Activity Report 2012

Section Dissemination

ACES Project-Team

7. Dissemination

7.1. Scientific Animation

7.1.1. Program committees

- PC member for IE'12: 8th Int Conference on Intelligent environments, Guanajuato, Mexico, June 2012, M. Banâtre.
- PC member of the 15th International Symposium on Wireless Personal Multimedia Communications (WPMC'12), F. Weis.

7.1.2. Organizing and reviewing activities

Michel Banâtre is expert to the European Commission (FP7 program): reviewer member for SM4All and CONSERN projects.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

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

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

Master : Distributed Systems, M. Banâtre, 18 hours, M2, Ecole des mines de Nantes, France

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

Master: Mobile communications and ambient computing, M. Banâtre, 8 hours, M2, ENSEIRB Bordeaux, France

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

7.2.2. Supervision

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

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

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

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

<p align="center">**ALF Project-Team**</p>

9. Dissemination

9.1. Scientific community animation

- Pierre Michaud was a member of the ISPASS 2012 and MuCoCos 2012 program committees
- Isabelle Puaut is a member of the program committees of ECRTS 2013, RTAS 2013 and RTCSA 2013. She was a member of the program committee of DAC 2012, ECRTS 2012, EFTA 2012, LCTES 2012, RTCSA 2012, RTNS 2012, WCET 2012.
- André Seznec was a member of Micro 2012, ISCA 2012 and ICDD2012 program committees. He is a member of the editorial board of the IEEE Micro.
- André Seznec is the Program co-chair of HiPEAC 2013, January 2013 and Program co-chair of PACT 2013 (September 2013).
- Erven Rohou was a member of the program committees of PARMA 2012, EUC 2012 and Computing Frontiers 2012.

9.2. Teaching

- F. Bodin, A. Seznec, I. Puaut and E. Rohou are teaching computer architecture and compilation in the master of research in computer science at University of Rennes I.
- Erven Rohou teaches classes and labs of Computing Systems at école Polytechnique (INF422).
- I. Puaut teaches operating systems and real-time systems in the master degree of computer science of the University of Rennes I and at Ecole Supérieure d'ingénieurs de Rennes.
- D. Hardy teaches operating systems and compilers in the master degree of computer science of the University of Rennes I. He teaches real-time systems in the BSc degree *Embedded automotive systems*.
- Pierre Michaud and André Seznec are teaching computer architecture at the engineering degree in computer science at Ecole Supérieure d'ingénieurs de Rennes.
- I. Puaut is co-responsible of the Master of Research in computer science in Britanny (administered jointly by University of Rennes I, University of Bretagne Sud, University of Bretagne Occidentale, INSA de Rennes, ENS Cachan antenne de Bretagne, ENIB, Supélec, Telecom-Bretagne).

9.3. Workshops, seminars, invitations, visitors

9.3.1. Seminars

- A. Seznec has presented a seminar on "What you will never have wanted to know on branch prediction" at University of Cyprus (April 2012), ETH Zurich (May 2012), Qualcomm (August 2012, Raleigh, North Carolina), Georgia Tech (August 2012) and ARM Sophia Antipolis (October 2012).
- A. Seznec has presented invited talks on "Should we defy the Amdahl's Law" at MATEO 2012 workshop in honor of Mateo Valero (Barcelona, June 2012), and at the "Let's Imagine the Future Workshop" in honor of Jean-Pierre Banâtre (Rennes, November 2012).
- A. Seznec has presented a seminar on "Revisiting value prediction" at Intel Hillsboro in December 2012.
- A. Seznec has presented a seminar on "HAVEGE, HArdware Volatile Entropy Gathering and Expansion: unpredictable random number generation at user level" at the LPMA laboratory (Paris, September 2012).

- I. Puaut has presented a seminar on "WCET estimation for multi-core architectures" at CNES, Toulouse, in December 2012.

- Pierre Michaud has presented a seminar on "Hardware acceleration of sequential loops" at Intel, Boston in December 2011.

- E. Rohou gave a talk at the GDR GPL/5es journées françaises de compilation: "Défis des architectures à venir - Quelle compilation pour demain ?" (Rennes, Irisa/Inria April 2012)

- E. Rohou gave an invited talk at Harvard University: "Compilation Challenges for Upcoming Architectures", (September 2012)

- E. Rohou gave a invited talk at the Workshop on Language Virtual Machines and Multicore Architectures: "Compilation Challenges for Future Architectures" (September 2012, LIP6 Paris)

- E. Rohou gave an invited talk at the Egypt-Japan University of Science and Technology in Alexandria:"Performance of Future Architectures and Compilation Challenges" (May 2012).

9.3.2. Visits

- Pr Ahmed El-Mahdy, from the Egyptian-Japanese University of Science and Technology visited the ALF project for 1 week in October 2012.

- Pr Qureshi from Georgia Tech visited the ALF project-team for 3 weeks in July 2012 in the framework of the DAL ERC project.

- Pr Baniasidi from Victoria university visited the ALF project-team for 1 week in October 2012. This visit was funded by the French embassy in Canada.

- Keisuke Kuroyanagi from University of Tokyo was a master intern in the ALF team from April 2012 to July 2012. He worked on memory scheduling [21].

9.4. Miscelleanous

- I. Puaut is a member of the advisory board of the foundation Michel Métivier (http://www.fondation-metivier.org).

- I. Puaut is a member of the Technical Committee on Real-Time Systems of Euromicro, which is responsible for ECRTS, the prime European conference on real-time systems.

- I. Puaut is in the steering committee of the RTNS conference.

- I. Puaut is the french representative for the COST action TACLe (Timing Analysis on Code-Level), for which she also chairs the student mobility committee.

- Erven Rohou was a member of the working group GTInria2020 whose mission is to produce the next "Plan Stratégique".

- A. Seznec is an elected member of the scientific committee of Inria.

- A. Seznec has been nominated by ACM for 3 years 2011-2013 on the selection committee for the ACM-IEEE Eckert-Mauchly award.

- A. Seznec was a member of the steering committee of ISCA 2012.

- E. Rohou has been appointed "correspondant scientifique des relations internationales" for Inria Rennes Bretagne Atlantique.

ASAP Project-Team

9. Dissemination

9.1. Scientific Animation

A.-M. Kermarrec was the chair of the ACM Software System Award Committee.

A.-M. Kermarrec is a member of the scientific committee of the Société Informatique de France

A.-M. Kermarrec gave an invited seminar at the University of Lisbon is September 2012

A.-M. Kermarrec is a member of the steering committee of Eurosys.

A.-M. Kermarrec is a member of the steering committte of Middleware

A.-M. Kermarrec is a member of the steering committte of the SNS workshop

A.-M. Kermarrec is a member of the steering committte of the Winter School on hot topics in distributed systems

A.-M. Kermarrec is a member of the IEEE Internet Computing Editorial Board

A.-M. Kermarrec co-organized the Workshop Inria/Technicolor on distributed storage systems, Nov. 2012

A.-M. Kermarrec was an expert for WWTF (Vienna Science and Technology Fund) in 2012.

A.-M. Kermarrec is a member of the Inria scientific board (Bureau du comité des projets) in Rennes

A.-M. Kermarrec served in the program committees for the following conferences:

Eurosys 2012   : Bern, Swizerland, April 2012

Middleware 2012   : *ACM/IFIP/USENIX International Conference on Middleware*, Montreal, Canada, December 2012

DEBS 2012   : *ACM International Conference on Distributed Event-Based Systems*, Berlin, Germany, July 2012.

LADIS 2012   : *Large-Scale Distributed Systems and Middleware*, Madeira, Portugal, July 2012

VLDB 2013   : *International Conference on Very Large Data Bases*, Trento, Italy, August 2013.

SIGMOD 2013   : *ACM International Conference on Data Management*, NYC, USA, June 2013.

ICDCS 2013   : *International Conference on Distributed Computing Systems*, Philadelphia, USA, July 2013.

M. Raynal was program co-chair of ICDCN 2013, 14th International Conference on Distributed Computing and Networking, Mumbai, January 2013.

M. Raynal served in the program committees for the following conferences:

ICDCN 2012   *13th Int'l Conference on Distributed Computing and Networking (ICDCN'12)*, Hong-Kong, Hong Kong, January 3-6, 2012.

WTTM 2012   *4th Workshop on the Theory of Transactional Memory (WTTM'12)*, (satellite workshop of PODC'12), Madeira, 2012.

DISC 2012   *26th Int'l Symposium on Distributed Computing (DISC'12)*, Salvador, Brazil, 2012.

ICDCS 2012   Liaison Co-Chair, *32th IEEE Int'l Conference on Distributed Computing Systems (ICDCS'12)*, Macau, June, 2012.

D. Frey co-chaired the Workshop on Social Networks Systems colocated with Eurosys, Bern, April 2012.

D. Frey was program co-chair of ICDCN 2013, 14th International Conference on Distributed Computing and Networking, Mumbai, January 2013.

D. Frey served in the technical program committee of the following conferences:

Middleware 2012:   *ACM/IFIP/USENIX International Conference on Middleware*, Montreal, Canada, December 2012.

P2P 2012:   *The 12th IEEE International Conference on Peer-to-Peer Computing* Tarragona, Spain, September, 2012.

SSS 2012:   *The 14th International Symposium on Stabilization, Safety, and Security of Distributed Systems* Toronto, Canada, October 2012.

IPDPS 2013:   *IEEE International Parallel & Distributed Processing Symposium*, Boston, Massachusetts USA, May 2013.

A. Boutet served in the technical program committee and shadow program committee for the following conferences:

CyberC 2012:   *International Conference on Cyber-enabled distributed computing and knowledge discovery*, Sanya, China, October 2012.

Eurosys 2013:   *The European Conference on Computer Systems*, Prague, Czech Republic, April 2013.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence (bachelor) courses:

Marin Bertier, Programmation C, 26h, niveau L3, INSA de Rennes, France.

Marin Bertier, Unix, 20h, niveau L3, INSA de Rennes, France.

Marin Bertier, Programmation Scheme, 36h, niveau L1, INSA de Rennes, France.

Master courses:

Anne-Marie Kermarrec, P2P Systems and Applications, 15h, M2, Université of Rennes 1, France.

Anne-Marie Kermarrec, Gossip-based computing, 5 hours, M2, University of San Sebastian, Spain.

Marin Bertier, Algorithmique distribuée, 16h, niveau M2, INSA de Rennes, France.

Marin Bertier, Système d'exploitation, 56h, niveau M1, INSA de Rennes, France.

Marin Bertier, Parallélisme, 20h, niveau M1, INSA de Rennes, France.

Davide Frey, Scalable Distributed Systems, 10 hours, M2, Université de Rennes 1, France.

Mathieu Goessens, Managing students projects, M2 MIAGE, Université of Evry, France, worked with Delphine Lebédel (Mozilla corporation).

Doctoral courses:

Anne-Marie Kermarrec, Large-scale distributed systems, 28h, EPFL, Switzerland

A.-M. Kermarrec, lecture at the METIS Spring School, Tanger, Marocco.

9.2.2. Supervision

PhD: Damien Imbs, "Calculabilité et conditions de progression des objets partagés en présence de défaillances", Universtité de Rennes 1, April, 2012, advised by Michel Raynal

PhD: Afshin Moin, "Les techniques de recommandation et de visualisation pour les données A Une Grande Echelle", Universtité de Rennes 1, July, 2012, advised by Anne-Marie Kermarrec .

PhD in progress: Mohammad Alaggan, "Private similarity computation in user-centric peer-to-peer systems"; October 1 2010; Anne-Marie and Sébastien Gambs; MENRT Grant.

PhD in progress: Antoine Boutet, Inria Grant (ERC) (2009-2012)

PhD in progress: Tyler Crain, Marie Curie European Grant (2010-2013)

PhD in progress: Ali Gouta, CIFRE ORANGE (2012-2015)

PhD in progress: Arnaud Jégou, Inria Grant (ERC) (2010-2013)

PhD in progress: Eleni Kanellou, "Liveness in Transactional Systems"; September 2011; Michel Raynal; Marie Curie European Grant (2010-2013)

PhD in progress: Konstantinos Kloudas, Inria CORDIS Grant (2009-2012)

PhD in progress: Julien Stainer, MENRT Grant (2011-2014)

PhD in progress: Antoine Rault, "Privacy through decentralization"; October 1, 2012; Anne-Marie Kermarrec, Davide Frey; Inria/Region Grant.

PhD in progress: Alexandre van Kempen, CIFRE TECHNICOLOR (2009-2012)

9.2.3. Juries

Anne-Marie Kermarrec was a member of the following PhD Juries.

Joao Leitao, University of Lisbon, Portugal, August 2012

Adrien Friggeri, ENS Lyon, June 2012

Hervé Baumann, University Paris Diderot, September 2012

Sergey Legtchenko in University Pierre et Marie Curie, October 2012

Raphaël Fournier in University Pierre et Marie Curie, December 2012

Qinna Wang, ENS Lyon, August 2012

Anne-Marie Kermarrec was a member of the following HdR Juries.

Arnaud Legout, Inria Sophia, 20/01/2012

François Taïani was a member of the following PhD juries.

Matthew Leeke, Towards the Design of Efficient Error Detection Mechanisms, The University of Warwick (UK), 16/2/2012 (external examiner)

Simon Meyffret, Local And Social Recommendation In Decentralized Architectures, INSA de Lyon / LIRIS (F), 7/12/2012 (rapporteur)

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

9. Dissemination

9.1. Scientific Animation

9.1.1. Event organization, animation of scientific community

9.1.1.1. International

- **Aspect-oriented Software Association (AOSA):** Mario Südholt has been the chair of this international organization (headquarted in California) since 2011
- **COST Action:** Jean-Marc Menaud is a management committee member of the European COST Action IC0804: Energy efficiency in large scale distributed systems from 2009 to 2013.
- **Grid'5000 Winter School.** A. Lèbre has been the general chair of the 5th edition of the Grid'5000 winter school organized by EMN, the LINA laboratory and Inria in Nantes, December 3-6 2012 (70 attendees). https://www.grid5000.fr/mediawiki/index.php/Grid5000:School2012.
- **OW2:** Jean-Marc Menaud has been a member of the OW2 board committee since 2010.

9.1.1.2. National

- **COMIN Labs laboratory of Excellence:** Jean-Marc Menaud has been the co-coordinator of the focus on Energy and resource efficiency in ICT since Jun. 2011. Mario Südholt has been co-coordinating the Security focus of COMIN Labs.
- **Enterprise Information Systems in the Cloud.** M. Südholt has been part of the organization committee of this event organized by the Images&Networking competitivity cluster in Sep, 2012. He has also given an invited lecture there on the foundations of the Cloud.
- **Eco-conception of software.** J.-M. Menaud co-organized the first event on *Eco-conception des logiciels* in Nantes, and an event on *Efficacité énergétique : comment monitorer et quels sont les impacts sur les applications ?* in Lyons.
- **Software Product Line series of events.** J.-C. Royer started a steering committee for the *Journée lignes de produits logiciels*, which took place in Lille, November 6, http://www.jldp.org/2012

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/. As such he was involved in the CominLabs (labex) proposal.

  He is a member of the board of the Doctoral School MATISSE in Rennes as well as the selection and evaluation committee and the board of the cluster Images & Réseaux. He is 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 program chair of the 6th international workshop on "Virtualization Technologies in Distributed Computing" (VTDC 2012) co-located with HPDC 2012 in Delft, the Netherlands. He also was a member of the program committee of the IEEE International Conference on Cloud and Green Computing (CGC 2012). He also took part to several reviewing processes for the IEEE Transactions on Parallel and Distributed Systems Journal, the Concurrency and Computation: Practice and Experience Journal, the French journal *Technique des Sciences Informatiques* and has been involved as external reviewers for the ISPA, the ICPADS and the Europar conferences.

- **T. Ledoux** was a member of the program committees of the following conferences: 3rd International Workshop on Green and Cloud Management (GCM'12), 11th International Workshop on Adaptive and Reflective Middleware (ARM'12), Second International Conference on ICT as Key Technology against Global Warming (ICT- GLOW'12), 28th Symposium On Applied Computing (SAC'13) - track Software Engineering Aspects of Green Computing.

  He is a member of the board of the Regional Doctoral School STIM. He is a member of the board of the Follow-up committee of the PhD theses at LINA.

- **J.-M. Menaud** has served on the program committee of the 7th Workshop on Virtualization in High-Performance Cloud Computing (VHPC'12), the first International Workshop on Cloud and Grid Interoperability (Cloud&Grid 2012), the IEEE/ACM Inter. Conference on Green Computing and Communications (GreenCom2012), the Eighth Advanced International Conference on Telecommunications (AICT 2012), the Second International Conference on Smart Grids, Green Communications and IT Energy-aware Technologies (ENERGY 2012), the first International Conference on Smart Grids and Green IT Systems (SMARTGREENS 2012), the second International Conference on ICT as Key Technology against Global Warming (ICT-GLoW 2012), the first Workshop on Collaborative and Autonomic Green computing (CAGing 2012) and the French Conference *NOuvelles Technologies de la REpartition* (NOTERE'12). He was a reviewer for the International Journal of Computer and Telecommunications Networking (COMNET), the International Journal of the Electronics and Telecommunications Research Institute, and the International Journal on Transactions on Parallel and Distributed Systems.

  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** co-organized the 7th international workshop on "Domain-Specific Aspect Languages" (DSAL 2012) co-located with AOSD 2012 in Potsdam, Germany.

- **J-C. Royer:** He is a member of the editorial board of the journal TSI. He was a member of the program committee of CAL 2012 and CIEL 2012 and did reviews for the SPLC conference, and the RNTI and SoSym journals.

- **M. Südholt** is the chair of the international association of AOSD. He is a member of the steering committees of the international conferences AOSD and Software composition. He is also a member of the editorial board of the international journal "Transactions of AOSD", which is published by Springer Verlag.

  He was a member of the program committes of the international conferences GPCE'12 and AOSD'12 as well as of 2 international and 2 national workshops.

  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 is a member of the governing board of AOSD-Europe, the European Network of Excellence in AOSD.

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 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 190 hours on average in 2012 (hours of presence in front of students). Hereby, we have taken into account that researchers and some professors have not taught at times and that part of the program is taught by temporary staff.

9.2.2. Supervision

The team has been supervising 16 PhD thesis in 2012, 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 EMNantes.

One PhD has been defended in Sep. 2012, Remy Pottiers thesis on "Approche langage pour l'administration d'infrastructures virtualisées".

Two members of the team have started preparing an HDR in 2012 for defense in 2013.

9.2.3. Juries

- **A. Lèbre** was member of the PhD committee of Sheheryar Malik (University of Nice).
- **J.-M. Menaud** was a reviewer of the PhD of Sheheryar Malik, Nice University, and member of the PhD committees of Xavier Etchevers, Grenoble University, and Eugen Feller, Rennes University.
- **J-C. Royer** was a reviewer of the PhD of Alfred Sanogo, Université Paris Nord, and a member of the PhD committees of Rémy Pottier, EMN, and Takoua Ben-Rouhma, Université Paris Sud.
- **M. Südholt** was a reviewer of the PhD of Arjan De Roo, university of Twente, the Netherlands.

7. Dissemination

7.1. Scientific animation

Arnaud Guyader and Frédéric Cérou have co–organized the workshop on *Computation of Transition Trajectories and Rare Events in Non-Equilibrium Systems*, held in Lyon in June 2012.

Arnaud Guyader has organized the session on *Rare Events Simulation* at *Journées MAS de la SMAI*, held in Clermont–Ferrand in August 2012. He has also co–organized the 2012 edition of the *Journées de Statistiques Rennaises*, held in Rennes in October 2012. He is the co–author of a book [27] on the statistical software R.

François Le Gland was a member of the scientific and organizing committees for the international conference on *Ensemble Methods in Geophysical Sciences*, held in Toulouse in November 2012, an event organized within the ANR project PREVASSEMBLE.

François Le Gland has been a member of the committee for the PhD thesis of Cyrille Dubarry (université Pierre et Marie Curie, advisor: Éric Moulines) and he as been a reviewer for the PhD theses of Romain Leroux (université de Poitiers, advisors: Ludovic Chatellier and Laurent David), Virgile Caron (université Pierre et Marie Curie, advisor: Michel Broniatowski), and Thierry Dumont (université Paris–Sud, advisor: Elisabeth Gassiat).

Florent Malrieu has co–organized the 2012 edition of *Journées de probabilités*, held in Roscoff in June 2012.

Valérie Monbet has co–organized the first international workshop on *Stochastic Weather Generators*, held in Roscoff in May 2012. It gathered 30 participants from France, UK, USA and New-Zealand. Most major teams working on WGs were present. The latest developments were presented, thus providing an up–to–date and almost comprehensive snapshot of the state–of–the art.

François Le Gland is a member of the "conseil d'UFR" of the department of mathematics of université de Rennes 1.

Florent Malrieu is a member of the "conseil" of IRMAR (institut de recherche mathématiques de Rennes, UMR 6625).

Valérie Monbet is a member of the "comité de direction" and of the "conseil" of IRMAR (institut de recherche mathématiques de Rennes, UMR 6625). She is also the director of the master on statistics and econometry at université de Rennes 1.

7.2. Teaching

Arnaud Guyader is a member of the committee of "oraux blancs d'agrégation de mathématiques" for ENS Cachan at Ker Lann.

François Le Gland gives a course on Kalman filtering and hidden Markov models, at université de Rennes 1, within the master SISEA (signal, image, systèmes embarqués, automatique, école doctorale MATISSE), a 3rd year course on Bayesian filtering and particle approximation, at ENSTA (école nationale supérieure de techniques avancées), Paris, within the systems and control module, a 3rd year course on linear and nonlinear filtering, at ENSAI (école nationale de la statistique et de l'analyse de l'information), Ker Lann, within the statistical engineering track, and a 3rd year course on hidden Markov models, at Télécom Bretagne, Brest. He has also organized a thematic school on particle filtering, proposed as a complementary scientific training to PhD students of école doctorale MATISSE.

Florent Malrieu teaches in the probability and statistics track of the training programme for "agrégation de mathématiques" at université de Rennes 1.

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

7.3. PhD and habilitation theses

Arnaud Guyader has been supervising one PhD student
- Nicolas Jégou, title: *Régression isotonique itérée*, defense in November 2012, co–direction: Nick Hengartner (Los Alamos) and Éric Matzner–Løber (université de Rennes 2).

Valérie Monbet is currently supervising one PhD student
- Julie Bessac, provisional title: *Space time modelling of wind fields*, started in October 2011, co–direction : Pierre Ailliot (université de Bretagne Occidentale),

and she is a member of the PhD thesis committe of
- Jérôme Weiss, provisional title: *Modelling of extreme storm surge series*, funding : CIFRE grant with EDF R&D, direction : Michel Benoît (Laboratoire d'Hydraulique Saint-Venant).

François Le Gland has been supervising one PhD student
- Rudy Pastel, title: *Estimation of rare event probabilities and extreme quantiles. Applications in the aerospace domain*, defense in February 2012, funding: ONERA grant, co–direction: Jérôme Morio (ONERA, Palaiseau).

and he is currently supervising three PhD students
- Paul Bui–Quang, provisional title: *The Laplace method for particle filtering*, started in October 2009, expected defense in 2013, funding: ONERA grant, co–direction: Christian Musso (ONERA, Palaiseau).
- Alexandre Lepoutre, provisional title: *Detection issues in track–before–detect*, started in October 2010, funding: ONERA grant, co–direction: Olivier Rabaste (ONERA, Palaiseau).
- Damien Jacquemart, provisional title: *Rare event methods for the estimation of collision risk*, started in October 2011, funding: DGA / ONERA grant, co–direction: Jérôme Morio (ONERA, Palaiseau).

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

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

Arnaud Guyader has been invited to give a talk on adaptive multilevel splitting for rare event estimation in a static case, at the workshop on *Sequential Monte Carlo Methods and Efficient Simulation in Finance*, held at École Polytechnique in October 2012, and a talk on Monte Carlo methods for rare event simulation, at the *Rencontres Statistiques Lyonnaises*, held in Lyon in October 2012. He has given a talk on the nonparametric analysis of the ABC algorithm and a talk on iterative isotone regression, at the *44èmes Journées de Statistique*, held in Brussels in May 2012, and a talk on soft level splitting for rare event estimation, at the *9th International Workshop on Rare Event Simulation*, held in Trondheim in June 2012.

François Le Gland has given a talk on adaptive resampling in sequential Monte Carlo methods, at the CRiSM workshop on *Recent Advances in Sequential Monte Carlo*, held at the University of Warwick in September 2012, and a talk on large sample asymptotics of the ensemble Kalman filter, at the workshop on *Data Assimilation*, held at the University of Oxford in September 2012, and at the international conference on *Ensemble Methods in Geophysical Sciences*, held at the Météo–France center in Toulouse in November 2012.

Florent Malrieu has given a three–hour mini–course on the long time asymptotics of piecewise–deterministic Markov models, in the workshop on *Piecewise–Deterministic Markov Processes*, held in Marne–la–Vallée in March 2012. He has been an invited speaker at the ERGONUM workshop on *Probabilistic Analysis of Large Time Systems*, held in Sophia–Antipolis in June 2012, and at the EPSRC workshop *At the Frontier of Analysis and Probability*, held in Warwick in September 2012. He has been invited to give seminar talks on the long time behaviour of the TCP process in Marseilles in January 2012 and in Paris–Nanterre in May 2012, and on the long time behaviour of some piecewise deterministic Markov processes in Tours in October 2012, in Montpellier and in Toulouse in November 2012.

7.5. Visits and invitations

Arnaud Guyader has been invited by Nicolas Hengartner to visit Los Alamos National Laboratories in April 2012.

François Le Gland has been invited by Arunabha Bagchi to visit the department of applied mathematics of the University of Twente in Enschede and the technical business unit on radar engineering at Thalès Nederland in Hengelo in December 2012, and he has given there a talk on rare event simulation in stochastic hybrid systems, a talk on Laplace and SMC methods in Bayesian filtering, and a talk on detection issues in track–before–detect.

ATLANMOD Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Organization

In 2012, the AtlanMod team has coorganized the following events:

- J. Cabot has coorganized the OCL and Textual Modeling Workshop (OCL'12) [6] co-located with the MoDELS conference.
- J. Cabot has coorganized the CloudMDE workshop, the First International Workshop on Model-Driven Engineering on and for the Cloud, co-located with ECMFA 2012.

9.1.2. Steering Committees

Participation in Steering Committees of Research Conferences:

- Jordi Cabot: International Conference on Model Transformation

9.1.3. Editorial Boards

Participation to editorial boards of scientific journals:

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

9.1.4. 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.
- 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.

9.1.5. Program Committee members

Participation to conference program committees:

- Fabian Buettner:
  - International: Workshop on the Analysis of Model Transformations (AMT), Model-Driven Security Workshop (MDSec).
- 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, eXtreme Modeling workshop, Model-Driven Engineering for High Performance and CLoud computing workshop, Model Driven Web Engineering Workshop.

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[6]http://st.inf.tu-dresden.de/OCL2012/

- – National: French national conference on MDE, Spanish national conference on MDE.
- Javier Canovas:
  - – International: International Workshop on Modeling Social Media.
  - – National: French national conference on MDE, Spanish national conference on MDE.
- 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.

9.1.6. Research Evaluation Committees

- Jordi Cabot:Reviewer for Spanish CICYT Research Projects Call, Reviewer for the National Dutch Projects Call

9.1.7. Awards

The team got a price while participating in a hackathon organized as part of the SoTeSoLa 2012 Summer School. The objective was to perform useful reverse engineering tasks from a given base of legacy source code. The AtlanMod team (Hugo Bruneliere) and the Public Research Center Henri Tudor - Luxembourg (Jean-Sebastien Sottet, a former AtlanMod post-doc) worked together and proposed a model-based prototype using the MoDisco and ATL tools developed within the team. Javier Canovas got the best paper award in the National Spanish conference on MDE [32]

9.2. Teaching - Supervision - Juries

9.2.1. Invited Talks

Jordi Cabot gave an invited lecture in the 12th International School on Formal Methods for the Design of Computer, Communication and Software Systems (http://www.sti.uniurb.it/events/sfm12mde/)

9.2.2. Teaching

Teaching duties of AtlanMod members done in 2012 involved the following courses:

License: J. Cabot is in charge of a 24-hour course on MDE in the CS degree at the Ecole des Mines de Nantes .

Seminar: J. Canovas. Software modernization in Eclipse, 3h, Universidad de Cádiz, Spain.

Master: J. Canovas. Model-Driven Software Development, 2h, L1, Universidad Autónoma de Madrid, Spain

License: M. Tisi, Programmation Modulaire, 12h, L2, Ecole des Mines de Nantes

License: M. Tisi, Structures de Données, 15h, L3, Ecole des Mines de Nantes

License: M. Tisi, Interaction Homme-Machine, 15h, M1, Ecole des Mines de Nantes

License: M. Tisi, UML, 20h, M1, Ecole des Mines de Nantes

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, L3, 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

9.2.3. Supervision

HdR : Jordi Cabot, MDE 2.0 - Pragmatic Formal model verification and other challenges, ED-STIM Ecole des Mines de Nantes, 12/09/2012

PhD in progress : Carlos A. González, Pragmatic Model Verification, October 1st, 2011, Jordi Cabot

PhD in progress : Salvador Martínez Pérez, Automatic reconstruction and analysis of semantic network security policies from deployed security components, November 1st, 2011, Jordi cabot and Frédéric Cuppens

PhD in progress : Valerio Cosentino, Extraction and refactoring of Business Logic from Legacy Applications, December 1st, 2010, Jordi Cabot, Patrick Albert

9.2.4. Juries

Jordi Cabot was a member of the jury of the thesis of Thang Quyet Pham (Telecom Bretagne).

9.3. Popularization

9.3.1. Introductory book to Model-Driven Engineering

Jordi Cabot has co-written the book "Model-Driven Software Engineering in Practice" (published by Morgan and Claypool) [9], an introductory book to the domain of model driven engineering that discusses how approaches based on modeling can improve the daily practice of software professionals. The book is being used in more than 10 different universities as basic teaching material for MDE courses at the moment.

9.3.2. Dissemination to the local community

As part of our commitment to the Eclipse community (cf. next subsection), we co-organized again this year (together with the Obeo company) an Eclipse DemoCamp event in Nantes to promote the new Eclipse Juno version's release. The Eclipse DemoCamps are an opportunity to showcase all of the technology being built by local Eclipse community members, as well as an excellent opportunity to meet other Eclipse enthusiasts in the region (notably industrial actors) and present them some of the Eclipse-based technologies developed by the team in the context of our research works. This year, we have notably presented during the event our three latest prototypes: Collaboro, EMFtoCSP and Virtual EMF.

Also, we have been invited to present our team and its activities to the Board of Architects of Steria Ouest (premises located in Nantes). We described them our main research fields and experiments in term of modeling, and raised some real interest from their side. Concretely, this has resulted in a first successful collaboration with them that happened this year (cf. related subsection).

9.3.3. Involvement in the worldwide Open Source Community via Eclipse

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*: EMFToCSP (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.

CAIRN Project-Team

8. Dissemination

8.1. Scientific Animation

D. Chillet was General Co-Chair of the Conference on Design and Architectures for Signal and Image Processing (DASIP) in Karlsruhe, Germany, Oct. 2012.

D. Chillet was the Editor of a Special Issue of International Journal of Real Time Image Processing, 2012.

A. Tisserand was a member of technical program committee of the following conferences: IEEE ARITH'21, IEEE Reconfig 2012, DASIP 2012, IEEE NEWCAS 2012. He is a member of the editorial board of the International Journal of High Performance Systems Architecture, Inderscience.

M. Gautier was a member of the technical program committee of IEEE VTC-fall 2012, IEEE ICCVE 2012 and IARIA COCORA 2012.

E. Casseau co-organized with Michael Hubner the first DASIP demo night during the Conference on Design and Architectures for Signal and Image Processing, Karlsruhe, Germany. Details on http://ecsi.org/dasip2012/demo-night.

S. Pillement and E. Casseau were members of the Program Committee of DASIP.

P. Quinton was the coordinator of the "équipe projet de recherche" PucesCom of the Université européenne de Bretagne.

O. Sentieys was a member of technical program committee of the following conferences: IEEE/ACM DATE, IEEE ISQED, IEEE VTC, IEEE DDECS, DCIS, FTFC. He was Track Chair at NEWCAS. He is on the editorial board of Journal of Low Power Electronics, American Scientific Publishers, and of ISRN Sensor Networks.

O. Sentieys is a member of the steering committee of the GDR SOC-SIP. He is the chair of the IEEE Circuits and Systems (CAS) French Chapter. In 2011, he was an expert for some scientific organizations (ANR INS, ANR blanc). He is a member of Allistene working group.

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

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

A. Tisserand co-organized the ECOFAC 2012 *école thématique CNRS conception faible consommation pour les systèmes embarqués temps réel* in La Colle-sur-Loup, May 21–25, 2012. Details on http://leat.unice.fr/ECoFaC2012/.

8.2. Seminars and Invitations

A. Tisserand gave an invited talk at the French *Rencontres Arithmétique de l'Informatique Mathématique du GT ARITH - GDR IM* in June on *Circuits for True Random Number Generation with On-Line Quality Monitoring*.

A. Tisserand gave a invited lecture at the CNRS ECOFAC 2012 spring school on *Power Consumption and Security: Attacks and Countermeasures*.

A. Tisserand gave a invited lecture at the IRMAR (Maths) Laboratory of University of Rennes 1 on *True Random Number Generation with On-Line Quality Monitoring*.

8.3. Teaching - Supervision - PhD Committee

8.3.1. Teaching Responsibilities

There is a strong teaching activity in the CAIRN team since most of the permanent members are Professors or Associate Professors.

C. Wolinski is the Director of ESIR.
P. Quinton is the deputy-director of Ecole Normale Supérieure de Cachan, responsible of the Brittany branch of this school.
D. Chillet is the Director of Academic Studies of ENSSAT.
P. Scalart is the Head of the Electronics Engineering department of ENSSAT.
S. Derrien is the responsible of the first year of the master of computer science at ISTIC since Sep. 2012.
O. Sentieys is responsible of the "Embedded Systems" branch of the SISEA Master of Research (M2R).

ENSSAT stands for *"École Nationale Supérieure des Sciences Appliquées et de Technologie"* and is an *"École d'Ingénieurs"* of the University of Rennes 1, located in Lannion.
ISTIC is the Electrical Engineering and Computer Science Department of the University of Rennes 1.
ESIR stands for *"École supérieure d'ingénieur de Rennes"* and is an *"École d'Ingénieurs"* of the University of Rennes 1, located in Rennes.
M2R stands for Master by Research, second year.

D. Chillet is member of the French National University Council since 2009 in signal processing and electronics (Conseil National des Universités en 61e section).
D. Chillet is member of the Permanent Committee of the French National University Council since november 2011 in signal processing and electronics (Commission Permanente du Conseil National des Universités en 61e section).

8.3.2. Teaching

O. Berder: introduction to signal processing, 38h, ENSSAT(L3)

O. Berder: microprocessors and digital systems, 19h, ENSSAT(L3)

O. Berder: wireless communications, 23h, ENSSAT(M2)

O. Berder: digital signal processing, 60h, ENSSAT(M1)

O. Berder: ad hoc networks, 58h, ENSSAT(M1-M2)

O. Berder: signal processing, 24h, IUT Lannion (L2)

E. Casseau: verification, 12h, Master by Research and ENSSAT(M2)

E. Casseau: hardware description language, 20h, ENSSAT(M1)

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

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

E. Casseau: verification, 25h, USTH (M1)

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

S. Derrien: component and system synthesis, 16h, Research Master (MRI ISTIC) (M2)

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

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

F. Charot: specification of applications with the signal synchronous language, 24h, ESIR(M1)

F. Charot: virtual prototyping of multiprocessor system-on-chip, 24h, ESIR(M1)

F. Charot: design of embedded systems, 28h, ESIR(M1)

D.Chillet: Basic processor architecture, 20h, ENSSAT(L1)

D.Chillet: Design methodology of real-time systems, 32h, ENSSAT(L2)

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

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

D.Chillet: Multi-processor systems, 20h, ENSSAT(M2)

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

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

D. Chillet: Digital system design, 25h, University of Science and Technology of Hanoi, (M1)

D. Chillet: Advanced Multiprocessor system , 25h, University of Science and Technology of Hanoi, (M2)

M.Gautier, electronics, 42h, IUT Lannion (L1)

M.Gautier, telecommunications, 114h, IUT Lannion (L1)

R. Rocher: electricity, 16h, IUT Lannion (L1)

R. Rocher: electronics, 44h, IUT Lannion (L1)

R. Rocher: telecommunications, 82h, IUT Lannion (L1)

R. Rocher: signal processing, 12h, IUT Lannion (L2)

R. Rocher: digital communications, 48h, IUT Lannion (L2)

P. Scalart: non-linear optimisation, 18h, Master by Research and ENSSAT (M2)

P. Scalart: Parametric modelisation, optimal and adaptive Filters, 24h, Master by Research and ENSSAT (M2)

P. Scalart: source coding, 14h, Master by Research and ENSSAT (M2)

P. Scalart: cellular networks, 24h, ENSSAT (M2)

P. Scalart: digital communication systems, 32h, ENSSAT (M1)

P. Scalart: random signals and systems, 12h, ENSSAT (M1)

O. Sentieys: methodologies for system-on-chip design, 6h, Master by Research and ENSSAT(M2)

O. Sentieys: VLSI integrated circuit design, 66h, ENSSAT(M1)

O. Sentieys: high-level synthesis of digital signal processors, 16h, Master by Research and ENSSAT(M2)

A. Tisserand: GPU programming, 8h, ENSSAT(M2)

A. Tisserand: hardware computer arithmetic operators, 6h, Master by Research, Univ. Rennes 1 (M2)

A. Tisserand: computer arithmetic, 12h, ENS Cachan, Antenne de Bretagne, *Magister* Computer Science and Telecommunications (L3)

A. Tisserand: computer arithmetic, 16h, ENSEIRB, (L3)

C. Wolinski: architecture 1, 64h, ESIR(L3)

C. Wolinski: architecture 2, 28h, ESIR(L3)

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

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

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

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

8.3.3. Supervision

HDR: Olivier Berder, Systèmes multi-antennes et optimisation énergétique des réseaux de capteurs sans fil, Habilitation à Diriger des Recherches, University of Rennes 1, Dec. 2012.

PhD: Naeem Abbas, Acceleration of a Bioinformatics Application using High-Level Synthesis, May 2012, P. Quinton, S. Derrien.

PhD: Andrei Banciu, A Stochastic Approach for the Range Evaluation, Feb. 2012, E. Casseau.

PhD: Antoine Eiche, Real-Time Scheduling for Heterogeneous and Reconfigurable Architectures using Neural Network Structures, University of Rennes 1, Sep. 2012, D.Chillet.

PhD: Antoine Floc'h, Optimizing Compilation for Processor Instruction-Set Extension, Jun. 2012, C. Wolinski, F. Charot.

PhD: Quoc-Tuong Ngo, Generalized minimum Euclidean distance based precoders for MIMO spatial multiplexing systems, Jan. 2012, P. Scalart, O. Berder.

PhD: Danuta Pamula, Arithmetic operators on $GF(2^m)$ for cryptographic applications: performance - power consumption - security tradeoffs, University of Rennes 1 and Silesian University of Technology, Dec. 2012, A. Tisserand.

PhD: Le-Quang-Vinh Tran, Energy-efficient cooperative relay protocols for wireless sensor networks, Dec. 2012, O. Berder, O. Sentieys.

PhD: Karthick Parashar, System-level approaches for fixed-point refinement of signal processing algorithms, Dec. 2012, O. Sentieys, D. Menard.

PhD: Chenglong Xiao, Custom Operator Identification for High-level Synthesis, University of Rennes 1, Nov. 2012, E. Casseau.

PhD in progress: Mahtab Alam, Power Aware Signal Processing for Reconfigurable Radios in the context of Wireless Sensor Networks, Nov. 2009, O. Sentieys, O. Berder, D. Menard.

PhD in progress: Djamel Benfarhat, Design of disruption-tolerant communication protocols for mobile communicating objects in health applications, 2009, Patrice Quinton jointly with Frédéric Guidec, IRISA UBS.

PhD in progress: Karim Bigou, RNS Hardware Units for ECC, Oct. 2011, A. Tisserand.

PhD in progress: Robin Bonamy, Power Consumption Modelling and Optimisation for Reconfigurable Platform, Oct. 2009, D. Chillet.

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

PhD in progress: Thomas Chabrier, Reconfigurable Arithmetic Units for Cryptoprocessors with Protection against Side Channel Attacks, Oct. 2009, A. Tisserand, E. Casseau.

PhD in progress: Aymen Chakhari, Analytical approach for decision errors in fixed-point digital communication systems, Oct. 2010, R. Rocher, P. Scalart.

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

PhD in progress: Clément Guy, Generic Definition of Domain Specific Analysis using MDE, Oct. 2010, S. Derrien, jointly with J.M. Jezequel and B. Combemale from Triskell EPI.

PhD in progress: Christophe Huriaux, Embedded reconfigurable hardware accelerators with efficient dynamic reconfiguration management, Oct. 2012, O. Sentieys, A. Courtay.

PhD in progress: Quang-Hai Khuat, Real-Time Spatio-Temporal Task Scheduling on 3D Architectures, Oct. 2011, D. Chillet.

PhD in progress: Trong-Nhan Le, Global power management system for self-powered autonomous wireless sensor nodes, Jan. 2011, O. Sentieys, O. Berder.

PhD in progress: Quang-Hoa Le, Virtualized dynamic reconfiguration for 3D SoC, Oct. 2012, E. Casseau, A. Courtay.

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

PhD in progress: Antoine Morvan, Loop Transformations for Design Space Exploration in High-Level Synthesis, Oct. 2009, P. Quinton, S. Derrien.

PhD in progress: Jean-Charles Naud, Source-to-Source Code Transformation for Fixed-Point Conversion, Oct. 2009, D. Menard, O. Sentieys.

PhD in progress: Viet-Hoa Nguyen, Energy-efficient cooperative techniques for Wireless Body Area Sensor Networks, Nov. 2012, O. Berder, jointly with C. Langlais from Telecom Bretagne.

PhD in progress: Matthieu Texier, Low-Power Embedded Multi-Core Architectures for Mobile Systems, Oct. 2009, O. Sentieys, jointly with R. David from CEA List.

PhD in progress: Michel Theriault, Transmit Beam-forming for Distributed Wireless Access with Centralized Signal Processing, Oct. 2007, O. Sentieys, jointly with S. Roy from U. Laval, Canada.

PhD in progress: Vivek D. Tovinakere, Ultra-Low Power Reconfigurable Controllers for Wireless Sensor Networks, Oct. 2009, O. Sentieys.

Ganda-Stéphane Ouedraogo, Automatic synthesis of hardware accalerator from high-level specifications in flexible radios, Oct. 2011, M. Gautier, O. Sentieys.

PhD in progress: Pramod P. Udupa, Sampling, synchronising, digital processing and FPGA implementation of 100Gbps optical OFDM signals, Jan. 2011, O. Sentieys.

PhD in progress: Hervé Yviquel, Video coding design framework based on SoC-based platforms, Oct. 2010, E. Casseau.

PhD in progress: Zhongwei Zheng, Short-range geolocation algorithms based on distributed multi-sensor processing, Nov. 2012, P. Scalart, jointly with C. Roland from Lab-STICC.

8.4. Popularization

A. Tisserand gave a popularization talk at *Fête de la science* 2012 in Lannion on *low-energy electronic circuits*.

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CELTIQUE Project-Team

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8. Dissemination

8.1. Scientific Animation

David Pichardie served on the program committees of the international conferences IFM 2012 and ITP 2012 and the international workshop SVARM & VERIFY 2012. He co-chaired the international workshop PxTP 2012. A. Schmitt is a member of the steering committee of the Journées Françaises des Langages Applicatifs (JFLA). Thomas Jensen and Alan Schmitt organized the École Jeunes Chercheurs en Programmation (EJCP 2012). Sandrine Blazy served on the organizing committee of the annual meeting of the GDR GPL French community. Sandrine Blazy is a member of the steering committe of the ITP conference. Sandrine Blazy is scientific director of the "Languages and software engineering department" of IRISA.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Alan Schmitt, Caml, 43h, L3, Insa Rennes, France

Alan Schmitt, Méthodes Formelles pour le développement de logiciels sûrs, 12h, M1, Rennes 1, France

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

Sandrine Blazy, Software vulnerabilities, 24h, M2PRO, Rennes 1

Sandrine Blazy, Mechanised semantics, 30h, M2R, Rennes 1, France

Sandrine Blazy, The Coq proof assistant, 6h, 4th Asian-Pacific summer school on formal methods, Shanghai, China

Sandrine Blazy, Functional programming, 30h, L3, Rennes 1, France

Frédéric Besson, Compilation, 30h, M1, Insa Rennes, France

Thomas Jensen, Program analysis and Semantics, 30h, M2R, Rennes 1, France

Thomas Jensen, Sécurité de logiciel, 30h, M2R, Rennes 1, France

Pierre-Alain Fouque, Cryptography, 58h, M2PRO, Rennes 1, France

Thomas Jensen, Static program analysis, 5h, Ecole Jeunes Chercheurs en Programmation.

Thomas Genet, Cryptography, 18h, M1, Rennes 1, France

Thomas Genet, Object-oriented software engineering, 48h, M1, Rennes 1, France

Thomas Genet, Software Formal Analysis and Design, 65h, M1, Rennes 1, France

Thomas Genet, Functional programming, 44h, L3, Rennes 1, France

David Cachera, Programming language semantics, 24h, M1, Rennes 1, France

David Cachera, Computability and Logic, 24h, L3, ENS Cachan Bretagne, France

David Cachera, Formal Languages, 24h, L3, ENS Cachan Bretagne, France

David Cachera, Algorithmics, 10h, M2FES, ENS Cachan Bretagne, France

8.2.2. Supervision

PhD & HdR :

HdR : David Pichardie, Toward a Verified Software Toolchain for Java, ENS Cachan, November 19th 2012

PhD : Delphine Demange, Semantic foundations of intermediate program representations, ENS Cachan, October 19th 2012, Thomas Jensen and David Pichardie

PhD : Arnaud Jobin, Dioïdes et idéaux de polynômes en analyse statique, ENS Cachan, January 16th 2012, Thomas Jensen and David Cachera

PhD in progress: Zhoulai Fu, Abstract interpretation and memory analysis, octobre 2009, Thomas Jensen and David Pichardie

PhD in progress: Vincent Laporte, Formal verification of static analyses for low level langages, septembre 2012, Sandrine Blazy and David Pichardie

PhD in progress: Martin Bodin, Certified Analyses for JavaScript, September 2012, Thomas Jensen and Alan Schmitt

PhD in progress: Andre Oliveira Maroneze, Compilation vérifiée et calcul de temps d'exécution au pire cas, septembre 2010, Sandrine Blazy and Isabelle Puaut

PhD in progress: Stéphanie Riaud, Transformations de programmes pertinentes pour la sécurité du logiciel, septembre 2011, Sandrine Blazy

PhD in progress: J-C Zapalowicz, Formal methods for identifying security vulnerabilities, September 2011, Thomas Jensen and Pierre-Alain Fouque.

Pierre-Emmanuel Cornilleau: Result certification of static analyses using SMTs, October 2009, Frédéric Besson and Thomas Jensen.

PhD in progress: Valérie Murat, Automatic verification of infinite state systems using tree automata completion, septembre 2010, Thomas Genet

PhD in progress: Yann Salmon, Static Analysis of functional programs using tree automata, septembre 2011, Thomas Genet

8.2.3. *Juries*

Alan Schmitt, jury member for the HdR defense of Ludovic Henrio, July 19th 2012

Alan Schmitt, jury member (reviewer) for the PhD defense of Federico Ulliana, December 12 2012

Sandrine Blazy, jury member for the HDR defense of Eric Totel, December 2012, Supélec, Rennes

Sandrine Blazy, jury member (reviewer) for the PhD defense of Vincent Filou, December 2012, LABRI, Bordeaux

Thomas Jensen, jury member (reviewer) for the PhD defense of Tahina Ramananandro, January 2012, ENS Paris

Thomas Jensen, jury member (examiner) for the PhD defense of Jérémy Planul, February 2012, Ecole polytechnique

Pierre-Alain Fouque, jury member (reviewer) for the PhD defense of Olivier Meynard, January 2012, ENST Paris

Pierre-Alain Fouque, jury member (reviewer) for the PhD defense of Sylvain Heraud, February 2012, Nice-Sophia Antipolis

Pierre-Alain Fouque, jury member (reviewer) for the PhD defense of Christina Boura, January 2012, Paris 6 University

8.3. Popularization

David Pichardie organised the second edition of the french Castor Informatique contest. This contest promotes Computer Science in secondary schools and high schools. It is organised by Inria, ENS Cachan and the France IOI association and supported by CNRS, Pascaline, the SIF and API associations. In 2012, there was about 90.000 participants.

Sandrine Blazy was interviewed for a 10 minutes podcast (in French) about compiler verification. The podcast is available from the Interstices website.

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

9. Dissemination

9.1. Scientific Animation

Ludovic Mé acts as a

- member of the editorial board of the « Journal in Computer Virology », Springer (http://www.springer.com/computer/journal/11416).

- member of the steering committee of the « 7ème Conférence sur la Sécurité des Architectures Réseaux et Systèmes d'Information (SAR-SSI 2012) » held in May 2012 in Cabourg, France (https://sarssi2012.greyc.fr/).

- member of the steering committee of the « 15th International Symposium on Research in Attacks, Intrusions and Defenses (RAID 2012) » held in September 2012 in Amsterdam, The Netherlands (http://www.raid2012.org/).

- member of the steering committee of the « Computer & Electronics Security Applications Rendez-vous - Cloud and Security, threat or opportunity ? (C&ESAR 2012) » held in November in Rennes, France (http://www.cesar-conference.org/).

- member of the program committee of the « 5th SETOP International Workshop on Autonomous and Spontaneous Security (SETOP 2012) » held in September 2012 in Pisa, Italy (http://sesar.dti.unimi.it/SETOP2012/).

- member of the program committee of the « 7th International Conference on Risks and Security of Internet and Systems (CRiSIS 2012) » held in October 2012 in Cork, Ireland (http://4c.ucc.ie/crisis2012/).

- member of a DGA's scientific committee.

Emmanuelle Anceaume acts as a

- member of the International Evaluation Panel of the Call 2012 for the topic Context- and Content-Adaptive Communication Networks of the CHIST-ERA, a European Network of Research

- member of the program committee of the « 11th IEEE International Conference on Ubiquitous Computing and Communications (IUCC 2012) » held in June 2012 in Liverpool, England (http://scim.brad.ac.uk/~hmibrahi/IUCC2012/).

- member of the program committee of the « 11th IEEE International Conference on Trust, Security and Privacy in Computing and Communications (TrustCom-2012) » held in June 2012 in Liverpool, England (http://www.scim.brad.ac.uk/~hmibrahi/TrustCom2012/).

- member of the program committee of the « 7th International Conference on Frontier of Computer Science and Technology (FCST-12) » held in November 2012 in Suzhou, China (http://trust.csu.edu.cn/conference/fcst2012/).

- member of the program committee of the « 9th FTRA International Conference on Secure and Trust Computing, data management, and Applications (STA 2012) » held in September 2012 in Gwangju, Korea (http://www.ftrai.org/sta2012/).

- external reviewer for the IEEE Transactions on Parallel and Distributed Systems journal, the ACM Transactions on Autonomous and Adaptive System journal, and the ACM Transactions on Systems, Man, and Cybernetics (Part A: Systems and Humans).

Christophe Bidan acts as a

- member of the program committee of the « 7th Conference on Network Architectures and Information Systems Security (SAR-SSI 2012) » held in May 2012 in Cabourg, France (https://sarssi2012.greyc.fr/).

- member of the program committee of the « 8th International Conference on Security and Privacy in Communication Networks (SecureComm 2012) » held in September 2012 in Padua, Italy (http://securecomm.org/2012/show/home).

- member of the program committee of the « 5th International Workshop on Autonomous and Spontaneous Security (SETOP 2012) » held in September 2012 in Pisa, Italy (http://sesar.dti.unimi.it/SETOP2012/).

Sébastien Gambs acts as a

- leader of the action line on « Privacy, Security and Trust in the Information Society » from EIT ICT labs (until September 2012).

- 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).

- co-organizer of a panel on « Location-based services and privacy: are we moving in the right direction ? (6th International Conference on Computers, Privacy and Data Protection - CPDP 2012) » held in January 2012 in Brussels, Belgium (http://www.cpdpconferences.org/thursday26january.html).

- member of the organization committee of the « 3ème Atelier sur la Protection de la Vie Privée (APVP 2012) » held in June 2012 in Ile de Groix, France (http://www.irisa.fr/prive/sgambs/apvp2012.html).

- member of the program committee of the « 3ème Atelier sur la Protection de la Vie Privée (APVP 2012), » held in June 2012 in Ile de Groix, France (http://www.irisa.fr/prive/sgambs/apvp2012.html).

- member of the program committee of the « 4th International Workshop on SEcurity and SOCial Networking (SESOC 2012) » held in March 2012 in Lugano, Switzerland (http://www.sesoc.org/home.htm).

- member of the program committee of the « Workshop on Privacy and Anonymity for the Digital Economy (PADE 2012) » held in June 2012 in London, United Kingdom (http://pade12.mytestbed.net/).

- member of the program committee of the « 10th International Conference on Privacy, Security and Trust (PST 2012) » held in July 2012 in Paris, France (http://www.unb.ca/pstnet/pst2012/).

- member of the program committee of the « 1st International Workshop on Citizen Sensor Networks (CitiSen 2012) » held in August 2012 in Montpellier, France (https://sites.google.com/site/citisen2012/).

- member of the program committee of the « 13th Conference on Communications and Multimedia Security (CMS 2012) » held in September 2012 in Canterbury, United Kingdom (http://sec.cs.kent.ac.uk/cms2012/?page=main).

- member of the program committee of the « 7th International Workshop on Data Privacy Management (DPM 2012) » held in September 2012 in Pisa, Italy (http://www-ma4.upc.edu/DPM2012/).

- member of the program committee of the « 5th Symposium on Foundations and Practice of Security (FPS 2012) » held in October 2012 in Montréal, Canada (http://conferences.telecom-bretagne.eu/fps2012/).

- member of the program committee of the « 5th ACM SIGSPATIAL International Workshop on Location-Based Social Networks (LBSN 2012) » held in November 2012 in Redondo Beach, USA (http://www.cs.umb.edu/~gghinita/LBSN12/).
- external reviewer for GeoProcessing 2012 (Conference on Advanced Geographic Information Systems, Applications, and Services), CCS 2012 (19th ACM Conference on Computer and Communications Security), the Neural Computation journal, IEEE Transactions on Parallel and Distributed Systems, Journal of Parallel and Distributed Computing and Information Systems.

Gilles Guette acts as a

- member of the program committee of the « Symposium sur la sécurité des technologies de l'information et des communications (SSTIC 2012) » held in June 2012 in Rennes, France (https://www.sstic.org/2012/news/).

Guillaume Hiet acts as a

- member of the program committee of the « 15th International Symposium on Research in Attacks, Intrusions and Defenses (RAID 2012) » held in September 2012 in Amsterdam, The Netherlands (http://www.raid2012.org/).

Michel Hurfin acts as a

- member of the editorial board of the « Springer Journal of Internet Services and Applications » (http://www.springer.com/computer/communications/journal/13174).
- member of the program committee of the « 3rd International Workshop on Interconnections of Wireless Sensor Networks (IWSN 2012) » held in May 2012 in Hangzhou, China (http://iwsn2012.gforge.uni.lu/index.html).
- member of the program committee of the « 4th International Workshop on Workflow Management in Service and Cloud Computing (WMSC2012) » held in November 2012 in Xiangtan, China (http://kpnm.hnust.cn/confs/wmsc2012).
- member of the program committee of the « 11st African Conference on research In Computer Science and Applied Mathematics (CARI 2012) » held in October 2012 in Algiers, Algeria (http://www.cari-info.org/).
- external reviewer for the Elsevier Journal of Computer and System Sciences (JCSS) and PODC 2012 (31st ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing).
- member of the Inria COST-GTAI (reviewer for ADT submissions and project proposal).

Guillaume Piolle acts as a

- member of the CERNA (*Commission de réflexion sur l'éthique de la recherche en sciences et technologies du numérique d'Allistene*), ethical committee for the French research in digital sciences and technologies.
- member of the organization committee of the « 3ème Atelier sur la Protection de la Vie Privée (APVP 2012), » held in June 2012 in Ile de Groix, France (http://www.irisa.fr/prive/sgambs/apvp2012.html).
- member of the program committee of the « 3ème Atelier sur la Protection de la Vie Privée (APVP 2012), » held in June 2012 in Ile de Groix, France (http://www.irisa.fr/prive/sgambs/apvp2012.html).
- member of the program committee of the « 1st Workshop on Information Hiding Techniques for Internet Anonymity and Privacy (IHTIAP 2012) » held in June 2012 in Venice, Italy (http://www.iaria.org/conferences2012/IHTIAP.html).
- member of the program committee of the « 1st Workshop on Rights and Duties of Autonomous Agents (RDA2 2012) » held in August 2012 in Montpellier, France (https://rda2-2012.greyc.fr/).
- external reviewer for Interstices (online peer-reviewed journal of Inria - http://interstices.info/) and RAID 2012 (15th International Symposium on Research in Attacks, Intrusions and Defenses).

Nicolas Prigent acts as a

- member of the program committee of the « Symposium sur la sécurité des technologies de l'information et des communications (SSTIC 2012) » held in June 2012 in Rennes, France (https://www.sstic.org/2012/news/).
- member of the organization committee of the « Symposium sur la sécurité des technologies de l'information et des communications (SSTIC 2012) » held in June 2012 in Rennes, France (https://www.sstic.org/2012/news/).
- member of the program committee of the « 5th SETOP International Workshop on Autonomous and Spontaneous Security (SETOP 2012) » held in September 2012 in Pisa, Italy (http://sesar.dti.unimi.it/SETOP2012/).

Eric Totel acts as a

- external reviewer for RAID 2012 (15th International Symposium on Research in Attacks, Intrusions and Defenses), and CRISIS 2012 (7th International Conference on Risks and Security of Internet and Systems).

Frédéric Tronel acts as a

- member of the program committee of the « Symposium sur la sécurité des technologies de l'information et des communications (SSTIC 2012) » held in June 2012 in Rennes, France (https://www.sstic.org/2012/news/).
- member of the organization committee of the « Symposium sur la sécurité des technologies de l'information et des communications (SSTIC 2012) » held in June 2012 in Rennes, France (https://www.sstic.org/2012/news/).
- external reviewer for RAID 2012 (15th International conference Recent Advances on Intrusion Detection) and PODC 2012 (31st ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing).

Valérie Viet Triem Tong acts as a

- member of the program committee of the « FTRA International Conference on Advanced IT, engineering and Management (FTRA AIM 2012) » held in February 2012 in Seoul, Korea (http://web.ftrai.org/aim2012/home).
- external reviewer for the IEEE Transactions on Network and Service Management journal (TNSM), the Technique et Science informatiques Journal (TSI), and the British Journal of Applied Science & Technology.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Ludovic Mé is Professor at Supélec:

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

> Master: "Intrusion detection", 9 hours of lecture, M2 - Master research, Rennes, France

> Master: "Intrusion detection", 8 hours of lecture, M2 - Master Pro SSI, université de Rennes 1, France

> Master: "Intrusion detection", 9 hours of lecture, M2 - Master SSI, Supélec & Télécom Bretagne, France

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

Christophe Bidan is Professor at Supélec:

    Licence: "Programming models", 13 hours, L3 - first year of the engineer degree, Supélec, France

    Licence: "Foundations of computer science, data structures and algorithms", 40 hours including 18 hours of lecture, L3 - first year of the engineer degree, Supélec, France

    Master: "Information system", 6 hours, M1 - second year of the engineer degree, Supélec, France

    Master: "Software engineering", 22 hours, M1 - second year of the engineer degree, Supélec, France

    Master: "Supervision of student project", 9 hours, M1 - second year of the engineer degree, Supélec, France

    Master: "Introduction to security threat", 4.5 hours of lecture, M2 - third year of the engineer degree, Supélec, France

    Master: "Cryptography", 44 hours including 18 hours of lecture, M2 - third year of the engineer degree, Supélec, France

    Master: "Audit technique Web", 3 hours, M2 - third year of the engineer degree, Supélec, France

Sébastien Gambs is Associate Professor at Université de Rennes 1:

    Master: « Protection of Privacy », 32 hours including 16 hours of lectures, M2 - Master Pro SSI, université de Rennes 1, France

    Master: « Topics on Authentication », 16 hours of lectures, M2 - Master Pro SSI, université de Rennes 1, France

    Master: Supervision (50%) of the master thesis of Simon Boche, Antoine Rault and Mohammed Ghesmoune from February to June

Gilles Guette is Associate Professor at Université de Rennes 1:

    Master: « System and Network Security », 48 hours, M1 - second year of the engineer degree; speciality Automation, ESIR, France

    Master: « Supervision of student project », 12 hours, M1 - second year of the engineer degree; speciality Telecommunication and Network, ESIR, France

    Master: « Network Security », 40 hours, M2 - third year of the engineer degree; speciality Telecommunication and Network, ESIR, France

    Master: « System and Scripting », 24 hours, M2 - third year of the engineer degree; speciality Telecommunication and Network, ESIR, France

    Master: « Infrastructure Network », 20 hours, M2 - third year of the engineer degree; speciality Telecommunication and Network, ESIR, France

    Master: « Supervision of student project », 20 hours, M2 - third year of the engineer degree; speciality Telecommunication and Network, ESIR, France

    Master: « System and Network Security », 24 hours, M2 - third year of the engineer degree; speciality Software engineering, ESIR, France

Guillaume Hiet is Associate Professor at Supélec:

    Licence: "Programming models and languages", 4 hours, L3 - first year of the engineer degree, Supélec, France

    Licence: "Foundations of computer science, data structures and algorithms", 16 hours, L3 - first year of the engineer degree, Supélec, France

    Master: "Introduction to SSI", 9 hours of lecture, M1 - second year of the engineer degree, Supélec, France

    Master: "Supervision of student project", 9 hours, M1 - second year of the engineer degree, Supélec, France

Master: "Supervision of student project - Computer and electronic", 1 project, M1 - second year of the engineer degree, Supélec, France

Master: "Security in UNIX/Linux", 4.5 hours including 1.5 hours of lecture, M2 - third year of the engineer degree, Supélec, France

Master: "Intrusion detection sensors", 3 hours, M2 - third year of the engineer degree, Supélec, France

Master: "Alert correlation", 3 hours, M2 - third year of the engineer degree, Supélec, France

Master: "Securing an application vulnerable to buffer overflows", 8 hours, M2 - third year of the engineer degree, Supélec, France

Master: "Supervision of student project", 3 hours, M2 - third year of the engineer degree, Supélec, France

Master: "Introduction to UNIX/Linux", 3 hours, M2 - post-graduate training (master Cyber Security), Supélec, France

Master: "Securing Linux (LDAP authentication, ACL and disk encryption)", 6 hours, M2 - post-graduate training (master Cyber Security), Supélec, France

Master: "Security of Passwords", 3 hours, M2 - post-graduate training (master Cyber Security), Supélec, France

Master: "Security of Java", 3 hours, M2 - post-graduate training (master Cyber Security), Supélec, France

Master: "Intrusion detection sensors", 3 hours, M2 - post-graduate training (master Cyber Security), Supélec, France

Master: "Preparation for the ICTF competition in computer security", 12 hours, M2 - post-graduate training (master Cyber Security), Supélec, France

Master: "Securing UNIX/Linux", 7 hours of lecture, M2 - post-graduate training CQP, Supélec, Gif-sur-Yvette, France

Master: "Intrusion detection", 10 hours of lecture, M2 - post-graduate training CQP, Supélec, Gif-sur-Yvette, France

Master: "Intrusion detection (Introduction)", 20 hours including 8 hours of lecture, M2 - Master Pro SSI, université de Rennes 1, France

Master: "Intrusion detection (Introduction)", 10 hours including 4 hours of lecture, M2 - ESIR (Ecole supérieure d'ingénieur de Rennes), Université de Rennes 1, France

Guillaume Piolle is an Assistant Professor at Supélec:

Licence: « Programming models and languages », 7.5 hours, L3 - first year of the engineer degree, Supélec, France

Licence: « Foundations of computer science, data structures and algorithms », 18 hours, L3 - first year of the engineer degree, Supélec, France

Licence: « Logical systems and associated electronics », 36 hours, L3 - first year of the engineer degree, Supélec, France

Licence: « Software engineering », 18 hours, L3 - first year of the engineer degree, Supélec, France

Master: « Modelling, algorithms and programming », 20 hours, M1 - second year of the engineer degree, Supélec, France

Master: « Computer security and privacy », 11.5 hours, M1 - second year of the engineer degree, Supélec, France

Master: « Software development project », 12 hours, M1 - second year of the engineer degree, Supélec, France

Master: « C++ /Qt », 18 hours, M2 - third year of the engineer degree, Supélec, France

Master: « Security policies », 4.5 hours, M2 - third year of the engineer degree, Supélec, France

Master: « Network access protection », 3 hours, M2 - third year of the engineer degree, Supélec, France

Master: « Network supervision in Java », 18 hours, M2 - third year of the engineer degree, Supélec, France

Master: « Web development », 20 hours, M2 - third year of the engineer degree, Supélec, France

Master: « Symbolic Artificial Intelligence », 4.5 hours, M2 - third year of the engineer degree, Supélec, France

Master: « Law and computing », 11.5 hours, M2 - third year of the engineer degree, Télécom Bretagne and Supélec, France

Master: « Occupations at the law-computing interface », 4 hours, M2 - third year of the engineer degree, Télécom Bretagne, France

PhD : « Privacy and personal data protection », 9 hours, Matisse doctoral school, Rennes, France.

Master: « Legal aspects of computing », 1.5 hours, ENS Cachan (Rectorat de Rennes), Rennes, France.

Master: « Privacy and personal data protection on the Internet », 9 hours, URFIST Ouest – Université Rennes 2, France.

Nicolas Prigent is Associate Professor at Supélec:

Licence: « Programming », 20 hours, L3 - first year of the engineer degree, Supélec, France

Master: « Network programming », 15 hours, M2 - third year of the engineer degree, Supélec, France

Master: « Network programming », 11 hours, M2 - post-graduate training, Supélec, France

Master: « Computer security », 4 hours, M2 - third year of the engineer degree, Supélec, France

Master: « Computer security and pentesting », 10 hours, M2 - third year of the engineer degree, Supélec, France

Master: « Programming », 6 hours of lecture, M2 - third year of the engineer degree, Supélec, France

Master: « Python programming for computer security », 1.5 hours, M2 - third year of the engineer degree, Supélec, France

Master: « Operating systems », 12 hours of lecture, M2 - third year of the engineer degree, Supélec, France

Master: « Computer science (computability and complexity) » , 3 hours of lecture, M2 - third year of the engineer degree, Supélec, France

Master: « Operating systems (MS Windows) », 20 hours of lecture, M2 - post-graduate training, Supélec, France

Master: « Security », 17 hours including 9 hours of lecture, M2 - post-graduate training, Supélec, France

In-house training: "Computer networks", 6 hours including 3 hours of lectures

Eric Totel is Associate 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 SSI (Sécurité des systèmes d'information), 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 », 6 hours including 4.5 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: « 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

Master: Supervision (50%) of the master thesis of Erwan Godefroy

Master: Supervision (50%) of the master thesis of Pierre Karpman

Frédéric Tronel is Associate Professor at Supélec:

Licence: « Software engineering », 18 hours, L3 - first year of the engineer degree, Supélec, France

Master: « Operating systems », 10.5 hours of lecture, M2 - third year of the engineer degree, Supélec, France

Master: « Compilation », 21 hours including 9 hours of lecture, M2 - third year of the engineer degree, Supélec, France

Master: « Automatic reasoning », 6 hours including 4.5 hours of lecture, M2 - third year of the engineer degree, Supélec, France

Master: « Buffer overflow vulnerabilities (theory and practice) », 15 hours including 3 hours of lecture, M2 - third year of the engineer degree, Supélec, France

Master: « Virtualization », 1.5 hours of lecture, M2 - third year of the engineer degree, Supélec, France

Master: « Firewalls », 6 hours, M2 - third year of the engineer degree, Supélec, France

Master: « Firewalls », 3 hours, M2 - post-graduate training, Supélec, France

Master: « Makefile », 3 hours, M2 - post-graduate training, Supélec, France

Master: « Calculability in distributed systems », 7.5 hours including 6 hours of lecture, M2 Master research Rennes, France

Master: « Buffer overflow vulnerabilities (theory and practice) », 6 hours including 3 hours of lecture, M2 - third year of the engineer degree, Telecom Bretagne, France

Master: Supervision (50%) of the master thesis of Pierre Karpman

Valérie Viet Triem Tong is Associate Professor at Supélec:

Licence: « Programming », 9 hours, L3 - first year of the engineer degree, Supélec, France

Master: « Computer security », 13.5 hours including 4h30 of lecture, M2 - third year of the engineer degree, Supélec, France

Master: « Game Theory », 20 hours of lecture, M1 - second year of the engineer degree, Supélec, France

Master: « Foundations of computer science », 10.5 hours of lecture, M2 - third year of the engineer degree, Supélec, France

Master: « Spontaneous networking », 3 hours of lecture, 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: Valérie Viet Triem Tong is responsible for the module « Security of data and Infrastructure information systems », M2 - Master research, Rennes, France

Master: « Supervision of student training », 1 training period (6 months), M2 - Supélec, France

Emmanuelle Anceaume (CR CNRS):

> is co-responsible of the BIB and STAGE modules of the Master Research of the university de Rennes 1.

Michel Hurfin (CR Inria):

> Master: Supervision (50%) of the master thesis of Erwan Godefroy

> PhD and Post-Doc: in charge of junior researchers at Inria (training through research, relationships with doctoral schools, Support for thematic schools)

9.2.2. *Supervision*

The defense of the HDR of Eric Totel occurred in december 2012 while the defense of the PhD of Heverson Borba Ribeiro occurred in October 2012. At the end of 2012, fourteen theses are in progress.

> HDR: Eric Totel, « Techniques de détection d'erreur appliquées à la détection d'intrusion », Université de Rennes 1 , December 6th 2012.

> PhD: Heverson Ribeiro, « Exploiting Rateless Coding in Structured Overlays to Achieve Persistent Storage », université de Rennes 1, October 12th 2011, supervised by Emmanuelle Anceaume and Michel Hurfin.

> 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%).

> 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: Ahmed Gmati, « Redefining the concept of privacy in privacy-preserving data mining », started in December 2010, supervised by Michel Hurfin (50%) and Sébastien Gambs (50%).

> 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 1, started in March 2011, supervised by Sébastien Josse (50% - DGA-MI) and Ludovic Mé (50%).

> PhD in progress: Christophe Hauser, « Détection d'intrusions dans les systèmes distribués », started in October 2009, in coordination with Queensland University of Technology, Brisbane, Australia, supervised by Ludovic Mé (20%) and Frédéric Tronel (80%).

> 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: 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%).

Some members of the team also participate to the supervision of external PhD students. Sébastien Gambs is co-supervising Ai Thanh Ho (PhD student from the Université de Montréal, Canada), Mohammad Nabil Al-Aggan (PhD student from ASAP, Inria Rennes), Miguel Nunez del Prado Cortez (PhD student from LAAS-CNRS, Toulouse), and Moussa Traore (PhD student from LAAS-CNRS, Toulouse). Emmanuelle Anceaume is co-supervising Romaric Ludinard (PhD student from the Inria project Dionysos, Rennes).

9.2.3. *Juries*

Some members of the team have participated to PhD committees:

- Ludovic Mé was a member of the mid-term PhD committees for 3 PhD students of Télécom Sud Paris (Olivier Levillain, Nabil Hacem, and Gustavo Gonzales Granavillo). Télécom SudParis, April 2012.

- Ludovic Mé was a member of the HDR committee (reviewer) for the HDR of Carlos Aguilar entitled « Sécurité, protection de la vie privée et cryptographie : quelques contributions », Université de Limoges, XLIM, June 2012.

- Christophe Bidan was a member of the PhD committee (reviewer) for the PhD of Aymen Boudguiga entitled « Authentification dans les réseaux maillés sans-fils avec la cryptographie basée sur l'identité », Télécom SudParis, September 2012.

- Ludovic Mé was a member of the PhD committee (reviewer) for the PhD of Sheila Becker entitled « Conceptual Approaches for Securing Networks and Systems », Université du Luxembourg and Institut National Polytechnique de Lorraine, October 2012.

- Christophe Bidan was a member of the PhD committee (reviewer) for the PhD of Rim AKROUT entitled « Analyse de vulnérabilités et évaluation de systèmes de détection d'intrusions pour les applications Web », Université de Toulouse, October 2012.

- Emmanuelle Anceaume was a member of the PhD committee for the PhD of Cyril Cassagnes entitled « Architecture Autonome et Distribuée d'Adressage et de Routage pour la Flexibilité des Communications dans l'Internet », Université de Bordeaux - LaBRI, November 2012.

- Christophe Bidan was a member of the PhD committee (reviewer) for the PhD of Nassima KAMEL entitled « Sécurité des cartes à puce à serveur Web embarqué », Université de Limoges, December 2012.

9.3. Popularization

Sébastion Gambs has participated to the following activities:

- High schools: course on the security topic for the high-school professors involved in the new INS option in Bac S, École Normale Supérieure Cachan antenne de Kerlann, France.

- High schools: 5 presentations in high schools in the context of the event « à la découverte de la recherche ».

- High schools: under the supervision of the association « Math.en.Jeans », a presentation about « Definition and quantification of anonymity » has been done in Rennes and Auray.

Nicolas Prigent has participated to:

- the training of some high-school professors involved in the new INS option in Bac S, École Normale Supérieure Cachan antenne de Kerlann, France.

Guillaume Piolle has participated to:

- the training of some high-school professors involved in the new INS option in Bac S, École Normale Supérieure Cachan antenne de Kerlann, France.

DIONYSOS Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. 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.

8.1.2. Seminar presentations

- B. Tuffin. Title: "Adword auctions: impact of ranking strategies and competition on search engines revenues". Vrije Universiteit Amsterdam, The Netherlands, January 2012.
- B. Tuffin (joint work with P. Maillé and P. Coucheney). Title: "Introduction to the Network Neutrality Debate. Description of a related model of ISP Inter-Relations: Traffic Exchange, Revenue Sharing, and Disconnection Threat". Université de Montréal, Canada, Nov. 2012.
- B. Tuffin (joint work with P. Maillé and P. Coucheney). Title: "Introduction to the Network Neutrality Debate. Description of a related model of ISP Inter-Relations: Traffic Exchange, Revenue Sharing, and Disconnection Threat". The Chinese University of Hong-Kong, Nov. 2012.
- G. Rubino. Title: "Introduction to Quality of Experience". D2 Department, IRISA, Rennes, France. June 2012.
- G. Rubino. Title: "Time-dependent behavior of Markovian queues". Electrical Engineering, Engineering School, University of the Republic, Montevideo, Uruguay. Oct. 2012.
- G. Rubino. Title: "Time-dependent behavior of Markovian queues". Université de Montréal, Canada. Nov. 2012.

8.1.3. Editorial activity

- Raymond Marie is Associate Editor for Performance Evaluation.
- 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-coordinator of the "Analysis" track at the Winter Simulation Conference (WSC'12), Berlin, Germany, December 9-12, 2012. It will be the first time this event leaves North America.
- 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 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)

8.1.4. Program committees

Bruno Tuffin served as TPC member for

- 2nd International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH), Roma, Italy, 28-31 July 2012.

- 8th Euro-NF Conference on Next Generation Internet (NGI 2012), Blekinge Institute of Technology, Karlskrona, Sweden, June 25-27, 2012.

- First Workshop on Pricing and Incentive in Networks (W-PIN 2012), in conjunction with ACM SIGMETRICS/Performance 2012 , London, England, 11 June 2012.

- 9th International Workshop on Economics of Grids, Clouds, Systems and Services (GECON'2012), Berlin, Germany, 27-28 November 2012.

- Track on Simulation Methods and Tools, Winter Simulation Conference (WSC'12), Berlin, Germany, December 9-12, 2012.

Bruno Sericola served in the Program Committee of the following conferences:

- ASMTA 2012, 19th International Conference on Analytical and Stochastic Modelling Techniques and Applications, Grenoble, France, 4–6 June 2012.

- ACCESS 2012, 3rd International Conference on Access Networks, Venice, Italy, 24-29 June 2012.

- NOTERE/CFIP 2012 : Colloque Francophone sur l'Ingénierie des Protocoles - Nouvelles technologies de la répartition, Anglet, France, 29–31 October 2012.

Adlen Ksentini served as TPC member for

- IEEE Global Communication Conference, GLOBECOM 2012 Wireless Network Symposium, December 2012, Anaheim, California, USA

- IEEE International Conference on Communication, ICC 2012 Wireless Network Symposium, June 2012, Ottawa, Canada

- IEEE Wireless Communication and Networking Conference, April 2012, Paris, France

César Viho served as TPC member for

- 3rd International Conference on the Internet of Things (IoT2012), Oct 2012, Wuxi, China.

- 11th African Conference on Research in Computer Science and Applied Mathematics, Oct 2012, Algiers, Algeria.

- TTCN-3 User Conference June 2012, Bangalore, India

Yassine Hadjadj-Aoul served as TPC member for

- IEEE Global Communication Conference, GLOBECOM 2012 Wireless Network Symposium, December 2012, Anaheim, California, USA

- IEEE International Conference on Communication, ICC 2012 Wireless Network Symposium, June 2012, Ottawa, Canada

- IEEE Wireless Communication and Networking Conference, April 2012, Paris, France

Gerardo Rubino served as TPC member of

- CLEI 2012, XXXVIII Conferencia Latinoamericana de Informática (Latin-American Informatics Conference), Medellín, Colombia, October 1–5, 2012.

- RESIM (9th International Workshop on Rare Event Simulation) 2012, Trondheim, Norway, June 25–27, 2012.

8.1.5. Managing research activities

- G. Rubino is a member of the Steering Committee of the international conference QEST (Quantitative Evaluation of SysTems).

- G. Rubino is a member of the Steering Committee of the International Workshop on Rare Event Simulation (RESIM).

- B. Tuffin 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 partners including the CNRS, the École Polytechnique, the École normale supérieure, Inria, Nice Sophia Antipolis University and the University of Toulouse III - Paul Sabatier.

- 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.

- Adlen Ksentini is vice-chair of the Interest Group on QoE of the Technical Committee on Multimedia (IEEE Communication Society).

- César VIHO is responsible of the "Network, Telecommunication and Services" department of Irisa composed of 7 research teams. He is member of the Scientific advisory board (Conseil scientifique) of Irisa. He is now deputy-director of the MATISSE Doctoral school of Electronics, Computer Sciences and Mathematics. In the context of international relations of Irisa, he is responsible of relations with Africa area universities and research centers.

- 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 is the Inria representative at the GIS SISCOM, an association composed of the four main academic institutions in Western France in the area of information and communication sciences: the European University of Brittany-UEB, the Institut TELECOM, the CNRS and Inria, to promote the excellence of the ICT research in Brittany.

8.2. Teaching - Supervision - Juries

8.2.1. 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.

8.2.2. Supervision

PhDs

- Sebastián Basterrech, title: "Learning with Random Neural Networks and Reservoir Computing models"; advisor: G. Rubino; date: November 15, 2012.

- Tran Hoang-Hai, title: " Auctions for competitive network providers "; advisor: B. Tuffin; date: April 2012.

PhD in progress:

- Romaric Ludinard; title: "Data-aggregation for large-scale distributed networks"; PhD started in April 2011; advisors: B. Sericola from Inria/Dionysos and E. Anceaume from Inria/Cidre

- 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 sarted in January 2012; advisors: B. Sericola and A. Ksentini

- Samira Saggadi; title: "Rare event simulation with application to telecommunications"; PhD started in November 2008; advisor: Bruno Tuffin

- Pablo Sartor; title: "Diameter-constrained reliability: exact analysis and simulation techniques"; PhD started on October 2012; advisors: G. Rubino from Dionysos, P. Robledo from the university of the Republic, Uruguay (joint PhD between this university and the university of Rennes 1, France)

- Laura Aspirot; title: "Fluid limits in performance evaluation"; thesis started in 2010; advisors: Gerardo Rubino from Dionysos, and Ernesto Mordecki from the university of the Republic, Uruguay (PhD of the university of the Republic, Uruguay)

- Leslie Murray; title: "Monte Carlo methods for rare event analysis"; thesis started in 2009; advisors: Gerardo Rubino from Dionysos, and Pablo Robledo from the university of the Republic, Uruguay (PhD of the PEDECIBA, Uruguay)

- 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

- Nanxing Chen; title: "On passive approach for interoperability testing"; PhD started on October 2009; advisor: C. Viho

8.2.3. Juries

- B. Tuffin was a member of the Jury of HDR of Sandrine Vaton, from Telecom Bretagne; title: "Mesure et Analyse du Trafic de Réseaux : Théorie et Pratiques"; date: July 13, 2012.
- B. Tuffin was a member of the jury of PhD of Bahar Kaynar, from Vrije University, The Netherlands; title: "Rare Event Simulation Techniques for Stochastic Design Problems in Markovian Settings"; date: January 2012.
- B. Tuffin was a member of the jury of PhD of Lorenzo Maggi, from Eurecom, France; title: "Cooperative games for Markov decision processes with applications to telecommunications"; date: October 2012.
- B. Tuffin was a member of the jury of PhD (rapporteur) of Pablo Gabriel Romero Rodriguez from Universidad de la República, Montevideo, Uruguay; title: "Mathematical Analysis of Scheduling Policies in Peer-to-Peer Video Streaming Networks"; date: November 2012.
- G. Rubino was a member of the Jury of HDR of Sandrine Vaton, from Telecom Bretagne; title: "Mesure et Analyse du Trafic de Réseaux : Théorie et Pratiques"; date: July 13, 2012.
- G. Rubino was the President of the Jury of PhD of Oscar Olvera Irigoyen, from Telecom Bretagne; title: "Hybrid Home Networks Links Quality Supervision"; date: December 20, 2012.
- C. Viho was the President of the Jury of HDR of Frederic Weis, from University of Rennes 1; title: "Exploiting system approaches in wireless networks"; date: June 6, 2012.
- C. Viho was the President of the Jury of HDR of Laurent Toutain, from Telecom Bretagne; title: "Towards a polymorphic Internet"; date: December 17, 2012.
- C. Viho was the President of the Jury of PhD of Tran Hoang Hai, from the University of Rennes 1; title: "Auctions for competitive Network providers"; date: April 2, 2012.
- C. Viho was a member/reviewer of the Jury of PhD of Ubaid Abbassi, from University of Bordeaux I; title: "Quality-Aware Live and on-Demand Video Streaming in P2P Networks"; date: April 25, 2012.
- C. Viho was the President of the Jury of PhD of Ahmed Ayadi, from Telecom Bretagne; title: "Energy-efficient reliable transport protocols for IP-based low power wireless networks"; date: June 25, 2012.
- C. Viho was a member/reviewer of the Jury of PhD of Jean-Michel Combes, from Telecom Sud Paris; title: "Utilisation d'identifiants cryptographiques pour la sécurisation IPv6"; date: September 28, 2012.
- C. Viho was the President of the Jury of PhD of Heverson Ribeiro, from the University of Rennes 1; title: "Exploiting Rateless Coding in Structured Overlays to Achieve Persistent Storage"; date: October 12, 2012.
- C. Viho was the President of the Jury of PhD of German Castignani, from Telecom Bretagne; title: "Exploiting network diversity"; date: November 7, 2012.
- C. Viho was the President of the Jury of PhD of Sebastian Basterrech, from University of Rennes 1; title: "Learning with Random Neural Networks and Reservoir Computing Models"; date: November 15, 2012.
- C. Viho was a member of the Jury of PhD of Kheira Bekara, from Telecom Sud Paris; title: "Protection des données personnelles côté utilisateur dans le E-commerce"; date: December 18, 2012.

8.3. Popularization

- G. Rubino makes regular presentations to high school students about the research work in general, and specific technical topics in particular. Titles of 2012:
    - "Utilisation du hasard pour résoudre des problèmes déterministes"
    - "Internet comme problème de recherche"
    - "Grands défis en mathématiques : la conjecture de Riemann"
    - "Grands défis en mathématiques : la conjecture P $\neq$ NP"

8.4. Standardization activities

Participants: Anthony Baire, Arulnambi Nandagoban, César Viho.

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 our contributions focus today mainly on IPv6 and related protocols such as 6LowPAN and CoAP.

8.4.1. 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 and the TTA (Telecommunications Technology Association) in Korea.

In 2010 we started a collaboration with the IPSO alliance in order to address the usage of IPv6 on smart objects based on the IEEE 802.15.4 link layer (for instance, sensor networks). These network have special constraints (limited power, packet loss, ...) and new protocols are designed at IETF (6LowPAN, RPL) to allow using IPv6 with these constraints. We are on the way to provide a certification program for 6LoWPAN.

DISTRIBCOM Project-Team

9. Dissemination

9.1. Scientific Animation

A. Benveniste is the Scientific Director of the CominLabs Excellence Center (Laboratoire d'Excellence, part of the program *Investissements d'Avenir* of the french government). He is member of the Strategic Advisory Council of the Institute for Systems Research, Univ. of Maryland, College Park, USA. He is president of the Scientific Committee of the *Common Bell Labs Inria Laboratory*. He is member of the Scientific Council of France Telecom. [4] Albert Benveniste is a member of the French Academy of Technologies.

Loïc Hélouët co-organizes the 68NQRT weekly seminar on formal methods. This seminar proposes around 40 talks each year. For more details, see http://68nqrt.inria.fr.

Claude Jard was the scientific director of the research of the Brittany extension of the ENS Cachan. He recently moved to Nantes, where he is the director of the CNRS cluster Atlanstic, gathering the public laboratories in ITCS in Pays de la Loire.

Eric Fabre leads the High Manageability joint team of Inria and Alcatel Lucent.

Axel Legay Co-organized the quantitative methods workshop at formal methods days. He also co-organized the winter school on quantitative methods at IT Copenhagen.

Guillaume Aucher was a PC member of AAMAS 2013, an auxiliary reviewer of TARK 2013, and served as a reviewer for the Logic Journal of the IGPL. He has been elected a member of the scientific council of the University of Rennes 1.

François Schwarzentruber was an auxiliary reviewer of TARK 2013 and AAMAS 2013.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Guillaume Aucher, Programmation Impérative 1, 40h eq. TD, L1, University of Rennes 1, France

Licence : Guillaume Aucher, Algorithms for graphs, 20h eq. TD, L3, University of Rennes 1, France

Doctorat : Enseignant, titre du cours, nombre d'heures en $\sqrt{©}$quivalent TD, universit$\sqrt{©}$, pays

Licence : Loïc Hélouët, JAVA courses, 32 h eq TD, L1, INSA, France

Master : Loïc Hélouët, Algorithms courses to students at the aggregation level, 16 h eq TD, aggregation, ENS Cachan-Antenne de Bretagne, France

Master : Eric Fabre, Distributed Algorithms and Distributed Systems, 12h eq. TD, M2 Rech. Comp. Sc., Univ. Rennes 1, France

Master : Eric Fabre, Information Theory, 15h eq. TD, M1, ENS Cachan (Rennes), France

Licence : Claude Jard, Formal languages, Distributed Computing, 44 h eq TD, L1, ENS Cachan-antenne de Bretagne, France

Master : Claude Jard, Algorithms courses to students at the aggregation level, 16 eq TD, aggregation, ENS Cachan-antenne de Bretagne, France

Licence: François Schwarzentruber, Introduction to algorithms (ALGO1), 32h eq TD, L3, ENS Cachan-antenne de Bretagne, France

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[4]Only facts related to the activities of DistribCom team are mentioned. Other roles or duties concern the S4 team, to which A. Benveniste also belongs.

Master: François Schwarzentruber, Software design and verification (CVFP), 32h eq TD, M1, ENS Cachan-antenne de Bretagne, France

Licence and master: François Schwarzentruber, Seminars for students (SEMIN1, SEMIN2), 36h eq TD, L3, M1, ENS Cachan-antenne de Bretagne, France

Master: François Schwarzentruber, Complexity theory, 6h eq TD, agrégation, ENS Cachan-antenne de Bretagne, France

Master: François Schwarzentruber, Introduction to discrete mathematics. 9 eq TD, University of Rennes 1, France

Master: François Schwarzentruber, Practical sessions in algorithmics. 6 eq TD, agrégation, ENS Cachan-antenne de Bretagne, France

9.2.2. Supervision

PhD : Ajay Kattepur, Flexible Quality of Service Management of Web Services Orchestrations, Université de Rennes 1, Nov. 8, 2012, Albert Benveniste, Claude Jard

PhD in progress : Rouwaida Abdallah, Synthèse à partir de scénarios, February 2010, Loïc Hélouët, Claude Jard

PhD in progress : Aurore Junier, Network calculus applied to network stability analysis, sept. 2010, C. Jard, A. Bouillard.

PhD in progress : Carole Hounkonou, A methodology for joint network and service self-diagnosis, Oct. 2009, Eric Fabre.

PhD in progress: Cyril Jegourel, statistical model checking for rare-event systems, Axel Legay.

PhD in progress : Bastien Maubert, Logical Foundations of Games with Imperfect Information, University of Rennes 1, 09/2010, Guillaume Aucher and Sophie Pinchinat (S4, Irisa)

PhD : Loig Jezequel, Distributed Optimal Planning in Large Distributed systems, ENS Cachan, Dec. 2012, Eric Fabre

<div align="center">**DREAM Project-Team**</div>

8. Dissemination

8.1. Scientific Animation

8.1.1. Journal editorial board

- *AAI: Applied Artificial Intelligence* (M.-O. Cordier).
- *ARIMA: Revue Africaine de la Recherche en Informatique et en Mathématiques Appliquées* (M.-O. Cordier).
- *Revue I3* (M.-O. Cordier).
- *Revue JESA (Journal Européen des Systèmes automatisés)* (M.-O. Cordier).
- *Interstices webzine* (M.-O. Cordier).
- *Bulletin AFIA* Invited editors of the special issue on "Intelligence Artificial and Agronomy": T. Guyet, M.-O. Cordier

8.1.2. Conference program committees and organizations

- Program committee member of KR'2012, ECAI 2012, RFIA'2012 (M.-O. Cordier)
- Program committee member of RFIA'2012 (T. Guyet).
- Program committee member of ECAI 2012, EGC 2013 (R. Quiniou).
- Program committee members of FOSTA workshop at EGC 2013 (T. Guyet, R. Quiniou).
- Organization committee member of CIDN workshop at EGC 2013 (T. Guyet).
- Organization committee members of EGC 2014 scheduled in Rennes (T. Guyet, R. Quiniou).
- Steering Committee of RFIA'2014 (T. Guyet).

8.1.3. Scientific and administrative boards

- ECCAI fellow + Honorific member of AFIA (Association Française d'Intelligence Artificielle): M.-O. Cordier
- Member of " Agrocampus-Ouest" scientific board: M.-O. Cordier.
- Member of "Conseil d'administration de l'ISTIC", "Comité scientifique de l'ISTIC", "Direction scientifique de l'Irisa": M.-O. Cordier
- Member of the "AAAI" award committee: M.-O. Cordier.
- Member of the "Prix de thèse AFIA 2012" award committee (selects the best French PhD thesis in the Artificial Intelligence domain): M.-O. Cordier.
- Chair of the INRA CSS-MBIA (Commission scientifique spécialisée "Mathématiques, Biologie et Intelligence Artificielle"): M.-O. Cordier.
- Member of the CoNRS (Comité national recherche scientifique (since october 2012) : M.-O. Cordier
- Member of the AFIA board: T. Guyet.
- Member of the COREGE (Research Committee-COmité de la REcherche du Grand Etablissement) of Agrocampus-Ouest: T. Guyet.
- External evaluator for the portuguese FCT (Portuguese Foundation For Science and Technology): T. Guyet.
- Member of the Payote-Network board: T. Guyet.

8.1.4. Misc

- Expert for specifying "methods and tools for exploring and analyzing simulation results" in the INRA inter-department project "Paysage Virtuel" (Virtual Landscape) (T. Guyet).
- Organization of the "Turing day" in october 2012 (M.-O. Cordier)
- Invited talk at CIDN workshop at EGC 2012 (R. Quiniou).
- Invited talk at Assises du GDR I3, Porquerolles, 2012, May 10 (Y. Moinard).
- Seminar in the Reasoning and Decision theme at IRIT (Toulouse, 2012, june 15) (Y. Moinard).
- Invited lectures at the "Logic Summer School", Canberra, Australie, december 2012 (M.-O. Cordier)

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Many members of the EPI DREAM are also faculty members and are actively involved in computer science teaching programs in ISTIC, INSA and Agrocampus-Ouest. Besides these usual teachings DREAM is involved in the following programs:

> Master: *Module DSS: Apprentissage sur des données séquentielles symboliques*, 10 h, M2, ISTIC University of Rennes (R. Quiniou).
>
> Master: *Module OCI : Interfaces graphiques en C++/GTKMM*, M2, ISTIC University of Rennes (T. Guyet),
>
> Master: *Géoinformation*, M2, Agrocampus Ouest Rennes (L. Bonneau, T. Guyet, K. Sedki)

8.2.2. Supervision

> PhD in progress: Tassadit Bouadi, "Analyse interactive de résultats de simulation et découverte de connaissances. Application à l'aide à la décision dans le domaine agroécologique pour l'amélioration de la qualité des eaux des bassins versants", january 1st 2010, co-supervisors Marie-Odile Cordier, René Quiniou and Chantal Gascuel, ANR project Acassya grant
>
> PhD in progress: Yulong Zhao, "Modélisation d'agroécosystèmes dans un formalisme de type systèmes à événements discrets et simulation de scénarios utilisant des outils de model-checking. Application à l'étude des impacts des changements climatiques et des pratiques agricoles sur les flux de nutriments vers les eaux de surface.", october 1st 2010, supervisor Marie-Odile Cordier and Chantal Gascuel
>
> PhD in progress: Philippe Rannou, "Modèle rationnel pour humanoïdes virtuels", october 1st 2010, co-supervisors Marie-Odile Cordier and Fabrice Lamarche

8.2.3. Juries

- Commitee member of Romain Tavenard's PhD defence (Univ. Rennes1): M.-O. Cordier
- Commitee member of Nuno Belard's PhD defence (Univ. Toulouse): M.-O. Cordier
- Commitee member of Annie Foret's HDR defence (Univ. Rennes1): M.-O. Cordier
- Commitee member of Vincent Armant's PhD defence (Univ. Paris11): M.-O. Cordier
- Committee member of Christophe Salperwyck's PhD defence (Université de Lille): R. Quiniou.
- External member of the INRA jury for the recruitment of computer science engineers: T. Guyet

DYLISS Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Administrative functions: scientific committees, journal boards

- Scientific Advisory Board of ITMO Genetics Genomics and Bioinformatics [J. Nicolas].
- Scientific Advisory Board of GDR BIM " Molecular Bioinformatics"[J. Nicolas].
- Member of the section 01 of the Comité National de la Recherche Scientifique [A. Siegel]
- Member of the IRISA laboratory council [F. Coste]
- Scientific Advisory Board of Biogenouest [J. Bourdon, J. Nicolas, A. Siegel].
- Steering committee of the International Inference community (ICGI) [F. Coste]
- Academic editor: Plos One [J. Bourdon]
- Recruitment committees: junior and senior research (CNRS) [A. Siegel], assistant professor (Irccyn, Univ. Nantes) [A. Siegel, D. Eveillard], professor (Lille) [A. Siegel]
- Referee: IET Systems Biology, Bioinformatics, BMC Bioinformatics, PLoS One, Annals of combinatorics, Medical & Biological Engineering & Computing, Theoretical Computer Science, Algorithmic Learning Theory '12
- Member of SCAS (Service Commun d'Action Sociale) of Univ. Rennes 1 [C. Belleannée]

8.1.2. JOBIM

JOBIM JOBIM is the scientific yearly appointment of the French-speaking bioinformatics community. The official languages of the conference are English and French. It has been organized in Rennes this year from 3 to 6 July 2012 (P. Peterlongo, C. Lemaitre and teams Genscale and Dyliss) and chaired by F. Coste and D. Tagu (Inra). Invited speakers were David B. Searls, University of Pennsylvania, Hugues Roest Crollius, Ecole Normale Supérieure, Pierre Baldi, University of California in Irvine, Ivo Hofacker, Institute for Theoretical Chemistry, Toni Gabaldon, Centre for Genomic Regulation, Martin Vingron, Max Planck Institute for Molecular Genetics and Bertil Schmidt, Johannes Gutenberg University Mainz. The program contained 33 papers (acceptance rate 50%) grouped into ten scientific sessions including sequence analysis, the study of protein interactions, and works on regulation and evolution.

[25] [Online publication]

8.1.3. Ecole Jeunes Chercheurs en Informatique-Mathématiques (GDR IM)

The GDR Informatique Mathématique has organized a young researcher seminar from 19 to 23 March in Rennes (Chair: A. Siegel. Organization M.-N. Georgeault and E. Lebret) http://ejcim2012.irisa.fr. It gathered 93 participants and proposed several courses including biological sequence linguistics (J. Nicolas and F. Coste), time modelling for dynamic systemchecking (D. Eveillard) and practical applications of discrete dynamic systems (J. Bourdon and A. Siegel).

8.1.4. Local meetings

- **IDEALG annual meeting** The IDEALG annual meeting has been organized in Irisa/Inria Rennes from 27 to 28 September 2012. Dyliss is participating to bioinformatics studies for the development of an integrated platform on seaweed omics data.

- **Seminar** A weekly seminar of bioinformatics is organized within the laboratory. Attendees are member of the symbiose team, biologists from Brittany and computer scientists from the laboratory. [web site].

8.1.5. Conference program committees

- Cap'2012 [F. Coste]
- JOBIM [F. Coste/co-head, J. Bourdon, J. Nicolas, A. Siegel]
- ICGI'12 [F. Coste]
- Numeration [A. Siegel]

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

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

Licence: C. Belleannée, Architecture des ordinateurs, 50h, L3 informatique, Rennes1 France.

Licence: C. Belleannée, Bases de données, 21h, L3 Miage par alternance, Rennes1 France .

Licence: G. Andrieux, TIC : Technologies de l'information et de la communication, 32h, L1, Univ. Rennes 1, France.

Licence : G. Garet, Office automation, 20h, L1, Univ. Rennes 1, France.

Licence : G. Garet, Functional algorithm, 24h, L1, Univ. Rennes 1, France.

Licence : G. Garet, Programming, 22h, L3, Univ. Rennes 1, France.

Licence: V. Picard, Scheme 14h, L1, INSA Rennes, France

Licence: V. Picard, Architecture et systèmes, 24h, L3, ENS Rennes/Univ. Rennes 1, France

Licence: V. Picard, Initiation Unix, 2h, L3, ENS Rennes, France

Licence: S. Prigent, learning PHP/SQL, 12h, L3 (3ème année ingénieur), Ensai, Rennes, France

Licence: S. Prigent, Database, 42h, L1, Ensai, Rennes, France

Licence: S. Prigent, An introduction to R, 9h, L1, Ensai, Rennes, France

Master: V. Picard, Préparation à l'agrégation de mathématiques option D: épreuve de modélisation, 12h, L2, ENS Rennes/Univ. Rennes 1, France

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

Master: C. Belleannée, Architecture matérielle et interface au système, 28h, M2 informatique, Rennes1 France

Master: F. Coste, Apprentissage Supervisé, 15h, M2 Informatique, Univ. Rennes 1, France

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

Doctorat : J. Bourdon, Applications de systèmes dynamiques discrets, 2h, Ecole Jeunes Chercheurs en Informatique Mathématique, Rennes, France

Doctorat : J. Bourdon, Réseaux biologiques semi-quantitatifs : dynamique et propriétés émergentes , 2h, Ecole thématique OSUR sur les systèmes complexes, Rennes, France

Doctorat : F. Coste & J. Nicolas, Linguistique des séquences biologiques, 4h, Ecole Jeunes Chercheurs en Informatique Mathématique, Rennes, France

Doctorat: D. Eveillard, Modélisation du temps pour la vérification des systèmes dynamiques, 2h, Ecole Jeunes Chercheurs en informatique mathématique, Rennes, France.

Doctorat: D. Eveillard, From Omics data to models, 4h, Ecole Thématique Ecologie et Génomique Environnementale, Aussois, France.

Doctorat : A. Siegel, Introduction aux systèmes dynamiques, 2h, Ecole Jeunes Chercheurs en Informatique Mathématique, Rennes, France

8.2.2. Seminars

- J. Bourdon , *Quelques outils pour étudier la dynamique des réseaux génétiques*, 10th days of the GenOuest platform: biological networks, 2012.
- F. Coste, *Characterization of protein families: overpassing HMM expressivity*, second meeting Idealg, Rennes sept. 2012
- D. Eveillard, *Temporal and quantitative behaviors of biological systems - Can we learn something by modeling via a systems biology viewpoint ?*, séminaire de la station biologique de Roscoff, Roscoff.
- D. Eveillard, *Quantitative modeling of biological systems*, Biocore seminar, Inria Sophia-Antipolis.
- G. Andrieux, *Analyzing Large Models of TGFbeta with Cadbiom and the Process Hitting*, Ecole Jeunes Chercheurs en Informatique Mathématique 2012, Rennes.
- S. Prigent, *Methods of metabolic network reconstruction: corresponding contributions*, second meeting Idealg, Rennes sept. 2012
- S. Prigent, *Reconstruction de réseaux métaboliques par la programmation logique*, Ecole Jeunes Chercheurs en Informatique Mathématique 2012, Rennes.
- S. Prigent, *Que nous apprend la reconstruction d'un réseau métabolique ?*, 10th days of the genouest platform: biological networks, 2012.
- A. Siegel, *A review on Pisot conjecture, coincidence conditions and related graphs*, TU Wien, department of mathematics, 2012.
- A. Siegel, *Using contraints programming to investigate the robustness of biological networks reconstruction*, University of Chile, 2012.
- A. Siegel, *Quelques approches formelles pour tester la robustesse de processus de reconstruction de réseaux*, Séminaire du réseau NetBio, 2012.
- V. Wucher. *Modélisation d'un réseau de régulation d'ARN pour prédire des fonctions de gènes impliqués dans le mode de reproduction du puceron du pois*. Journées "Bioinformatique des ARNnc", Toulouse.

8.2.3. Supervision

HdR : Jérémie Bourdon, *Sources probabilistes : des séquences aux systèmes*, Université de Nantes, 5 décembre 2012 [28].

PhD in progress : Oumarou Abdou-Arbi *Analyse Automatisée et générique des réseaux métaboliques en nutrition*, started in October 2010, supervised by A. Siegel and T. Tabsoba (Burkina-Faso).

PhD in progress : Geoffroy Andrieux, *Discrete approach modeling of biological signaling pathway*, started in October 2010, supervised by N. Théret (Inserm) and M. Le Borgne

PhD in progress : Andres Aravena, *Introduire des approches combinatoires dans des modèles probabilistes pour la découverte d'évènements de régulation d'un système biologique à partir de données hétérogènes*, started in July 2011, supervised by A. Maass (CMM, University of Chile) and A. Siegel.

PhD in progress : Gaëlle Garet, *Discovery of enzymatic functions in the framework of formal languages*, started in October 2011, supervised by J. Nicolas and F. Coste.

PhD in progress : Clovis Galiez, *Syntactic modelling of protein structure.*, started in October 2012, supervised by F. Coste.

PhD in progress : Vincent Picard, *Analyse dynamique d'algorithmes et dynamique symbolique pour l'étude de modèles semi-quantitatifs en biologie des systèmes*, started in September 2012, supervised by A. Siegel and J. Bourdon.

PhD in progress : Sylvain Prigent, *Modélisation par contraintes pour le contrôle génomique et physiologique de l'adaptation des algues brunes à la salinité de l'eau*, started in October 2011, supervised by A. Siegel and T. Tonon (UMR 7150, station biologique de Roscoff)

PhD in progress : Santiago Videla, *Applying logic programming to the construction of robust predictive and multi-scale models of bioleaching bacteria*, started in November 2011, supervised by A. Siegel

PhD in progress : Valentin Wucher, *Modélisation d'un réseau de régulation d'ARN pour prédire des fonctions de gènes impliqués dans le mode de reproduction du puceron du pois*, started in November 2011, supervised by J. Nicolas and D. Tagu (INRA)

8.2.4. Juries

- *Member of habilitation thesis jury*. J. Bourdon, Université de Nantes [A. Siegel].
- *Member of Ph-D thesis jury*. P. Vanier, Université de Marseille [A. Siegel]. M. Noual, ENS Lyon [A. Siegel]. P. Bordron, Univ. Nantes [D. Eveillard]
- *Referee of Ph-D thesis*. S. Thiele, University of Potsdam [A. Siegel]. N. Loira, University of Bordeaux [A. Siegel].

ESPRESSO Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Invited Lectures

Jean-Pierre Talpin gave a series of invited lectures on synchronous programming and on Polychrony at the Ecole Centrale de Pékin and at Beihang University, May 2012, in Beijing, China.

Jean-Pierre Talpin was invited at the 2012 ACM/IEEE Conference on Logic in Computer Science, in June 2012, Dubrovnik, to receive the ACM/IEEE LICS Test of Time Award. He gave a short presentation on the technical challenges and theoretical breakthroughs of his awarded paper: "A type and effect discipline", with his co-author Pierre Jouvelot.

Jean-Pierre Talpin participated to the Dagstuhl meeting on Architecture-Driven Semantic Analysis of Embedded Systems in June 2012, and presented the tools developped by ESPRESSO for co-modeling embedded software architectures with Polychrony.

Jean-Pierre Talpin gave an invited presentation on extending AADL with a timed annex at the AADL standardisation committee and SAE conference, October 2012 in Phoenix, a followup of which is the definition by the ESPRESSO project-team of a synchronous annex for AADL.

8.1.2. Conferences

Jean-Pierre Talpin is a member of the steering committee of the ACM-IEEE conference on methods and models for co-design (MEMOCODE) and of the editorial board of the EURASIP Journal on Embedded Systems. He served as technical program committee member for the following conferences:

HLDVT'11   http://www.hldvt.com/11
SAC'11   http://www.acm.org/conferences/sac/sac2011
SIES'11   http://www.mrtc.mdh.se/sies2011

Jean-Pierre Talpin co-organized with Elisabeth Lebret the 19th. edition of the synchronous programming workshop, held in Le Croisic, November 2012 (http://synchron2012.inria.fr).

Thierry Gautier served as technical program commitee member for the conference ESLsyn 2012 (http://www.ecsi.org/eslsyn2012) and MEMOCODE 2012 (http://memocode.irisa.fr/2012/MEMOCODE%202012.html).

8.2. Teaching - Supervision - Juries

8.2.1. Juries

Jean-Pierre Talpin served as referee and president at the thesis defense of Mikel Cordovilla, entitled "Environnement de développement d'applications multi-périodiques sur plateforme multi-cœur: la boîte à outils SchedMCore", held on April 2, 2012 at ONERA.

Paul Le Guernic served as examiner at the Habilitation thesis defense of Abdoulaye Gamatié, entitled "Design and analysis for multi-clock and data-intensive applications on multiprocessor systems-on-chip", held on November 15, 2012 at Université de Lille 1. He served also as referee at the thesis defense of Michaël Lafaye, entitled "Modélisation de plate-forme avionique pour exploration de performance en avance de phase", held on November 19, 2012 at Télécom ParisTech.

Jean-Pierre Talpin served on the Professor selection committee of ENSEEIHT in May 2012.

Thierry Gautier served on an Associate Professor selection committee of Université de Rennes 1 in May 2012.

Loïc Besnard served as president in a jury for the competitive selection of engineers at CNRS in October 2012.

Paul Le Guernic served as "rapporteur" of Inria Research Center Rennes - Bretagne-Atlantique at the Regional symposium of Higher Education and Research (Assises territoriales de l'enseignement supŕieur et de la recherche) in Nantes and Rennes.

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

8. Dissemination

8.1. Scientific Animation

Christophe Collewet

- Member of the irstea evaluation committee
- Member of the ecotechnologies department committee

Patrick Héas

- Seminar Image group GREYC, December 2012
- Reviewing in IEEE trans. on Geosciences and Remote Sensing (TGRS) and in IEEE trans. on Image Processing (IP)

Dominique Heitz

- Member of IRSTEA "Comité directeur des Systèmes d'Information"
- Member of IRSTEA "Comité Technique Spécial"
- Responsible of the IRSTEA ACTA Team

Cédric Herzet

- Organization commitee "Journées "Apprentissage et Parcimonie" October 2012
- Technical program committees of ICASSP 2013 and SPARS 2013
- project reviewer for the "Fond National de la Recherche Scientique" (FNRS), Belgique

Etienne Mémin

- Invited conference "Conf'luences" IMFT, Toulouse, April 2012.
- Invited conference "Journée LEFE/MANU de l'INSU", ENS Paris, March 2012
- Invited conference "Workshop on Tolopology in Fluid flow visualization", Pisa, June 2012
- Seminar LFD-FIUBA, Buenos Aires, November 2012
- Reviewer of FET Open projects
- Reviewer for NWO (Netherlands Organisation for Scientific Research) Vici projects
- Associate editor of the Journal of Computer Vision
- Associate editor of the journal of Image and Vision Computing
- Scientific committee and Organisation committee of the International Conference on Ensemble Methods in Geophysical Sciences, Toulouse, November 2012
- Reviewing for Tellus-A, IEEE Im. Proc., IEEE trans. Pat. Anal. Mach. Intel. , Int. Journ. Comp. Vis., Im. Vis. Comp., Exp in Fluids, ECCV'12
- Responsible of the "Commission Développement Technologique" Inria-IRISA Rennes
- member of the "Commission Personnel" Inria-IRISA Rennes

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

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

Master : Patrick Héas, Modélisation Statistique des Images, Mastere SISEA, 15h , niveau M2, Université de Rennes 1.

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

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

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

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

8.2.2. Supervision

PhD & HdR :

PhD : Christophe Avenel, Suivi de courbes libres fermées déformables par processus stochastiques, Université de Rennes I, 08/12/2011, Etienne Mémin et Patrick Pérez

PhD : Pierre Dérian, Estimation multi-échelle de mouvements de Fluides turbulents dans des séquences d'images,Université de Rennes I, 07/11/2012, Patrick Héas et Etienne Mémin

PhD in progress : Ioana Barbu, Estimation volumique de mouvement fluides /'a partir de séquence d'images, 01/11/2010, Cédric Herzet et Etienne Mémin

PhD in progress : Sébastien Béyou, Filtre d'ensemble pour l'assimilation de données images, 01/11/2010, Francois Le Gland et Etienne Mémin

PhD in progress : Qui Dao, Commande des écoulements fluides par asservissement visuel, 01/10/2010, Christophe Collewet

PhD in progress : Cordelia Robinson, Assimilation de données images dans un modèle LES : application à la reconstruction d'écoulements turbulents tridimensionnels , 01/11/2011, Dominique Heitz et Etienne Mémin

PhD in progress : Yin Yang , Assimilation d'images par techniques variationnelle ensembliste , 01/11/2011, Etienne Mémin

PhD in progress : Véronique Souchaud, Estimation directe de décomposition orthogonales propres à partir de séquences d'images, 01/11/2009, Cédric Herzet et Etienne Mémin

8.2.3. Juries

Etienne Mémin

- Président du Jury de th/'ese de Pierre Alain, Université de Bretagne Sud, mai 2011.
- Examinateur Jury HDR d'Arthur Vidard, Université J. Fourier, decembre 2012.

GENSCALE Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Meeting organization and scientific animation

- **JOBIM** the annual french conference on computational biology was organised this year by Genscale. C. Lemaitre and P. Peterlongo coordinated the organisation comittee. JOBIM 2012 took place from the 3rd to the 6th of June at Université Rennes 1 and gathered 375 participants mainly from France and french-speaking countries, bringing together researchers from the mathematical, computational and life sciences. The program was of high quality, including 7 international key-note speakers and 33 selected communications, along with 112 exposed posters and 6 industrial partners, participating through communications and exhibitions. This conference is a cornerstone in the French (speaking) computational biology research. It enables the whole community to meet, to share scientific results and to organize the discipline. Moreover, it provided a large visibility to the host city and to the organizing team. [web site: http://jobim2012.inria.fr/].

- **Seminar** A weekly seminar of bioinformatics is organized within the laboratory. Attendees are member of the ex-symbiose team (now teams Genscale, Dyliss and Genouest), biologists from Brittany and computer scientists from the laboratory. [web site: http://symbiose.irisa.fr/symbiose-seminars]

- **Discussion group on NGS** This working group brings together biologists and computational scientists, mainly from Rennes. Approximatively every two months, it enables to share experiences, raise new questions or propose news solutions about NGS issues. This groups is highly appreciated, between 40 and 50 persons attend this events and some from distant sites (Roscoff, Nantes) follow the meeting through visioconference. [web site: http://ngs.genouest.org/]

- **Sessions organised at ISMP 2012** Sessions "Bioinformatics and Combinatorial Optimization I" and "Combinatorial Optimization: Distance geometry applications" were organised at the 21st International Symposium on Mathematical Programming (ISMP 2012) in Berlin. http://ismp2012.mathopt.org/

- **Winter School : Algorithms in Structural Bio-informatics**, was co-organised by R. Andonov in december 2012 at Inria Sophia Antipolis.

- **Bioinformatics tutorials**, at CARI (Conference Africaine de Recherche en Informatique) in Alger (Algérie), organized by D. Lavenier [web site: http://cari-info.org/]

9.1.2. Conference program committees

- International Conference on Field Programmable Logic and Applications (FPL) [D. Lavenier]

- International Conference on Engineering of Reconfigurable Systems and Algorithms (ERSA) [D. Lavenier]

- Southern Programmable Logic Conference (SPL) [D. Lavenier]

- International Conference on ReConFigurable Computing and FPGAs (ReConFig) [D. Lavenier]

- Workshop on Emerging Parallel Architectures (WEPA 2012) [D. Lavenier]

- ACM International Conference on Computing Frontiers (UCHPC Workshop) [D. Lavenier]

- IEEE International Conference on Application-specific Systems, Architectures and Processors (ASAP) [D. Lavenier]

- IEEE International Conference on Parallel and Distributed Systems (ICPADS 2012) [D. Lavenier]

- Workshop on Computational Optimization (WCO12), Wroclaw, Poland, September 9–12, 2012 [A. Mucherino, R. Andonov]
- Data Mining in Agriculture (DMA12), Berlin, Germany, July 20, 2012. [A. Mucherino]
- 21st International Symposium on Mathematical Programming (ISMP12), Berlin, Germany, August 19–24, 2012 [A. Mucherino, R. Andonov]
- JOBIM'2012 [D. Lavenier, C. Lemaitre, P. Peterlongo]
- SeqBio 2012 [P. Peterlongo]

9.1.3. Administrative functions: scientific committees, journal boards

- Member of the administrative council of ISTIC [R. Andonov]
- ANR Evaluation Committee (Numerical Models Program) [D. Lavenier]
- Reviewer for NSF projects [D. Lavenier]
- Recruitment committees: 2 assistant professors [P. Peterlongo, D. Lavenier], 5 Inra engineers [F. Legeai]
- Member of the Editorial Board of The Scientific World JOURNAL, bioinformatics domain [D. Lavenier]
- Member of Inria CDT [D. Lavenier]
- Member of the RAPSODYN Governing Council [D. Lavenier]
- MESR/DGRI - MEI Expert (International Cooperation Program) [D. Lavenier]
- Inria center referee of Scientific mediation [P. Peterlongo]
- Member of the redaction committee Ouest Inria [P. Peterlongo]
- publication reviewing for NAR, BMC Genomics, Bioinformatics, briefing in Bioinformatics, BMC Bioinformatics, PLoS One, European Journal of Entomology, Bulletin of entomological research, Symmetry, Mathematical Programming, RECOMB, International Journal of Reconfigurable Computing, journal of experimental algorithms, Recent Patents on DNA and Gene Sequence [D. Lavenier, F. Legeai, A. Mucherino, C. Lemaitre, P. Peterlongo].

9.1.4. Invited talks

- D. Lavenier gave an invited talk at CARI (Conference Africaine de Recherche en Informatique) in Alger (Algerie)
- A. Mucherino gave an invited talk at IMECC, UNICAMP, Campinas (Brazil)
- A. Mucherino gave an invited talk at BIA, INRA, Toulouse
- A. Mucherino gave an invited talk at the Department of Informatics, University of Florence (UNIFI), Florence (Italy)
- P. Peterlongo gave an invited talk at "Journee axe genomique biogenouest" (Nantes)
- C. Lemaitre gave an invited talk at Inria Bonsai team in Lille
- C. Lemaitre gave an invited talk at "Séminaire BioSticker", LINA (Nantes)

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : A. Mucherino, R. Andonov, P. Peterlongo, Graph algorithms, 130h, L3, Univ. Rennes 1, Rennes France.

Licence : R. Andonov, Algorithmics, 20h, L3, Univ. Rennes 1, Rennes France.

Licence : D. Lavenier, Computer Architecture and system , 70 h, L3 - ENS Magister, Rennes, France

Master : R. Andonov, Advanced algorithmics, 20h, M1, Univ. Rennes 1, Rennes France.

Master : R. Andonov, A. Mucherino, Operations research, 94h, M1, Univ. Rennes 1, France.

Master : G. Chapuis, Compilation, 41h, M1, Univ. Rennes 1, France.

Master : D. Lavenier, Bioinformatics, 20h, M2, Angers, France

Master : A. Mucherino, Initiation to systems and networks, 41h, M2, Univ. Rennes 1, France

Master : C. Lemaitre, P. Peterlongo, Text algorithmics for Bioinformatics, 40 h, M1, Univ. Rennes 1, France.

Master : C. Lemaitre, Dynamical systems for biological networks, 23h, M2, Univ. Rennes 1, France

Master : F. Legeai, Bioinformatics, 4h, M2, Univ. Rennes 1, France.

Master : A. Mucherino, R. Andonov, P. Peterlongo, Sequence and structure algorithms, 50h, M2, Univ. Rennes 1, France

9.2.2. Supervision

PhD Defense: Rayan Chikhi, *Computational methods for de novo assembly of next-generation sequencing data* [10] , ENS Cachan, defended on July 2nd 2012, supervised by D. Lavenier [online manuscript: http://tel.archives-ouvertes.fr/tel-00752033/]

PhD in progress : Guillaume Chapuis, *Bioinformatique parallèle*, Univ. Rennes 1, started in October 2010, supervised by D. Lavenier and R. Andonov

PhD in progress : Mathilde Le Boudic-Jamin, *Through Flexible Protein-Protein Docking*, Univ. Rennes 1, started in October 2011, supervised by R. Andonov

PhD in progress : Nicolas Maillet, *Algorithme pour l'assemblage de données NGS de métagénomique*, Univ. Rennes 1, started in November 2010, supervised by D. Lavenier and P. Peterlongo

PhD in progress : Erwan Scaon, *Modèles et algorithmes pour l'assemblage de novo de génomes à forte redondance*, Univ. Rennes 1, started in October 2012, supervised by D. Lavenier and C. Lemaitre

PhD in progress : François Moreews, *Environnement intégré de conception et d'exécution de workflows en bioinformatique: du prototypage au calcul intensif. Applications à la recherche de motifs de régulation dans les génomes*, Univ. Rennes 1, started in November 2012, supervised by D. Lavenier and S. Lagarigue

9.2.3. Juries

- *President of Ph-D thesis jury*. N. Abbas, ENS Cachan [R. Andonov]
- *Member of Ph-D thesis juries*. I. Wohlers, Univ. Amsterdam [R. Andonov], A. Nicolas, Université de Rennes 1 [R. Andonov], R. Saidi, Université de Clermont-Ferrand [R. Andonov], O. Gaci Université du Havre [R. Andonov]
- *Referee of Ph-D thesis*. T. Tan Truan, Université de Lille [D. Lavenier]

9.3. Popularization

- Participation to the event "A la découverte de la recherche" (presentation of the research activity to high school students) [D. Lavenier]

9. Dissemination

9.1. Scientific Animation

L. Mevel is part of the IOMAC organisation committee. He is also reviewer for numerous journals and conference boards. He is associate editor of Journal of Modelling and Simulation in Engineering. He is part of the local organizing committee of EWSHM 2014.

9.2. Teaching - Supervision - Juries

9.2.1. Supervision

PhD in progress : Ambient diagnosis and early instability monitoring for helicopter rotor : Ahmed Jhinaoui, ,since June 2010, L.Mevel and J. Morlier (ISAE)

PhD in progress : Algorithms for monitoring and localization of damage. Luciano Marin, since October 2010, L.Mevel and D. Bernal (University of NorthEastern, Boston, USA)

PhD in progress : Aeroelastic instability early detection methods in frequency domain. Philippe Mellinger, since June 2011, L. Mevel and C. Meyer (Dassault Aviation)

IPSO Project-Team

7. Dissemination

7.1. Scientific Animation

7.1.1. Editorial activities

- P. Chartier is member of the editorial board of "M2AN"
- P. Chartier is member of the editorial board of "ESAIM Proceedings"
- P. Chartier is member of the editorial board of "Mathematical Analysis"
- N. Crouseilles is member of the editorial board of "International Journal of Analysis" http://www.hindawi.com/journals/analysis/
- A. Debussche is member of the editorial board of "SINUM"
- A. Debussche is member of the editorial board of "Differential and Integral Equations"
- A. Debussche is a member of the editorial board of "Potential Analysis"
- A. Debussche is a member of the editorial board of "ESAIM Proceeding"
- A. Debussche is a member of the editorial board of the collection "Mathématiques & Applications" edited by Springer
- A. Debussche is the editor in chief of "Stochastic Partial Differential Equations: Analysis and Conputations"
- M. Lemou is associate editor of "Annales de la faculté de Toulouse"

7.1.2. Conference and workshop organization

- P. Chartier, A. Debussche and E. Faou were members of the programm committee of DD21: 21th International Conference on Domain Decomposition Methods, 25-29 June 2012, Rennes, France.
- N. Crouseilles was member of the organization committee of the workshop WASPs 20-26 may 2012 http://www.math.univ-toulouse.fr/~cnegules/WAPs2012.html
- A. Debussche organizes the semester "Perspectives in Analysis and Probability" to be held in Rennes in 2013. Among others, there will be two international conferences, 3 workshops and 1 summer school.

7.1.3. Administrative activities

- P. Chartier is member of the bureau of the Comité des Projets at Inria-Rennes.
- M. Lemou is partly in charge of the Master 2
- M. Lemou is member of the scientific committee of the Lebesgue Center (Labex)
- F. Méhats is member of the CNU, Section 26.
- F. Méhats is the head of the numerical analysis department of IRMAR.
- A. Debussche is member of the board of directors of the ENS Cachan.
- A. Debussche is member of the Executive Board of the Lebesgue Center, Labex funded by the french government.

7.1.4. Talks in seminars and conferences, mini-courses

- P. Chartier was plenary speaker at the Tenth International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2012) in honor of Gerhard Wanner, Greece, September 19-25, 2012.

- P. Chartier was plenary speaker at the Workshop INNOVATIVE TIME INTEGRATION, Innsbruck, Austria, May 13-16, 2012.
- E. Faou was plenary speaker at the conference NUMDIFF13 (september 2012), Halle, Germany.
- E. Faou gave a lecture at the Winter School "Dynamics and PDEs", Saint-Etienne de Tinée.
- G. Vilmart was keynote speaker at the Special session on "Algebraic structures in numerical analysis of differential equations", Universitad Jaume I (IMAC), Castellon (Spain), May 2012.
- A. Debussche was plenary speaker at the conference "Recent Developments in Stochastic Analysis", EPFL Lausanne, february 2012.
- A. Debussche was plenary speaker at the conference "Stochastic Analysis and Stochastic PDEs ", University of Warwick, april 2012
- A. Debussche was plenary speaker at the conference "NASPDE12 - Numerical Analysis of Stochastic PDEs", University of Warwick, june 2012
- A. Debussche was plenary speaker at the conference "Stochastic Partial Differential Equations (SPDEs) Follow-up Meeting " in Cambridge, september 2012.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Licence : P. Chartier, "Equations différentielles", 36, L3, ENS Cachan-Bruz

Master : N. Crouseilles, "Numerical methods for kinetic equations", 18H, M2, University of Rennes 1

Master: E. Faou, "Modélisation et analyse numérique des EDPs", ENS Paris, in collaboration with D. Lannes

Master 1 and 2: M. Lemou, "Equations elliptiques" and "Equations hyperboliques"

7.2.2. Supervision

PhD : Charles-Edouard Bréhier, "Analyse numérique d'EDP stochastiques hautement oscillantes", defended the 27th of november 2012 (supervised by A. Debussche et E. Faou).

7.2.3. Juries

- Nicolas Crouseilles: member of the PhD-jury of A. Crestetto, 4 october, 2012 (Strasbourg).
- A. Debussche was member of the jury for Yohann Offret (PhD, Rennes, juin 2012), Florent Barret (Hdr, Ecole Polytechnique, juillet 2012), Maxime Gazeau (PhD, Ecole Polytechnique, octobre 2012), Bruno Saussereau (Hdr, Besancon, novembre 2012)
- M. Lemou was member of the jury for E. Franck (PhD, Paris 6) and S. Soulaiman (PhD, IRMAR).

7.3. Popularization

S. Fiorelli-Vilmart and G. Vilmart, Les planètes tournent-elles rond?, submitted for publication in "Interstices" Theme 2012-2013 "Invariants et similitudes" of TIPE in preparatory classes.

<div align="center">

KERDATA Project-Team

</div>

9. Dissemination

9.1. Scientific Animation

Gabriel Antoniu:

- General Co-Chair of the ScienceCloud 2012 International workshop held in conjunction with the ACM HPDC 2012 conference.
- Local Chair of the 7th International Workshop of the Joint Inria-UIUC-ANL Lab for Petascale Computing, Rennes, June 2012.
- Track chair at IEEE CloudCom 2012 international conference.
- Editor for a Special Issue of Concurrency and Computation: Practice and Experience Journal on Cloud Computing for Data-driven Science and Engineering, 2012.
- Program Committee member (selection): ACM HPDC 2012, ACM/IEEE SC 2013, IEEE/ACM CCGRID 2013, ICCCN 2012, IEEE HPCC 2012, IEEE AINA 2012, IEEE CloudCom 2012, ICPADS 2012.
- Coordinator for the MapReduce ANR project (see Section 8.1).
- G. Antoniu and B. Thirion (PARIETAL Project-Team, INRIA SACLAY – ÎLE-DE-FRANCE) co-lead the AzureBrain Microsoft-Inria Project (2010-2013).
- Coordinator for the DataCloud@work Associate Team, a project involving the KerData and MYR-IADS Inria Teams in Rennes and the Distributed Systems Group from Politehnica University of Bucharest (2010–2012).
- 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).

Alexandru Costan:

- Organizer of the 1st Workshop on Big Data Management in Clouds BDMC2012 in conjunction with EuroPar 2012, see http://www.irisa.fr/kerdata/bdmc/
- Program Committee member: CloudCom 2012, ScienceClouds 2012, EIDWT 2012
- Reviewer: J. of Parallel and Distributed Computing, IEEE Internet Computing, Concurrency and Computation: Practice and Experience, Intl. J. of Grid and Utility Computing, Innovative Studies Intl. J., Scalable Computing: Practice and Experience, Simulation Modelling Practice and Theory, HPDC 2012, AINA 2012, RenPar 2012

Luc Bougé:

- Since September 2012: Scientific coordinator for the Information & Communication Science & Technology Department of the National Research Agency (ANR).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Gabriel Antoniu:

Master (Engineering Degree, 5th year): Grid and cloud computing, 18 hours (lectures), M2 level, Ecole Supérieure d'Informatique, Electronique, Automatique, Paris, France.

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

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

Alexandru Costan

- Object-oriented programming, 18h, L3, ENS Cachan - Antenne de Bretagne
- Databases, 28h, L2, INSA Rennes, France
- Object-oriented design, 28h, M1, INSA de Rennes
- Practical case studies, 16h, L3, INSA de Rennes

Matthieu Dorier:

- Java programming (lectures, seminars, practical sessions), L1 level, INSA de Rennes, 56h.
- Programming techniques (seminars, practical sessions), L3 level, ENS Cachan - Antenne de Bretagne 42h

9.2.2. *Supervision*

PhD & HdR :

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 in progress : Houssem Chihoub, Consistency issues in cloud storage systems, thesis started in October 2010 co-advised by Maria Pérez (UPM - Madrid) and Gabriel Antoniu.

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.

9.2.3. *Juries*

Gabriel Antoniu served as a member of Inria's national Jury for hiring researchers (junior positions, confirmed positions and starting research positions).

Gabriel Antoniu served as a Referee and as a Chair for a PhD Jury at the University of Bordeaux; as a Chair for a PhD Jury at the University of Nantes.

9.2.4. *Miscellaneous*

Gabriel Antoniu serves as a member of Inria's Evaluation Committee.

Luc Bougé serves as Head of the Computer Science Department of ENS Cachan - Brittany.

LAGADIC Project-Team

9. Dissemination

9.1. Scientific Animation

- *Editorial boards of journals*
  - Eric Marchand and Paolo Robuffo Giordano are Associate Editors of the IEEE Trans. on Robotics.
  - François Chaumette is in the Editorial Board of the Int. Journal of Robotics Research. He has also been Associate Editor of the Int. Journal of Optomechatronics from its creation in 2007 till September 2012.
- *Technical program committees of conferences*
  - François Chaumette: ICRA'12, RSS'12, ISPRS'12, IROS'12, SYROCO'12, ISOT'12, WRV'13, ICRA'13
  - Eric Marchand: RFIA'12, Coresa'12, ICRA'12, RSS'12, ICRA'13
  - Patrick Rives: ICRA'12, RFIA'12, Innorobo'12, Vicomor'12
- *Selection committees*
  - François Chaumette was in the selection committee for a Professor position at the "Université de Strasbourg" and at the "Université Paul Sabatier" in Toulouse.
  - Alexandre Krupa was in the selection committee for an Assistant Professor position at the "Université de Strasbourg" and at the "Université de Franche-Comté".
  - Eric Marchand was in the selection committee for an Assistant Professor position at the "Université de Strasbourg" and at "Ensicaen" in Caen. He was in the selection committee for a Professor position at the "Université de Rennes 1".
  - Patrick Rives was in the selection committee of Starting and Advanced Research positions at Inria.
- *Participation in seminars, invitation*
  - François Chaumette has been invited to give a talk at the 4th Cimat Robotics Workshop in Guanajuato, Mexico [21] and to the 3rd French-Sino Symposium on Virtual Reality in Qingdao, China [22].
  - Eric Marchand has been invited to give a talk at the Workshop on Fundamental and Applied 3D Computer Vision in honor of Richard Hartley in Clermont Ferrand [23].
  - Patrick Rives has been invited to give a talk at the RFIA Atelier Monument 3D (Lyon, France, January 2012) [24], Innorobo Conference on Service Robotics (Lyon, France, March 2012) [25], and IROS Workshop Vicomor (Vilamoura, Portugal, October 2012) [26].
- *Animation at the international level*
  - François Chaumette has been elevated to IEEE Fellow in November 2012. He served as expert for the ERC Starting Grants and has been appointed to be a panel member of the ERC Consolidator Grants. He was in the 2012 and 2013 IEEE RAS chapter of the year award nomination committee.
- *Animation at the national level*
  - François Chaumette and Patrick Rives are members of the scientific council of the "GdR Robotique" and JNRR.

– François Chaumette served for the ANR Contint monitoring committee.

– Patrick Rives is an expert for Oseo (Agence Nationale pour la Valorisation), Agence Nationale de la Recherche (ANR) and the Swiss National Science Foundation.

– Patrick Rives is a member of the Inria evaluation committee.

– Alexandre Krupa is a member of the Inria Cost-GTAI in charge of the evaluation of the ADTs ("Actions de développments technologiques").

– François Chaumette is a member of the animation committee of Inria's thematic domain "Perception, cognition, interaction".

- *Animation at the regional and local levels*

   – Eric Marchand is in the board of the "Images et réseaux" competitivity cluster.

   – Eric Marchand is a member of the scientific council of the École supérieure d'ingénieurs de Rennes (ESIR).

   – François Chaumette is the president of the committee in charge of all the temporary recruitments ("Commission Personnel") at Inria Rennes Bretagne Atlantique and Irisa. He is a member of the Head team of Inria Rennes Bretagne Atlantique.

   – Eric Marchand is a member of the committee in charge of all the temporary recruitments ("Commission Personnel") at Inria Rennes Bretagne Atlantique and Irisa. He is particularly in charge of Irisa Ph.D. students.

   – Marie Babel and Fabien Spindler are members of the "Comité de centre" of Inria Rennes Bretagne Atlantique.

   – Fabien Spindler is a member of the "Commission développement durable" of Inria Rennes Bretagne Atlantique.

   – Alexandre Krupa is a member of the CUMIR ("Commission des Utilisateurs des Moyens Informatiques") of Inria Rennes Bretagne Atlantique.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Marie Babel:

   Master INSA3: "Statistical Signal Processing", 24 hours, M2, Institut National des Sciences Appliquées de Rennes

   Master INSA1: "Assembler", 30 hours, L3, Institut National des Sciences Appliquées de Rennes

   Master INSA2: "Computer science project", 30 hours, M1, Institut National des Sciences Appliquées de Rennes

   Master INSA2: "Image analysis", 18 hours, M1, Institut National des Sciences Appliquées de Rennes

   Master INSA1: "Remedial math courses", 24 hours, L3, Institut National des Sciences Appliquées de Rennes

   Master INSA1: "Risk Management for Information Systems", 8 hours, L3, Institut National des Sciences Appliquées de Rennes

François Chaumette:

   Master ESIR3: "Visual servoing", 12 hours, M2, Ecole supérieure d'ingénieurs de Rennes

   Ph.D.: IEEE RAS Summer School on Robot Vision and Applications: "Visual servoing", 4.5 hours, Universidad de Chile, Santiago.

Alexandre Krupa:

> Master SIBM (Signals and Images in Biology and Medicine): "Medical robotics guided from images", 4.5 hours, M2, Université de Rennes 1, Brest and Angers

Eric Marchand:

> Master ESIR2: "Colorimetry", 24 hours, M1, Ecole supérieure d'ingénieurs de Rennes

> Master ESIR2: "Computer vision", 24 hours, M1, Ecole supérieure d'ingénieurs de Rennes

> Master ESIR3: "Special effects", 24 hours, M2, Ecole supérieure d'ingénieurs de Rennes

> Master ESIR3: "Computer vision: tracking and recognition", 24 hours, M2, Ecole supérieure d'ingénieurs de Rennes

> Master MRI: "Computer vision: geometry", 24 hours, M2, Université de Rennes 1.

9.2.2. Supervision

> HdR: Marie Babel, "From image coding and representation to robotic vision", Université de Rennes 1, defense in June 2012 [10]

> HdR: Alexandre Krupa, "Contributions à l'asservissement visuel échographique", Université de Rennes 1, defense in December 2012 [13]

> Ph.D.: Maxime Meilland, "Cartographie RGB-D dense pour la localisation visuelle temps-réel et la navigation autonome", Ecole des Mines de Paris, defense in March 2012, supervised by Patrick Rives and Andrew Comport (I3S/CNRS) [14]

> Ph.D.: Alexandre Chapoulie, "Contributions aux méthodes de détection visuelle de fermeture de boucle et de segmentation topologique de l'environnement", Université de Nice-Sophia Antipolis, defense in December 2012, supervised by Patrick Rives and David Filliat (ENSTA) [11]

> Ph.D.: Laurent Coutard, "Appontage automatique d'avions par asservissement visuel", Université de Rennes 1, defense in December 2012, supervised by François Chaumette [12]

> Ph.D. in progress: Tao Li, "Commande d'un robot de télé-échographie par asservissement visuel échographique", started in October 2009, supervised by Alexandre Krupa

> Ph.D. in progress: Pierre Martin, "Augmented reality on smartphones", started in February 2010, supervised by Eric Marchand

> Ph.D. in progress: Rafik Sekkal, "Features extraction and robust tracking of objects for video representation", started in October 2010, supervised by Marie Babel

> Ph.D. in progress: Antoine Petit, "3D model-based tracking of complex objects in a spatial context", started in December 2010, supervised by Eric Marchand

> Ph.D. in progress: Manikandan Bakthavatchalam, "Utilisation des moments photométriques en asservissement visuel", started in October 2011, supervised by François Chaumette

> Ph.D. in progress: Bertrand Delabarre, "An information theoretic approach for navigation in robotics", started in October 2011, supervised by Eric Marchand

> Ph.D. in progress: Tawsif Gokhool, "Représentations valides à long terme pour la navigation et l'apprentissage des modèles 3D", started in February 2012, supervised by Patrick Rives

> Ph.D. in progress: Romain Drouilly, "Représentation hybride métrique, topologique et sémantique d'environnement 3D pour la localisation temps réel", started in May 2012, supervised by Patrick Rives

> Ph.D. in progress: Le Cui, "Nano-manipulation par asservissement visuel", started in October 2012, supervised by Eric Marchand

> Ph.D. in progress: Riccardo Spica, "Autonomous vision-based two-hand manipulation strategies for humanoid robots", started in December 2012, supervised by Paolo Robuffo Giordano and François Chaumette

9.2.3. Juries

- François Chaumette: Pierre Lebraly (Ph.D., president, Institut Pascal, Clermont-Ferrand), Adrien Durand Petiteville (Ph.D., reviewer, Laas, Toulouse), Pierre Rouanet (Ph.D., president, Inria Bordeaux), Moslem Kazemi (Ph.D., reviewer, Simon-Fraser University, Vancouver), Baptiste Charmette (Ph.D., reviewer, Institut Pascal, Clermont-Ferrand)

- Eric Marchand: Maxime Meilland (Ph.D., reviewer, Inria Sophia Antipolis), Pauline Merveilleux (Ph.D., reviewer, Mis, Amiens), Cédric Demonceaux (HDR, reviewer, Université de Bourgogne, Le Creusot)

- Patrick Rives: Mohamed Marouf (Ph.D., Ecole des Mines de Paris), Alessandro Victorino (HdR, Heudiasyc, Compiègne), Pauline Merveilleux (Ph.D., reviewer, Mis, Amiens), Cédric Demonceaux (HdR, reviewer, Université de Bourgogne, Le Creusot), Baptiste Charmette (Ph.D., reviewer, Institut Pascal, Clermont-Ferrand)

9.3. Popularization

- Due to the visibility of our experimental platforms, the team is often asked to present its research activities to students, researchers or industry. Our panel of demonstrations allows us to highlight recent results concerning the positioning of an ultrasound probe by visual servoing, the construction of a tower by combining 3D model-based visual tracking and visual servoing techniques to pick up cubes that are assembled, the navigation of a mobile robot in urban environments, and vision-based detection and tracking for space navigation in a rendezvous context.

- Fabien Spindler is a member of the editorial board of "Ouest Inria", the internal journal at Inria Rennes Bretagne Atlantique.

- Eric Marchand was co-author of an article entitled "FlyVIZ : un casque qui permet de voir dans toutes les directions" in Interstice, which is an online French popularization magazine for research in computer science.

METISS Project-Team

9. Dissemination

9.1. Animation of the scientific community

Frédéric Bimbot is the Head of the "Digital Signals and Images, Robotics" in IRISA (UMR 6074).

Frédéric Bimbot was a member of the Comité National de la Recherche Scientifique (Section 07 and Inter-Disciplinary Commission 42)

Frédéric Bimbot is the General Chairman of the Interspeech 2013 Conference in Lyon (1200 participants expected).

Frédéric Bimbot is the Scientific Leader of the Audio Processing Technology Domain in the QUAERO Project.

Rémi Gribonval is in charge of the Action "Parcimonie" within the French GDR ISIS on Signal & Image Processing

Rémi Gribonval and Emmanuel Vincent were Guest Editors of the special issue on Latent Variable Analysis and Signal Separation of the journal *Signal Processing* published by Elsevier [46].

Rémi Gribonval and Emmanuel Vincent are members of the International Steering Committee for the LVA conference series.

Emmanuel Vincent is an Associate Editor for the *IEEE Transactions on Audio, Speech, and Language Processing* (2011–2014).

Emmanuel Vincent was a Guest Editor of the special issue on Speech Separation and Recognition in Multisource Environments of the journal *Computer Speech and Language* published by Elsevier [35].

Emmanuel Vincent was elected a member of the IEEE Technical Committee on Audio and Acoustic Signal Processing (2012–2014).

Emmanuel Vincent is the General Chair of the 2nd International Workshop on Machine Listening in Multi-source Environments (CHiME), to be held in Vancouver as a satellite even of ICASSP 2013 on June 1, 2013, and an organizer of the 2nd CHiME Speech Separation and Recognition Challenge.

Emmanuel Vincent is a titular member of the National Council of Universities (CNU section 61, 2012–2015).

Nancy Bertin was elected a member of the IEEE Technical Committee on Audio and Acoustic Signal Processing (2013–2015).

9.2. Teaching

Rémi Gribonval gave a series of tutorial lectures on sparse decompositions and compressed sensing at two-day workshop on "Sparse Representations and Machine Learning" (Rennes, October 2012).

Rémi Gribonval gave lectures about sparse representations for inverse problems in signal and image processing for a total of 10 hours as part of the SISEA Masters in Signal & Image Processing, University of Rennes I.

Rémi Gribonval was the coordinator of the ARD module of the Masters in Computer Science, Rennes I.

Rémi Gribonval gave lectures about signal and image representations, time-frequency and time-scale analysis, filtering and deconvolution for a total of 8 hours as part of the ARD module of the Masters in Computer Science, Rennes I.

Emmanuel Vincent gave a tutorial on "Uncertainty handling for environment-robust speech recognition" with Ramon F. Astudillo and Li Deng at InterSpeech 2012 (13th Annual Conference of the International Speech Communication Association), Portland, OR, September 9–13, 2012.

Nancy Bertin gave lectures about audio rendering, coding, indexing, classification, speech processing and source separation, for a total of 12 hours as part of the CTR and FAV modules of the Masters in Computer Science, Université Rennes I.

<div align="center">**MIMETIC Team**</div>

8. Dissemination

8.1. Scientific Animation

8.1.1. Scientific Community Animation

- F. Multon: **Leader** of the Mimetic research team
- F. Multon: **Member** of the European Society of Biomechanics, the ACM association, the IEEE association, the Computer Society association, the Eurographcis association, the European Society of Biomechanics, the French "Societe de Biomecanique", the French "Association Française de Realite Virtuelle", **Reviewer** Journal of Biomechanics, IEEE Transaction of Affective Computing, CASA internation conference, Computer Methods in Biomedical Engineering journal, Computer & Graphics journal, Eurographics 2011, IEEE International Symposium on Robot and Human Interactive Communication conference, IEEE TVCG journal, **Program Committee member** of ACM SIGGRAPH Asia (Sketches and posters), Motion in Games Conference MIG2011, SKILLS conference, **Scientific expert** for "Pole Productique de Bretagne", and Auteo association, in ergonomics, **Guest editor** of Presence - Mit Press, VR & Sports special issue: Benoit Bideau, Richard Kulpa, Franck Multon, **Program chair** of Simulation of Sports Motion co-located with CASA2011, and of the 3rd sino-French Symposium in QingDao 2012, **Session chairman** of "Modélisation musculo-squelettique" in ACAPS'2011 conference and "Analyses Biomécanique de la performance motrice" in ACAPS'2011, **Conference Chair** of Motion in Games 2012, **Associate Editor** of the Presence journal MIT Press since 2012.
- M. Christie: **Member** of Eurographics, AFIG and AFRV, **Reviewer for** Eurographics 2012, Foundations of Digital Games 2012, IEEE Visualisation 2012, **Reviewer for journals** Computer Graphics Forum, Transactions on Visualisation and Computer Graphics, Transactions on Mutlimedia, Transactions on Graphics, **Scientific expert** for Candadian NSERC fundings, **Session chair** at MIG 2012.
- R. Kulpa: **Reviewer** for IEEE VR, Siggraph Asia, New Media & Society; **Leader** of a European Intensive Program called "Routine & Cutting-edge Technologies in Physical Activity: Implication for Health & Sport Performance" with the Queen's University of Belfast and the Universitat de Valencia.
- F. Lamarche: **Reviewer** for Computer Animation and Virtual Worlds. **PhD Committee** of Hakim Soussi.
- J. Pettré: **Member** of ACM and IEEE associations, **Reviewer for** Transactions on Graphics, Siggraph, Siggraph Asia, Eurographics, Pacific Graphics, Computer Animation and Social Agents, ACM/Eurographics Symposium on Computer Animation, IEEE Transactions on Visualization and Computer Graphics, Computer Animation and Virtual Worlds, ICRA, VR, Journal of Computational Science, Computer Graphics Forum, Autonomous Robots, Motion in Game Conference, **Program Committee member** of Pacific Graphics, Symposium on Computer Animation, International Conference on Computer Graphics Theory and Applications **Scientific expert** for ANR
- A. Crétual: **Reviewer** of Medical & Biological Engineering & Computing, Journal of Electromyography and Kinesiology, American Journal of Physical Medicine & Rehabilitation, Journal of Musculoskeletal & Neuronal Interactions, Prosthetics & Orthotics International, **Editorial Board** of Journal of Electromyography and Kinesiology, **PhD Committee** of Caroline Moreau, **Scientific expert** for ANR TecSan program, PCCA (Romanian equivalent of French ANR).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master:

- R. Kulpa: Biomechanics and scientific programming, University of Rennes 2, Computer Animation IUT Bordeaux 1.
- F. Lamarche: Computer Animation ESIR IN, AI for Video Games ESIR IN, Real Time Rendering and Computer Animation MASTER GL, IFSIC - MIT, ENS CACHAN/RENNES.
- F. Multon: Master of Computer Science Ifsic : Image and Motion; MASTER OF PHYSICAL EXERCISE University Rennes2
- A. Crétual: Master course on Sports or pathological Gesture analysis, Univ. Rennes 2
- M. Christie, Multimedia and Android, 48h, M2 GL/MITIC/MIAGE, University of Rennes 1

8.2.2. Supervision

HdR: Benoît Bideau, "Biomécanique du mouvement et interactions sportives", University of Rennes 2, Nov. 2012 [3].

PhD: Samuel Lemercier, "Simulation du comportement de suivi dans une foule de piétons à travers l'expérience, l'analyse et la modélisation", Université de Rennes 1, Avril 2012, supervised by Stéphane Donikian and Julien Pettré [4].

PhD: Anthony Sorel, "Gestion de la variabilité morphologique pour la reconnaissance de gestes naturels à partir de données 3D", Université de Rennes 2, Dec. 2012, supervised by Franck Multon and Richard Kulpa [6].

PhD: Thomas Lopez, "Planification de chemin et adaptation de posture en environnements dynamiques.", INSA Rennes, March 2012, supervised by Stéphane Donikian and Fabrice Lamarche [5].

PhD: Kristell Bervet, "Kerpape-Rennes-EMG-based-Gait-Index: Définition d'un index de quantification de la marche pathologique par électromyographie", Université de Rennes 2, Sep. 2012, supervised by Armel Crétual [2].

PhD: Edouard Auvinet, "Analyse d'information tri-dimensionnelle issue de systèmes multi-caméras pour la détection de la chute et l'analyse de la marche", PhD STAPS (Sports Sciences) University Rennes2 and Biomedical Engineering Université de Montreal, June 14th 2012, Franck Multon and Jean Meunier (co-supervised PhD) [1].

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

9. Dissemination

9.1. Scientific Animation

9.1.1. Leadership, Steering Committees and community service

C. Morin   is general co-chair for IEEE ISPA 2013, co-chair of track 4 on Storage, Big Data, and Cloud Computing of IEEE GreenCom 2013, tutorial chair for IEEE Cluster 2014 and the organizer of a BOF session on interoperability in cloud federations for scientific applications at SC'12 (November 2012).

A.-C. Orgerie   is publication co-chair for ICPP 2013, demonstration chair for EE-LSDS 2013 (http://www.irit.fr/~Georges.Da-Costa/ee-lsds2013/) and general co-chair for ExtremeGreen 2013 (workshop in conjunction with CCGrid 2013 http://www.ens-lyon.fr/LIP/RESO/extremegreen/).

T. Priol   is a member of the Editorial Board of the *International Journal of Intelligent Engineering Informatics* and of the *International Journal of Web Services Research*. He chaired the organization committee the *Let's imagine the Future* seminar organized for Jean-Pierre Banâtre's retirement celebration, November 8-9, Rennes, France.

J.-L. Pazat   is the chairman of the Steering Committee of RenPar (http://www.renpar.org/).

C. Tedeschi   is a member of the steering committee of the ComPAS (RenPar/SympA/CFSE) joint conference series.

9.1.2. Program Committees

R. Cascella   is a program committee member of Q2SWinet 2012 (8th ACM International Symposium on QoS and Security for Wireless and Mobile Networks), IEEE VTC 2013 spring track "Wireless Networks, Access Control, and Resource Management", IEEE VTC 2013 fall track "Wireless Networks and Security".

Y. Jégou   is a program committee member of IEEE TrustCom 2013 conference, and ORMaCloud workshop co-located with ACM HPDC 2013.

C. Morin   is a program committee member of IEEE CC-GRID 2012, EuroPar 2012, IEEE CloudCom 2012, the International Symposium on Parallel and Distributed Computing (ISPDC) 2012 and 2013, the 4th workshop on scientific computing (ScienceCloud) and of the 4th workshop on Virtualization Technologies in Distributed Computing (VTDC) co-located with ACM HPDC in 2013, CFSE 2013, CLOSER 2013, and IEEE CC-GRID 2013.

A.-C. Orgerie   is a program committee member of E2HPC2 2013, HSNCE 2013 and EE-LSDS 2013.

J.-L. Pazat   is a program committee member of RenPar'21, GPC2012, CPC2012.

G. Pierre   is a program committee member of CCGrid 2013, CFSE 2013, IC2E 2013, SAC 2013, DAIS 2013, CSCS19, CloudDP 2013 and ISPDC 2013.

T. Priol   is a program committee member of CCGRID12, CLOUD12, CloudCom12, HPCS12, ICPP12, SC12 and VECPAR12. He will act as one of the co-chairs of the "Grids and Clouds" track of SC13.

C. Tedeschi   is a program committee member of ICCS 2013, CloSer 2013 and RenPar'21

9.1.3. Evaluation committees, consulting

J.-P. Banâtre   was the INRIA representative in the Contrail General Assembly until September 2012. Since October 2012, he has been a member of the Contrail Scientific Advisory Board.

Y. Jégou   is a member of the Grid 5000 executive committee;

Y. Jégou   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 cloud computing expert group in the Software & Service Architectures and Infrastructures unit of the European Commission. She was a member of the committee for the Inria Boost Your Code competition. She is a member of the ModaCloud European project Advisory Board.

J.-L. Pazat   is the coordinator for the evaluation of submissions to international bilateral programs in the Information technology domain at Ministry of Higher Education and Research (MESR).

T. Priol   has been the INRIA representative in the Contrail General Assembly since October 2012. He was a member of the Contrail Scientific Advisory Board until September 2012.

9.1.4. Conferences, seminars, invitations

Roberto Cascella   gave presentation *Leveraging Contrail to support reliable IoT based applications* at the 4th EU-Japan Symposium on the "New Generation Network" and the "Future Internet", January 19, 2012, Tokyo Japan;

Roberto Cascella   gave talk *Contrail: A reliable and trustworthy cloud platform* at the 1st European Workshop on Dependable Cloud Computing, EWDCC'2012, May 8 2012, Sibiu, Romania;

Roberto Cascella   gave talk *The future of the Cloud* at the Contrail Summerschool, July 23, 2012, Almere, The Netherlands;

Roberto Cascella   was invited to give talk *The Cloud and the Contrail project: open computing infrastructures for elastic services* at Politecnico di Bari, September 5, 2012, Bari, Italy;

Roberto Cascella and Yvon Jégou   presented the Contrail project on the Contrail booth during the *Journée professionnelle Cloud Computing - MEITO*, INRIA-Rennes, december 11;

Roberto Cascella   was invited to give talk *Contrail: A trustworthy cloud platform providing interoperability* at Seconda Università di Napoli, December 19, 2012, Aversa, Italy;

Eugen Feller   presented a demonstration entitled *Snooze : un système auto-organisant pour la gestion de l'énergie dans les clouds* at the *Sciences Numériques et efficacité énergétique* Inria industry meeting, Grenoble, France, March 2012.

Eugen Feller   gave a talk entitled *Scalable, Autonomic, and Energy-Aware Management of Large-Scale Cloud Infrastructures*, at COST IC0804 Energy and QoS-aware Workload Management in Clouds focus group meeting, Rennes, France, March 2012.

Eugen Feller   gave a talk entitled *Energy Management in IaaS Clouds: A Holistic Approach* at EDF R&D (SINETICS department), Paris, France, April 2012.

Eugen Feller   gave a talk entitled *Autonomic and Energy-Efficient Management of Large-Scale Virtualized Infrastructures* in the Lawrence Berkeley National Laboratory CS seminar, Berkeley California, USA, August 2012.

Piyush Harsh and Yvon Jégou   presented the Contrail VEP on the INRIA booth during the "Solutions Linux" event in Paris, June 19-21, 2012;

Ancuta Iordache   presented a talk entitle *Elastic MapReduce on multiple clouds* at the EIT ICT Labs RMAC kick-off meeting in Delft, February 20, 2012;

Ancuta Iordache   gave a talk entitled *Elastic MapReduce on Cloud Federations* at the EIT Cloud workshop in Paris, November 29, 2012;

Yvon Jégou   gave a talk *The benefits of mixing grid and cloud workloads for genomics* at the "Workshop on Science Applications and Infrastructure in Clouds and Grids" held in conjunction with OGF 34, March 15-16, 2012, Oxford, UK;

Yvon Jégou   gave a talk about Contrail Virtual Execution Platform at the "EIT ICT Labs - Contrail workshop", March 19, Paris;

Yvon Jégou   gave a talk on *Interoperability in Cloud Federations* and participated to the panel discussion during the "Future Internet Assembly" meeting, May 10-11 2012, Aalborg, Denmark;

Yvon Jégou gave a talk entitled *The Need of Interoperability between Clouds* during the "2nd FIA roadmapping workshop", June 26, 2012, Bruxelles;

Yvon Jégou gave talk *Contrail: Open Computing Infrastructures for Elastic Services* during the "IoS Collaboration Days", October 16-18, 2012, Bruxelles;

Yvon Jégou gave a talk *Interoperability support in cloud federations: Contrail approach based on Virtual Execution Platforms* at the "Interoperability in Scientific Cloud Federations" Birds-of-a-Feather Sessions, SC'12, Salt Lake City, November 13, 2012;

Yvon Jégou, Piyush Harsh and Christine Morin presented Contrail software stack on Contrail European project booth at SC'12, Salt Lake City, November 12-15, 2012.

Christine Morin gave a talk *Contrail: Elastic PaaS Services over Federated IaaS Clouds* by visio-conference for participants in the ATLAS experiment at CERN, February 2, 2012.

Christine Morin gave a talk by visio-conference on Cloud Computing research activities in Rennes at the EIT ICT Labs meeting organized for W. Jonker's visit in Rennes, February 28, 2013.

Christine Morin was invited to give a seminar entitled *Elastic Services on top of Cloud Federations: Contrail Approach* at ORNL and at the Tennessee Technical University in March 2012.

Christine Morin gave a talk entitled *Elastic Services on top of Cloud Federations: Contrail Approach* at Google, Mountain View, April 23, 2012.

Christine Morin presented Myriads project-team research activities at the Inria evaluatio seminar for the "Distributed Systems and Services" theme, October 9, 2012.

Christine Morin gave a talk entitled *Cloud in San Francisco Bay Area* at the CLASS conference, Bled, Slovenia, October 24, 2012.

Christine Morin gave a talk entitled *Work in Progress on Cloud Computing in Myriads Team and Contrail European Project* at the the eighth workshop of the Joint Laboratory for Petascale Computing, Argonne National Laboratory, November 20, 2012.

Christine Morin gave a talk entitled *Destination Inria for researchers!* at the Destination Europe conference, San Francisco, December 7, 2013.

Anne-Cécile Orgerie gave a talk *Energy-efficiency in Cloud infrastructures in Myriads team* at the COST IC0804-IC0805 joint meeting in Cork, Ireland, October 18, 2012;

Anne-Cécile Orgerie gave a talk *ECOFEN: an End-to-end energy Cost mOdel and simulator For Evaluating power consumption in large-scale Networks* at the COST IC0804 meeting in Istanbul, Turkey, November 6;

9.1.5. Administrative Responsibilities

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), 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 committe. 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.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Christine Morin is responsible for a graduate teaching Module *Internet of Services: Programming Models & Infrastructures* of the Master Program in Computer Science (research), UNIVERSITY RENNES 1.

Christine Morin:

> Master : Internet of Services: Programming Models & Infrastructures, 12 hours ETD, M2RI, University of Rennes 1, France

> Master : Cluster single system image operating systems, 4.5 hours ETD, M2, Institut Telcecom Sud Paris, France

> Master : Energy management in computing infrastructures (as part of the Eco-STIC module), 4.5 hours ETD, M1, Supelec, France

Nikos Parlavantzas (at INSA Rennes):

- 4th year: Operating Systems (40 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):

- 4th year: Advanced Operating Systems (31 hours ETD)
- 4th year: Parallel Programming (39 hours ETD)
- 4th year: Networking and SOA (39 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'exloitation 2 (67 hours ETC)
- Master 2: Techniques de développement logiciel dans le Cloud (39 ETD)
- Master 2: Approche algorithmique des applications et systèmes répartis (32 ETD)

Cédric Tedeschi (at the University of Rennes 1):

- 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: Muti-users systems (50 hours ETD)
- Master 2 (research): Internet of Services (6 hours ETD)

9.2.2. Supervision

> PhD : André Lage, Dynamic Adaptation of Services on Distributed Infrastructures, March 29, 2012, Nikos Parlavantzas, Jean-Louis Pazat

> PhD : Héctor Fernández, Flexible Coordination Through the Chemical Programming Model for Service Infrastructures, Université de Rennes 1, June, 20 2012, Thierry Priol, Cédric Tedeschi

> PhD : Eugen Feller, Energy aware resource management in IaaS clouds, Université de Rennes 1, December 17, 2012, Christine Morin

> PhD in progress : Erwan Daubert, Environmental adaptation of services in large scale distributed architectures, October 2009, Françoise André, Jean-Louis Pazat, Olivier Barais (Triskell)

PhD discontinued : Guillaume Gauvrit, Distributed Dynamic Adaptation of SBAs, October 2008, Françoise André, Jean-Louis Pazat

PhD in progress : Chen Wang, Using Chemical Metaphor to Express Workflow and Service Orchestration October 2009, Jean-Louis Pazat

PhD in progress : Marko Obrovac, Large Scale Runtime of the Chemical Programming Model for Service Orchestration, January 2010, Thierry Priol, Cédric Tedeschi

PhD in progress : Stefania Costache, An economical approach for resource management in private clouds, May 2010, Christine Morin, Nikos Parlavantzas

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

9.2.3. Juries

- Christine Morin is a reviewer for the PhD thesis 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 (defense planned in February, 2013)
- Christine Morin is a reviewer for the PhD thesis of Damien Borghetto, Université de Toulouse 1 (defense planned in Spring 2013)

9.3. Popularization

Contrail summer school (Almere, the Netherlands, July 2012):

- Piyush Harsh gave a talk about the Contrail Virtual Execution Platform and organized a hand-on session on VEP;
- Roberto Cascella gave a presentation entitled *The Future of the Cloud* during the summer school.

Grid'5000 winter school (Nantes, France, December 2012):

- David Margery gave a talk about Grid'5000 and a tutorial about accessing Grid'5000
- Alexandra Carpen-Amarie gave a tutorial on deploying IaaS stacks on Grid'5000, as well as a challenge entry to demonstrate the deployment of CloudStack.
- Marko Obrovac took part in the challenge to demonstrate his experimental approach for his work on chemical computing entitled *Large-scale chemical computing on Grid'5000*

S4 Project-Team

8. Dissemination

8.1. Scientific Animation

Eric Badouel is the secretary of the steering committee of CARI, the African Conference on Research on Computer Science and Applied Mathematics. He took part in the programme committee and in the organizing committee of CARI 2012. He is a member of the editorial board of the ARIMA Journal.

Albert Benveniste is associated editor at large (AEAL) for the journal *IEEE Trans. on Automatic Control*. He is member of the Strategic Advisory Council of the Institute for Systems Research, Univ. of Maryland, College Park, USA. He belongs to the Scientific Advisory Board of INRIA, where he is in charge of the area of Embedded Systems. [1]

Benoît Caillaud has served in the steering and program committees of the International Conference on Application of Concurrency to System Design (ACSD 2012). He is serving on the Evaluation Committee of INRIA.

Philippe Darondeau has served on the program committees of the 23rd International Conference on Concurrency Theory (CONCUR 2012) and 11th International Workshop on Discrete Event Systems (WODES 2012). He is a member of the IFIP Working Group WG2.2 and has served as secretery of this working group until September 2012.

Sophie Pinchinat is serving in the editorial board of the Journal on Discrete Event Dynamic Systems, Theory and Applications. She has served on the program committee of the 10th Conference on Logic and the Foundations of Game and Decision Theory (LOFT 2012).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Benoit Caillaud has contributed to the training programme for the computer-science option of the *agregation* in mathematics, at ENS Cachan-Ker Lann.
- Sophie Pinchinat has contributed to three courses on verification and game theory in the computer science master degree of the University of Rennes 1 and at Supelec. She has taught algorithmics at undergraduate level at the university of Rennes 1. She has taught embedded systems design in the engineering degree of the university of Rennes 1.

8.2.2. Supervision

Several PhDs are in progress:

- Lamine Diouf, *Artefact opacity in workflow systems*, started in 2010, supervised by Eric Badouel.
- Bastien Maubert, *Logical Foundations of Imperfect Information Games*, started September 2010, co-supervised by Sophie Pinchinat and Guillaume Aucher.
- Stéphanie Georges, *Formal approaches to physical security analysis: Attack tree synthesis*, started December 2011, co-supervised by Sophie Pinchinat and Achour Mostefaoui.

8.2.3. Juries

Sophie Pinchinat has served on the PhD thesis jury of Loïg Jézeéquel (project-team DISTRIBCOM).

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[1]Only facts related to the activities of Team S4 are mentioned. Other roles or duties concern the DistribCom team, to which A. Benveniste also belongs.

SAGE Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Conferences and networks

- the team Sage organized, with the LMNO, the international conference on Domain Decomposition methods DD21 (Rennes, France, June 2012). Chair J. Erhel (with T. Sassi, University of Caen); members of the organizing committee É. Canot and G. Pichot; webmaster N. Soualem and A. Le Gentil; local coordination E. Blin and F. Cuyollaa.
- G. Pichot is a member of the organizing committee of the SMAI 2013 conference (Seignosse, France, May 2013).
- J. Erhel is a member of the scientific committee of the SMAI 2013 conference (Seignosse, France, May 2013).
- J. Erhel is a member of the scientific committee of the MAMERN'13 conference (Granada, Spain, April 2013).
- J. Erhel is a member of the international advisory committee of the parallel CFD conferences (Atlanta, USA, May 2012 and Changsha, Hunan, China, May 2013).
- J. Erhel is a member of the steering committee of the Réseau National des Systèmes Complexes.

9.1.2. Editorial Boards

- B. Philippe is one of the four chief-editors of the electronic journal ARIMA (revue Africaine de la Recherche en Informatique et Mathématiques Appliquées).
- B. Philippe is managing editor of the electronic journal ETNA (Electronic Transactions on Numerical Analysis).
- J. Erhel is member of the editorial board of ETNA.
- J. Erhel is member of the editorial board of ESAIM:Proceedings.
- J. Erhel is member of the editorial board of Interstices.
- J. Erhel is member of the editorial board of Mathematics of Planet Earth 2013, un jour-une brève.

9.1.3. Inria committees

- É. Canot is member of the CUMI (Commission des Utilisateurs de Moyens Informatiques), of Inria-Rennes, from September 2007.
- É. Canot is member of the CHS (Commission Hygiène et Sécurité), of Inria-Rennes, from September 2010.
- J. Erhel is member of the Comité Technique d'Etablissement Public of Inria.
- J. Erhel is member of Conseil d'Administration of Inria.
- J. Erhel participates in the working group of Inria Rennes on project management (first meeting, December 2012).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

A. Abdelmoula is teaching assistant (permanent position) in computer science at the University of Tunis, Tunisia.

S. Khalfallah is teaching assistant (permanent position since September 2012) in mathematics at the University of Kairouan, Tunisia.

M. Oumouni: TP in mathematics at the University of Kenitra, Morocco.

L. Lenôtre is teaching assistant (contrat doctoral avec mission d'enseignement) in mathematics at the University of Rennes 1.

A. Le Gentil: Master M1; title: TP d'analyse, conception et programmation orientée objets; 26 hours; INSA, Rennes, France.

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

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

9.2.2. PhD supervision

PhD: M. Djouwe Tankeo, University of Rennes 1, 20 January 2012, advisors P. Richard with É. Canot.

PhD in progress: S. Sabit, University of Rennes 1, October 2010, advisors J. Erhel with É. Canot.

PhD in progress: S. Khalfallah, University of Rennes 1 and University of Tunis, October 2009, co-advisors J. Erhel and A. ben Abda.

PhD in progress: M. Oumouni, University of Rennes 1 and University of Kenitra, October 2009, co-advisors J. Erhel and Z. Mghazli.

PhD in progress: A. Abdelmoula, University of Rennes 1 and University of Tunis, October 2005, co-advisors B. Philippe and M. Moakher.

PhD in progress: L.-B. Nguenang, University of Yaounde 1, October 2011, advisors E. Kamgnia with B. Philippe.

PhD in progress: L. Lenôtre, University of Rennes 1, October 2012, co-advisors A. Lejay (Inria Nancy) and J. Erhel, with G. Pichot.

9.2.3. Boards of examiners

- HdR: J.-Y. L'Excellent, ENS Lyon, Computer Science, September 2012. Reviewer J. Erhel.
- PhD: S. Duminil, Université du Littoral Côte d'Opale in Calais, Mathematics, July 2012. Reviewer J. Erhel.
- PhD: H. Alcin, University of Nice, Mathematics, December 2012. Chair J. Erhel.
- PhD: M. Rousseau, ENPC in Paris, Mathematics, December 2012. Chair J. Erhel.

9.3. Popularization

- J. Erhel is the scientific coordinator of the website Interstices (since June 2012). See http:http://www.interstices.info.
- J. Erhel gave a talk about numerical models for hydrogeology at lycée Descartes, Rennes, in March 2012 [47]. Video recording at http://videos.rennes.inria.fr/#descartes.
- J. Erhel is member of the editorial board of Mathematics of Planet Earth 2013, un jour-une brève. See http://mpt2013.fr/.

SERPICO Team

9. Dissemination

9.1. Scientific Animation

- *Technical program committees of conferences*
  - Charles Kervrann: PC member for ISBI'2012, ISBI'2013, reviewer for ICASSP'2012, ICASSP'2013, ICIP'2012, ICIP'2013, EMMCPRV'2013.
  - Patrick Bouthemy: PC member for ICPRAM'2013, MLDM'2013, TAIMA'2013, reviewer for ISBI'2012, ISBI'2013, ICRA'2013, ICPR'2012, EUSIPCO'2012, ACIVS'2012.

- *Journal reviewing*
  - Charles Kervrann: reviewer in 2012 for Image and Vision Computing, IEEE Transactions on Image Processing.
  - Patrick Bouthemy: reviewer in 2012 for International Journal of Computer Vision, IEEE Transactions on Circuits snd Systems for Video Technology, IEEE Computer Graphics and Applications, IEEE Signal Processing Letters, Signal Image and Video Processing, Results in Physics.

- *Participations in seminars, invitations, awards*
  - Charles Kervrann was invited to give a talk entitled "Patch-based Image Denoising in Light and Electron Microscopy" at the "BioImage Informatics" conference (Max Planck Institute, Dresden, Germany, November 2012) and at the "Statistics and Images" workshop (University of Strasbourg, November 2012); he was invited to give a talk entitled "Aggregation Methods for Optical Flow Computation" at the "SIAM Imaging Science" conference (Philadelphia, PA, May 2012) and at the "Mathematics and Image Processing" conference (University of Orleans, June 2012).
  - P. Bouthemy was invited to give a talk entitled "Estimation et interprétation du mouvement dans des séquences d'images", Interdisciplinary Mifobio School http://www.mifobio.fr/, plenary session (Seignosse, September 2012).

- *Responsibilities*

  Charles Kervrann:

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

  > Member of executive board of the GdR 2588 ("Microscopie Fonctionnelle du Vivant") CNRS, member of the scientific committee of the Interdisciplinary MiFoBio School CNRS (http://www.mifobio.fr),

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

  > Member of the 2012 CORDIS post-doctoral fellowships committee (Inria Rennes - Bretagne Atlantique centre),

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

  > Deputy-head of the GIS Europia (http://gis-europia.univ-rennes1.fr/) (Rennes imagery platform).

  Patrick Bouthemy

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

Deputy member of the board of directors of IRT (Technological Research Institute) B-com,

President of AFRIF (Association Francaise pour la Reconnaissance et l'Interprétation des Formes) and member of the board of the GRETSI (Groupement de Recherche en Traitement du Signal et des Images).

- *Other activities*
  - SERPICO is involved in the French network GdR 2588 "Microscopie Fonctionnelle du Vivant" CNRS,
  - SERPICO is member of the regional BioGenOuest GIS.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: Charles Kervrann, Geometric Modeling for Shapes and Images, 7.5 hours, M2 SISEA, University of Rennes 1,

Engineer Degree: Charles Kervrann, Statistical Models and Image Analysis, 30 hours + 15 hours (TP, Denis Fortun), 3rd year, Ecole Nationale de la Statistique et de l'Analyse de l'Information ENSAI, Bruz,

Master: Patrick Bouthemy, Analysis of Image Sequences, 18 hours, M2 SISEA, ISTIC & University of Rennes 1,

Master: Patrick Bouthemy, Video Indexing, 9 hours, M2 Computer Science, ISTIC & University of Rennes 1,

Master & Engineer Degree: Patrick Bouthemy, Motion Analysis, 16.5 hours, M2 IRIV & 3rd year, ENSPS & University of Strasbourg.

9.2.2. Supervision

PhD in progress: Philippe Roudot, Lifetime estimation of moving vesicles in FLIM microscopy, started in October 2010, supervised by Charles Kervrann and Francois Waharte (UMR 144 CNRS PICT Institut Curie),

PhD in progress: Denis Fortun, Optical flow computing, aggregation methods and statistical methods: application to time-lapse fluorescence microscopy, started in October 2010, supervised by Charles Kervrann and Patrick Bouthemy,

PhD in progress: Antoine Basset, Event detection and recognition in video-microscopy and applications in cell biology, started in October 2012, supervised by Patrick Bouthemy and Charles Kervrann in collaboration with Jérôme Boulanger (UMR 144 CNRS Institut Curie),

PhD in progress: Alice Bergonzoni, Methods and algorithms for tissue microarrays image analysis, started in January 2013, supervised by Charles Kervrann and Vincent Paveau (Innopsys).

9.2.3. Juries

Referee of Habilitation thesis: A. Manzanera (ENSTA ParisTech) [Patrick Bouthemy], C. Wolf (INSA Lyon) [Patrick Bouthemy]

Referee of PhD thesis: A.S. Coquel (INSA Lyon) supervised by H. Berry and A. Lindner [Charles Kervrann],

Chair of PhD thesis juries: S. Postec (University of Bretagne-Sud) supervised by J. Froment [Charles Kervrann], P. Dérian (University of Rennes 1)) supervised by E. Mémin [Patrick Bouthemy], L. Coutard (University of Rennes 1) supervised by F. Chaumette [Patrick Bouthemy], M. Ullah (University of Rennes 1) supervised by I. Laptev and P. Pérez [Patrick Bouthemy].

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

9. Dissemination

9.1. Scientific Animation

- C. Guillemot is associate editor of the Eurasip International Journal on Image Communication.
- C. Guillemot is member of the award committee of the Eurasip Image communication journal.
- C. Guillemot is member of the Selection and Evaluation Committee of the "Pôle de Compétitivité" Images and Networks of the Region of Ouest of France.
- C. Guillemot has been "Technical co-chair" of the Packet Video International Conference, Munich, May 2012.
- C. Guillemot is member as scientific expert of the CCRRDT (Regional Committee of Research and Technological Development) of the Brittany region.
- C. Guillemot is member of the committee in charge of the IEEE Brillouin-Glavieux award.
- C. Guillemot has been a member of the technical program committees of the international conferences EUSIPCO 2012, PV-2012 and PCS-212.
- C. Guillemot is member of the "bureau du Comité des Projets" as well as of the "commission personnels" in charge of the postdoc and delegation recrutments.
- C. Guillemot was a member of the selection committee for recruting a Professor at Univ. Paris-Sud 11, section 63 (2012).
- C. Guillemot gave a keynote talk on data dimensionality reduction methods and application to different image processing problems at the International Symposium on Image, Video and Communications (ISIVC), Valenciennes, July 2012.
- C. Labit is the Scientific Board chairman of Rennes 1 University (since June 1st, 2008).
- C. Labit is president of the Rennes-Atalante Science Park and of the start-up incubator Emergys (since April, 2007).
- C. Labit is member of the GRETSI association board.
- C. Labit is member of the coordination group of the Allistene alliance devoted to ICT.
- O. Le Meur co-organized a special session about visual attention at the conference SPIE Photonics Europe 2012 (presentations are available on http://www.irisa.fr/temics/staff/lemeur/visualAttention/specialsessions/).
- A. Roumy is a member of the GRETSI association board.
- A. Roumy has been a member of the technical program committee of the international conference EUSIPCO 2012.
- A. Roumy was nominated a titular member of the National Council of Universities (CNU section 61, 2012-2015).
- A. Roumy is a local liaison officer for Eurasip.
- A. Roumy co-organized a two-day workshop on Sparse Models and Machine Learning in Rennes (15-16 Oct. 2012) (sponsored by the Signal, Image & Robotics Department of IRISA. In partnership with EURASIP, Inria & ORANGE LABS).

9.2. Patents and Standardization

The team contributes to the HEVC and 3DV standardization initiatives of the ITU/MPEG joint collaborative team on video coding (JCT-VC) [32], [34], [33], [36], [35].

Four patents have been filed jointly by Technicolor and Inria in the area of 2D video coding. Two more patents have been filed by Inria on motion and disparity prediction tools for 3D video coding.

9.3. Teaching - Supervision - Juries

9.3.1. Teaching

> Master: C. Guillemot, Image and video compression, 12 hours, M2 computer science, Univ. of Rennes 1, France.
>
> Master: C. Guillemot, Image and video compression, 12 hours, M2 SISEA, Univ. of Rennes 1, France.
>
> Master: L. Guillo, Multimedia Communication, 15 hours, M2 Network Engineering, Univ. of Rennes 1, France.
>
> Master: O. Le Meur, Selective visual attention, 13 hours, M2, Univ. of Paris 8, France.
>
> Master: O. Le Meur, Acquisition/Image Processing/Compression, 22 hours, M2 MITIC, Univ. of Rennes 1, France.
>
> Master; A. Roumy, Acquisition/Image processing/Compression, 16 hours, M2 MITIC, Univ. of Rennes 1, France.
>
> Master: A. Roumy, Magistère program, Information Theory, Computer science and telecommunications, 18 hours, Ecole Normale Supérieure de Cachan, Ker Lann campus, France.
>
> Engineering degree: C. Guillemot, Video communication, 16 hours, Télécom Lille 1, Villeneuve-d'Ascq, France.
>
> Engineering degree: L. Guillo, Video streaming, 3 hours, ESIR, University Rennes 1, France.
>
> Engineering degree: C. Labit, Entrepreneurship and innovation, 3 hours, ESIR, Rennes, France.
>
> Engineer degree: O. Le Meur, Image Processing, video analysis and compression, 54 hours, ESIR2, Univ. of Rennes 1, France.
>
> Engineer degree: O. Le Meur, Visual communication, 65 hours, ESIR3, Univ. of Rennes 1, France.
>
> Engineering degree: A. Roumy, Image processing and numerical analysis, 51 hours, ECAM Rennes, France.

9.3.2. Supervision

PhD & HdR

> PhD : V. Jantet, Layered depth images for multi-view video coding, Univ. Rennes 1, 23rd Nov. 2012, C. Guillemot and L. Morin (INSA)
>
> PhD : J. Gautier, A Dynamic Visual Attention Model for 2D and 3D conditions; Depth Coding and Inpainting-based Synthesis for Multiview Videos, Univ. Rennes 1, 5th Dec. 2012, O. Le Meur and C. Guillemot
>
> PhD in progress : J. Aghaei Mazaheri, Sparse representations and dictionary learning for satellite image compression, Oct. 2011, C. Guillemot and C. Labit (contract with Astrium)
>
> PhD in progress : M. Bevilacqua, Image and video super-resolution using neighbor embedding algorithms, Feb. 2011, A. Roumy and C. Guillemot (Contract with Alcatel/Lucent)
>
> PhD in progress : S. Cherigui, Spatio-temporal scene modeling for video compression, Nov. 2009, C. Guillemot (Cifre contract with Technicolor)
>
> PhD in progress : B. Huang, Video compression with generalized lifting, Apr. 2012, C. Guillemot (Cifre contract with Orange)
>
> PhD in progress : D. Khaustova, Objective evaluation of 3D video quality, Dec. 2011, O. Le Meur (Cifre contract with Orange)
>
> PhD in progress : M. Ebdelli, Video inpainting for editing and loss concealment, Dec. 2010, C. Guillemot and O. Le Meur
>
> PhD in progress : M. Alain, Spatio-temporal linear embedding for epitome-based video compression, Oct. 2012, C. Guillemot (Cifre contract with Technicolor)

9.3.3. *Juries*

- C. Guillemot has been member (president) of the jury of the HDR committee of:
    – G. Coatrieux, Telecom Bretagne, 9/07/2012
    – E. Vincent, Univ. Rennes 1, 23/11/2012
- C. Guillemot has been member (president) of the jury of the PhD committee of:
    – C. Greco, Telecom ParisTech, 6/07/2012
- C. Labit has been member (president) of the jury of the HDR committee of:
    – Marie Babel, INSA Rennes, 29/06/2012
- C. Labit has been examiner and member of the jury of the PhD committee of:
    – Lu Zhang-Ge, Univ d'Angers, 28/11/2012

9.4. Popularization

- L. Guillo is advisor of secondary school pupils following the course "Informatique et Science du Numérique (ISN)" of the Lycée Jean Macé in Rennes, France.
- A. Roumy led a reading group on machine learning that was held weekly in the academic year 2011/12.
- Aline Roumy gave a lecture on video compression at the lycée Chateaubriand for highschool students (Terminale and classes préparatoires).
- Participation of Sirocco team members to the Rennes Science Festival (cultural dissemination of sciences).

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

9. Dissemination

9.1. Scientific Animation

- Nicolas Beldiceanu:
  - Head of the Inria TASC team and LINATASC team.
  - Program co-chair of CPAIOR 2012.
  - Member of the program committee of ROADEF 2012.
  - Member of the program committee of CP 2012.
  - Co-chair of BPPC 2012.
  - Member of the program committee of ECAI 2012.
  - Member of the program committee of CPAIOR 2013.
  - Member of the program committee of CP 2013.
  - Reviewer for IJCAI 2013.
  - Reviewer in 2012 for the Constraints Journal.
  - Invited talk in August 2012 on the topic of *a model seeker* by the Department of Information Technology, Uppsala University, Sweden.
- Fréderic Benhamou:
  - Vice-President for Research of Nantes University, France.
- Gilles Chabert:
  - Reviewer for CPAIOR 2012.
  - Reviewer for ACM-SAC 2012.
  - Reviewer in 2012 for the Constraints Journal.
  - Reviewer in 2012 for the RAIRO Journal.
  - Invited by the department of mathematics of Uppsala University, Sweden in the context of the international workshop on interval analysis and set-membership methods.
- Sophie Demassey:
  - Member of the program committee of CPAIOR 2012.
- Jean-Guillaume Fages:
  - Reviewer in 2012 for the Constraints Journal.
  - Invited an Inria Rocquencourt by the constraint team for a seminar on *Using Graph Variables in Constraints Programming*.
- Narendra Jussien:
  - Head of the computer science department at EMN.
  - Conference and program co-chair of CPAIOR 2012.
  - Member of the program committee of CP 2012.
  - Member of the program committee of LION 7.
  - Member of the program committee of RIVF 2012.
  - Member of the program committee of ROADEF 2012.
  - Member of the program committee of ACM-SAC 2012.
  - Reviewer in 2012 for the AI Journal.

- Reviewer in 2012 for the TPLP.
- Reviewer in 2012 for the Constraints Journal.
- Director of the series *Operations Research and Constraint Programming* from ISTE/Wiley.

- Xavier Lorca:
  - Member of the program committee of JFPC 2012.
  - Member of the program committee of JFPC 2013.
  - Member of the program committee of IJCAI2013.
  - Reviewer for CPAIOR 2012.
  - Reviewer in 2012 for the Constraints Journal.
  - Reviewer in 2012 for the RAIRO Journal.

- Florian Richoux:
  - Organizer and member of the program committee of the session *Large Scale Parallelism* of LION 7.

- Thierry Petit:
  - Co head of the LINA TASC team.
  - Conference co-chair of CPAIOR 2012.
  - Member of the program committee of CPAIOR 2012.
  - Member of the program committee of Cocomile 2012.
  - Reviewer in 2012 for CP 2012.
  - Reviewer in 2012 for the Constraints Journal.
  - Reviewer in 2012 for EJOR.
  - Reviewer in 2012 for CPL.
  - Member of the program committee of CP 2013.
  - Invited talk on the topic of *constraints on sequences of variables, balancing and focus constraints* at the 8èmes Journèes Francophones de Programmation par Contraintes (JFPC 2012), Toulouse, France.

- Charlotte Truchet:
  - Program Chair of JFPC 2013.
  - Member of the program committee of ECAI 2012.
  - Invited at the NII (National Institute for Informatics) and JFLI (Japanese-French LAboratory for Informatics) in Tokyo: work on *parallel constraint solving* with H. Hosobe at NII and with P. Codognet at JFLI.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: N. Beldiceanu, Constraint (Master ORO), 26h, M2, Nantes University, France.

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

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

Licence: N. Beldiceanu, Imperative Programming, 12h, L3, Mines de Nantes, France.

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

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

Licence: G. Chabert, Simulation and parameter estimation, 18h, L3, Mines de Nantes, France.

Licence: G. Chabert, Numerical integration, 15h, L3, Mines de Nantes, France.

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

Licence: J.-G. Fages, Graphs and Algorithms, 28h, L2, Mines de Nantes, France.

Master: J.-G. Fages, Constraints Programming, 12h, M2, Mines de Nantes, France.

Master: J.-G. Fages, Project, 20h, M2, Mines de Nantes, France.

Licence: J.-G. Fages, Imperative Programming, 4h, L1, Mines de Nantes, France.

Master: N. Jussien, Constraint, 12h, M2, Mines de Nantes, France.

Master: N. Jussien, Constraint, 3h, M1, Mines de Nantes, France.

Licence: N. Jussien, Discrete mathematics, 12h, L3, Mines de Nantes, France.

Licence: A. Letort, Project, 15h, L1, Mines de Nantes, France.

Licence: A. Letort, Operation Research, 15h, L3, Mines de Nantes, France.

Master: X. Lorca, Head of the major of the Master in Engineering, Computer Science for Decision Support, M2, 30h, Mines de Nantes, France.

Master: X. Lorca, Algorithms and Complexity, 20h, M1, Mines de Nantes, France.

Master: X. Lorca, Data Warehouse and Data Analysis, 20h, M1, Mines de Nantes, France.

Master: X. Lorca, Graph Theory, Algorithms, 20h, M1, Mines de Nantes, France.

Master: X. Lorca, Business Intelligence, 20h, M2, Mines de Nantes, France.

Master: X. Lorca, IT System and Software Development, 20h, M2, Mines de Nantes, France.

Master: X. Lorca, Implementation Project, 20h, M2, Mines de Nantes, France.

Master: T. Petit, Combinatorial Optimization GIPAD, 17.5h, M2, Mines de Nantes, France.

Master: T. Petit, GIPAD project, 25h, M2, Mines de Nantes, France.

Master: T. Petit, Internship of Mohamed Kebe, 25h, M2, University of Clermont, France.

Licence: T. Petit, Imperative Programming, 22.5h, L2, Mines de Nantes, France.

Licence: T. Petit, Object Programming, 9h, L2, Mines de Nantes, France.

Licence: T. Petit, Synthesis, 5h, L2, Mines de Nantes, France.

Licence: T. Petit, Programming project, 8h, L2, Mines de Nantes, France.

Licence: T. Petit, Data structures, 27.5h, L2, Mines de Nantes, France.

Licence: F. Richoux, Design Patterns in Object-Oriented Programming, 96h, L3, University of Nantes, France.

Licence: F. Richoux, Introduction to Computer Science, 36h, L1, University of Nantes, France.

Licence: C. Truchet, C2i, 64h, L1, University of Nantes, France.

Licence: C. Truchet, Algorithms and Programming, 140h, L1, University of Nantes, France.

Licence: C. Truchet, Web, 36h, L1, University of Nantes, France.

Master: C. Truchet, Computer sound design, 24h, M2, University of Nantes, France.

9.2.2. Supervision

PhD: Marie Pelleau, Abstract domains in constraint programming, Nantes University, November 29 2012, Charlotte Truchet, Fréderic Benhamou, Pascal van Hentenryck.

PhD: Alexis De Clerq, Cumulative scheduling with overloads: global constraints and decompositions, Nantes University, October 29 2012, Thierry Petit, Narendra Jussien, Nicolas Beldiceanu.

PhD: Aurélien Merel, Biobjective railway infrastructure capacity assessment by hybrid column generation, Nantes University, October 31 2012, Sophie Demassey, Xavier Gandibleux.

PhD in progress: Arnaud Letort, Scalable scheduling constraints, October 2010, Nicolas Beldiceanu.

PhD in progress: Bruno Belin, Interactive conception of sustainable urban environments with constraints, September 2011, Charlotte Truchet, Marc Christie, Fréderic Benhamou.

PhD in progress: Jean Guillaume Fages, Graph Theory in Constraint Programming, Theory and application to several graph covering problems, October 2011, Xavier Lorca, Nicolas Beldiceanu.

PhD in progress: Charles Prud'Homme, Constraint Propagation and search strategies Management in Modern Constraint Solvers, October 2011, Xavier Lorca, Narendra Jussien, Rémi Douence.

PhD in progress: Alban Derrien, Constraint propagation with limited time complexity, October 2012, Thierry Petit, Nicolas Beldiceanu.

9.2.3. Juries

- N. Beldiceanu, Member of the PhD committee of the thesis of Alexis De Clerq (Univ. Nantes, October 29, 2012).
- F. Benhamou, Member of the PhD committee of the thesis of Marie Pelleau (Univ. Nantes, November 29, 2012).
- Narendra Jussien, Member of the PhD committee of the thesis of Alexis De Clerq (Univ. Nantes, October 29, 2012).
- Narendra Jussien, Reviewer of the PhD thesis of Caroline Maillet (Univ. Toulouse, April 25, 2012).
- T. Petit, Member of the PhD committee of the thesis of Alexis De Clerq (Univ. Nantes, October 29, 2012).
- Charlotte Truchet, Member of the PhD committee of the thesis of Marie Pelleau (Univ. Nantes, November 29, 2012).

9.3. Popularization

- Within the context of the global constraint catalog, some effort was done to provide more explanations for the core global constraints, namely:
  - provide for all core global constraints some small examples where one can see, also graphically, all solutions.
  - provide a set of 30 exercises with their detailed solution for half of the core constraints (*alldifferent*, *cycle*, *cumulative*, *element*, *nvalue*).
- Within the context of the new release of the library IBEX a course was given by G. Chabert mid december to about 22 participants in ENSTA Bretagne.

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

9. Dissemination

9.1. Scientific Animation

- Laurent Amsaleg
  - was a program committee member of CBMI 2012;
  - was a program committee member of ICMR 2012;
  - was a program committee member of MMM 2012;
  - was a program committee member of BDA 2012;
  - was a program committee member of ICME 2012;
  - was a program committee member of MMM 2013;
  - was a member of the "commission de spécialistes, ISTIC, University Rennes 1";
  - was a reviewer for Advances in Multimedia Journal.
- Vincent Claveau
  - was a program committee member of the Hybrid methods in NLP Workshop, collocated with EACL2012, Avignon, France;
  - was a program committee member of TALN'12 (18e conférence nationale Traitement automatique des langues naturelles), Grenoble, France;
  - was a program committee member of IEEE/WIC/ACM Web Intelligence (WI-IAT) conference, Macau, China;
  - was a program committee member of Conférence en Recherche d'Information et Applications, CORIA 2012, Bordeaux, France;
  - is a member of the editorial board of the journal TAL, Traitement Automatique des Langues;
  - was a reviewing committee member for the journal BioInformatics;
  - is a board member of Association pour le Recherche d'Information et Application (ARIA) and was implied in the organization of the CORIA 2012 conference and the EARIA 2012 summer school
  - was a selection committee member in Univ. Paris 11 and Univ. Paris 13.
- Teddy Furon
  - was an associate editor of Elsevier Digital Signal Processing, 2012;
  - was an associate editor of IEEE Trans. on Information Forensics and Security, 2012;
  - was a member of the technical committee of IEEE Information Forensics and Security sub-society, 2012.
  - was a program committee member of Information Hiding 2012, Berkeley, CA, USA;
  - was a program committee member of CMS 2012, Canterbury, UK;
  - was a program committee member of IEEE WIFS 2012, Tenerife, Spain;
- Guillaume Gravier
  - was a program committee member of the Journées d'étude sur la Parole, 2012;
  - was a technical program committee member of Workshop on Content-based Multimedia Indexing, 2012;

– was a technical program committee member of IEEE Intl. Conf. on Multimedia and Exhibition, 2012;

– was a program committee member of the ECCV Workshop on Information Fusion in Computer Vision for Concept Recognition, 2012;

– founded in 2012 the Special Interest Group of the Intl. Speech Communication Association, Speech and Language in Multimedia (SLIM), which he is leading;

– is vice-president of the Association Francophone de la Communication Parlée, the French-speaking Speech Communication Association, also a regional group of the Intl. Speech Communication Association;

– was a program committee member of the ACM Multimedia 2012 Workshop on Multimedia Analysis For Ecological Data;

– was a technical program committee member of the ACM Worskhop on Audio and Multimedia Methods for Large-Scale Video Analysis, 2012;

– was a program committee member of the 2012 5th International Congress on Image and Signal Processing;

– was appointed as an expert for the ANR CONTINT program;

– is a member of the Interspeech 2013 Steering Committee, in charge of the conference program coordination;

– was the scientific leader of the national evaluation initiative ETAPE;

– was a member of the organizing committee of the MediaEval 2012 evaluation benchmark;

– has served as a reviewer for several major journals in the speech and multimedia domains.

- Patrick Gros

    – was a program committee member of the Fourth International Conference on Creative Content Technologies, Content 2012, Nice, France;

    – was a program committee member of Conférence en Recherche d'Information et Applications, CORIA 2012, Bordeaux, France;

    – was a Technical Program Committee member of the 20th European Signal Processing Conference Eusipso 2012, Bucharest, Romania;

    – was a program committee member of the 18th Conférence en Reconnaissance des Formes et Intelligence Artificielle, RFIA 2012, Lyon, France;

    – was appointed as scientific officer of the Inria research center of Rennes – Bretagne Atlantique;

    – was member of the scientific board of Université européenne de Bretagne;

    – was member of the Evaluation Board of Inria.

- Hervé Jégou

    – has co-organized a tutorial on Large-Scale Visual Recognition at CVPR'2012;

    – was a program committee member and keynote speaker at the Workshop on Web-scale Vision and Social Media, in conjunction with ECCV'2012;

    – was area chair for the BMVC'2012 conference;

    – was a program committee member of CVPR'2012;

    – was a program committee member of ECCV'2012;

    – was a program committee member of CBMI'2012;

    – was a program committee member of MMM'2012;

    – was a program committee member of RFIA'2012;

- – was appointed as an expert for the ANR CONTINT'2012 project call and for the ANRT in 2012;
- – was a member of the selection committee for associate professors at ENSEA.
- Ewa Kijak
  - – is head of the Image engineering track of ESIR (Ecole Supérieure d'Ingénieur de Rennes, associated with University of Rennes 1).
- François Poulet
  - – co-organized and edited, together with B. Le Grand, the proceedings of the 10th Workshop Visualisation et Extraction de Connaissances co-located with Extraction et Gestion de Connaissances, (EGC'12), Bordeaux, France, Jan. 2012.
  - – was a program committee member of KDIR'12, International Conference on Knwoledge Discovery and Information Retrieval, Barcelona, Spain, Oct. 2012;
  - – was a program committee member of KICSS'12, International Conference on Knowledge Information and Creativity Support Systems), Melbourne, Australia, Nov. 2012;
  - – was a program committee member of VINCI'12, Visual INformation Communications International, Hangzhou, China, Sept. 2012;
  - – was a program committee member of AusDM'12, Autralasian Data Mining Conference, Sydney, Australia, Dec. 2012;
  - – was a program committee member of EGC'12, Extraction et Gestion de Connaissances, Bordeaux, France, Jan. 2012;
  - – was a reviewer of ISCAS 2013, IEEE International Symposium on Circuits and Systems, Beijing, China, May 2013;
  - – was a reviewer of DAMI, Journal on Data Mining and Knowledge Discovery, Springer;
  - – was a reviewer of Advances in Knowledge Discovery and Management, Springer;
  - – was co-organizer of the 10th workshop Visualisation et Extraction de Connaissances, (AVEC-EGC'12), Bordeaux, France, January 2012.
- Christian Raymond
  - – is a member of the editorial board of the e-journal "Discours";
  - – was a reviewing committee member of Interspeech (13th Annual Conference of the International Speech Communication Association);
  - – was a reviewing committee member of ICMLA (The tenth International Conference on Machine Learning and Applications).
- Pascale Sébillot
  - – was a member of the program committee of LREC 2012 (8th international conference on Language Resources and Evaluation);
  - – was a member of the program committee of TALN 2012 (19e conférence francophone Traitement automatique des langues naturelles);
  - – is an editorial committee member of the Journal TAL (Traitement automatique des langues; since July 2009);
  - – was a member of the reading committee of several issues of the Journal TAL (Traitement automatique des langues) in 2012.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Doctorate: H. Jégou, Tutorial at CVPR'12, 3h, Providence, USA

- Doctorate: H. Jégou, Tutorial at BMVC'12, 2h, Surrey, UK
- Doctorate: H. Jégou, Lecture at SSMS'12 summer school, 2h, Santorini, Greece
- Master: L. Amsaleg, High dimensional Indexing, 14h, M2R, University of Rennes 1
- Master: L. Amsaleg, Database Tuning, 8h, ENSAI
- Master: G. Gravier, Data analysis and stochastic modeling, 27h, M2, University of Rennes 1
- Master: V. Claveau, Multimedia Indexing, 12h, M2, ISTIC, University of Rennes 1, Rennes
- Master: V. Claveau, Indexing and multimedia databases, 15h, M2, ENSSAT
- Master: V. Claveau, Natural Language Processing, 36h, M2, Univ. Rennes 1
- Master: V. Claveau, Data-Based Knowledge Acquisition 2: Symbolic Methods, 27 hours, M1, INSA de Rennes
- Master: V. Claveau, Symbolic and sequential data, 10h, M2R, University of Rennes 1
- Master: P. Gros, Mathematics workshop, 8h, ISTIC, University of Rennes 1
- Master: E. Kijak, Image analysis and classification, 30h, M1, ESIR
- Master: E. Kijak, Image processing, 64h, M1, ESIR
- Master: E. Kijak, Supervised learning, 16h, M2R, University Rennes 1
- Master: E. Kijak, Computer Vision, 15h, M2, ESIR
- Master: E. Kijak, Indexing and multimedia databases, 15h, M2, ENSSAT
- Master: E. Kijak, Digital Documents Indexing and Retrieval, 26h, M2, University Rennes 1
- Master, François Poulet is in charge of the Master in computer science (2nd year), MITIC, Computer Science Methods and Information and Communication Technologies, ISTIC, University of Rennes 1
- Master: F. Poulet, Managing Large Collections of Digital Data, 10h, M2R, ISTIC, University of Rennes 1
- Master: F. Poulet, Introduction to Data Mining, 15h, M2P, ISTIC, University of Rennes 1
- Master: F. Poulet, Mining Symbolic Data, 25h, M2P, ISTIC, University of Rennes 1
- Master: F. Poulet, Applications and Problem Solving, 10h, M2P, ISTIC, University of Rennes 1
- Master: F. Poulet, Learning Methods for Multimedia Data, 26h, M2P, ISTIC, University of Rennes 1
- Master: P. Sébillot, Advanced Databases and Modern Information Systems, 70 hours, M2, INSA de Rennes,
- Master: P. Sébillot, Data-Based Knowledge Acquisition 2: Symbolic Methods, 18 hours, M1, INSA de Rennes
- Licence: G. Gravier, Databases, 9h, L3, Université de Rennes 1
- Licence: G. Gravier, Databases, 27h, L2, INSA de Rennes
- Licence: G. Gravier, Programming in C, 8h, L3, INSA de Rennes,
- Licence: H. Jégou, Databases, 40h, L2, INSA de Rennes

9.2.2. Supervision

- PhD : Juan David Cruz-Gomez, Socio-semantic Networks Algorithm for a point of View Based Visualization of On-line Communities. December 10th 2012, Cécile Bothorel (Télécom Bretagne), François Poulet.
- PhD: Thanh-Toan Do, Security Analysis of Copy Image Detection systems based on SIFT Descriptors, University Rennes 1, September 27th 2012, Laurent Amsaleg, Ewa Kijak, Teddy Furon.

- PhD : Ali Reza Ebadat, Toward robust information extraction models for multimedia documents, INSA de Rennes, October 17th 2012, Vincent Claveau and Pascale Sébillot
- PhD in progress: Petra Bosilj, Video description and retrieval, Started October 2012, Ewa Kijak and Sebastien Lefèvre (in collaboration with IRISA SEASIDE team)
- PhD in progress: Mohammed-Haykel Boukadida, Automatic video summarization based on constraint programming, January 2012, Patrick Gros, Sid-Ahmed Berrani (Orange Labs, Rennes)
- PhD in progress : Thanh Nghi Doan, Image Classification, Started November 2010, François Poulet
- PhD in progress: Khaoula Elagouni, Automatic image and video indexing using automatic recognition of embedded texts and natural language processing, October 10, 2009, Pascale Sébillot, Christophe Garcia (LIRIS, Lyon) and Franck Mamalet (Orange Labs, Rennes)
- PhD in progress: Julien Fayolle, Information retrieval in TV streams, Started October 2009, Fabienne Moreau, Christian Raymond, Guillaume Gravier, Patrick Gros.
- PhD in progress: Gylfi Gudmundsson, Towards parallel and distributed CBIR systems, started April 2010, Laurent Amsaleg
- PhD in progress: Mihir Jain, Video description and retrieval, started February 2011, Hervé Jégou, Patrick Gros and Patrick Bouthemy
- PhD in progress: Ludivine Kuznik, Structuring and navigating documentary archives, started April 2011, Guillaume Gravier and Pascale Sébillot, in collaboration with Institut National de l'Audiovisuel (Jean Carrive)
- PhD in progress: Abir Ncibi, Structure learning of TV streams, started October 2011, Vincent Claveau, Guillaume Gravier, Patrick Gros, Emmanuelle Martienne
- PhD in progress: Cédric Penet, Multimodal content based analysis for video on demand, started September 2010, Guillaume Gravier and Patrick Gros, in collaboration with Technicolor
- PhD in progress: Bingqing Qu, Structure discovery of TV programs from an homogeneous collection, started October 2012, Guillaume Gravier in collaboration with Institut National de l'Audiovisuel
- PhD in progress: Anca Roxana Simon, Hierarchical semantic structuring of video collections, started October 2012, Guillaume Gravier and Pascale Sébillot
- PhD in progress: Stefan Ziegler, Landmark driven speech recognition, started September 2010, Guillaume Gravier

9.2.3. *Juries*

- Patrick Gros, HDR, Benoît Huet (université de Nice-Sophia Antipolis)
- Guillaume Gravier, PhD, Mickaël Rouvier (LIA);
- Guillaume Gravier, PhD, Pierre Gotab (LIA);
- Guillaume Gravier, PhD, Sylvain Raybaud (LORIA);
- Guillaume Gravier, PhD, Christian Gillot (LORIA);
- Hervé Jégou, PhD, Safadi Bahjat (LIG);
- Ewa Kijak, PhD, Muneeb Ullah (Inria);
- Pascale Sébillot, HDR, Ludovic Tanguy (Toulouse university);
- Pascale Sébillot, PhD, Clémentine Adam (Toulouse university);
- Pascale Sébillot, PhD, Gert-Jan Poulisse (Katholieke Universiteit (KU) Leuven, Belgium) ;

9.3. Invited talks and lectures

- Vincent Claveau: Invited speaker at the ASAP off-site seminar, Quiberon, France, May 2012
- Vincent Claveau: Invited speaker at the Cordial seminar, December 2012

- Hervé Jégou: Keynote speaker at the ECCV workshop on web scale vision and social media, Firenze, Italy, October 2012
- Hervé Jégou: Lecturer at the CVPR conference "Large scale object recognition" tutorial (selected), Providence, USA, June 2012
- Hervé Jégou: Invited lecturer at Summer School on Social Media Modeling and Search (SSMS'12), Thira, Greece, September 2012
- Hervé Jégou: Invited tutorial at the BMVC conference, Surrey, UK, September 2012
- Hervé Jégou: Invited talk at Oxford University, Visual Geometry Group, UK, September 2012
- Hervé Jégou: Invited talk at the National Institute of Technology (NII), Tokyo, Japan, April 2012
- Hervé Jégou: Invited talk at Technicolor Palo Alto, California, USA, August 2012
- Hervé Jégou: Invited talk at the ETIS laboratory/ENSEA, Cergy-Pontoise, France, December 2012

9.4. Popularization

- Sébastien Campion and Teddy Furon: Participation to *Fête de la Science*, October 12-13, 2012;
- The image search technique based on Pqcodes [83] was popularized in the journal Futura Sciences;
- The Texmix demonstration was presented at Futur en Seine.

<h1 align="center" style="color:red">TRISKELL Project-Team</h1>

9. Dissemination

9.1. Scientific Animation

9.1.1. Journals

9.1.1.1. Jean-Marc Jézéquel

is an Associate Editor of the following journals:

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

9.1.1.2. Benoit Baudry

is an Associate Editor of the following journal:

- Journal on Software and System Modeling: SoSyM

9.1.2. Conferences

9.1.2.1. Benoit Baudry

has been a member of the program committee of the following conferences:

- MODELS 2012 The 15th International Conference on Model Driven Engineering Languages and Systems Innsbruck, Austria, October 2012
- IEEE ICST'12 The 5th International Conference on Software Testing Verification and Validation, Montreal, Canada, April 2012
- GECCO'12, The International Conference on Genetic and Evolutionary Computation Conference, Philadelphia, USA? July 2012
- GPCE'12, The International Conference on Generative Programming and Components Engineering
- NIER'12, The New Ideas and Emerging Results track at ICSE'12, Zurich, Switzerland, May 2011.
- AST workshop on Automated Software Testing, at ICSE'11, Honolulu, USA, May 2011
- Mutation'12 workshop at ICST'12, Montreal, Canada, April 2012

9.1.2.2. Jean-Marc Jézéquel

has been a member of the program board of the following conferences:

- MODELS 2012 The 15th International Conference on Model Driven Engineering Languages and Systems Innsbruck, Austria, October 2012

9.1.2.3. Jean-Marc Jézéquel

has been a member of the program committee of the following conferences:

- Models@run.time 7th International Workshop on Models at Run-Time, associated to MODELS 2012, Innsbruck, Austria, October 2012

9.1.2.4. Benoit Combemale

has been a member of the program committee of the following conferences:

- APSEC'12, The 19th Asia-Pacific Software Engineering Conference, Hong Kong, 2012.
- SEFM'12, The 9th International Conference on Software Engineering and Formal Methods, 2012.
- AMT workshop on Analysis of Model Transformations (AMT), at MODELS'12, Innsbruck, Austria, 2012.
- ICMT'12, The 5th International Conference on Model Transformation, 2012.
- ECMFA'12, The 8th European Conference on Modelling Foundations and Applications, Lyngby, Denmark, july 2012.
- PMDE workshop at ECMFA'12, Lyngby, Denmark, july 2012.
- CSP track at WETICE'12, Toulouse, France, 2012.

9.1.2.5. Olivier Barais

has been a member of the program committee of the following conferences:

- CIEL'12, The 1st french Conference on Software Engineering, Rennes, 2012.
- SEAA'12, The 38th Euromicro Conference on Software Engineering and Advanced Applications, 2012.
- VARYCOMP'12, The 3rd International Workshop on Variability & Composition @Modularity·AOSD.
- SAC'12 The the 27th Symposium On Applied Computing, Trento, Italy, 2012.

9.1.2.6. Noël Plouzeau

has been a member of the program committee of the following conferences:

- CBSE 2012, Component Based Software Engineering, Bertinoro, Italy, june 2012,.

9.1.3. Workshops, Tutorials and Keynotes

9.1.3.1. Jean-Marc Jézéquel

has co-organized VARY'12 (Variability for You) a workshop of MODELS 2012, Innsbruck, Austria, October 2012.

9.1.3.2. Mathieu Acher

gave a tutorial "Next-Generation Model-based Variability Management: Languages and Tools" at MODELS 2012 (15th International Conference on Model Driven Engineering Languages and Systems Innsbruck).

9.2. Miscellaneous

9.2.1. Benoit Baudry

is on the steering committee of the IEEE International Conference on Software Testing Verification and Validation.

He is program committee chair for ICST'13.

9.2.2. Jean-Marc Jézéquel

is on the steering committee of the IEEE/ACM Conference on Aspect Oriented Software Development

9.3. Teaching - Supervision - Juries

9.3.1. 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.

Olivier Barais is the overall responsible for the Master2 Pro in Computer Science at the University of Rennes.

Benoit Combemale was co-chair of the 8th Educators' Symposium at MODELS 2012.

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

9.3.2. Supervision

PhD : Juan Cadavid, *Analyse formelle pour l'assistance à la méta-modélisation*, thèse 12 décembre 2012, J.-M. Jézéquel and B. Baudry

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 : Suresh Pillay, *Variability Management in Modeling Languages*, thèse, 2011-2014, 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 : Olivier-Nathanael Ben David, *Secure Service Architectures and Design*, thèse 2010-2013, J.-M. Jézéquel and B. Baudry

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

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

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

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

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

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

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

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

PhD in progress : Antonio Mattos Junior, *On Validating Models at Runtime adaptation*, thèse 2012-2014, N. Plouzeau and O. Barais

9.3.3. *Juries*

9.3.3.1. Benoit Baudry

was in the examination committee of the following PhD thesis:

- Ahmed Turki, Mars 2012, Université d'Orléans (Referee)
- María Francisca Rosique Contereras, June 2012, Universidad Politécnica de Cartagena (Referee)
- Rajwinder Kaur Panesar-Walawege, August 2012, University of Oslo (Referee)
- Amine Raji, March 2012, ENSTA-Bretagne (Referee)
- Florian Noyrit, October 2012, Université de Paris XI (Referee)
- Marie Pelleau, November 2012, Université de Nantes (Referee)
- Marc Palyart, December 2012, Université de Toulouse (Member)
- Thang Pham, December 2012, Telecom Bretagne (Member)

9.3.3.2. Jean-Marc Jézéquel

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

- Cédric Fleury, June 2012, Université Rennes 1 (President)
- Eduardo Mazza, June 2012, University of Grenoble (Referee)
- Marcos Aurelio Almeida da Silva, June 2012, University of Paris 6 (Referee)
- Ajay Kattepur, November 2012, Université Rennes 1 (President)
- Thierry Duval (HDR), November 2012, Université Rennes 1 (President)
- Bertrand Couasnon (HDR), December 2012, Université Rennes 1 (President)

9.3.3.3. Olivier Barais

was in the examination committee of the Ali Hassan PhD (Member).

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

8. Dissemination

8.1. Scientific Animation

Nathalie Bertrand   was PC member of QAPL'12, QEST'12, Infinity'12 and SYNT'12. She is since september 2012 a Steering Committee member of QEST. She was invited to give a talk at the research seminar of the Quantitative Logics and Automata (QuantLA) Doctoral School in Dresden, in December 2012. She is also a member of the panel for the Gilles Kahn prize awarded each year to an excellent PhD thesis in computer science.

Thierry Jéron   is Vice President of the Project Committee of Inria Rennes - Bretagne Atlantique. He is member of the IFIP Working Group 10.2 on Embedded Systems. He is a member of the Steering Committe of the School MOVEP (held in Marseille in December 2012), and PC member of ICFEM 2012, ICST 2012, ICTSS 2012, RV 2013, TAP 2012 and 2013. He gave a lecture at the Summer School TAROT 2012. He co-organizes the Dagstuhl Seminar 13021 on "Symbolic Methods in Testing" in January 2013.

Hervé Marchand   is Associate Editor of the IEEE Transactions on Automatic Control since 2009 and member of the IFAC Technical Committees (TC 1.3 on Discrete Event and Hybrid Systems) since 2005. He is member of the steering committee of MSR (Modélisation de systèmes réactifs). He was PC member of WODES'12, ICINCO'12. He is organizer of MSR 2013 in Rennes.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Nathalie Bertrand

Master : Techniques de vérification avancées, 10h, niveau M2, ISTIC, Université de Rennes 1.

Agrégation : Langages formels, 16h, niveau M2, ENS-Cachan-Antenne de Bretagne.

Sébastien Chédor

Licence : Programmation Java, 20h, niveau L2, ISTIC, Université de Rennes 1.
APF, 20h, niveau L1, ISTIC, Université de Rennes 1.
Initiation LaTeX, 6h, niveau L3, ENS-Cachan-Antenne de Bretagne.
Programmation, 20h, niveau L3, ENS-Cachan-Antenne de Bretagne.

Paulin Fournier

Licence : Scheme (TP), 20h, niveau L1, INSA-Rennes.

Christophe Morvan

Licence : Object Oriented programming with Java, 120h, niveau L2, Université de Marne-la-Vallée.
Systèmes d'exploitation (Cours), 36h, niveau L3, Université de Marne-la-Vallée.
Compilation (Cours-TD), 60h, niveau L3, Université de Marne-la-Vallée.

Amélie Stainer

Licence : Base de données (Cours-TD-TP), 28h, niveau L2, INSA-Rennes.

Agrégation : Modélisation (Cours), 11h, niveau M2, ENS-Cachan-Antenne de Bretagne.
Oraux blancs, 12h, niveau M2, ENS-Cachan-Antenne de Bretagne.
Préparation de leçons d'informatique, 10h, niveau M2, ENS-Cachan-Antenne de Bretagne.

8.2.2. Supervision

PhD in progress: **Sébastien Chédor**, Verification and test of systems modeled by regular graphs, started in September 2009, supervised by Christophe Morvan and Thierry Jéron.

PhD in progress: **Paulin Fournier**, Parameterized Verification of probabilistic systems, started in September 2012, supervised by Nathalie Bertrand and Thierry Jéron.

PhD in progress: **Srinivas Pinisetty**, Runtime validation of critical control-command systems, started in December 2011, supervised by Hervé Marchand and Thierry Jéron.

PhD in progress: **Amélie Stainer**, Quantitative verification of timed automata, started in October 2010, supervised by Nathalie Bertrand and Thierry Jéron.

8.2.3. Juries

Nathalie Bertrand was a member of the PhD defense jury of Youssouf Oualhadj (LaBRI, Bordeaux) in december 2012.

8.3. Popularization

Christophe Morvan has been involved in the organization of a public talk on Turing (celebrating the centenary of his birth) by Jean Lassègue. See the webpage.

VISAGES Project-Team

9. Dissemination

9.1. Animation of the scientific community

9.1.1. Editorial board of journals

- C. Barillot is Associate Editor of IEEE Transactions on Medical Imaging (IEEE-TMI).
- C. Barillot is Associate Editor of Medical Image Analysis (MedIA).
- C. Barillot is Associate Editor of ISRN Signal Processing.
- C. Barillot is Associate Editor of Current Medical Imaging Reviews.
- C. Barillot serves in the peer review committee of the Journal of Computer Assisted Tomography.
- C. Barillot serves in the peer review committee of Neuroimage.

9.1.2. Workshop/Symposium Organization

- S. Prima was co-chairman of the MICCAI workshop on Mesh Processing in Medical Image Analysis (MeshMed 2012), Nice, France, Oct. 1, 2012 (http://www2.imm.dtu.dk/projects/MeshMed).

9.1.3. Peer Reviews of journals

- IEEE TIP (SP, CB), IEEE TBE (SP), IEEE TITB (SP), Medical Image Analysis (CB, SP), NeuroImage (CB, IC), Computer Methods and Programs in Biomedicine (CB), Phys. Med. Biol. (CB), Comp. in Biol & Med. (CB), J. of Neuroscience Methods (CB), Image and Vision Computing (CB), JMIV (CB), Machine Vision and Applications (SP), Pattern recognition letters (SP), American Journal of Physical Anthropology (SP), Journal of Anatomy (SP)

9.1.4. Technical Program Committees (TPC) of conferences

- C. Barillot was area chair of Miccai 2012, SPIE 2012, TPC member of MICCAI workshops DCICTIA 2012, ICSS 2012, MBIA 2012, and MCV 2012, TPC member of IEEE CBMS 2012, ICPR 2012, ESMRMb 2012, SFRMBM 2012 ECR/imaGine 2011
- S. Prima was TPC member of MICCAI'2012, IEEE ISBI'2012, IEEE ICPR'2012, MeshMed'2012.
- I. Corouge was TPC member of the MICCAI 2012 Workshop on Novel Biomarkers for Alzheimer's Disease and Related Disorders.
- P. Maurel was TPC member of MICCAI'2012, IEEE ISBI'2012, MICCAI 2012 Workshop on Novel Biomarkers for Alzheimer's Disease and Related Disorders.
- O. Commowick was TPC member of MICCAI'2012, IEEE ISBI'2012, MICCAI 2012 Workshop on Novel Biomarkers for Alzheimer's Disease and Related Disorders.

9.1.5. Scientific societies

- C. Barillot is member of the Board of Directors of IPMI (Information Processing in Medical Imaging)
- C. Barillot is member of IEEE EMBS
- C. Barillot is senior member of IEEE
- C. Barillot, O. Commowick, P Maurel and S. Prima are members of the MICCAI society

9.2. Teaching

Teaching on 3D Medical Imaging (visualization, segmentation, fusion, management, normalization) and Image Guided Surgery in the following tracks:

- Master 2 SIBM, University of Angers-Brest-Rennes : 26h (*C. Barillot, O. Commowick, S. Prima, I. Corouge, E. Bannier, JY Gauvrit*)
- C. Barillot is responsible for one semester.
- J-Y. Gauvrit is the coordinator for the Master.
- Sylvain Prima gave two 3-hour lectures as an invited speaker at the SERA summer school (June 5-8, Tampere, Finland, http://www.cs.tut.fi/sera2012)
- Elise Bannier gave 4-day lecture in fMRI and E-Prime to Emmanuelle Le Bars, MR Physicist from the University Hospital of Montpellier (February 2012, Rennes, France). This training was funded by Siemens.
- Ecole Supérieure d'Ingénieur de Rennes (ESIR) : 60h in Medical Imaging (P. Maurel) and 60h in general Image Processing (P. Maurel)

9.3. Participation to seminars, scientific evaluations, awards

- C. Barillot served as expert for the APHP-DHU program 2012
- C. Barillot served as expert for the PHRC national program 2012
- C. Barillot is elected-member of the Scientific Board of CNRS-INS2I
- C. Barillot is permanent member of the Administrative Council of the pôle de compétitivité "Images & Réseaux"
- Sylvain Prima served as expert for The Netherlands Organisation for Scientific Research (NWO)
- Sylvain Prima is a member of the CUMIR committee (Commission des Utilisateurs des Moyens Informatiques pour la Recherche) and of the working group "voyages".

9.4. Dissemination toward non specialists

- Sylvain Prima gave a 1-hour lecture on "computer-assisted paleoanthropology" on June 26 at the "Conf'Lunch" monthly seminar organised at Inria.
- Christian Barillot participate to a 1-hour debate on "L'exploration médicale du cerveau : hommage au Voyage fantastique d'Isaac Asimov" during the "UTOPIALES" festival at Palais des Congres, Nantes, Nov. 2012. (http://www.utopiales.org/christian-barillot)
- In collaboration with Biogenouest, Neurinfo organized a user meeting in December 2012. This meeting attended by scientists, students, MRI operators, physicians, ..., gave us the opportunity to present an overwiew of the Neurinfo activities to our user community. Four users presented the research project they have been conducting at Neurinfo.
- In cunjonction with INSERM and ARSEP we organized a Lab visits to the MS population community to disseminate our current work in imaging in Multiple Sclerosis (16th November 2012).

VR4I Team

8. Dissemination

8.1. Scientific Community Animation

- B. Arnaldi: **Vice-Director** of IRISA (UMR 6074), **Vice-President** of Scientific Committee of INSA, **Member** of the Selection Committee (CSV) of the Competitiveness Cluster "Media and Networks" (http://www.images-et-reseaux.com/) since 2005, **Member** of the Managment Committee of "Métivier action of Rennes 1 University Foundation", **Vice-President** of AFRV, **Responsible** of the organization of scientific presentation during the annual days of the association AFRV, **Chair** of the white ANR SIMI2 committee.

- G. Dumont: **Head** of Mechatronics department at École Normale Supérieure de Cachan, **Head** of Media and Interaction department of IRISA (UMR 6074), **Leader** of WP9 of VISIONAIR european project [2011-2014], member of its Directory Board and member of its scientific committee, **Member** of the Selection Committee (CSV) of the Competitiveness Cluster "Media and Networks" (http://www.images-et-reseaux.com/), **Member** of Executive Board of international Journal IJIDeM. **Reviewer** for ASME-ISFA2012, ASME-DETC2012, Haptic Symposium 2012, **Member** of the AFRV, **Reviewer** for three PhD Defense (two in Politechnico di Milano, one in École Centrale de Nantes).

- T. Duval: **Member** of AFRV, ACM and Eurographics, **Reviewer** for JVRC 2012, CGI 2012, ICPR 2012, VRST 2012, GRAPP 2013, IEEE VR 2013, 3DUI 2013, **Member** of the International Program Committee of JVRC 2012, GRAPP 2013, 3DUI 2013, **Treasurer** of Web3D 2012, **Program Chair** of a Symposium of the VRIC 2013 conference about immersive collaboration in VR.

- V. Gouranton: **member** of AFRV, co-leader of ANR CORVETTE and FUI SIFORAS.

- A. Lécuyer: **Associate editor** of ACM Transactions on Applied Perception, **Associate editor** of International Journal on Human-Computer Studies, **Secretary** of the French Association for Virtual Reality, **Member of Selection Committee of ANR CONTINT Call for Project**, **Organizer of Panel** at IEEE Virtual Reality 2012 "Brain-Computer Interfaces and Virtual Reality: Present, Past and Future Interactions" (Panelists: A. Nijholt, R. Scherer, M. Gonzalez, C. Berka), **Program Co-Chair** of IEEE Symposium on 3D User Interfaces 2012 , **Program Committee member** of international conferences in 2012 : IEEE VR, IEEE 3DUI, EUROGRAPHICS, EUROHAPTICS, ACM SIGGRAPH ASIA, JVRC, **Reviewer** of journals in 2012 : IJHCS, ACM TAP **Reviewer of conferences** in 2012 : ACM VRST, ACM UIST, **PhD Jury member** in 2012 : J. Fruitet, R. Grandchamp, S. Rousseau.

- M. Marchal: **Reviewer** of international journals in 2012: IEEE TVCG, IEEE TOH **Reviewer** of international conferences in 2012: MICCAI, IEEE EMBS, IEEE Virtual Reality, IEEE 3DUI, ACM VRST, ACM UIST, GRAPP, ACM ICMI, ICCAV, **Reviewer** for ANR, IHU Strasbourg, **Member** of AFRV and AFIG, **Program Committee member** of international conferences: IEEE 3DUI 2013, GRAPP 2013.

8.2. Teaching

- Bruno Arnaldi

  Master MR2I Computer sciences : Virtual and Augmented Reality (VAR) (with E. Marchand), level M2), Rennes 1 University and INSA of Rennes, France

  Master MR2I Computer sciences : Responsible for the Track Images and Interactions, level M2), Rennes 1 University and INSA of Rennes, France

- Georges Dumont

First year of mechatronics : Design project, 24h, École Normale Supérieure de Cachan, France

Master2, mechatronics : Mechanical simulation in Virtual reality, 36h, level M2, Rennes 1 University and École Normale Supérieure de Cachan, France

Master2, formation des enseignants du supérieur : Mechanics of deformable systems, 40h, level M2, école Normale Supérieure de Cachan, France

Master2, formation des enseignants du supérieur : oral preparation to agregation competitive exam, 20h, level M2, école Normale Supérieure de Cachan, France

Master2, formation des enseignants du supérieur : Vibrations in Mechanics, 10h, level M2, école Normale Supérieure de Cachan, France

Master2, formation des enseignants du supérieur : Multibody Dynamics, 9h, level M2, école Normale Supérieure de Cachan, France

Master2, formation des enseignants du supérieur : Finite Element method, 12h, level M2, école Normale Supérieure de Cachan, France

Master2 mechatronics : Responsible of the second year of the master, Rennes 1 University and école Normale Supérieure de Cachan, France

- Thierry Duval

    Master : Human-Computer Interaction and Design of Interactive Applications, 32h, M2 (GL, Mitic, Miage), University of Rennes 1, France

    Master : Collaborative Virtual Environments, 32h, M2 (GL, Mitic), University of Rennes 1, France

    Master : Introduction to Computer Graphics, 20h, M1, University of Rennes 1, France

    Master : Introduction to 2D and 3D Human-Computer Interaction, 48h, M1, University of Rennes 1, France

- Ronan Gaugne

    Master : Virtual Reality presentation, 12h, M1, INSA of Rennes, FR.

    Master : Projects on Virtual Reality, 20h, M1, INSA of Rennes, FR.

    Master : Projects on Virtual Reality, 16h, M2, INSA of Rennes, FR.

- Valérie Gouranton

    Licence : Introduction to Virtual Reality, 13h, L2, INSA of Rennes, FR and responsible of this lecture.

    Licence : Project on Virtual Reality, 16h, L3, INSA of Rennes, FR and responsible of this lecture.

    Master : Virtual Reality, 8h, M2, INSA of Rennes, FR.

    Master : Projects on Virtual Reality, 20h, M1, INSA of Rennes, FR.

    Master **co-responsible** of M2 Computer Science of RENNES 1 University, INSA Rennes, ENS CACHAN Antenne Bretagne, Supelec, UBO, ENIB, ENSTA Bretagne, Télécom Bretagne, UBS.

- Anatole Lécuyer

    Master IVI : Haptic Interaction, 7 hours, M2, ENSAM, France

    MAster SIBM : Brain-Computer Interfaces and Haptic Interfaces, 3 hours, M2, University of Rennes 1, France

- Maud Marchal

    Licence : Programming Language C, 30h, L3, INSA Rennes, France;

Master : Algorithms and complexity, 30h, M1, INSA Rennes, France; Object-Oriented Modeling and Programming, 43h, M1, INSA Rennes, France; Software Quality, 30h, M2, INSA Rennes, France; Modeling and Engineering in Biology and Health Applications, 48h, M2, INSA Rennes, France; Medical Simulation, 3h, M2, Master SIBM University of Rennes 1, France;

- Quentin Avril

  Licence : Sensibilisation Réalité Virtuelle, 20h eq. TD, L1, INSA de Rennes, France

  Master : Images Numériques, 28h eq. TD, M1, Université de Rennes1, France

  Master : Modélisation, Animation et Rendu 3D, 11h eq. TD, M2, Université de Rennes1, France

- Charles Pontonnier

  Master : Conception de systèmes mécatroniques, 20h, M1 Mécatronique, Antenne de Bretagne de l'ENS Cachan, France

  Master : Mécanique des milieux continus, 24h, M2 Formation à l'Enseignement Supérieur, Antenne de Bretagne de l'ENS Cachan, France

  Master : Résistance des matériaux, 24h, M2 Formation à l'Enseignement Supérieur, Antenne de Bretagne de l'ENS Cachan, France

  Master : Travaux pratiques d'automatique, 24h, M2 Formation à l'Enseignement Supérieur, Antenne de Bretagne de l'ENS Cachan, France

  Master : Travaux pratiques d'analyse de systèmes mécaniques, 15h, M2 Formation à l'Enseignement Supérieur, Antenne de Bretagne de l'ENS Cachan, France

8.3. PhD

HDR : Thierry Duval, Models for design, implementation and deployment of 3D Collaborative Virtual Environments, defense date 2012/11/28.

PhD : Cédric Fleury, Outils pour l'exploration collaborative d'environnements virtuels 3D, INSA Rennes, defense 2012/06/15, advised by Bruno Arnaldi, co-advised by Thierry Duval and Valérie Gouranton [2].

PhD : Rozenn Bouville Berthelot, Interopérabilité des environnements virtuels 3D : modèle de réconciliation des contenus et des composants logiciels , start date 2009/11/01, advised by Bruno Arnaldi, co-advised by Thierry Duval and Jérôme Royan, defense date 2012/12/20.

PhD in progress : Thi Thuong Huyen Nguyen, Proposition de nouvelles techniques d'interaction 3D et de navigation 3D préservant l'immersion de l'utilisateur et facilitant la collaboration entre utilisateurs distants, start date 2011/10/01, advised by Thierry Duval.

PhD in progress : Jérôme Ardouin, See and Interact at 360 degree, start date 2011/01/14, advised by Anatole Lécuyer.

PhD in progress : Fabien Danieau, Haptic interaction for multimedia, start date 2011/01/03, advised by Anatole Lécuyer.

PhD in progress: Laurent George, The use of Brain computer interface for implicit human-computer interaction with Virtual Environnements, start date 2009/11/01, advised by Anatole Lécuyer.

PhD : Loeiz Glondu, Modélisation et simulation physique d'outils d'exploration pour des interactions en environnement virtuel, start date 2009/10/01, advised by Georges Dumont, co-advised by Maud Marchal, defense date 2012/11/06 [3].

PhD in progress : Andrés Saraos Luna, Travail d'équipe entre individus réels ou virtuels pour réaliser un travail collaboratif adaptatif dans un environnement virtuel possiblement physicalisé, start date 2010/10/01, advised by Bruno Arnaldi, co-advised by Valérie Gouranton.

PhD in progress : Anthony Talvas, Two-handed haptic perception and interaction with virtual worlds, start date 2011/10/01, advised by Anatole Lécuyer, co-advised by Maud Marchal.

PhD : Léo Terziman, Realistic walking navigation in virtual environments for training, start date 2009/10/01, advised by Anatole Lécuyer and Bruno Arnaldi. [4]