



RESEARCH CENTER

FIELD

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

Activity Report 2013

# Section Dissemination

Edition: 2014-03-20



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## ACES Project-Team

# 8. Dissemination

## 8.1. Scientific Animation

### 8.1.1. Program committees

- PC member for SCW 2013: Spatial Computing Workshop, 2013, M. Banâtre.
- PC member for SCW 2014: Spatial Computing Workshop, 2014, M. Banâtre.
- PC member for ruSMART 2013: The 5th conference on Smart Spaces, M. Banâtre.

## 8.2. Teaching - Supervision - Juries

### 8.2.1. Teaching

L2/L3: network computing (lectures, tutorials, labs), 250 hours, F. Weis, University Rennes 1 / IUT Saint-Malo

Master : Ambient Computing and Mobile Communications, F. Weis, 6 hours, M2, university of Rennes, France

Master : Wireless LANs, F. Weis, 8 hours, M2, Telecom Bretagne, France

Master : Mobile communications and ambient computing, M. Banâtre, 4 hours, M1, Ecole Centrale de Paris, France

### 8.2.2. Supervision

PhD: M. Dominici, Context Management in Smart Homes, 01/11/09, M. Banâtre and F. Weis, defended in June 2013

PhD: B. Pietropaoli, Proximate interactions and data fusion in Smart Homes, 01/10/10, M. Banâtre and F. Weis, defended in December 2013

PhD: Minh Ho, Indoor localization mechanisms for ambient computing systems, 01/11/08, M. Banâtre and F. Weis, defended in December 2013

PhD in progress: Arnab Sinha, Pervasive control systems for smart waste management solutions, 14/12/10, M. Banâtre and P. Couderc, to be defended in April 2014

PhD in progress: Francisco Javier Acosta Padilla, Auto-adaptation for IoT, 31/01/13, Frédéric Weis and Johann Bourcier

### 8.2.3. Juries

Michel Banâtre was in the following PhD examination committees:

B. Pietropaoli, Proximate interactions and data fusion in Smart Homes, University Rennes 1, (director)

Minh Ho, Indoor localization mechanisms for ambient computing systems, University Rennes 1, (director)

Frédéric Weis was in the following PhD examination committees:

M. Dominici, Context Management in Smart Homes, University Rennes 1, (co-director)

B. Pietropaoli, Proximate interactions and data fusion in Smart Homes, University Rennes 1, (co-director)

Minh Ho, Indoor localization mechanisms for ambient computing systems, University Rennes 1, (co-director)

Paul Couderc was in the following PhD examination committees:

PhD, Tony Ducrocq, Auto-organisation des réseaux sans-fil multi-sauts dans les villes intelligentes, University of Lille 1, (examiner)

## ADAM Project-Team

# 9. Dissemination

## 9.1. Scientific Animation

**Laurence Duchien** served in the following scientific animations actions:

- Chair of the 5ème Journées du GDR CNRS GPL, Nancy, April 2013,
- Member of the Editorial Board of Lavoisier TSI,
- Member of the Editorial Board of Special Issue "Advanced Architectures for the Future Generation of Software-Intensive Systems" in the Elsevier journal Future Generation Computer Systems,
- Member of the following PC committees:
  - 8th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS), San Francisco, USA, San Francisco, May 2013,
  - 7th European Conference on Software Architecture (ECSA), Montpellier, France, July 2013,
  - 17th European Conference on Software Maintenance and Reengineering (CSMR), Genova, Italy, March 2013,
  - 6th Day Lignes de Produits, Paris, November 2013,
  - Joint Workshop of MAPLE 2013 – 5th International Workshop on Model-driven Approaches in Software Product Line Engineering and SCALE 2013 – 4th Workshop on Scalable Modeling Techniques for Software Product Lines at the 17th Software Product Lines Conference, Tokyo, Japan, August 2013,
  - International Workshop on Software Engineering for Systems-of-Systems (SESoS) at the 7th European Conference on Software Architecture (ECSA), Montpellier, France, 2013,
  - 29th IEEE International Conference on Software Maintenance (ICSM), Eindhoven, the Netherlands, September 2013.

**Philippe Merle** served in the following scientific animation actions:

- Member of the steering committee of the Conférence en Ingénierie du Logiciel (CIEL),
- Member of the following PC committees:
  - 2nd Conférence en Ingénierie du Logiciel (CIEL), April 2013,
  - 12th International Workshop on Adaptive and Reflective Middleware (ARM), December 2013,
- Member of the Evaluation Committee for the special issue on Ingénierie du Logiciel of the TSI Journal,
- Reviewer for IEEE Computer Magazine, and both ECSA and DAIS conferences.

**Romain Rouvoy** served in the following scientific animations actions:

- Member of the steering committee of the IFIP International Conference on Distributed Applications and Interoperable Systems,
- Member of the following PC committees:
  - 28th International ACM Symposium on Applied Computing (SAC) - 7th Track on Dependable and Adaptive Distributed Systems (DADS), March 2013,
  - 28th International ACM Symposium on Applied Computing (SAC) - 1st Track on Software Engineering Aspects of Green Computing (SEGC), March 2013,
  - 1st International Workshop on Green in Software Engineering, Green by Software Engineering (GIBSE), March 2013
  - 10th International USENIX Conference on Autonomic Computing (ICAC) - 2nd Track on Self-Aware Internet of Things (Self-IOT), June 2013,
  - 10th International Conference on Services Computing (SCC) - Industry track, June 2013,
  - 15th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC), September 2013,
  - 2nd Nordic Symposium on Cloud Computing & Internet Technologies (NordiCloud), September 2013,
  - 8th International Workshop on Middleware for Next Generation Internet Computing Workshop (MW4NG), December 2013,
  - 5th International IEEE Conference on Cloud Computing Technology and Science (Cloud-Com), December 2013,
  - 12th International Workshop on Adaptive and Reflective Middleware (ARM), December 2013,
  - 3rd International Workshop on Adaptive Services for the Future Internet (WAS4FI), September 2013,
- Reviewer for the following journals: Springer Journal of Internet Services and Applications, Journal of Ambient Intelligence and Smart Environments, IEEE Transactions on Computers.

**Lionel Seinturier** served in the following scientific animations actions:

- Guest co-guest editor of a special issue of the Springer Journal of Internet Services and Applications on Greening Distributed Systems,
- Member of the editorial board of the ISTE-Wiley series of books on Computer Science and Information Technology and editor for the Software Engineer domain of this series,
- co-PC Chair of the special session on Self-Adaptive Networked Embedded Systems (SANES) at the 3rd International Conference on Pervasive Embedded Computing and Communication Systems, Barcelona, February 2013,
- Member of the following PC committees:
  - Workshop on Patterns Promotion & Anti-patterns Prevention (PPAP) at the 17th European Conference on Software Maintenance and Reengineering, Genova, March 2013,
  - 7ème Conférence francophone sur les architectures logicielles (CAL), Toulouse, May 2013,
  - 13th IFIP International Conference on Distributed Applications and Interoperable Systems (DAIS), Florence, June 2013,
  - International Workshop of Security and Dependability for Resource Constrained Embedded Systems (S& D4RCES) at the 13th International Conference on Software Reuse, Pisa, June 2013,

- 16th ACM SIGSOFT International Symposium on Component-Based Software Engineering (CBSE), Vancouver, June 2013,
- 39th Euromicro Conference on Software Engineering and Advanced Applications (SEAA), MOCS Track, Santander, Spain, September 2013,
- 6th IEEE International Conference on Service-Oriented Computing and Applications (SOCA), Hawaii, December 2013.
- Reviewer for the following journals: Elsevier Science of Computer Programming, Elsevier Information and Software Technology, Elsevier Journal of System and Software, Lavoisier TSI.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Permanent members teach the following courses.

**Laurence Duchien** heads the **research program** in Master of Computer Science at University Lille 1. She heads the Carrières et Emplois service and is referent for the professional insertion in the PhD program in Computer Science at PRES University Lille Nord de France. She is also Director of Doctoral Studies for Computer Science in Doctoral School Engineering Science (SPI) - PRES Lille Nord de France. She teaches the following courses:

- Software Project Management, 50h, Level M2, Master MIAGE, University Lille 1,
- Design of distributed applications, 42h, Level M1, Master of Computer Science, University Lille 1,
- Software Product Lines, 8h, Level M2, Master of Computer Science, University Lille 1,
- Research and Innovation Initiation, 22h, Level M2, Master of Computer Science, University Lille 1,
- Tutoring Internship, 16h, Level M2, Master of Computer Science, University Lille 1.

**Martin Monperrus** teaches at the University Lille undergraduate and graduate courses. In particular:

- Introduction to programming, 48h, Level L1, Licence of Computer Science, UFR IEEA, University Lille 1,
- Object-oriented design, 39h, Level L3, Licence of Computer Science, UFR IEEA,
- Automated software engineering, 40h, Level M2, Master of Computer Science speciality IAGL, UFR IEEA, University Lille 1.

**Romain Rouvoy** heads the **IAGL** specialty of the Master of Computer Science at the University Lille 1. He supervises the **Agil-IT** Junior Enterprise and gives the following courses at the University Lille 1:

- Initiation à la Programmation, 48h, Level L1, Licence of Computer Science, UFR IEEA, University Lille 1,
- Conception d'Applications Réparties, 42h, Level M1, Master of Computer Science, UFR IEEA, University Lille 1,
- Qualité du Logiciel, 30h, Level M2, Master of Computer Science speciality MIAGE, UFR IEEA, University Lille 1,
- Infrastructures et Frameworks Internet, 8h, Level M2, Master of Computer Science speciality IAGL, UFR IEEA, University Lille 1,
- Innovation & Initiation à la Recherche, 14h, Level M2, Master of Computer Science speciality IAGL, UFR IEEA, University Lille 1,
- Intergiciels Orienté Services, 50h, Level M2, Master of Computer Science speciality IPI-NT, UFR IEEA, University Lille 1,
- Suivi de projets, 60h, Level M2, Master of Computer Science, UFR IEEA, University Lille 1,
- Suivi d'alternants, 60h, Level M2, Master of Computer Science, UFR IEEA, University Lille 1.



**Lionel Seinturier** has headed the **E-Services** specialty of the Master of Computer Science at the University Lille 1 until August 2013. He gives the following graduate courses at the University Lille 1:

Conception d'Applications Réparties, 18h, M1, University Lille 1,  
 Infrastructures et Frameworks Internet, 6h, M2, University Lille 1.

### 9.2.2. Supervision

- PhD: Rémi Druilhe, Power Efficiency of Services in Dynamic and Heterogeneous Dynamic Systems, 5 December 2013, Laurence Duchien & Lionel Seinturier.
- PhD: Russel Nzekwa, Building Manageable Autonomic Control Loops for Large Scale Systems, 5 July 2013, Lionel Seinturier & Romain Rouvoy.
- PhD in progress: Maxime Colmant, Amélioration de l'efficacité énergétique des logiciels dans les systèmes multi-coeurs, October 2013, Lionel Seinturier & Romain Rouvoy.
- PhD in progress: Benoit Cornu, Automated Runtime Software Repair, October 2012, Lionel Seinturier & Martin Monperrus.
- PhD in progress: Alexandre Feugas, Maintien de la qualité de service au cours de l'évolution d'applications orientées services, October 2010, Laurence Duchien & Sébastien Mosser (Lab. I3S, University Nice-Sophia-Antipolis).
- PhD in progress: Maria Gomez Lacruz, Self-Optimization of Software Systems Driven by Wisdom of the Crowds, October 2013, Lionel Seinturier & Romain Rouvoy.
- PhD in progress: Nicolas Haderer, AntDroid: Opportunistic Mobile Sensing of User Activities, October 2010, Lionel Seinturier & Romain Rouvoy.
- PhD in progress: Geoffrey Hecht, Auto-optimisation des architectures orientées services : Application aux applications mobiles et Cloud, October 2013, Laurence Duchien & Romain Rouvoy.
- PhD in progress: Matias Martinez, Automated Program Repair at Development and Runtime, October 2011, Laurence Duchien & Martin Monperrus.
- PhD in progress: Vincenzo Musco, Etude de la topologie et de l'évolution des graphes logiciels, October 2013, Philippe Preux (Inria SequeL) & Martin Monperrus.
- PhD in progress: Adel Noureddine, Towards a Better Understanding of the Energy Consumption of Software Systems, October 2010, Defense planed on 19 March 2014, Lionel Seinturier & Romain Rouvoy.
- PhD in progress: Fawaz Paraïso, Interopérabilité des environnements middleware de cloud computing, October 2011, Lionel Seinturier & Philippe Merle.
- PhD in progress: Clément Quinton, Migration d'applications dans les environnements middleware de cloud computing, October 2011, Laurence Duchien.
- PhD in progress: Marc Sango, Composants logiciels, boucle de contrôle et adaptation pour applications safety critical dans le domaine ferroviaire, October 2012, Laurence Duchien & Christophe Gransart.
- PhD in progress: Amal Tahri, Evolution logicielle multi-vues : des réseaux domestiques au Cloud, March 2013, Laurence Duchien & Jacques Pulou (Orange).
- PhD in progress: Bo Zhang, Elasticité spontanée des services et infrastructures dans le Cloud, October 2013, Lionel Seinturier & Romain Rouvoy.

### 9.2.3. Juries

**Laurence Duchien** was in the following HDR examination committee:

- Vasile-Marian Scuturici, INSA Lyon, University Claude Bernard Lyon1, December 2013 (referee)

**Laurence Duchien** was in the following PhD examination committees:

- Pengfei Liu, University of Bordeaux, January 2013, (referee),
- Mehdi Chouiten, University of Evry-Val d'Essone, January 2013, (co-referee),
- Diana Guadalupe Moreno-Garcia, University of Grenoble, February 2013 (referee),
- Jimmy Lauret, University of Toulouse, April 2013, (referee),
- Thibaut Possompès, University of Montpellier, October 2013 (referee),
- Julie Hamon, University Lille 1, November 2013 (chair),
- Rémi Druilhe, University Lille 1, December 2013 (co-director),
- Sylvain Frey, Paris-Tech, December 2013 (referee),
- Aurélien Favarelon, University of Grenoble, December 2013 (referee).

**Romain Rouvoy** was in the following PhD examination committees:

- Mehdi Chouiten, University of Evry-Val d'Essone, January 2013, (co-referee),
- Russel Nzekwa, University Lille 1, July 2013 (co-director).

**Lionel Seinturier** was in the following HDR examination committee:

- Tomas Bures, Charles University, Prague, March 2013 (referee).

**Lionel Seinturier** was in the following PhD examination committees:

- François Fouquet, University Rennes 1, February 2013 (referee),
- Gérard Nicolas, Telecom Paris, June 2013 (referee),
- Russel Nzekwa, University Lille 1, July 2013 (co-director),
- Ali Ghaddar, University of Nantes, July 2013 (referee),
- Elmedhi Damou, University Grenoble 1, October 2013 (referee),
- Joao Americo, University Grenoble 1, November 2013 (referee),
- Olga Melekhova, University Paris 6, November 2013 (referee),
- Filip Křikava, University of Nice, November 2013 (referee),
- Yacine Kessaci, University Lille 1, November 2013 (president),
- Rémi Druilhe, University Lille 1, December 2013 (co-director),
- Miruna Stoicescu, University Toulouse, December 2013 (referee),
- Petr Spacek, University Montpellier 2, December 2013 (referee),
- Sana Fathallah, University of Nice, December 2013 (referee).

### 9.3. Popularization

Christophe Ribeiro gave several demonstrations of the APISENSE platform (see Section 5.1 ), especially for the Recherche, Innovation, Creation (RIC) day that was held on 1 October 2013 in Lille and that targets graduate students from the M.Sc and Computer Engineering programs. He also participated to the Forum des PME innovantes organized the PICOM competitiveness cluster on 16 October 2013. The APISENSE platform has been the subject of some popularization articles in ERCIM News [24] and L'Usine Nouvelle [51].

The PowerAPI library (see Section 5.3 ) has been the subject of some popularization articles in ERCIM News [23], GreenIT.fr [49] and 01 Business & Technologies [50].

## ARLES Project-Team

# 8. Dissemination

## 8.1. Scientific Animation

### 8.1.1. Programme Committees of Conferences and Workshops

- Nelly Bencomo is PC chair of SEAMS'13;
- Nelly Bencomo is PC member of the following international conferences: MODELS'13, CibSE'13, Poster track at RE'13, SANES session at PECCS'13, SBES'13;
- Nelly Bencomo is PC member of the VAMOS'13 international workshop;
- Nikolaos Georgantas is PC member of the following international conferences: CloudCom'13, Aml'13, DATA'13, ICSOFT-EA'13, ICSOFT-PT'13, SCC'13, ANT'13, SOSE'13;
- Nikolaos Georgantas is PC member of the following international workshops: MW4NG'13, ARM'13;
- Valérie Issarny is PC member of the following international conferences: CBSE'13&14, Coordination'14, ECSA'13, ESSOS'14, FASE'13&15, FSE'14, ICDCS'13, ICSE'13, ICSE-SEIP'14, IFIPTM'13, ISARCS'13, Middleware'13&14, MobiCASE'13, SEAMS'13&14;
- Valérie Issarny is PC member of the following international workshops: SESO@ICSE'13, SERENE'13;
- Animesh Pathak is PC member of the following international conferences: S-Cube'13, EWSN'14, and Sensornets'14; and
- Animesh Pathak is PC member of the GeoHCI'13 international workshop.

### 8.1.2. Leadership Services in Academic Events and Edited Journals

- Nikolaos Georgantas is associate editor of the International Journal of Ambient Computing and Intelligence (IJACI);
- Nikolaos Georgantas is associate editor of the International Journal of Advances in Human-Computer Interaction;
- Valérie Issarny is member of the Steering Committee of the ESEC/FSE conference;
- Valérie Issarny is associate editor of the Springer JISA Journal of Internet Services and Applications;
- Valérie Issarny is the general chair of the ESSoS 2013, the International Symposium on Engineering Secure Software and Systems; and
- Animesh Pathak is the Production Chair of HiPC 2013, and Publicity Chair of DCOSS 2014.

### 8.1.3. Other Academic Services

- Nikolaos Georgantas is member of the PhD monitoring committee at Inria Paris-Rocquencourt;
- Valérie Issarny is scientific leader of the EC FP7 ICT IP CHOReOS;
- Valérie Issarny is member of the IFSTTAR Scientific Council & "Commission d'évaluation des chercheurs";
- Valérie Issary is member of the GDR GPL scientific council;
- Valérie Issarny is member of the evaluation committee of ANR Blanc JCJC'13, and of the Swedish Research Council subcommittee for Computer Science'2013.

## 8.2. Teaching - Supervision - Juries

### 8.2.1. Teaching

Nikolaos Georgantas gives a 12 hours lecture on “Pervasive Service Oriented Computing” as part of the SWAS lecture of the M2 COSY of the University of Versailles Saint-Quentin en Yvelines;

Animesh Pathak co-taught a M2 COSY level course on “Web sémantique, contenus et usages” at University of Versailles Saint-Quentin-en-Yvelines in Spring 2013; and

Animesh Pathak gave two three-hour guest lectures at CNAM, Paris as part of a M2 level course on embedded systems in Spring 2013.

### 8.2.2. Supervision

In 2013, the following students successfully defended their PhD:

- Amel Bennaceur, *Dynamic Synthesis of Connectors in Pervasive Environments*, UPMC-EDITE, defended in July 2013, advised by V. Issarny
- Pankesh Patel, *Enabling High-Level Application Development for the Internet of Things*, UPMC-EDITE, defended in November 2013, advised by A. Pathak and V. Issarny

Additionally, the following PhD theses are currently in progress at the ARLES project-team:

- Emil Andriescu, *Synthèse et déploiement dynamiques de protocoles de médiation pour l'interopérabilité dans les environnements collaboratifs nomades*, started October 2012, UPMC-EDITE, CIFRE Inria-Ambientic, advised by Valérie Issarny and Roberto Speicys-Cardoso (Ambientic).
- Benjamin Billet, *Self-adaptive Streaming Middleware for the Internet of Things*, started October 2012, UVSQ-EDSTV, advised by Valérie Issarny
- Sara Hachem, *Middleware pour l'Internet des objets intelligents*, started October 2012, UVSQ-EDSTV, advised by Valérie Issarny and Animesh Pathak.
- Georgios Bouloukakis, *Runtime adaptation of middleware connectors for emergent mobile systems*, started October 2013, UPMC-EDITE, advised by Nikolaos Georgantas and Valérie Issarny.

Also, Valérie Issarny is co-advising with Ansgar Radermacher from CEA-LISE, the PhD thesis of Amel Belaggoun on *Adaptabilité et reconfiguration des systèmes temps-réel embarquées*; this is a PhD from UPMC-EDITE with the research being undertaken at CEA-LISE.

### 8.2.3. Juries

- Valérie Issarny served on the HDR committee of Marc-Olivier Killijian (Université Paul Sabatier, Toulouse).
- Animesh Pathak served on the PhD committee of Miruna Stoicescu (CNRS-LAAS & INP, Toulouse).

## 8.3. Popularization

- Benjamin Billet was invited to speak at a one-day Android tutorial event organized by the ARAMIS business network at Lyon.
- Animesh Pathak attended the “India-France Technology Summit” in New Delhi, India as part of the Inria delegation, where he was part of a panel on urban rail, and also presented a technology showcase of “TravelDashboard: Smart Mobility for Urban Travelers”.
- Animesh Pathak was invited to be part of a panel on the “Chronique marché des applications mobiles” television programme on the French TV channel TVFIL78.
- Emil Andriescu, Sara Hachem, Kim Hwa Khoo, Georgos Mathioudakis Animesh Pathak, and George Rosca represented Inria at the “Futur en Seine” technology expo in Paris.

## LOGNET Team

# 9. Dissemination

## 9.1. Scientific Animation

- reviewing of an ANR blanc proposition;
- reviewing of an Ecos-sud proposition;
- reviewing of TLCA-13,
- program committee of Modularity 2014;

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Master : Luigi Liquori, Peer-to-peer 1, 31.5hTD, M2, Université of Nice Sophia-Antipolis;

### 9.2.2. Supervision

PhD: Petar Maksimovic, “Development and Verification of Probability Logics and Logical Frameworks”, Faculty of Technical Sciences, University of Novi Sad, Serbia and the University of Nice Sophia Antipolis; Supervisors: Silvia Ghilezan and Luigi Liquori; Defended in October 2013 [24].

PhD: Vincenzo Ciancaglini, “Extending the reach of overlay networks through distributed gateways: design, modeling and applications”, Université de Nice-Sophia Antipolis; Supervisors: Luigi Liquori and Jean-Christophe Pazzaglia (SAP); Defended in July 2013 [23].

PhD: Giang Ngo Hoang, “Inter-heterogeneous overlay co-operation”, Université de Nice-Sophia Antipolis and HUST, Hanoi Institute of Science and Technology, Vietnam; Supervisors: Luigi Liquori and Hung Nguyen Chan (HUST & VIELINA); Defended in December 2013 [25]

PhD in progress: Riccardo Loti, “Modeling and evaluation of protocols for Delay Tolerant Networks exploiting DHT, Content driven routing, and rateless codes”, Université de Nice-Sophia Antipolis and University of Turin Italy; Supervisors: Luigi Liquori and Rossano Gaeta (UNITO); Defense envisaged in the first half of 2014.

PhD in progress: Thao Nguyen, “Trust and reputation management in online marketplaces”, Université de Nice-Sophia Antipolis; Supervisors : Luigi Liquori and Bruno Martin (UNICE); Defense envisaged in the first half of 2014.

### 9.2.3. Juries

Participating of Raoul Gimenez Ph.D. defense, KTH, Stockholm, December 2013.

## 9.3. Popularization

The LogNet team has conducted two dozen circa of sessions of popularization of the myMed software (typically an “atelier de formation au réseau social myMed”). Public are typically students, administration people of many town or institutions (CG06, Mairies, Hospital, etc.).

## ASAP Project-Team

# 9. Dissemination

## 9.1. Scientific animation

- Antoine Boutet was a member of the shadow program committee of *ACM Eurosys'13*, Prague, Czech Republic, Apr. 2013.
- Davide Frey was a program co-chair of the *International Conference on Distributed Computing and Networking (ICDCN), Distributed Computing Track*, Mumbai, India, Jan. 2013.
- Davide Frey was a program committee member of the conferences:
  - *IEEE International Parallel & Distributed Processing Symposium (IPDPS)*, Boston, Massachusetts USA, May 2013.
  - *IEEE International Conference on Peer-to-Peer Computing (P2P)*, Trento, Italy, Sep. 2013.
  - *ACM/IFIP/USENIX International Conference on Middleware (Middleware)*, Beijing, China, Dec. 2013.
  - *IFIP International Conference on Distributed Applications and Interoperable Systems (DAIS)*, Florence, Italy, June 2013.
- George Giakkoupis was a program committee member of the *International Workshop on Foundations of Mobile Computing (FOMC)*, Jerusalem, Israel, Oct. 2013.
- Anne-Marie Kermarrec is a member of the *Academia Europea* since 2013.
- Anne-Marie Kermarrec is a member of the scientific committee of the *Société Informatique de France*.
- Anne-Marie Kermarrec is a member of the *Inria scientific board (Bureau du comité des projets)* in Rennes.
- Anne-Marie Kermarrec was a member of *ASF 2013*.
- Anne-Marie Kermarrec is the chair of the *ACM Software System Award Committee* in 2014.
- Anne-Marie Kermarrec is a member of the *ACM Software System Award Committee* since 2009.
- Anne-Marie Kermarrec is a member of the *ERC panel for Consolidator Grants* since 2013.
- Anne-Marie Kermarrec was the chair of the hiring committee for the position of *Assistant Professor at ENS Lyon (Chaire Inria/ENS)*.
- Anne-Marie Kermarrec was a member of the 2013 hiring committees of: Inria CR, Max Planck Institute for Software Systems, University of Lugano.
- Anne-Marie Kermarrec is a member of the *IEEE Internet Computing Editorial Board*.
- Anne-Marie Kermarrec is the vice-chair of *ACM Eurosys* since Apr. 2013.
- Anne-Marie Kermarrec is/was a program committee member of the conferences:
  - *ACM/IFIP/USENIX International Conference on Middleware (Middleware)*, China, Dec. 2013.
  - *International Conference on Very Large Data Bases (VLDB)*, Trento, Italy, Aug. 2013.
  - *International Conference on Networked Systems (NETYS)*, Marrakech, May 2013.
  - *ACM International Conference on Data Management (SIGMOD)*, NYC, USA, June 2013.
  - *International Conference on Distributed Computing Systems (ICDCS)*, Philadelphia, USA, July 2013.

- *International Conference on Peer-to-peer systems (P2P)*, Trento, Italy, Sep. 2013.
- *International Conference on Distributed Computing Systems (ICDCS)*, Madrid, July 2014.
- *International Conference on Extending Database Technology (EDBT)*, Athens, Greece, Mar. 2014.
- *ACM Eurosys*, Amsterdam, Apr. 2014.
- *ACM International Systems and Storage Conference (SYSTOR)*, Haifa, Israel, June 2014.
- *International Conference on Networked Systems (NETYS)*, Marrakech, May 2014.
- 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*.
- Anne-Marie Kermarrec co-organized the *Workshop Inria/Technicolor on Distributed Storage Systems*, Rennes, Nov. 2013.
- Michel Raynal was in the editorial board of the journals: *IEEE Transactions on Computers*, *Journal of Parallel and Distributed Computing*, *Journal of Computer Systems Science and Engineering*, *Foundations of Computing and Decision Sciences*.
- Michel Raynal was a program co-chair of the *International Conference on Distributed Computing and Networking (ICDCN)*, *Distributed Computing Track*, Mumbai, India, Jan. 2013.
- Michel Raynal was a steering committee member of the conferences:
  - *IEEE International Conference on Distributed Computing Systems (ICDCS)*, Philadelphia, USA, July 2013.
  - *International Conference on Distributed Computing and Networking (ICDCN)*, Mumbai, India, Jan. 2013.
- Michel Raynal was a program committee member of the conferences:
  - *ACM Symposium on Principles of Distributed Computing (PODC)*, Montreal, QC, Canada, July 2013.
  - *International Symposium on Distributed Computing (DISC)*, Jerusalem, Israel, Oct. 2013.
- Michel Raynal was an *Adjunct Professor* of the Polytechnic University (PolyU), Hong-Kong.
- Michel Raynal was a *European Representative in the IEEE Technical Committee on Distributed Computing*.
- Michel Raynal was an international liaison co-chair of *ICDCS 2013*.
- François Taïani was as program committee co-chair of the *IFIP International Conference on Distributed Applications and Interoperable Systems (DAIS)*, Florence, Italy, June 2013.
- François Taïani was a program committee member of the conferences:
  - *International Conference on Distributed Computing Systems (ICDCS)*, Philadelphia, USA, July 2013.
  - *Latin-American Symposium on Dependable Computing (LADC)*, Rio de Janeiro, Brazil, Apr. 2013
  - *Dependable and Adaptive Distributed Systems (DADS) Track of the ACM Symposium on Applied Computing*, Coimbra, Portugal, Mar. 2013
- Juan Manuel Tirado was a Program Committee Member of the *Workshop on Middleware for Next Generation Internet Computing (MW4NG)*, Beijing, China, Dec. 2013.

## 9.2. Invited talks

- George Giakkoupis. *Rumor spreading on dynamic graphs*. CS Theory Seminar, University of Calgary, Canada, Nov. 29 2013.
- George Giakkoupis. *Gossip protocols for information dissemination and other tasks*. Workshop on Storage and Cloud Computing (WOS3), Rennes, France, Nov. 22 2013.
- George Giakkoupis. *Tight bounds for rumor spreading with graph expansion*. PODC Social Network Workshop, Montreal, Canada, Jul. 21 2013.
- George Giakkoupis. *Randomized loose renaming in  $O(\log \log n)$  time*. ASAP Workshop on Distributed Computing, Rennes, France, Jun. 28 2013.
- George Giakkoupis. *Rumor spreading and graph expansion*. 3rd Pacific Northwest Theory Days Workshop, University of Victoria, Canada, May 5 2013.
- George Giakkoupis. *Rumor spreading and vertex expansion*. Workshop on Epidemic Algorithms and Processes: From Theory to Applications, Dagstuhl, Germany, Jan. 21 2013.
- Mathieu Goessens. *P2P technologies for the Web: Challenges and perspectives*. Mozilla Summit 2013, Brussels, Belgium, Oct. 5 2013.
- Anne-Marie Kermarrec. Tutorial: *Systems support for news recommendation: From P2P to hybrid architectures*. Transform Summer School on Research Directions in Distributed Computing. Heraklion, Crete. June 10-14, 2013.
- Anne-Marie Kermarrec. *Privacy-aware micro-blogging*. University of Sydney and NICTA, Australia, Jan. 2014.
- Michel Raynal. Tutorial: *Checkpointing and debugging in distributed computing*. Latin-American Conference on Dependable Computing (LADC), Rio de Janeiro, Brazil, Apr. 2013.
- Michel Raynal. *Concurrency-related distributed recursion*. International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS), Osaka, Japan, Nov. 2013.
- Michel Raynal. *Hybrid concurrent objects*. DISC workshop on Software Transactional memory, Jerusalem, Israel, Oct. 2013.
- François Taïani. *Deconstructing complex distributed platforms: A report from the trenches*. International Workshop on Automated Specification and Verification of Web Systems (WWV), Florence, Italy, June 2013.
- François Taïani. Workshop La politique des données personnelles: Big data ou contrôle individuel? Institut Rhône-Alpin des Systèmes Complexes (IXXI) and ENS Lyon, Lyon, Nov. 2013.

## 9.3. Teaching, supervision, and juries

### 9.3.1. Teaching

- Licence (bachelor) courses:
  - François Taïani, Introduction to Operating Systems, 16h, L3, ESIR / Université of Rennes I, France.
  - Davide Frey, Invited lectures at ENS Cachan, Paris, and ENS Cachan Antenne de Bretagne.
- Master courses:
  - Davide Frey, Scalable Distributed Systems, 10h, M2, Université de Rennes I, France.
  - François Taïani, Synchronization and Parallel Programming, 62h, M1, ESIR / Université de Rennes I, France.
  - François Taïani, Distributed Systems, 48h, M2, ESIR / Université de Rennes I, France.
  - François Taïani, Programming Technologies for the Cloud, 32h, M2, Université de Rennes I, France.
- Doctoral courses:



- Anne-Marie Kermarrec, Large-scale Systems and Applications, EPFL, Switzerland.

### 9.3.2. Supervision

- PhD: Mohammad Alaggan. *Private Peer-to-peer similarity computation in personalized collaborative platforms*. Dec 2013. Supervised by Anne-Marie Kermarrec (and Sébastien Gambs).
- PhD: Antoine Boutet. *Décentralisation des systèmes de personnalisation*. Mar 2013. Supervised by Anne-Marie Kermarrec.
- PhD: Tyler Crain. *Faciliter l'utilisation des mémoires transactionnelles logicielles*. Mar 2013. Supervised by Michel Raynal.
- PhD: Konstantinos Kloudas. *Leveraging Content Properties to Optimize Distributed Storage Systems*. Mar 2013. Supervised by Anne-Marie Kermarrec.
- PhD: Alexandre Van Kempen. *Optimiser l'utilisation de la bande passante dans les systèmes de stockage distribué*. Mar 2013. Supervised by Anne-Marie Kermarrec.
- PhD in progress: Fabien André. *Calcul incrémental sur des plates-formes à large échelle*. Started Nov 2013. Supervised by Anne-Marie Kermarrec.
- PhD in progress: Resmi Ariyattu Chandrasekharannair. *Towards Decentralized Federations for Plug-based Decentralized Social Networks*. Started Dec 2013. Supervised by François Taïani.
- PhD in progress: Stéphane Delbruel. *Towards a Decentralized Embryomorphic Storage System*. Started Oct 2013. Supervised by François Taïani.
- PhD in progress: Ali Gouta. *Caching et distribution adaptatifs dans les réseaux de contenus de grande échelle*. Started Dec 2011. Supervised by Anne-Marie Kermarrec.
- PhD in progress: Arnaud Jégou. *Explicit and implicit social networks, harnessing their power through decentralisation*. Started Oct 2010. Supervised by Anne-Marie Kermarrec and Davide Frey.
- PhD in progress: Nupur Mitall. *Infrastructure et algorithmes pour la recommandation de contenus cross application*. Started Dec 2013. Supervised by George Giakkoupis and Anne-Marie Kermarrec.
- PhD in progress: Javier Olivares. *Web-Alter Ego Platform : A Peer-sourcing infrastructure for personalized privacy-aware event processing*. Started Oct 2013. Supervised by Anne-Marie Kermarrec.
- PhD in progress: Julien Stainer. *Calculabilité distribuée*. Started Oct 2011. Supervised by Michel Raynal.
- PhD in progress: Antoine Rault. *Privacy Through Decentralization*. Started Oct 2012. Supervised by Anne-Marie Kermarrec and Davide Frey.

### 9.3.3. Juries

- Davide Frey was a member of the PhD jury for Konstantinos Kloudas. *Leveraging Content Properties to Optimize Distributed Storage Systems*. Université de Rennes I, March 6, 2013. (examinateur)
- François Taïani was a member of the following PhD juries:
  - Konstantinos Kloudas *Leveraging Content Properties to Optimize Distributed Storage Systems*. Université de Rennes I / Inria Rennes, March 6, 2013. (examinateur)
  - François Fouquet. *Kevooree : Model@Runtime pour le développement continu de systèmes adaptatifs distribués hétérogènes*. Université de Rennes I / Inria Rennes, March 6, 2013. (examinateur)
  - Jimmy Lauret. *Prévention et détection des interférences inter-aspects : méthode et application à l'aspectisation de la tolérance aux fautes*. Institut National Polytechnique de Toulouse (INP Toulouse) / LAAS-CNRS, May 15, 2013. (rapporteur)
  - Yousri Kouki. *Approche dirigée par les contrats de niveaux de service pour la gestion de l'élasticité du "nuage"*. École nationale supérieure des mines de Nantes, LINA, Dec. 12, 2013. (rapporteur)

## ATLANMOD Project-Team

# 9. Dissemination

## 9.1. Scientific Animation

### 9.1.1. Organization

In 2013, the AtlanMod team has coorganized the following events:

- J. Cabot has coorganized the OCL and Textual Modeling Workshop (OCL'13)<sup>8</sup> co-located with the MoDELS conference.
- J. Cabot was tutorials co-chair for the MoDELS conference.

### 9.1.2. Editorial Boards

Participation to editorial boards of scientific journals:

- Jordi Cabot: Journal of Object Technology, International Journal of Information System Modeling and Design, Software and Systems Modeling

### 9.1.3. Reviewing of International Journals

AtlanMod members have collaborated in the reviewing process for the following journals this year

- Hugo Bruneliere: Elsevier Advances in Engineering Software (ADES)
- Jordi Cabot: IEEE Software, IEEE Transactions on Software Engineering Journal, Journal of Systems and Software, Information and Software Technology Journal, Software and Systems Modeling Journal, Data and Knowledge Engineering Journal, Science of Computer Programming journal, Journal of Web Engineering journal
- Javier Canovas: Software and Systems Modeling Journal, Journal of Object Technology.
- Massimo Tisi: IEEE Software, Science of Computer Programming journal, Journal of Software: Practice and Experience, Information and Software Technology Journal, Software and Systems Modeling Journal, Journal of Object Technology.
- Gerson Sunyé: IBM Journal of Research and Development, Journal of System and Software, Distributed Computing Journal, Software: Practice and Experience Journal

### 9.1.4. Program Committee members

Participation to conference program committees:

- Jordi Cabot:
  - International: World Wide Web Conference, International Conference on Model-Driven Engineering Language and Systems, Software Language Engineering conference, European Conference on modeling foundations and applications, International Conference on Web Engineering, Transformation Tool Contest, International Conference on Conceptual Modeling, International Conference on Advanced Information Systems Engineering, Model Driven Web Engineering Workshop.
  - National: French national conference on MDE, Spanish national conference on MDE.
- Javier Canovas:

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<sup>8</sup><http://ocl2013.inf.mit.bme.hu/>

- International: International Conference on Cyber, Physical and Social Computing, ACM European Computing Research Congress, International Conference on Web Engineering, Model-Driven Web Engineering workshop, International Conference on Model Driven Engineering Languages and Systems, Workshop on Modeling Social Media, International Conference on Knowledge Management and Knowledge Technologies.
- Massimo Tisi:
  - International: International Conference on Engineering of Complex Computer Systems, International Conference on Current Trends in Theory and Practice of Computer Science, International Conference on Software Engineering and Advanced Applications, International Conference on Web Information Systems and Technologies, International Conference on Model Transformation, Transformation Tool Contest, Workshop on Domain-Specific Modeling, Extreme Modeling Workshop, Academics Modelling with Eclipse Workshop.
- Gerson Sunye:
  - International: 25th International Conference on Software Engineering and Knowledge Engineering (SEKE 2013), 2nd International Workshop on Large-Scale Testing (LT 2013), 1st International Workshop on Testing The Cloud (TTC 2013).

### **9.1.5. Research Evaluation Committees**

- Jordi Cabot: Reviewer for Spanish CICYT Research Projects Call

### **9.1.6. Steering Committees**

Participation in Steering Committees of Research Conferences:

- Jordi Cabot: International Conference on Model Transformation

## **9.2. Teaching - Supervision - Juries**

### **9.2.1. Teaching**

License: M. Tisi, Projet IPIPIP, 8h, L2, Ecole des Mines de Nantes  
 License: M. Tisi, Projet Integrateur PRIME, 12h, L3, Ecole des Mines de Nantes  
 License: M. Tisi, Programmation, 40h, L2, Ecole des Mines de Nantes  
 License: M. Tisi, Bases de Données, 33h, L3, Ecole des Mines de Nantes  
 License: M. Tisi, Interaction Homme-Machine, 14h, L3, Ecole des Mines de Nantes  
 License: S. Martínez, Bases de Données, 33h, L3, Ecole des Mines de Nantes  
 License: S. Martínez, Interaction Homme-Machine, 14h, L3, Ecole des Mines de Nantes  
 License: J. Cabot, Projet IPIPIP, 8h, L2, Ecole des Mines de Nantes  
 License: J. Cabot, Model-driven Engineering, 45h, L1, Ecole des Mines de Nantes  
 Master: J. Cabot, Master MIAGE - Object Constraint Language, 4h, M1, Université de Nantes  
 Master : G. Sunyé, Genie logiciel, 90h, M1, Université de Nantes  
 Master : G. Sunyé, Verification et tests, 56h, M1, Université de Nantes  
 Master : G. Sunyé, Nouveaux usages de l'informatique pour l'entreprise, 23h, M1, Université de Nantes  
 Master : G. Sunyé, Developpement du logiciel, 44h, M1, Université de Nantes  
 Master: J. Canovas, Master MIAGE - Domain Specific Languages, 6h, Université de Nantes.  
 License: J. Canovas, Projet IPIPIP, 8h, L2, Ecole des Mines de Nantes

### **9.2.2. Supervision**

PhD : Valerio Cosentino, Extraction and refactoring of Business Logic from Legacy Applications, December 19th, 2013, Jordi Cabot, Patrick Albert

PhD : Tam Le Nham, Model-Driven Software Engineering for Virtual Machine Images Provisioning in Cloud Computing, Université de Rennes 1, December 10th 2013, Jean-Marc Jézéquel, Gerson Sunyé

PhD in progress : Carlos A. González, Pragmatic Model Verification, Jordi Cabot

PhD in progress : Salvador Martínez Pérez, Automatic reconstruction and analysis of semantic network security policies from deployed security components, Jordi cabot and Frédéric Cuppens

PhD in progress : Olivier Finot, Oracles du test de transformation de modeles, Université de Nantes, Septembre 2010, Christian Attiogbé (Directeur), Jean-Marie Mottu, Gerson Sunyé

### 9.2.3. Juries

Jordi Cabot was a member of the jury of the thesis of Thang Quyet Pham (Telecom Bretagne), Jad MATAR (Ecole Centrale Nantes) and Aymeric Hervieu (Inria/IRISA)

## 9.3. Popularization

In June 2013, the team participated to the organization of the seminar “Logiciels de qualité : modélisation et vérification” at “Journées scientifiques de l’Université de Nantes”. The seminar had more than 50 participants, from industry and academia.

Moreover, since several years, the AtlandMod team is already very involved in the open source community, notably via its constant activity within the context of the Eclipse Foundation. This activity actually takes different forms: creation and leading/development of Eclipse projects (under *Eclipse.org* or *Eclipse Labs*), participation to the major worldwide community events (i.e.; EclipseCon North America and EclipseCon Europe), organization of events targeting the local community (i.e. Eclipse DemoCamps), etc.

This year again, the team has been active and visible in terms of concrete contributions to the community. The main remarkable items are the following ones:

- Leading of the MDT MoDisco project (Hugo Bruneliere), the Eclipse reference project concerning model-driven reverse engineering;
- Commitment to other projects directly under *Eclipse.org*: MMT ATL and EMFT EMF Facet (Hugo Bruneliere);
- Commitment to other projects under *EclipseLabs*: EMFTtoCSP (Jordi Cabot, Carlos Gonzalez) and Virtual EMF (Caue Clasen, Jordi Cabot);
- Creation and development of a new incubation project under *Eclipse Labs*: Collaboro (Javier Canovas);
- Organization of an official Eclipse DemoCamp in Nantes, on the 28th of June 2012, for locally promoting the Eclipse Juno release including the MoDisco, ATL and EMF Facet team’s projects (Hugo Bruneliere, in collaboration with the Obeo company);
- Publication of a paper on MoDisco in the European ERCIM NEWS Journal 88, dedicated to Software Evolution (Hugo Bruneliere and Jordi Cabot, in collaboration with the Mia-Software company);
- Presentation of talks during the two main Eclipse events (Hugo Bruneliere): at EclipseCon North America 2012 about EMF Facet, at EclipseCon Europe 2012 about Collaboro.

Generally, the team visible presence under Eclipse is also an efficient way to continue active collaborations with industrial partners, such as Mia-Software (Sodifrance) on MoDisco - EMF Facet, and Obeo on ATL.

## CIDRE Project-Team

# 9. Dissemination

## 9.1. Scientific Animation

Frédéric Tronel and Nicolas Prigent are members of the organization and program committees of the French symposium SSTIC about security of information and communications technologies (Symposium sur la Sécurité des Technologies de l'Information et de la Communication). This symposium is held each year in Rennes and gathers more than 400 people coming from academic, industrial and governmental sectors.

Emmanuelle Anceaume served as a reviewer for the following conferences:

- IEEE/ACM International Conference on Ubiquitous Computing and Communications (IUCC). 2013 (Australia).
- International Symposium on Security and Multimodality in Pervasive Environments (SMPE). 2013 (Spain).
- International Conference on Secure and Trust Computing, data management, and Applications (STA). 2013 (Japan).
- International Conference on Pervasive and Embedded Computing and Communication Systems (PECCS), 2013 (Spain).

Christophe Bidan is a member of the Selection and Validation Committee (CSV - Comité de Sélection et de Validation) of the Images & Réseaux cluster, of the advisory board the security activities of the DGA-MI (Direction Générale de l'Armement - Maîtrise de l'Information). Christophe Bidan served as a reviewer for the following conferences:

- SecureComm - International Conference on Security and Privacy in Communication Networks 2013.
- SETOP - International Workshop on Autonomous and Spontaneous Security 2013.
- IIT - International Conference on Innovations in Information Technology 2013.

Sébastien Gambs acts as:

- member of the editorial board of International Journal of Data Mining, Modelling and Management (<http://www.inderscience.com/browse/index.php?journalID=342#board>).
- member of the editorial board of International Journal of Privacy and Health Information Management (<http://www.igi-global.com/journal/international-journal-privacy-health-information/41027>).
- member of the program committee of the « 5th International Workshop on SEcurity and SOCIAL Networking (SESOC 20123) » held in March 2013 in San Diego, USA.
- member of the program committee of the « Workshop on Privacy and Anonymity for the Digital Economy (PADE 2013) » held in June 2013 in Sydney, Australia ([http://pade-lcn2013.conference.nicta.com.au/?page\\_id=14](http://pade-lcn2013.conference.nicta.com.au/?page_id=14)).
- member of the program committee of the « 11th International Conference on Privacy, Security and Trust (PST 2013) » held in July 2013 in Tarragona, Spain (<http://unescoprivacychair.urv.cat/pst2013/>).
- member of the program committee of the « 14th Conference on Communications and Multimedia Security (CMS 2013) » held in September 2013 in Magdeburg, Germany (<http://www.cms2013.de/>).
- member of the program committee of the « 8th International Workshop on Data Privacy Management (DPM 2013) » held in September 2013 in Egham, UK (<http://research.icbnet.ntua.gr/DPM2013/>).

- member of the program committee of the « 6th Symposium on Foundations and Practice of Security (FPS 2013) » held in October 2013 in La Rochelle, France (<http://conferences.telecom-bretagne.eu/fps/2013/>).
- member of the program committee of the « 8th International Conference on Risks and Security of Internet and Systems (CRISIS 2013) » held in October 2013 in La Rochelle, France (<http://secinfo.msi.unilim.fr/crisis2013/>).
- member of the program committee of the « 4th International Conference on Emerging Ubiquitous Systems and Pervasive Networks (EUSPN 2013) » held in October 2013 in Niagara Falls, Canada (<http://cs-conferences.acadiau.ca/euspn-13/>).
- external reviewer for PETS 2013 (13th Privacy Enhancing Technologies Symposium), Transactions on Mobile Computing, IEEE Transactions on Parallel and Distributed Systems, Journal of Parallel and Distributed Computing, Journal of Systems and Software and Information Systems.

Gilles Guette is member of the program committee of the symposium SSTIC. He also served as a reviewer for the following conferences:

- National conference SARSSI 2013.
- National conference SSTIC 2013.

Ludovic Mé is a member of the steering committee of RAID (International Symposium on Research in Attacks, Intrusions and Defenses, ex-Recent Advances in Intrusion Detection), of the French conference SARSSI, and of the conference C&ESAR organized by the DGA. He served from 2011 to 2013 the scientific board of the CSFRS ("High Council for Strategic Education and Research"). He served this year as a reviewer for the ANRT organization, and for a few journals.

Guillaume Piolle served as a reviewer for the Internal Journal of Information Security. He is a member of CERNA, the ethics committee of Allistene, serving as a common reference point for French institutions undertaking research in information technologies. He also served as a reviewer for the following conferences:

- IIT - International Conference on Innovations in Information Technology 2013;
- SARSSI - National conference on Security of Information Systems and Network Architectures 2013.

Nicolas Prigent served as a reviewer for the SSTIC 2013 conference. He also was the PC chair of SAR-SSI 2013.

Frédéric Tronel served as a reviewer for the following conferences:

- International conference Principles of Distributed Computing (PODC 2013) (as an external reviewer).
- National conference SSTIC 2013.

Valérie Viet Triem Tong served as a reviewer for the following conferences:

- International journal Science of Computer Programming.
- International conference ICC 2014.

Guillaume Hiet served as a reviewer for the following organizations :

- Fonds de recherche du Québec – Nature et technologies
- ANRT
- ANR (INS)

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Christophe Bidan is Professor at Supélec :

Licence : “Models and programming languages”, lab work (8h), L3 - first year of the engineer degree, Supélec, France

Licence : “Foundations of computer science, data structures and algorithms.”, lectures (18h), tutorial (6h) and lab work (12h), L3 - first year of the engineer degree, Supélec, France

Licence: “Software engineering”, tutorial (6h) and lab work (12h), L3 - first year of the engineer degree, Supélec.

Licence: “Information System”, tutorial (6h), M1 - second year of the engineer degree, Supélec.

Master : “Introduction to security”, lab work (4h30), M2 - third year of the engineer degree, Supélec, France

Master : “Applied / Advanced Cryptography”, lectures (12h) and lab work (24h), M2 - third year of the engineer degree, Supélec, France.

Master : “Supervision of student project”, 4 projects, M1 - second year of the engineer degree, Supélec, France

Master : “Supervision of student project”, 1 project, M2 research degree of University of Rennes I.

Sébastien Gambis is Associate Professor at Université de Rennes I:

Master: “Protection of Privacy”, 32 hours including 16 hours of lectures, M2 - Master Pro SSI, Université de Rennes I, France.

Master: “Topics on Authentication”, 16 hours of lectures, M2 - Master Pro SSI, Université de Rennes I, France.

Gilles Guette is Associate Professor at University of Rennes I :

Master : “Network Architecture and Security”, 48 hours including 16 hours of lecture, M1 - second year of the engineer degree, ESIR, France

Master : “Network Administration”, 42 hours including 14 hours of lecture, M1 - second year of the engineer degree, ESIR, France

Master : “Network and System Tools”, 24 hours including 4 hours of lecture, M1 - second year of the engineer degree, ESIR, France

Master : “Access Network”, 6 hours including 2 hours of lecture, M1 - second year of the engineer degree, ESIR, France

Master : “Network and System Security”, 18 hours including 6 hours of lecture, M2 - third year of the engineer degree, ESIR, France

Master : “Network Security”, 12 hours including 12 hours of lecture, M2 - third year of the engineer degree, ESIR, France

Master : “Infrastructure Network”, 20 hours including 4 hours of lecture, M2 - third year of the engineer degree, ESIR, France

Master : “Supervision of student project”, 1 projects, M1 - Master in Computer Science, ISTIC, France

Master : “Supervision of student project”, 1 projects, M1 - second year of the engineer degree, ESIR, France

Master : “Supervision of student project”, 1 project, M2 - third year of the engineer degree, ESIR, France

Ludovic Mé is Professor at Supélec:

Licence: “Software Engineering”, 15h, L3 - first year of the engineer degree, Supélec, France

Master: “Introduction to Computer Security and Privacy”, 6.75 hours, M1 - second year of the engineer degree, Supélec, France

Master: “Information systems”, 6 hours, M1 - second year of the engineer degree, Supélec, France

Master: “Supervision of student project”, 1 project, M1 - second year of the engineer degree, Supélec, France

Master: “Supervision of student project”, 1 project, M2 - third year of the engineer degree, Supélec, France

Master: Ludovic Mé is responsible for the module “Secured information systems”, M2 - third year of the engineer degree, Supélec, France

Doctorat: “Introduction to Information Systems Security”, 18 hours, Université de Rennes I, France

Guillaume Hiet is Assistant-Professor at Supélec:

Licence: “Models and programming languages”, 11 hours, L3 - first year of the engineer degree, Supélec, France

Licence: “Foundations of computer science, data structures and algorithms”, 15 hours, L3 - first year of the engineer degree, Supélec, France

Master: “Computer security and privacy for the engineer”, 10 hours including 4,5 hours of lecture, M1 - second year of the engineer degree, Supélec, France

Master: “Buffer overflow vulnerabilities”, lab work (16h), M2 - third year of the engineer degree, Supélec.

Master: “Pentest”, lab work (9h00), M2 - third year of the engineer degree, Supélec, France

Master: “Introduction to Linux”, lab work (3h), M2 - master CS (Cyber Security), Supélec, France

Master: “Java Security”, lecture (3h), M2 - master CS (Cyber Security), Supélec, France

Master: “Linux Security”, lab work (6h), M2 - master CS (Cyber Security), Supélec, France

Master: “Linux Security”, lecture (3h) and lab work (3h), third year of the engineer degree, Supélec, France

Master: “Intrusion Detection”, lecture (6h) and lab work (6h), M2 - master CS (Cyber Security), Supélec, France

Master: “Intrusion Detection”, lecture (3h) and lab work (6h), M2 - third year of the engineer degree, M2 research degree of University of Rennes I, Supélec

Master: “Intrusion Detection”, lecture (8h) and lab work (12h), M2 - master 2 degree, University of Rennes I, France

Master: “Intrusion Detection”, lecture (4h) and lab work (6h), M2 - third year of the engineer degree, ESIR, France

Master: “Intrusion Detection”, 6 hours of lecture, M2, Université de Limoges, France

Master: “Firewall”, lecture (4h), M2 - master 2 degree, University of Rennes I, France

Master: “Supervision of student project”, 4 projects, M1 - second year of the engineer degree, Supélec, France

Master: “Supervision of student project”, 1 project, M2 - third year of the engineer degree, Supélec, France



Guillaume Piolle is Assistant Professor at Supélec:

Licence: “Programming models and languages”, 14 hours, L3 - first year of the engineer degree, Supélec, France

Licence: “Foundations of computing, data structures and algorithms”, 15 hours, L3 - first year of the engineer degree, Supélec, France

Licence: “Logical systems and electronics”, 16 hours, L3 - first year of the engineer degree, Supélec, France

Licence: “Software engineering”, 22 hours, L3 - first year of the engineer degree, Supélec, France

Master: “Modelling, algorithms and programming”, 17 hours including 9 hours of lecture, M1 - second year of the engineer degree, Supélec, France

Master: “Computer security and privacy for the engineer”, 10,5 hours including 7,5 hours of lecture, M1 - second year of the engineer degree, Supélec, France

Master: “Security policies”, 3 hours of lecture, M2 - third year of the engineer degree, Supélec, France

Master: “Network access protection”, 6 hours, M2 - third year of the engineer degree, Supélec, France

Master: “Network supervision in Java”, 3 hours, M2 - third year of the engineer degree, Supélec, France

Master: “Symbolic artificial intelligence”, 3 hours of lecture, M2 - third year of the engineer degree, Supélec, France

Master: “C++/Qt”, 15 hours, M2 - third year of the engineer degree, Supélec, France

Master: “Privacy protection”, 3 hours of lecture, M2 - third year of the engineer degree, Supélec, France

Master: “Introduction to privacy protection”, 4 hours of lecture, M2, joint degree between University of Saint-Étienne, École Nationale Supérieure des Mines de Saint-Étienne, France, and University of Alicante, Spain

Master: “Legal aspects of computing”, 1 hour of lecture, course for computing high school teachers, Académie de Rennes, France

Master: “Law and computing”, 4 hours of lecture, M2, master in Cybersecurity, joint degree between Supélec and École Nationale Supérieure des Télécommunications de Bretagne, France

Nicolas Prigent is Assistant Professor at Supélec:

Master: “Operating systems”, lectures (10h30), M2 - third year of the engineer degree, Supélec.

Master: “Automatic reasoning”, lectures (3h00) and lab work (1h30), M2 - third year of the engineer degree, Supélec.

Master: “Python for security”, lectures (3h00) and lab work (3h00), M2 - third year of the engineer degree, Supélec.

Master: “Advanced Java”, lectures (3h00) and lab work (3h00), M2 - third year of the engineer degree, Supélec.

Master: “Pentest”, lab work (9h00), M2 - third year of the engineer degree, Supélec.

Master: “MS-Windows”, lectures (6h00) and lab work (6h00), M2 - third year of the engineer degree, Supélec.

Master: “Preparation to iCTF, operational security”, lab work (20h00), M2 - third year of the engineer degree, Supélec.

Licence: “Programming models and languages”, 14 hours, L3 - first year of the engineer degree, Supélec.

Master: “Supervision of student project”, 4 projects, M1 - second year of the engineer degree, Supélec, France.

Master: “Supervision of student project”, 3 projects, M3 - third year of the engineer degree, Supélec, France.

Eric Totel is Professor at Supélec :

Licence : “Models and programming languages”, 19.5 hours including 10.5 hours of lecture, L3 - first year of the engineer degree, Supélec, France

Licence : “Foundations of computer science, data structures and algorithms”, 6 hours, L3 - first year of the engineer degree, Supélec, France

Master : “Computer systems’ architecture”, 30 hours, M1 - second year of the engineer degree, Supélec, France

Master : “C language”, 24 hours including 6 hours of lecture, M2 - master CS (Cyber Security), Supélec, France

Master : “C language and C++ language”, 12 hours including 6 hours of lecture, M2 - third year of the engineer degree, Supélec, France

Master : “Dependability”, 9 hours including 7.5 hours of lecture, M2 - third year of the engineer degree and master research, Supélec, France

Master : “Dependability”, 3 hours of lecture, M2 - third year of the engineer degree (ingénierie des systèmes automatisés), Supélec, France

Master : “Dependability”, 4.5 hours of lecture, M2 - post-graduate training (master Architecture des Réseaux de Communication), Supélec, France

Master : “Intrusion Detection”, 6 hours of lecture, M2 - M2 - master CS (Cyber Security), Supélec, France

Master : “Intrusion Detection”, 8 hours of lecture, M2 - master 2 degree, University of Rennes I, France

Master : “Intrusion Detection”, 4 hours of lecture, M2 - master 2 degree, University of Rennes I, France

Master : “Supervision of student project”, 4 projects, M1 - second year of the engineer degree, Supélec, France

Master : “Supervision of student project”, 1 project, M2 - third year of the engineer degree, Supélec, France

Frédéric Tronel is Associate Professor at Supélec:

Licence: “Software engineering”, lectures (15h), tutorial (6h) and lab work (12h), L3 - first year of the engineer degree, Supélec.

Master: “Operating systems”, lectures (10h30), M2 - third year of the engineer degree, Supélec .

Master: “Compilers”, lectures (9h), lab work (12h), M2 - third year of the engineer degree, Supélec.

Master: “Automatic reasoning”, lectures (4h30) and lab work (1h30), M2 - third year of the engineer degree, Supélec.

Master: “Buffer overflow vulnerabilities (theory and practice)”, lecture (3h) and lab work (12h), M2 - third year of the engineer degree, Supélec.

Master: “Buffer overflow vulnerabilities (theory and practice)”, lectures (3h) and lab work (3h), M2 - third year of the engineer degree, Telecom Bretagne.

Master: “Firewall”, tutorial (3h), lab work (3h), M2 - third year of the engineer degree, Supélec.

Master: “Calculability in distributed systems”, lecture (6h), M2 research degree jointly with University of Rennes I and Supélec.

Valérie Viet Triem Tong is associate Professor at Supélec :

Licence : “Models and programming languages”, Lab work (10h), L3 - first year of the engineer degree, Supélec, France

Licence : “Foundations of computer science, data structures and algorithms.”, tutorial (3h) and lab work (6h), L3 - first year of the engineer degree, Supélec, France

Licence : “Programming with Java”, Lectures and lab work (12h), M1- International student in second year of the engineer degree (NplusI program), Supélec, France

Master: “Game Theory”, Lectures and lab work (20h), M1 - second year of the engineer degree, Supélec.

Master: “Projects in computer science ”, coordination of the projects for all students second year of the engineer degree (60 students at Rennes), Supélec.

Master: “Supervision of student project”, 4 projects, M1 - second year of the engineer degree, Supélec, France

Master : “Applied / Advanced Cryptography”, lectures (3h) and lab work (3h), M2 - third year of the engineer degree, Supélec, France.

Master: “Intrusion Detection”, Lectures (3h), M2 - third year of the engineer degree, M2 research degree of University of Rennes I, Supélec.

Master: “Automatic reasoning”, lectures (4h30), M2 - third year of the engineer degree, Supélec.

Master: “Security of program using proof assistants”, Lectures and lab work (10h30), M2 - third year of the engineer degree, Supélec.

### **9.2.2. Supervision**

PhD: Christophe Hauser, “Détection d’intrusions dans les systèmes distribués par propagation de teinte au niveau noyau – A basis for intrusion detection in distributed systems using kernel-level data tainting”, Université de Rennes I (France) and Queensland University of Technology (Brisbane, Australia) joint PhD, June 2013, 19<sup>th</sup>, supervised by Ludovic Mé (20%) and Frédéric Tronel (80%).

PhD in progress: Radoniaina Andriatsimandefitra, “Protection de l’information dans l’environnement Android”, started in October 2011, supervised by Ludovic Mé (20%) and Valérie Viet Triem Tong (80%).

PhD in progress: Mounir Assaf, “Vérification de propriétés de sécurité par analyse statique sur des programmes C de grande taille”, started in November 2011, supervised by Ludovic Mé (20%), Eric Totel (40%), and Frédéric Tronel (40%).

PhD in progress: Simon Boche, “Réputation et respect de la vie privée dans les réseaux auto-organisé”, started in October 2012, supervised by Christophe Bidan(30%), Gilles Guette (35%) and Nicolas Prigent (35%).

PhD in progress: Georges Bossert, “Méthodologie d’évaluation des systèmes de détection d’intrusions”, started in October 2010, supervised by Ludovic Mé (20%) and Guillaume Hiet (80%).

PhD in progress: Thomas Demongeot, “Protection des données utilisateur dans les web services”, Telecom Bretagne, started in September 2008, supervised by Eric Totel (50%) and Valérie Viet Triem Tong (50%). The Phd was defended with success on the 19th of December 2013.

PhD in progress: Stéphane Geller, “Administration de politiques de sécurité reposant sur le contrôle des flux d’information”, started in October 2009, supervised by Ludovic Mé (20%) and Valérie Viet Triem Tong (80%).

PhD in progress: Erwan Godefroy, “Corrélation d’alertes dirigée par la connaissance de l’environnement”, started in November 2012, supervised by Michel Hurfin (20%), Ludovic Mé (30%) and Eric Totel (50%).

PhD in progress: Geoffroy Guéguen, “Métamorphisme viral et grammaires formelles”, université de Rennes I, started in March 2011, supervised by Sébastien Josse (50% - DGA-MI) and Ludovic Mé (50%).

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%) and Nicolas Prigent (50%).

PhD in progress: Mouna Hkimi “, Détection d’intrusion dans les systèmes distribués: Application au cloud computing”, started in October 2013, supervised by Eric Totel (50%) and Michel Hurfin (50%).

PhD in progress: Christopher Humphries, “Visualisation d’évènements de sécurité”, started in December 2011, supervised by Christophe Bidan (20%) and Nicolas Prigent (80%).

PhD in progress: Paul Lajoie-Mazenc, “Privacy preserving reputation system in large scale and self organizing systems”, started in October 2012, supervised by Emmanuelle Anceaume (50%) and Valérie Viet Triem Tong (50%).

PhD in progress: Julien Lolive, “Entwining identification and privacy mechanisms”, Télécom-Bretagne, started in December 2012, supervised by Caroline Fontaine (50% - Télécom-Bretagne) and Sébastien Gambis (50%).

PhD in progress: Regina Marin, “Privacy protection in distributed social networks (Protection de la vie privé dans les réseaux sociaux distribués”, started in November 2011, supervised by Christophe Bidan (20%) and Guillaume Piolle (80%).

PhD in progress: Pierre Obame, “Dependability issues in large scale systems”, started in February 2012, supervised by Emmanuelle Anceaume (50%) and Frédéric Tronel (50%).

PhD in progress: Deepak Subramanian, “Multi-level Information Flow Monitoring”, started in January 2013, supervised by Christophe Bidan (20%) and Guillaume Hiet (80%).

Some members of the team also participate to the supervision of external PhD students. Sébastien Gambis is co-supervising Raghavendran Balu (PhD student for Texmex, Inria Rennes), Mohammad Nabil Al-Aggan (PhD student from ASAP, Inria Rennes, who defended his thesis on December 2013), Miguel Nunez del Prado Cortez (PhD student from LAAS-CNRS, Toulouse, who defended his thesis on December 2013), and Moussa Traore (PhD student from LAAS-CNRS, Toulouse). Emmanuelle Anceaume is co-supervising Romaric Ludinard (PhD student from the Inria project Dionysos, Rennes). Valérie Viet Triem Tong participates to the "supervision committee" of Quentin Jerome Phd Student from the University of Luxembourg. Christophe Bidan is supervising Kun He (PhD student from the IRT B-Com).

### 9.2.3. *Juries*

- Ludovic Mé was a member of the mid-term PhD committees for a PhD student at Ecole des Mines de Nantes (Florent de Kerchove). Ecole des Mines de Nantes, June 2013.
- Ludovic Mé was a member of the PhD committee (reviewer) for the PhD of Gabriel Serme entitled “Modularisation de la sécurité informatique dans les systèmes distribués”, Télécom Paris Tech, November 2013.
- Ludovic Mé was a member of the PhD committee (president of the jury) for the PhD of Mohammad Alaggan entitled “Private peer-to-peer similarity computation in personalized collaborative platforms”, Université de Rennes I, December 2013.
- Ludovic Mé was a member of the PhD committee (examinateur) for the PhD of Gustavo Gonzalez Granadillo entitled “Optimization of Cost-based Threat Response for Security Information and Event Management Systems”, Télécom SudParis et Université Pierre et Marie Curie, December 2013.
- Christophe Bidan was a member of the PhD committee (president of the jury) for the PhD of Aude Plateaux entitled “Solutions opérationnelles d’une transaction électronique sécurisée et respectueuse de la vie privée”, Université de Caen Basse-Normandie, November 2013.

- Christophe Bidan was a member of the PhD committee (examiner) for the PhD of Ludovic Jacquin entitled “Compromis performance/sécurité des passerelles très haut débit pour Internet”, Université de Grenoble, November 2013.
- Christophe Bidan was a member of the PhD committee (reviewer) for the PhD of Mohamed Amine Riahlia entitled “Contributions au routage et l’anonymat des échanges dans les réseaux dynamiques”, Université de Limoges, March 2013.

### **9.3. Popularization**

[17] represents an effort to communicate to the community of engineers and company officials the reflexions and evolutions taking place in academia in the domain of personal data protection, in the fields of both computer science and law. The adopted perspective is to shed some light on the evolutions of the requirements, procedures and policies applying to public or private organizations, putting them in correspondence with the evolution of technical and legal risks, societal motivations and computing tools.

## MYRIADS Project-Team

# 9. Dissemination

## 9.1. Scientific Animation

### 9.1.1. Program committees

Roberto Cascella was program committee member for IEEE VTC 2013-Fall and IEEE VTC 2013-Spring.

Eugen Feller was program committee member of EE-LSDS 2013 and PDP (2013, 2014).

Yvon Jégou was program committee member of IEEE TrustCom 2013 conference, GC2013 conference and ORMaCloud workshop co-located with ACM HPDC 2013.

Christine Morin was program committee member of the *International Symposium on Parallel and Distributed Computing (ISPDC)* in 2013 and 2014, *IEEE International Parallel & Distributed Processing Symposium (IPDPS)* in 2014, *IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CC-GRID)* in 2013 and 2014, *CLOSER* in 2013 and 2014, *International Conference on Cloud and Green Computing (CGC)* in 2013, *Resilience (Workshop on Resiliency in High Performance Computing in Clusters, Clouds, and Grids)* co-located with EuroPar in 2013, *VTDC (International Workshop on Virtualization Technologies in Distributed Computing)* co-located with ACM HPDC in 2013, *ScienceCloud* co-located with ACM HPDC in 2013, *OrmaCloud* co-located with ACM HPDC in 2013 and 2014, *ESPAS (Workshop on Extreme Scale Parallel Architectures and Systems)* in 2014 *CrossCloud (workshop on cloud interoperability and federation)* co-located with INFOCOM in 2014, *Distributed Cloud Computing (DCC)* workshop co-located with SIGCOMM in 2014. She was *General Co-Chair* of the IEEE ISPA conference held in Melbourne, Australia, in July 2013. She was *Program vice-chair* of the IEEE GreenCom conference held in Beijing, China, in August 2013. She was *General co-chair* of the DIHC international workshop co-located with the EuroPar conference held in Aachen, Germany, in August 2013. She is *Tutorial Chair* of the IEEE Cluster conference to be held in Madrid, Spain, in September 2014.

Anne-Cécile Orgerie was program committee member of FedICI workshop co-located with EuroPar 2013, OPTIM workshop co-located with HPCS 2013, IEEE GreenCom 2013, CGC 2013, ITC SSEGN seminar co-located with ATNAC 2013, TIWDC 2013, HSNCE workshop co-located with COMPSAC 2013, EEHPDC workshop co-located with HPDC 2013, EE-LSDS 2013, and E2HPC2 workshop co-located with EuroMPI 2013. She was also publication co-chair for ICPP 2013, general co-chair for ExtremeGreen workshop co-located with CCGrid 2013, and demo chair for EE-LSDS 2013.

Guillaume Pierre was program committee member of CCGrid 2013, CFSE 2013, IC2E 2013, SAC 2013, DAIS 2013, CSCS19, CloudDP 2013, ISPDC 2013, ORMaCloud 2013, BigDataCloud 2013, DIHC 2013, IC2E 2014, DADS track of SAC 2014, and MobileCloud 2014. He was also workshop chair of EuroSys 2014.

Thierry Priol was SC'13 "Grids and Clouds" track co-chair.

Cédric Tedeschi was a program committee member of ICWS 2013, ICCS 2013, CloSer 2013 and ComPas2013.

### 9.1.2. Evaluation committees, consulting

Roberto Cascella was invited to join the final review of the FUI11 CompatibleOne French project.

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.

C. Morin acted as an expert to review proposals for the French Research Agency (ANR). She is a member of the ModaClouds European project Advisory Board. Since September 2013, she has been a member of the Irisa/Inria "Commission Personnel" being in charge of post-docs and "délégations". She is a member of the scientific council of ENS Cachan. She was a member of a professor position selection committee at *Ecole des Mines de Nantes*.

Anne-Cécile Orgerie is expert at the AERES for evaluating the doctoral schools.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Roberto Cascella (at the University of Rennes 1):

- License 3: Inter-networking (30h ETD)

Christine Morin is responsible for the ISI teaching unit.

Christine Morin:

- Master : Internet of Services: Programming Models & Infrastructures (ISI), 12 hours ETD, M2RI, University of Rennes 1, France.
- Master : Cluster single system image operating systems, 4.5 hours ETD, M2, Institut Telecom Sud Paris, France.
- Master : Energy management in computing infrastructures (as part of the Eco-STIC module), 4.5 hours ETD, M1, Supelec, France.

Anne-Cécile Orgerie (at ENS de Rennes):

- Master 1: projet logiciel (24 hours ETD)
- License 3: architecture et systèmes 2 (36 hours ETD)

Nikos 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, Networking and SOA.

Jean-Louis Pazat (at INSA Rennes for 2012-2013):

- 4th year: Advanced Operating Systems (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 ETD)
- Master 1: Service Technologies (24 ETD)
- Master 2: Approche algorithmique des applications et systèmes répartis (32 ETD)

Cédric Tedeschi (at the University of Rennes 1 for 2012-2013):

- Licence 3: Organization of Operating System (38 hours ETD)
- Licence 3: Algorithmic methods (22 hours ETD)
- Master 1: Multitask Operating Systems (65 hours ETD)
- Master 1: Concurrency in Systems and Networks (56 hours ETD)
- Master 2: Multi-users systems (50 hours ETD)
- Master 2 (research): Internet of Services (6 hours ETD)

### 9.2.2. Supervision

PhD : Marko Obrovac, Chemical Computing for Distributed Systems: Algorithms and Implementation, Université de Rennes 1, March, 28 2013, Thierry Priol, Cédric Tedeschi.

PhD : Erwan Daubert, Environmental adaptation of services in large scale distributed architectures, INSA de Rennes, May 24 2013, Françoise André, Olivier Barais (Triskell), Jean-Louis Pazat.

PhD : Chen Wang, Using Chemical Metaphor to Express Workflow and Service Orchestration, INSA de Rennes May, 28 2013, Jean-Louis Pazat.

PhD : Stefania Costache, Market-based Autonomous Resource and Application Management in the Cloud, defended on 3 July 2013, Christine Morin, Nikos Parlavantzas.

PhD in progress : Djawida Dib, Dynamic adaptation in distributed systems, October 2010, Christine Morin, Nikos Parlavantzas.

PhD in progress : Ancuta Iordache, Multi-resource optimization for application hosting in heterogeneous clouds, February 2013, Guillaume Pierre.

PhD in progress: Yunbo Li, Resource allocation in a Cloud partially powered by renewable energy sources, 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, October 2013, Christine Morin, Anne-Cécile Orgerie.

PhD in progress: Édouard Outin, A multi-objective adaptation system for the management of a Distributed Cloud, October 2013, Olivier Barais (Triskell), Yvon Jégou, Jean-Louis Pazat.

PhD in progress: Sabbir Hasan, SLA Driven Cloud autoscaling for optimizing energy footprint, December 2013, Thomas Ledoux (Ascola), Jean-Louis Pazat.

### 9.2.3. Juries

- Christine Morin is a reviewer in the PhD defense committee of Marco Meoni, EPFL (January 8, 2013).
- Christine Morin is a member of the PhD defense committee of Flavien Quesnel, Ecole des Mines de Nantes (February 20th, 2013).
- Christine Morin is a reviewer in the PhD defense committee of Damien Borghetto, Université de Toulouse 1 (June 3rd 2013).
- Christine Morin is a reviewer in the PhD defense committee of Enric Tejedor Saavedra, Université Polytechnique de Catalogne (UPC), Spain (July 15th, 2013).
- Christine Morin is a member of the PhD defense committee of Gylfi Gudmundsson, Université de Rennes 1 (September 12th 2013).
- Christine Morin is a member of the PhD defense committee of Joseph Emeras, Université de Grenoble (October 1st, 2013).
- Christine Morin is the president the HDR committee of Laurent Lefèvre, ENS Lyon (November 14th 2013).
- Christine Morin is a reviewer in the PhD defense committee of Sylvain Lefebvre, CNAM, Paris (December 10th 2013).



- Christine Morin is the president of the PhD defense committee of Minh Tuan Ho, University of Rennes 1 (December 18th, 2013).
- Guillaume Pierre is a member of the PhD defense committee of Jiayi Liu, Telecom Bretagne (November 4th 2013).
- Guillaume Pierre is a member of the promotion committee to the rank of Assistant Professor of George Pallis, university of Cyprus (October 30th 2013).
- Guillaume Pierre is a member of the PhD defense committee of Alexandre van Kampen, Inria (March 8th 2013).
- Guillaume Pierre is a member of the PhD defense committee of Viet-Trung Tran, Inria (January 21st 2013).
- Cédric Tedeschi is a member of the PhD defense committee of Chen Wang, Université Rennes 1 (May 28th 2013)
- Jean-Louis Pizat is a reviewer for the PhD thesis of Frederico Alvares, Ecole des Mines de Nantes (April 9th 2013)
- Jean-Louis Pizat is the president of the PhD defense of Rémy Druilhe, Université de Lille (December 5th 2013)
- Jean-Louis Pizat is the president of the PhD defense of Tan Le Nhan, Université de Rennes 1 (December 10th 2013)

### 9.3. Popularization and scientific animation

- Roberto Cascella gave a talk entitled “The Conrail approach for interoperable and dependable Clouds” at Create-Net, 12 December 2013 (Trento, Italy)
- Roberto Cascella gave a talk entitled “The Conrail Approach for Interoperable Clouds” at Cloud Interoperability Workshop, 18 September 2013 (Madrid, Spain — <http://www.cloudplugfest.org/cloud-interoperability-week/workshop>)
- Roberto Cascella gave a talk entitled “Open Social Lab: Ad Hoc Clouds for Crowd Social Computing” at Séminaire thématique Inria “Smart Cities”, 17 July 2013 (Paris, France)
- Roberto Cascella was a panelist in the panel “la sécurité dans le monde ouvert d’Internet” at journée CominLabs (Rennes, France)
- Roberto Cascella gave a talk entitled “Conrail: Open Computing Infrastructures for Elastic Services” at pre-FIA workshop “Multi-Cloud Scenarios for the Future Internet”, 7 May 2013 (Dublin, Ireland)
- Djawida Dib gave a talk entitled “Meryn - Open, SLA-driven, Cloud Bursting PaaS ” at Lawrence Berkeley National Laboratory, Berkeley, USA, in June 2013.
- Stefania Costache gave a talk entitled “Market-based Autonomous Resource and Application Management in the Cloud” at Queen’s University of Belfast, Belfast, UK, in November 2013.
- Florian Dudouet gave a talk about VEP at the Conrail summer school (Almere, the Netherlands, July 2013)
- Eugen Feller gave a talk entitled “From Autonomic Cloud Management to Storage and Data Management for Scientific Applications” at Ericsson Research Silicon Valley, October 2013 (San Jose, CA, USA).
- Eugen Feller gave a talk entitled “DALHIS – Data Analysis on Large Heterogeneous Infrastructures for Science” at the Berkeley-Inria-Stanford workshop, May 2013 (Stanford University, CA, USA).
- Yvon Jégou gave a talk entitled *Mise en œuvre des SLAs dans la pile logicielle Conrail* at the Workshop “SLA Management in Cloud computing”, colocated with ComPAS’2013.
- Yvon Jégou demonstrated the VEP component of Conrail on the Conrail booth during the *EGI Community Forum 2013*, April 8-12, Manchester UK.

- Yvon Jégou gave talk *Contrail Virtual Execution Platform* at the *OpenNebulaConf* event, September 24-26, Berlin, Germany.
- Christine Morin was invited to give a tutorial on *Energy Management in Large-scale Distributed Systems* at the *Green Wireless Communications school* of the NEWCOM Network of Excellence, Poznan, Poland, in September 2013.
- Christine Morin gave a talk entitled "Dependable Cloud Computing in Contrail" on Inria booth at SC'13, Denver, USA, November 2013.
- Christine Morin was invited to give a talk on Myriads activities on cloud computing at the EIT ICT Labs meeting on future clouds, Rennes, France, November 2013.
- Christine Morin gave a talk on Myriads research activities on cloud computing at CREATE-NET, Trento, Italy in December 2013.
- Guillaume Pierre gave a talk about ConPaaS and organized a hands-on session at Contrail summer school (Almere, the Netherlands, July 2013)
- Guillaume Pierre organized the 1st ConPaaS workshop (Amsterdam, the Netherlands, June 13th 2013) and gave the opening presentation
- Anne-Cécile Orgerie gave a talk entitled "Economies d'énergie dans les systèmes distribués à grande échelle", at ENS de Rennes, December 2013.
- Anne-Cécile Orgerie gave a talk entitled "Energy-Efficiency in Large-Scale Distributed Systems: an On-Off Approach" at the ACS department at LBNL, Berkeley, USA, May 2013.
- Anne-Cécile Orgerie gave a talk entitled "Snooze: an autonomic and energy-efficient management system for virtualized clusters" at GreenDaysLuxembourg, January 2013.
- Cédric Tedeschi gave a talk *Un protocole pour la capture atomique de molécules* at the "System" track of CompAS'2013.
- Alexandra Carpen-Amarie gave a talk entitled "Experimental Study of the Energy Consumption in IaaS Cloud Environments" at GreenDaysLille, November 2013.

## 9.4. Miscellaneous

Roberto Cascella is a member of the Inria "Commission locale formation".

Christine Morin is a member of the Project-Team Committee of INRIA RENNES – BRETAGNE ATLANTIQUE (Comité des projets), *Référent Chercheur* for INRIA RENNES – BRETAGNE ATLANTIQUE, Coordinator of the Inria@Silicon Valley program (in collaboration with Inria DRI) until August 2013, member of the scientific council of ENS Cachan. She is the coordinator of Contrail European project.

Nikos Parlavantzas is the local coordinator for the international exchange of students at the computer science department of Insa.

Jean-Louis Pazat is the leader of the "Large Scale Systems" department of IRISA. He is member of the Steering committee (conseil d'administration) of Insa Rennes. He is a member of the Computer Science Department committee and member of the IRISA-INSA Lab committee. He is the local coordinator for the international exchange of students at the computer science department of Insa.

Thierry Priol is the director of the Inria European Partnership department.

Cédric Tedeschi is a member of the administration council of the EECS departement of the University of Rennes 1.

## REGAL Project-Team

# 8. Dissemination

## 8.1. Scientific Animation

Bertil Folliot is:

- Co-program chair du 13th IEEE International Symposium on Parallel and Distributed Computing (ISPDC 2014), Porquerolles Island, France.
- Co-editor (with Juhnyoung Lee, IBM Watson) of International Journal of Networked and Distributed Computing (IJNDC),
- PC Member of 12th International Symposium on Parallel and Distributed Computing (ISPDC 2013), Bucharest, Roumanie, June 2013.
- PC Member of The 2013 International Conference on High Performance Computing & Simulation (HPCS 2013), Helsinki, Finlande, July 2013.
- PC Member of 13th IEEE International Symposium on Parallel and Distributed Computing (ISPDC 2014), Porquerolles Island, France, June 2014.

Swan Dubois is:

- PC member of the 1st International Workshop on Models and Algorithms for Reliable and Open Computing.
- External reviewer for the 31st Symposium on Theoretical Aspects of Computer Science (STACS 2014).

Julia Lawall is:

- Member of the steering committee of Generative Programming and Component Engineering.
- Secretary of IFIP TC2.
- Member-at-large of the SIGPLAN Executive Committee.
- Member of the editorial board of Science of Computer Programming.
- Associate editor of Higher Order and Symbolic Computation.
- Expert reviewer of DAC 2013, Design Automation Conference, Austin, TX, USA, June 2013.
- PC Member of GPCE 2013, Generative Programming and Component Engineering, Indianapolis, IN, October 2013.
- PC Member of OOPSLA 2013, formerly the ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications, Indianapolis, IN, USA, October 2013.
- External review committee of ASE 2013, the 28th IEEE/ACM International Conference on Automated Software Engineering, Palo Alto, CA, USA, November 2013.
- PC Member for various workshops: MISS, PLOS, Hotswup, Scheme Workshop, Real Time Linux Workshop.
- Member of IFIP WG 2.11 (Program Generation).

Gilles Muller is:

- Member of the EuroSys steering committee
- Workshop co-organizer of PLOS 2013, Nemacon Woodlands Resort, Pennsylvania, USA, November 2013.
- PC member of DSN 2013, Budapest, Hungary, June 2013.
- PC member of EuroSys 2013, April 2013, Prague, Czech Republic.
- PC member of ICDCN 2013, January 2013, Mumbai, India.

Franck Petit is:

- Invited Editor of Journal of Theoretical Computer Sciences (TCS), Special Issue on Distributed Computing (ICDCN 2013)
- Invited Editor of Journal of Theoretical Computer Sciences (TCS), Special Issue on Stabilization, Safety, and Security (SSS 2011)
- PC Member of 14th International Conference on Distributed Computing and Networking (ICDCN 2013)
- PC Member of 22th Conférence d’informatique en Parallélisme, Architecture et Système (ComPass 2013)

Pierre Sens is:

- PC Member of 28th IEEE International Parallel & Distributed Processing Symposium (IPDPS’2014)
- PC Member of 2nd IEEE/SAE International Conference on Connected Vehicles and Expo (ICCVE 2013)
- PC Member of 42nd IEEE International Conference on Parallel Processing (ICPP’2013)
- PC Member of 27th IEEE International Parallel & Distributed Processing Symposium (IPDPS’2013)
- Project reviewer for Swiss National Science Foundation (Switzerland).
- Project reviewer for Agence Nationale de la Recherche (France).

In 2013, Marc Shapiro served as:

- Invited speaker at Int. W. on Exploiting Concurrency Efficiently and Correctly ((EC)2), <http://zvonimir.info/events/ec2-2013/>.
- Member of the Scientific Advisory Board of the **Center for Informatics and Information Technologies (CITI)** of **Universidade Nova de Lisboa**.
- Member of the **ACM Europe Council**.
- Member of the board (Conseil d’Administration) of **Société Informatique de France (SIF)**, the French learned society in Informatics.
- Member of the board of the **Euro. Forum for Info. and Comm. Sciences and Technologies (EFICST)**.
- Member of the “Consolidator Grants” for the PE6 (Computer Science) selection panel of the European Research Council (ERC).
- Co-chair of Dagstuhl workshop “Consistency in Distributed Systems” [24].
- Coordinator of FP7 project **SyncFree** (Section 7.2.1.1).
- Coordinator of ANR project (Section 7.1.6 ConcoRDanT).
- PC co-chair for Int. Conf. on Principles of Distr. Sys. (OPODIS) 2014.
- PC member for for **Int. Conf. on Principles of Distr. Sys. (OPODIS) 2013**.
- Review committee member of **ACM Symp. on Principles and Practice of Parallel Programming (PPoPP) 2014**.
- Reviewer for **Int. Symp. on DIStributed Computing (DISC) 2013**.
- Reviewer for **ACM Symp. on Principles of Dist. Comp. (PODC) 2013**.
- Project reviewer for Swiss National Science Foundation (Switzerland).
- Project reviewer for Agence Nationale de la Recherche (France).
- Project reviewer for US-Israel Binational Science Foundation.

Gaël Thomas is:

- PC Member of 7th Workshop on Programming Languages and Operating Systems (PLOS'2013)

Olivier Marin is:

- PC Member of the 1st Workshop on Real Applications for P2P Networks 2013 (RAPP'2013)

## 8.2. Teaching - Supervision - Juries

### 8.2.1. Teaching

Master: Julia Lawall, Coccinelle, 4h, niveau M2, ENSEIRB, Bordeaux.

Licence: Gaël Thomas, Introduction to the C programming language, L1, Université Paris 6

Licence: Swan Dubois, Franck Petit, C programming language, L2, Université Paris 6

Licence: Gaël Thomas, Introduction to computer architecture, L2, Université Paris 6

Licence: Luciana Arantes, Bertil Folliot, Julien Sopena, Franck Petit, Pierre Sens, Principles of operating systems, L3, Université Paris 6

Licence: Mesaac Makpangou, Client/server architecture, L3 professionnelle, Université Paris 6

Licence: Sébastien Monnet, Gaël Thomas, System and Internet programmation, L2, Université Paris 6

Licence: Sébastien Monnet, Computer science initiation, L1, Université Paris 6

Master: Luciana Arantes, Sébastien Monnet, Pierre Sens, Julien Sopena, Gaël Thomas, Operating systems kernel, M1, Université Paris 6

Master: Luciana Arantes, O. Marin, Maria Potop-Butucaru, Distributed algorithms, M1, Université Paris 6

Master: Luciana Arantes, Oliver Marin, Pierre Sens, Advanced distributed algorithms, M2, Université Paris 6

Licence: Luciana Arantes, Bertil Folliot, Olivier Marin, POSIX Advanced C system programming, M1 d'Informatique, Université Paris 6

Master: Bertil Folliot, Julien Sopena, Distributed systems and client/serveur, M1, Université Paris 6

Licence: Bertil Folliot, C programming & systems, L2, Université Paris 6

Licence: Bertil Folliot, Directed projects, L2, Université Paris 6

Licence: Bertil Folliot, Head of the Computer Courses "Applications of Computer Technology and Communication", L2, Université Paris 6

Master: Franck Petit, Resistance of Distributed Attacks, M2, Université Paris 6,

Master: Franck Petit, Embedded communicant systems, M2, Université Paris 6

Master: Luciana Arantes, Sébastien Monnet, Julien Sopena, Gaël Thomas, Middleware for advanced computing systems, M2, Université Paris 6"

Master: Marc Shapiro, Julien Sopena, Gaël Thomas, multicore kernels and virtualisation, M2, Université Paris 6

Master of Engineering: Marc Shapiro, OS-User, PolyTech-UPMC I4.

### 8.2.2. Supervision

PhD: Ruijing Hu, "Epidemic dissemination algorithms in large-scale networks: comparison and adaption to topologies", UPMC, 2/12/2013, Luciana Arantes, Isabelle Demeure, Julien Sopena, Pierre Sens.

PhD: Guthemberg Da Silva Silvestre, "Designing Adaptive Replication Schemes for Efficient Content Delivery in Edge Networks", UPMC, 18/10/2013, Sébastien Monnet, Pierre Sens.

PhD: Massata Ndiaye, “Techniques de gestion des défaillances dans les grilles informatiques tolérantes aux fautes”, UPMC, 17/09/2013, Pierre Sens.

PhD: Thomas Preud’homme, “Optimized inter-core communication for pipeline parallelism”, UPMC, 10/06/2013, Bertil Folliot, Gael Thomas, Julien Sopena.

PhD: Suman Saha, Improving the Quality of Error-Handling Code in Systems Software using Function-Local Information, UPMC, 25/03/2013, Giller Muller and Julia Lawall.

PhD: Anissa Lamani, “Algorithmes avec optimisation de ressources pour des problèmes et des systèmes distribués variés”, UPJV, 19/03/2013, Franck Petit et Vincent Villain.

### 8.2.3. *Juries*

Bertil Folliot was member of the jury of:

- Alexandre Carbon. Accélération matérielle couplée au processeur en charge de la compilation dynamique afin d’en accroître les performances. Thèse de Doctorat de l’Université Paris VI, CEA+Nano-INNOV, Palaiseau, October 2013 (président du jury).
- Ruijing Hu. Un système adaptatif de publication-abonnement pour des réseaux mobiles. Thèse de Doctorat de l’Université Paris VI, November 2013 (président du jury).
- Ridha Benosman. Conception et évaluation de performances d’un bus applicatif, parallèle et orienté services. Thèse de Doctorat du Conservatoire National des Arts et Métiers, Paris, December 2013 (président du jury).

Julia Lawall was member of the jury of:

- Tegawendé F. Bissyandé. PhD University of Bordeaux (Advisor: Laurent Réveillère)

Gilles Muller was the reviewer of:

- Sylvain Geneves, PhD U. of Grenoble (Advisor: Vivien Quema)
- Emmanuel Sifakis, PhD U. of Grenoble (Advisor: Laurent Mounier)

Gilles Muller was member of the jury of:

- Preston Rodrigues, PhD University of Bordeaux (Advisor: Laurent Réveillère)
- A MCF position at INSA of Lyon.
- Four committees for engineer positions at the Inria Paris-Rocquencourt.

Franck Petit was the reviewer of:

- Yvan Rivierre. PhD VERIMAG, Grenoble (Advisors: Florence Maraninchi, Fabienne Carrier, Stéphane Devismes)
- Sylvie Delaët, HDR LRI, Orsay.
- Hung Tran-The, PhD LIAFA, Paris (Advisors: C. Delporte-Gallet, H. Fauconnier)

Franck Petit was member of the jury of:

- Ndeye Massata Ndiaye, PhD LIP6, Paris (Advisors: Pierre Sens, Ousmane Thiare)

Pierre Sens was the reviewer of:

- Martin Quinson. HDR Loria, Nancy
- Houssein Chihoub. PhD ENS Cachan, Rennes (Advisors: Luc Bougé, Gabriel Antoniu)
- Aeiman Gadafi. PhD ENSHEIT, Toulouse (Advisor: Daniel Hagimont)
- Marko Obravac. PhD Rennes 1, Rennes (Advisor: Thierry Priol, Cedric Tedeschi)
- Mehdi Diouri. PhD ENS Lyon, Lyon (Advisor: Eddy Caron)

Gaël Thomas was the reviewer of:

- François Goicho, PhD Université de Lyon (Advisors: Stéphane Frénot, Guillaume Salagnac)
- Quentin Sabah, PhD Université de Grenoble (Advisor: Jean-Bernard Stefani)
- Konstantinos Kloudas, PhD Université de Rennes (Advisor: Anne-Marie Kermarrec)
- Geoffroy Cogniaux, PhD Université de Lille (Advisor: Gilles Grimaud, Michael Hauspie)

### **8.3. Popularization**

- Marc Shapiro presented a tutorial on “From strong to eventual consistency: getting it right” at [OPODIS 2014](#).
- Marc Shapiro organized the Dagstuhl workshop on “Consistency in Distributed Systems,” in February 2013 [24].

## SCORE Team

# 7. Dissemination

## 7.1. Scientific Animation

- Claude Godart is member of the editorial board of IEEE transaction on Service Computing, International Journal of Services Computing and International Journal of E-adoption journals, and member of the review board of the International Journal of Next Generation Computing. He has been PC co-chair of EIDWT 2013 (4th International Conference on Emerging Intelligent Data and Web Technologies). In 2013, he has been program committee member of BPM (Business Process Management), BPMDS (Business Process Modelling, Development and Support), CBI (IEEE Conference on Business Informatics), IEEE Conference on Big Data, EDOC (The enterprise computing conference), IEEE CLOUD Computing, ICWS (IEEE International Conference on Web Services), RCIS (Research challenges in Information Systems), SCC (IEEE International Conference on Services Computing) conferences.
- Claudia-Lavinia Ignat is member of the editorial board of Journal of CSCW (Computer Supported Cooperative Work). She has been or is PC member of CSCW (International Conference on Computer Supported Cooperative Work and Social Computing) 2015, SIGMOD Demo 2014, CDVE (International Conference on Cooperative Design, Visualization and Engineering) 2013 and 2014, ICEBE (International Conference on Business Engineering) 2013 and the workshop IWCES (International Workshop on Collaborative Editing Systems) in 2013 and 2014. She reviewed papers for IEEE Transactions on Parallel and Distributed Systems and Transactions on Internet Technology.
- Olivier Perrin has been or is Program Committee member of ICSOC 2013, BPM PALS 2013 workshop (3rd International Workshop on Process-Aware Logistics Systems), QASBA 2013 workshop (Quality Assurance for Service-based applications) 2013, BIS 2013 (International Conference on Business Information Systems), SITIS conference 2013 and 2014. He reviewed in 2013 papers for IEEE Transactions on Services Computing, International Journal of Cooperative Information Systems, Automated Software Engineering, IEEE Transactions on the Web journals.
- Gérald Oster was a PC member of CoopIS 2013 (International Conference on Cooperative Information Systems).
- François Charoy has been PC member of ICEBE (International Conference on Business Engineering) 2013, CTS 2013 (International Symposium on Collaborative Technologies and Systems), DG.O (International Conference on Digital Government Research) 2013, and of several workshops. He is member of the editorial board of the Service Oriented Computing and Applications Journal (Springer). He was co-chair of the Third Collaborative Technology for Coordinating Crisis Management Track at WETICE 2013.
- Claudia-Lavinia Ignat is member of the Inria Nancy-Grand Est COMIPERS researchers committee. She is in charge of European affairs for Inria Nancy Grand-Est. She is the Delegate of International Relations for Inria Nancy-Grand Est. She is member of the Inria Nancy - Grand Est committee for health, safety and working conditions. She was a member of the jury for the recruitment of permanent Inria junior researchers at Inria Nancy-Grand Est.
- Olivier Perrin is member of the council of École Doctorale IAEM (Informatique, Automatique, Électronique et Mécanique), and co-head of the Commission de la mention Informatique.
- Gérald Oster is member of the Administration Council of TELECOM Nancy.
- Nacer Boudjlida addressed an invited conference at the 3rd International Symposium ISKO-Maghreb'2013: Concepts and Tools for Knowledge Management. Marrakech, Morocco, November 2013.



- Nacer Boudjlida is a member of the council of the Fédération Charles Hermite (Université de Lorraine) and a member of the council of the Faculté Sciences et Technologies (Université de Lorraine).
- Nacer Boudjlida has been a PC member in many scientific events, including COOPIS, COOPIS/EI2N, CAISE/EMMSAD, IEEE-CBI, BPM/AICCSA, ISKO Maghreb symposium, IFAC, etc.

## 7.2. Teaching - Supervision - Juries

### 7.2.1. Teaching

Permanent members of the SCORE team are leading teachers in their respective institutions. They are responsible of lecture in disciplines like software engineering, database systems, object oriented programming and design, distributed systems, service computing and even more advanced topics at all levels and in all kind of departments in the University. Most of the PhD Students have also teaching duties in the same institutions. As a whole, the SCORE team accounts for more than 2500 hours of teaching.

- G r me Canals is the head of the Computer science department of the Nancy University Institute of Technology (IUT Nancy Charlemagne) since sept. 2010, and is responsible for the professional licence degree "Web application programming" since sept. 2001.
- Jacques Lonchamp is responsible for the professional licence degree "Free and Open Source Software".
- Claude Godart is responsible for the Computer Science department of the engineering school ESSTIN. He was study director of the master degree "Distributed Services, Security and Networks" until September 2013. Claude Godart is member of the board of directors and the recruitment committee of the engineering school ESSTIN.
- Khalid Benali is responsible for the professional Master degree speciality "Distributed Information Systems" of MIAGE and of its international branch in Morocco.
- Olivier Perrin was responsible of the Certificat Informatique et Internet (C2I) course for DEG collegium of University of Lorraine.
- Fran ois Charoy is responsible of the Software Engineering specialisation at the TELECOM Nancy Engineering School of University of Lorraine.
- G rald Oster is responsible of the 3rd year internship program at the TELECOM Nancy Engineering School of University of Lorraine.
- Pascal Urso is responsible for the "Security, Services, Systems and Network" track of the master degree in computer science at University of Lorraine from September 2013.

### 7.2.2. Supervision

PhD: Aymen Baouab, Gouvernance et supervision d centralis e des chor graphies inter-organisationnelles, Universit  de Lorraine, 5/2013, Claude Godart, Olivier Perrin

PhD: Yongxin Liao, Title: Semantic annotations for systems interoperability in a PLM environment, University of Lorraine, 5/2013, Advisors: Nacer Boudjlida (LORIA) and Herv  Panetto (CRAN).

PhD in progress: Luc Andr , R plication et Maintien de la Coh rence en Temps R el dans les R seaux Pair- -pair, started in 9/2011, Fran ois Charoy et G rald Oster

PhD in progress: Mehdi Ahmed Nacer, Title: Evaluation of CRDT for optimistic replication, started in 9/2011, Fran ois Charoy et Pascal Urso

PhD in progress: Elio Goettelman, Ex cution en confiance de processus dans le cloud, started in 9/2011, Claude Godart

PhD in progress: Ahmed Bouchami , S curit  des donn es collaboratives d'une plateforme PaaS, started in 11/2012, Olivier Perrin

PhD in progress: Adrien Devresse , Study of effective sharing and analysis of very large metadata repositories: application to the High Energy Physics computing community, started on 11/2011, Olivier Perrin

PhD in progress: Badrina Gasmi, Title: Distributed Competence Management, Béjaïa University, Algeria, started in January 2011, Advisors: Nacer Boudjlida and Hassina Talantikite (Béjaïa University).

PhD in progress: Faïza Bouchaïb, Title: Toward a Generic Model for Competence Management, Béjaïa University, Algeria, started in January 2011, Advisors: Nacer Boudjlida and Hassina Talantikite.

PhD in progress: Jordi Martori i Adrian, Data constraints for large-scale collaboration, started in 10/2013, François Charoy et Pascal Urso

### **7.2.3. Juries**

SCORE members were members of the following PhD defense committees:

- Mohammed Oussame Kherbouche, PhD, Université du Littoral Côte d’Opale, December 2013 (François Charoy)
- Oussema Dabbebi; PhD, Université Henri Poincaré Nancy 1, June 2013 (Claude Godart)
- Chedlia Chakroun, PhD, ENSMA Poitiers, October 2013 (Claude Godart)
- Francis Ouedraogo, PhD, INSA Lyon, November 2013 (Claude Godart)
- Hanane Abdeljelil, PhD, Université Claude Bernard Lyon1, November 2013 (Claude Godart)
- Hanaa Mayzad, PhD, Université du Littoral Côte d’Opale, January 2013 (Claude Godart)
- Mohamed Hilia, PhD, Université Paris Est, December 2013 (Claude Godart)
- Fahad Muhammad, PhD, University Lumière, Lyon 2, April 2013 (N. Boudjlida, reviewer and member)
- Karim Doumi, PhD, University Med V-Souissi, Rabat, Morocco, September 2013 (N. Boudjlida, reviewer and member)
- Yonxin Liao, PhD, Université de Lorraine, November 2013 (N. Boudjlida)
- Maryam Eslamichalandar, PhD, CNAM Paris, December 2013 (Olivier Perrin)
- M. Komlan Akpédjé KEDJI, PhD, Université de Toulouse, July 2013 (Khalid Benali)

SCORE members were members of the following Habilitation defense committees:

- Mme Julie Dugdale, HDR, Université Joseph Fourier Grenoble 1, December 2013 (François Charoy)
- Youakim Badr, HDR, INSA Lyon, December 2013 (Claude Godart)

## ALGORILLE Project-Team

# 8. Dissemination

## 8.1. Scientific Animation

Since October 2001, J. Gustedt is Editor-in-Chief of the journal *Discrete Mathematics and Theoretical Computer Science* (**DMTCS**). He is member of the recruiting committee for PhDs and postdocs of Inria research center and has been member in a recruitment committee for a position at university of Franche Comté in 2013. For the French evaluation organization AERES, J. Gustedt has been one of the evaluators of the LRI Lab near Paris.

For SUPÉLEC, S. Vialle is now leader of the IDMaD research group (focussed on distributed computing and big data) inside the IMS team.

Since 2010, J. Gossa serves as expert for the French ministry of science and education and is in charge of reviewing industrial R&D expenses and *Credit Impôt Recherche* reports. He is also a member of the following boards: IUT Robert Schuman, ICube laboratory computer science department, and University of Strasbourg.

Since march 2013, S. Genaud is dean of the ENSIIE engineering school in Computer Science.

Since 2013, S. Contassot-Vivier is director of the Computer Science Department of the Faculty of Science at Université Lorraine. Since 2011, he also serves as an expert for the French ministry of education and research in the DGRI/MEI mission and is in charge of reviewing academic projects between French and foreign teams.

L. Nussbaum is appointed as an expert on production facilities by the direction of the Inria Nancy–Grand Est center.

M. Quinson has served as program committee member of the 28th ACM/IEEE International Parallel & Distributed Processing Symposium (IPDPS'14), of the 4th International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH, co-organized with ACM SIGSIM), of the 2013 ACM SIGSIM Conference on Principles of Advanced Discrete Simulation (PADS'13), and of the 4th International Workshop on Analysis Tools and Methodologies for Embedded and Real-time Systems (WATERS'13).

M. Quinson served as a member of the recruitment committees for associate professor in computer science at University of Lorraine and for junior researcher at Inria Nancy.

M. Quinson is elected of the AM2I board, in charge of voting the budget for 6 laboratories at Université de Lorraine (450 researchers in computer science, mathematics and control theory).

## 8.2. Teaching - Supervision - Juries

### 8.2.1. Teaching

IUT Charlemagne: Lucas Nussbaum, Installation of Linux, 20 ETD, Licence pro ASRALL (L3), Université de Lorraine, France

IUT Charlemagne: Lucas Nussbaum, Outils Libres, 16 ETD, Licence pro ASRALL (L3), Université de Lorraine, France

IUT Charlemagne: Lucas Nussbaum, Administration des infrastructures avancées, 12 ETD, Licence pro ASRALL (L3), Université de Lorraine, France

Licence: Sylvain Contassot-Vivier, "Informatique graphique", 42 ETD, Licence informatique (L1), Université de Lorraine, France

Licence: Sylvain Contassot-Vivier, "Algorithmique 3", 12 ETD, Licence informatique (L2), Université de Lorraine, France

Licence: Sylvain Contassot-Vivier, “Algorithmique 4”, 32 ETD, Licence informatique (L3), Université de Lorraine, France

Licence, Stephane Vialle, “modèle de programmation”, 21 TD, L1, SUPELEC, France

MIAGE Nancy: Marion Guthmuller, “Réseaux”, 50 ETD, M1, Université de Lorraine, France

Master: Sylvain Contassot-Vivier, “Algorithmique répartie et systèmes distribués”, 45 ETD, M1, Université de Lorraine, France

Telecom Nancy: Sylvain Contassot-Vivier, “Algorithmique des systèmes parallèles et distribués”, 32 ETD, 2ème année (M1), université de Lorraine, France

Telecom Nancy : Martin Quinson, “Algorithmique et Programmation,”, 48 ETD, 1ere année (L3), Université de Lorraine, France.

Telecom Nancy : Martin Quinson, “Programmation Système,”, 24 ETD, 2ème année (M1), Université de Lorraine, France.

ESSTIN Nancy: Sylvain Contassot-Vivier, “Calcul haute performance”, 42 ETD, 4ème année (M1), université de Lorraine, France

Master, Stephane Vialle, “systèmes d’information”, 39 TD, M1, SUPELEC, France

Master, Stephane Vialle, “calcul haute performance”, 62 TD, M2, SUPELEC, France

Engineering School, Stéphane Genaud, “systèmes informatiques et réseaux”, 72 TD, niveau L3, ENSIIE, France

Engineering School, Stéphane Genaud, “middleware”, 32 TD, niveau M1, ENSIIE, France

Master, Stéphane Genaud, “parallélisme, systèmes distribués et grilles”, 21 TD, M2, University of Strasbourg, France

Master, Stephane Vialle, “parallélisme, systèmes distribués et grilles”, 21 TD, M2, University of Strasbourg, France

Master, Stephane Vialle, “systèmes distribués et grilles”, 28 TD, M2, University of Strasbourg, France

### 8.2.2. Supervision

PhD in progress: Tomasz Buchert, *Orchestration of experiments on distributed systems*, since Oct 2011, Jens Gustedt & Lucas Nussbaum

PhD in progress: Marion Guthmuller, *Dynamic verification of distributed applications, using a model-checking approach*, since Oct 2011, Sylvain Contassot-Vivier & Martin Quinson

PhD stopped: Thomas Jost, *Solveurs linéaires creux sur GPU*, started in Jan 2010, Bruno Lévy & Sylvain Contassot-Vivier

PhD: Soumeya Hernane, *Models and algorithms for consistent data sharing in high performance parallel and distributed computing*, defense Jul 2013, Jens Gustedt & Mohamad Benyettou

PhD in progress: Mariem Saied, *Ordered Read-Write Locks for Multicores and Accelerators*, since Nov 2013, Jens Gustedt & Gilles Muller

### 8.2.3. Juries

Jens Gustedt was reviewer and member of the jury of the thesis of Lilia Ziane Khodja at Franche-Comté university.

Martin Quinson was a member of the jury of the thesis of Rafael Ferreira Da Silva at INSA-Lyon.

Stéphane Genaud was a member of the jury of thesis of Imen Chakroun at Lille 1 university.

## 8.3. Popularization

Jens Gustedt is regularly blogging about efficient programming in particular the [C programming language](#). He also is an active member of the [stackoverflow community](#) a technical Q&A site for programming and related subjects.

L. Nussbaum currently serves as the (elected) Debian Project Leader since April 2013.

M. Quinson develops a pedagogic platform in collaboration with G. Oster (Score team of Inria Nancy Grand Est). This tool aims at providing an environment that is both appealing for the student, easy to use for the teacher, and efficient for the learning process. It is available from [its page](#).

M. Quinson is co-leading a working group on the teaching of computer science in the LORIA laboratory. He served both as a program chair and a local chair for a nation-wide two-days workshop gathering about hundred people involved in the introduction of computer science in the French secondary education: university lecturers in charge of teaching to the prospective CS teachers, regional heads of the Education minister accompanying this reform and producer of teaching resources. He also served both as a program chair and local chair for a regional gathering of CS teachers of the secondary wanting to exchange their good practices. This initiative, initiated in Nancy, will spread in several other French cities in 2014.

M. Quinson participated to several events toward the popularization of computer science (either as a speaker or as a co-organizer), targeting either kids and pupils (Telecom Nancy in November), students (Inria in March), maths teachers (APMEP Lorraine in March), CS teachers (SIF-ISN day in June), or all public (Fête de la science in November).

M. Quinson serves on the editorial board of the Interstices website of Inria for the popularization of computer science.

## ALPINES Team

## 9. Dissemination

### 9.1. Scientific Animation

Xavier Claeys reviewed articles for the following journals:

- American Mathematical Society
- Comptes Mathématiques de l'Académie des Sciences
- BIT Numerical Mathematics
- Numerical Methods for Partial Differential Equations
- Differential Equations and Applications

Laura Grigori's scientific animation activities are:

- Area Co-chair, Algorithms, IEEE/ACM SuperComputing 2013.
- Area editor for Parallel Computing Journal, Elsevier, since June 2013.
- Member of Program Committee of IEEE International Parallel and Distributed Processing Symposium, IPDPS 2013.

Frederic Hecht's scientific animation activities are:

- Organization of FreeFem++ days, December 2013, UPMC. There were around 60 participants from different countries (France, Italy, Spain, Slovenia).

### 9.2. Teaching - Supervision - Juries

#### 9.2.1. Teaching

Master : Xavier Claeys, MM009: Informatique de base, 72 hrs de travaux pratiques en programmation C++, niveau M1, Université Pierre et Marie Curie, France

Master : Xavier Claeys, NM406: Résolution des EDP par la méthode des éléments finis, 18 hrs de travaux pratiques en programmation C++, niveau M2, Université Pierre et Marie Curie, France

Master : Xavier Claeys, MM031: Informatique Scientifique, 44 hrs de de cours magistral, niveau M1, Université Pierre et Marie Curie, France

Master : Laura Grigori, High performance computing, 12 hours, Master Université Paris XI, France

Master : Laura Grigori, Course on Parallel Computing, 30 hours IFIPS, Ingénieurs 3, Polytech, Université Paris XI, France

Master : Frederic Hecht, Tutorials of practical C++ programming for the course *Informatique de Base*, 36 hours, Master 1 Mathématiques et Applications, UPMC, France

Master : Frederic Hecht, Course on Numerical methods for fluid mechanics, 30 hours, Master 2 Mechanics, UPMC, France.

Master : Frederic Hecht, From PDEs to their resolution by finite element methods, 36 hours per year, Master 2 UPMC, France.

Master : Frederic Nataf, Course on Domain Decomposition Methods, 30 hours, Master 2, UPMC, France.

Master : Frederic Nataf, Course on Domain Decomposition Methods, 15 hours, Master 2, ENSTA, France.

#### 9.2.2. Supervision

PhD : Amal Khabou, Dense matrix computations : communication cost and numerical stability, University Paris-Sud 11, February 2013, advisor Laura Grigori

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

PhD in progress : Pierre Jolivet, since October 2011 (funded by University of Grenoble), advisors F. Nataf, C. Prudhome and F. Hecht

PhD in progress : Sophie Moufawad, since October 2011 (funded by Inria), advisor L. Grigori

PhD in progress : Nicole Spillane, since December 2010 (funded by Michelin), co-advisor F. Nataf

PhD in progress : Ryadh Haferssas, since October 2013 (funded by Ecole Doctorale, UPMC), co-advisor F. Nataf

PhD in progress : Sylvain Auliac, since October 2009 (funded by UPMC), advisor F. Hecht

PhD in progress : Pierre-Henri Tournier, since October 2011 (funded by UPMC), advisor F. Hecht and M. Comte

### **9.2.3. Juries**

- Laura Grigori: Phd thesis of Soleiman Youssef, UPMC, December 2013, Invited member.
- Laura Grigori: HDR habilitation of Stef Graillat, UPMC, December 2013, Examineur.
- Laura Grigori: PhD thesis Mouraid Gouicem, defended on 14 October 2013, LIP6, Paris 6, examinatrice, president of the jury.
- Frederic Nataf : PhD thesis of Paul-Marie Berthe, defended on 18 December 2013, University Paris XIII.
- Frédéric Hecht: Phd thesis Charles Dapogny, defended on 29 december 2013, Univ Rouen, examinateur
- Frédéric Hecht: HDR BENNIS Chakib , defended on 29 november 2013, UMPC, examinateur.
- Frédéric Hecht: Phd thesis Charles Dapogny, defended on 4 december 2013, UMPC, Président.
- Frédéric Hecht: Phd thesis Nicolas Kowalski, defended on 5 december 2013, UMPC, examinateur.
- Frédéric Hecht: Phd thesis Brahim Yahoui, defended on 17 december 2013, UTT, Rapporteur.

### **9.3. Popularization**

Xavier Claeys dedicated an afternoon to participation to the "fête de la science".

## **AVALON Team**

# **8. Dissemination**

## **8.1. Scientific Animation**

- Eddy Caron
  - Co-Organization of Inria Booth in SuperComputing 2013, Denver, USA, November 16-22, 2013
  - Local Arrangements Co-Chairs of ICPP 2013 : 42th International Conference on Parallel Processing, Lyon, October 1-4, 2013
  - Program Committee Member: IPDPS 2013, HCW 2013, CLOSER 2013, CloudCom 2013, The First International Workshop Federative and Interoperable Cloud Infrastructures, (FedICI'2013) and CGCIC'13.
  - Reviews: Journal of Grid Computing, JPDC (Journal of Parallel and Distributed Computing), CPE (Concurrency and Computation: Practice and Experience), TPDS (Transactions on Parallel and Distributed Systems)
- Frédéric Desprez
  - General chair of the VTDC'13 workshop (within HPDC'13), Co-chair of Closer'13, Co-chair of BigDataCloud'2013 (within EuroPAR'13)
  - Program Committee Member: CCGRID'2013, IPDPS'13, CGC2013, NPC2013, Big-Data'13, BDSE'2013
  - Reviews: Journal of Grid Computing, Parallel Processing Letters, Future Generation Computing Systems
  - Project Evaluation: Appel à Projets Recherche 2013 du Conseil régional d'Aquitaine, Région Languedoc-Roussillon, appel à projets "Chercheur(se)s d'avenir" 2013
  - Member of the selection committee for an associate professor at Université Joseph Fourier (Grenoble)
- Gilles Fedak
  - Member of Editorial Board of Springer Cloud Computing Journal, 2013
  - "Special Issue: Combined Special Issue of MapReduce and its Applications & Advanced topics on wireless sensor networks" Concurrency and Computation: Practice and Experience Issue edited by: Gilles Fedak, Keqiu Li, Kai Lin Volume 25, Issue 1 January 2013
  - Program Committee Member: 9th IEEE International Conference on e-Science, (e-Science 2013), 5th IEEE International Conference on Cloud Computing Technology and Science (CloudCom2013), 25th International Symposium on Computer Architecture and High-Performance Computing (SBAC-PAD), The First International Workshop Federative and Interoperable Cloud Infrastructures, (FedICI'2013), IEEE International Conference on Big Data and Distributed Systems (BDDS 2013), 10th IFIP International Conference on Network and Parallel Computing (NPC 2013), 15th IEEE International Conference on High Performance Computing and Communications (HPCC 2013), 22nd ACM International Symposium on High-Performance Parallel and Distributed Computing (HPDC 2013), 13th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGRID 2013), International Workshop on High Performance Data Intensive Computing (HPDIC2013), 17th Workshop on Job Scheduling Strategies for Parallel Processing (JSSPP 2013).
- Jean-Patrick Gelas



- PC member (Cloud and Distributed Computing), AICCSA 2013 : 10th ACS/IEEE International conference on computer systems and applications, Fes, Morocco, May 27-30, 2013
- PC member, ExtremeGreen: Extreme Green and Energy Efficiency in Large Scale Distributed Systems , Delft, The Netherlands, May 13-16, 2013
- Reviews : ExtremGreen2013, Euro-Par2013, EnA-HPC 2013, CGC2013.
- Olivier Glück
  - Organization: local organization committee of ICPP
  - PC member: ExtremeGreen, International Conference on Cloud and Green Computing
  - Reviews: Cluster Computing, Euro-Par
  - University committee: Member of the CEVU (Conseil des Etudes et de la Vie Universitaire) of University Lyon 1, Member of the UFR Faculte des Sciences et Technologies faculty council of University Lyon 1, Member of the computer science department council of University Lyon 1
- Laurent Lefèvre
  - Co-organizer of the Green Days @ Lille event: "HPC & Clouds : are they green ?", Lille, November 28-29, 2013
  - Co-Organization of Inria Booth in SuperComputing 2013, Denver, USA, November 16-22, 2013
  - Co General chair of ICPP 2013 : 42th International Conference on Parallel Processing, Lyon, October 1-4, 2013
  - Co-Program chair of CGC 2013 : Third International Conference on Cloud and Green Computing ,Karlsruhe, Germany, September 30- October 2, 2013
  - Co-Workshop chair of ExtremeGreen 2013 : Extreme Green & Energy Efficiency in Large Scale Distributed Systems , Delft, The Netherlands, May 2013
  - Co-organizer of the Green Days @ Luxembourg event: "Energy efficiency : what else / what next ?", Luxembourg, January 28-29, 2013
  - Associate editor of IEEE Transactions on Cloud Computing (TCC)
  - Member of the selection committee for an associate professor position at Université Antilles Guyane (Pointe à Pitre)
- Christian Perez
  - Co-organization of the The Ninth Workshop of the Inria-Illinois Joint Laboratory on Petascale Computing, Lyon, France, June 12-14, 2013.
  - Programm committee member of the International Conference on Parallel Computing 2013 (ParCo), the 11th International Conference on Service Oriented Computing (IC-SOC2013).
  - Reviewing for IEEE Transactions on Parallel and Distributed Systems, Future Generation Computer Systems, Parallel Computing, and Technique et Science Informatique.
  - Member of the selection committee for an associate professor position at University Lyon I/LIP.
- Frédéric Suter
  - Organization: 3rd edition of the SIMGRID Users Days.
  - Project Evaluation: Comité d'Evaluation ANR SIMI2, Israel Science Foundation.
  - PC member: CLOSER, VTDC, IPDPS, SYNASC, VECPAR, EuroMPI.
  - Reviews: JPDC, Parallel Computing, TPDS, CCGrid

## 8.2. Teaching - Supervision - Juries

### 8.2.1. Teaching

- Licence: Olivier Glück, Initiation Réseaux, 2x9h, niveau L2, Université Lyon 1, France
- Licence: Olivier Glück, Réseaux, 2x70h, niveau L3, Université Lyon 1, France
- Licence: Eddy Caron, Architecture, Système et Réseaux, 36h, niveau L3, Ecole Normale Supérieure de Lyon, France
- Master: Eddy Caron, Systèmes Distribués, 36h, niveau M1, Ecole Normale Supérieure de Lyon, France
- Master: Eddy Caron, Projet Intégré, 36h, niveau M1, Ecole Normale Supérieure de Lyon, France
- Master: Frédéric Desprez, Parallélisme, 30h, niveau M1, Université Lyon 1, France
- Master: Olivier Glück, Services et Protocoles Avancés sur Internet, 40h, niveau M2, Université Lyon 1, France
- Master : Olivier Glück, Administration des Systèmes et des Réseaux, 16h, niveau M2, Université Lyon 1, France
- Master: Jean-Patrick Gelas, Réseaux, 48h, niveau M2 (CCI), Université Lyon 1, France
- Master: Jean-Patrick Gelas, Système d'exploitation, 30h, niveau M2 (CCI), Université Lyon 1, France
- Master: Jean-Patrick Gelas, Architecture des routeurs, 6h, niveau M2, Université Lyon 1, France
- Master: Jean-Patrick Gelas, Nouvelles Technologies, 85h, niveau M2, Université Lyon 1, France
- Master: Jean-Patrick Gelas, Routage et IPv6, 45h, niveau M2, Université Lyon 1, France
- Master: Eddy Caron, Gilles Fedak, Christian Perez and Jonathan Rouzard-Cornabas Grid and Cloud Computing, 36h, niveau M2, Ecole Normale Supérieure de Lyon, France
- Master/Doctorat : Gilles Fedak, MapReduce Environments: Design, Performance, Optimizations, II Escola Regional de Alto Desempenho - Região Nordeste, Salvador de Bahia, Brazil, October 22, 2013
- Master : Laurent Lefèvre is responsible of training periods for Research Master in ENS-Lyon

### 8.2.2. Supervision

- HdR: Laurent Lefèvre, *Contributions à la flexibilité et à l'efficacité énergétique des systèmes distribués à grande échelle*, Ecole Normale Supérieure de Lyon, 14 Novembre 2013. [2]
- PhD: Mohammed El Mehdi Diouri, *Efficacité énergétique dans le calcul très haute performance : application à la tolérance aux pannes et à la diffusion de données*, ENS LYON, September 27 2013, Isabelle Guerin-Lassous and Laurent Lefèvre and Olivier Glück. [1]
- PhD: Ghislain Landry Tsafack Chetsa, *System Profiling and Green Capabilities for Large Scale and Distributed Infrastructures*, Ecole Normale Supérieure de Lyon, December 3rd, 2013. [3]
- PhD: Rafaël Silva (Creatis, INSA Lyon), *A science-gateway for workflow executions: online and non-clairvoyant self-healing of workflow executions on grids*, Frédéric Desprez (dir), Tristan Glatard (Creatis, CNRS, co-dir), November 13, 2013.
- PhD in progress: George Markomanolis, *Performance evaluation and prediction of parallel applications*, 12/2009, Frédéric Desprez (dir), Frédéric Suter (co-dir).
- PhD in progress: Maurice Djibril Faye, *Déploiement auto-adaptatif d'intergiciel sur plateforme élastique*, Eddy Caron (dir), Ousmane Thiaré (Université Gaston Berger, St Louis, Sénégal, co-dir)
- PhD in progress: Sylvain Gault, *Ordonnancement de tâches avec le modèle MapReduce*, 11/2010, Frédéric Desprez (dir), Frédéric Suter (co-dir)

PhD in progress, Vincent Lanore, *Adaptation et dynamique dans les modèles à composants logiciels pour les applications scientifiques*, C. Pérez.

PhD in progress, Arnaud Lefray, *Mission fonctionnelle et de sécurité dans une informatique en nuage*, Eddy Caron (dir), Christian Toinard (ENSIB, co-dir)

PhD in progress : Anthony Simonet, *Exécution efficace d'applications de traitement intensif de données sur des infrastructures distribuées hybrides*, 10/2011, Gilles Fedak.

PhD in progress: Jonathan Pastor (Nantes), *Conception d'un système de gestion autonome, coopérative et distribué pour les centrales numériques à large échelle*, 11/2012, Frédéric Desprez, Adrien Lèbre (Ascola, Nantes, co-dir).

### 8.2.3. Juries

- Eddy Caron
  - Ndye Massata NDIAYE, *Technique de gestion des défaillances dans les grilles informatiques tolérantes aux fautes*, PhD, Université Pierre et Marie Curie, France, September 2013, Reviewer
  - Sébastien Fourestier, *Redistribution dynamique parallèle efficace de la charge pour les problèmes numériques de très grandes tailles*, PhD, Université de Bordeaux I, Juin 2013, Reviewer
- Frédéric Desprez
  - Flavien Quesnel, *Vers une gestion coopérative des infrastructures virtualisées à grande échelle : le cas de l'ordonnancement*, PhD, Université de Nantes, February 2013, Reviewer
  - Thierry Coupaye, *Architecture dynamique des systèmes répartis – Expériences avec les composants logiciels*, HDR, Université Joseph Fourier, March 2013, Reviewer
  - Laurent Lefèvre, *Contributions à la flexibilité et à l'efficacité énergétique des systèmes distribués à grande échelle*, HDR, Ecole normale supérieure de Lyon, November 2013, Jury member
  - Ghislain Tsafack Chetsa, *System Profiling and Green Capabilities for Large Scale and Distributed Infrastructures*, PhD, Ecole normale supérieure de Lyon, December 3rd, 2013, Jury member
- Laurent Lefèvre
  - Yacine Kessaci, *Ordonnancement multi-critère sur Clouds*, PhD, Université Lille1, France, November 2013, Jury member
  - Remigiusz Modrzejewski, *Distribution and Storage in Networks*, PhD, Université de Nice, France, October 2013, Jury member
  - Anton Beloglazov, *Energy and Performance Efficient Dynamic Consolidation of Virtual Machines in Cloud Data Centers*, PhD, University of Melbourne, Australia, March 2013, Reviewer
- Christian Perez
  - Chen Wang, *Chemistry-Inspired Middleware for Flexible Service Composition and Adaptation*, PhD, Insa Rennes, May 28th, 2013, Reviewer.
  - Stefania Costache, *Market-based Autonomous Resource and Application Management in the Cloud*, PhD, University of Rennes I, July 3rd, 2013, Reviewer.
  - Joseph Emeras, *Workload Traces Analysis and Replay in Large Scale Distributed Systems*, PhD, University of Grenoble, France, October 1st, 2013, Reviewer.
  - Cyril Bordage, *Ordonnancement dynamique, adapté aux architectures hétérogènes, de la méthode multipôle pour les équations de Maxwell en électromagnétique*, PhD, Université de Bordeaux I, France, December 20th, 2013, Reviewer.

### 8.3. Popularization

- Laurent Lefèvre
  - Interview extract in Blog "Web developpement durable" : Internet & Data Center : bilan énergétique positif ou négatif , July 17, 2013
  - Interview for La Vie Journal, "Using Internet with less energy", June 13, 2013
  - Interview for Liberation News Paper, "Datacenters : la donnée écolo", April 15, 2013
  - Participant in the Panel on Green Computing, GDR GPL, Nancy, April 2013
  - Co-Editor for the Future Internet Assembly (FIA) Book 2013 : Validated Results and New Horizons, Alex Galis editor, LNCS, Volume 7858, Springer, May 2013
- Jean-Patrick Gelas :
  - Invited speaker to Ecocity 2013, "Greening Clouds and High Performance Computing: Challenges and Initiatives", Nantes, France, September 23, 2013
  - Invited speaker to JDN2013 (Journée sur le décisionnel dans le Nuage), "Energy monitoring framework for high-performance cloud infrastructure", Bron, France, May 16, 2013
  - Invited speaker to JSF2013 (Journée Scientifique) about Energy, "Propositions to improve Data Centers and Clouds Energy Efficiency", Lyon, France, June 26, 2013

## CEPAGE Project-Team

# 8. Dissemination

## 8.1. Scientific Animation

### 8.1.1. Editorial Work

- Ralf Klasing is Associate Editor for
  - Algorithmic Operations Research (since May 2007),
  - Parallel Processing Letters (since August 2007),
  - Networks (since September 2007),
  - Computing and Informatics (since January 2008),
  - Theoretical Computer Science (since December 2009),
  - Fundamenta Informaticae (since January 2010),
  - Discrete Applied Mathematics (since February 2010),
  - Wireless Networks (since May 2010),
  - Journal of Interconnection Networks (since November 2010).
- Olivier Beaumont is Associate Editor for
  - IEEE Transactions on Parallel and Distributed Systems (since June 2010).

### 8.1.2. Steering Committees

- Ralf Klasing is a member of the Steering Committee of the *International Colloquium on Structural Information and Communication Complexity (SIROCCO)*.

### 8.1.3. Program Committees

- Olivier Beaumont: ICPP 2013 (Chair, Algorithm Track), IPDPS 2013, HCW 2013, ISCIS 2013, IPDPS 2014, EuroPar 2014.
- Ralf Klasing: SSS 2013 (Co Chair, Ad-hoc, sensor, robot and opportunistic networks Track) WALCOM 2015, IWOCA 2014, ADHOC-NOW 2014, ALGOSENSORS 2013, ADHOC-NOW 2013, FCT 2013, IWOCA 2013, vSEA 2013.
- David Ilcinkas: SIROCCO 2013, ADHOC-NOW 2013, AlgoTel 2013.
- Lionel Eyraud-Dubois: IPDPS 2013, HiPC 2013, IPDPS 2014, HiPC 2014.
- Adrian Kosowski: COCOA 2013, SSS 2013, DISC 2013, ADHOC-NOW 2013, FCT 2015 (PC co-chair).
- Sofian Maabout: DaWAK 2013, DOLAP 2013, BDA 2013, EDA 2013, DaWAK 2014. PC co-chair of MEDI 2013.
- Cyril Gavoille: WG 2014, PODC 2014, IPDPS 2014, PODC 2013, ICALP 2013, IPDPS 2013, SODA 2013.

## 8.2. Teaching - Supervision - Juries

### 8.2.1. Teaching

Master : Communication and Routing (last year of engineering school ENSEIRB, 2012) O. Beaumont, N. Bonichon, L. Eyraud, N. Hanusse, R. Klasing, A. Kosowski (16h)

Master : Communication Algorithms in Networks (2nd year MASTER "Algorithms and Formal Methods", University of Bordeaux, 2012) R. Klasing (24h)

Master : Search Engines (2nd year of engineering school ENSEIRB, 2012) O. Beaumont (20h)

Master : Distributed Computing (2nd year MASTER "Réseaux, Systèmes et Mobilité"), (24h) C. Gavaille

### **8.2.2. Supervision**

HdR : Nicolas Bonichon, Université de Bordeaux 1, 2013

HdR : Adrian Kosowski, Université de Bordeaux 1, 2013

PhD : Ahmed Wade, Université de Bordeaux, 2014

PhD : Przemyslaw Uznanski, Université de Bordeaux 1, 2013

PhD : Pierre Halftermeyer, Université de Bordeaux 1, 2013

PhD : Quentin Godfroy , Université de Bordeaux 1, 2013

PhD : Christian Glacet , Université de Bordeaux 1, 2013

## GRAND-LARGE Project-Team

## 7. Dissemination

### 7.1. Scientific Animation

Christine Eisenbeis

- IJPP (International Journal on Parallel Programming) editorial board.

Marc Baboulin

- Member of Steering Committee of ACM High Performance Computing Symposium (HPC 2013), San Diego, April 7-10, 2013.

### 7.2. Teaching - Supervision - Juries

#### 7.2.1. Teaching

Licence : Cédric Bastoul, Réseaux niveau licence, IUT d'Orsay (60h), Système niveau licence, IUT d'Orsay (40h).

Master : Christine Eisenbeis, coordinatrice du module "Optimisations et compilation" du M2 recherche NSI ("Nouveaux systèmes informatiques") de l'université Paris-Sud 11. 3 heures de cours.

Master: M. Baboulin and J. Falcou teach in "Calcul Haute Performance" of M2 recherche NSI of University Paris Sud 11.

Polytech 5th year: M. Baboulin and J. Falcou teach the "Parallel Computing" class.

#### 7.2.2. Supervision

PhD : Amal Khabou, Dense matrix computations: communication cost and numerical stability, University Paris Sud 11, 11 February 2013, PhD Supervisor: L. Grigori

PhD in progress: Ian Masliah, Automatic code generation in high-performance computing numerical libraries, University Paris Sud 11, Supervisors: M. Baboulin and J. Falcou

PhD in progress: Adrien Rémy, Solving dense linear systems on accelerated multicore architectures, University Paris Sud 11, Supervisors: M. Baboulin and B. Rozoy

PhD in progress: Yushan Wang, Numerical simulations of incompressible fluid flows on heterogeneous parallel architectures, University Paris Sud 11, Supervisors: M. Baboulin and O. Le Maître

PhD in progress: Lénaïc Bagnères, université Paris-Sud 11, supervisors: Cédric Bastoul and Christine Eisenbeis

PhD in progress: Alessandro Leite, université Paris-Sud 11, supervisors: Alba de Melo (university of Brazilia), Claude Tadonki (CRI, école des Mines de Paris), Christine Eisenbeis

PhD in progress: Michael Kruse, Polytopic memory layout optimization, université Paris-Sud 11, supervisor: Christine Eisenbeis

#### 7.2.3. Committees

- Marc Baboulin, President of the PhD committee of Marc Letournel: "Approches duales dans la résolution de problèmes stochastiques", September 27, 2013.
- Christine Eisenbeis, jury de HdR de Claude Tadonki, "High Performance Computing as a Combination of Machines and Methods and Programming", jeudi 16 mai 2013, université Paris-Sud.

### 7.3. Popularization

Christine Eisenbeis est membre du conseil scientifique des programmes du centre d'Alembert, Centre Interdisciplinaire d'Étude de l'Évolution des Idées, des Sciences et des Techniques (CIEEIST), de l'université Paris-Sud.

## HIEPACS Project-Team

# 9. Dissemination

## 9.1. Scientific Animation

Emmanuel Agullo has been a member of the scientific committee of the international conferences IPDPS'13. Olivier Coulaud is member of the C3I GENCI committee and of the scientific board of the regional computing mesocentre. Moreover, he is the leader of the Inria PlaFRIM computing platform. He is member of the scientific committee of CCGRID2014.

Mathieu Faverge has been member of the technical program committee of the international conference HiPC'13 and reviewed for Parallel Computing journal.

Pierre Ramet is member of the GENCI scientific committee (Mathematics and Computer Sciences). He is also in the decision board of the "MCIA" project (*Mésocentre Aquitain : un environnement Mutualisé de Calcul Intensif en Aquitaine*).

Luc Giraud has been member of the scientific committee of the international conferences Preconditioning'13, IPDPS'13, HiPC'13, Pareng'13, PDCN'13 and PDSEC'13. He is also member of the editorial board of the SIAM Journal on Matrix Analysis and Applications (SIMAX), expert for the PRACE program and for the Italian VQR 2004-2010 programme. He is a member of DAS-SCI (Domaine d'Activité technologiques Stratégiques - Systèmes complexes, Conception, architecture et Intégration) of Aerospace Valley (pôle de compétitivité).

Abdou Guermouche has been member of the scientific committee of the international conferences HiPC'13, ICPP'13 and IPDPS'13.

Jean Roman is a member of the Research Direction of Inria; he is the Deputy Scientific Director of the Inria research domain entitled *Applied Mathematics, Computation and Simulation* and is in charge at the national level of the Inria activities concerning High Performance Computing. He is member of the "Strategic Comity for Intensive Computation" of the French Research Ministry and is member of the "Scientific Board" of the CEA-DAM. As representative of Inria, he is member of the Steering Committee of EADS Corporate Foundation (for the research chair entitled *Mathematics of Complex Systems* in Bangalore-India), of the board of ETP4HPC (*European Technology Platform for High Performance Computing*), of the French Information Group for PRACE, of the Technical Group of GENCI and of the Scientific Advisory Board of the Maison de la Simulation. Finally, he has been member of the scientific committee of the international conference EuroMicro PDP'13 (IEEE).

Finally, the **HIEPACS** members have contributed to the reviewing process of several international journals (ACM Trans. on Mathematical Software, IEEE Trans. on Parallel and Distributed Systems, Journal of Engineering Mathematics, Parallel Computing, SIAM J. Matrix Analysis and Applications, SIAM J. Scientific Comp., ...), to the reviewing process of international conferences (CCGRID 2014, IEEE IPDPS 2014, IEEE PDP 2014, ...), and have acted as experts for the research agency ANR-MN.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

In the following are listed the lectures given by the **HIEPACS** members.

Undergraduate level/Licence

1. A. Esnard: Operating system programming, 36h, University Bordeaux I; Using network, 23h, University Bordeaux I.



He is also in charge of the computer science certificate for Internet (C2i) at the University Bordeaux I.

2. P. Ramet: System programming 24h, Databases 32h, Objet programming 48h, cryptography 32h at Bordeaux University.  
He is also in charge of the "licences professionnelles" since 2007 at Bordeaux University.

Post graduate level/Master

1. O. Coulaud: Paradigms for parallel computing, 28h, ENSEIRB-MatMeca, Talence; Code coupling, 6h, ENSEIRB-MatMeca, Talence.
2. E. Agullo: Operating systems, 24h, University Bordeaux I; Dense linear algebra kernels, 8h, ENSEIRB-MatMeca; Numerical Algorithms, 30h; ENSEIRB-MatMeca, Talence.
3. A. Esnard: Network management, 27h, University Bordeaux I; Network security, 27h, University Bordeaux I; Programming distributed applications, 35h, ENSEIRB-MatMeca, Talence.
4. M. Faverge: System Programming, 74h; Programming Environment, 26h; Load Balancing and Scheduling, 19h; Numerical Algorithmic, 30h; C Projects, 20h; ENSEIRB-MatMeca, Talence.  
He is also in charge of the second year of Embedded Electronic Systems option at ENSEIRB-MatMeca, Talence.
5. P. Ramet: Scheduling, 8h; Numerical Algorithmic, 30h; ENSEIRB-MatMeca, Talence.  
He also give classes on advanced databases, 30h, Ho Chi Minh City, Vietnam.
6. L. Giraud: Introduction to intensive computing and related programming tools, 20h, INSA Toulouse; Introduction to high performance computing and applications, 20h, ISAE-ENSICA; On mathematical tools for numerical simulations, 10h, ENSEEIHT Toulouse; Parallel sparse linear algebra, 11h, ENSEIRB-MatMeca, Talence.
7. A. Guermouche: Network management, 92h, University Bordeaux I; Network security, 64h, University Bordeaux I; Operating system, 24h, University Bordeaux I.
8. J. Roman: Parallel sparse linear algebra, 10h, ENSEIRB-MatMeca, Talence; Parallel algorithms, 22h, ENSEIRB-MatMeca, Talence.
9. X. Vasseur: Solution of PDE, 16 h, ENSEEIHT Toulouse; Linear Algebra and Optimization, 25 h, ISEA-ENSICA, Toulouse; Introduction to MPI, 11 h, ENM, Toulouse; Introduction to Fortran 90, 5 h, CERFACS, Toulouse.

### 9.2.2. Supervision

Defended HDR

1. HdR: Olivier Coulaud, *Contributions algorithmiques pour les simulations complexes en physique des matériaux*, Université Bordeaux I, defended on 29 Nov. 2013.

Defended PhD thesis

1. Pablo Salas Medina, *Numerical and physical aspects of thermoacoustic instabilities in annular combustion chambers* Université Bordeaux I, defended on 15 Nov. 2013, advisors: L. Giraud and X. Vasseur (CERFACS).
2. Rached Abdelkhalek, *Accélération matérielle pour l'imagerie sismique: modélisation, migration et interprétation*, Université Bordeaux I, defended on 20 Dec. 2013 advisors: O. Coulaud, G. Latu (CEA Cadarache) and J. Roman.

PhD in progress :

1. Pierre Blanchard, *Fast and accurate methods for dislocation dynamics*, starting Oct. 2013, advisors: O. Coulaud and E. Darve.

2. Bérenger Bramas, *Optimization of time domain BEM solvers*, starting Jan 2013, advisors: O. Coulaud and G. Sylvand.
3. Astrid Casadei, *Scalabilité et robustesse numérique des solveurs hybrides pour machines massivement parallèles*, starting Oct. 2011, advisors: F. Pellegrini and P. Ramet.
4. Jean-Marie Couteyen, *Parallélisation et passage à l'échelle du code FLUSEPA*, starting Feb 2013, advisors : P. Brenner (Astrium Space Transportation) and J. Roman.
5. Yohann Dudouit, *Scalable parallel elastodynamic solver with local refinement in geophysics*, starting Oct. 2010, advisors: L. Giraud and S. Pernet (CERFACS).
6. Arnaud Etcheverry, *Toward large scale dynamic dislocation simulation on petaflop computers*, starting Oct. 2011, advisor: O. Coulaud.
7. Xavier Lacoste, *Scheduling and memory optimizations for sparse direct solver on multi-core/multigpu cluster systems*, starting Jan. 2012, advisors: F. Pellegrini and P. Ramet.
8. Andra Hugo *Composabilité de codes parallèles sur plateformes hétérogènes*, starting Oct. 2011, advisors: A. Guermouche, R. Namyst and P-A. Wacrenier.
9. Alexis Praga, *Parallel atmospheric chemistry and transport model solver for massively platforms*, starting Oct. 2011, advisors: D. Cariolle (CERFACS) and L. Giraud.
10. Stojce Nakov, *Parallel hybrid solver for heterogenous manycores: application to geophysics*, starting Oct. 2011, advisors: E. Agullo and J. Roman.
11. Maria Predari, *Dynamic Load Balancing for Massively Parallel Coupled Codes*, starting Oct. 2013, advisors: A. Esnard and J. Roman.
12. Fabien Rozar, *Peta and exaflop algorithms for turbulence simulations of fusion plasmas*, starting Nov. 2012, advisors: Guillaume Latu (CEA Cadarache) and Jean Roman.
13. Moustapha Salli, *Design of a massively parallel version of the SN method for neutronic simulations*, starting Oct. 2012, advisors: Laurent Plagne (EDF), Pierre Ramet and Jean Roman.
14. Clément Vuchener, *Algorithmique de l'équilibrage de charge pour des couplages de codes complexes*, starting Sept. 2010, advisors: A. Esnard and J. Roman.
15. Mawussi Zounon, *Numerical resilient algorithms for exascale*, starting Oct. 2011, advisors: E. Agullo and L. Giraud.

### 9.2.3. Juries

#### PhD thesis defences

1. M. Malandain, *Simulation massivement parallèle des écoulements turbulents à faible nombre de Mach*, Institut National des Sciences Appliquées de Rouen, spécialité mécanique des fluides numériques, January 15, Referee: L. Giraud.
2. S. Fourestier, *Redistribution dynamique parallèle efficace de la charge pour les problèmes numériques de très grande taille*, Université Bordeaux I, June 20, Member: A. Esnard.
3. S. Henry, *Modèles de programmation et supports exécutifs pour architectures hétérogènes*, Université Bordeaux I, spécialité Informatique, Nov. 14, Member: L. Giraud.

#### HdR defences

1. C. Tadonki, *High Performance Computing and Combination of Machines and Methods and Programming*, Université Paris-Sud, Orsay, spécialité Informatique, May 16, Referee: L. Giraud.

## 9.3. Popularization

In the context of HPC-PME initiative, we started a collaboration with ALGO'TECH INFORMATIQUE and we have organised one of the first PhD-consultant action implemented by Xavier Lacoste led by Pierre Ramet. ALGO'TECH is one of the most innovative SMEs (small and medium sized enterprises) in the field of cabling embedded systems, and more broadly, automatic devices. The main target of the project is to validate the possibility to use the sparse linear solvers of our team in the area of electromagnetic simulation tools developed by ALGO'TECH.

The **HIEPACS** members have organized the PATC training session on Parallel Linear algebra at "Maison de la simulation" in Saclay from March 26th to March 28th. Mathieu Faverge also gave a full day lecture on dense linear algebra libraries at the PRACE Summer School at CINECA.

## KERDATA Project-Team

# 9. Dissemination

## 9.1. Scientific Animation

### 9.1.1. Gabriel Antoniu

- Program Co-Chair of the ScienceCloud 2013 International workshop held in conjunction with the ACM HPDC 2013 conference, New York, June 2013.
- Program Committee member (selection): ACM HPDC 2013 and 2014, ACM/IEEE SC 2013, IEEE/ACM CCGRID 2013, IEEE Big Data 2013, IEEE HPCC 2013, BDMC 2013 (workshop organized in conjunction with Euro-Par 2013).
- Coordinator for the MapReduce ANR project (see Section 8.1 ).
- G. Antoniu and B. Thirion (PARIETAL Project-Team, INRIA SACLAY – ÎLE-DE-FRANCE) co-led the A-Brain Microsoft-Inria Project (2010-2013).
- G. Antoniu and P. Valduriez (Zenith Project-Team, INRIA SOPHIA-ANTIPOLIS – MÉDITERRANÉE) co-lead the Z-CloudFlow Microsoft-Inria Project (2013-2016).
- Coordinator for the Data@Exascale Associate Team in collaboration with Argonne National Lab and the University of Illinois at Urbana - Champaign (2013-2015).
- Local coordinator for Inria Rennes – Bretagne Atlantique Research Center in the SCALUS Project of the Marie-Curie Initial Training Networks Programme (ITN), call FP7-PEOPLE-ITN-2008 (2009-2013).

### 9.1.2. Luc Bougé

- Vice-Chair of the Euro-Par conference steering committee (<http://www.europar.org/>). Workshop co-chair for the 2013 issue of the conference held in Aachen, Germany.
- PhD Forum Co-Chair for the 2013 IPDPS conference (<http://www.ipdps.org/>) held in Boston, MA, USA.

### 9.1.3. Shadi Ibrahim

- Program Committee member: ICPP 2013, ICA3PP 2013, CloudCom 2013, NPC 2013, CCGrid 2013 Doctoral Symposium, CLOUD COMPUTING 2013, BigData Book 2013
- Reviewer: IEEE Transactions on Cloud Computing, Future Generation Computer Systems, IEEE Systems Journal, Computing, Cluster Computing, Multimedia Tools and Applications Journal
- Subreviewer: SC 2013, HPDC 2013, CCGrid 2013, Cluster 2013, Euro-par 2013, HPCC 2013, ICPADS 2013, BigDataCloud 2013.

### 9.1.4. Alexandru Costan

- Organizer of the 2nd Workshop on Big Data Management in Clouds BigDataCloud in conjunction with EuroPar 2013, see <http://www.irisa.fr/kerdata/bigdatacloud/>
- Program Committee member: CloudCom 2013, ISPDC 2013, CCGrid Doctoral Symposium 2013, BigData Book 2013
- Reviewer: Transactions on Parallel and Distributed Systems, J. of Parallel and Distributed Computing, IEEE Internet Computing, Concurrency and Computation: Practice and Experience, Intl. J. of Grid and Utility Computing, Intl. J. of Systems and Software, Intl. J. of Intelligent Systems Technologies and Application
- Subreviewer: HPDC 2013, CCGrid 2013, ICPADS 2013, HPCC 2013, Cluster 2013

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

#### 9.2.1.1. 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: Grid, P2P and cloud data management, 18 hours (lectures), M2 level, ALMA Master, Distributed Architectures module, University of Nantes, France.

Master: Peer-to-Peer Applications and Systems, 10 hours (lectures), M2 level, PAP Module, M2RI Master Program, ENS Cachan/Rennes, France.

#### 9.2.1.2. Luc Bougé

Licence: Introduction to programming concepts, 24 hours (lectures), L3 level, Informatics program, ENS Cachan/Rennes, France.

Master: Introduction to object-oriented high-performance programming, 24 hours (lectures), M1 level, Mathematics program, ENS Cachan/Rennes, France.

#### 9.2.1.3. Shadi Ibrahim

Master : Cloud1 — Map/Reduce, 10 hours (lectures, lab sessions), M2 Level, École des Mines de Nantes, Nantes, France.

#### 9.2.1.4. Alexandru Costan

License: Object-oriented programming, 18 hours, L3, ENS Cachan/Rennes

License: Databases, 28 hours, L2, INSA Rennes, France

License: Practical case studies, 16 hours, L3, INSA Rennes

Master: Object-oriented design, 28 hours, M1, INSA Rennes

#### 9.2.1.5. Matthieu Dorier

Licence: Java programming 35 hours (lectures, lab sessions), L1 level, INSA de Rennes.

Licence: Ruby Programming, 15 hours (lectures, lab sessions), L3 level, ENS Cachan/Rennes.

Licence: Computer Architectures, 24 hours (lab sessions), L3 level, ENS Cachan/Rennes.

### 9.2.2. Supervision

PhD: Viet-Trung Tran, “Scalable data-management systems for Big Data”, thesis started in October 2009 co-advised by Gabriel Antoniu and Luc Bougé. Date of defense: 21 January 2013.

PhD: Housseem Chihoub, “Managing consistency for Big Data Applications: Tradeoffs and Self-Adaptiveness”, thesis started in October 2010 co-advised by Maria Pérez (UPM, Madrid) and Gabriel Antoniu. Date of defense: 10 December 2013.

PhD in progress : Matthieu Dorier, “Scalable I/O for postpetascale HPC systems”, thesis started in October 2011 co-advised by Gabriel Antoniu and Luc Bougé.

PhD in progress : Radu Tudoran, “Scalable data sharing for Azure clouds”, thesis started in October 2011 co-advised by Gabriel Antoniu and Luc Bougé.

PhD in progress : Álvaro García Recuero, “Scalable, Power-efficient Big Data Analysis on Geographically Distributed Clouds”, thesis started in October 2013 co-advised by Shadi Ibrahim and Gabriel Antoniu.

PhD in progress : 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.

### 9.2.3. Juries

Gabriel Antoniu served as a Referee for a PhD Jury at the University Pierre et Marie Curie, Paris; as a Member in a PhD Jury at Telecom Bretagne, Cesson-Sévigné.

Luc Bougé served as a jury member for several PhD and HDR defenses, in many cases as the jury chairman.

### **9.3. Miscellaneous**

- Gabriel Antoniu serves as a member of Inria's Evaluation Committee.
- Luc Bougé served as Head of the Computer Science Department of ENS Cachan/Rennes until September 2013.
- Luc Bougé is serving as a scientific co-ordinator for the IT Department (STIC) of the French *National Research Agency (ANR)*, for 40 % of his working time. He is in charge of the logistic and the scientific management of the ANR call for proposals and of the various scientific ANR exhibitions and prizes in the IT domain.
- Luc Bougé is a member of the *National Academic Board (CNU, Conseil national des universités)* in the Informatics Committee (Section 27).

#### **9.3.1. Popularization**

##### *9.3.1.1. Radu Tudoran's talks*

Microsoft TechDays 2013, Paris, France. Invited Speaker together with Gabriel Antoniu to give a presentation about *Azure Brain: 4th paradigm, scientific discovery and (really) big data*.

Microsoft TechDays 2013, Paris, France. Invited Speaker to give a short talk about using the Azure cloud for science within Session *Introducing 10 Windows Azure projects in one hour*.

Microsoft ATLE, Munich, Germany. Internal Presentation about *Streaming and processing events across cloud data-centers*.

## MESCAL Project-Team

## 9. Dissemination

### 9.1. Scientific Animation

- Yves Denneulin is the director of Grenoble INP ENSIMAG.
- Corinne Touati is the Grenoble INP correspondent for international relations with Japan.
- Yves Denneulin and Jean-Marc Vincent are co-directors of the LICIA (Franco-Brazilian Laboratory).
- Arnaud Legrand is mandated by the LIG for representing the Networking and Parallel and Distributed System teams of the LIG.
- Panayotis Mertikopoulos is mandated by the LIG to supervise PhD students of the laboratory.

#### 9.1.1. Invited Talks

- Bruno Gaujal was a keynote speaker at ICPP'13 and an invited speaker at the Dagstuhl Seminar on Exascale computing.
- Panayotis Mertikopoulos was an invited speaker to
  - the 30 years congress of the Société de Mathématiques Appliquées et Industrielles
  - the Evolutionary Dynamics and Market Behavior workshop, Hausdorff Research
  - the Institute for Mathematics , Bonn, Germany
  - Erice 2013 (Stochastic Methods in Game Theory), Sicile, Italy
  - ADGO 2013 (Algorithms and Dynamics for Games and Optimization), Playa Blanca, Chile
- Arnaud Legrand has given an invited talk at TU Wien (April), at the JLPC at NCSA (November). He was a keynote speaker at ERADS (Porto Alegre, Brazil) in March 2013 and at SimuTools (Nice, Cannes) in March 2013.

#### 9.1.2. Journal, Conference and Workshop Organization

- Arnaud Legrand has organized the *SimGrid user days* in Lyon (June 2013).
- Arnaud Legrand has organized the *BOINC workshop* in Grenoble (September 2013).
- Corinne Touati and Panayotis Mertikopoulos have organized the *Algo-GT workshop* in Grenoble (July 2013).

#### 9.1.3. Program Committees

- Panayotis Mertikopoulos has been Publication chair of WiOpt'13, TPC member of ValueTools'13. He is a regular reviewer for ISIT'13, ITW'13, Games on Economic Behavior, Journal of Economic Theory, Advances on Applied Probability, IEEE Trans. on Information Theory, IEEE Trans. on Wireless Communications, IEEE Trans, on Signal Processing.
- Bruno Gaujal has been a TPC member of Wodes, IPDPS and SigMetrics.
- Olivier Richard has initiated a reproducible research track in Compas entitled Realis. He is a regular reviewer for Parallel Computing, TSI and CLCAR.
- Jean-Marc Vincent has been in the steering committee of AMSTA and a TPC member of IPDPS'13, SimuTools'13, ValueTools'13 and SimulTech'13.
- Arnaud Legrand has been a TPC member of IPDPS'13, ICPP'13, PPAM and is a regular reviewer for IJHPCA, SIMPAT and TPDS.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Several members of MESCAL are university professors and comply with their recurrent teaching duties. We only list here lectures (i.e., not tutorials or practical sessions) at the master level or above.

Master : Florence Perronnin, Probabilities for computer science, 23h Eq. TD, M1, ENSIMAG

Master : Florence Perronnin, Performance Evaluation, 23h Eq. TD, M1, Polytech

Master : Arnaud Legrand and Jean-Marc Vincent, Performance Evaluation, 32h Eq. TD, M2, UJF

Master : Arnaud Legrand, Parallel Systems, 47h Eq. TD, M2, UJF

Master : Bruno Gaujal, Discrete Events, 18 Eq. TD, M2, MPRI/ Paris Diderot.

Master : Bruno Gaujal, Mean field Approximation, 20 Eq. TD, M2, BCAM (Bilbao)

Doctorat : Bruno Gaujal, Mean field Approximation 30 Eq. TD, Toulouse PhD Program.

Master : Panayotis Mertikopoulos, Game theory for the working economist, 55 Eq. TD, M2, University of Athens.

Master : Olivier Richard, Networking, 33 Eq. TD, M1, Polytech

Master : Jean-Marc Vincent, Probabilities and Simulation, 23h Eq. TD, M1, Polytech

- Olivier Richard is also responsible of the organization of the RICM4 (M1 Polytech) and of multi-disciplinary projects.

### 9.2.2. Supervision

PhD : Joseph Emeras, *Workload Traces Analysis and Replay in Large Scale Distributed Systems*, Université de Grenoble, 01 octobre 2013 [5].

PhD : Robin Lamarche Perrin, *Building Meaningful Macroscopic Descriptions of Large-scale Complex Systems*, 14 octobre 2013 [6].

### 9.2.3. Juries

- Bruno Gaujal has been president of the junior researcher selection committee in Inria Bordeaux.
- Bruno Gaujal has been member of the professor selection committee in University of Avignon.
- Bruno Gaujal has been member of the PhD thesis committee of Alexandre Salch (G-SCOP laboratory, Grenoble).
- Arnaud Legrand has been member of the PhD thesis committee of Sorina Camarasu Pop (Creatis laboratory, Lyon).
- Arnaud Legrand has been a reviewer of the PhD thesis of Javier Celaya Alastrué (University of Zaragoza, Spain).

## 9.3. Popularization

### 9.3.1. Popular Science

- MESCAL actively promotes science to young and non-scientific audience. This year Corinne Touati participated the *Fête de la science* and animated a workshop on game theory. theory [48].
- Jean-Marc Vincent contributed to the national initiative for introducing computer science to high school professors in mathematics. He was responsible of the high school professors training, of the corresponding university diploma and of the online training provided by the rectorat. Jean-Marc also participated to the steering committee of CERVIN (<http://flet.fr/cervin/>) for Inria.
- Olivier Richard is involved in training *Classe Préparatoires* professors to Python. He is also responsible of the Polytech fablab, which he presented at the Toulouse Hacker Space Factory.



## **MOAIS Project-Team**

# **9. Dissemination**

## **9.1. Scientific Animation**

- Chair, Steering board:
  - Thierry Gautier, Chair of ComPAS'2013, Track Parallelism, located in Inria Grenoble, January 2013.
  - Bruno Raffin, Paper co-chair of JVRC 2013 (EGVE - EuroVR Joint Virtual Reality Conference).
  - Bruno Raffin, Member of the Steering Board of EGPGV (Eurographics Symposium on Parallel Rendering and Visualization)
  - Bruno Raffin, Member of the Steering Board of the journée visualisation scientifique.
  - Denis Trystram, Chair of the track Algorithms HiPC (20th Int'l Conf. on High Performance Computing), dec. 16-20, Hyderabad, India
- Program committees:
  - ICCS 2013 (International Conference on Computational Science).
  - GPUCOMP 2013 (third Workshop on GPU Computing).
  - IEEE VR 2013.
  - ISVC 2013 (International Symposium on Visual Computing).
  - SEARIS 2013 (Workshop on Software Engineering and Architectures for Realtime Interactive Systems).
  - COMPASS, january 15-18 2013, Grenoble, France
  - IPDPS 2013 (24th IEEE International Parallel & Distributed Processing Symposium) may 20-24 2013, Boston USA
  - HCW'2013 (22nd IEEE Heterogeneous Computing Workshop) may, 2013, Boston USA
  - ISPD (12th Internat Symposium on Parallel and Distributed Computing) june 27-30, 2013, Bucharest, Romania
  - OPTIM'13 (Workshop on Opt. Issues in Energy Efficient Distributed Systems) july 1-5, 2013, Helsinki, Finland
  - 6th MISTA, august 27-29 2013, Ghent, Belgium
  - 10th PPAM 2013, september 9-12, 2011, Warsaw, Poland
  - ParCo'2013, sept. 10-13, 2013, Munich, Germany
  - IC3 2012 (5th International Conference of Contemporary Computing) august 6-8, 2012, Noida, India
  - EuroMPI (20th internat conference) sept. 15-18, 2013, Madrid, Spain
  - ESA (21st European Symposium on Algorithms) sept. 2-6, 2013, Sophia Antipolia, France
  - 25th SBAC-PAD, october 23-26, 2013, Pernambuco, Brazil

## **9.2. Teaching - Supervision - Juries**

### **9.2.1. Teaching**

Master: J-L. Roch co-director (Grenoble-INP) with P Elbaz-Vincent (Université Joseph Fourier, Math. Dept) of the Master "SCCI Security, Cryptology and Coding of Information Systems" (M2) joined between UJF and INP Grenoble Universities. This Master, started in 2001, is taught in English from sept 2007 (international Master).

Master: C. Pernet and Denis Trystram are responsible of the first year (M1) of the international Master of Science in Informatics at Grenoble (MOSIG-M1).

Master: V Danjean: course "Parallel Programming" (M2), Grenoble University,.

Master: J-L. Roch, "Security models" 24h (M2), Grenoble University

Master: D. Trystram, P.-F. Dutot, J.-L. Roch, "Complexity, approximation theory and randomization" master course (M2) at Grenoble University

Master: François Broquedis. 192 hours per year. 192 hours per year. Engineering school Grenoble-INP/Ensimag, 1st year/L3 and Master (M1/2nd year and M2/3rd year).

Master: Vincent Danjean. 242 hours per year. Licence (third year) and Master (first and second year) at Joseph Fourier University. First to third year of engineering school at Polytech' Grenoble.

Master: Pierre-François Dutot. 226 hours per year. Licence (first and second year) at IUT2/UPMF (Institut Universitaire Technologique de l'Université Pierre Mendès-France) and 9 hours Master M2R-ISC Informatique-Systèmes-Communication at Joseph Fourier University.

Master: Guillaume Huard. 242 hours per year. Licence (first and third year) and Master (first year) at Joseph Fourier University.

Master: Grégory Mounié. 242 hours per year. Master (first year) and Computer Science for Non Computer Scientist Post-Master at Engineering school ENSIMAG and Dept TELECOM, Grenoble-INP.

Master: Clement Pernet. 210 hours per year. University J. Fourier. Master (first year and second year) and Licence (3rd year).

Master: Bruno Raffin. 22 hours per year. Master at Université d'Orléans and Polytech'Grenoble.

Master: Jean-Louis Roch. 242 hours per year. Engineering school Grenoble-INP/Ensimag and Master (M1/2nd year and M2/3rd year)

Master: Denis Trystram. 200 hours per year in average, mainly at first level of Engineering School.

Master: Frédéric Wagner. 220 hours per year. Engineering school ENSIMAG, Grenoble-INP (M1/2nd year and M2/3rd year) (190h) ; Master DESS/M2-P SCCI Security (30h).

### 9.2.2. Supervision

PhD in progress : **David Beniamine (since 2013)**. Parallelisation Patterns and Scheduling for Real-Time Physics Simulations. Co-advised Guillaume Huard and Bruno Raffin.

PhD in progress : **Amrit Kumar (since 2013)**. Analysis of work-stealing and adaptive algorithms. Labex-Persyval co-advised PhD by Pascal Lafourcade (Verimag lab), Cedric Lauradoux (Inria Privatics team) and Jean-Louis Roch.

PhD in progress : **Gilles Daviet (since 2013)**. Parallel Macroscopic Simulations of Fibrous Materials. Co-advised by Florence Bertails-Descoubes, Pierre Saramito and Bruno Raffin.

PhD in progress : **Julio Toss (since 2013)**. Parallel Algorithms and Data Structures for Physically Based Simulation of Deformable Objects. Join Ph.D with UFRGS, Brazil. Co-advised by Joao Comba and Bruno Raffin.

PhD in progress : **Marwa Sridi (since 2013)**. Parallel Algorithm Composition for Transient Mechanics Simulations. Join Ph.D with CEA, France. Co-advised by Vincent Faucher, Thierry Gautier and Bruno Raffin.

PhD in progress : **Ziad Sultan (since 2012)**. High-performance algebraic computations. Co-advised Ph.D by Jean-Guillaume Dumas (LJK Lab) and Clément Pernet.

PhD in progress : **Mathias Ettinger (since 2011)**. Cache Efficient Parallel Adaptive Algorithms for Scientific Visualization. Co-advised by Bruno Raffin and François Broquedis

PhD in progress : **Stefano Mor (since 2011)**. Analysis of work-stealing and adaptive algorithms. Join Ph.D with UFRGS, Brazil. Co-advised by Jean-Louis Roch, Nicolas Maillard and Bruno Raffin

PhD in progress : **Mathieu Dreher (since 2011)**. In-Situ Visualization for Molecular Dynamics. Advised by Bruno Raffin.

PhD in progress : **Joao Ferreira Lima (since 2010)**. Work Stealing on GPUs. Join Ph.D with UFRGS, Brazil. Co-advised by Vincent Danjean, Thierry Gautier, Nicolas Maillard and Bruno Raffin

## ROMA Team

## 9. Dissemination

### 9.1. Scientific Animation

Anne Benoit is an associate editor of the *Journal of Parallel and Distributed Computing (JPDC)*. She was the workshops co-chair of ICPP 2013. She was a member of the program committees of the following conferences and workshops: HiPC 2013, ICPE 2013, CCGrid 2013, IPDPS 2013, CLOSER 2013, HCW 2013, IGCC 2013.

Jean-Yves L'Excellent was a member of the program committees of Renpar'13 and ICPP'2013, where he was also local arrangements co-chair. He co-organized the third MUMPS Users days, EDF, Clamart, May 29-30, 2013.

Loris Marchal is or was a member of the program committees of IPDPS'2013, ICPP'2013, and IPDPS'2014.

Yves Robert is an associate editor of *IJHPCA*, *IJGUC* and *JOCS*. He was Program Chair of ICPP 2013 (Int. Conference on Parallel Processing) and of HiPC 2013 (Int. Conference on High Performance Computing). He is or was a member of the program committees of the following conferences and workshops: EduPar 2013, FTXS 2013, ICCS 2013, IGCC 2013, ISC tutorials 2013 ISCIS 2013 and SC 2013.

Bora Uçar was the chair of the applications track of ICPP 2013. He was a member of the program committee for IPDPS 2013, PCO 2013 (a workshop of IPDPS), and PPAM.

Frédéric Vivien is an associate editor of *Parallel Computing*. Frédéric Vivien was program vice-chair, for the algorithms track, of IPDPS 2013, is program vice-chair, for the algorithms track, of HiPC 2014, and is co-responsible of the stream "Algorithmes distribués, multi-agents et calcul parallèle" for ROADEF 2014.

He is or was a member of the program committee of the following conferences and workshops: SC'14, IPDPS 2014, ComPAS'2014, PDP 2014, SC'13, EduPDHPC, ICPP 2013, EduPar-13, PDP 2013, ROADEF 2013, RenPar'21 - ComPAS'2013.

### 9.2. Teaching - Supervision - Juries

#### 9.2.1. Teaching

Licence: Anne Benoit, Systèmes et Réseaux, 48h, L3, École normale supérieure de Lyon, France.

Licence: Yves Robert, Algorithmes, 48h, L3, École normale supérieure de Lyon, France.

Master: Frédéric Vivien, Algorithmique et Programmation Parallèles, 36 h, M1, École normale supérieure de Lyon, France.

Master: Frédéric Vivien, Algorithms for High-Performance Computing Platforms, 36 h, M2, École normale supérieure de Lyon, France.

Master: Bora Uçar, Combinatorial Scientific Computing, 36 h, M2, École normale supérieure de Lyon, France.

#### 9.2.2. Supervision

PhD in progress: Guillaume Aupy, Multi-criteria scheduling on volatile platforms, September 1, 2011, Anne Benoit and Yves Robert.

PhD in progress: Dounia Zaidouni, Performance and execution models for exascale applications in failure-prone environments, October 1, 2011, Frédéric Vivien and Yves Robert.

PhD in progress: Wissam M. Sid-Lakhdar, Exploitation of multicore architectures in the resolution of sparse linear systems by multifrontal methods, October 1, 2011, Jean-Yves L'Excellent.

PhD in progress: Julien Herrmann, Numerical algorithms for large-scale platforms, September 1, 2012, Loris Marchal and Yves Robert.

### 9.2.3. *Juries*

PhD: Anne Benoit was a “rapporteur” and member of the jury for the PhD defense of Przemysław Uznański, Bordeaux, France, October 11, 2013.

PhD: Jean-Yves L'Excellent was a “rapporteur” and member of the jury for the PhD defense of Sethy Montan, University Pierre et Marie Curie, France, October 17, 2013.

PhD: Yves Robert was a “rapporteur” and member of the jury for the PhD defense of Amal Khabou, University Orsay Paris XI, Saclay, France, on February 11, 2013.

PhD: Yves Robert was a member of the jury for the PhD defense of Dimitris Letsios, University of Evry Val d'Essonne, Paris, France, on October 22, 2013.

Habilitation: Yves Robert chaired the jury for the *Habilitation à Diriger des Recherches* of Laurent Lefèvre, ENS Lyon, France, November 22, 2013.

PhD: Frédéric Vivien was a member of the jury for the PhD defense of Javier Celaya, University of Zaragoza, Zaragoza, Spain, September 6, 2013.

PhD: Frédéric Vivien was an “expert” for the PhD defense of Marco Meoni, EPFL, Lausanne, Switzerland, December 11, 2013.

PhD: Bora Uçar was an “evaluator” for the PhD defense of Bastian Onne Fagginger Auer, Department of Mathematics, Utrecht University, the Netherlands, August 26 2013.

## RUNTIME Project-Team

# 9. Dissemination

## 9.1. Scientific Animation

Raymond NAMYST is the head of the LaBRI-CNRS “SATANAS” (*Runtime systems and algorithms for high performance numerical applications*) research team (about. 50 people) that includes the BACCHUS, HIEPACS, PHOENIX and RUNTIME Inria groups.

Raymond NAMYST was chairing the scientific committee of the ANR “Numerical Models” program for the 2011-2013 period.

Raymond NAMYST serves as an expert for the following initiatives/institutions:

- ETP4HPC (<http://www.etp4hpc.eu/>, in 2013) ;
- CEA/DAM (as a “scientific expert” for the 2008-2012 period) ;
- ORAP (ORganisation Associative du Parallélisme, since 2013) ;
- CEA-EDF-Inria School technical committee (since 2009) ;
- GENCI (<http://www.genci.fr/?lang=en>, since 2009) ;

Raymond NAMYST was a program committee member of the following international conferences: SC’13, PACT 2013, ROSS 2013, ICPP 2013, CASS 2013; CCGrid 2013, PPAM 2013.

Raymond NAMYST gave invited talks at the following international conferences/workshops: SC’13 (Birds of a Feather on "Dynamic Exascale Runtime Systems"), ORAP 2013 ("Programming Heterogeneous Architectures").

Samuel THIBAULT was a program committee member of IPDPS 2014

Brice GOGLIN was a program committee member of EuroMPI 2013, Hot Interconnects 2013, HIPC 2013.

Brice GOGLIN organized the CEA-EDF-Inria summer school on Programming Heterogeneous Parallel Architectures in Cadarache (June 2013).

Guillaume MERCIER was program committee member of EuroMPI 2013.

Olivier AUMAGE was reviewer for the ACM TACO journal and for the EuroPar 2013, ICPP 2013, ROSS 2013, and IPDPS 2014 conferences and workshops. He also reviewed one project submission for the 2013 ANR MN funding call. He is part of the Inria Bordeaux – Sud-Ouest committee for scientific event fundings.

Olivier AUMAGE was an invited teacher for the European COST-funded ComplexHPC school in Uppsala, Sweden. He also was an invited speaker at the International Conquest Workshop organized by the Theoretical Chemistry and Modeling Group of the Institute for Molecular Science from the University of Bordeaux.

Emmanuel JEANNOT was program committee member for: Euro-MPI 2013, CCGRID 2013, Heteropar 2013, PPAM 2013, IPDPS 2014.

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

Emmanuel JEANNOT is associate editor of the International Journal of Parallel and Emergent Distributed Systems.

Emmanuel JEANNOT was reviewer for the following journals: JPDC, IEEE TPDS, Parallel Computing.

Emmanuel JEANNOT has given an invited talk at the JLPC in Urbana and at the ComplexHPC Spring School 2013 on "Heterogeneous computing - impact on algorithms -".

Denis BARTHOU was program committee member for: Euro-Par 2013, IPDPS 2013, PROPER 2013, UCHPC 2013. He is part of the Inria Bordeaux – Sud-Ouest committee for Young Researchers. He is member of the Governing Board of the LaBRI and of the board of directors of the Institut Polytechnique de Bordeaux (IPB). Denis BARTHOU is scientific expert for the Exascale Computing Research Laboratory (since 2009).

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Members of RUNTIME project gave thousands of hours of teaching at University of Bordeaux and ENSEIRB-MATMECA engineering schools, covering a wide range of topics from basic use of computers and C programming to advance topics such as operating systems, parallel programming and high-performance runtime systems.

### 9.2.2. Supervision

PhD: Sylvain HENRY, Programming Models and Runtime Systems for Heterogeneous Architectures, 2013/11, Denis BARTHOU and Alexandre DENIS

PhD: Cyril BORDAGE, Parallélisation de la méthode multipôle sur architecture hybride, 2013/11, Raymond NAMYST and David GOUDIN (CEA CESTA)

PhD: Alexandre DUCHATEAU, Automatic Algorithm Derivation and Exploration in Linear Algebra for Parallelism and Locality, 2013/03, Denis BARTHOU and David PADUA (UIUC)

PhD in progress : Bertrand PUTIGNY, Modèles de performance pour l'ordonnancement sur architectures multicœurs hétérogènes, 2010/11, Brice GOGLIN and Denis BARTHOU

PhD in progress : François TESSIER, Placement d'applications hybrides sur machine non-uniformes multicœurs, 2011/10 Emmanuel JEANNOT and Guillaume MERCIER

PhD in progress : Paul-Antoine ARRAS, Development of a Flexible Heterogeneous System-On-Chip Platform using a mix of programmable Processing Elements and hardware accelerators. 2011/10, Emmanuel JEANNOT and Samuel THIBAULT

PhD in progress: Andra HUGO, Composability of parallel codes over heterogeneous platforms, 2013/10, Abdou GUERMOUCHE and Pierre-André WACRENIER and Raymond NAMYST

PhD in progress: Corentin ROSSIGNON, Design of an object-oriented runtime system for oil reserve simulations on heterogeneous architectures, 2012/04, Olivier AUMAGE and Pascal HÉNON (TOTAL) and Raymond NAMYST and Samuel THIBAULT

PhD in progress: Emmanuelle SAILLARD, Analyse statique/dynamique/itérative pour la validation et l'amélioration des applications parallèles multi-modèles sur supercalculateur hybride de type cluster de CPUs/GPUs, 2012/10, Patrick CARRIBAULT (CEA/DAM), Denis BARTHOU

PhD in progress: Grégory VAUMOURIN, Hiérarchie mémoire hybride et gestion dynamique de données dans les architectures parallèles embarquées, 2013/10, Thomas DOMBEK (CEA/DACLE), Denis BARTHOU

PhD in progress: Soufiane BAGHDADI, Collaboration entre compilateur et support d'exécution pour les applications parallèles 2011/10, Elisabeth BRUNET (Telecom SudParis), Jean-François TRAHAY (Telecom SudParis), Denis BARTHOU

PhD in progress: Marc SERGENT, Passage à l'échelle de moteur d'exécution à base de graphes de tâches, 2013/09, Olivier AUMAGE, David GOUDIN (CEA/CESTA), Samuel THIBAULT, Raymond NAMYST

PhD in progress: Suraj KUMAR, Stratégies d'ordonnancement dynamique pour l'algèbre linéaire dense, 2013/12, Emmanuel AGULLO, Olivier BEAUMONT, Samuel THIBAULT

PhD in progress: Pei LI, High-Performance Code Generation for Stencil Computations on Heterogeneous Multi-device Architectures, 2012/10, Raymond NAMYST, Elisabeth BRUNET (Telecom SudParis)

### 9.2.3. Juries

Raymond NAMYST was member of the PhD defense jury for the following candidates:

- Jean-Yves VET (University Pierre et Marie Curie Paris, reviewer)

Denis BARTHOU was member of PhD defense jury of the following candidates:

- Amira MENSI (Mines de Paris, reviewer)
- Yuryi KACHNIKOV (UVSQ, reviewer)
- Jose NOUDOHOUENOU (UVSQ, president)
- Jean-Marc GRATIEN (UJF, president)

### **9.3. Popularization**

Brice GOGLIN is in charge of the diffusion of the scientific culture for the Inria Research Center of Bordeaux. He is also a member of the national Inria committee on Scientific Mediation. He gave numerous talks about high performance computing and research careers to general public audience and school student, as well as several radio and paper interviews about Inria's activities.

Brice GOGLIN and Bertrand PUTIGNY wrote two popularization papers about High-Performance Computing in the Interstices online journal.

Brice GOGLIN and François TESSIER presented research careers at the Aquitec student exhibition.

Paul-Antoine ARRAS, Sylvain HENRY, Bertrand PUTIGNY and François TESSIER gave a hands-on introduction to programming to 30 teenagers at the *Fete de la Science*. Brice GOGLIN was in charge of a numeric science popularization game during that same event.

Samuel THIBAUT presented his research work in a local elementary school.



## ASCOLA Project-Team

# 9. Dissemination

## 9.1. Scientific Animation

### 9.1.1. Event organization, animation of scientific community

#### 9.1.1.1. International

##### Board memberships

- **AITO:** P. Cointe is a member of this international organization that manages the ECOOP conference series.
- **AOSD-Europe:** M. Südholt is a member of the governing board of AOSD-Europe, the European Network of Excellence in AOSD, which provides financial support and organizes scientific events on Modularity.
- **Aspect-oriented Software Association (AOSA):** M. Südholt is a member of this international organization (headquartered in California) that manages the international conference on Modularity and provides support for scientific and industrial events on modularity in a large sens. He has been its chair for two years until April 2013.
- **COST Action:** J.-M. Menaud has been a management committee member of the European COST Action IC0804: Energy efficiency in large scale distributed systems from 2009 to 2013.
- **OW2:** Jean-Marc Menaud has been a member of the OW2 board committee since 2010.
- **Transactions of AOSD.** M. Südholt is a member of the editorial board of this Springer journal.

##### Events

- **REM 2013:** M. Südholt has been a general co-chair of the International Workshop on Reactivity, Events and Modularity, collocated with the ACM SPLASH conference in Indianapolis. <http://soft.vub.ac.be/REM13>
- **VTDC 2013:** A. Lèbre has been the general chair of the 7th edition of the International Workshop on Virtualization Technologies in Distributed Computing, collocated with the ACM HPDC conference in New York <http://www.grid-appliance.org/wiki/index.php/VTDC13>.

#### 9.1.1.2. National

##### Board memberships

- **CominLabs laboratory of excellence:** P. Cointe is a member of its management board. J.-M. Menaud has been the co-coordinator of the focus on Energy and resource efficiency in ICT since 2011 of this regional excellence cluster in research. M. Südholt has been co-coordinating its security focus since 2011.
- **Green Lab Center:** T. Ledoux and J.-M. Menaud are members 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 <http://www.greenlabcenter.fr>.
- **Innovation cluster Images & Réseaux:** P. Cointe is a member of the management board of this cluster. M. Südholt serves on its board for the selection and validation of industrial and academic projects.

## Events

- **Eco-conception of software.** J.-M. Menaud has co-organized two events on GreenIT, *HPC & Cloud : Are they green ?* in Lille and *What else / what next ?* in Luxembourg.
- **Regional Doctoral School STIM:** T. Ledoux has co-organized JDOC, an event promoting contact between PhD students of the Doctoral School (Apr. 11, 2013).
- **Workshop on SLA Management in Cloud computing:** T. Ledoux has been the main coordinator of first workshop on SLA management in the Cloud organized with both industrial and research speakers <http://compas2013.inrialpes.fr/evenements-satellites/ateliers/slacloud>.
- **Workshop on Software Quality.** The Ascola team has co-organized a workshop on Software Quality in June 2013, which has been attended by 60 participants. <http://www.lina.sciences.univ-nantes.fr/apcb/JSQ2013>

### 9.1.2. Committee participations, reviewing activities, collective duties, etc.

- **P. Cointe:** He is the head of the LINA computer science laboratory (UMR 6241) <http://www.lina.univ-nantes.fr/>.

He was a member of the ECOOP 2013 program committee. He served the French programming language community as member of the GDR GPL “Phd Thesis” prize committee

This year he was a member of the AERES visiting evaluation committee for the LTCI laboratory and a member of the PES national committee for computer sciences (CNRS section 27).

He is a member of the board of the Doctoral School MATISSE in Rennes. He is also the chair of the STIC-MATHS committee working for the Pays de la Loire Council (CCRRDT) and the PRES L’UNAM.

- **A. Lèbre** has been the general chair of the 7th international workshop on “Virtualization Technologies in Distributed Computing” (VTDC 2013) co-located with HPDC 2013 in New York, USA. He also was a member of the program committee of the ACM/IEEE International Conference on Cluster, Cloud and Grid Computing (CCGRID 2013), the International ACM SuperComputing Conference (SC 2013), the IEEE International Conference on Cloud and Green Computing (CGC 2013), the IEEE International Conference on Big Data (BigData 2013), the Euro-Par Conference (Euro-Par 2013), and the International Conference on P2P, Parallel, Grid, Cloud and Internet Computing (3PG-CIC 2013). He served as Publicity Chair for the International Conference on Network and Parallel Computing (NPC 2013). He also served as external reviewers for the Austrian Starting Grant Program and the European FP7 Program. He represented Inria during the Post Consultation Workshop on Cloud Computing and Services for H2020 at Brussels.

He is a member of the architect board of the G5K consortium and also acts the local contact point for the Nantes site. He is also member of the directory board of the CNRS/GDR ASR System group since 2012. He leads the Discovery Initiative, an open-source collaborative action, which aims at providing a fully distributed IaaS Cloudkit <http://beyondthecLOUDS.github.io>. He presented this initiative at the Summer School of Cloud Computing at Telecom SudParis, Evry France and at the Inria Alumni Jam Session on Cloud Computing.

- **T. Ledoux** has been a member of the program committees of the following conferences: the 4th International Workshop on Green and Cloud Computing Management (GCM’13), the 12th Workshop on Adaptive and Reflective Middleware (ARM’13), the 1st International Workshop on Green In Software Engineering - Green By Software Engineering (GIBSE’13) the 28th Symposium On Applied Computing (SAC’13) - track Software Engineering Aspects of Green Computing.
- **J.-M. Menaud** has served on the program committee of the 9th French Conference on Operating Systems (CFSE-9), the 8th Workshop on Virtualization in High-Performance Cloud Computing (VHPC’13) the ninth Advanced International Conference on Telecommunications (AICT 2013), the second Workshop on Collaborative and Autonomic Green computing (CAGING 2013), the third Green Communications and IT Energy-aware Technologies (ENERGY 2013), the IEEE/ACM Inter.

Conference on Green Computing and Communications (GreenCom2013), the 1st Conference on Energy Efficiency on Large Scale Distributed Systems (EE-LSDS 2013), the third IEEE International Conference on Cloud and Green Computing (GCG 2013), the 6th International Conference on Contemporary Computing (IC3 2013), the International Workshop on Cloud Computing Systems, Networks, and Applications (Globecom 2013), and the second International Conference on Smart Grids and Green IT Systems (SMARTGREENS 2013).

J.-M. Menaud is a management committee member of the european COST Action IC0804 : Energy efficiency in large scale distributed systems since 2009, the co-animator of the focus Energy and resource efficiency in ICT, in the Labex COMIN Labs since June 2011, the animator of the CNRS/GDR ASR System group since June 2009, member of the OW2 board committee from 2010 and a member of the (RenPar/CFSE/Sympa) steering committee since 2008.

- **J. Noyé** has been a program committee member of the International Conference on Software Composition (Budapest Hungary, June 2013). He is a program committee member of the 13 International Conference on Modularity (Modularity'14), which will take place in Lugano, Switzerland, in April 2014.
- **J.-C. Royer:** He has been a member of the program committees of CAL 2013, CIEL 2013, WETICE 2013, SNPD 2013, ICIS 2013, MULTIPLE 2013, and SERA 2013 and did a review for the TSI journal. He participated in the evaluation of a project for Israel Science Foundation.
- **M. Südholt** has been a member of the management board of the *Aspect-Oriented Software Association* since 2006 and management board of **AOSD-Europe** since 2008.

He has been a member of the the steering committees of the internal conference on Modularity since 2006 and has chaired it for two years until 2013. He has been a member of the steering committee of the international conference on Software Composition since 2008.

In 2013, he was a member of the program committees of the international conferences CloudCom'13 and Modularity:aosd'13 as well as of 1 international and 1 national workshop.

He is a coordinator of the security domain within the CominLabs laboratory of excellence.

He is a member of the council of the *Laboratoire Informatique de Nantes Atlantique* (LINA, UMR 6241). He also serves on the selection and evaluation committee of the competitiveness cluster Images & Réseaux. Finally, he has served on the evaluation committee for startup proposals of Atlanpole, a regional innovation body.

- **N. Tabareau** was a member of the program committees of the Journées Francophones des Langages applicatifs (JFLA'13) and Foundations of Aspect Languages (FOAL'13).

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

The team is involved in the following undergraduate and graduate-level programs at EMN (the institution 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 final-year **graduate-level informatics specialization**.
- Since 2009 our team has defined and set up a new three-year **engineering program on software engineering**

The team has also been involved in the following three 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.
- 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 each for about 195 hours on average in 2013 (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, a significant part of the program is taught by temporary staff, whose participation is managed by ASCOLA members.

### **9.2.2. Supervision**

The team has been supervising 16 PhD thesis in 2013, of which four have been co-supervised with external partners (three with foreign partners from U. Chile; TU Darmstadt, Germany; Lancaster U., U.K.) and one with the French TASC team from Mines Nantes.

Several PhD have been defended this year: In Feb., Flavien Quesnel defended his thesis on “Toward Cooperative Management of Large-scale Virtualized Infrastructures: the Case of Scheduling”. In April, Frederico Alvares defended his thesis on “Multi Autonomic Management for Optimizing Energy Consumption in Cloud Infrastructures”. In Sep., Akram Ajouli defended his thesis on views and program transformations for software modularity. In Dec., Yousri Kouki defended his thesis on “SLA-driven Cloud Elasticity Management approach”.

Two members of the team have been preparing an HDR in 2013 for a defense in 2014.

### **9.2.3. Juries**

- **A. Lèbre** was a member of a selection committee for an Associate Professor position in the Telecom school in Nancy.
- **T. Ledoux** was member of the PhD committee of Erwan Daubert at Université Rennes 1.
- **J.-M. Menaud** was member of the PhD committees of Damien Borgetto at University of Toulouse, Rémi Druilhe at University of Lille, and Flavien Quesnel in Nantes.
- **J.-C. Royer** was member of the PhD committees of Akram Ajouli and Valerio Cosentino at Mines de Nantes.
- **M. Südholt** was part of a selection committee for a position of Associate Professor at University of Rennes. He was also a member of the PhD evaluation committees of Eline Philips at Vrije Universiteit Brussel and Zhoulai Fu at University of Rennes.

## FOCUS Project-Team

# 8. Dissemination

## 8.1. Scientific Animation

**M. Bravetti:** Program Committee co-chair for: SEFM 2013 11th International Conference on Software Engineering and Formal Methods.

Program Committee member of the following conferences: SITIS 2013 (WeCA): 9th Conference on Signal-Image Technology and Internet-Based Systems (Web Computing and Application track); CLOUD 2013: 6th IEEE Conference on Cloud Computing; WS-FM 2013: 10th Workshop on Web Services and Formal Methods: Formal Aspects of Service-Oriented and Cloud Computing; ESOC 2013: 2nd European Conference on Service-Oriented and Cloud Computing; FSEN 2013: 5th Conference on Fundamentals of Software Engineering; WS-FMDS 2013: 3rd Workshop on Formal Methods in the Development of Software.

**O. Dardha:** Program Committee member 6th Interaction and Concurrency Experience (ICE 2013)

**U. Dal Lago:** Program Committee co-chair and main organizer for FOPARA 2013: Third International Workshop on Foundational and Practical Aspects of Resource Analysis (August 29th to 31st, 2013, Bertinoro, Italy).

Program Committee member of the following conferences: FOSSACS 2013: 16th Conference on Foundations of Software Science and Computation Structures; CSL 2013: Computer Science Logic 2013; FSTTCS 2013: Foundations of Software Technology and Theoretical Computer Science; LOLA 2013: Syntax and Semantics of Low-Level Languages; GaLoP VIII: Games for Logic and Programming Languages.

**I. Lanese:** Program Committee co-chair of the following conferences: ICE 2013: 6th Interaction and Concurrency Experience; Service Oriented Architectures and Programming track of the 28th Annual ACM Symposium on Applied Computing (SAC 2013).

Program Committee member of 9th Workshop on Automated Specification and Verification of Web Systems (WWV 2013).

Member of the editorial board of the Scientific World Journal, and the Open Journal of Communications and Software.

**C. Laneve:** Invited speaker at IFM 2013, 10th International Conference on Integrated Formal Methods

**M. Gabbrielli:** Member of the editorial board of the Int'l Journal Theory and Practice of Logic Programming.

**S. Martini:** Program Committee member of the following conferences: 14th Italian Conference on Theoretical Computer Science (ICTCS 2013); 8th International Computer Science Symposium in Russia (CSR 2013); Workshop Logic and Computational Complexity (LCC 13); conference on the History and Philosophy of Computing (HaPoC 2013).

**F. Montesi:** Track program chair for 27th ACM Symposium on Applied Computing (SAC) track on Service-Oriented Applications and Programming track (SOAP).

Program Committee member of 2013 World Conference on Information Systems and Technologies (WorldCIST).

**D. Sangiorgi:** Member of the editorial board of the journals: Logical Methods in Computer Science, Acta Informatica, and Distributed Computing, Foundations and Trends in Programming Languages.

Invited speaker at the events: the SIGPLAN Programming Languages Mentoring Workshop; 6th Interaction and Concurrency Experience (ICE 2013)

Program Committee member of the conferences: 7th Conference on Language and Automata Theory and Applications (LATA 2013); 5th IPM International Conference on Fundamentals of Software Engineering (FSEN 2013); 24th International Conference on Concurrency Theory (CONCUR); Fourth International Symposium on Games, Automata, Logics and Formal Verification (GandALF)

Lecturer at the schools: 18th Estonian Winter School in Computer Science (EWSCS), Tallin, February 2013, and Scuola Estiva di Logica 2013, Garignano sul Garda, August 2013.

**G. Zavattaro:** Invited speaker at the 2013 European Conference on Service-oriented and Cloud Computing (ESOCC'13).

Program Committee member of the following conferences: 3rd Workshop on Adaptive Services for the Future Internet (WAS4FI'13); 10th Workshop on Web Services and Formal Methods: Formal Aspects of Service-Oriented and Cloud Computing (WS-FM'13); 7th Workshop on Reachability Problems (RP'13); European Conference on Service-oriented and Cloud Computing (ESOCC'13); 2nd Workshop on Quality Assurance for Service-based applications (QASBA 2013); 6th IEEE Conference on Cloud Computing (CLOUD 2013); IFIP Joint International Conference on Formal Techniques for Distributed Systems (33rd FORTE / 15th FMOODS); 10th Symposium on Formal Aspects of Component Software (FACS'13); the 10th Conference on Integrating Formal Methods (iFM'13).

## 8.2. Teaching - Supervision - Juries

### 8.2.1. Teaching

Below are the teaching activities of the Focus members during 2013.

- Mario Bravetti
  - Undergraduate: “Tecnologie Web”, 66 hours, 3rd year, University of Bologna, Italy.
  - Master: “Applicazioni e Servizi Web”, 54 hours, 2nd year, University of Bologna, Italy.
- Ugo Dal Lago
  - Undergraduate: “Introduction to Programming in Python”, 20 hours, 1st year, University of Bologna, Italy.
  - Undergraduate: “Optimization”, 36 hours, 2nd year, University of Bologna, Italy.
- Maurizio Gabbrielli
  - Undergraduate: “Programming languages”, 40 hours, 2nd year, University of Bologna, Italy.
  - Master: “Artificial Intelligence”, 60 hours, 2nd year, University of Bologna, Italy.
- Marco Gaboardi
  - Master: “Advanced Programming”, 40 hours. 1st or 2nd year. University of Pennsylvania, USA.
- Ivan Lanese
  - Undergraduate: “Programmazione”, 40 hours, 1st year, University of Bologna, Italy.
  - Undergraduate: “Ingegneria del Software”, 20 hours, 2nd year, University of Bologna, Italy.
  - PhD: “Reversible Computing”, 10 hours, Department of Mathematics and Computer Science, University of Cagliari, Italy
- Cosimo Laneve
  - Undergraduate: “Programmazione”, 90 hours, 1st year, University of Bologna, Italy.
  - Master: “Analisi di Programmi”, 42 hours, 1st year, University of Bologna, Italy.
- Simone Martini

Undergraduate: “Introduction to programming in Python”, 58 hours, 1st year, University of Bologna, Italy.

Undergraduate: “Computer abilities for biologists”, 8 hours, 1st year, University of Bologna, Italy.

Master: “Basic Complexity”, 12 hours, 1st year and 2nd year, University of Bologna, Italy.

PhD: “Principles of Computer Science: Computing, Machines, and Programming Languages” Joint International Doctoral (Ph.D.) Degree in Law, Science and Technology, University of Torino, Italy.

- Davide Sangiorgi

Undergraduate: “Operating Systems”, 110 hours, 2nd year, University of Bologna, Italy.

Master: “Models for concurrency”, 15 hours, 2nd year, University of Bologna, Italy.

- Marco Solieri

Undergraduate: “Introduction aux structures de données linéaires”, 6h hours, 1st year, Institut Galilé, Université Paris 13, France

Master: “Administration Système”, 15 hours, 2nd year, école d’ingénieurs, Institut Galilé, Université Paris 13, France

Master: “Intranet, Internet et Web”, 44 hours, 2nd year, école d’ingénieurs, Institut Galilé, Université Paris 13, France

- Gianluigi Zavattaro

Master: “Linguaggi di Programmazione e Modelli Computazionali”, 120 hours, 1st year, University of Bologna, Italy.

- Roberto Amadini

Undergraduate: “Algoritmi e strutture dati”, 20 hours, 1st year, University of Bologna, Italy.

- Giulio Pellitta

Undergraduate: “Laboratorio di Operating Systems”, 40 hours, 2nd year, University of Bologna, Italy.

Undergraduate: “Attività di supporto alla didattica universitaria di Informatica nell’ambito della Piattaforma di e-learning A3”, 130 hours, 1st year, University of Bologna, Italy.

- Elena Giachino

Undergraduate: “Programmazione”, 40 hours, 1st year, University of Bologna, Italy.

### 8.2.2. Supervision

Phd thesis completed in 2013:

- Paolo Parisen Toldin, Implicit computational complexity and probabilistic classes, Dottorato di Ricerca in Informatica, University of Bologna, April 2013 Supervisors: S. Martini

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

- Michele Alberti, July 2011; Separation results in the algebraic lambda-calculus; L. Regnier (Marseille) and S. Martini
- Roberto Amadini, January 2012, Constraint Programming, M. Gabbrielli.
- Ferdinanda Camporesi, January 2009, Analysis of system biology, R. Cousot (Ecole Normale, Paris) and M. Gabbrielli
- Alberto Cappai, January 2013; Security, ICC and probabilistic bisimulation, U. Dal Lago.

- Ornella Dardha, January 2011, Type Systems for Distributed Programs: Components and Sessions, D. Sangiorgi.
- Saverio Giallorenzo, January 2013, Adaptation and choreography languages, M. Gabbrielli.
- Tudor Alexandru Lascu, January 2011, Automatic planning of the deployment of cloud-based applications, G. Zavattaro
- Jean-Marie Madiot, September 2011, Types, proofs and proof techniques for process calculi, D. Hirschhoff and D. Sangiorgi.
- Giulio Pellitta, January 2011, Extending Implicit Computational Complexity and Abstract Machines to Languages with Control, S. Martini.
- Alessandro Rioli, January 2012; Bisimulation equivalence in quantum lambda calculi, U. Dal Lago.
- Marco Solieri, December 2011; Géométrie de l'interaction, réseaux, et lambda-calcul, S. Guerrini (Paris Nord) and S. Martini.

The following PhD student is supervised by a member of Focus, but currently not in the Focus team:

- Sara Zuppiroli (Bologna), January 2010; models for quantum computing; U. Dal Lago.

### 8.2.3. *Juries*

U. Dal Lago has been rapporteur and member of the PhD evaluation committee for Clement Aubert, Paris 13, Stephane Zimmermann, Paris 7, and Martin Avanzini, University of Innsbruck.

S. Martini has been rapporteur and member of the evaluation committee of the “Habilitation a Diriger des Recherches” (HDR) of Michele Pagani, Paris 13, December 2013.

G. Zavattaro has been rapporteur and member of the PhD evaluation committee for Huu Nghia Nguyen (supervisors Prof. Pascal Poizat and Fatiha Zaidi), Université Paris Sud, Paris, France; and he has been member of the Ph.D. evaluation committee of Luca Panziera (supervisor Prof. Flavio De Paoli), universita' Milano Bicocca, Milano, Italy.

## 8.3. Popularization

**Simone Martini** has carried out extended work of scientific divulgation:

- member of the technical committee of Olimpiadi del Problem Solving (at Italian Ministry of Education), <http://www.olimpiadiproblemsolving.com>;
- the talks “Calcolo e simboli: la scienza digitale. A.M. Turing a cent'anni dalla nascita”, Accademia di Agricoltura Scienze e Lettere di Verona; “Problem solving tra linguaggio e competizione”, Workshop ‘Olimpiadi e Informatica’, Verona, 22 novembre 2013.

In addition, **S. Martini** and **U. Dal Lago** gave a series of lectures (20 hours altogether) to the students of “Collegio Superiore”, a college of excellence at the University of Bologna (general students, not limited to Computer Science). The course was about algorithms, computational complexity, and cryptography.



## OASIS Project-Team

# 8. Dissemination

## 8.1. Scientific Animation

- Françoise Baude: member of the editorial board of the Techniques et Sciences Informatique French journal from feb 2011, program committee member of HPCS 2013, ISPA 2013, reviewer for HPCS 2012 special issue journal Concurrency Practice and Experiment to be published in 2013, for JPDC, PC member for Compas 2014, ISPA2014 and CCGrid 2014, University of Nice official representative within the KIC EIT ICT Labs, including the Master school, from 2012.
- Olivier Dalle: member of the Steering Committee of SIMUTools (since 2009), member of the Program Committee of the Conferences DEVS/TMS'2013, WSC'2013, ACM SIGSIM PADS'2013, HPC&S 2013, Omnet++2013, reviewer for SIMULATION (SCS), ACM TOMACS, SIMPRA (Elsevier) and JOS (Palgrave).
- Ludovic Henrio: program committee member of FESCA'13, FOCLASA'13, ICE'13 and reviewer for the journal SCP (Science of Computer Programming), DIST, and STVR.
- Fabien Hermenier: program committee member of VTDC and PDP (energy efficiency track) and reviewer for IEEE Transactions on Computers, IEEE Transactions on Cloud Computing, IEEE Transactions on Network and Service Management, Journal of Software: Practice and Experiment, Journal of Systems and Software.
- Fabrice Huet : program committee member of HPDC 2013, CCGrid 2013, Big Data 2013.
- Eric Madelaine: member of the steering committees of the FACS and FMCO symposia, member of the program committee of FACS'13, and of the Science of Computer Programming (SCP) journal.

## 8.2. Teaching - Supervision - Juries

### 8.2.1. Teaching

- Master : Françoise Baude and Ludovic Henrio, Distributed systems: an Algorithmic approach, 17 H + 17 h eqTD, niveau M2, Polytech'Nice Sophia/UFR Sciences, UNS, France
- Master : Françoise Baude, Applications Réparties, 45 H eqTD, niveau M1/SI4, Polytech'Nice Sophia, UNS, France
- Licence : Françoise Baude, Algorithmique et Programmation en Java, 70 H eqTD, niveau L2, Polytech'Nice Sophia, UNS, France
- Licence : Olivier Dalle, Systèmes d'Exploitation, 60h eq. TD
- Licence : Olivier Dalle, Initiation Framework Programmation Serveur, 70h eq. TD
- Licence : Olivier Dalle, Algorithmique, 12h eq. TD
- Licence : Olivier Dalle, Projet Scientifique Informatique, 37h eq. TD
- Licence : Fabien Hermenier, Algorithmique et Programmation en Java, 70 H eqTD, niveau L2, Polytech'Nice Sophia, UNS, France
- Licence : Fabien Hermenier, Introduction à Internet, 103 H eqTD, niveau L2, Polytech'Nice Sophia, UNS, France
- Licence : Fabien Hermenier, Outils pour le Génie Logiciel 14 H eqTD, niveau L3/SI3, Polytech'Nice Sophia, UNS, France

### 8.2.2. Supervision

- PhD in progress: Laurent Pellegrino “Pushing dynamic and ubiquitous event-based interaction in the Internet of services: a middleware for event clouds”, since Sept 2010, advisor Françoise Baude, Fabrice Huet.
- PhD in progress: Nuno Gaspar “Integrated, Autonomic, and Reliable Deployment and Management for SaaS composite applications”, since Nov 2011, advisor: Eric Madelaine
- PhD in progress: Michaël Benguigui, “Modèles de programmation pour l’analyse de données sur machines multi-cœurs, grilles et clouds”, since Dec 2011, advisor Françoise Baude.
- PhD in progress: Yanwen Chen, “Formal model and Scheduling for cyberphysical systems”, since Dec 2011, advisors Eric Madelaine and Yixiang Chen (ECNU Shanghai)
- PhD in progress: Alexandra Savu, “Design, specification, and verification of parameterized topologies of distributed components”, since Oct. 2012, advisor Eric Madelaine
- PhD in progress: Maeva Antoine, “Plateforme élastique pour le stockage et la notification d’Evènements”, since Oct. 2012, advisors Eric Madelaine, Fabrice Huet
- PhD in progress: Oleksandra Kulankhina, “Model-driven environment for the development of safe component-based distributed applications”, since Oct. 2013, advisor Eric Madelaine
- PhD in progress : Vincent Kerbache, “Resource Management in a Cloud Supplied with Renewable Energies”, since Sep. 2013, advisors Eric Madelaine, Fabien Hermenier
- PhD in progress: "Programming model and middleware support for distributed and concurrent applications", since Oct. 2013, advisor Ludovic Henrio
- PhD in progress: Sophie Song, "Publish-Subscribe Models for Large Scale Data Analysis Frameworks", since Feb. 2013, advisor Fabrice Huet, Frédéric Margoulés (ECP)
- PhD in progress: Damian Vicino, "Simulation-based Open Science in the Cloud", since Jan. 2013, advisors Françoise Baude, Gabriel Wainer (Carleton University, Canada), Olivier Dalle.

### 8.2.3. Juries

Françoise Baude participated in PhD evaluations as

- PhD reviewer and jury member: PhD of Francisco Alvares on 9th April 2013, Ecole des Mines de Nantes (ASCOLA EPI); PhD of Erwan Daubert on May 24th 2013, at INSA Rennes (TRISKELL and MYRIADS EPIs); PhD of Denis Morand on November 5th 2013, Université de Grenoble.
- PhD examiner: PhD of Gauthier Berthou on 21th January 2014, Université de Grenoble; PhD; PhD of Pierre-Louis Aublin, Université de Grenoble, on the same day.

She participated in the recruitment committee for a Professor at ENSEIRB, in May 2013. She evaluated one project for Programme ANR Blanc in 2013.

Ludovic Henrio evaluated one project for Programme ANR: INS 2013.

Olivier Dalle participated in PhD evaluations as

- PhD jury member for the PhD of Imran Mahmood, Feb. 26 2013, Royal Technological Institute of Sweden (KTH), Stockholm.

Fabrice Huet participated in PhD evaluations as jury member for the PhD of Giang Ngo Hoang on 16th December 2013.

## 8.3. Popularization

- Françoise Baude is in charge since September 2011 of the set up and animation of an educational program *Cordées de la Réussite*. She leads as Polytech’Nice Sophia member, and in connection with MASTIC activities at Sophia-Antipolis, two *Cordées pour la Science à Sophia* groups (one with Lycée Vinci Antibes, the other with Lycée Tocqueville Grasse). Since 2013, she is in charge of the AVOSTII-STI2D program implementation for Polytech’Nice Sophia, requiring advertising high-school pupils for engineering studies, in particular in ICT.

- **Rencontres Inria Industrie:**  
The 11th of June 2013, we took advantage of the Inria-Industry national meeting to expose our works on the American basket option pricing. Our strategy relies on a two-level CPU/GPU parallelization of the Picazo algorithm, combining dynamic strategies to fully exploit distributed resources. During the event, we presented the difficulty to price such instruments in reasonable time, and highlight our solution through multiple tests on Grid'5000, of our pricing engine.  
A Video is available here: <http://www.inria.fr/centre/saclay/innovation/rii-modelisation-simulation-calcul-intensif/demos/pricing-d-options-sur-panier-de-type-americaain-en-utilisant-des-clusters-equipes-de-gpus>
- This year, Fabrice Huet gave a seminar to high school students about the inner working of computers. He also leads the ISN *Informatiques et Sciences du Numérique* courses for the academia of Nice. These courses were given to high school teachers who volunteered to offer a Computer Science option to their students.

## PHOENIX Project-Team

### 8. Dissemination

#### 8.1. Scientific Animation

We have organized the following workshops:

- HCAN'13: Workshop on Assistive Technologies - <http://phoenix.inria.fr/hcan13>
- International Workshop on "Assistance and Service Robotics in a Human Environment", in conjunction with the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS'2013) - <http://www.lissi.fr/iros-ar>

Charles Consel has been involved in the following events as

- Program Committee member of
  - ACM/IEEE International Conference on Software Engineering (ICSE) 2013, the New Ideas and Emerging Results (NIER Track)
  - 10th International Conference on Autonomic Computing (ICAC). ICAC 2013 will be held in conjunction with the 2013 Usenix Federated Conference Week (FCW), and will take place on June 26th-28th, 2013, in San Jose, CA.
  - ICSE 2014
- Invited speaker at
  - Yale University March 29th (DiaSuite Approach)
  - Fraunhofer Ctr. for Exp. Soft. Eng., College Park, Maryland (DiaSuite Approach)
  - MAPLS Mid-Atlantic Programming Language Seminar, University of Maryland (UMD) (DiaSuite Approach)
  - HCIL seminar, University of Maryland (UMD) (Personalizing Assisted Living)
  - University of Montreal, Université du Québec à Montréal (QaM), University of Sherbrooke (DiaSuite Approach)
  - McGill University (Design-Driven Development of Dependable Applications: A Case Study in Avionics)
  - the David Schmidt Fest, Kansas State University Sept, 2013 (DiaSuite Approach)
  - Research Institute for Geriatrics of the University of Montreal (CRIUGM) (Personalizing Assisted Living)

Charles Consel is a member of Quebec Network for Research on Aging and he participate to the project "Dépistage précoce de la démence : Utilisation novatrice des environnements intelligents pour détecter les difficultés rencontrés dans la vie quotidienne" (2013-2015).

Emilie Balland has been involved in the following events as

- Program Committee member of
  - SLE'13: 6th International Conference on Software Language Engineering
  - GPCE'13: 12th International Conference on Generative Programming: Concepts & Experiences (collocated with SPLASH'13, incl. OOPSLA'13)
  - WGP'13: 9th ACM SIGPLAN Workshop on Generic Programming (collocated with ICFP'13)
  - WASDETT'13: 4th International Workshop on Academic Software Development Tools and Techniques (collocated with ECOOP'13)
- Invited speaker at
  - ETH Zurich, Switzerland, August 2013.

David Daney has been involved in the following events as

- Organizer and Program Committee member of
  - IROS 2013 workshop on Assistance and Service Robotics in a Human Environment, IROS'13, Tokyo.
- Invited speaker at
  - National Days of Robotics Research, JNRR'13, Annecy
  - 2nd Workshop of National Expertise Center in Robotics, Evry
  - Inria Scientific Day, Rennes

D. Daney is coordinator of the Inria Project Lab Personally Assisting Living (IPL PAL) – see <http://pal.inria.fr>

Hélène Sauzéron has been involved in the following events as

- Reviewer for the following journals
  - Gerontology
  - BMC Geriatrics
  - Applied Psycholinguistics
  - Experimental Aging Research
  - Journal of Speech, Language, and Hearing Research
- Invited speaker at
  - Workshop – Alzheimer, Approche pluri-disciplinaire :de la recherche clinique aux avancées technologiques, Toulouse, Jan. 2013.

## 8.2. Teaching - Supervision - Juries

### 8.2.1. Teaching

Licence : David Daney, Industrial control systems, 48h, L3, ITII, Polytech Nice, France

Master : David Daney, Medical robotics, 22h, M2, Master of Bio-Medical , Univ. Nice Sophia Antipolis France.

Master : David Daney, Mathematics of robotics, 9h, M2, IPB, Bordeaux, France.

Master : David Daney, Health Technology, 10h, M2, IPB, Bordeaux, France.

Master : Hélène Sauzéron, UE Neuroscience cognitive, 6h, M2, Master NEURASMUS, Université Bordeaux Segalen, France

Diplôme Inter-Universitaire Antilles-Guyanne, Sciences neuropsychologiques, 30h, Université de médecine de Guadeloupe, France

### 8.2.2. Supervision

PhD : Quentin Enard, “Développement d’applications logicielles sûres de fonctionnement: une approche dirigée par la conception”, University of Bordeaux, May 6, 2013, supervised by Charles Consel

PhD : Pengfei Liu, “Intégration de politiques de sécurité dans les systèmes ubiquitaires”, University of Bordeaux, January 17, 2013, supervised by Hélène Kirchner and Charles Consel

PhD : Tsounil Prashant Arvind Pala, “Approche écologique de l’évaluation de la mémoire épisodique dans le vieillissement normal et les neuropathologies”, University of Bordeaux Segalen, December 18, 2013, supervised by Hélène Sauzéron and Bernard N’Kaoua

PhD in progress : Stéphanie Gatti, “Architecture en composants et qualification incrémentale”, started in February 2010, supervised by Charles Consel and Emilie Balland

PhD in progress : Paul Van der Walt, “Certification d’une plateforme ouverte”, started in November 2012, supervised by Charles Consel and Emilie Balland

PhD in progress : Milan Kabac, “Orchestration à grande échelle d’objets communicants”, started in September 2012, supervised by Charles Consel

PhD in progress : Charles Fage, “Validation expérimentale d’un assistant numérique d’inclusion scolaire d’élèves collégiens porteurs d’autisme”, started in September 2012, supervised by Hélène Sauzéon

PhD in progress : Lucile Dupuy, “DomAssist : Assistance domiciliaire pour la personne âgée et son aidant formel basée sur la technologie DiaSuiteBox”, started in September 2013, supervised by Hélène Sauzéon and Charles Consel

### 8.2.3. *Juries*

Charles Consel has participated:

- in the thesis defense committee
  - Miruna Stoicescu, University of Toulouse, France
- in the thesis award committee of
  - Programming and Software of "Groupement de Recherche Génie de la Programmation et du Logiciel (GDR GPL)"

Emilie Balland has participated in the thesis defense committee of Jimmy Lauret, May 15, University of Toulouse, France.

David Daney has participated in the thesis defense committee of:

- Jorgé Alberto Rios Martinez, January 8, University of Grenoble, France
- Julien Alexandre Dit Sandretto, September 11, University of Nice, France
- Thibault Gayral, November 29, University of Nice, France

Hélène Sauzéon has participated in the thesis defense committee of Tsounil Prashant Arvind Pala, December 18, University of Bordeaux Segalen, France.

## 8.3. Popularization

Participation of the Phoenix Inria project team in the following events:

- Salon Aquitec, February 2013
- Accueil d’étudiants de terminale S option ISN, February 2013
- “Fête de la science” (national popular science event), October 2013
- Emilie Balland and Milan Kabac, Metro’Num, talk and demonstration of the HomeAssist project, September 2013
- Hélène Sauzéon, "Conférence prospective : Demain les objets sont connectés !", presentation of the HomeAssist project, 3ème Semaine digitale organized by the Bordeaux city hall, March 2013
- Hélène Sauzéon and Charles Fage, "Autisme et Numérique : Mise en place d’un assistant scolaire pour collégiens porteurs d’autisme", « Journée mondiale de sensibilisation à l’autisme » organized by Collectif Girondin des Associations Autour de l’Autisme, April 2013
- Hélène Sauzéon and Charles Fage, "Mise en place d’un assistant solaire Collège + pour les collégiens porteurs d’autisme", « Journée mondiale de sensibilisation à l’autisme » organized by Centre Ressource Autisme, CHU Poitiers, April 2013
- Hélène Sauzéon, presentation of the School+ project to Vincent Peillon, Point d’étape de l’entrée de l’École dans l’ère du numérique, Ministère de l’éducation Nationale, June 2013

## RMOD Project-Team

# 9. Dissemination

## 9.1. Scientific Animation

### 9.1.1. Organization

- Guillermo Polito helped organizing the *Uqbar Workshop* (November 2013) in Argentina.
- Damien Cassou: DYLA 2013, *7th Workshop on Dynamic Languages and Applications*. Colocated with ECMFA, ECOOP and ECSA, 1–5 July, Montpellier, France.
- Stéphane Ducasse and Marcus Denker: Part of the organization team of ESUG 2013, *21th International Smalltalk Conference*, Annecy, France 9-13 September 2013.

### 9.1.2. PC Memberships and Reviewing

- Anne Etien
  - ECMFA 2013, *European Conference on Modelling Foundations and Applications*.
  - IWST 2013, *International Workshop on Smalltalk Technologies*.
  - ME 2013, *Models and Evolution*
  - SLE 2013, *International Conference on Software Language Engineering*.
- Marcus Denker
  - DLS 2013, *Dynamic Languages Symposium at SPLASH*.
  - Varicom 2013, *International Workshop on Variability and Composition*.
  - ICSM 2013 Tool Demo Track, *International Conference on Software Maintenance*.
  - SCAM 2013 Tool Paper Track, *IEEE International Working Conference on Source Code Analysis and Manipulation*.
  - SLE 2013, *International Conference on Software Language Engineering*. External Reviewer.
- Damien Cassou
  - aec-esec FSE 2013, *ACM SIGSOFT Symposium on the Foundations of Software Engineering*.
  - ASE 2013, *28th IEEE/ACM International Conference on Automated Software Engineering*.
  - DYLA 2013, *7th Workshop on Dynamic Languages and Applications*.
  - WASDETT 2013, *4th International Workshop on Academic Software Development Tools and Techniques*.
- Nicolas Anquetil:
  - ICSM 2013, *International Conference on Software Maintenance*.
  - ECOOP/ECMFA/ECSA 2013 Doctoral Symposium.
  - Reviewer EMSE (Empirical Software Engineering journal).
  - Reviewer SCICO (Science of Computer Programming journal).

### 9.1.3. Memberships

- Marcus Denker is a member of *DFGWT - Deutsch-Französische Gesellschaft für Wissenschaft und Technologie e.V* (Association Franco-Allemande pour la Science et la Technologie) (from August 2013).

- Nicolas Anquetil and Anne Etien are member of IEEE. (from July 2013).

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Master: C. Demarey, Architectures Logicielles, 30h (M1), GIS4, Polytech'Lille, France  
 Misc: Stéphane Ducasse, Ecoles des jeunes chercheurs Inria (2013), 6h, Inria, France  
 Licence: Stéphane Ducasse, Cours IAE (2013), 14h, Annecy, France  
 Master: Stéphane Ducasse, Cours Ecole des Mines de Douai (2013), 12h, France  
 Master: Stéphane Ducasse, Cours USTL L3 (2013), 4.5h, Université Lille, France  
 Master: Stéphane Ducasse, Cours University of Quilmes, 2h, Argentina  
 Master: Stéphane Ducasse, Cours University of Lviv, 12h, Ukraine  
 Master: Stéphane Ducasse, Cours University of Buenos Aires, 3h, Argentina  
 Master: Stéphane Ducasse, Cours FIT Prague (dec 2013), 8h, Czech Republic  
 Licence: Nicolas Anquetil, Software engineering: Testing techniques, 40h, (L2), IUT-A Lille, France  
 Licence: Nicolas Anquetil, Interface programming in Java/Swing, 48h, (L2), IUT-A Lille, France  
 Licence: Anne Etien, Java, Course: 30h (L3), Polytech Lille, France  
 Master: Anne Etien, Object Information System, TP: 8h (M1), Polytech Lille, France  
 Master: Damien Cassou, Algo, 24h, Université Lille 1, France  
 Master: Damien Cassou, COO, 18h, Université Lille 1, France  
 Master: Damien Cassou, [OPL] Test, maintenance & évolution, 12h, Université Lille 1, France  
 Master: Damien Cassou, Qualité logicielle, 30h, Université Lille 1, France  
 Master: Damien Cassou, CAR, 24h, Université Lille 1, France  
 Master: Damien Cassou, COA, 24h, Université Lille 1, France  
 License: Damien Pollet, UV info, 100h, Introduction to OO programming in Java, Telecom Lille, France  
 Master: Damien Pollet, SER, 25h, Distributed Algorithms, Telecom Lille, France  
 Master: Damien Pollet, ILOG & TSIO, 35h, Programming & Software engineering, Telecom Lille, France  
 Master: Damien Pollet, Supervision of industry internships, Telecom Lille, France  
 Master: Guillermo Polito, Cours University of Quilmes, 2h, University of Quilmes, Argentina

### 9.2.2. Supervision

PhD: Jean Baptiste Arnaud, Towards First Class References as a Security Infrastructure in Dynamic Languages, 18/02/2013, Marcus Denker, Stéphane Ducasse  
 PhD: Nick Papoylias, Languages and Development Environments for Mobile Autonomous Robots, 19/12/2013, Marcus Denker, Stéphane Ducasse  
 PhD in progress: Camillo Bruni, Entering the 4th Quadrant, 01/03/2011, Stéphane Ducasse, Marcus Denker  
 PhD in progress: Andre Hora, Improving Static Analysis with Domain-Specific Rules, 01/12/2011, Nicolas Anquetil, Stéphane Ducasse  
 PhD in progress: Camille Teruel, Security for dynamic languages, 01/12/2012, Stéphane Ducasse, Damien Cassou  
 PhD in progress: Martin Dias, Supporting Merging, 03/12/2012, Damien Cassou, Stéphane Ducasse  
 PhD in progress: Guillermo Polito, Isolation and Reflection in Dynamic Object Oriented Languages, 01/04/2012, Noury Bouraqadi, Luc Fabrese, Marcus Denker, Stéphane Ducasse

### 9.2.3. Juries

**Stéphane Ducasse** was in the examination committee of the following PhD theses:

- F. Olivero, Lugano, 02/2013 (reviewer)
- Q. Sabah, Grenoble 12/2013 (examinator)



Anne Etien was in the examination committee of the following PhD theses:

- D. Blouin, Lorient, 10/12/2013

### 9.3. Popularization

- Marcus Denker gave a presentation about Pharo at the open source conference FOSDEM 2013.
- *Web with Pharo* Conference was held 6 June 2013 @ Euratechnologies, Lille.
- Camille Teruel and Damien Cassou gave a Pharo tutorial at ECOOP 2013 Montpellier. Slides got >16000 hits after a mention on ycombinator news (<http://www.lirmm.fr/ecoop13/?id=158#tutorial13>)
- *RIC Day* was held 2 October 2013 @ University of Lille 1, Lille, Anne Etien gave a presentation about Moose and software maintenance.
- Tutorials at ESUG 2013, Annecy, France in September.
- Esteban Lorenzano and Guillermo Polito gave multiple Presentations at Smalltalks 2013 (Argentina):
- Guillermo Polito gave a lecture about *Pharo Ninja Tricks* at Universidad de Quilmes / Argentina in November (a hands-on showing how to use the IDE and explore the system, open classes, extension methods...).
- Marcus Denker gave a lecture and a public talk at *Universitat Politecnica de Catalunya*, Barcelona, Spain.
- Software Maintenance Courses (Nicolas Anquetil):
  - IJDs Inria Lille Nord Europe, with Guillaume Larcheveque, 1 day
  - Thales, 1 day
- Stéphane Ducasse gave multiple lectures and talks at University of Prag in December 2013.
- Organization of the MooseDay in Lille on the 19th December with around 25 persons from all around the world. (<http://www.lifl.fr/~etien/MooseDay.html>).
- Multiple public Pharo Sprints in Lille, Santiago/Chile, Buenos Aires/Argentina and other places.

## TRISKELL Project-Team

# 9. Dissemination

## 9.1. Scientific Animation

### 9.1.1. Journals

#### 9.1.1.1. Benoit Baudry

is an Associate Editor of the following journal:

- Journal of Systems and Software (JSS)
- Journal on Software and System Modeling (SoSYM)

#### 9.1.1.2. Jean-Marc Jézéquel

is an Associate Editor of the following journal:

- IEEE Computer
- Journal of Systems and Software (JSS)
- Journal on Software and System Modeling (SoSYM)
- Journal of Object Technology: JOT

#### 9.1.1.3. Noël Plouzeau

is chief editor of a special issue of the TSI French research journal, dedicated to software engineering.

### 9.1.2. Conferences

#### 9.1.2.1. Benoit Baudry

has been chair for the program committee of ICST'13, the 6th International Conference on Software Testing Verification and Validation, Luxembourg, April 2013, and a member of the program committee of the following conferences:

- MODELS 2013 The 16th International Conference on Model Driven Engineering Languages and Systems Miami, USA, October 2013
- SEIP 2013 track, the Software Engineering in Practice track at ICSE'13, San Francisco, USA, May 2013
- AMT 2013, the 2nd International workshop on the Analysis of Model Transformations, Miami, USA, October 2013

#### 9.1.2.2. Benoit Combemale

has been a member of the program committee of the following conferences, symposia and workshops:

- APSEC'13, The 20th Asia-Pacific Software Engineering Conference, Thailand, 2013.
- SEFM'13, The 10th International Conference on Software Engineering and Formal Methods, Spain, 2013.
- ICMT'13, The 6th International Conference on Model Transformation, Hungary, 2013.
- ECMFA'13, The 9th European Conference on Modelling Foundations and Applications, Montpellier, 2013.
- QSIC13, The 13th International Conference on Quality Software, China, 2013.
- Educators' Symposium at MODELS'13, USA, 2013.
- AMT workshop on Analysis of Model Transformations (AMT), at MODELS'13, USA, 2013.
- CMA workshop on Comparing Modeling Approaches (CMA), at MODELS'13, USA, 2013.
- CMA workshop on Comparing Modeling Approaches (CMA), at RE'13, Brazil, 2013.
- VOLT workshop on Verification Of Model Transformation (VOLT), at ICMT'13, Hungary, 2013.

Benoit Combemale has also been an external reviewer for IEEE Transactions on Software Engineering, Journal of Software and Systems Modeling (SoSyM), and ICSE'13 (International Conference on Software Engineering).

#### 9.1.2.3. *Jean-Marc Jézéquel*

has been a member of the program board (PB) or program committee (PC) of the following conferences:

- MODELS 2013, The 16th International Conference on Model Driven Engineering Languages and Systems Miami, USA, October 2013 (PB)
- ICSE 2013 The 35th International Conference on Software Engineering, San Francisco, USA, May 18-26, 2013 (PC)
- ICSE 2013 Doctoral Symposium San Francisco, USA, May 18-26, 2013 (PC)
- MiSE 2013 5th International Workshop on Modeling in Software Engineering, San Francisco, USA, May 18-26, 2013 (PC)
- VaMoS 2013 The Seventh International Workshop on Variability Modelling of Software-intensive Systems January 23-25, 2013 - CNR, Pisa, Italy (PC)

#### 9.1.2.4. *Olivier Barais*

has been a member of the program committee of the following conferences, symposia and workshops:

- SC'13, The 12th International Conference on Software Composition, Budapest, Hungary
- SEAA'13, The 39th Euromicro Conference on Software Engineering and Advanced Applications (SEAA 2013) Santander, Spain 2013
- SAC'13, The 28th Symposium On Applied Computing Coimbra, Portugal.
- VARICOMP'13, The 4th International Workshop on Variability & Composition @Modularity-AOSD, Fukuoka, Japan
- VAO'13, The 1st Workshop on View-Based, Aspect-Oriented and Orthographic Software Modelling, Montpellier, France
- WEITICE'2013, the 22nd IEEE International Conference on Collaboration Technologies and Infrastructure Hammamet, Tunisia
- CSMR2013 tools demo: the 17th European Conference on Software Maintenance and Reengineering tools demo track
- CIEL, the 2nd French Conference in Software Engineering. Nancy,

Olivier Barais has also been an external reviewer for IEEE Transactions on Software Engineering, Journal of Software and Systems Modeling (SoSyM), Journal of Software System (JSS), ACM TaaS (Transactions on Autonomous and Adaptive Systems), STVR (Software Testing, Verification and Reliability) and CBSE'13 (International Conference on Software Engineering).

#### 9.1.2.5. *Arnaud Blouin*

has been external/sub reviewer for: IEEE Transactions on Software Engineering, Journal of Software and Systems Modeling (SoSyM), ICSE'13 (International Conference on Software Engineering), EICS'13 (ACM SIGCHI symposium on Engineering interactive computing systems), ICMT'13 (International Conference on Model Transformation), ASPEC'13 (Asia-Pacific Software Engineering Conference), and IHM'13 (French speaking conference on human-computer interaction).

#### 9.1.2.6. *Mathieu Acher*

has organized the Journée ligne de produits (7th edition) in Paris (Sorbonne). He has been reviewer for ACM Surveys, International Journal on Software Tools for Technology Transfer (STTT), Journal of Systems and Software (JSS), Journal of Software and Systems Modeling (SoSyM), program committee for the Fifth International Workshop on Feature-Oriented Software Development (FOSD'13), the 1st International workshop on Reverse Variability Engineering (REVE'13).

#### 9.1.2.7. Noël Plouzeau

has been program committee chair of the CIEL'2013 conference (the French conference on Software Engineering), Nancy, april 2013, and a member of the program committee of the CBSE 2013, Component Based Software Engineering, Seattle, USA, june 2013.

#### 9.1.2.8. Johann Bourcier

has been in the program committee of PECCS 2013 and an external reviewer for TaaS (Transactions on Autonomous and Adaptive Systems), and JSS (Journal of Systems and Software).

### 9.1.3. Workshops, Tutorials and Keynotes

#### 9.1.3.1. Benoit Combemale

was an invited keynote speaker at CIEL'13 (the French Conference on Software Engineering) and gave a talk entitled "On Modeling and Testing When Unpredictability Becomes the Pattern"<sup>12</sup>. He also has been invited to give a talk at Neptune'13 (the French Industrial Conference on Model Driven Engineering) entitled "On the Globalization of Modeling Languages"<sup>13</sup>, at the french day organized by CNRS on MDE and Scientific Models<sup>14</sup> entitled "Language and Model Composition", at the workshop AOM (Barbados) entitled "On Language Composability", and at the Università degli Studi di Milano (Italy) entitled "Model-Driven Engineering for Software Language Engineering".

Benoit Combemale also has been co-chair of the workshops GlobalDSL'13 at ECOOP (cf. <http://gemoc.org/globalds13>, published on the ACM DL), and GEMOC'13 at MODELS (cf. <http://gemoc.org/gemoc2013>, published on CEUR).

### 9.1.4. Expertises

#### 9.1.4.1. Benoit Baudry

is on the scientific advisory board of the Software Verification and Validation Lab from the Security and Trust research center in Luxembourg.

#### 9.1.4.2. Arnaud Blouin

is a member of the Advisory Board of the FNR Core project MoDEL (2013-2015, Luxembourg) that works on the use of model-driven software product line for generating and testing user interfaces.

#### 9.1.4.3. Benoit Combemale

is the coordinator of the international GEMOC initiative, and a member of its Advisory Board.

#### 9.1.4.4. Jean-Marc Jézéquel

is a member of the Advisory Board of the NSF REMODD Project (Repository for Model Driven Development), and of the Advisory Board of the international GEMOC initiative.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

The Triskell 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, Benoit Combemale, Johann Bourcier, Arnaud Blouin and Mathieu Acher teaches about 200h in these domains, with Benoit Baudry teaching about 50h, for a grand total of about 1400 hours, including several courses at ENSTB, Supelec and ENSAI Rennes.

<sup>12</sup>Cf. <http://people.irisa.fr/Benoit.Combemale/ciel2013>

<sup>13</sup>Cf. <http://people.irisa.fr/Benoit.Combemale/neptune2013>

<sup>14</sup>Cf. <http://devlog.cnrs.fr/journee-idm-et-modeles-scientifiques>

Olivier Barais (from january 2013 to august 2013) and Noël Plouzeau (september 2013) are the managers of the Master2 Pro in Computer Science at the University of Rennes.

Johann bourcier is co-manager of the Home-Automation option at the ESIR engineering school in Rennes.

The Triskell team also receives several Master and summer trainees every year.

### 9.2.2. Supervision

PhD : Clément Guy, *Generic Definition of Domain Specific Analysis using MDE*, thèse 2010-2013, J.-M. Jézéquel and B. Combemale

PhD : Tam Le Nhan, *Model-Driven Software Engineering for Cloud Computing*, thèse 2010-2013, J.-M. Jézéquel and G. Sunye

PhD : Nicolas Sannier, *IDM pour l'ingénierie des exigences*, thèse CIFRE avec EDF 2010-2013, B. Baudry

PhD : Aymeric Hervieu, *Model-based testing: handling performance in embedded software product lines*, thèse CIFRE avec Kereval 2010-2013, B. Baudry and A. Gotlieb

PhD : Stephen Creff, *Hierarchical Product Lines*, thèse 2009-2012, J.-M. Jézéquel and J. Champeau

PhD : François Fouquet, *Contracts for Enterprise Service Bus*, thèse 2009-2012, J.-M. Jézéquel and N. Plouzeau

PhD : Paul Istoan, *SOA Product Lines*, thèse en co-tutelle avec l'université du Luxembourg, 2009-2012, J.-M. Jézéquel and N. Guelfi

PhD : Viet-Hoa Nguyen, *Model Driven Design Methodology for Trusted Real-Time Components*, thèse 2009-2012, J.-M. Jézéquel and N. Plouzeau

PhD in progress : Emmanuelle Rouillé, *Processus Logiciels dirigés par les intentions*, thèse CIFRE avec SodiFrance, 2010-2013, J.-M. Jézéquel, B. Combemale and O. Barais

PhD in progress : Erwan Bousse, *Intégration et combinaison des techniques de V&V dans un contexte d'ingénierie système*, thèse, 2012-2015, B. Baudry and B. Combemale

PhD in progress : Julien Richard-Foy, *A DSL factory for modular Web oriented architecture*, thèse CIFRE avec Zenexity, 2011-2014, J.-M. Jézéquel and O. Barais

PhD in progress : João Bosco Ferreira Filho, *Variability modeling in software intensive systems*, thèse 2011-2014, O. Barais, B. Baudry and M. Acher

PhD in progress : Hamza Samih, *Extending model-based testing with variability and security management*, thèse CIFRE avec All4Tec, 2011-2014, B. Baudry

PhD in progress : Valéria Lelli Leitão Dantas, *On Testing Interactive Systems*, thèse 2012-2015, B. Baudry and A. Blouin

PhD in progress : Kwaku Yeboah-Antwi, *Runtime emergence of software diversity*, thèse 2013-2016, B. Baudry and O. Barais

PhD in progress : Sana Ben Nasr, *Modeling variability in regulatory requirements*, thèse 2013-2016, B. Baudry and M. Acher

PhD in progress : Mohamed Boussaa, *An Architecture for Testing Large-Scale Dynamic Distributed Systems*, thèse 2013-2016, B. Baudry and O. Barais

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 : Ivan Paez Anaya, *Proactive Adaptation in Pervasive Environment*, thèse 2012-2015, J. Bourcier, N. Plouzeau and J.-M. Jézéquel

PhD in progress : Inti Gonzalez Herrera, *Ressources reservation in Pervasive Middleware*, thèse 2012-2015, J. Bourcier, O. Barais

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-JavierAcosta Padilla, *Automatic Deployment and Reconfigurations in Internet of Things*, thèse 2013-2016 co-encadrement avec l'équipe ACES, J. Bourcier, F. Weis

### **9.2.3. Juries**

#### *9.2.3.1. Benoit Baudry*

was in the examination committee of the following PhD thesis:

- Walter Rudametkin Ivey, January 2013, Université de Grenoble (Referee)
- Amel Bennaceur, July 2013, Université Pierre et Marie Curie (Referee)
- Hajer Saada, December 2013, Université de Montpellier (Referee)
- Akram Ajouli, Septembre 2013, Université de Nantes (Member)

#### *9.2.3.2. Benoit Combemale*

was in the examination committee of the following PhD thesis:

- Clément Guy, December 2013, University of Rennes (Co-supervisor)
- Moussa Amrani, November 2013, University of Luxembourg (Member)
- Mounira Kezadri, July 2013, University of Toulouse (Member)
- Robert Guduvan, April 2013, University of Toulouse (Member)
- Laurent Wouters, January 2013, LIP6 (Member)

#### *9.2.3.3. Noël Plouzeau*

was in the examination committee of the following PhD thesis:

- François Fouquet, March 2013, University of Rennes (Co-supervisor)
- Nguyen Viet-Hoa, December 2013, University of Rennes (Co-supervisor)

#### *9.2.3.4. Olivier Barais*

was in the examination committee of the following PhD thesis:

- François Fouquet, March 2013, University of Rennes (Co-supervisor)
- Erwan Daubert, May 2013, University of Rennes (Co-supervisor)
- Pankesh Patel, November 2013, Université Pierre et Marie Curie (Member)

## COATI Project-Team

## 9. Dissemination

### 9.1. Scientific Animation

#### 9.1.1. Participation in Committees

- J-C. Bermond: Expert for DRTT, and various projects outside France (Canada, Italy,...); Member of the Ph.D. committee of the University of Marseille;
- D. Coudert: Member of the *comité du suivi doctoral* of Inria Sophia Antipolis (since January 2009); Member of the scientific board of the GIS ENSL-UNS (CNRS, ENSL, Inria, UNS) since 2011; Expert for the Future and Emerging Technologies Open Scheme (FET-Open) European program, and the ANR;
- F. Giroire: Member of the *conseil de laboratoire I3S*;
- F. Havet: Responsible of the Pôle ComRed of I3S (since September 2013); Expert for the ANR and its Czech analogues; Member of the *conseil de l'Ecole Doctorale I2S* (Montpellier);
- M. Syska: Member of the commission ad-hoc ATER 27 UNS; Member of *Comité Permanent de Ressources Humaines* (CPRH) UNS 27e; Member of the *conseil de département* (Department Committee) of IUT Nice; Expert for DRTT PACA.

#### 9.1.2. Editorial Boards

- J-C. Bermond: Combinatorics Probability and Computing, Computer Science Reviews, Discrete Mathematics, Discrete Applied Mathematics, Journal of Graph Theory, Journal of Interconnection Networks (Advisory Board), Mathématiques et Sciences Humaines, Networks, Parallel Processing Letters, SIAM book series on Discrete Mathematics, Transactions on Network Optimization and Control, Discrete Mathematics, Algorithms and Applications;
- D. Coudert: Discrete Applied Mathematics (Elsevier); Networks (Wiley);
- F. Havet: Discrete Mathematics and Theoretical Computer Science;

#### 9.1.3. Steering Committees

- D. Coudert: Pôle ResCom du GDR ASR du CNRS (since 2005); Rencontres francophones sur les aspects algorithmiques des télécommunications (AlgoTel);
- F. Havet: GT Graphes du GDR IM du CNRS; Journée Combinatoire et Algorithmes du Littoral Méditerranéen;

#### 9.1.4. Conference Organization

- ALGO'13: this scientific event comprises the *European Symposium on Algorithms* (ESA), the *Workshop on Algorithms for Bioinformatics* (WABI), the *International Symposium on Parameterized and Exact Computation* (IPEC), the *Workshop on Approximation and Online Algorithms* (WAOA), the *International Symposium on Algorithms for Sensor Systems, Wireless Ad Hoc Networks and Autonomous Mobile Entities* (ALGOSENSORS), the *Workshop on Algorithmic Approaches for Transportation Modeling, Optimization, and Systems* (ATMOS), and the *Workshop on Massive Data Algorithmics* (MASSIVE). Sophia Antipolis, France (September 2-6, 2013); D. Coudert and J. Moulierac were members of the organizing committee.
- OPODIS'13: 17th International Conference On Principle Of DIstributed Systems; Conference Chair: N. Nisse; Organization Committee: A. Kodjo, B. Li.

#### 9.1.5. Participation in Program Committees

- D. Coudert: IEEE ICC – Green Communications and Networks Track, Budapest, Hungary (June 9-13, 2013); IEEE GLOBECOM – Green Networks and Communication Systems Track, Atlanta, GA, USA (December 9-13, 2013); 17th International Conference on Optical Network Design and Modeling (ONDM’13), Brest, France (April 16-19, 2013);
- F. Havet: 15emes Journées Graphes et Algorithmes, Orsay, France (November 13-15, 2013);
- N. Nisse: PC Chair of the 15th Rencontres francophones sur les aspects algorithmiques des télécommunications (AlgoTel) (May 28-31, 2013);

## 9.2. Participation in Conferences and Workshops

### 9.2.1. Invited Talks

- J-C. Bermond: DIMACS Workshop on Algorithms for Green Data Storage, DIMACS, Rutgers University USA (December 18, 2013);
- D. Coudert: Bell labs - NIST Workshop on Large-Scale Networks, Murray Hill, NJ, USA (October 25, 2013); AIDyNet Workshop on Algorithms and Randomness, Santiago, Chile (November 21, 2013);
- F. Havet: School on Graph Theory, Oléron, France (June 17-21, 2010), five hour lecture on “Orientations and colorings of graphs”;
- N. Nisse: AIDyNet Workshop on Algorithms and Randomness, Santiago, Chile (November 21, 2013);

### 9.2.2. Participation in Scientific Meetings

- ADR Network Science: Meeting of ADR Network Science of the Alcatel-Lucent / Inria Joint lab, Paris, France (February 28, 2013) Attended by D. Coudert (speaker) and N. Nisse (speaker); Sophia-Antipolis, France (December 5) Attended by D. Coudert;
- COMRED: Journée du pôle COMRED (December 3-4, 2013). Attended by all members of COATI;
- DIMAGREEN: Journées de l’ANR - Rencontres du numérique (April 17-18, 2013). Attended by F. Giroire;
- EULER: Plenary meeting of FP7 STREP EULER, Antwerp, Belgium (September 23-25, 2013). Attended by D. Coudert and A. Lancin.
- GDL: GreenDay@Lille, Lille, France (November 28-29, 2013). Attended by K. Phan;
- JFRO: 29e Journée Francilienne de Recherche Operationnelle, Paris, France (June 4, 2013). Attended by J. Araújo, B. Li, N. Nisse;
- JGA: 15èmes Journées Graphes et Algorithmes, Orsay, France (November 13-15, 2013). Attended by J. Araújo, F. Havet, A. Maia (speaker);
- JIF: Journées D’informatique fondamentale de Paris Diderot (April 24, 2013). Attended by N. Nisse;
- Journées REP: Journées Scientifiques and Journée REP of Inria, Rennes, France (June 25-27, 2013). Attended by D. Coudert;
- Inria- Alcatel Lucent Bell Labs: Kick off meeting Phase 2 of the Common Lab Inria-Alcatel Lucent Bell Labs, Nozay, France (March 27, 2013). Attended by J-C. Bermond;
- POC: Polyèdres et Optimisation Combinatoire: Journée sur l’Optimisation Robuste et la programmation mathématique Paris, France (December 6th, 2013). Attended by A. Kodjo;
- SEAT: meeting for preparing submission of ANR SEAT (October 2nd, 2013). Attended by D. Coudert and N. Nisse;
- Struco: Meeting on Combinatorics and Distributed Computing, Pont-à-Mousson, (November 12-15, 2013). Attended by F. Havet;
- TREND: NoE TREND Plenary Meeting, Catania, Italy (February 6-8, 2013). Attended by F. Giroire;

### 9.2.3. Participation in Conferences



- AIDyNet: AIDyNet Workshop on Algorithms and Randomness, Santiago, Chile (November 21, 2013). Attended by D. Coudert (speaker), B. Li (speaker), F. Moataz (speaker), N. Nisse (speaker);
- ALGO: Sophia Antipolis, France (September 2-6, 2013). Attended by all members of COATI;
- Algotel: 15èmes Rencontres Francophones pour les Aspects Algorithmiques des Telecommunications, Pornic, France (May 28-31, 2013). Attended by F. Moataz (speaker), N. Nisse, D. Coudert, G. Ducoffe (speaker), I. Tahiri, A. Lancin, R. Soares (speaker) and F. Giroire;
- DIMACS: Working group and Workshop on Algorithms for Green Data Storage, DIMACS, Rutgers University USA (December 16-18, 2013). Attended by J-C. Bermond (speaker);
- DRCN: the 9th International Conference on Design of Reliable Communication Networks, Budapest, Hungary (March 4-7, 2013). Attended by F.Z. Moataz (speaker);
- EURO: 26th European Conference on Operational Research, Roma, Italy (July 2-4, 2013). Attended by C. Molle-Caillouet (speaker), D. Coudert and N. Nisse (speaker);
- GIIS: Global Information Infrastructure and Networking Symposium, Trento, Italy (October 28-31, 2013). Attended by A. Kodjo (speaker);
- Globe: 6th International Conference on Data Management in Cloud, Grid and P2P Systems, Prague, Czech Republic (August 28-29, 2013). Attended by R. Modrzejewski (speaker);
- Globecom: IEEE Global Communications Conference, Atlanta, United States (December 9-13, 2013). Attended by F. Giroire (speaker);
- GROW: 6th workshop on Graph Classes, Optimization, and Width Parameters, Santorini Island (October 09-11, 2013). Attended by F. Havet (speaker) and N. Nisse;
- ICC: IEEE International Conference on Communications, Budapest, Hungary (June 9-12, 2013). Attended by R. Modrzejewski (speaker);
- ICGCC: IEEE International Conference on Green Computing and Communications, Beijing, China (August 20-23, 2013). Attended by K. Phan (speaker);
- INOC: 6th International Network Optimization Conference, Tenerife, Spain (May 20-22, 2013). Attended by I. Tahiri (speaker);
- LAGOS: VII Latin-American Algorithms, Graphs and Optimization Symposium, Playa del Carmen, Mexico (April 22-26, 2013). Attended by J. Araújo (speaker), A. Maia (speaker), P. Moura (speaker), R. Soares (speaker);
- OPODIS: 17th International Conference On Principle Of Distributed Systems, Nice, France (December 16-18, 2013). Attended by B. Li, A. Kodjo and N. Nisse
- SIROCCO: 20th International Colloquium on Structural Information and Communication Complexity, Ischia, Italy (July 1-3, 2013). Attended by F. Giroire (speaker) and N. Nisse (speaker);
- WLSN: Bell labs - NIST Workshop on Large-Scale Networks, Murray Hill, NJ, USA (October 25, 2013). Attended by D. Coudert;

#### **9.2.4. Participation in Schools**

- CSP: School on Constraint Satisfaction problems, ENS Lyon, France (January 21-25, 2013). Attended by F. Moataz;
- EULERSS: Summer School on Graph and Routing Dynamics: Models and Algorithms, Barcelona, Spain (July 1-5, 2013). Attended by F. Moataz, B. Li and A. Lancin;
- JCALM13: 13es Journées Combinatoire et Algorithmes du Littoral Méditerranéen, Marseille, France (June 10-11, 2013). Attended by J. Araújo, G. Ducoffe, F. Giroire, A. Maia, N. Nisse;
- JCALM14: 14es Journées Combinatoire et Algorithmes du Littoral Méditerranéen, Barcelona, Spain (October 14-15, 2013). Attended by F. Havet (speaker), A. Maia
- NetOpt: Winter School on Network Optimization, Estoril, Portugal (January 14-18, 2013). Attended by B. Li and A. Kodjo;

ResCom: Summer school ResCom 2013 of GDR ASR of CNRS on Content Centric Networks, Porquerolles, France (May 13-17, 2013). Attended by J-C. Bermond, D. Coudert, F. Giroire, R. Modrzejewski;

SGT: Summer School on Graph Theory, île d'Oléron, France (June 17-21, 2013). Attended by J. Araújo, F. Havet, B. Li, A. Maia, F. Moataz, N. Nisse;

TREND: The TREND PhD School in Green Networking, Turin, Italy (July 1-5, 2013). Attended by K. Phan;

## 9.3. Teaching - Supervision - Juries

### 9.3.1. Teaching

Licence: A. Kodjo, Algorithmme-Programmation Objet-Python, 40h ETD, L2, Networks, 15h ETD, L2, IUT Nice Côte d'Azur, Informatique pratique, 36h ETD, L1, Univ. Nice Sophia Antipolis;

Licence: F. Moataz, Systèmes Informatiques, 40h ETD, L1, Univ. Nice Sophia Antipolis;

Licence: C. Molle-Caillouet, IT Tools, 53h, L1, Database and advanced information system, 36h, L2, Operations Research, 81h, L2, Delivery Optimization, 30h, L3, IUT Nice Côte d'Azur, Univ. Nice Sophia Antipolis;

Licence: J. Moulhierac, Algorithms and Programming, 100h ETD, L1, ASR5 - Networks, 30h ETD, L1, IUT Nice Côte d'Azur, Univ. Nice Sophia Antipolis;

Licence: N. Nisse, informatique, 30h ETD, 1ère année classes préparatoires (L1), CIV, Sophia Antipolis, France;

Licence: I. Tahiri, Introduction to networks, 96h ETD, L1, IUT Nice Côte d'Azur, Univ. Nice Sophia Antipolis;

Licence: M. Syska, Introduction to Operating Systems, 40h ETD, L1, Operating Systems : Advanced Programming, 60h ETD, L2, Bash Scripting, 20h ETD, L3, Introduction to Algorithms, 30h ETD, L3, Linux Systems Administration, 40h ETD, L3, IUT Nice Côte d'Azur, Univ. Nice Sophia Antipolis.

Master: D. Coudert, Algorithms for Telecommunication 2, 30 ETD, M2 Ubinet of Master IFI, Univ. Nice Sophia Antipolis;

Master: F. Giroire, 16h ETD, Introduction to Probabilities and Statistics, International track of the Master 1 IFI, Univ. Nice Sophia Antipolis;

Master: F. Giroire and N. Nisse, Algorithms for Telecommunications, 30h ETD, M2 Ubinet of Master IFI, Univ. Nice Sophia Antipolis;

Master: F. Giroire and N. Nisse, Algorithms for Telecommunications, 36h ETD, M2, Master MDFI, Univ. Marseille;

Master: F. Havet, Discharging Method, 6h, M2, Simon Fraser University, Canada.

Master: A. Kodjo, Réseaux, 15h ETD, M1, Univ. Nice Sophia Antipolis;

#### 9.3.1.1. Administration

Collaboration Inria-Lycée International de Valbonne: N. Nisse is co-responsible of the Computer Science course of MPSI;

IUT Nice Côte d'Azur: J. Moulhierac is Directrice d'études of Semestre 2 décalé at IUT Nice Côte d'Azur, Computer Science Department since september 2013;

M. Syska is responsible of the Computer Science Department of IUT since september 2011;

Ubinet, Master IFI: J.-C. Bermond is member of the scientific committee;

F. Giroire is responsible of the Internships within international stream Ubinet, Master IFI (<http://ubinet.unice.fr>), since October 2011;

International Master 1: J.-C. Bermond is member of the scientific committee of the international track of the M1 (<http://computerscience.unice.fr/master1>).

### 9.3.2. Supervision

#### PhD:

R. Modrzejewski, *Systèmes pair-à-pair de partage de données*, October 24, 2013, S. Pérennes and F. Giroire.

R. Pardo Soares, *Routing reconfiguration in WDM networks*, November 8, 2013, D. Coudert, C. Linhares Sales and N. Nisse.

#### PhD in progress:

I. Tahiri, *Optimisation dans les réseaux de collecte IP sans fils*, since November 2009, D. Coudert.

4th year:

S. Félix, *Smart transports : optimisation du trafic dans les villes*, since January 2011, J.-C. Bermond and J. Galtier.

A. Lancin, *Study of network properties for efficient routing algorithms*, since January 2011, D. Coudert.

3rd year:

M. A. Bergach, *GPGPU Graphics Processing Units for signal processing*, since September 2011, M. Syska.

A. Kodjo, *Design and optimization of multi-operators wireless backhaul networks*, since October 2011, D. Coudert.

B. Li, *Tree-decomposition and applications to routing*, since October 2011, D. Coudert and N. Nisse.

A. K. Maia, *Partitions of directed graphs*, since September 2011, F. Havet.

T. K. Phan, *Design and Management of networks with low-power Consumption*, since October 2011, D. Coudert and J. Moulierac.

2nd year:

F. Z. Moataz, *Conception et optimisation de réseaux robustes aux pannes et variations de capacités*, since October 2012, D. Coudert.

#### 9.3.2.1. Internships

D. Coudert: supervised the internship of Guillaume Ducoffe (ENS Cachan, Paris, France) on "Computation in Large Graphs with Applications to Gromov Hyperbolicity", March-September 2013 (6 months);

F. Havet: supervised the internship of Mathieu Schmitt (École Normale Supérieure de Lyon, France) on backbone colouring, May-August 2013 (3 months).

N. Nisse: supervised the internship of Christos Papageorgakis (University of Thessaly, Volos, Greece) on implementation of Cops and Robber games, February-July 2013 (6 months);

N. Nisse and S. Pérennes: supervised the internship of Ioannis Lamprou (University of Athens, Greece) on fractional games in graphs, March-August 2013 (6 months);

### 9.3.3. Juries

J.-C. Bermond: member of the PhD jury of Remigiusz Modrzejewski, Univ. Nice Sophia Antipolis (October 24, 2013);

D. Coudert: Member of the PhD jury of Valentin Weber, Université de Grenoble, France (July 8, 2013); Referee and member of the PhD jury of Jiyai Liu, Télécom Bretagne, Rennes, France (November 4, 2013); Member of the PhD jury of Ronan Soares, Univ. Nice Sophia Antipolis, France (November 8, 2013); Member of the PhD jury of Christian Glacet, Université de Bordeaux 1, Bordeaux, France (December 6, 2013);

- F. Giroire: member of the PhD jury of Ngo Hoang Giang, Univ. Nice Sophia Antipolis (December 16, 2013); member of the PhD jury of Remigiusz Modrzejewski, Univ. Nice Sophia Antipolis (October 24, 2013);
- F. Havet: external referee of the PhD of S. Simonsen, University of Southern Denmark (November 7 2013); external referee of the PhD of A. Maddaloni, University of Southern Denmark (November 8 2013);
- N. Nisse: member of the PhD jury of Ronan Soares, Univ. Nice Sophia Antipolis (November 8, 2013);

## **9.4. Popularization**

- Attractiveness: J-C. Bermond is in charge of the attractiveness of the center Inria Sophia Antipolis Méditerranée. Among other activities he corganized The "Mediterranean days" (January 23-25) ( 25 foreign students invited) and co-organized the valorization afternoon on February 2, 2013 (100 students);
- Fête de la Science: F. Giroire presented the stand "Magie et jeux mathématiques" at the Centre International de Valbonne, France (October 8, 2013); F. Moataz assisted the stand "Drone/Unmanned Aerial Vehicle" at Sophia Antipolis, France (October 12-13, 2013);
- Formation EDSTIC: J. Araújo has given lectures on Graph Theory and Algorithms to PhD students, 20h;
- Mathématiques et Internet: J-C. Bermond gave a vulgarization talk at the Centre Culturel of La Grande Motte, Hérault France (April 16, 2013);
- Optimisation dans les réseaux: J-C. Bermond gave 3 talks to investors on the future of optimization in networks, Paris (March 28, 2013);
- Science culture au lycée, Inria/PACA: N. Nisse explains graph to a Lycée class at Marseille, France (December 19th, 2013);

## DANTE Team

# 9. Dissemination

## 9.1. Scientific Animation

- Éric Fleury is President of the expert committee for the ANR INFRA call
- Éric Fleury is Co-chair of the Networking group ResCom of the CNRS GDR ASR. He is also a member of the scientific committee of the GDR ASR.
- Éric Fleury is in the steering committee of the IXXI – Rhône-Alpes Complex Systems Institute.
- Éric Fleury has been an expert for the Fund for Scientific Research - FNRS.
- Éric Fleury was PC member of 4th Workshop on Complex Networks (CompleNet 2013)
- Éric Fleury is Vice-Chairman of the projects committee of Inria Grenoble Rhône-Alpes research center
- Éric Fleury was president of the AERES visiting committee of the PRISM laboratory.
- Paulo Gonçalves is scientific correspondent of the International Relations for Inria Grenoble - Rhône-Alpes
- Paulo Gonçalves is scientific correspondent of the International Relations for the Computer Science Department at ENS Lyon.
- Paulo Gonçalves is officer of the local liaison board of EURASIP
- Paulo Gonçalves was organiser of the 4th Workshop on High Speed Network and Computing Environments (COMPSAC 2013, Kyoto)
- Paulo Gonçalves is PC member of IWCMC - TRAC 2014.
- Thomas Begin is PC member of ACM PE-WASUN 2013.
- Thomas Begin was an expert for ANR on program INFRA.
- Isabelle Guérin Lassous is a member of the editorial board of: Computer Communications (Elsevier), Ad Hoc Networks (Elsevier) and Discrete Mathematics & Theoretical Computer Science.
- Isabelle Guérin Lassous is program co-chair of ACM PE-WASUN 2013.
- Isabelle Guérin Lassous is a member of the following program committees in 2013: IPDPS, MSWiM, ITC, ICC, Globecom, ISCC, IWCMC.
- Isabelle Guérin Lassous is member of the CNRS National Committee for section 06 (Computer Science).
- Christophe Crespelle is in the steering committee of the IXXI – Rhône-Alpes Complex Systems Institute.
- Christophe Crespelle was PC member of AlgoTel 2013
- Christophe Crespelle was an expert for ANR on program JCJC - SIMI 2 Information Science and Applications.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

#### 9.2.1.1. Teaching by Paulo Gonçalves

Master : Responsible for the teaching axis "Models and Optimization for Emergent Infrastructure". M1/M2 of the Department of Computer Sciences at ENS Lyon (*Informatique fondamentale*)

Eng. school : Signal processing, lab classes (4th year), CPE Lyon, France

#### 9.2.1.2. Teaching by Thomas Begin

Thomas Begin is an Assistant Professor at Université Claude Bernard Lyon 1 in the Computer Science since 2009. He mostly lectures at the University, though he has a teaching activity at ENS Lyon as well.

Licence : "Networks" (L3), University Lyon 1, France

Master : "Networking" (M1), University Lyon 1, France

Master : "Advanced Networks" (M2), University Lyon 1, France

Master : "Computer Networks" (M1), ENS de Lyon, France

#### 9.2.1.3. Teaching by Isabelle Guérin Lassous

Master 2 Computer Science, University Lyon 1: Responsible of the speciality Réseaux.

Professor at the computer science department of University Lyon 1, teaching in Master 1 and Master 2, Networking, Quality of Service, Wireless Networks, Multimedia networking applications.

#### 9.2.1.4. Teaching by Christophe Crespelle

Christophe Crespelle is an Assistant Professor at Université Claude Bernard Lyon 1 (UCBL) in the Computer Science department since 2010. He mostly lectures at UCBL, though he has a teaching activity at ENS Lyon as well.

Master : "Calculability and Complexity" (M1), UCBL, France

Master : "Network Security Architecture" (M2), UCBL, France

Master : "Security" (M2), UCBL, France

Master : "Future Networks" (M2), UCBL, France

Master : "Complex Networks" (M2), ENS Lyon, France

#### 9.2.1.5. Teaching by Eric Fleury

Eric Fleury is a full professor at ENS de Lyon. He was the head of the Computer Science Department until July 2013. ENS de Lyon is one of the four Écoles normales supérieures in France.

Licence : "Introduction to Algorithm" (L3), ENS de Lyon, France

### 9.2.2. Supervision

PhD in progress : Lucie Martinet, iBird: Individual Based Investigation of Resistance Dissemination, September 2011, Éric Fleury & Christophe Crespelle

PhD in progress : Benjamin Girault, Ondelettes et graphe d'interactions dynamique : échelle temporelle et spatiale, September 2012, Éric Fleury & Paulo Gonçalves

PhD in progress : Thiago Abreu, Integration of Traffic Awareness in Substitution Networks, March 2011, Isabelle Guérin Lassous & Thomas Begin

PhD in progress : Roy Shubhabrata, Measurements in the framework of Virtual Networks Development, October 2010, Paulo Gonçalves & Thomas Begin

PhD in progress: Marina Sokol, Clustering and learning techniques for traffic / users classification, October 2010, Philippe Nain (Inria MAESTRO) and Paulo Gonçalves. M. Sokol has interrupted her PhD and is currently on maternity leave (until October 2013).

PhD in progress: Elie Rotenberg, Complex Network Metrology, September 2010, Matthieu Latapy and Christophe Crespelle

PhD in progress: Anh Tuan GIANG, Modeling and Improving the Capacity of Vehicular Ad hoc network, April 2011, Anthony Busson (registered at University Paris XI).

PhD in progress: Sabrina Naimi, Mobility metrics in wireless mobile networks, September 2010, Véronique Vèque and Anthony Busson (registered at University Paris XI).

PhD in progress : Laurent Reynaud, Optimized mobility strategy in wireless networks for reliability and energy consumption, March 2013, Isabelle Guérin Lassous.

PhD in progress : Yannick Léo, Diffusion Processes and Community Structures in Dynamic Complex Networks, September 2013, Éric Fleury & Christophe Crespelle

### **9.2.3. Juries**

- Paulo Gonçalves was member of the Ph.D. jury of Maude Pasquier (Université de Grenoble, Inria).
- Isabelle Guérin Lassous was a member of the following Ph.D. juries: Frédéric Besse (Université de Toulouse, ISAE, reviewer), Ichrak Amdouni (Université Pierre et Marie Curie, Inria, reviewer), Muhammad Yousaf (University of Engineering and Technology, Taxila, Pakistan, reviewer), Nicolas Gouvy (Université Lille 1, reviewer), Ana Bildea (Université de Grenoble, reviewer), Karen Miranda (Université Lille 1, president).
- Isabelle Guérin Lassous was a member of the following HDR jury: Céline Robardet (Université Lyon 1, INSA de Lyon, member).
- Éric Fleury was member of the following Ph.D. juries : Jury of Tony Ducrocq (Université des Sciences et technologies de Lille, reviewer); Jury of Robin Lamarche-Perrin (Université de Grenoble, Reviewer); Jury of Anh Dung Nguyen (Université de Toulouse, ISAE, reviewer).

## DIANA Team

# 9. Dissemination

## 9.1. Scientific Animation

- **Walid Dabbous** served in the programme committees of ACM MM'2013 and CCNxCon'2013. He is member of the ns-3 consortium and has organized the kick-off meeting for the consortium in March 2013. He co-organized the Rescom summer school on Information Centric Networking in Porquerolles in May 2013. He is member of the scientific council of the Inria Bell-Labs laboratory on Self Organizing Networks.
- **Thierry Turetletti** Senior ACM and IEEE member, served in 2013 in the program committees of the following international conferences: 20th International Packet Video Workshop and 5th ACM Workshop on mobile Video Delivery (Movid). He is member of the Editorial Boards of the Journal of Mobile Communication, Computation and Information (WINET) published by Springer Science and of the Advances in Multimedia Journal published by Hindawi Publishing Corporation.
- **Chadi Barakat** is on the editorial board of the Computer Networks journal and served on the Technical Program Committee for the Traffic Monitoring and Analysis (TMA) 2013 workshop and the Passive and Active Measurement (PAM) 2013 conference. He is currently the scientific referee for international affairs at Inria Sophia Antipolis and member of the Conseil d'Orientation Scientifique et Technologique (COST) at Inria within the working group of international affairs (COST-GTRI).
- **Arnaud Legout** is on the editorial board of the Computer Networks journal. He was also reviewer of journals (IEEE/ACM Transactions on Networking, IEEE/ACM Transactions on Computers, IEEE Network, Computer Communications, ACM SIGCOMM CCR), and conferences (IEEE Infocom, ACM Sigmetrics). He also served as an expert to the European Commission to evaluate EC funded projects.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Undergraduate course at IUP GMI Avignon on Peer-to-peer networks, by Arnaud Legout (38h), France.

Master Ubinet: course on Evolving Internet - architectural challenges by Walid Dabbous and Chadi Barakat 42 hours, University of Nice-Sophia Antipolis, France.

Master Ubinet: course on Peer-to-peer networks, by Arnaud Legout (21), University of Nice-Sophia Antipolis.

Master 1 International in Computer Science: course on algorithms for networking, by Chadi Barakat (18h), University of Nice.

Master CAR: course on Internet monitoring by Chadi Barakat, 3h, Telecom Paris Tech, France.

Master TSM: course on Voice over IP by Chadi Barakat, (6h), University of Nice-Sophia Antipolis, France.

Master RISM: course on mobility and wireless networking, by Chadi Barakat (7h), University of Avignon.

Master RISM: course on peer-to-peer networks and privacy, by Arnaud Legout (30), University of Avignon.

### 9.2.2. Supervision



PhD : Ashwin Rao defended his PhD titled “Improving Transparency and End-User Control in Mobile Networks” on June 30th, at University of Nice Sophia-Antipolis. His thesis was co-supervised by Arnaud Legout and Walid Dabbous.

PhD in progress: Riccardo Ravaioli works on “Active and Passive Inference of Network Neutrality” since October 2012. His thesis is co-supervised by Chadi Barakat.

PhD in progress: Xuan Nam Nguyen works on "Software Defined Networking in challenged environments", since October 2012. His thesis is co-supervised by Thierry Turletti and Walid Dabbous.

PhD in progress: Alina Quereilhac works on "Unified Evaluation environment of Networking Protocols for Simulators and Testbeds", since 2011. Her thesis is co-supervised by Walid Dabbous and Thierry Turletti.

PhD in progress: Maksym Gabielkov works on “Propagation of data in social networks” since 2012. His work is supervised by Arnaud Legout.

### **9.2.3. Juries**

Walid Dabbous served as a reviewer and jury member of Mohamed Diallo PhD thesis, defended in March 2013, at University Pierre and Marie Curie.

Walid Dabbous served as a reviewer and jury member of Bilel Ben Romdhanne PhD thesis, defended in December 2013, at Eurecom.

Thierry Turletti served as an external examiner and presides the jury of Bilel Ben Romdhanne PhD thesis, defended in December 2013, at Eurecom.

Thierry Turletti served as reviewer and jury member of Nicolas Kuhn PhD thesis, defended in November 2013 at INP Toulouse.

Thierry Turletti served as reviewer and jury member of Emmanuel Chaput HDR thesis, defended in November 2013, at INP Toulouse.

Thierry Turletti served as reviewer and jury member of Jean Vella PhD thesis, defended in September 2013, at University of Malta.

Chadi Barakat served as a reviewer and jury member of Xavier Miseri PhD thesis, defended in October 2013 at Telecom ParisTech.

Chadi Barakat served as jury member of Vincenzo Ciancaglini PhD thesis, defended in July 2013 at Inria Sophia Antipolis.

Chadi Barakat served as a reviewer and jury member of Heng Cui PhD thesis, defended in April 2013 at Eurecom.

Arnaud Legout served as a jury member for the Ph.D. thesis of Roberto Roverso defended in December 2013 at KTH.

Arnaud Legout served as an opponent for the Ph.D. thesis of Raul Jimenez defended in December 2013 at KTH.

## **9.3. Popularization**

Arnaud Legout made a presentation on “Exploration macroscopique du graphe social de Twitter” to a user group interested in network security called OSSIR. See <http://www.ossir.org/paris/supports/index/2013.shtml>.

## **DIONYSOS Project-Team**

# **9. Dissemination**

## **9.1. Scientific Animation**

### **9.1.1. International memberships**

- R. Marie and G. Rubino are members of the IFIP WG 7.3 (Working Group in Computer Performance Modeling and Analysis).
- Gerardo Rubino is a member of the Technical Committee on Multimedia Communications of IEEE.
- Adlen Ksentini is a member of the Technical Committee on Multimedia Communications and Wireless of IEEE.
- Adlen Ksentini is vice-chair of the Interest Group on QoE of the Technical Committee on Multimedia (IEEE Communication Society).

### **9.1.2. Seminar presentations**

- B. Tuffin (with P. Maillé). Title: An analysis of ISP Inter-Relations: Traffic Exchange, Revenue Sharing, and Disconnection Threat. Colloquium Rennais des Sciences du Numérique, 4 Juillet 2013.
- A. Ksentini. Title: QoE-based in-network adaptation of SVC video streams. FP7 Envision project workshop, Orange labs Lannion, Sept. 2013.
- Y. Hadjadj-Aoul. Title: Streaming Vidéo sur Internet: Architectures, Protocoles et Services. University of Oran's Winter School, Oran, Algeria, Dec. 2013.
- C. Viho. Title: QoE (Quality of Experience): a new paradigm for multimedia networking. Institute of Computer Science, University of Goettingen (Germany), Jan 23, 2013.
- C. Viho. Title: Passive interoperability testing is the way to go for Internet of Things. BUPT, Beijing, China, Oct 15, 2013.
- C. Viho. Title: Internet of Things: Internet of challenges. IC-BNMT, Guilin, China, Nov 19, 2013.
- G. Rubino. Title: Context Delivery Networks in Dionysos. At the in Kick-off DTC ICT Labs, Rennes, France, March 22, 2013.
- G. Rubino. ITCE Distinguished Lecture, Postech, Pohang, Korea. Title: Automatic measuring of perceptual quality on the Internet. May 14, 2013.
- G. Rubino. Title: Transient queueing analysis. AMMA workshop, UDELAR, Montevideo, Uruguay, Sep 4, 2013.
- G. Rubino. Title: On fluid models in performance and dependability analysis. At the Design and Analysis of Communication Systems (DACs) group, University of Twente, Netherlands, Dec 6, 2013.

### **9.1.3. Editorial activity**

- Bruno Tuffin is associate Editor for INFORMS Journal on Computing.
- Bruno Tuffin is associate Editor for Mathematical Methods of Operations Research.
- Bruno Tuffin is associate Editor for ACM Transactions on Modeling and Computer Simulation.
- Bruno Tuffin was the co-chair of the 8th International Workshop on Advanced Internet Charging and QoS technologies (ICQT'13), Zurich, Switzerland, 2013.
- Bruno Sericola is associate editor for The Open Operational Research Journal.
- Bruno Sericola is associate editor for International Journal of Stochastic Analysis.

- Bruno Sericola is associate editor for ISRN Probability and Statistics.
- Adlen Ksentini is guest editor in IEEE Wireless Communication Magazine for the special issue “Research & Standards: Leading the Evolution of Telecom Network Architectures”, June 2014.
- Adlen Ksentini is Associate Editor of Hindawei International Journal of Digital Multimedia Broadcasting
- Yassine Hadjadj-Aoul is a member of the editorial board of the International Journal of Computer Networks (IJCN)

#### 9.1.4. Program committees

Bruno Tuffin served as TPC member for

- 9th International Workshop on Resource Allocation, Cooperation and Competition in Wireless Networks (RAWNET/WNC3), Tsukuba Science City, Japan, May 13-17, 2013.
- 7th workshop on Simulation, Rimini, Italy, May 21-25, 2013.
- IFIP Networking 2013 Conference, Brooklyn, New York, USA, May 22-24, 2013.
- 27th ACM/IEEE/SCS Workshop on Principles of Advanced and Distributed Simulation (SIGSIM/PADS), 2013.
- Joint Workshop on Pricing and Incentives in Networks and Systems (W-PIN + NETECON 2013), in conjunction with ACM SIGMETRICS 2013, Pittsburg, USA, June 21, 2013.
- 3rd International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH), Reikjavik, Iceland, 29-31 July 2013.
- 9th IMACS Seminar on Monte Carlo Methods, Annecy, France, July 15-19, 2013.
- 10th International Workshop on Economics of Grids, Clouds, Systems and Services (GECON'2013), Zaragoza, Spain September 18-20, 2013.
- 4th International Symposium on Information and Communication Technology (SoICT), Danang city, Vietnam, December 5-6, 2013.

Bruno Sericola served in the Program Committee of the following conferences:

- ASMTA 2013, 20th International Conference on Analytical and Stochastic Modelling Techniques and Applications, Ghent, Belgium, 8–10 July 2013.
- ACCESS 2013, 4th International Conference on Access Networks, Nice, France, 21-26 July 2013.

Adlen Ksentini served as TPC member for

- IEEE Global Communication Conference, GLOBECOM 2013 Wireless Network Symposium, December 2013, Atlanta, USA
- IEEE International Conference on Communication, ICC 2013 Wireless Network Symposium, June 2013, Budapest, Hungary
- IEEE Wireless Communication and Networking Conference, April 2013, Paris, France
- IEEE International Conference on Multimedia and Expo ICME 2013,

Yassine Hadjadj-Aoul served as TPC member for

- IEEE Global Communication Conference, GLOBECOM 2013, Wireless Network and communications QoS symposiums, December 2013, Atlanta, USA
- IEEE International Conference on Communication, ICC 2012 Wireless Network and communication software symposiums, June 2013, Budapest, Hungary
- IEEE Wireless Communication and Networking Conference, April 2013, Paris, France

Cesar Viho served as TPC member for

- The 25th IFIP International Conference on Testing Software and Systems (ICTSS 2013), Nov 13-15, 2013, Istanbul, Turkey. C. Viho was Tutorials Chair.
- IEEE International Conference on Broadband Network & Multimedia Technology (IC-BNMT 2013), Nov 17-19, Guilin, China. C. Viho was general co-chair.

Gerardo Rubino served or serves as TPC member of

- e-Health'13: International workshop of e-Health Pervasive Wireless Applications and Services, Lyon, France, Oct 2013.
- MAM8: 8th International Conference on Matrix Analytic Methods in Stochastic Models, Calicut, India, Jan 6-10,
- Networking 2014: IFIP Networking 2014 Conference, Trondheim, Norway, Jun 2–4
- Resim 2014: 10th International Workshop on Rare Event Simulation, Amsterdam, Netherlands, Aug 27–29, 2014.
- QEST 2014: 11th International Conference on Quantitative Evaluation of SysTems, Florence, Italy, Sep 8–12, 2014.
- CLEI 2014, XL Conferencia Latinoamericana de Informática (Latin-American Informatics Conference), Montevideo, Uruguay, Sep 15–19, 2014.

### 9.1.5. Managing research activities

- B. Tuffin is a member of the Steering Committee of the International Workshop on Rare Event Simulation (RESIM).
- B. Tuffin was a member of Inria Rennes' PhD thesis selection committee, 2013.
- Bruno Sericola is responsible for the Inria Rennes - Bretagne Atlantique budget.
- Bruno Sericola is 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.
- B. Sericola was a member of the juries for the recruitment of young graduate scientists and senior researchers at Inria.
- Cesar Viho was responsible of the Network, Telecommunication and Services department and member of the scientific council of IRISA till June 2013.
- Cesar Viho is deputy director of the MATISSE (Mathematics, Electronics and Computer Sciences) doctoral school in charge of managing the recruitment of PhD students and their activities during their doctorate, in all the concerned areas of the school.
- G. Rubino was a member for years of the Steering Committee of the international conference QEST (Quantitative Evaluation of SysTems). This membership ended mid-2013.
- G. Rubino is a member of the Steering Committee of the International Workshop on Rare Event Simulation (RESIM).
- 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 served as international evaluator of NWO projects for the Netherlands Organisation for Scientific Research, for the 2013 Program.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Licence L3: Introduction to networks, 20 hours, Istic/University of Rennes 1, France  
 Master M1: Introduction to networks, 24 hours, Esir/University of Rennes 1, France  
 Master M1: Wireless networking, 46 hours, Esir/University of Rennes 1, France  
 Master M1: Networks and protocols, 24 hours, Istic/University of Rennes 1, France  
 Master M1: Computer networks, 24 hours, Esir/University of Rennes 1, France  
 Master M1: Algorithms and graphs, 48 hours, Esir/University of Rennes 1, France  
 Master M1: Performance and dependability evaluation of computer systems, 54 hours, Istic/University of Rennes 1, France  
 Master M1: Introduction to graph theory, 14 hours, Esir/University of Rennes 1, France  
 Master M1: Introduction to networks, 20 hours, Esir/University of Rennes 1, France  
 Master M1: Wireless Networks, 48 hours, Esir/University of Rennes 1, France  
 Master M2: Multimedia transmission, 48 hours, Esir/University of Rennes 1, France  
 Master M2: Introduction to C language, 12 hours, Istic/University of Rennes 1, France  
 Master M2: Validation and tests, 6 hours, Istic/University of Rennes 1, France  
 Master M2: Quality of service and multimedia, 6 hours, Istic/University of Rennes 1, France  
 Master M2: Multimedia transmission, 18 hours, Istic/University of Rennes 1, France  
 Master M2: Performance evaluation, 26 hours, Istic/University of Rennes 1, France  
 Master M2: Network security, 14 hours, Istic/University of Rennes 1, France  
 Master M2: Dependability analysis, 15 hours, Supelec, Rennes, France  
 Master M2: Simulation, 5 hours, Telecom Bretagne, Rennes, 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: Logistic and performance, 8 hours, Faculté de Sciences économiques/University of Rennes 1, France.  
 PhD class: Introduction to Monte Carlo simulation, 12 hours, Matisse PhD school, France  
 PhD class: Network economics, 6 hours, Matisse PhD school, France

### 9.2.2. Supervision

HdR : Adlen Ksentini; title: “Building the bridges between QoS and QoE for network control mechanisms”; University Rennes 1; date: July 3, 2013.

PhDs defended in Dionysos, in 2013:

- Wael Cherif; title: “Adaptation de contexte basée sur la qualité d’expérience dans les réseaux Internet du Futur”; advisors: A. Ksentini and G. Rubino; University Rennes 1; date: June 19, 2013.
- Nanxing Chen; title: “On passive approach for interoperability testing”; advisor: C. Viho, University of Rennes 1; date: June 24, 2013.
- Samira Saggadi; title: “Rare event simulation with applications in telecommunications”; advisor: B. Tuffin; University Rennes 1; date: July 8, 2013.
- Pablo Sartor del Giudice; title: “Propriétés et méthodes de calcul de la fiabilité diamètre-bornée des réseaux”; advisor: G. Rubino; University Rennes 1; date: Dec 18, 2013.

PhDs defended out of Dionysos, in 2013, with participation of team’s members as co-advisors:

- Selim Ellouze; title “Mécanismes de collaboration entre réseaux et services applicatifs pour l’optimisation des ressources et des services”; co-advisor: G. Rubino; University Rennes 1; July 2, 2013.
- Isabel Amigo; title “Métrologie et Ingénierie du Trafic pour la QoS de bout-en-bout dans un réseau multi-domaine”; co-advisor: G. Rubino; Telecom Bretagne, Brest, July 12, 2013.

PhDs in progress in the team:

- Romaric Ludinard; title: “Data aggregation for large-scale distributed networks”; PhD started on April 2011; advisors: B. Sericola from Inria/Dionysos and E. Anceaume from Inria/Cidre; University Rennes 1.
- Damien Le Queré; Cifre Grant, Orange Labs; title: “Conception et étude des performances d’une solution auto-configurable pour les réseaux de transport du futur”; PhD started on January 2012; advisors: B. Sericola and A. Ksentini; University Rennes 1.
- Btissam Errahmadi; Cifre Grant, Orange Labs; title: “Coopération et auto-\* dans un réseau de small cells network”; PhD started on January 2013; advisors: C. Viho and A. Ksentini; University Rennes 1.
- Leila Ghazzai; title: “Replication and caching strategies for adaptive video streaming in future information centric networks”; PhD started on October 2012; advisors: G. Rubino, Y. Hadjadj-Aoul; University Rennes 1.
- Osam Arouk; title: “Cellular-based M2M communication: congestion control”; PhD started on December 2012; advisors: C. Viho and A. Ksentini; University Rennes 1.
- Quang Tran Anh Pham; title: “Dynamic QoE based resource management in heterogeneous networks”; PhD started on October 2013; advisors: C. Viho; University Rennes 1.
- Laura Aspirot; title: “Fluid limits of some Markovian models used in performance and dependability analysis”; PhD started in Dec 2010; advisors: E. Mordecki and G. Rubino; University of the Republic, Uruguay. Expected defense in Sep 2014.
- Leslie Murray; title: “New Monte Carlo variance reduction techniques with applications in dependability”; PhD started in Dec 2010; advisors: H. Cancela and G. Rubino; University of the Republic, Uruguay. Defense in May 2014.

### 9.2.3. *Juries (PhD and HDR)*

- B. Sericola was a reviewer of the PhD thesis of Alessio Angius, from the university of Torino, Italy; title: “Handling large state spaces in transient analysis of Markovian processes” date: May 7, 2013.
- B. Tuffin was the president of the PhD jury of Isabel Amigo; title “Métrologie et ingénierie du trafic pour la QoS de bout-en-bout dans un réseau multi-domaine”; Telecom Bretagne, Brest, July 12, 2013.
- B. Tuffin was a member (as advisor) of the PhD jury of Samira Saggadi (advisor); title: “Rare event simulation with applications in telecommunications”; Université Rennes 1; July 8, 2013.
- B. Tuffin was a member of the PhD jury of Pablo Sartor del Giudice; title: “Propriétés et méthodes de calcul de la fiabilité diamètre-bornée”; Université de la République, Montevideo, Uruguay, and Université Rennes 1 (defense at Montevideo, Uruguay), December 18, 2013.
- C. Viho was Member of the Jury of HDR of Adlen Ksentini; title: “Building the bridges between QoS and QoE for network control mechanisms”; University Rennes 1; date: July 3, 2013.
- C. Viho was member/reviewer of the PhD of Thomas Ring, from University of Goettingen (Germany); title: “Assessing and Improving Interoperability of Distributed Systems”; date: January 23, 2013.
- C. Viho was the president of the PhD Jury of Wael Cherif; title: “Adaptation de contexte basée sur la Qualité d’Expérience dans les réseaux Internet du Futur”; date: June 19, 2013.

- C. Viho was the president of the PhD Jury of Lucien Loiseau, from Telecom Bretagne; title: “Exploitation des réceptions opportunistes dans les mécanismes de relayage pour les réseaux sans-fils”; date: December 6, 2013.
- C. Viho was the president of the Jury of PhD of Luis Alberto Suárez Rivera, from Telecom Bretagne; title: “Optimisation des techniques et déploiements radio pour les réseaux efficaces en énergie”; date: December 13, 2013.
- G. Rubino was a member of the Jury of HDR of Adlen Ksentini; title: “Building the bridges between QoS and QoE for network control mechanisms”; University Rennes 1; July 3, 2013.
- G. Rubino was the president of the PhD jury of Samira Saggadi; title: “Rare event simulation with applications in telecommunications”; University Rennes 1; July 8, 2013.
- G. Rubino was the president of the Jury of HDR of Daniel Negru; title: “A Networked Media Ecosystem based on \*-Awareness for Future Media Internet”; University of Bordeaux 1; December 5, 2013.
- G. Rubino was member/reviewer of the PhD of Daniël Reijbergen, at the University of Twente, Netherlands; title: “Assessing and Improving Interoperability of Distributed Systems”; December 6, 2013.
- G. Rubino was a member (as advisor) of the PhD jury of Pablo Sartor del Giudice; title: “Propriétés et méthodes de calcul de la fiabilité diamètre-bornée”. Université de la République, Montevideo, Uruguay, and Université Rennes 1 (defense at Montevideo, Uruguay), December 18, 2013.

### 9.3. Popularization

- G. Rubino makes regular presentations to high school students about the research work in general, and specific technical topics in particular. Titles of 2013:
  - Using randomness for solving deterministic problems
  - Internet as a research problem
  - Great challenges in maths: Riemann Hypothesis
  - Great challenges in math/computer science: the “P versus NP” problem

### 9.4. Standardization activities

**Participants:** Anthony Baire, César Viho, Nanxing Chen.

The Dionysos team continues to dedicate a significant effort towards standardization and certification in the telecommunications area. We participate in several working groups of the main telecommunication standardization institutes like the IETF (Internet Engineering Task Force), ETSI (European Telecommunication Standardization Institute), etc. We are also active in the main mailing-lists treating new generation networks and protocols. Several proposals of drafts and contributions to the definition of standards and RFCs (Request For Comments) have been published. This year we continued focusing mainly on Internet of Things and related protocols such as 6LowPAN (IPv6 for Low Power Area Networks) and CoAP (Constrained Application Protocol).

#### 9.4.1. IPv6 Ready Logo Program

**Participants:** Anthony Baire, César Viho.

Dionysos team has also a major role in the world-wide certification process for IPv6 products launched by the IPv6 Forum, the “IPv6 Ready Logo Program”. For details, see <http://www.ipv6ready.org>. This project aims to provide the means needed to test existing IPv6 products to be deployed in the market. Dionysos contributes to the technical part of this Program by defining the certification process itself, specifying required tests, and developing some of the interoperability tests needed. This work is done together with the IPv6 Forum, the ETSI in Europe, the WIDE-project in Japan, the TTA (Telecommunications Technology Association) in Korea and BII in China.

This year, in collaboration with the IPSO alliance and ETSI, we addressed the usage of IPv6 on smart objects based on the IEEE 802.15.4 link layer (for instance, sensor networks). These networks have special constraints (limited power, packet loss, ...) and new protocols are designed at IETF (6LowPAN, CoAP) to allow using IPv6 with these constraints. We participated in the preparation of two Interoperability events for these protocols in June in Berlin (Germany) and in November in Las Vegas (USA).



## DYOGENE Project-Team

# 9. Dissemination

## 9.1. Scientific Animation

- François Baccelli:
  - Member of IFIP WG 7.3,
  - Advisory Editor, Queueing Systems, Springer Verlag,
  - Associate Editor IEEE Tr Information Theory,
  - TPC Member IEEE Wiopt 2013,
  - TPC Member IEEE ISIT 2013.
  - Organization of the first Simons Lectures on Network Mathematics in May 2013: <http://www.ma.utexas.edu/conferences/SimonsChairLectures/>
  - Co-organization of the workshop “Modern probabilistic techniques for design, stability, large deviations, and performance analysis of communication, social, energy, and other stochastic systems and networks”, Isaac Newton Institute, Cambridge, UK, 12-16 August 2013.
  - Inaugural lecture at the Workshop on Geometry and Physics of Spatial Random Systems, Aarhus, Denmark, April 2013, on stochastic geometry and information theory.
  - Invited lecture at the Asymptotics of Large-Scale Interacting Networks Workshop, Banff, February-March 2013, on the dynamics of peer to peer networks.
- Bartek Błaszczyszyn:
  - reviewer of all major IEEE journals publishing in wireless domain,
  - organizing and co-chairing of the “Workshop on Spatial Stochastic Models for Wireless Networks” in Riva del Garda, Italy (2005), Berlin, Germany (2008), Tokyo, Japan (2013).
  - organizing and chairing of the 17th Workshop on Stochastic Geometry, Stereology and Image Analysis, Torun, Poland 2013.
  - Reviewer for DIGITEO and Israel Science Foundation.
- Ana Bušić:
  - TPC Member Performance 2013; <http://performance.cs.univie.ac.at/>.
  - TPC Member Valuetools 2013; <http://valuetools.org/2013/show/home>.
- Marc Lelarge:
  - Associate Editor: QUESTA, Bernoulli
  - TPC Member IEEE Wiopt 2013
  - TPC Member ACM SIGMETRICS 2013,
  - Reviewer for Swiss National Science Foundation.
- Alexandre Proutière:
  - Associate editor of IEEE transactions on Networking, Queueing Systems.
  - TPC: ACM Mobihoc, IEEE Infocom, Performance.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

- Licence : Anne Bouillard, Structures et algorithmes aléatoires, 60h eqTD, L3, ENS, France
- Licence: Ana Bušić, Réseaux de communications, 36h, L3, ENS, France
- Licence: Ana Bušić, Conception of algorithms and applications, 27h, L3, UPMC Sorbonne Universités, France
- Licence: Marc Lelarge, Théorie de l'information et codage, 40h, L3, ENS, France
- Master : Anne Bouillard, Probabilistic aspects of computer science, 15h eqTD, M1, ENS Cachan, France
- Master : Anne Bouillard, Introduction to tropical mathematics, 32h eq TD, Tokyo institute of technology, Japan.
- Master: Ana Bušić, Foundations of network models, 14h, M2 MPRI, France
- Master: Marc Lelarge, Algorithmique des réseaux sociaux, 40h, M1, ENS, France
- Doctorat: Bartek Błaszczyszzy and Laurent Massoulié, Graduate Course on point processes, stochastic geometry and random graphs (program "Master de Sciences et Technologies"), 45h, UPMC, Paris 6.
- Doctorat: Alexandre Proutière, Invited short course at IIT Bombay, Decentralized learning in repeated games and network optimisation, 4h, IIT Bombay, India

### 9.2.2. Supervision

- PhD: Tien Viet Nguyen, On the modelling of wireless communication networks using non-poisson point processes [65], Ecole Doctorale Sciences Mathématiques de Paris Centre, defense: January 9, 2013, advisor: F. Baccelli.
- PhD : Aurore Junier, Analyses de performance et de stabilité des réseaux de télécommunication [60], ENS Cachan (Bretagne), defence: 16 december 2013, supervisors: Anne Bouillard and Claude Jard (Université de Nantes/LINA)
- PhD: Mathieu Leconte, Load-balancing and resource-provisioning in large distributed systems [2], EDITE, CIFRE Technicolor, defense: December 18, 2013, advisors: Marc Lelarge and Laurent Massoulié.
- PhD in progress :
- Kumar Gaurav, "Convex comparison of network architectures" started in October 2011, adviser B. Błaszczyszyn;
  - Miodrag Jovanović, "Evaluation and optimization of the quality perceived by mobile users for new services in cellular networks" started in January 2012, adviser B. Błaszczyszyn;
  - Christelle Rovetta, Applications of perfect sampling to queuing networks and random generation of combinatorial objects, from December 2013, co-supervised by Anne Bouillard and Ana Bušić.

### 9.2.3. Juries

- François Baccelli:
  - David Coupier, Habilitation, Université de Lille, Décembre 2013.
  - Nicolas Chenavier, Université de Rouen (Rapporteur), Décembre 2013.
  - Mathieu Leconte, Institut Mines Télécom, Décembre 2013.
- Bartek Błaszczyszyn was a member in PhD jury of: Anaïs Vergne, Telecom ParisTech, 28/11/2013 and Manjesh Kumar Hanawal, Univ. Avignon, 06/11/2013
- Anne Bouillard was part of the jury of the PhD defence of Aurore Junier.
- Marc Lelarge was part of the jury of the PhD defense of Feng Yan, EDITE, September 2013 and Mathieu Leconte, EDITE, December 2013.
- Alexandre Proutière was a member of the jury, Niek Bouman, Technical University in Eindhoven, December 2013.

## FUN Project-Team

## 8. Dissemination

### 8.1. Scientific Animation

#### 8.1.1. Conference organization

##### Program (co-)chairs

- Nathalie Mitton is/was program chair or co-program chair for WiMob 2013, OpenWorldForum 2013 (IoT Track) and IoT-IP 2013.

##### Program committee members

- Nathalie Mitton is/was in the Technical Program Committee (TPC) for Algotel'14, WPMC'14, SecAN'14, WinSys 2014, MDM 2014, SensorNets 2014, MDM 2013, WWASN2013, AdHoc-Nets 2013, EUSPN 2013, MC3 2013, AdHocNow 2013, HuMoComp 2013, MDM 2013, WWASN2013, Africomm 2013, WWASN2013.
- Tahiry Razafindralambo is/was a TPC member for WiMob 2013, MSWIM 2013, PE-WASUN 2013.
- Valeria Loscri is/was TPC member for WiMob2013, NTMS2013, IoTIP2013, MC3 2013.

##### Other chairing

- Valeria Loscri was publicity chair for IoT-IP 2013.

#### 8.1.2. Editorial activity

- Nathalie Mitton is editorial board members of AHSWN since 2011.
- Nathalie Mitton is editorial board member of Adhoc Networks since 2012.
- Nathalie Mitton is editorial board member of IET-WSS since 2013.
- Nathalie Mitton and David Simplot-Ryl edited the book "Wireless sensor and robot networks: from topology control to communication aspects", to be published in February 2014.

#### 8.1.3. Misc

- Nathalie Mitton was member of the ANR programme blanc SIMI3 for 2013.
- Nathalie Mitton a member of the Inria COST-GTAI and Building User committee (CUB).
- Nathalie Mitton was vice-president of the Technological development committee (CDT) in 2013 and will be president from January 2014.

## 8.2. Teaching - Supervision - Juries

### 8.2.1. Teaching

Master : Nathalie Mitton, Wireless sensor networks, 36h eqTD (Master TIIR and MINT), Université Lille 1 and Telecom Lille 1, France

Master : Nathalie Mitton, RFID Middlewares, 16h eqTD, Institut Telecom and Université Lille 1, France

Master : Valeria Loscri, Digital Transmission - Course of Master Science in Engineering of Telecommunication Course (University of Calabria)

Post-Master : Valeria Loscri, KOM4T me: Knowledge Management 4 info Telemati in Mobile Environment (post-master course for expert in knowledge management systems applied to the context of infotainment for vehicular environments, organized by University of Calabria, Infomobility Spa, Magneti Marelli Spa, Info Blu Spa) - 100 hours

### 8.2.2. Supervision

HdR : Tahiry Razafindralambo, Mouvements autonomes: de la créativité dans les réseaux sans fil, Université Lille 1, December 5th 2013

PhD : Karen Miranda, Self-deployment algorithms for substitution networks, Université Lille 1, December 10th 2013, Tahiry Razafindralambo and David Simplot-Ryl

PhD : Tony Ducrocq, Auto-organisation des réseaux sans-fil multi-sauts dans les villes intelligentes , Université Lille 1, November 15th 2013, Nathalie Mitton and Michael Hauspie

PhD : Milan Erdelj, MobileWireless Sensor Network Architecture: Applications to Mobile Sensor Deployment, Université Lille 1, October 11th 2013, Tahiry Razafindralambo and David Simplot-Ryl

PhD : Nicolas Gouvy, Routage géographique dans les réseaux de capteurs et actionneurs sans fil Université Lille 1, September 19th 2013, Nathalie Mitton

PhD in process: Riccardo Petrolo, Internet of Things and Smart Cities, Université Lille 1, 2013-2016, Nathalie Mitton and Valeria Loscri

PhD in process: Viktor Toldov, : Interférence et consommation dans les réseaux de capteurs, Université Lille 1, 2013-2016, Nathalie Mitton and Laurent Clavier

PhD in process: César Marchal, Sécurité dans les réseaux de capteurs - Du routage à la pertinence des données, Université Lille 1, 2013-2016, Nathalie Mitton

PhD in process: Natale Guzzo, Auto - organisation et économie d'énergie dans un réseau sans fil de surveillance de fret, Université Lille 1, 2013-2016, Nathalie Mitton

PhD in process: Roudy Dagher, Géolocalisation en environnement réel, extérieur et intérieur avec réseau de capteurs, Université Lille 1, 2013-2016, Nathalie Mitton

### 8.2.3. Juries

- Nathalie Mitton was committee member of the following PhD thesis:
  - Julien Beaudaux, Université de Strasbourg, France, June 2013
  - Raul Gorcitz (reviewer), UPMC, Paris, July 2013
  - Alhem Riggani, UPMC, Paris, January 2014
  - Arnab Sinha, Inria Rennes, February 2014
  - Rafik Kheddami, Esisar, February 2014
- Nathalie Mitton was member of the CR2 Lille competition selection committee.
- Nathalie Mitton was member of the Boost Your Code 2013 competition jury.
- Nathalie Mitton was a member of the COS (associate professor selection committee) for INSA de Lyon and Université de Reims.

### 8.3. Popularization

- Tahiry Razafindralambo gave a popularization talk "Introduction to Wireless Sensor Networks" at Distributed Computing Department / Universidad de Chile.
- Nathalie Mitton gave a talk on "Introduction to RFID" to Terminales ES and S and "Introduction to Wireless Sensor Networks" to 4e and 3e in the framework of "Journées de la Science".
- Ibrahim Amadou gave a talk on "Introduction to Wireless Sensor Networks" in the framework of "Journées de la Science".

## GANG Project-Team

## 8. Dissemination

### 8.1. Scientific Animation

**Participants:** Carole Delporte, Hugues Fauconnier.

Most participants have been invited for the TRANSFORM Summer School on research Directions in Distributed Computing Heraklion, Greece 10-14 june <http://www.ics.forth.gr/carv/transform/srdc/index.html>

### 8.2. Teaching - Supervision - Juries

#### 8.2.1. Teaching

Master MPRI University of Paris Diderot:

- M. Habib, graph algorithms, 12 hours;
- P. Fraigniaud, "Algorithmique distribuée pour les réseaux", 12 hours;
- C. Delporte and H. Fauconnier, "Algorithmique distribuée avec mémoire partagée"; C. Delporte, 12 hours and H. Fauconnier, 12 hours.

Master Professional University of Paris Diderot:

- M. Habib, Search Engines, 50 hours;
- M. Habib, Parallelism and mobility which includes peer-to-peer overlay networks, 50 hours;
- C. Delporte, Distributed programming, 33 hours;
- H. Fauconnier, Internet Protocols and Distributed algorithms, 44 hours;

Master Bioinformatique University of Paris Diderot:

- L. Viennot, System, network and Internet, 15 hours.

Master: F. Mathieu, Peer-to-Peer Techniques, 30 hours, University of Paris 6;

D.U.T. : Y. Boufkhad, computer science and networks, 192 hours, University of Paris Diderot;

U.F.R.: F. de Montgolfier, foundation of computer science, algorithmics, and computer architecture, 192 hours, University of Paris Diderot;

Master: F. de Montgolfier, Peer-to-Peer theory and application, M2, University of Marne-la-Vallée;

Elementary school: L. Viennot, "Ateliers de fondements de l'informatique", 30 hours (CM1, corresponding to 4th grade).

#### 8.2.2. Supervision

PhD :Hung Tran-The, "Le Problème du Consensus dans les Systèmes avec Homonymes", University of Paris Diderot June 06 2013, supervised by Hugues Fauconnier and Carole Delporte [1],

PhD in progress : François Durand, "Manipulabilité des systèmes de vote et applications aux réseaux", since 2012, supervised by Fabien Mathieu and Ludovic Noirie

Jérémie Dusart, "Parcours de graphes de cocomparabilité", since 2011, supervised by Michel Habib  
Antoine Mamcarz, "Algorithmes de décomposition de graphes", since 2010, supervised by Michel Habib

The-Dang Huynh , "Extensions de PageRank et Applications aux Réseaux Sociaux", since 2012, supervised by Fabien Mathieu, Dohy Hong and Laurent Viennot,

Leonardo Linguaglossa, "Design of algorithms and protocols to support ICN functionalities in high speed routers", since 2013, supervised by Fabien Mathieu, Diego Perino and Laurent Viennot.

### 8.2.3. *Juries*

HdR reviews: C. Delporte-Gallet reviews Coelho's HdR thesis "Contributions à la performance du calcul scientifique et embarqué" (october 11th 2013)

L. Viennot has reviewed Nicolas Bonichon's HdR thesis "Quelques algorithmes entre le monde des graphes et les nuages de points" (April 3rd 2013) and Adrian Kosowski's HdR thesis "Time and space-efficient algorithms for mobile agents in an anonymous network" (October 26th 2013).

PhD review: L. Viennot has reviewed Przemyslaw Uznanski's PhD thesis "Large scale platform : instantiable models and algorithmic design of communication schemes" (October 11th 2013), Remigiusz Modrzejewski's PhD thesis "Distribution and storage in networks" (October 24th 2013) and Christian Glacet's PhD thesis "Algorithmes de routage, de la réduction des coûts de communication à la dynamique" (December 6th 2013).

## 8.3. Popularization

### 8.3.1. *scientific popularization*

**Participant:** Laurent Viennot.

Laurent Viennot is correspondent for the Inria Paris-Rocquencourt center concerning scientific popularization. In that context, he has participated to a document describing how scientific popularization actions could take place at Inria [26]

## HIPERCOM2 Team

# 9. Dissemination

## 9.1. Scientific Animation

**Pascale Minet** was member of the program committee of:

- AdHocNets 2013, 5th International ICST Conference on Ad Hoc Networks, October 2013.
- DCNET 2013, International Conference on Data Communication Networking, July 2013,
- ETFA 2013, 18th IEEE International Conference on Emerging Technologies & Factory Automation, September 2013.
- ICN 2013, the 12th International Conference on Networks, January 2013.
- IFIP Wireless Days 2013, November 2013.
- IUCC 2013, the 12th IEEE International Conference on Ubiquitous Computing and Communications, August 2013.
- IWCMC 2013, the 9th International Wireless Communications and Mobile Computing Conference, July 2013.
- PAEWN 2013, International workshop on Performance Analysis and Enhancement of Wireless Networks, November 2013.
- PECCS 2013, 3rd international conference on Pervasive and Embedded Computing and Communication Systems, February 2013.
- RAWSN 2013, first International Workshop on RFID and Adaptive Wireless Sensor Networks, in conjunction with NETYS 2013, Marrakech, Morocco, April 2013.
- RTNS 2013, 20th International Conference on Real-Time and Network Systems, September 2013.
- SERA 2013, Int. Conf. on Software Engineering Research & Applications, August 2013.
- SNPD 2013, 12th International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing, June 2013.

**Pascale Minet** was also reviewer for the following journals:

- IEEE Transactions on Vehicular Technology,
- The International Journal of Networked and Distributed Computing,
- International Journal of Communication Systems,
- International Journal of Distributed Sensor Networks,
- Computer Communications Journal,
- Ad Hoc Networks journal.

**Paul Muhlethaler** was reviewer for the following projects:

- the call 8 of the European commission: "Networks of the future".
- ANR projects,
- ASTRID projects.

**Paul Muhlethaler** was reviewer for the following journals:

- IEEE Transactions on Wireless Communications,
- IEEE Transactions on Vehicular Technology,
- IEEE Transactions on Information Theory.

**Paul Muhlethaler** was also member of:

- the Steering committee of MobileHealth 2013, 3rd ACM MobiHoc Workshop on Pervasive Wireless Healthcare In Conjunction With MobiHoc 2013 Conference, June 2013, Hilton Head Island, South Carolina, USA,
- the Technical committee of the second International Workshop on Performance Evaluation and Modeling in Wireless Networks, PEMWN 2013, November 2013, Hammamet, Tunisia.

**Cédric Adjih** was member of the program committee of:

- AINTEC 2013, ACM Asian Internet Engineering Conference, November 2013.
- PEMWN 2013, 2nd International Workshop on Performance Evaluation and Modeling in Wireless Networks, November 2013, Hammamet, Tunisia.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Licence : **Ichrak Amdouni** taught "Imperative programming" at Univeristy of Versailles Saint-Quentin (L1).

Master : **Pascale Minet** taught:

- Networks and quality of service in Master Systèmes Electroniques et Traitement de l'Information, at INSTN (Saclay).
- Mobile ad-hoc networks: medium access, routing and quality of service in Master Ingénierie informatique of the University of Marne-la-Vallée.
- Mobile ad hoc networks and wireless sensor networks: medium access, routing and energy efficiency in Master ScTIC (Systèmes complexes, Technologies de l'Information et du Contrôle) of the University of Paris 12.

### 9.2.2. Supervision

PhD : **Ichrak Amdouni**, "Wireless Self-adaptive Ad hoc and Sensor Networks: Energy Efficiency and Spatial Reuse", University Pierre et Marie Curie - Paris VI, February 2013, Pascale Minet, adviser.

### 9.2.3. Juries

HdR : Rami Langar, "Urban wireless networks: mobility, routing and resource management concerns ", University Pierre et Marie Curie, Sorbone universities, December 2013, Paul Muhlethaler, reviewer.

PhD :

- Mouhannad Alattar, "Security supervision of mobile ad hoc networks: a lightweight, robust and reliable intrusion detection system", University of Franche-Comté, July 2013, Pascale Minet, reviewer.
- David Fotue, "Agrégation et routage efficace de données dans les réseaux de capteurs sans fil", Telecom ParisTech, October 2013, Pascale Minet, president.
- Skander Azzaz, "Maintenance proactive des réseaux de capteurs sans fil", ENSI, Tunisia, November 2013, Pascale Minet, examiner.
- Abir Ben Ali, "Contrôle de congestion dans les applications multimédia dans l'Internet sans fil", ENSI, Tunisia, November 2013, Paul Muhlethaler, reviewer.
- Ahmed Soua, "Réseaux véhiculaires: dissémination, routage et collecte de données: modèles et algorithmes", Telecom SudParis & University Pierre et Marie Curie, Sorbone universities, November 2013, Paul Muhlethaler, examiner.



### 9.3. Popularization

- **Futur en Seine**, in Paris, June 2013. The HIPERCOM2 team was very active and presented demonstrations of Wireless Sensor Networks with a focus on the context of Smart Cities. The demonstration prepared by Cédric Adjih, Ichrak Amdouni, Hana Baccouch, Ridha Soua and Ala-Edin Weslati concerned the principles of wireless sensor networks, the energy-efficient routing protocol, the node coloring algorithm running in the OCARI network to maximize network lifetime; along with application of wireless sensor networks to Smart Cities. The open testbeds for wireless sensor networks, Senslab and Equipex-FIT were also presented: what do they offer and how to use them.
- Nadjib Achir, Cédric Adjih, Hana Baccouch, Ichrak Amdouni and Ridha Soua explained the principles of communication and routing in wireless sensor networks and organized several demonstrations for undergraduates and students who visited Inria in February 2013.

## MADYNES Project-Team

# 9. Dissemination

## 9.1. Scientific Animation

Abdelkaer Lahmadi served as a reviewer for the following journals: IEEE Communications Magazine, IEEE Transactions on Parallel and Distributed Systems, IEEE Transactions on Network and Service Management.

Abdelkader Lahmadi served as a Technical Program Committee member for the following conferences: Autonomous Infrastructure, Management and Security (AIMS'2013, PhD student workshop), The 1st International Workshop on Crowdsensing Methods, Techniques, and Applications (CROWDSENSING 2014).

Abdelkader Lahmadi participated to the Dagstuhl Seminar "Global Measurement Framework".

Isabelle Chrisment is the Co-Chair together with Ahmed Serhrouchni from Telecom ParisTech of the IFIP Task Force 6.5 on Secure Networking. This Task Force provides a framework for the organization of activities within the scope of secure networking. It facilitates international cooperation activities and exchanges in this area.

Isabelle Chrisment is a member of AFNIC<sup>6</sup> 'scientific board since January 2013.

Isabelle Chrisment served as a TPC member of : the 7th International IFIP Conference on Autonomous Infrastructure, Management and Security (IFIP AIMS'2013); the 14th joint TC6 and TC11 International IFIP Conference on Communications and Multimedia Security (IFIP CMS'2013); the IFIP/IEEE International Symposium on Integrated Network Management (IFIP/IEEE IM'13); the 4th International Conference on Emerging Ubiquitous Systems and Pervasive Networks (EUSPN-2013), Security and Privacy Track. the 8th national conference on Sécurité des Architectures Réseaux et des Systèmes d'Information (SARSSI 2013).

Olivier Festor is Chair of the IFIP Working-Group 6.6 on Network and systems management. This working group is actively involved the animation of most major conferences in this research area and organizes frequent meetings and workshops on the domain.

Olivier Festor is the Co-chair together with Lisandro Zambenedetti Grandvile from the Federal University of Rio Grande do Sul (UFRGS) of the Internet Research Task Force (IRTF) Network Management Research Group since march 2011. In 2013, we organized four workshops leading to a new work-plan for the design of new management protocols and services within the IRTF.

Olivier Festor served as a Technical Program Committee Member of the following 2013 events:

IFIP/IEEE Integrated Management Symposium (IM'2013), IFIP/IEEE in conjunction with ACM CNSM'2013. Asia-Pacific Network Operations and Management Symposium (APNOMS'2013 and IEEE GLOBECOM 2013.

Olivier Festor is member of the board of editors of the Springer Journal of Network and Systems Management. He is member of the editorial board of the IEEE Transactions on Network and Service Management.

In December 2012, Olivier Festor joined the University of Lorraine on a Full Professor position. There he became Director of the TELECOM Nancy Engineering School (350 students at Masters level, 50 faculty and staff).

Remi Badonnel served as a TPC member of the following conferences:

- the IFIP International Conference on Autonomous Infrastructure, Management and Security (IFIP AIMS'2013);
- the IEEE International Conference on Integrated Management (IEEE/IFIP IM'2013);
- the IEEE/IFIP International Workshop on Management of the Future Internet (IEEE/IFIP MANFI'2013).

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<sup>6</sup><http://www.afnic.fr>

Remi Badonnel served as a session chair and was part of the Best Paper Award Committee at the IEEE International Conference on Integrated Management (IEEE/IFIP IM'2013).

Remi Badonnel served as an expert for the "Futur et Ruptures" programm of the Mines-Telecom institute.

Thibault Cholez was invited to present a tutorial [38] on the Management of Content-Centric Networking at ResCom 2013, a CNRS summer school .

Thomas Silverston leads in 2013 the activity CityCrowdSource from EIT ICT Labs. He also co-organized the SDN Days (GdR CNRS RESCOM) in Loria (Nancy), November 26/27<sup>th</sup> 2013. Thomas is co-chair (General Chair) of the The 1st International Workshop on Crowdsensing Methods, Techniques, and Applications (CROWDSENSING) organized with IEEE Percom 2014. Thomas is a TPC member of the Named-Oriented Mobility Workshop organized with IEEE Infocom 2014. Thomas was a speaker at the CNRS GdR RESCOM summer school on Information-Centric Networks . Thomas was an invited speaker at the Internet for the Future Society Workshop in Tokyo, organized by the *Societe Franco-Japonaise des Techniques Industrielles* and sponsored by the « Ambassade de France au Japon »

Ye-Qiong Song served as a TPC Member of the following 2013 events: the 18th IEEE international conference on Emerging Technologies & Factory Automation (ETFA'2013) ; the 11th International Conference On Smart homes and health Telematics (ICOST 2013); IROS'13 Workshop on Robots and Sensors integration in future rescue INformation system (ROSIN'13); the International Workshop on Cooperative Robots and Sensor Networks (RoboSense 2013) ; the 12th International Workshop on Real-Time Networks (RTN 2013).

Ye-Qiong Song served as track co-chair of Ubimob2013.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

There is a high demand on networking courses in the various universities in which LORIA is par. This puts high pressure on MADYNES members which are all in charge of numerous courses in this domain. Especially the team professors and associate professors ensure more than the required amount of teaching obligation in their respective institutions: IUT, bachelor, master, TELECOM Nancy, ENSEM and École des Mines de Nancy engineering schools.

Laurent Andrey is the Head of Department of the Charlemagne IUT specialization on multimedia networking.

Olivier Festor is the Director of the TELECOM Nancy Engineering School. Isabelle Chrisment is co-directing the school and is in charge of the students recrutement process. Remi Badonnel is heading the Telecommunications and Networks specialization of the 2nd and 3rd years at the TELECOM Nancy engineering school, and is also in charge of the 2nd year design and development projects at the same school. They teach the networking related courses in this cursus.

Laurent Ciarletta is heading the specialization Safe Systems Architecture of the Computer Science and IT department of the Ecole des Mines de Nancy ("Grande Ecole", Engineering School, Master degree level). He is most notably in charge of Advanced Networking, Middleware, Component-based software development, Pervasive Computing, Networking and Systems courses at the Ecole des Mines de Nancy. Notably, within the ARTEM alliance (ICN - Business School, Mines Nancy, Ecole d'Art / School of Art), he is a member of the Research Comitee, more specifically with the "Smart Working Spaces" research theme, and he is co-responsible for the "Businesses: the digital challenge *CORP 3.0*, *Entreprises : le défi numérique* and the *Imagineries and the Workspaces*, 2 classes within the ARTEM alliance (over 90 hours).

Team members are teaching the following courses:

Abdelkader Lahmadi

- Ecole Ingénieur : Elements of Distributed Computing: algorithms and systems, 20, niveau M2 Ingénieur, ENSEM, France
- Ecole Ingénieur : Wireless Sensor Network Programming, 12, niveau M2 Ingénieur, ENSEM, France

- Ecole Ingénieur : Operating Systems and C language programming, 30, niveau M1 Ingénieur, ENSEM & Ecole des Mines de Nancy, France
- Ecole Ingénieur : Real time systems: concepts and programming, 30, niveau M1 Ingénieur, ENSEM, France
- Ecole Ingénieur : Relational Database, 20, niveau M1 Ingénieur, ENSEM, France
- Ecole Ingénieur : Algorithmic and Programming (Java), 50, niveau L1 Ingénieur, ENSEM, France
- Ecole Ingénieur : Computer Architecture ,50, niveau L1 Ingénieur, ENSEM, France

#### Bernardetta Addis

- Ecole d'ingénieur : Optimisation Discrete et Deterministe, 21, 2A, Université de Lorraine-ENSMN, France
- Ecole d'ingénieur : Recherche Operationelle, 28, 2A, Université de Lorraine-ENSMN, France

#### Isabelle Chrisment

- Ecole Ingénieur : Langage C et Shell, 42hTD, niveau L3, Telecom Nancy
- Ecole Ingénieur : Réseaux et Systèmes, 60hTD, niveau M1, Telecom Nancy
- Ecole Ingénieur : Réseaux et Systèmes Avancés, 30hTD, niveau M1, Telecom Nancy
- Ecole Ingénieur : Routage Internet, 50hTD, niveau M2, Telecom Nancy
- Ecole Ingénieur : Sécurité des Réseaux et des Applications, 18hTD, niveau M2, Telecom Nancy

#### Laurent Andrey

- Licence : Introduction to networks, 56, niveau L1 (DUT), IUT nancy-Charlemagne, France
- Licence : Introduction to network services, 38, niveau L2 (DUT), IUT nancy-Charlemagne, France

#### Laurent Ciarletta

- Ecole Ingénieur : Networking and Information System, 8, niveau L3 Ingénieur, Mines Nancy, France
- Ecole Ingénieur : Bootcamp (programming bootcamp), 9, niveau M1 Ingénieur, Mines Nancy, France
- Ecole Ingénieur : Operating Systems, 10, niveau M1 Ingénieur, Mines Nancy, France
- Ecole Ingénieur : Networking, 27, niveau M1 Ingénieur, Mines Nancy, France
- Ecole Ingénieur : Advanced Networking and Ambient Systems, 18, niveau M1 Ingénieur, Mines Nancy, France
- Ecole Ingénieur : Embedded Systems, 18, niveau M1 Ingénieur, Mines Nancy, France
- Ecole Ingénieur : Advanced Software Engineering, 18, niveau M1 Ingénieur, Mines Nancy, France
- Ecole Ingénieur : Android development, 12, niveau M1 and M2 Ingénieur, Collegium Ingenieur and Mines Nancy, France
- Ecole Ingénieur : Ateliers ARTEM "Smart and new workspaces", 90, niveau M1 and M2 Ingénieur, Collegium Ingenieur and Mines Nancy, Nancy National School of Art, ICN Business School, France

#### Emmanuel Nataf

- DUT : Introduction to computer system and network, 60, niveau L1, IUT nancy-Charlemagne, France

- DUT : Network, 30, niveau L1 , IUT Nancy-Charlemagne, France
- DUT : System, 30, niveau L2, IUT Nancy-Charlemagne, France
- Licence : Network monitoring, 30, niveau L3, IUT Nancy-Charlemagne, France
- Master : Network monitoring, 30, niveau M2, Université de Lorraine, France

#### Olivier Festor

- Ecole Ingénieur : P2P Algorithms, Protocols and Applications, 12, niveau M2 Ingénieur, Telecom Nancy & ENSEM, France
- Ecole Ingénieur : Voix sur IP, Protocols and Applications, 9, niveau M2 Ingénieur, Telecom Nancy, France

#### Rémi Badonnel

- Ecole Ingénieur : Networks and Services Management, 24, niveau M2 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : Cloud Computing, 22, niveau M2 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : Industrial Project, 20, niveau M2 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : Networks and Systems, 28, niveau M1 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : Advanced Courses on Networks and Systems, 28, niveau M1 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : Algorithmics, Data Structures and Algebra, 30, niveau L3 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : Design and Development Project, 16, niveau M1 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : Initiation to Research Project, 18, niveau M1 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : Object-Oriented Programming, 32, niveau L3 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : XML Design and Development, 18, niveau L3 Ingénieur, TELECOM Nancy, France

#### Thibault Cholez

- Ecole Ingénieur : Principles and architecture of computers (ASM), 18h, niveau L3 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : C and Shell programming, 22h, niveau L3 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : Reliable C++ programming, 10h, niveau M2 Ingénieur, TELECOM Nancy, France

#### Thomas Silverston

- Master : Réseaux Avancés, 57, niveau M2, Université de Lorraine, France
- Master : Sécurité des réseaux, 45, niveau M2, Université de Lorraine, France
- Master : Architecture des Réseaux, 22, niveau M1, Université de Lorraine
- Master : VoIP, 24, niveau M1, Université de Lorraine
- Master : Introduction aux Réseaux, 26, niveau M2 Math, université de Lorraine, France
- Master : Convergence IP et Mobilité, 24, M2, Université de Lorraine, France
- Ecole d'ingénieur : Voix sur IP, 28, 3A, Telecom Nancy, France
- Master : Convergence et Multimédia, 15, Université de la Réunion

Ye-Qiong Song

- Master : Embedded and Sensor Networks, 8, niveau M2, Université de Lorraine, France
- Ecole Ingénieur : Networking, 40, niveau M2, ENSEM - Université de Lorraine, France
- Ecole Ingénieur : Wireless Sensor Network protocols, 8, niveau M2 Inge´nieur, ENSEM, France
- Ecole Ingénieur : Database, 6, niveau M1, ENSEM - Université de Lorraine, France
- Ecole Ingénieur : Algorithmic and programming (Java), 90, niveau L3, ENSEM - Université de Lorraine, France
- Ecole Ingénieur : Computer Architecture , 30, niveau L1 Ingénieur, ENSEM, France

### 9.2.2. Supervision

PhD : Oussema Dabebbi, Dynamic risk management in Voice over IP services, defended the 3rd June 2013, supervised by Remi Badonnel and Olivier Festor

PhD : Juan Pablo Timpanaro, Monitoring and Security in P2P file sharing networks, defended the 6th November 2013, supervised by Isabelle Chrisment

PhD in progress : Martin Barrere, Vulnerability management in autonomic networks and services, since Mar 2011, supervised by Remi Badonnel and Olivier Festor

PhD in progress : César Bernardini, Réseau orienté-contenu basé sur les communautés d'utilisateurs, since Nov 2011, supervised by Olivier Festor et Thomas Silverston

PhD in progress : François Despaux, Delay evaluation in wireless sensor networks for providing QoS, since Oct 2011, supervised by Ye-Qiong Song and Abdelkader Lahmadi

PhD in progress : Patrick Olivier Kamgueu, Routing management in WSNs, since Jun 2012, supervised by Emmanuel Nataf and Olivier Festor in France, Thomas Djotio in Cameroun

PhD in progress : Kevin Roussel : Dynamic management of QoS and energy in heterogenous sensor and actuator networks for e-health applications, since Dec 2012, supervised by Ye-Qiong Song

PhD in progress : Anthéa Mayzaud, Monitoring and Security in the Internet of Things, since May 2013, supervised by Isabelle Chrisment and Remi Badonnel

PhD in progress: Evangelia Tsiontsiou, Multi-constrained QoS routing for wireless sensor networks with applications to smart space for ambient assisted living, since Oct 2013, supervised by Ye-Qiong Song and Bernardetta Addis

PhD in progress : Elian Aubry, Security and Management of Content-Centric Networks, since Oct 2013, supervised by Isabelle Chrisment and Thomas Silverston

PhD in progress : Wazen Shbair, An open and flexible architecture for monitoring the uses of Internet, since Dec. 2013, supervised by Isabelle Chrisment and Thibault Cholez

PhD in progress : Dorin Maxim, Probabilistic Analysis of Real-Time Systems, since Dec 2013, supervised by Françoise Simonot-Lion and Liliana Cucu-Grosjean

PhD in progress : Mohamed Said Seddiki, Allocation des ressource dans la virtualisation des réseaux, since Mar 2013, supervised by Ye-Qiong Song, and by Mounir Frikha in Tunisia

### 9.2.3. Juries

Team members participated to the following Ph.D. defense committees :

- Yosra Ben Saied, Ph.D in Computer Science from TELECOM SudParis and Université Pierre et Marie Curie. Title: *Sécurité Collaborative pour l'Internet des Objets*, June 2013. (Isabelle Chrisment)
- Chrystel Gaber, Ph.D. in computer Science from Université de Caen Basse-Normandie. Title: *Sécurisation d'un système de transactions sur terminaux mobiles*. October 2013. (Isabelle Chrisment)

- Leila Benacer, Ph.D in Computer Science from University Paris Est Créteil. Title: *Contributions à l'autodiagnostic de pannes dans les réseaux de communication à large échelle*. December 2013. (Olivier Festor)
- Véronique Legrand, Ph.D in Computer Science from INSA Lyon. Title: *Confiance et risque pour engager un échange en milieu hostile*. March 2013. (Olivier Festor)
- Florian Many, Combinaison des aspects temps réel et Sureté de fonctionnement pour la conception des plateformes avioniques, February 2013. (Françoise Simonot-Lion)
- Zhe Li, Ph.D. in Computer Science from TELECOM Bretagne. Title *Optimization d'un réseau de distribution de contenus géré par un opérateur*, January 2013. (Olivier Festor)
- Sylvain Cherrier, Ph.D in Computer Science from University Paris Est. Title: *Architecture et protocoles applicatifs pour la chorégraphie de services dans l'Internet des objets*. December 2013. (Olivier Festor)
- Ludovic Jacquin, Ph.D in Computer Science from University of Grenoble. Title: *Compromis Performance Sécurité pour des passerelles très haut débit pour Internet*, December 2013. (Olivier Festor)
- Jamila Ben Slimane, Ph.D in Computer Science from both University of Lorraine and SupCom Tunis. Title: *Allocation conjointe des canaux de fréquence et des créneaux e temps et routage avec QoS dans les réseaux de capteurs dans fil denses et étendus*, March 2013. (Ye-Qiong Song)
- Xiaoting LI, Ph.D in Computer Science from University of Toulouse - INPT. Title: *Worst-case delay analysis of real-time switched Ethernet networks with flow local synchronization*, September 2013. (Ye-Qiong Song)
- Cédric Mauclair, Ph.D in Computer Science from University of Toulouse - ISAE. Title: *Analyse statistique de réseaux embarqués temps réel*, September 2013. (Ye-Qiong Song)
- Juan Lu, Ph.D in Computer Science from University of Toulouse. Title: *Modeling, simulation and implementation of an 802.15.4 based adaptive communication protocol in wireless sensor network: application to monitoring the elderly at home*, February 2013. (Ye-Qiong Song)
- Mohamed-Anis Gallas, Ph.D in Architecture Science from University of Lorraine. Title: *De l'intégration à la solution architecturale: proposition d'une méthode d'assistance à la prise en compte de la lumière naturelle durant les phases amont de conception*, September 2013. (Ye-Qiong Song)
- Soumeiya-Leila Hernane, Ph.D in Computer Science from University of Lorraine. Title: *Modèles et algorithmes de partage de données cohérents pour le calcul parallèle distribué à haut débit*, June 2013. (Ye-Qiong Song)

Team members participated to the following Habilitation Degree defense committees :

- Joaquin Garcia-Alfaro, Habilitation Degree in Computer Science from Université Pierre et Marie Curie Paris 6. Title: *Contributions to the Security of EPC/RFID Wireless Technologies*, 2013. (Olivier Festor)
- Martin Quinson, Habilitation Degree in Computer Science from Université de Lorraine. Title: *Méthodologies d'expérimentation pour l'informatique distribuée à large échelle*, March 2013. (Isabelle Chrisment)

## MAESTRO Project-Team

## 8. Dissemination

### 8.1. Scientific Animation

#### 8.1.1. Editorial activities

MAESTRO members are

Editor-in-Chief of

- *Performance Evaluation* (PEVA) (**P. Nain** since 1 January 2008);

Associate Editors of (in alphabetical order)

- *Dynamic Games and Applications* (DGAA) (**E. Altman** since 2011);
- *IEEE Transaction on Control of Networks* (TCNS) (**E. Altman** since 2013);
- *IEEE/ACM Transaction on Networking* (ToN) (**E. Altman** since 2013);
- *Journal of Economic Dynamics and Control* (JEDC) (**E. Altman** since 2001);
- *Performance Evaluation* (PEVA) (**K. Avrachenkov** since 2008);

Guest editors of Special Issues of

- *Dynamic Games and Applications* (DGAA) on “Dynamic Games for Networks” [69] (**E. Altman**);
- *Performance Evaluation* (PEVA) on “Selected Papers from the 9th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2011)” [70] (**E. Altman**).

#### 8.1.2. Conferences, meetings and tutorial organization

MAESTRO members were

in the Steering Committee of

- 7th Intl. Conference on Performance Evaluation Methodologies and Tools (VALUE-TOOLS 2013, Turin, Italy) (**E. Altman**);
- 31st Intl. Symposium on Computer Performance, Modeling, Measurements and Evaluation (IFIP WG 7.3 Performance 2013, Vienna, Austria) (**P. Nain**);
- 11th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2013, Tsukuba, Japan) (**E. Altman** as chair).

General Co-chair of

- IEEE Intl. Workshop on Self-Organizing Networks (SONETs 2014, Istanbul, Turkey) (**M. Haddad**);
- 4th Intl. Workshop on Indoor and Outdoor Small Cells (IOSC 2013, Tsukuba, Japan) (**E. Altman, M. Haddad**).

Publicity Co-chair of

- ACM Intl. Conference on Measurement and Modeling of Computer Systems (ACM SIGMETRICS 2014, Austin, Texas, USA) (**S. Alouf**);
- 33rd IEEE Intl. Conference on Computer Communications (IEEE INFOCOM 2014, Toronto, Canada) (**G. Neglia**).

Organizer of

- a stream of sessions “Random Graphs and Complex Networks” at the 17th INFORMS Applied Probability Society Conference 2013 (Costa Rica) (**K. Avrachenkov**).

Workshops chair of

- 11th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2013, Tsukuba, Japan) (**M. Haddad**).



### 8.1.3. Participation in technical program committees (TPC)

MAESTRO members were in the TPC of (in alphabetical order)

1. 8th ACM MobiCom Workshop on Challenged Networks (CHANTS 2013, Miami, Florida, USA) (**G. Neglia**);
2. ACM Intl. Conference on Measurement and Modeling of Computer Systems (ACM SIGMETRICS 2013, Pittsburgh, Pennsylvania, USA) (**A. Jean-Marie**);
3. 9th Advanced Intl. Conference on Telecommunications (AICT 2013, Rome, Italy) (**K. Avrachenkov**);
4. 33rd IEEE Intl. Conference on Computer Communications (IEEE INFOCOM 2014, Toronto, Canada) (**G. Neglia**);
5. 4th Intl. Conference on Access Networks (ACCESS 2013, Nice, France) (**K. Avrachenkov**);
6. 20th Intl. Conference on Analytical and Stochastic Modelling Techniques and Applications (ASMTA 2013, Ghent, Belgium) (**K. Avrachenkov**);
7. 7th Intl. Conference on Game Theory and Management (GTM 2013, St. Petersburg, Russia) (**E. Altman**);
8. 13th Intl. Conference on Next Generation Wired/Wireless Networking (NEW2AN 2013, St. Petersburg, Russia) (**K. Avrachenkov**);
9. 7th Intl. Conference on Performance Evaluation Methodologies and Tools (VALUETOOLS 2013, Turin, Italy) (**S. Alouf, G. Neglia**);
10. 28th Intl. Symposium on Computer and Information Sciences (ISCIS 2013, Paris, France) (**A. Jean-Marie**);
11. 11th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2013, Tsukuba, Japan) (**D. Ciullo**);
12. 25th Intl. Teletraffic Conference (ITC 2013, Shanghai, China) (**S. Alouf, G. Neglia**);
13. 1st Intl. Workshop on Modeling, Measurements and Optimization of Video Performance over Wireless Networks (WiVid 2013, Tsukuba, Japan) (**O. Habachi**);
14. 6th Intl. Workshop on Multiple Access Communications (MACOM 2013, Vilnius, Lithuania) (**K. Avrachenkov**);
15. Intl. Workshop “Networking Games and Management” (Petrozavodsk, Russia) (**E. Altman, K. Avrachenkov**);
16. 9th Intl. Workshop on Resource Allocation, Cooperation and Competition in Wireless Networks (RAWNET/WNC3 2013, Tsukuba, Japan) (**O. Habachi**);
17. Joint Workshop on Pricing and Incentives in Networks and Systems (W-PIN+NetEcon 2013, Pittsburgh, Pennsylvania, USA) (**E. Altman**);
18. 15èmes Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (Algo-Tel 2013, Pornic, France) (**G. Neglia**);
19. 10th Workshop on Algorithms and Models for the Web Graph (WAW 2013, Cambridge, Massachusetts, USA) (**K. Avrachenkov**);
20. 15th Workshop on Mathematical Performance Modeling and Analysis (MAMA 2013, London, UK) (**A. Jean-Marie, P. Nain**);

#### 8.1.4. Leadership within the scientific community

- E. Altman is a fellow member of IEEE (Class of 2010).
- E. Altman, A. Jean-Marie and P. Nain are (elected) members of IFIP WG7.3 on “Computer System Modeling”.
- P. Nain is the vice-Chair of the IFIP WG7.3 working group on “Computer System Modeling” (since June 30, 2007).

#### 8.1.5. Research administration

S. Alouf

- was member of the recruitment committee for a *Maître de Conférences* position at Polytech’Tours.

E. Altman

- is co-responsible of one of the five themes of the SFR (Structure Fédérative de Recherche) AGORANTIC (in which Inria is a founding member) entitled “Digital Culture and Virtual Societies.”
- is Scientific coordinator of the European project CONGAS.

K. Avrachenkov

- together with Arnaud Legout (DIANA team) and Fabien Gandon (WIMMICS team) is co-responsible of the multi-disciplinary research theme (Action Transversale) “Semantic and Complex Networks” at Inria Sophia Antipolis - Méditerranée.

A. Jean-Marie

- is the scientific coordinator of Inria activities in Montpellier (since 2008); as part of this duty, he represents Inria in the Scientific Board of the Univ. of Montpellier 2, at the Scientific Council of the Doctoral School “Sciences and Agrosiences” of the Univ. of Avignon, at the Regional Conference of Research Organisms (CODOR), at the Regional Consulting Committee for Research and Technological Development (ARAGO Committee);
- is member of the managing sub-committee of the Project-Team Committee of the Inria Sophia Antipolis – Méditerranée research center (since July 2010);
- is a member of the Steering Committee of the GDR RO, a national research initiative on Operations Research sponsored by the CNRS;
- is president of the Technical and Industrial Orientation Council for Information Technologies (COSTI TIC) of the Transferts LR association (since 2009);
- has presided the 2013 recruitment committee for junior Inria researchers (CR2) for the Inria Sophia-Antipolis – Méditerranée research center.

P. Nain

- is Chairman of Inria’s Evaluation Committee since 1 September 2012 (<http://www.inria.fr/en/institute/organisation/committees/evaluation-committee>); as part of this duty he has presided the 2013 recruitment committee for senior Inria researchers (DR2) and was member of the 2013 recruitment committee for junior Inria researchers (CR2) for the Inria Nancy Grand Est center.
- is Head of project-team MAESTRO.

MAESTRO members are in the following committees of Inria Sophia Antipolis - Méditerranée

- CC (Comité de Centre): General Information Commission (**N. Choungmo Fofack** as PhD Student Representative, until May 2013); **G. Neglia** since September 2013);
- ComRes: Commission Restauration (**N. Choungmo Fofack** as PhD Student Representative, until May 2013);
- CSD: Doctoral Committee (**S. Alouf**, since February 2006);
- NICE: Invited Researchers Committee (**K. Avrachenkov**, since 2010);

and in charge of the following tasks for the research center:

- Supervision and validation of the project-teams' yearly activity reports (**K. Avrachenkov**, since 2010);
- Accounting for the monthly Project-Team Committee meetings (**S. Alouf**, since February 2012);
- Organizing MAESTRO internal meetings (**N. Choungmo Fofack**, since November 2011).

## 8.2. Teaching - Supervision - Juries

### 8.2.1. Teaching

Licence:

S. Alouf, "Probability and Statistics", 45H, 1st year Water Engineering degree (L3), Univ. of Nice Sophia Antipolis (UNS), France.

E. Altman, "Culture and Internet", 32H, 3rd year of Communication and Culture studies (L3), Univ. of Avignon (UAPV), France.

N. Choungmo Fofack, "Stochastic processes for Signal Processing", 64H, 1st year Electronic Engineering degree (L3), Univ. of Nice Sophia Antipolis (UNS), France.

M. El Chamie, "Databases", 20H, Computer Science Methods applied to the Enterprise Management Program (L3), Univ. of Nice Sophia Antipolis (UNS), France.

M. El Chamie, "Networks", 15H, Computer Science Program (L3), Univ. of Nice Sophia Antipolis (UNS), France.

Master:

S. Alouf, "Performance Evaluation of Networks", 31.5H, M2 IFI Ubinet, Univ. of Nice Sophia Antipolis (UNS), France.

E. Altman, "Analysis of social Networks", 8H, Venezuelan Informatics School (EVI), Master in Computer Engineering, Merida, 30 Sept – 4 October, Merida, Venezuela.

M. El Chamie, "Internet and Networks", M1 International in Computer Science, Univ. of Nice Sophia Antipolis (UNS), France.

G. Neglia, "Performance Evaluation of Networks", 31.5H, M2 IFI Ubinet, Univ. of Nice Sophia Antipolis (UNS), France.

Doctorat:

A. Jean-Marie, "Advanced Markov Modeling", 18H, Univ. of Montpellier 2, France.

### 8.2.2. Supervision

PhD:

Richard Combes, "Self-organizing functionalities in radio networks," Univ. Pierre and Marie Curie, 15 February 2013, advisors: Eitan Altman and Zwi Altman (Orange Labs) and Sylvain Sorin (Univ. Pierre and Marie Curie).

Eugenio Della Vecchia, "Contribution to the solution of problems in stochastic control and games", National Univ. of Rosario, Argentina, 12 March 2013, advisors: Silvia Di Marco (National Univ. of Rosario, Argentina) and Alain Jean-Marie.

Manjesh Kumar Hanawal, "Resource allocation and learning algorithms in small cells wireless networks," Univ. of Avignon (UAPV), 6 November 2013, advisors: Eitan Altman and Rachid El-Azouzi (Univ. of Avignon).

Cengiz Hasan, "Optimization of resource allocation for small cells networks," INSA Lyon, 29 August 2013, advisors: Eitan Altman and Jean-Marie Gorce (Inria project-team SOCRATE).

Yuhui Wang, “On the use of network coding and multicast for enhancing performance of wired networks”, Telecom SudParis, 17 May 2013, advisors: Eitan Altman, Tijani Chahed and Eric Gourdin (Telecom SudParis).

PhD in progress:

Alberto Benegiamo, “Mathematical tools for smart grids,” 1 November 2013, advisors: Patrick Loiseau (Eurecom) and Giovanni Neglia.

Iliaria Brunetti, “Cooperative and competitive content dissemination in social networks,” 1 October 2012, advisor: Eitan Altman.

Nicaise Choungmo Fofack, “Performance Evaluation of TTL-based resource networks,” 1 October 2010, advisors: Sara Alouf and Philippe Nain.

Mahmoud El Chamie, “Belief propagation in complex networks,” 1 October 2011, advisors: Konstantin Avrachenkov and Giovanni Neglia.

Julien Gaillard, “Creation, simulation and multidiscipline evaluation of dynamic mobility models in complex systems,” 1 October 2011, advisors: Eitan Altman, Marc El Bèze (Univ. of Avignon) and Emmanuel Ethis (Univ. of Avignon).

Jithin Kazhuthuvelil Sreedharan, “Diffusion processes in complex networks,” 23 July 2013, advisor: Konstantin Avrachenkov.

Yonathan Portilla, “Analysis of social networks,” 1 January 2012, advisor: Eitan Altman.

Alexandre Reiffers, “Modelling competition and cooperation in telecommunication networks,” 15 October 2012, advisor: Eitan Altman.

Marina Sokol, “Clustering and learning techniques for traffic/user classification,” 1 October 2009, advisors: Paulo Gonçalves (Inria project-team DANTE) and Philippe Nain.

Abdoulaye Tall, “Self organization in wireless networks,” 1 December 2012, advisors: Eitan Altman and Zwi Altman (Orange Labs).

### 8.2.3. *Juries*

MAESTRO members participated in the Habilitation (HDR) thesis committees of (in alphabetical order):

- Marc Chaumont: 23 July 2013, Univ. of Montpellier 2 (**A. Jean-Marie** as jury member);
- Yezekael Hayel: 4 December 2013, Univ. of Avignon (UAPV) (**E. Altman** as advisor and **A. Jean-Marie** as jury president);
- Raphaël Soubeyran: 13 November 2013, Univ. Montpellier 1 (**A. Jean-Marie** as jury member);

and in the PhD thesis committees of (in alphabetical order):

- Richard Combes: 15 February 2013, Pierre and Marie Curie Univ. (**E. Altman** as advisor);
- Manjesh Kumar Hanawal: 6 November 2013, Univ. of Avignon (**E. Altman** as advisor);
- Mathieu Leconte: 18 December 2013, Telecom ParisTech (**A. Jean-Marie** as jury president);
- Cédric Mauclair: 13 June 2013, Univ. Toulouse (**A. Jean-Marie** as jury member);
- Alexandre Salch: 29 November 2013, INPG (**A. Jean-Marie** as reviewer and **P. Nain** as jury member);
- Romain Tajan: 5 December 2013, Univ. Cergy-Pontoise (**Eitan Altman** as jury member);
- Yuhui Wang: 17 May 2013, Telecom SudParis (**E. Altman** as advisor).

### 8.3. Popularization

Activities are presented in chronological order:

- The article titled “Internet” (interview of S. Alouf by E. Kuntzelmann, as reported in the 2012 activity report) has appeared in *Savoirs Jeunes* (14 January 2013). It is available here: <http://www.savoirs.essonne.fr/sections/ressources/questions-a/resource/internet/>.
- E. Altman and A. Reiffers participated in a round-table on the network economy in France, organized at the National Assembly in Paris (28 February 2013).
- A short publication [80] by M. Cosnard and E. Altman has appeared in *01Business* on the network neutrality debate in France (11 July 2013). It is intended for a large audience and presents advantages in legislating on this topic.
- E. Altman presented a talk at the 9th Mediterranean rendez-vous entitled: “The new networks - Cradle of globalized culture in the Mediterranean Area” at Marseille, with the participation of leading political and economical figures from Mediterranean and Middle Eastern countries (9 November 2013).
- S. Alouf delivered a conference titled “Internet ou Web ?” at Inria, Sophia Antipolis, for a group of high school students (22 November 2013).

S. Alouf is a member of MASTIC, a commission in charge of popularization and regional and internal scientific animation (since November 2011).

### 8.4. Participation in scientific events

#### 8.4.1. Keynotes, tutorials and invited talks

MAESTRO members gave the following keynote lectures (in alphabetical order):

- *Admission control to an M/M/1 queue with partial information*, at the 20th Intl. Conference on Analytical & Stochastic Modelling Techniques & Applications (ASMTA), Ghent, Belgium, 8 July 2013 (**E. Altman**);
- *Dynamic game models in complex systems*, at the 17th Intl. Conference On Principles Of Distributed Systems (OPODIS), Nice, France, 17 December 2013 (**E. Altman**);

the following tutorials (in alphabetical order):

- *Tutorial on Stochastic Games*, at Game Theory Workshop of Politecnico di Milano, Italy, 23–24 May 2013 (**K. Avrachenkov**).

and the following invited talks (in alphabetical order):

- *Analysis of Social Networks*, at the Seminar on interactions of computer science and mathematics in the LIP6 laboratory of the Pierre and Marie Curie Univ., France, 18 October 2013 (**E. Altman**);
- *Competition over popularity in social networks*, at KAIST, Seoul, 21 May 2013 (**E. Altman**);
- *Cooperative Game Theory for Markovian quasi-static multiple access channels*, at the Workshop “Networking Games and Management”, Petrozavodsk, Russia, 24 June 2013 (**K. Avrachenkov**);
- *Game theoretic models for competition over popularity in social networks*, University of California at Berkeley, USA, 26 July 2013 (**E. Altman**);
- *Graph-based semi-supervised learning methods: Comparison and tuning*, at the Yandex Workshop on Random Graphs and their Applications, Moscow, Russia, 25 October 2013 (**K. Avrachenkov**);
- *MAESTRO’s activities on smart grids*, at the JRC-TUM Partnership Event “Emerging Smart Electricity Systems”, 20–21 March 2013, Munich, Germany (**G. Neglia**);
- *Modeling Energy Demand Aggregators for Residential Consumers*, at the Centre de Mathématiques Appliquées de l’Ecole des Mines, Sophia Antipolis, France, 2 April 2013 (**G. Neglia**);

- *Modern DNS cache network*, at Boston Univ., Boston, Massachusetts, USA, 23 September 2013 (**N. Choungmo Fofack**);
- *Online Myopic Network Covering*, at the Mathematics Department of the University of Liverpool, UK, 8 February 2013 (**K. Avrachenkov**);
- *Pay Few, Influence Most - Online Myopic Network Coverage*, at the Technical Univ. of Darmstadt, Germany, 6 September 2013 (**G. Neglia**);
- *Singular Perturbations in Optimization*, at GeoLMI 2013 Conference, Luminy, France, 12 November 2013 (**K. Avrachenkov**);
- *Weight Selection in Consensus Protocols*, at Univ. of Illinois at Urbana-Champaign (UIUC), Champaign, Illinois, USA, 24 October 2013 (**M. El Chamie**).

#### 8.4.2. Conferences and workshops

MAESTRO members gave presentations at the following scientific events (in alphabetical order):

- Conf. on Empirical Methods in Natural Language Processing (EMNLP), 18–21 October 2013, Seattle, Washington, USA (**J. Gaillard**);
- Dagstuhl Scheduling Seminar, 11 March 2013, Dagstuhl Castle, Germany (**K. Avrachenkov**);
- 52nd IEEE Conf. on Decision and Control (CDC), 10–13 December 2013, Florence, Italy (**I. Brunetti, G. Neglia**);
- 32nd IEEE Intl. Conf. on Computer Communications (INFOCOM), 14–19 April 2013, Turin, Italy (**E. Altman**);
- IEEE Wireless Communications and Networking Conf. (WCNC), 7–10 April 2013 Shanghai, China (**O. Habachi**);
- 12th IFIP Intl. Conf. on Networking (Networking), 22–24 May 2013, Brooklyn, New York, USA (**G. Neglia**);
- 20th Intl. Conf. on Analytical and Stochastic Modelling Techniques and Applications (ASMTA), 8–10 July 2013, Ghent, Belgium (**E. Altman**);
- 9th Intl. Conf. on Data Mining (DMIN), 22–25 July 2013, Las Vegas, Nevada, USA (**J. Gaillard**);
- 7th Intl. Conf. on Performance Evaluation Methodologies and Tools (VALUETOOLS), 10–12 December 2013, Turin, Italy (**N. Choungmo Fofack**);
- 11th Intl. Symp. on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt), 13–17 May 2013, Tsukuba, Japan (**E. Altman, M. Haddad, M. K. Hanawal**);
- 25th Intl. Teletraffic Conference (ITC), 10–12 September 2013, Shanghai, China (**M. Haddad**);
- 15èmes Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (Algo-Tel), 28–31 May 2013, Pornic, France (**M. El Chamie, A. Reiffers**);
- 10th Workshop on Algorithms and Models for the Web Graph (WAW), 14–15 December 2013, Cambridge, Massachusetts, USA (**K. Avrachenkov**);
- Workshop of the ANR CLEANER, 31 January–1 February 2013, Annecy, France (**A. Jean-Marie**);
- 9th Workshop of the Intl. Society of Dynamic Games (ISDG), 5–6 July 2013, Barcelona, Spain (**I. Brunetti**).

#### 8.4.3. Technical program committee meetings

MAESTRO members have participated in the following TPC meetings:

- 33rd IEEE Intl. Conference on Computer Communications (IEEE INFOCOM 2014), 16 November 2013, Toronto, Canada (**G. Neglia**).

#### 8.4.4. Schools and students workshops

MAESTRO members have attended the following summer schools:

- Summer school ResCom on “Content-oriented networks, Internet evolution or revolution?” (30H), 13–17 May 2013, Porquerolles, France (**I. Brunetti, N. Choungmo Fofack**).

## RAP Project-Team

# 7. Dissemination

## 7.1. Leadership within scientific community

*Christine Fricker* is member of the jury of agrégation.

*Philippe Robert* is Associate Editor of the Book Series “Mathématiques et Applications” edited by Springer Verlag and Associate Editor of the journal “Queueing Systems, Theory and Applications”. He is member of the scientific council of EURANDOM. He is also associate Professor at the École Polytechnique in the department of applied mathematics where he is in charge of lectures on mathematical modeling of networks.

*James Roberts* is a Fellow (membre émérite) of the SEE. He is an associate editor of IEEE Transactions on Networking.

## 7.2. Teaching

*Nicolas Broutin* has taught at the Master Parisien de Recherche en Informatique (MPRI), in the course 2.15 on Analysis of Algorithms. He also gave a series of tutorials on the continuum random tree at the Adama summer school in Mahdia, Tunisia.

*Christine Fricker* is member of the jury of agrégation.

*Philippe Robert* gives Master2 lectures in the laboratory of the Probability of the University of Paris VI. He is also giving lectures in the “Programme d’approfondissement de Mathématiques Appliquées et d’Informatique” on Networks and Algorithms at the École Polytechnique.

## 7.3. Conference and workshop committees, invited conferences

*Nicolas Broutin* is member of the steering committee of the international meeting on analysis of algorithms (AofA).

*Nicolas Broutin* has given invited lectures at annual meeting of the ANR presage, the annual meeting of the workgroup ALEA of the GDR-Im, and at the Oberwolfach workshop on extremes of branching random walk and branching Brownian motion. He has presented his results in seminars to the complex networks team at LIP6, in Paris X Nanterre, Nancy, ETH Zürich, Bell Labs France, and Frankfurt university. He has visited the computer science department of UL in Brussels, the mathematics institute of the Universität Zürich and of the mathematics institute of the Universität Frankfurt.

*Nicolas Broutin* has defended and obtained the HDR in July.

*Philippe Robert* has been a member of the technical programme committee of the conferences ACM Sigmetrics(2013) ICCCN (2013). He gave a talk at the PDMP workshop in Rennes in May. He gave an invited conference at the workshop “Modern probabilistic techniques for stochastic systems and networks” in Cambridge in August 2013 and in Eindhoven at the occasion of the 15th anniversary on December 11.

*James Roberts* was a member of the technical programme committee of the following conferences: NOMEN, CoNext, ITC. He gave keynote talks at Infocom (March), SaCoNeT (June) and ValueTools (December), invited talks at Rescom (February), Bell Labs France (October) and AINTEC (November), and a tutorial at ITC 25 (September).

## SOCRATE Project-Team

## 9. Dissemination

### 9.1. Scientific Animation

- Jean-Marie Gorce is an associate editor of Telecommunications Systems (Springer) and Journal of Wireless communications and Networking (Springer). He was a member of the Program Committees of the conferences : IEEE PIMRC 2013, ICUWB 2013, ICT 2013, VTC 2013 (Las Vegas, USA) IEEE 24th Int. Symposium on Personal, Indoor and Mobile radio Communications (PIMRC2013) 8-11 September 2013, London, UK. IEEE 78th Vehicular Technology Conference (VTC2013-Fall) 2-5 September 2013, Las Vegas, USA. IEEE Int Conference on Ultra-Wideband (ICUWB2013) 15-18 September 2013, Sidney, Australia. 20th International Conference on Telecommunications (ICT 2013) 6-8 Mai 2013, Casablanca, Morocco.
- Florent de Dinechin is an associate editor of the journal *IEEE Transactions on Computers*. He was a member of the Program Committees of the conferences CompAs (Grenoble, Januar 2013), Applied Reconfigurable Computing (Los Angeles, March 2013), Highly Efficient Accelerators and Reconfigurable Technologies (Edimburgh, June 2013), Field-Programmable Logic (Porto, September 2013), Field-Programmable Technology (Kyoto, December 2013), ReConfig 2013 (Cancun, December 2013).
- Tanguy Risset is in the Program Committee of conferences IEEE SIES 2013, ISVLSI 2013.

### 9.2. Teaching - Supervision - Juries

#### 9.2.1. Teaching

Tanguy Risset and Jean-Marie Gorce are professors in the Telecommunications department of Insa Lyon.

Florent de Dinechin is professor in the Computer Science department of Insa Lyon.

Claire Goursaud is associate professor in the Telecommunications department of Insa Lyon.

Guillaume Salagnac and Kevin Marquet are associate professors in the Computer Science department of Insa Lyon.

Guillaume Villemaud and Florin Hutu are associate professors in the Electrical Engineering department of Insa Lyon.

Nikolai Lebedev is associate professor in the engineering school in Chemistry, Physics and Electronics, Lyon.

Tanguy Risset has been the vice-head of the Telecommunications department of Insa Lyon until september 2012.

Tanguy Risset is the responsible for the Networking program of the Master Mastria from University of Lyon.

Jean-Marie Gorce is the responsible for the Telecommunications program of the future Master EEAP from University of Lyon.

Guillaume Villemaud is responsible for international relations in the Electrical engineering département of Insa Lyon

#### 9.2.2. Supervision

HdR: **Guillaume Villemaud**, *Les communications multi-\* : contribution au développement d'architectures radio flexibles pour les réseaux sans fil hétérogènes*, Insa Lyon, 9 december 2013



PhD: **Laurent Maviel**, *Modélisation et simulation des réseaux sans fil hétérogènes et non-stationnaires. Application aux topologies de petites cellules*, CIFRE grant with SIRADEL, defended 27 may 2013.

PhD: **Meiling Luo**: *Indoor Radio Propagation Modeling For System performance prediction* MENRT grant, 17 july 2013.

PhD: **Cengiz Hasan**, *Optimization of resource allocation for small cells networks*”, Orange labs grant, 29 august 2013.

PhD: **Francois Goichon**, *Equité d'accès aux ressources dans les systèmes partagés best-effort*, 16 december 2013.

PhD: **Paul Ferrand**: *Cooperative communications in BANET*, MENRT, defended 21 june 2013.

PhD in progress: **Mickael Dardailon**, *Virtual machine for the cognitive radio*, Rhône-Alpes grant, since 10/2011.

PhD in progress: **Arturo Jimenez Guizar**: *Cooperative communications in Body Area Networks*, ANR Cormoran grant, since 09/2012.

PhD in progress: **Mathieu Lauzier**: “*Design and evaluation of information gathering systems for dense mobile wireless sensor networks*”, CIFRE/Euromedia, since 09/2011.

PhD in progress: **Baher Mawlawi**: CEA grant, since 09/2012.

PhD in progress: **Matthieu Vallerian**: “*Radio Logicielle pour réseau de capteurs*”, CIFRE/Orange, since 09/2012.

PhD in progress: **Zhaowu Zhan**: “*Full-Duplex Multimode MIMO wireless communications*”, CSC/China grant with , since 9/2012.

### 9.2.3. Participation in thesis Committees

**Claire Goursaud** Jury member for the PhD defense of Nicolas BARBOT “*Codage de canal pour les communications optiques sans fils*”, 22 nov. 2013 (U. Limoges)

#### Tanguy Risset:

- reviewer for the Phd of Muhammad Mahtab ALAM “*Power Aware Adaptive Techniques for Wireless Sensor Networks*”, 27 feb. 2013 (U. Rennes 1)
- reviewer for the Phd Djamel Benferhat “*Conception d’un syst’eme de communication tol’erant la connectivité intermittente pour capteurs mobiles biom’etriques*”, 2 oct. 2013 (U. Bretagne Sud)
- reviewer for the Phd Jair Gonzalez-Pina “*Application modelling and software architectures for the software defined radio*”, 14 may 2013 (Telecom-ParisTech, Nice )
- Jury president for the PhD of Antoine Morvan “*ASIP processor instruction set extension*”, 28 jun. 2013 (U. Rennes 1)
- Jury president for the PhD of Maria Isabel Vergara Gallego “*Smarter Radios for Energy Efficiency in Wireless Sensor Networks*”, 3 oct. 2013 (U. Grenoble)
- Jury president for the PhD of Hervé Yviquel “*From Dataflow-based video Coding Tools to dedicated embedded Multi-core platforms*”, 25 jun. 2013 (U. Rennes 1)
- Jury members of Habilitation à Diriger les recherches of Guillaume Villemaud, 9 dec. 2013 (U Lyon1/Insa-Lyon)

**Jean-Marie Gorce** has been reviewer of Phd theses:

- reviewer for the HdR of Benoit Escrig: "Communications coopératives"; 5 Juillet 2013 (INP Toulouse);
- Ziaf Khalaf: "Contribution à l'étude de détection des bandes libres dans le contexte de la radio intelligente"; 7 Février 2013 (Supelec Rennes);
- Sébastien Marcille: " Resource Allocation for HARQ based Mobile Ad hoc Networks"; 21 Février 2013 (Telecom Paris Tech);
- Aymen Ayari: "Mécanismes d'ingénieries pour la planification des réseaux de 3ème et 4ème génération"; 29 Mars 2013 (Supcom Tunis);
- Salma Bourbia: "Algorithmes de prise de décision pour la Cognitive Radio et optimisation du mapping de reconfigurabilité de l'architecture de l'implémentation numérique"; 27 Nov. 2013 (Supcom Tunis et Supélec Rennes);

**Florent de Dinechin**

- reviewer for the PhD of thèse de Mourad Guicem "Conception et implantation d'algorithmes efficaces pour la résolution du dilemme du fabricant de tables sur architectures parallèles." , 14 oct. 2013 (U. Paris VI)

## URBANET Team

# 9. Dissemination

## 9.1. Scientific Animation

- Walid Bechkit is/was reviewer for IEEE Transaction on Wireless Communications, Ad-Hoc Networks Journal, Journal of Network and Computer Applications, IEEE ICC 2013, IEEE WCN 2014.
- Walid Bechkit is in charge of seminar organization at the CITI laboratory.
- Khaled Boussetta is/was TPC member for a number of international conferences, including IEEE ICC, IEEE GlobeCom, IEEE MASS, IEEE VTC (fall/Spring), Wireless Days, Med-Hoc-Net, ICCVE, GIIS.
- Khaled Boussetta organized two technical sessions at University of Paris 13, one on Optimization for Networks in July 2013 and a second on Cloud Networks in October 2013.
- Marco Fiore was co-chair at IFIP/IEEE Wireless Days'13 for the Track Wireless Models and Simulation.
- Marco Fiore is/was TPC member for a number of international conferences, including IEEE SECON 2013/2014, IEEE WoWMoM 2013/2014, IEEE Globecom 2014, IEEE ICC 2014, IEEE VTC-Fall 2013.
- Hervé Rivano is TPC member of several international conferences, including IEEE IPDPS 2014 and IEEE ICC 2014.
- Hervé Rivano is elected member of the CITI laboratory council.
- Razvan Stanica was Local co-chair of IEEE WiMob 2013.
- Razvan Stanica was Session chair for a Networking track session at IEEE WiMob 2013.
- Razvan Stanica is/was TPC member for a number of international conferences, including IEEE ICC 2014, IEEE PIMRC 2013, IEEE VTC Spring/Fall 2013.
- Razvan Stanica is/was reviewer for IEEE Transaction on Mobile Computing, Ad-Hoc Networks Journal, IEEE Communications Magazine, Springer Wireless Networks, Vehicular Communications Journal.
- Fabrice Valois was General co-chair of IEEE WiMob 2013.
- Fabrice Valois is/was TPC member for several international conferences such as: IEEE AINA, IEEE Globecom, IEEE ICC, IEEE VTC, IEEE WCNC, IARIA SensorComm, IEEE WiMob.
- Fabrice Valois is in charge of the foreign affairs of the CITI laboratory.
- Fabrice Valois is correspondent member of the CITI laboratory for the Labex IMU.
- Fabrice Valois is elected member of the CITI laboratory council.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Licence : Isabelle Augé-Blum, Operating Systems, 70h, L3, Telecom. Dpt. INSA Lyon, France.

Licence : Walid Bechkit, IP Networks, 10h, L3, Telecom. Dpt. INSA Lyon, France.

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

Licence : Razvan Stanica, Advanced Wireless Networks, 20h, L3, IST / Telecom. Dpt. INSA Lyon, France (lectures given in english).

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

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

Master : Isabelle Augé-Blum, Innovation project, 30h, M1, Telecom. Dpt. INSA Lyon, France.

Master : Isabelle Augé-Blum, Bibliographical study, 30h, M1, Telecom. Dpt. INSA Lyon, France.

Master : Isabelle Augé-Blum, Real-Time Networks, 25h, M2, Telecom. Dpt. INSA Lyon, France.

Master : Isabelle Augé-Blum, Networks of the Future, 10h, M2, University of Lyon.

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

Master : Marco Fiore, Performance evaluation of telecom networks, 60h, M1, Telecom. Dpt. INSA Lyon, France.

Master : Razvan Stanica, Wireless local area networks, 8h, M2, University of Lyon.

Master : Razvan Stanica, Mobile Networks, 10h, M1, Telecom. Dpt. INSA Lyon, France.

Master : Fabrice Valois, Cellular Networks, 40h, M1, Telecom. Dpt. INSA Lyon, France.

Master : Fabrice Valois, Wireless Multihop networks, 10h, M2, University of Lyon.

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

Isabelle Augé-Blum is in charge of the foreign affairs of the Telecommunications department at INSA Lyon, coordinating all incoming and outgoing student exchange programs.

Isabelle Augé-Blum is an elected member of the Telecommunications Department Council at INSA Lyon.

Razvan Stanica is responsible for the administrative part related to all Master projects prepared by INSA Lyon Telecommunications department students.

Fabrice Valois is responsible of the networking teaching team in the Telecommunications department at INSA Lyon, coordinating all the courses in the networking domain.

Since 2006, Fabrice Valois is the head of an international teaching program focused on Internet of Things, established between INSA Lyon and Shanghai Jiao Tong University.

Fabrice Valois is an elected member of the Telecommunications Department Council at INSA Lyon.

### 9.2.2. Supervision

PhD : Ochirkhand Erdene-Ochir, Résilience et application aux protocoles de routage dans les réseaux de capteurs, INSA Lyon, 07/2013, Advisors: Fabrice Valois, Marine Minier (Inria Privatics).

PhD : Alexandre Mouradian, Proposition et vérification formelle de protocoles temps-réel pour les réseaux de capteurs sans fil, INSA Lyon, 11/2013, Advisors: Fabrice Valois, Isabelle Augé-Blum.

PhD : Anis Ouni, Optimisation de la capacité et de la consommation énergétique dans les réseaux maillés sans fil, INSA Lyon, 12/2013, Advisors: Fabrice Valois, Hervé Rivano.

PhD : Sandesh Uppoor, Understanding and exploiting mobility in wireless networks, INSA Lyon, 11/2013, Advisors: Marco Fiore, Fabrice Valois.

PhD in progress : Soukaina Cherkaoui, Energy-saving strategies for backhaul networks, since 11/2013. Advisors: Hervé Rivano, Fabrice Valois.

PhD in progress : Jin Cui, Aggregation: From data dynamics to network dynamics, since 11/2012. Advisor: Fabrice Valois.

PhD in progress : Rodrigue Domga Komguem, Autonomous WSN architectures for road traffic applications, since 11/2012. Advisors: Fabrice Valois, Razvan Stanica, Maurice Tchunte (Univ. Yaounde', Cameroun).

PhD in progress : Guillaume Gaillard, SLA pour réseaux de capteurs multi-services, since 12/2012. Advisor: Fabrice Valois.

PhD in progress : Quentin Lampin, QoS constraints and time constraints in WSN, since 10/2009. Advisors: Isabelle Augé-Blum, Fabrice Valois.

PhD in progress : Trista Lin, Urban mobility measurement and citizen-oriented services cartography, since 10/2012. Advisors: Frédéric Le Mouel (CITI DynaMid), Hervé Rivano, Fabrice Valois.

PhD in progress : Diala Naboulsi, Human mobility - an urban networking perspective, INSA Lyon, since 10/2012. Advisors: Razvan Stanica, Marco Fiore, Fabrice Valois.

### 9.2.3. Juries

- Khaled Boussetta was external examiner of the following Ph.D. defense:
  - Lionel Bertaux, Architecture Réseau pour Véhicule de transport en commun communiquant, LAAS, Université Toulouse 3 Paul Sabatier, 10/2013.
- Isabelle Augé-Blum was external examiner of the following Ph.D. defense:
  - Muhammad Adnan, Exact Worst-Case Communication Delay Analysis of AFDX Network, INP Toulouse, 11/2013.
- Fabrice Valois was external examiner of the following HDR defenses:
  - Emmanuel Chaput, Architecture et gestion de ressources dans les réseaux satellite et véhiculaires, IRIT, ENSEEIHT, INP Toulouse, 11/2013.
  - Tahiry Razafindralambo, Mouvements Autonomes : vers la Créativité dans les Réseaux sans fil, Université de Lille 1, 12/2013.
  - Rami Langar, Urban Wireless Networks : Mobility, Routing, and Resource Management Concerns, LIP6, UPMC, 12/2013.
- Fabrice Valois was external reviewer of the following PhD defenses:
  - Abbas Antoun Hatoum, Gestion des Ressources et d'Interférences dans les Réseaux FemtoCell OFDMA, LIP6, UPMC, 03/2013.
  - Julien Beaudaux, Auto-configuration et auto-adaptation de réseaux de capteurs sans-fil dans le contexte de la télémédecine, I-CUBE, Université de Strasbourg, 09/2013.
  - Jean-François Malbranque, IP sur UHF, Université de Toulon, 12/2013.
- Fabrice Valois was external examiner of the following PhD defenses:
  - Cédric Chauvenet, Protocoles de support IPv6 pour réseaux de capteurs sur courant porteur en ligne, LIG, Université de Grenoble, 10/2013.
- Fabrice Valois was president of a CoS 27 for a MCF position at INSA Lyon.
- Fabrice Valois was member of a CoS 27 for a Full Professor position at INSA Lyon.

### 9.3. Popularization

- Khaled Boussetta gave a keynote talk entitled "Cloud gaming: state of the art and open challenges", organized by the International Cloud Computing School (ICCS 2013), Hammamet Tunisia, in Dec 2013.
- Fabrice Valois gave an 8h course on ISN (Informatique et Sciences du Numérique). These lectures are made for the Rectorat of Lyon, the public is high school teachers.
- Trista Lin participated to *Fête de la science 2013*, between Oct 8-11. She was responsible for the animation "Best Route - Intelligent Mobility", at La Mache Highschool.
- Hervé Rivano gave a keynote talk entitled "Column Generation for optimization of wireless mesh networks", in the Optimization days of University of Paris XIII.