senior University Lecturer in Computing Science and Engineering at the Faculty of Science and Technology of Umeå University (August 2015). She was a member of the ModaClouds European project Advisory Board. She is a member of the scientific council of ENS Cachan. She was a member of the admission jury for the 2015 Inria senior researcher competition.

  She was a member of the selection committees for a Professor position in Computer Science at ESIR engineering school at the University of Rennes 1 and for a Professor position in Computer Science at ENS Rennes.

- Anne-Cécile Orgerie participated to the evaluation of three Doctoral schools in January 2015 as a young researcher expert for HCERES.

- Guillaume Pierre participated in the evaluation panels of ongoing national (ANR) projects LISP-LAB, MOEBUS, PROFIL, ABCD, and DataTweet. Paris, France, 27-27 October 2015.

- Nikolaos Parlavantzas acted as an expert reviewer for ANRT CIFRE, PHC Orchid, and FFCR projects.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Christine Morin is responsible for the Internet of Services: Programming Models & Things and Clouds (ISI) teaching unit of the Master in research in Computer Science of the University of Rennes 1 and of the EIT Digital Master School at the University of Rennes 1.

Christine Morin:

- Master 2: Internet of Services: Programming Models & Things and Clouds (ISI), 12 hours ETD, EIT Digital Master School, University of Rennes 1, France.

Anne-Cécile Orgerie:

- Licence 3: ARCSYS2 - architecture et systèmes 2 (60 hours ETD at ENS Rennes)
- Master 2: Green ICT - 3 hours of invited lecture at Telecom SudParis

Nikolaos Parlavantzas (at INSA Rennes):

- 4th year: Operating Systems (40 hours ETD)
- 4th year: Big Data and Applications (25 hours ETD)
- 4th year: Networking and SOA (12 hours ETD)
- 4th year: Advanced Operating Systems (12 hours ETD)
- 4th year: Parallel programming (12 hours ETD)
- 4th year: Software Development Project (30 hours ETD)
- 5th year: Component-based Software Engineering (16 hours ETD)

Jean-Louis Pazat is responsible for the following graduate teaching Modules: Advanced operating Systems, Parallel Computing, Clouds, Networking and SOA.

Jean-Louis Pazat (at INSA Rennes):

- 4th year: Advanced Operating Systems and Clouds (32 hours ETD)
- 4th year: Parallel Programming (48 hours ETD)
- 4th year: Networking and SOA (48 hours ETD)
- 4th year: Software development project (60 hours ETD)

Guillaume Pierre (at the University of Rennes 1):

- License 3: Systèmes (25 hours ETD)
- License 3: Organisation et utilisation des systèmes d'exploitation 2 (67 hours ETC)
- Master 2: Techniques de développement logiciel dans le Cloud (39 hours ETD)
- Master 1: Service Technologies (24 hours ETD)
- Master 2: Approche algorithmique des applications et systèmes répartis (32 hours ETD)

Martin Quinson:

- Licence 3: Programming and Software Engineering (30 hours ETD at ENS Rennes)
- Master 1: Concurrency in Systems and Networks (20 hours ETD at University of Rennes 1)
- Master 2: Pedagogy and Scientific Mediation for Computer Science (30 hours EDT at ENS Rennes)

Cédric Tedeschi (at the University of Rennes 1):

- Master 1: Concurrency in Systems and Networks (70 hours ETD)
- Master 1: Parallel Programming (36h hours ETD)
- Master 1: Service Techonologies (30h hours ETD)
- Master 2 (research): Internet of Services (6 hours ETD)

  E-learning

  Christine Morin contributed to a MOOC entitled "*Villes intelligentes : défis technologiques et sociaux*" that will be available on the FUN platform in January 2016.

  Cédric Tedeschi is responsible for the Operating Systems class within the eMiage online teaching program.

  Martin Quinson extended the Programmer's Learning Machine (PLM) with another lesson on recursive programming. The 12 new exercises revisit the old problem of Hanoï towers with several less common variants.

10.2.2. Supervision

PhD in progress : Ancuta Iordache, Multi-resource optimization for application hosting in heterogeneous clouds, started in February 2013, Guillaume Pierre.

PhD in progress: Yunbo Li, Resource allocation in a Cloud partially powered by renewable energy sources, started in October 2013, Anne-Cécile Orgerie, Jean-Marc Menaud (Ascola).

PhD in progress: Ismael Cuadrado Cordero, Energy-efficient and network-aware resource allocation in Cloud infrastructures, started in October 2013, Christine Morin, Anne-Cécile Orgerie.

PhD in progress: Édouard Outin, A multi-objective adaptation system for the management of a Distributed Cloud, started in October 2013, Olivier Barais (Triskell), Yvon Jégou, Jean-Louis Pazat.

PhD in progress: Sabbir Hasan, SLA Driven Cloud autoscaling for optimizing energy footprint, started in December 2013, Thomas Ledoux (Ascola), Jean-Louis Pazat.

PhD in progress: Anna Giannakou, A Self-adaptable Security Supervision System for Clouds, started in March 2014, Christine Morin, Jean-Louis Pazat, Louis Rilling.

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, Jean-Louis Pazat.

PhD in progress: David Guyon, Supporting energy-awareness for cloud users, started in September 2015, Anne-Cécile Orgerie, Christine Morin.

PhD in progress: Amir Teshome Wonjiga, Definition and Enforcement of Service Level Agreements for Cloud Security Supervision, started in October 2015, Christine Morin, Louis Rilling.

PhD in progress: Issam Rais, Multi criteria scheduling for large scale High Performance Computing environments, started in October 2015, Anne-Cécile Orgerie, Anne Benoit (ROMA), Laurent Lefèvre (Avalon).

PhD in progress: Palakiyem Wallah, Best-Effort Execution of Service Workflows, started in October 2013, Ayité Ajavon (University of Lomé, Togo), Jean-Louis Pazat, Cédric Tedeschi.

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

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).

10.2.3. Juries

- Christine Morin was a member (chair) of the PhD defense committee of Sylvain Gault, ENS Lyon (March 23rd 2015).
- Christine Morin was a reviewer of the HdR committee of Gilles Fedak, ENS Lyon (May 28th, 2015).
- Christine Morin was a reviewer of the HdR committee of Vania Marangozova-Martin, Grenoble University (June 12th, 2015).
- Christine Morin was a reviewer of the PhD defense committee of Tatiana Martsinkevich, Paris-Sud University (September 22nd 2015).
- Christine Morin was a member (chair) of the PhD defense committee of Arnaud Lefray, ENS Lyon (October 3rd 2015).
- Christine Morin was a reviewer of the HdR committee of Georges DaCosta, Toulouse University (November 12th, 2015).
- Christine Morin was a reviewer of the PhD defense committee of Aline Bousquet, Orléans University (December 2nd 2015).
- Christine Morin was a reviewer of the PhD defense committee of Damien Riquet, Lille 1 University (December 3rd 2015).
- Guillaume Pierre was a reviewer in the PhD committee of Mihai Dobrescu, EPFL, 3 July 2015.
- Guillaume Pierre was a reviewer in the PhD committee of Kaveh Razavi, Vrije Universiteit Amsterdam, 5 November 2015.
- Guillaume Pierre was a reviewer in the PhD committee of Diego Didona, Lisbon University, 20 November 2015.
- Martin Quinson was a member in the PhD committee of Luka Stanisic, Grenoble University, 30 October 2015.
- Louis Rilling was a member of the PhD defense committee of Pierrick Buret, Université de Limoges (December 1st 2015).
- Louis Rilling was a member of the PhD defense committee of Anis Bkakria, Télécom Bretagne (December 17th 2015).
- Cédric Tedeschi was a member in the PhD committee of Maurice Faye, ENS de Lyon, 10 November 2015.

10.3. Popularization

- Martin Quinson organized a 2-days workshop for secondary maths teachers on how algorithms could be used to reinforce the pupils abilities to verbalize, set out arguments and conduct rigorous demonstrations (Nancy, March 2-3 2015). This workshop was co-organized by the IREM (Institut de Recherche en Enseignement des Mathématiques) of Nancy.
- Martin Quinson gave a talk entitled "Computational Science: the real societal impact of computers", during the workshop presented in previous item (Nancy, March 3th 2015).
- Martin Quinson co-organized a one day workshop for about 100 secondary computer science teachers. This event spreads the best practices to teach our topic (Nancy, March 12th 2015).

- Martin Quinson was a scientific expert in an experiment in which we explored how Scratch can be used to teach Computer Science in after school activities every week for the whole week.

- Martin Quinson is a scientific expert in a teaching manual of Computer Science for primary schools, currently authored within the «La main à la pâte» research network. This manual will be released in 2016.

- Martin Quinson organized a collaborative workshop on Wikipedia gathering students and researchers to improve the French speaking pages on Computer Science in the free encyclopedia (Rennes, December 10, 2015).

10.4. Miscellaneous

Christine Morin   is a member of the Project-Team Committee of INRIA RENNES – BRETAGNE AT-LANTIQUE (Comité des projets), a member of the board of the Project-Team Committee of IN-RIA RENNES – BRETAGNE ATLANTIQUE (since November 2015), *Référent Chercheur* for INRIA RENNES – BRETAGNE ATLANTIQUE. She was a member of the Irisa/Inria "Commission Personnel" being in charge of post-docs and "*délégations*" (until October 2015). She was corresponding for North America relationships in the Inria Direction of European and International Relationships (until November 2015).

Anne-Cécile Orgerie   is in charge (chargée de mission) of the "Green IT" transversal axis of IRISA.

Nikolaos Parlavantzas   is the local coordinator for the international exchange of students at the computer science department of Insa.

Guillaume Pierre   is the local coordinator of the EIT Digital master school in Rennes, and the local coordinator of the Erasmus exchange program between Université de Rennes 1 and Politehnica University Bucharest.

Jean-Louis Pazat   is the leader of the "Large Scale Systems" department of IRISA. He is the leader of the computer Science Lab at INSA (IRISA-INSA). He is the coordinator for reviews of international bilateral cooperation projects at the Ministry of Research and Higher Education in the STIC domain.

Thierry Priol   is the director of the Inria European and International Partnership department.

Cédric Tedeschi   is a member of the administration council of the EECS departement of the University of Rennes 1.

Yvon Jégou   is a member of the Grid 5000 executive committee. He is a member of the *Comité de Sélection et de Validation (CSV)* of the *Images & Réseaux* cluster.

TACOMA Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific events organisation

8.1.1.1. Member of the conference program committees
- PC member for Ehpwas 2015: 3rd IEEE Int. Workshop on E-Health , 2015, F. Weis

8.1.2. Invited talks
- "L'habitat adaptatif: un pas à franchir vers la ville durable", speech at BATI-MAT/Le Mondial du Bâtiment on 5 November 2015. http://visiteur.batimat.com/?IdNode=6564&CurrentNode=11261&Lang=FR&Zoom=cb627eb94499111bd0da1a764a20bc34&KM_Session=b6bc7a1

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

L2/L3: network computing (lectures, tutorials, labs), 250 hours, F. Weis, University Rennes 1

Master : Wireless LANs, F. Weis, 20 hours, M2, Telecom Bretagne

Master: Mobile and Pervasive Computing , 12 hours, P. Couderc, M2, University of Rennes 1

8.2.2. Supervision

PhD in progress: Francisco Javier Acosta Padilla, Auto-adaptation for IoT, 31/01/13, Frédéric Weis and Johann Bourcier

PhD in progress: Adrien Capaine, Vers une plate-forme de LED connectées comme vecteur de services contextuels dans le cadre des bâtiments intelligents, 01/05/15, Frédéric Weis and Yoann Maurel

PhD in progress: Zaineb Lioune, Une Architecture pour des Services e-Santé évolutifs dans le cadre des Maisons Intelligentes, 01/09/14, Frédéric Weis, Tayeb Lemlouna and Philippe Roose

8.2.3. Juries

Frédéric Weis was in the following PhD examination committees:

Abdulkader BENCHI, Middleware Systems for Opportunistic Computing in Challenged Wireless Networks, University Bretagne Sud (PhD referee)

Osama ABU OUN, Conception d'une plate-forme multi-échelle hybride pour évaluer les performances des systèmes orientés Internet des Objets, University Franche-Comté (PhD referee)

8.2.4. Internship

Master 2 Internship, 6 months: "Enhancing a Web Administration GUI for Smart Home devices", Charles Ferron

Master 1 Internship, 4 months: "Synchronization between connected LEDs", Youness Aghazzaf

8.3. Popularization

8.3.1. Hack'Archi

Organized as part of the "Architecture de la Transformation" call for proposals, the Hack'Archi was an open workshop held in Paris-Belleville school of architecture (ENSA) on 4 and 5 December 2015. About 90 students in disciplines as diverse as architecture, sociology, urbanism and engineering gathered for this 24-hours "architectural hackathon'". Students were organized in small teams of 5 or 6 members to work on enriching the preselected projects, proposed by the social landlords.

During the Hack'Archi, Michele Dominici was the representative of the project led by NEOTOA (a french social landlord) and helped 6 students in architecture, sociology, urbanism and engineering proposing new ideas about the on-demand room. We had in charge the leadership and coordination of the students. Our team was awarded the first prize of the Hack'Archi [0].

8.3.2. *Miscellaneous*

- Atelier de l'Innovation, Fondation Rennes 1. https://fondation.univ-rennes1.fr/actualite/neotoa-nouveau-partenaire-de-la-fondation-0.

- "Un habitat très prospectif | Espace des sciences". Date accessed: 16 December 2015. http://www.espace-sciences.org/sciences-ouest/335/dossier/un-habitat-tres-prospectif.

- Pitch at "Rencontres Inria - Industrie and Meito", 21 May 2015. http://videos.rennes.inria.fr/InriaMeito2015/index-pitchInriaMEITO2015.html

- Fondation de l'Université de Rennes 1 - Chaire Habitat Intelligent et Innovation. Date accessed: 16 December 2015. http://www.legrand.fr/formation/fondation-universite-rennes1-chaire-habitat-intelligent-innovation_5746.

- Live video interview at Festival des Sciences, "Samedi en direct du plateau TV du Village des sciences'". https://www.youtube.com/watch?v=MDkKd4Pl5vQ&feature=youtu.be&t=4541.

- Website of the chair "Habitat Intelligent et Innovation". On-line since October 2015. https://fondation.univ-rennes1.fr/la-chaire-habitat-intelligent-et-innovation.

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[0]Hack'Archi : retour sur 24h d'innovations - Lab CDC. Date accessed: 16 December 2015. http://labcdc.caissedesdepots.fr/hackarchi-etudiants-et-professionnels-autour-dun-meme-defi/

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

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. General chair, scientific chair

Local chairs of PFIA 2015 in Rennes (T. Guyet, R. Quiniou).

Organization chair (T. Guyet) and program committee members (T. Guyet, R. Quiniou) of GAST workshop at EGC 2015 and at EGC 2016.

10.1.1.2. Member of the organizing committees

Organizer of the workshop "Data mining in industry: case study in embedded systems" at the IRISA Data Science fair (A. Termier).

10.1.2. Scientific events selection

10.1.2.1. Member of the conference program committees

Program committee members of EGC 2015 and 2016 (R. Quiniou, A. Termier).

Program committee member of IJCAI 2015 and 2016 (T. Guyet).

Program committee member of KR 2016 (T. Guyet).

Program committee member of DSAA 2015 (A. Termier)

Program committee member of ICDM 2015 (A. Termier)

Program committee member of ECML/PKDD 2015 (A. Termier)

Program committee member of KDD 2016 (A. Termier)

10.1.3. Journal

10.1.3.1. Member of the editorial boards

Members of the editorial board of RIA (Revue d'Intelligence Artificielle) (T. Guyet).

10.1.3.2. Reviewer - Reviewing activities

Journal of Biomedical Informatics (T. Guyet).

ACM Computing Surveys (T. Guyet).

Data Mining and Knowledge Discovery (A. Termier)

The Very Large DataBases journal (A. Termier)

10.1.4. Invited talks

"Intelligence articielle et Fouille de données: questions ouvertes et perspectives pour les thématiques des JFPDA", JFPDA conference, july 2015: T. Guyet.

"Pattern mining with ASP", LIFO, Orléans, october 2015: T. Guyet

"Intelligence articielle et Fouille de données", I-Cube, Strasbourg, november 2015: T. Guyet

"Pattern mining for execution traces: a report", GREY, Caen, February 2015: A. Termier

10.1.5. Leadership within the scientific community

Representative of Inria for the "e-Agriculture" program, which goal is to organize further governmental actions to develop numerical agriculture: A. Termier

Co-representative of Inria, with E. Prados, in the Transition[2] action undertaken with the FING: A. Termier

Member of the AFIA board, treasurer (since october 2011): T. Guyet.

10.1.6. Scientific expertise

Evaluation of a project proposal for the University of Padova: A. Termier

Evaluation of a CIFRE PhD proposal for the ANRT: A. Termier

Evaluation of a project proposal for the ANR: R. Quiniou

10.1.7. Research administration

Member of INRA CEI (Engineers Evaluation Committee): T. Guyet.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Many members of the EPI Dream are also faculty members and are actively involved in computer science teaching programs in ISTIC, INSA and Agrocampus-Ouest. Besides these usual teachings Dream is involved in the following programs:

Master: Module DSS: Apprentissage sur des données séquentielles symboliques, 10 h, M2, Istic University of Rennes 1 (R. Quiniou).

Master: C++ Programming, M1, ENSAI , Rennes (T. Guyet),

Master: Géoinformation, M2, Agrocampus Ouest Rennes (L. Bonneau, T. Guyet, C. Largouët)

10.2.2. Supervision

PhD: Serge Vladimir Emteu Tchagou, "Stream mining techniques for online monitoring of MP-SoC applications", december 15th 2015, co-supervisors Alexandre Termier, René Quiniou, Miguel Santana and Jean-François Méhaut

PhD in progress: Clément Gautrais, "Mining massive data from client purchases", october 1st 2015, Alexandre Termier, Peggy Cellier, Thomas Guyet and René Quiniou

PhD in progress: Yann Dauxais, "Query-language for care-pathway mining and analysis", february 1st 2015, David Gross-Amblard, Thomas Guyet, André Happe

10.2.3. Juries

Committee member of Serge Vladimir Emteu Tchagou Phd defense (Université de Grenoble Alpes): R. Quiniou, A. Termier.

Committee member of Ying Xiao Phd defense (Université de Lorraine): C. Largouët

Thesis advisory committee member of Benoit Bellot (INRA/IGEPP): T. Guyet.

Comittee member of Haykel Boukadida Phd defense (Université de Rennes 1): A. Termier

Comittee member of Elisa Fromont HDR defense (Université Jean Monet, St Etienne): A. Termier

10.3. Popularization

M.-O. Cordier is editorial board member of Interstices webzine.

HYBRID Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. General chair, scientific chair

- Bruno Arnaldi was Chair of "Journées de l'AFRV" 2015, Bordeaux, France.

10.1.1.2. Member of the organizing committees

- Bruno Arnaldi was Supporters Chair of IEEE Virtual Reality 2015.
- Ferran Arguelaguet was Research Demos Chair of IEEE Virtual Reality 2015.
- Florian Nouviale was Exhibit Chair of IEEE Virtual Reality 2015.
- Maud Marchal was Research Demos Chair of IEEE Virtual Reality 2015.

10.1.2. Scientific events selection

10.1.2.1. Chair of the conference program committees

- Anatole Lécuyer was Program Chair of IEEE Virtual Reality 2015.

10.1.2.2. Member of the conference program committees

- Bruno Arnaldi was Member of the conference program committee of IEEE Virtual Reality 2015 and Motion in Game 2015.
- Ferran Arguelaguet was Member of the conference program committee of IEEE Virtual Reality 2015, IEEE Symposium on 3D User Interfaces 2015, ACM Virtual Reality Software and Technology 2015, and ACM Symposium on Spatial User Interfaces 2015.
- Maud Marchal was Member of the conference program committee of IEEE Symposium on 3D User Interfaces 2015, ACM Symposium on Virtual Reality Software and Technology 2015.
- Valérie Gouranton was Member of the program committee of 3DCVE Workshop 2015.

10.1.2.3. Reviewer

- Bruno Arnaldi was Reviewer for Motion in Game 2015.
- Ferran Arguelaguet was Reviewer for ACM CHI 2015.
- Maud Marchal was Reviewer for IEEE Virtual Reality 2015, IEEE Symposium on 3D User Interfaces 2015, Worldhaptics 2015, ACM VRST 2015, ACM CHI 2015, ACM MIG 2015, IHM 2015.
- Valérie Gouranton was Reviewer for IEEE Virtual Reality 2015.

10.1.3. Journal

10.1.3.1. Member of the editorial boards

- Anatole Lécuyer is Associate Editor of Frontiers in Virtual Environments, and Presence:Teleoperators and Virtual Environments.
- Ferran Arguelaguet is Review Editor of Frontiers in Virtual Environments.
- Maud Marchal is Associate Editor of Computer Graphics Forum, Review Editor of Frontiers in Virtual Environments, and Member of the Editorial Board of Revue Francophone d'Informatique Graphique.

10.1.3.2. Reviewer - Reviewing activities

- Ferran Arguelaguet was Reviewer for IEEE Transactions on Visualization and Computer Graphics.
- Maud Marchal was Reviewer for IEEE Transactions on Visualization and Computer Graphics, IEEE Transactions on Haptics, IEEE Transactions on Automation Science and Engineering, SMC Magazine, Presence, Medical Image Analysis.
- Valérie Gouranton was Reviewer for Revue d'Intelligence Artificielle.

10.1.4. Invited talks

- Maud Marchal was invited at Journées Jeunes Chercheurs de l'Association Française en Informatique Graphique 2015.

10.1.5. Leadership within the scientific community

- Bruno Arnaldi is Vice-President of AFRV (French Association for Virtual Reality).
- Valérie Gouranton is Member of Executive Committee of AFRV.

10.1.6. Scientific expertise

- Valérie Gouranton was Expert for French ANR (Agence Nationale de la Recherche).

10.1.7. Research administration

- Bruno Arnaldi is Deputy Director of IRISA and Vice-President of Scientific Committee of INSA de Rennes
- Maud Marchal is Co-Head of MRI Master Research in Computer Science since August 2015.
- Valérie Gouranton was Co-Head of MRI Master Research in Computer Science until August 2015.

10.2. Teaching - Supervision - Juries

Anatole Lécuyer:

Master MNRV: "Haptic Interaction", 9h, M2, ENSAM, Laval, FR

Ecole Centrale de Nantes : "Haptic Interaction and Brain-Computer Interfaces", 4,5h, M1-M2, Ecole Centrale de Nantes, FR

Master SIBM: "Haptic and Brain-Computer Interfaces", 4,5h, M2, University of Rennes 1, FR

Bruno Arnaldi:

Master INSA Rennes: "VAR: Virtual and Augmented Reality", 12h, M2, INSA Rennes, FR

Master INSA Rennes: "Virtual Reality", 6h, M2, INSA Rennes, FR

Master INSA Rennes: Projects on "Virtual Reality", 20h, M1, INSA Rennes, FR

Ferran Argelaguet:

Master STS Informatique MITIC: "Techniques d'Interaction Avancées", 26h, M2, ISTIC, University of Rennes 1, FR

Maud Marchal:

Master INSA Rennes: "Modeling and Engineering for Biology and Health Applications", 48h, M2 and responsible of this lecture, INSA Rennes, FR

Master SIBM: "Biomedical simulation", 3h, M2, University of Rennes 1, FR

Valérie Gouranton:

Licence: "Introduction to Virtual Reality", 12h, L2 and responsible of this lecture, INSA Rennes, FR

Licence: Project on "Virtual Reality", 16h, L3 and responsible of this lecture, INSA Rennes, FR

Master INSA Rennes: "Virtual Reality", 16h, M2, INSA Rennes, FR

Master INSA Rennes: Projects on "Virtual Reality", 30h, M1, INSA Rennes, FR

10.2.1. Supervision

PhD : Merwan Achibet, "Contributions to the Design of Novel Hand-Based Interaction Techniques for Virtual Environments", INSA Rennes, December 14th, Supervised by M. Marchal and A. Lécuyer

PhD : Jonathan Mercier, "Contribution to the Study of the Use of Brain-Computer Interfaces in Virtual and Augmented Reality", INSA Rennes, October 12th 2015, Supervised by M. Marchal and A. Lécuyer

PhD in progress: Jean-Baptiste Barreau, "Virtual Reality and Archaelogy", Started in February 2014, Supervised by V. Gouranton and B. Arnaldi

PhD in progress: Benoit Le Gouis, "Multi-scale physical simulation", Started in October 2014, Supervised by B. Arnaldi, M. Marchal and A. Lécuyer

PhD in progress: Lorraine Perronet, "Neurofeedback applications based on EEG, fMRI and VR", Started in January 2014, Supervised by C. Barillot and A. Lécuyer

PhD in progress: Jérémy Lacoche, "Plasticity for user interfaces in mixed reality", Started in September 2013 at b<>com Research Institute, Supervised by T. Duval, B. Arnaldi, É. Maisel and J. Royan

PhD in progress: Morgan Le Chénéchal, "Activity and perception for distant collaboration in virtual environments", Started in September 2013 at b<>com Research Institute, Supervised by B. Arnaldi, T. Duval, V. Gouranton and J. Royan

PhD in progress: Lucas Royer, "Visualization tools for needle insertion in interventional radiology", Started in September 2013 at b<>com Research Institute, Supervised by A. Krupa, M. Marchal and G. Dardenne

PhD in progress: Andéol Evain, "BCI-based Interaction", Started in September 2013, Supervised by N. Roussel, G. Casiez, F. Argelaguet and A. Lécuyer

PhD in progress: Guillaume Claude, "Synthesis and Simulation of Process Models ", Started in September 2013, Supervised by V. Gouranton and B. Arnaldi

PhD in progress: François Lehericey, "Collision Detection HPC", Started in October 2013, Supervised by V. Gouranton and B. Arnaldi

PhD in progress: Gwendal Le Moulec, "Automatic generation of VR applications", Started in October 2015, Supervised by V. Gouranton, B. Arnaldi and A. Blouin (Team Diverse)

PhD in progress: Anne-Solène Dris-Kerdreux, "Training in virtual reality for construction applications", Started in November 2015, Supervised by V. Gouranton and B. Arnaldi

PhD in progress: Antoine Costes, "Haptic texturing", Started in November 2015, Supervised by A. Lécuyer and F. Argelaguet

PhD in progress: Guillaume Cortes, "Improving tracking in VR", Started in November 2015, Supervised by A. Lécuyer

10.2.2. Juries

10.2.2.1. Selection committees

- Bruno Arnaldi was President of Selection committee of Full-time Professor Position at University of Rennes 1 (ISTIC) and Member of Selection committee of Full-time Professor Position at University of Rennes 1 (ENSSAT) and and Member of Selection committee of Full-time Professor Position at Ecole Normale Supérieure de Rennes.

- Maud Marchal was Member of Selection committee of Research Scientist (CR2 and CR1) Inria Nancy.

10.2.2.2. PhD and HDR juries

- Anatole Lécuyer was Member of PhD juries of Merwan Achibet (INSA de Rennes), Jonathan Mercier (INSA de Rennes), Lucile Dupin (Univ. Paris 5), Jérémy Frey (Univ. Bordeaux), Toinon Vigier (Ecole Centrale de Nantes), and Member of HDR committee of Reinhold Scherer (TU Graz, Austria).

- Bruno Arnaldi was President of PhD juries of Merwan Achibet (INSA de Rennes), Jonathan Mercier (INSA de Rennes), Kevin Jordao (INSA de Rennes), Karl Jorgensen (University of Rennes 1), Steve Tonneau (INSA de Rennes) and Member of PhD jury of Mukesh Barange (ENIB Brest), Siju WU (Evry University)

- Maud Marchal was Member of PhD juries of Merwan Achibet (INSA de Rennes), Julien Bosman (Univ. Lille 1), Jonathan Mercier (INSA de Rennes), Alvaro Perez (Univ. Rey Juan Carlos, Madrid, Spain).

10.3. Popularization

The team has participated to numerous events in 2015 :

- "Futur en Seine 2015" (Paris, 05/15) : booth and demo of the PREVIZ project results.

- "Festival de la Science 2015" (Rennes, 10/15) : booth and demos of the team.

- "Journées Science et Musique 2015" (Rennes, 11/15) : co-organization of this event, and presentation of several demos.

- Technoférence du Pôle Images et Réseaux (Rennes, 02/15) : presentation from Anatole Lécuyer on VR.

The results of the team were also disseminated in several TV appearances and media coverages :

- « Télématin », France2 channel (02/15) : presentation of the Mind-Mirror system.

- « On est pas que des cobayes », France 3 channel (04/15) : presentation and testings of the FlyVIZ system.

- « E=M6 », M6 channel (05/15) : presentation and testing of the Mind-Mirror system.

- « Thalassa », France3 channel (05/15) : presentation of several cultural heritage applications of Hybrid.

- « Future Mag », Arte channel (12/15) : presentation of several cultural heritage applications of Hybrid.

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

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. General chair, scientific chair

- Patrick Rives was the co-organizer and the scientific chair of the Journées Nationales de la Recherche en Robotique (JNRR'15) held in October at Cap Hornu.

10.1.1.2. Member of the organizing committees

- Paolo Robuffo Giordano co-organized the 7-th International Workshop on Human-Friendly Robotics, Pontedera, Italy

10.1.2. Scientific events selection

10.1.2.1. Member of the conference program committees

- François Chaumette: ICRA'2015, RSS'2015, ICRA'2016
- Eric Marchand: Orasis'15, IROS'2015, ICRA'2016
- Patrick Rives: ICRA'2016, RFIA'2016
- Paolo Robuffo Giordano: ICRA'2015, ICRA'2016

10.1.2.2. Reviewer

- Marie Babel: ICRA 2016 (2), IROS 2015 (1)
- François Chaumette: IROS'2015 (3), Humanoids'2015 (1)
- Vincent Drevelle: IROS'2015 (4)
- Alexandre Krupa: IROS'2015 (2), ISBI'2015 (1), ICRA'2016 (4)
- Eric Marchand: Orasis'15 (3), ICRA'2015 (3), IROS'2015 (2), ICRA'2016 (2)
- Patrick Rives: ICCV'2015 (2), ICRA'2015 (3), IROS'2015 (3), IV'2015 (1), MVIGRO'2015 (1)
- Paolo Robuffo Giordano: ICRA'15, IROS'15, IROS'15, MED'15

10.1.3. Journal

10.1.3.1. Member of the editorial boards

- François Chaumette: Editorial Board of the Int. Journal of Robotics Research, Senior Editor of the IEEE Robotics and Automation Letters
- Alexandre Krupa: Associate Editor of the IEEE Robotics and Automation Letters
- Eric Marchand: Associate Editor of the IEEE Robotics and Automation Letter, Guest Editor (with Peter Corke and Jana Kosecka) of a Special Issue of the Int. Journal of Robotics Research on Robot Vision.
- Paolo Robuffo Giordano: Associate Editor of IEEE Trans. on Robotics, Area Chair of RSS 2015

10.1.3.2. Reviewer - Reviewing activities

- Marie Babel: Autonomous Robots (1)
- François Chaumette: IEEE Trans. on Robotics (4), Robotics and Autonomous Systems (1)
- Patrick Rives: IEEE Trans. on Robotics (1), Robotics and Autonomous Systems (1), TSI (2)
- Paolo Robuffo Giordano: IEEE Trans. on Robotics (2)

10.1.4. Invited talks

- Marie Babel and François Pasteau were invited to give a talk during the final workshop of the Interreg 4A France Channel COALAS project at Kent University, UK, in May 2015.

- François Chaumette: Plenary talk at DICTA'2015, Adelaide, Australia [58]; Tutorial at SIDRA'2015 (Ph.D. Summer School on Robot Control), Bertinoro, Italy

- Eric Marchand: Plenary talk at Orasis'2015, Amiens, France.

- Paolo Robuffo Giordano. Invited Talk: Control of Quadrotors in Unstructured Environments. RSS 2015 Symposium: Frontiers of Robotics, April 2015

- Fabien Spindler: Plenary talk and visual servoing atelier at RPRA'2015 summer school (Recent Progress in Robotics Applications), Alicante, Spain

10.1.5. Leadership within the scientific community

- François Chaumette and Patrick Rives are members of the scientific council of the "GdR Robotique" and JNRR.

- François Chaumette has been elected to serve in the Administrative Committee of the IEEE Robotics and Automation Society (RAS). He chaired the 2015 IEEE RAS Chapter of the year Award Committee and served in the 2015 IEEE RAS Fellow Nomination Committee. He also served in the Advisory Board of the Peraspera project. This project funded by the EC is in charge of drafting the roadmap of the EC Strategic Research Cluster on Space Robotics.

- Alexandre Krupa is a member of the GestChir project at the IRT b<>com in Rennes.

- Eric Marchand is in the board of the "Images et réseaux" competitivity cluster. He is also a member of the scientific council of the "École supérieure d'ingénieurs de Rennes" (ESIR).

- Patrick Rives has represented Inria's robotic community at European Robotics Forum 2015 for the election of the Board of Directors of euRobotics AISBL.

10.1.6. Scientific expertise

- François Chaumette and Patrick Rives served in the jury to select the best French Ph.D. thesis in robotics.

- François Chaumette served as a Panel member for the ERC PE7 consolidator grants. He also served as evaluator of the FP7 Euroc project and reviewed a set of ANR proposals.

- Eric Marchand served in the jury to select the best French Ph.D. thesis in image processing and computer vision.

- Patrick Rives served as a member of the Inria evaluation committee until July 2015. He also served in the local CR2 (Rocquencourt) and national DR2 recruitment juries.

- Paolo Robuffo Giordano served as External Reviewer for the EU FP7 Sherpa Project.

10.1.7. Research administration

- Marie Babel is a member of the "Comité de Centre" of Inria Rennes-Bretagne Atlantique.

- François Chaumette serves as the president of the committee in charge of all the temporary recruitments ("Commission Personnel") at Inria Rennes-Bretagne Atlantique and Irisa. He is also a member of the Head team of Inria Rennes-Bretagne Atlantique.

- Eric Marchand served as secretary in the board of the "Association Française pour la Reconnaissance et l'Interprétation des Formes (AFRIF)". He isalso in charge of the Irisa Ph.D. students in the committee in charge of all the temporary recruitments ("Commission Personnel") at Inria Rennes-Bretagne Atlantique and Irisa.

- Alexandre Krupa is a member of the CUMIR ("Commission des Utilisateurs des Moyens Informatiques pour la Recherche") of Inria Rennes-Bretagne Atlantique.

10.1.8. Patents

- François Pasteau and Marie Babel are the main authors of a patent (No FR 3 021 400) entitled "Méthode de correction d'une trajectoire dans un dispositif d'aide au déplacement de personnes".
- Lucas Royer, Alexandre Krupa and Maud Marchal (Hybrid group at Inria Rennes-Bretagne Atlantique and Irisa) submitted a patent application (No. FR15/60541) to INPI entitled "Process for tracking a clinical target in medical images".

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Marie Babel:

> Master INSA3: "Statistical Signal Processing", 24 hours, M2, INSA Rennes
>
> Master INSA1: "Architecture", 30 hours, L3, INSA Rennes
>
> Master INSA2: "Computer science project", 30 hours, M1, INSA Rennes
>
> Master INSA2: "Image analysis", 18 hours, M1, INSA Rennes
>
> Master INSA1: "Remedial math courses", 50 hours, L3, INSA Rennes

François Chaumette:

> Master ESIR3: "Visual servoing", 8 hours, M2, Ecole supérieure d'ingénieurs de Rennes

Vincent Drevelle:

> Master CTS: "Instrumentation, localization, GPS", 6 hours, M2, Université de Rennes 1
>
> Master Info: "Mobile robotics", 38 hours, M2, Université de Rennes 1
>
> Master GLA: "Terrain information systems", 16 hours, M2, Université de Rennes 1
>
> Master Info: "Artificial intelligence", 12 hours, M1, Université de Rennes 1

Alexandre Krupa:

> Master SIBM (Signals and Images in Biology and Medicine): "Medical robotics guided from images", 4.5 hours, M2, Université de Rennes 1, Brest and Angers
>
> Master FIP TIC-Santé: "Ultrasound visual servoing", 6 hours, M2, Télécom Physique Strasbourg
>
> Master INSA3: "Modeling and engineering for Biology and Health applications", 12 hours, M2, INSA Rennes
>
> Master ESIR3: "Ultrasound visual servoing", 9 hours, M2, Esir Rennes

Eric Marchand:

> Master Esir2: "Colorimetry", 24 hours, M1, Esir Rennes
>
> Master Esir2: "Computer vision: geometry", 24 hours, M1, Esir Rennes
>
> Master Esir3: "Special effects", 24 hours, M2, Esir Rennes
>
> Master Esir3: "Computer vision: tracking and recognition", 24 hours, M2, Esir Rennes
>
> Master MRI: "Computer vision", 24 hours, M2, Université de Rennes 1
>
> Master MIA: "Augmented reality", 4 hours, M2, Université de Rennes 1

Paolo Robuffo Giordano:

> Master in Robotics: "Analysis and Control of Multi-Robot Systems", 16 hours, M2, Department of Computer and System Sciences, University of Rome "La Sapienza"

10.2.2. Supervision

Ph.D.: Manikandan Bakthavatchalam, "Utilisation des moments photométriques en asservissement visuel", defended on March 2015, supervised by François Chaumette [8]

Ph.D.: Tawsif Gokhool, "Représentations valides à long terme pour la navigation et l'apprentissage des modèles 3D", defended on June 2015, supervised by Patrick Rives [10]

Ph.D.: Romain Drouilly, "Représentation hybride métrique, topologique et sémantique d'environnement 3D pour la localisation temps réel", defended on June 2015, supervised by Patrick Rives [9]

Ph.D.: Riccardo Spica, "Contributions to Active Visual Estimation and Control of Robotic Systems", defended on December 2015, supervised by Paolo Robuffo Giordano and François Chaumette [11]

Ph.D. in progress: Le Cui, "Nano-manipulation by visual servoing", started in October 2012, supervised by Eric Marchand

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

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

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

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

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

Ph.D. in progress: Renato José Martins, "Robust navigation and control of an autonomous vehicle", started in November 2013, supervised by Patrick Rives and Samuel Siqueira Bueno (CTI)

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

Ph.D. in progress: Jason Chevrie, "Control of a flexible needle by visual servoing using B-mode ultrasound images", started in September 2014, supervised by Alexandre Krupa and Marie Babel

Ph.D. in progress: Quentin Bateux, "Visual servoing from global descriptors", started in October 2014, supervised by Eric Marchand

Ph.D. in progress: Fabrizio Schiano, "Collective control with onboard sensors for multiple quadrotor UAVs", started in October 2014, supervised by Paolo Robuffo Giordano

Ph.D. in progress: Pedro Patlan-Rosales, "Robotic insertion of a biopsy needle by visual servoing using elastography images", started in October 2014, supervised by Alexandre Krupa

Ph.D. in progress: Noël Mériaux, "Landing by visual servoing", started in October 2014, supervised by François Chaumette, Eric Marchand and Patrick Rives

Ph.D. in progress: Lesley-Ann Duflot, "Soft tissue deformation tracking using optical coherence tomography (OCT) and ultrasound imaging", started in November 2014, supervised by Alexandre Krupa and Brahim Tamadazte (Minarob group at FEMTO-ST, Besançon)

Ph.D. in progress: Firas Abi Farraj, "Shared Control Architectures for Visual Servoing Tasks", started in October 2015, supervised by Paolo Robuffo Giordano

Ph.D. in progress: Salma Jiddi, "Analyses géométrique et photométrique pour des applications de réalité mixte", started in October 2015, supervised by Eric Marchand and Philippe Robert (Technicolor)

Ph.D. in progress: Ide Flore Kenmogne Fokam, "Cooperative localization in multi-robot fleets using interval analysis", started in October 2015, supervised Vincent Drevelle and Eric Marchand

Ph.D. in progress: Bryan Penin "Model predictive visual servoing for UAVS", started in October 2015, supervised by Paolo Robuffo Giordano and François Chaumette

Ph.D. in progress: Muhammad Usman, "Robust Vision-Based Navigation for Quadrotor UAVs", started in October 2015, supervised by Paolo Robuffo Giordano

Ph.D. in progress: Louise Devigne, "Contribution d'une aide technique robotique à l'évaluation de pathologies neurologiques : Application à la navigation d'un fauteuil roulant", started in November 2015, supervised by Marie Babel and Philippe Gallien (Pôle Saint Hélier)

Master internship: Marwan Osman from Master Erasmus Mundus Vibot, Le Creusot, "Visual servoing using the trifocal tensor", supervised by François Chaumette

Master 1 internship: Pierre Le Bihan from Insa Rennes, "Camera-laser triangulation", supervised by François Pasteau and Marie Babel

Bachelor internship: Grégoire Bonin from Université de Rennes 1, "Rigidity-based Formation Control for the case of Distance and Bearing Constraints", supervised by Paolo Robuffo Giordano

10.2.3. Juries

- François Chaumette: Cédric Pradalier (HdR, reviewer, Laas, Toulouse), Julien Pettré (HdR, president, Irisa, Rennes), Augustin Manecy (Ph.D., reviewer, ISM, Marseille), Victor Rosenzveig (Ph.D., president, Irccyn, Nantes), Nathan Crombez (Ph.D., reviewer, Mis, Amiens), Don Joven Agravante (Ph.D., president, Lirmm, Montpellier)

- Alexandre Krupa: Ederson Antonio Gomes Dorileo (Ph.D., reviewer, Lirmm, Montpellier)

- Eric Marchand: François Chadebecq (Ph.D., reviewer, Institut Pascal, Clermont-Ferrand), Xialu Sun (Ph.D., reviewer, CVLAB EPFL, Lausanne), Datta Ramadasan (Ph.D., reviewer, Institut Pascal, Clermont-Ferrand), Zaynab Habibi (Ph.D., reviewer, MIS, Amiens), Manikandan Bakthavatchalam (Ph.D., president, Inria, Rennes)

- Patrick Rives: Francisco Moreno Dueñas (Ph.D, reviewer, Malaga, Spain), Danilo Alves de Lima (Ph.D, reviewer, Heudiasyc, Compiègne), Emilie Wirbel (Ph.D, president, Mines-Paritech, Paris), Guillaume Duceux (Ph.D, examiner, ENSTA, Paris)

10.3. Popularization

- Due to the visibility of our experimental platforms, the team is often asked to present its research activities to students, researchers or industry. Our panel of demonstrations allows us to highlight recent results concerning the positioning of an ultrasound probe by visual servoing, the construction of a tower by combining 3D model-based visual tracking and visual servoing techniques to pick up cubes that are assembled, vision-based detection and tracking for space navigation in a rendezvous context, the semi-autonomous navigation of a wheelchair, and augmented reality applications.

- Marie Babel, François Chaumette and Fabien Spindler participated to a "Café des Sciences" in Rennes in November 2015: http://www.espace-sciences.org/conferences/cafes-de-l-espace-des-sciences/les-robots-sont-partout

- Marie Babel and François Pasteau participated as exhibitors to the robotics exhibition "Innorobo" in Lyon in July 2015: http://innorobo.com/en/home/ and to the "Autonomic" exhibition dedicated to the handicap and the autonomy in Rennes in October 2015: http://www.autonomic-expo.com/

- Fabien Spindler is a member of the editorial board of "Ouest Inria", the internal journal at Inria Rennes-Bretagne Atlantique.

LINKMEDIA Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. General chair, scientific chair

Teddy Furon co-organized a GdR-ISIS workshop on Biometrics, Multimedia Indexing and Privacy.

Guillaume Gravier was general chair of the ACM Multimedia Third Workshop on Speech, Language and Audio in Multimedia (SLAM 2015) and is president of the steering committee of the workshop.

Pascale Sébillot was a member of the acting presidency of Conf. Francophone en Traitement Automatique des Langues Naturelles.

Pascale Sébillot is a member of the permanent steering committee of Conf. Francophone en Traitement Automatique des Langues Naturelles.

9.1.2. Scientific events selection

9.1.2.1. Chair of conference program committees

Vincent Claveau was area chair of Conf. Francophone en Traitement Automatique des Langues Naturelles.

Guillaume Gravier was chair of the program committee of the ACM Multimedia Third Workshop on Speech, Language and Audio in Multimedia (SLAM 2015).

Pascale Sébillot was area chair of Conf. Francophone en Traitement Automatique des Langues Naturelles.

9.1.2.2. Member of the conference program committees

Laurent Amsaleg was a PC member of: ACM Intl. Conf. on Multimedia; VISI, ACM Intl. Conf. on Multimedia Retrieval; IEEE Intl. Conf. on Multimedia and Exhibition; Intl. Conf. on Multimedia Modeling; Intl. Workshop on Content-Based Multimedia Indexing; Intl. Conf. on Similarity Search and Applications; Intl. Conf. on Signal Image Technolopgy & Internet-based Systems.

Vincent Claveau was a PC member of: Conf. en Recherche d'Information et Applications; Intl. Conf. on Web Intelligence.

Teddy Furon was a PC member of: IEEE Work. on Information Forensics and Security; Intl. Conf. on Acoustics, Speech and Signal Processing; Intl. Conf. on Multimedia, Communication and Computing; ACM Intl. Conf. on Multimedia; European Signal Processing Conf.

Guillaume Gravier was a PC member of: ACM Intl. Conf. on Multimedia; IEEE Intl. Conf. on Multimedia and Exhibition; Annual Conf. of the Intl. Speech Communication Association; IEEE Intl. Workshop on Multimedia Signal Processing; Intl. Workshop on Content-Based Multimedia Indexing; Intl. Conf. on Knowledge and Systems Engineering; Intl. Conf. on Statistical Language and Speech Processing.

Ewa Kijak was a PC member of Intl. Workshop on Content-Based Multimedia Indexing.

Christian Raymond was a PC member of: Annual Conf. of the Intl. Speech Communication Association; Conf. Francophone en Traitement Automatique des Langues Naturelles.

Pascale Sébillot was a PC member of Intl. Conf. on Terminology and Artificial Intelligence.

9.1.2.3. Reviewer

Vincent Claveau was a reviewer of: Intl. Conf. on Machine Learning.

9.1.3. Journal

9.1.3.1. Member of the editorial boards

Vincent Claveau is member of the editorial board of the journal Traitement Automatique des Langues.

Teddy Furon was member of the editorial board of IEEE Trans. on Information Forensics and Security (up to March 2015).

Christian Raymond is member of the editorial board of the online journal Discours.

Pascale Sébillot is: editor of the Journal Traitement Automatique des Langues; member of the editorial committee of the Journal Traitement Automatique des Langues.

9.1.3.2. Reviewer - Reviewing activities

Laurent Amsaleg reviewed for Knowledge and Information Systems.

Vincent Claveau reviewed for: Multimedia Tools and Applications, Traitement Automatique des Langues.

Teddy Furon reviewed for: IEEE Trans. on Information Forensics and Security; IEEE Trans. on Multimedia, Data Mining and Knowledge Discovery; ACM Trans. on Information Systems; IEEE Trans. on Circuits and Systems for Video Technology; Digital Signal Processing Journal; Applied and Computational Harmonic Analysis Journal; IET Information Security Journal.

Guillaume Gravier reviewed for: IEEE Trans. on Audio Speech and Language; IEEE Trans. on Image Processing; EURASIP Journal on Audio, Speech, and Music Processing; Journal of Computer Science and Technology; Multimedia Tools and Applications;

Christian Raymond reviewed for Computer Speech and Language.

Pascale Sébillot was member of the reading committee for several issues of the Journal Traitement Automatique des Langues.

9.1.4. Invited talks

Vincent Claveau gave an invited talk about biomedical NLP in Rennes University Hospital's computer science department.

9.1.5. Leadership within the scientific community

Vincent Claveau is finance head of the Association pour la Recherche d'Informations et ses Applications (ARIA).

Vincent Claveau is deputy head of the GdR MaDICS, a CNRS inter-lab initiative to promote research about Big Data and Data Science.

Guillaume Gravier is president of the Association Francophone de la Communication Parlée (AFPC), French-speaking branch of the Intl. Speech Communication Association.

Guillaume Gravier is co-founder and general chair of the ISCA SIG Speech, Language and Audio in Multimedia.

Guillaume Gravier is member of the Community Council of the Mediaeval Multimedia Evaluation series.

Guillaume Gravier is the technical representative of Inria in the cPPP Big Data Value Association, actively working on technical aspects of data analytics.

9.1.6. Scientific expertise

Vincent Claveau served as expert for the ERC Consolidator grant programme, for the FNRS (Belgian Funding agency), for the Programme Hubert Curien.

Teddy Furon reviewed projects for Alpes Grenoble Innovation and French National Research Agency (ANR).

Teddy Furon is the scientific adviser for startup company Lamark (20 % of his time since July 2015).

Guillaume Gravier was vice-president of the Scientific Evaluation Committee of the National Research Agency for the theme 'HCI, Content, Knowledge, Big Data, Simulation, HPC'.

Pascale Sébillot reviewed projects for the Natural Sciences and Engineering Research Council of Canada.

9.1.7. Research administration

Guillaume Gravier is a member of the Board of the technology cluster Images & Réseaux.

Guillaume Gravier is a member of the Board of the Comité des Projets of Inria - Rennes Bretagne Atlantique.

Pascale Sébillot is a member of the Conseil National des Universités.

Pascale Sébillot is a member of the theses advisory committee of the Matisse doctoral school.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

For reseachers, all activities are given. For professors and assistant professors, only courses at the M. Sc. level are listed.

> Master: Laurent Amsaleg, Multidimensional indexing, 13h, M2R, University Rennes 1, France
>
> Master: Vincent Claveau, Data-Based Knowledge Acquisition: Symbolic Methods, 20h, M1, INSA de Rennes, France
>
> Master: Vincent Claveau, Text Mining, 36h, M2, Univ. Rennes 1, France
>
> Master: Vincent Claveau, Machine Learning for symbolic and sequential data, 7h, M2, Univ. Rennes 1, France
>
> Master: Vincent Claveau, Information Retrieval, 15h, M2, ENSSAT, France
>
> Master: Vincent Claveau, Information Retrieval, 13h, M2, Univ. Rennes 1, France
>
> Licence: Teddy Furon, Probabilities, 40h, L1, Agrocampus Rennes, France
>
> Licence: Guillaume Gravier, Databases, 30h, L2, INSA Rennes, France
>
> Licence: Guillaume Gravier, Probability and statistics, 10h, L3, INSA Rennes, France
>
> Master: Guillaume Gravier, Data analysis and probabilistic modeling, 30h, M2, University Rennes 1, France
>
> Master: Ewa Kijak, Image processing, 64h, M1, ESIR, France
>
> Master: Ewa Kijak, Supervised learning, 15h, M2R, University Rennes 1, France
>
> Master: Ewa Kijak, Statistical data mining, 13h, M2, University Rennes 1, France
>
> Master: Ewa Kijak, Indexing and multimedia databases, 15h, M2, ENSSAT, France
>
> Master: Ewa Kijak, Computer vision, 15h, M2, ESIR, France
>
> Master: Simon Malinowski, Short-term time series prediction, 29h, M1, Univ. Rennes 1
>
> Master: Simon Malinowski, Supervised Learning, 10h, M2, Univ. Rennes 1
>
> Master: Pascale Sébillot, Advanced Databases and Modern Information Systems, 70h, M2, INSA Rennes, France
>
> Master: Pascale Sébillot, Data-Based Knowledge Acquisition: Symbolic Methods, 18h, M1, INSA Rennes, France
>
> Master: Pascale Sébillot, Logic Programming, 12h, M1, INSA Rennes, France

9.2.2. Supervision

PhD: Mohammed-Haykel Boukadida, Video summarization based on constraint programming, defended Dec. 2015, Patrick Gros

PhD: Bingqing Qu, Structure discovery in collections of recurrent TV programs, defended Dec. 2015, Guillaume Gravier

PhD: Anca Roxana Simon, Semantic structuring of video collections from speech: segmentation and hyperlinking, defended Dec. 2015, Guillaume Gravier and Pascale Sébillot

PhD in progress: Raghavendran Balu, Privacy-preserving data aggregation and service personalization using highly-scalable data indexing techniques, started Oct. 2013, Teddy Furon and Laurent Amsaleg

PhD in progress: Rémi Bois, Navigable directed multimedia hypergraphs: construction and exploitation, started October 2014, Guillaume Gravier and Pascale Sébillot

PhD in progress: Petra Bosilj, Content based image indexing and retrieval using hierarchical image representations, started October 2012, Ewa Kijak and Sebastien Lefèvre (with OBELIX, IRISA team)

PhD in progress: Ricardo Carlini Sperandio, Unsupervised motif mining in multimedia time series, started August 2015, Laurent Amsaleg and Guillaume Gravier

PhD in progress: Ahmet Iscen, Continuous memories for representing sets of vectors and image collections, started September 2014, Hervé Jégou and Teddy Furon

PhD in progress: Grégoire Jadi, Opinion mining in multimedia data, started October 2014, Vincent Claveau, Béatrice Daille (LINA, Nantes) and Laura Monceaux (LINA, Nantes)

PhD in progress: Raheel Kareem Qader, Phonology modeling for emotional speech synthesis, started January 2014, Gwénolé Lecorvé and Pascale Sébillot (with EXPRESSION, IRISA Team)

PhD in progress: Cédric Maigrot, Detecting fake information on social networks, started October 2015, Laurent Amsaleg, Vincent Claveau and Ewa Kijak

PhD in progress: Vedran Vukotič, Deep neural architectures for automatic representation learning from multimedia multimodal data, started October 2014, Guillaume Gravier and Christian Raymond

9.2.3. Juries

Laurent Amsaleg
   PhD, Herwig Lejsek, Reykjavík University

Teddy Furon
   PhD, Wei Fan, University of Grenoble

Guillaume Gravier
   HDR, reviewer, Slim Essid, Telecom ParisTech
   PhD, president, Grégor Dupuis, Université du Maine

Ewa Kijak
   PhD, Cyrille Beaudry, Université de la Rochelle

Simon Malinowsky
   PhD, Racha Khelif, Université de Franche-Comté

Pascale Sébillot
   PhD, reviewer, Munshi Asadullah, Univ. Paris-Sud
   PhD, reviewer, Sondes Bannour, Univ. Paris-Nord
   PhD, president, Valéria Lelli Leitão Dantas, , Univ. Rennes 1
   PhD, president, Bingqing Qu, Univ. Rennes 1
   PhD, Mohamed Haykel Boukadida, Univ. Rennes 1

9.3. Popularization

Pascale Sébillot: Invited speaker (6h) Introduction to issues and solutions in NLP, URFIST Bretagne et Pays de la Loire seminar, June 2015.

MIMETIC Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. General chair, scientific chair

Marc Christie, co-Program Chair, ACM Motion in Games, MIG 2015, Paris

10.1.1.2. Member of the organizing committees

Marc Christie, Steering Committee and Conference Organiser, Smartgraphics 2015, Chengdu, China

10.1.2. Scientific events selection

10.1.2.1. Member of the conference program committees

Marc Christie, ACM Motion in Games MIG 2015, Paris, France, November 2015

Marc Christie, Smartgraphics, Chengdu, China, August 2015

Ludovic Hoyet, ACM Motion in Games MIG 2015, Paris, France, November 2015

Ludovic Hoyet, International Conference on Computer Graphics Theory and Applications (GRAPP), Rome, Italy, February 2016

Richard Kulpa, International Conference on Computer Graphics Theory and Applications (GRAPP), Rome, Italy, February 2016

Franck Multon, member of the International Steering committee of MIG, Interational steering committee of the symposium "From humans and non-humans primates to robots: motion", member of the International Program Committee of MIG, STARs International Program Committee Eurographics

Anne-Hélène Olivier, IEEE VR 2016, Greenville, United-States, March 2016

10.1.2.2. Reviewer

Ludovic Hoyet, Eurographics 2016, Lisbon, Portugal, May 2016

Ludovic Hoyet, IEEE VR 2016, Greenville, United-States, March 2016

Richard Kulpa, IEEE VR 2016, Greenville, United-States, March 2016

Richard Kulpa, VISIGRAPP, Rome, Italy, February 2016

Franck Multon, ICRA2016, IEEE VR 2016, ISBS 2015

Charles Pontonnier, IHM 2015, Toulouse, France, October 2015

Marc Christie, Eurographics, CHI, Smartgraphics, VISIGRAPP, Motion in Games,

10.1.3. Journal

10.1.3.1. Member of the editorial boards

Franck Multon, Editorial board of Presence MIT Press

Marc Christie, Associate Editor, The Visual Computer, Springer

10.1.3.2. Reviewer - Reviewing activities

Ludovic Hoyet, Computer Animation and Virtual Worlds, Computer Graphics Forum, Transactions on Graphics, Transactions on Applied Perception

Richard Kulpa, Journal of Sports Engineering and Technology, Journal of Sports Sciences

Franck Multon, Gait and Posture, Applied Computing and Informatics, Journal of Applied Biomechanics, Sensors, International Journal of Sports and Exercise Medicine

Anne-Hélène Olivier, Gait and Posture, Journal of Experimental Psychology Human Perception and Performance

Charles Pontonnier, Applied Ergonomics

Marc Christie, TVCG, The Visual Computer, Computer Graphics Forum

10.1.4. Invited talks

Ludovic Hoyet, Perception of Biological Human Motion: Towards New Perception-Driven Virtual Character Simulations, Inria Grenoble, Equipe Imagine, France, September 2015

Ludovic Hoyet, Perception of Biological Human Motion: Towards New Perception-Driven Virtual Character Simulations, Northumbria University, United Kingdom, November 2015

Franck Multon, Virtual Reality and Sports, applied session, International Society of Biomechanics in Sports, 2015

Franck Multon, Physical Activity on VR, Invited talk, International Society of Biomechanics in Sports, 2015

Richard Kulpa, Virtual Reality and Sports, applied session, International Society of Biomechanics in Sports, 2015

Charles Pontonnier Muscle based control for avatar animation: a synergy based approach, From Humans and Non-Human Primates to Robots: Motion, International Meeting, CNRS Primatology Station, Rousset sur Arc, France, December 2015

10.1.5. Scientific expertise

- Franck Multon, reviewer for a full-length ANR Proposal
- Franck Multon, reviewer for 12 short ANR proposals

10.1.6. Research administration

- Franck Multon is member of the University Rennes2 Research steering committee "commission recherche", and Academic Council "CAC",
- Franck Multon is member of the M2S Lab steering committee,
- Richard Kulpa is member of the University Rennes2 Research steering committee "commission recherche", and Academic Council "CAC",
- Franck Multon is member of the UFR-APS steering committee in University Rennes2
- Benoit Bideau is director of the M2S Lab
- Georges Dumont is director of mechatronics teaching department at École Normale Supérieure de Rennes
- Georges Dumont is president of the elected group at scientific council of École Normale Supérieure de Rennes, member of the scientific council of École Normale Supérieure de Rennes
- Georges Dumont is scientific head of Media and Interaction Department at IRISA
- Georges Dumont is scientific head of Immerstar platforms (Immersia + Immermove) jointly for Inria and Irisa Partners

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

10.2.1.1. Master level

Master : Franck Multon, "Images et Mouvement - IMO", leader of the module, 20H, Master 2 research in computer sciences, University Rennes1, France

Master : Franck Multon, "Santé et Performance au Travail : étude de cas", leader of the module, 30H, Master 1 M2S, University Rennes2, France

Master : Franck Multon, "Analyse Biomécanique de la Performance Motrice", leader of the module, 30H, Master 1 M2S, University Rennes2, France

Master : Franck Multon, "Modélisation et Simulation du Mouvement", leader of the module, 30H, Master 2 M2S, University Rennes2, France

Master: Marc Christie, "Multimedia Mobile", Master 2, leader of the module, 32h, Computer Science, University of Rennes 1, France

Master: Marc Christie, "Projet Industriel Transverse", Master 2, 32h, leader of the module, Computer Science, University of Rennes 1, France

Master: Marc Christie, "Outils pour la Conception d'IHM", Master 2, 32h, leader of the module, Computer Science, University of Rennes 1, France

Master : Armel Crétual, "Méthodologie", leader of the module, 20H, Master 1 M2S, University Rennes2, France

Master : Armel Crétual, "Biostatstiques", leader of the module, 15H, Master 2 M2S, University Rennes2, France

Master: Charles Pontonnier, "Numerical methods", leader of the module, Mechanics, École Spéciale Militaire de Saint-Cyr Coëtquidan, France

Master: Charles Pontonnier, "Numerical simulation of mechanical systems", leader of the module, Mechanics, École Spéciale Militaire de Saint-Cyr Coëtquidan, France

Master: Charles Pontonnier, "Analytical Mechanics" , Mechanics, École Spéciale Militaire de Saint-Cyr Coëtquidan, France

Master: Charles Pontonnier, "Design and control of mobile robots", leader of the module, Electronics, École Spéciale Militaire de Saint-Cyr Coëtquidan, France

Master: Charles Pontonnier, "Design, simulation and control of mechanical systems", leader of the module, Lecturers training in mechatronics, École Normale Supérieure de Rennes, France

Master : Richard Kulpa, "Contrôle moteur", leader of the module, Master 1 M2S, Université Rennes 2, France

Master : Richard Kulpa, "Boucle analyse-modélisation-simulation du mouvement", leader of the module, Master 2 M2S, Université Rennes 2, France

Master : Richard Kulpa, "Méthodes numériques d'analyse du geste", leader of the module, Master 2 M2S, Université Rennes 2, France

Master : Richard Kulpa, "Cinématique inverse", leader of the module, Master 2 M2S, Université Rennes 2, France

Master: Fabrice Lamarche, "Compilation pour l'image numérique", 29h, Master 1, ESIR, University of Rennes 1, France

Master: Fabrice Lamarche, "Synthèse d'images", 12h, Master 1, ESIR, University of Rennes 1, France

Master: Fabrice Lamarche, "Synthèse d'images avancée", 28h, Master 1, ESIR, University of Rennes 1, France

Master: Fabrice Lamarche, "Modélisation Animation Rendu", 36h, Master 2, ISTIC, University of Rennes 1, France

Master: Fabrice Lamarche, "Jeux vidéo", 26h, Master 2, ESIR, University of Rennes 1, France

Master : Georges Dumont, Mechanical simulation in Virtual reality, 36H, Master Mechatronics, Rennes 1 University and École Normale Supérieure de Rennes, France

Master : Georges Dumont, Responsible of the second year of the master Mechatronics, Rennes 1 University and École Normale Supérieure de Rennes, France

Master : Georges Dumont, Mechanics of deformable systems, 40H, Master FE, École Normale Supérieure de Rennes, France

Master : Georges Dumont, oral preparation to agregation competitive exam, 20H, Master FE, École Normale Supérieure de Rennes, France

Master : Georges Dumont, Vibrations in Mechanics, 10H, Master FE, École Normale Supérieure de Rennes, France

Master : Georges Dumont, Multibody Dynamics, 9H, Master FE, École Normale Supérieure de Rennes, France

Master : Georges Dumont, Finite Element method, 12H, Master FE, École Normale Supérieure de Rennes, France //

Master : Anne-Hélène Olivier, "Biostatstiques", 18H, Master 2 M2S, University Rennes2, France

Master : Anne-Hélène Olivier, "Biostatstiques", 12H, Master 1 2SEP, École Normale Supérieure de Rennes, France

Master : Anne-Hélène Olivier, "Contrôle moteur : loi de contrôle de la locomotion", 3H30, Master 1 M2S, Université Rennes 2, France

Master : Anne-Hélène Olivier, "Contrôle moteur : Boucle perceptivo-motrice", 3H30, Master 1 M2S, Université Rennes 2, France

Master : Anne-Hélène Olivier, "Analyse Biomécanique de la Performance Motrice", 15H, Master 1 M2S, University Rennes2, France

10.2.1.2. Licence level

Licence : Franck Multon, "Ergonomie du poste de travail", Licence STAPS L2 & L3, University Rennes2, France

Licence : Marc Christie, "Système d'information Tactiques", Computer Science, University of Rennes 1, France

Licence : Marc Christie, "Programmation Impérative 1", leader of the module, University of Rennes 1, France

Licence : Armel Crétual, "Analyse cinématique du mouvement", 100H, Licence 1, University Rennes 2, France

Licence: Charles Pontonnier, "Numerical control", leader of the module, Electronics, École Inter-Armes de Saint-Cyr Coëtquidan, France

Licence : Richard Kulpa, "Biomécanique (dynamique en translation et rotation)", Licence 2, Université Rennes 2, France

Licence : Richard Kulpa, "Méthodes numériques d'analyse du geste", Licence 3, Université Rennes 2, France

Licence : Richard Kulpa, "Statistiques et informatique", Licence 3, Université Rennes 2, France

Licence: Fabrice Lamarche, "Initiation à l'algorithmique et à la programmation", 56h, License 3, ESIR, University of Rennes 1, France

License: Fabrice Lamarche, "Programmation en C++", 46h, License 3, ESIR, University of Rennes 1, France

Licence: Fabrice Lamarche, "IMA", 24h, License 3, ENS Rennes, ISTIC, University of Rennes 1, France

Licence : Anne-Hélène Olivier, "Analyse cinématique du mouvement", 100H , Licence 1, University Rennes 2, France

Licence : Anne-Hélène Olivier, "Anatomie fonctionnelle", 8H , Licence 1, University Rennes 2, France

Licence : Anne-Hélène Olivier, "Effort et efficience", 12H , Licence 1, University Rennes 2, France

Licence : Anne-Hélène Olivier, "Locomotion et handicap", 12H , Licence 1, University Rennes 2, France

Licence : Anne-Hélène Olivier, "Biomécanique du viellissement", 12H , Licence 1, University Rennes 2, France

10.2.2. Supervision

PhD: Steve Tonneau, Synthèse et planification de mouvement pour des personnages virtuels en environnements contraints, INSA Rennes, 2011-2015, Franck Multon & Julien Pettré

PhD: Carl-Johan Jorgensen, Peuplement automatisé d'environnements urbains pour l'étude et la validation d'aménagements, University of Rennes 1, Fabrice Lamarche & Kadi Bouatouch

PhD: Kevin Jordao, Peuplement massif de maquettes numériques immenses, University Rennes1, Julien Pettré

PhD: Julien Bruneau, Foules immersives, University Rennes1, Julien Pettré

PhD: Billal Merabti, Style-driven virtual camera control in 3D environments, University of Rennes 1, Kadi Bouatouch & Marc Christie

PhD: Quentin Galvane, Automatic cinematography and editing in virtual environments, University of Grenoble, Rémi Ronfard & Marc Christie

PhD in progress: Marion Morel, Suivi et étude des interactions pour l'analyse des tactiques durant un match de basket-ball, UPMC - University Rennes 2, septembre 2014, Catherine Achard & Séverine Dubuisson & Richard Kulpa

PhD in progress: Sean D. Lynch, Perception visuelle du mouvement humain dans les interactions lors de tâches locomotrices, M2S - University Rennes 2, septembre 2015, Anne-Hélène Olivier & Richard Kulpa

PhD in progress: Pierre Touzard, Suivi longitudinal du service de jeunes joueurs de tennis élite : identification biomécanique des facteurs de performance et de risque de blessures, University Rennes 2, septembre 2014, Benoit Bideau & Richard Kulpa & Caroline Martin

PhD in progress: Yacine Said Bouhalia, Approche transversale pour l'analyse et la reconnaissance de gestes 2D et 3D, INSA of Rennes, septembre 2015, Richard Kulpa & Franck Multon & Eric Anquetil

PhD in progress: Pierre Plantard, Estimation des efforts musculaires à partir de données in situ pour l'évaluation ergonomique d'un poste de travail, 2013-2016, Franck Multon & Anne-Sophie LePierres

PhD in progress: Ana Lucia Cruz Ruiz, Contributions to muscle based control: a synergy based approach, Ecole normale supérieure, Georges Dumont & Charles Pontonnier

PhD in progress: Antoine Muller, Design of a modular and multiscale musculoskeletal model as a support to motion analysis-synthesis, Ecole normale supérieure, Georges Dumont & Charles Pontonnier

PhD in progress: Hui-yin Wu, Validated temporal structures in Interactive Storytelling, University Rennes1, Marc Christie

PhD in progress: Cunka Sanokho, Data-driven Virtual Cinematography, University Rennes1, Marc Christie

10.2.3. Juries

PhD: Eray Molla, Precise and Responsive Performance Animation for Embodied Immersive Interactions, EPFL, September 25th, Richard Kulpa, rapporteur

PhD: Guay Martin, Sketching free-form poses and movements for expressive character animation, Univ. Grenoble, July 2nd, Franck Multon, Examinateur

PhD: Omran Sahab, Génération de trajectoires de marche de robots humanoïdes établies sur les modèles pendulaires bio-inspirés de l'humain, November 30th, Univ. Nantes, Franck Multon, Examinateur

PhD: Vallee Pascal, Estimation du risque de chute suite à une perturbation d'équilibre, November 26th, Univ. Claude Bernard Lyon1,, Franck Multon, Rapporteur

HDR: Watier Bruno, De l'analyse du mouvement in-vitro à la génération de mouvements des systèmes anthropomorphes, November 16th, Univ. Toulouse3, Franck Multon, Rapporteur

HDR: Hayashibe Mitsuhiro, Computational Modeling and Control for Personalized Neuroprosthetics and Rehabilitation, October 12nd, Univ. Montpellier, Franck Multon, Rapporteur

PhD: Fourati Nesrine, Classification et Caractérisation de l'Expression Corporelle des Emotions dans des Actions Quotidiennes, September 9th, Telecom Paristech, Franck Multon, Examinateur

PhD: Maurice Pauline, Virtual ergonomics for the design of collaborative robots, June 16th, Univ. Pierre et Marie Curie, Franck Multon, Rapporteur

PhD: Vigier Toinon, Suggestion et perception des ambiances climatiques dans les environnements virtuels urbains, July 3rd, Ecole Centrale de Nantes, Franck Multon, Président

PhD: Han Yuan, Static and Dynamic Stiffness Analysis of Cable-Driven Parallel Robots, INSA Rennes, March 11th, Georges Dumont, Examinateur

PhD: Brian Ravenet, Modélisation de comportements non-verbaux et d'attitudes sociales dans la simulation de groupes conversationnels, Telecom Paristech, Dec 7, Marc Christie, Examinateur

PhD: Zaynab Habibi, Vers l'assistance à l'exploration pertinente et réaliste d'environnments 3D très denses, Université de Picardie Jules Verne, Dec 8, Marc Christie, Examinateur

PANAMA Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

Rémi Gribonval is a member of the IEEE Technical Committee on Signal Processing Theory and Methods (2012–2014), and a member of the Awards sub-committee.

Rémi Gribonval is a member of the program committee of the GRETSI.

Rémi Gribonval is a member of the Steering Committee of the SPARS international workshop (chairman until 2013).

Frédéric Bimbot is the Head of the "Digital Signals and Images, Robotics" in IRISA (UMR 6074).

Frédéric Bimbot is a member of the International Advisory Council of ISCA (International Speech Communication Association).

Rémi Gribonval and Frédéric Bimbot are the scientific coordinators of the Science and Music Day (Journée Science et Musique) organized by IRISA.

R. Gribonval was a keynote speaker at LVA/ICA15, and a tutorial speaker at IEEE-SchoolOfICASSP15.

R. Gribonval is guest editor of a special issue of IEEE Journal on Selected Topics in Signal Processing, on Structured Matrices in Signal and Data Processing.

R. Gribonval was vice-president of the jury of the GDR ISIS / GRETSI / Club EAA thesis prize in signal and image processing 2014.

Nancy Bertin is a member of the IEEE Technical Committee on Audio and Acoustic Signal Processing (2013–2015).

Nancy Bertin and Frédéric Bimbot guest edited a special issue of the journal "Traitement du Signal" (Lavoisier).

Laurent Albera is substitute member of the french national board of universities (section 61) (2015-2019).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence : N. Bertin, "Discovery of selected topics in audio signal processing research", 9 hours, L3, École Supérieure de Réalisation Audiovisuelle (ESRA), France.

Master : N. Bertin, "Audio rendering, coding and source separation", 9 hours, M2, Université Rennes 1, France.

Master : N. Bertin, "Audio indexing and classification", 9 hours, M2, Université Rennes 1, France.

Master : N. Bertin, "Fundamentals of Signal Processing", 24 hours, M1, Ecole Normale Supérieure de Bretagne, Rennes, France.

Master : R. Gribonval, "Signal and image representations", 8 hours, M2, Université Rennes 1, France.

Master: R. Gribonval, coordination of the ARD module "Acquisition et Représensation de Données", M2, Université Rennes 1, France.

Laurent Albera gives lectures in Mathematics and in Signal Processing, and he supervises end of school year projects, mainly at the university of Rennes 1:

Licence: L. Albera, "Mathematics for electronics", 6 hours, L2, Université Rennes 1, France.

Licence: L. Albera, "Mathematics for electronics", 21 hours, L3, Université Rennes 1, France.

Licence: L. Albera, "Mathematics", 53 hours, L3, Ecole Supérieure d'Ingénieurs de Rennes, France

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Master: L. Albera, "Cardiac source localization from ECG signals", project supervision (with Ansys), M2, Ecole Supérieure d'Ingénieurs de Rennes, France.

Master : L. Albera, "Blind equalization", 4.5 hours, M2, Université Rennes 1, France.

Master : L. Albera, "Inverse problems", 3 hours, M2, Université Rennes 1, France.

Laurent Albera is responsible of the "Signal Processing" branch of the SISEA (Signal, Images, Embedded Systems and Control) Master 2 of University of Rennes 1.

10.3. Popularization

10.3.1. *Journée science et musique*

Participants: Nicolas Keriven, Luc Le Magoarou, Stéphanie Lemaile, Frédéric Bimbot, Rémi Gribonval, Gilles Puy, Nancy Bertin, Corentin Guichaoua, Srdan Kitic, Ewen Camberlein, Romain Lebarbenchon, Nathan Souviraà-Labastie.

with contributions and support from: Valérie Gouranton, Laurent Perraudeau, Nathalie Denis, Evelyne Orain, Julie Newton, Agnès Cottais, Cagdas Bilen, and many more.

PANAMA coordinated the organization of a public event called "Journée Science et Musique" (Day of Music and Science). This yearly event organized by the METISS/ PANAMA Team since 2011 aims at sharing with the wide audience the latest innovations and research projects in music. The motivation for hosting this event is to explain and promote the technology behind audio-processing that people face in their daily lives. The event is free to everyone and people have the possibility to attend talks by selected speakers or meet numerous experts that demonstrate current projects in which people can interactively participate. Edition 2015 hosted more than 250 visitors and was the official opening event of the "Festival des Sciences" week in Rennes.

10.3.2. *Radio and press*

Nancy Bertin and Rémi Gribonval co-authored a popularization article about compressed acoustic holography (with L. Daudet and F. Ollivier). It was published in the journal "Pour la Science" in May 2015 [46].

Nancy Bertin was interviewed for the local press (Rennes Métropole journal) at the occasion of "Journée Science et Musique".

SIROCCO Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific events organisation

10.1.1.1. Member of the organizing committees

- C. Guillemot has been area chair of Eusipco 2015 and IEEE-ICIP 2015, and award chair of IEEE-ICME 2015.
- A. Roumy is local liaison officer for Eurasip.

10.1.2. Scientific events selection

10.1.2.1. Member of the conference program committees

- C. Guillemot has been a member of technical program committees of international conferences: EUSIPCO 2015, IEEE-ICIP 2015.
- C. Labit is member of the GRETSI technical program committee.
- O. Le Meur has been a member of technical program committees of international conferences: IEEE-ICME 2015, QoMex 2015.
- O. Le Meur co-organized a special session on Visual attention modelling at EUSIPCO'2015.
- A. Roumy is member of the GRETSI technical program committee.

10.1.3. Journal

10.1.3.1. Member of the editorial boards

- C. Guillemot is associate editor of the Eurasip International Journal on Image Communication.
- C. Guillemot is associate editor of the IEEE Trans. on Image Processing.
- C. Guillemot is associate editor of the International Journal on Mathematical Imaging and Vision.
- C. Guillemot is senior member of the editorial board of the IEEE Journal on selected topics in signal processing.
- O. Le Meur has been guest editor of the Special Issue on Recent Advances in Saliency Models, Applications and Evaluations, in Signal Processing: Image communication journal.
- A. Roumy is associate editor of the Hindawi Journal on Mathematical Problems in Engineering.

10.1.4. Invited talks

- C. Guillemot has been invited as member of a panel on computational imaging at IEEE-ICME 2015.
- O. Le Meur gave a seminar dealing with examplar-based inpainting at INSA Rennes, June 2015.
- T. Maugey has been invited for a talk at INSA Rennes on "Interactive multi-view video coding", June 2015.
- T. Maugey has been invited for a talk at the GDR-Isis meeting on "Multi-view imaging from acquisition to rendering", June 2015.

10.1.5. Leadership within the scientific community

- C. Guillemot is member of the IEEE IVMSP technical committee.
- A. Roumy has co-animated with F. Bimbot and N. Bertin (PANAMA team, IRISA)the workshop "Les défis de dimensionnalité soulevés par les nouvelles générations de capteurs audiovisuels", at the Data Science Symposium, IRISA, Nov. 2015.

10.1.6. Scientific expertise

- C. Guillemot is member of the Selection and Evaluation Committee of the "Pôle de Compétitivité" Images and Networks of the Region of Ouest of France (until June 2015).
- C. Guillemot is member as scientific expert of the CCRRDT (Regional Committee of Research and Technological Development) of the Brittany region.
- C. Guillemot is member of the committee in charge of the IEEE Brillouin-Glavieux award.
- C. Labit is member of the ICT strategic steering committee (CPS-7) of the National Research Agency (ANR).
- A. Roumy is a member of the Selection and Evaluation Committee (CDT Commission Developpement Technologique) for the Inria technological development grants.

10.1.7. Research administration

- C. Guillemot is, since Sept. 2015, vice-chair of Inria's evaluation committee.
- C. Guillemot is member of the "bureau du Comité des Projets".
- C. Labit is the Vice-president of the Scientific Board, in charge of Research and Innovation, for the University of Rennes1 (since June 1st, 2008).
- C. Labit is president of the Rennes-Atalante Science Park and of the start-up incubator Emergys (since April, 2007).
- A. Roumy is titular member of the National Council of Universities (CNU section 61, 2012-2015).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: C. Guillemot, Image and video compression, 8 hours, M2 computer science, Univ. of Rennes 1, France.

Master: C. Guillemot, Image and video compression, 8 hours, M2 SISEA, Univ. of Rennes 1, France.

Master: O. Le Meur, Selective visual attention, 13 hours, M2, Univ. of Paris 8, France.

Master: O. Le Meur, Acquisition/Image Processing/Compression, 22 hours, M2 MITIC, Univ. of Rennes 1, France.

Master: T. Maugey, "Multi-view / 3D video coding", 2H, EPFL, Lausanne, Switzerland, March 2015.

Master: A. Roumy, Information Theory, 18 hours Master Computer science and telecommunications, Ecole Normale Supérieure de Rennes, Ker Lann campus, France.

Engineer degree: C. Guillemot, Video communication, 10 hours, Télécom Lille 1, Villeneuve-d'Ascq, France.

Engineer degree: C. Labit, Entrepreneurship and innovation, 3 hours, ESIR, Rennes, France.

Engineer degree: O. Le Meur, Image Processing, video analysis and compression, 54 hours, ESIR2, Univ. of Rennes 1, France.

Engineer degree: O. Le Meur, Visual communication, 65 hours, ESIR3, Univ. of Rennes 1, France.

Engineer degree: A. Roumy, Image processing, 14 hours, ECAM Rennes, France.

Professional training: O. Le Meur, Image Processing and OpenCV, 42 hours, Technicolor Rennes.

10.2.2. Supervision (PhDs defended during the year)

PhD : B. Huang, Second-order prediction and residue vector quantization for video compression, University of Rennes 1, defense on the 8th of July 2015, C. Guillemot (contract with Orange labs.)

PhD : J. Aghaei Mazaheri, Representations parcimonieuses et apprentissage de dictionnaires pour la compression et la classification d'images satellites, Univ. of Rennes 1, defense on the 20th of July 2015, C. Labit and C. Guillemot (contract with Astrium)

10.2.3. Juries

- C. Guillemot has been member (rapporteur) of the jury of the PhD committee of:
    - Y. Xing, Télécom ParisTech, Jan. 2015
    - M. Suryanarayana, MidSweden Univ., June 2015
    - M. Farajallah, Univ. Nantes, June 2015
    - M. S. Farid, Universita Degli Studi Di Torino, Sept. 2015
    - S. Karygianni, EPFL, Oct. 2015
- C. Guillemot has been member (president) of the jury of the PhD committee of:
    - M. Daisy, Univ. of Caen, Dec. 2015
    - A. Arrufat, INSA of Rennes, Dec. 2015
    - A. Basset, Univ. Rennes 1, Dec. 2015
- O. Le Meur has been member (rapporteur) of the jury of the PhD committee of:
    - S. Lemonnier, Univ. Paris VIII, November 2015
- O. Le Meur has been member (examiner) of the jury of the PhD committee of:
    - L. Yi, INSA of Rennes, March 2015
    - J. Liang, Univ. of Hong Kong, April 2015
    - N. Riche, Univ. of Mons, October 2015