Activity Report 2011

Section Dissemination

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9. Dissemination

9.1. Animation of the scientific community

- Florent de Dinechin was in the program committee of HEART 2011 (Highly Efficient Accelerators for Reconfigurable Computing), FPL 2011 (Field-Programmable Logic), FPT 2011 (Field-Programmable Technologies) and ARC 2011 (Applied Reconfigurable Computing). He was a reviewer for the thesis of Pedro Echeverria (U. Madrid) and the habilitation thesis of Steven Derrien (U. Rennes 1). He gave talks in the Radiophysics department of Nizhniy Novgorod State University and in the Intel Russian Summer School.

- Claude-Pierre Jeannerod was in the program committee of SNC 2011 (Fourth International Workshop on Symbolic-Numeric Computation).

- Jean-Michel Muller was in the program committee of ARITH’20 (20th IEEE Symposium on Computer Arithmetic) and ASAP’2011 (Application-Specific Systems, Architectures and Processors). He was a reviewer of the Habilitation thesis of D. Ménard (U. Rennes 1) and chaired the board of examiners for the PhD defense of M. Mezzarobba (École Polytechnique). He was a member (until December 2011) of the Scientific Council of Grenoble INP, and is a member of the Scientific Councils of Ecole Normale Supérieure de Lyon and CERFACS.

- Nathalie Revol was in the program committee of NSV 11 (Fourth International Workshop on Numerical Software Verification) and of MACIS 2011 (Fourth International Conference on Mathematical Aspects of Computer and Information Sciences).

- Damien Stehlé was in the program committees of ACISP 2011 (16th Australasian Conference on Information Security and Privacy), PQCRYPTO 2011 (4th International Conference on Post-Quantum Cryptography), CANS 2011 (10th International Conference on Cryptography and Network Security) and INDOCRYPT 2011 (12th International Conference on Cryptology in India). He was in the program committee of C2 (National Workshop on Coding and Cryptography, Oléron). He gave invited talks at the RAIM workshop (Rencontres Arithmétiques de l’Informatique Mathématique, Perpignan), at the NUS/NTU Workshop on Coding, Cryptology and Combinatorial Design (Singapore), at the International Workshop on Coding and Cryptology (IWCC 2011, Qingdao, China) and at the Magic@LIX workshop (Palaiseau).

- Vincent Lefèvre gave a talk at the Dagstuhl Seminar 11371 on Uncertainty modeling and analysis with intervals: Foundations, tools, applications. [29]

- Gilles Villard is chair of the LIP laboratory since January 2009.

9.2. Teaching


Master: Reconfigurable Computing, 24h, M2, École normale supérieure de Lyon, taught by Florent de Dinechin (autumn 2011).

Master: Cryptology: new primitives and applications, 24h, M2, École normale supérieure de Lyon, taught by Guillaume Hanrot and Damien Stehlé (autumn 2011).


Doctorate: *Floating-Point Arithmetic*, 12h, Nizhniy Novgorod State University, taught by Florent de Dinechin (spring 2011).

PhD & HdR:

HdR: Damien Stehlé, *Euclidean lattices: algorithms and cryptography* [15], ENS de Lyon - Université de Lyon, defended on October 14, 2011.


PhD in progress: Jingyan Jourdan-Lu, *Floating-point arithmetic and compilation for embedded processors*, started in March 2009. Supervisors: Claude-Pierre Jeannerod, Christophe Monat (STMicroelectronics Compilation Expertise Center), and Jean-Michel Muller. Jingyan has been on maternity leave from November 2010 to May 2011.


PhD in progress: Érik Martin-Dorel, *Contributions to the elaboration of arithmetic algorithms with their formal proof*, started in October 2009. Supervisors: Micaela Mayero and Jean-Michel Muller.


PhD in progress: Serge Torres, *Some tools for the design of efficient and reliable function evaluation libraries*, started in September 2010. Supervisors: Nicolas Brisebarre and Jean-Michel Muller.
Other teaching:

Nathalie Revol gave conferences at “Lycée Lalande” (Bourg-en-Bresse), “Collège Jean Zay” (Bri-gnais), “Collège Eugénie de Pomey” (Amplepuis) and “Collège Pablo Picasso” (Bron).


Damien Stehlé gave introductory talks on lattice-based cryptography at ENS de Casablanca and ENSA de SAFI (Morocco).

9. Dissemination

9.1. Animation of the Scientific Community

- Fabrice Rastello was the local chair of the CGO’11 conference (ACM/IEEE International Conference on Code Generation and Optimization), which took place in Chamonix, France, in April 2011. He was also part of the organization of CGO’11 satellite workshops.

- Christophe Alias was the main organizer of IMPACT’11 (international workshop on polyhedral compilation techniques), held in conjunction with CGO’11. This workshop was the very first international event on this topic. Alain Darte gave the keynote of this first edition [2]. Christophe Alias is now a member of the steering committee of IMPACT, whose second edition will take place within the conference HIPEAC’12 (January 2012). Also part of CGO’11, the workshop ACCA’11 (analyze to compile, compile to analyze) was co-organized by Laure Gonnord.

- Paul Feautrier has been an active participant in the elaboration of the Encyclopedia of Parallel Programming, (David Padua ed.), to be published by Springer Verlag. He has been a member of the scientific committee, and has contributed four entries, on array layout for parallel computing [19], Bernstein’s conditions [20], dependences [21], and the polyhedral model (with Christian Lengauer) [22]. Alain Darte also contributed a chapter on the parallelism detection in loops [18].

- Paul Feautrier is associate editor of Parallel Computing and the International Journal of Parallel Computing. He has been a member of the program committee of the ParCo’2011 conference and of the IMPACT’2012 workshop (as Christophe Alias). He has reviewed many submissions to various conferences and journals.

- Alain Darte is associate editor of ACM Transactions on Embedded Computing Systems. He was member of the program committees of the conferences CASES’11 (Compilers, Architectures, and Systems for Embedded Systems), DATE’12 (Design and Test in Europe), and CC’12 (Compiler Construction).

- Paul Feautrier has been a reviewer for the PhD thesis of Nicolas Pouillon (Université Pierre et Marie Curie, September 2011), and a member of the defense committee for the PhD of Bogdan Pasca (ENS Lyon, September 2011).

- Fabrice Rastello has been a member of the defense committee for the PhD thesis of Antoniu Pop (CRI, MINES ParisTech, September 2011), and a member of the defense committee for the PhD thesis of Boubacar Diouf (Paris-Sud University, December 2011).

- In collaboration with participants of the SSA’09 workshop, Fabrice Rastello is the editor of a book on SSA (Static Single Assignment) and its application in compilation, optimization, and program analysis. In a joint work with Diego Novillo (Google), Florian Brandner contributed a chapter on sparse dataflow analysis to this book.

- Fabrice Rastello and Laure Gonnord are in charge of the “steering committee” of the “journées françaises de la compilation” that gathers, twice a year, around fifty participants.

- In 2011, Alain Darte was member of the hiring committee for a professor position at ENS-Lyon.

- Paul Feautrier has taken charge of the organization of Compsys’ workgroups.

9.2. Teaching

- Licence: Christophe Alias gave a L3 course on “Introduction to compilation” at ENSI Bourges and a L2 lab on “Architecture des ordinateurs” at Université Lyon 1.
• Master 1: Christophe Alias gave a Master 1 course on “Compilation” at ENS-Lyon.

• Master 2: Alain Darte gave a Master 2 course on “Advanced code optimizations” at ENS-Lyon. Laure Gonnord and Paul Feautrier contributed to this course too (2 hours each).

• Master 1 and 2: Christophe Alias is organizer of the Winter Master School “Vérification et certification du logiciel” that will take place in January 2012 at ENS-Lyon, as part of the Master of ENS-Lyon.

• Internships: Laure Gonnord and Christophe Alias co-supervised the undergraduate internship of Guillaume Andrieu, from the Engineering School Polytech’Lille. This internship lasted four months, from May 16th, 2011 to August 15th, 2011. The subject was about termination of big C programs. Alain Darte advised the M1 internship of Alexandre Isoard on retiming techniques for the streaming language Faust. Florian Brandner advised the M1 internship of François Gindraud on intermediate representations related to extensions of SSA.


PhD in progress: Guillaume Iooss, “Program analysis and optimization in the polyhedral model”, started in September 2011, at ENS-Lyon and Colorado State University. Advisors: Sanjay Rajopadhye (Colorado State University), Christophe Alias, Alain Darte.
LICT Exploratory Action

8. Dissemination

8.1. Animation of the scientific community

As part of the networking activities put forward in Section 2.1, LICIT has organized or co-organized the following events:

- Multidisciplinary conference on digital evidence (Palais de Justice de Paris, December 2011) 7. The other organizer was ADIJ (Association pour le Développement de l’Informatique Juridique). This conference was organized in the context of the LISE project.
- Multidisciplinary workshop on legal and technical aspects of causality (ENSCP Paris, December 2011) 8. This open workshop was organized in the context of the LISE project.
- Annual Conference on Computers, Privacy and Data Protection CPDP 2011 (Brussels, January 2011) and panel on “behavioural targeting” 9. CPDP, which is now established as the main privacy conference in Europe, attracts every year a wider and more multidisciplinary audience (more than 300 participants in 2011). The other organizers of CPDP are the Free University of Brussels (VUB), the University of Namur and the Fraunhauer Institute.

Daniel Le Métayer was a member of the PhD committee of Mario Alvim (École Polytechnique, Formal approaches to information hiding: an analysis of interactive systems, statistical disclosure control, and refinement of specifications), of the committee of the CNIL PhD award 10 and the scientific committees of:

- The Annual Conference on Computers, Privacy and Data Protection (CPDP 2011).

Daniel Le Métayer gave the following invited talks:

- University of Laval (Québec, October 2011): Privacy by design: towards a systematic approach.
- LIRIS Seminars (Lyon, February 2011): Méthodes formelles et droit (“Formal methods and regulations”).

8.2. Teaching

PhD in progress : Eduardo Mazza, Specification of liability issues in software engineering, November 2008, Daniel Le Métayer
PhD in progress : Thibaud Antignac, A systematic approach to privacy by design, September 2011, Daniel Le Métayer

7 http://licit.inrialpes.fr/lise/
8 http://licit.inrialpes.fr/lise/
9 http://www.cpdpconferences.org
10 http://www.cnil.fr/la-cnil/actualite/prix-de-these/
9. Dissemination

9.1. Animation of the scientific community

- Gwenaël Delaval was co-organizer of the international workshop SYNCHRON’11 (international open workshop on Synchronous Programming).
- P. Fradet served in the external review committee of PLDI’2011 (ACM SIGPLAN conference on Programming Language Design and Implementation). He was examiner for the PhD of Julien Tesson (University of Orléans).
- Alain Girault served in the programme committees of the international conferences DATE’2011, DAC’2011, MEMOCODE’2011, LAFT’2011, MSR’2011, and APSIPA-ASC’2011. He was referee for the PhD of Alexandru Drobila (University of Besançon) and Mohamed Fellahi (University of Paris Sud), and examiner for the PhD of Fanny Duffossé (ENS Lyon).
- Gregor Goessler served in the programme committees of the international conference DATE’2012 and of the international workshops FOCLASA’2011 and LAFT’2011.
- Bertrand Jeannet served in the programme committee of the international conference DATE’2012. He was examiner for the PhD of Assalé Adjé (Ecole Polytechnique) and of Khalil Gorbhal (Ecole Polytechnique).

9.2. Teaching

9.2.1. Advising

PhDs:
- Marnes Hoff, co-advised by P. Fradet (with J.-L. Giavitto, Université d’Evry), since 04/2008 until 03/2011, PhD in computer science, Grenoble University.
- Henri-Charles Blondeel, co-advised by P. Fradet and A. Girault, until 06/2011, PhD in computer science, Grenoble University.
- Peter Schrammel, co-advised by B. Jeannet and A. Girault since 07/2009, PhD in computer science, Grenoble University.
- Gideon Smeding, co-advised by G. Goessler and J. Sifakis since 12/2009, PhD in computer science, Grenoble University.
- Vagelis Bebelis, co-advised by P. Fradet and A. Girault, since 12/2011, PhD in computer science, Grenoble University.

Masters:
- Emmanouil Kominnos, 02-07/2011, co-advised by Pascal Fradet and Alain Girault, Power consumption optimization of data-flow applications on many-core systems, MSc at KTH.

9.2.2. University Teaching

Gwenaël Delaval teaches algorithmics and programming at Université Joseph Fourier (170h in 2011–2012).
9. Dissemination

9.1. Software Dissemination and Internet Visibility

The VASY project team distributes two main software tools: the CADP toolbox (see § 5.1) and the TRAIAN compiler (see § 5.2). In 2011, the main facts are the following:

- We prepared and distributed 11 successive beta-versions (from 2009-f to 2009-i and from 2010-a to 2010-g "Zurich") of CADP.
- The number of license contracts signed for CADP increased from 429 to 441.
- We were requested to grant CADP licenses for 631 different computers in the world.

We co-operated with the legal department to simplify the distribution procedure for academic users of CADP, who can now obtain the software using an entirely electronic procedure, which no longer requires the signature of paper copies of the license agreement.

We migrated all CADP documentation and Web site to reflect recent changes in email addresses (cadp@inria.fr instead of cadp@inrialpes.fr) and URLs (http://cadp.inria.fr instead of http://www.inrialpes.fr/vasy/cadp).

The VASYWEB site (see http://vasy.inria.fr) was updated with scientific contents, announcements, publications, etc. In 2011, we updated the CADPFAQ (list of frequently asked questions about CADP), aligning its structure with the CADP Forum.

In September 2007, we opened the “CADP Forum” (see http://cadp.inria.fr/forum.html) for discussions regarding the CADP toolbox. By the end of December 2011, this forum had over 195 registered users and over 1300 messages had been exchanged.

9.2. Program Committees

In 2011, the members of VASY took on the following responsibilities:

- H. Garavel was a program committee member for the TOPCASED Days conference, Toulouse, France, February 2–4, 2011.
- F. Lang was a program committee member for NEPTUNE’11 (Nice Environment with a Process and Tools Using Norms and Example), Paris, France, May 17–18, 2011.
- G. Salaün was publicity chair for DISCOTEC’11 (6th International Federated Conferences on Distributed Computing Techniques), Reykjavik, Iceland, June 6–9, 2011.
- H. Garavel was a program committee member for DCDS’11 (3rd International Workshop on Dependable Control of Discrete Systems), Saarbrücken, Germany, June 15–17, 2011.
- G. Salaün was a program committee member for CSSE’11 (CSI International Symposium on Computer Science and Software Engineering), Tehran, Iran, June 15–16, 2011.
- G. Salaün was a program committee member for AMMSE’11 (2nd International Workshop on Algebraic Methods in Model-based Software Engineering), Zürich, Switzerland, June 30, 2011.
- R. Mateescu was a program committee member for PDMC’11 (10th International Workshop on Parallel and Distributed Methods in Verification), Cliff Lodge, Snowbird, Utah, July 14, 2011.
- G. Salaün was co-chair of the program committee and co-editor of the proceedings for FMICS’11 (16th International Workshop on Formal Methods for Industrial Critical Systems), Trento, Italy, August 29-30, 2011. F. Lang was program committee member for FMICS’11.
• G. Salaün was a program committee member for VATSS’11 (1st International Workshop on Verification, Analysis, and Testing of Service Systems), Szeged, Hungary, September 4, 2011.

• G. Salaün was a program committee member for FOCLASA’11 (10th International Workshop on the Foundations of Coordination Languages and Software Architectures), Aachen, Germany, September 10, 2011.

• R. Mateescu was a program committee member for ECOWS’11 (9th European Conference on Web Services), Lugano, Switzerland, September 14–16, 2011.

• G. Salaün was a program committee member for FACS’11 (8th International Symposium on Formal Aspects of Component Software), Oslo, Norway, September 14–16, 2011.

• G. Salaün was a program committee member for QASBA’11 (International Workshop on Quality Assurance for Service-Based Applications), Lugano, Switzerland, September 14, 2011.

• G. Salaün was a program committee member for FLACOS’11 (5th Workshop on Formal Languages and Analysis of Contract-Oriented Software), Málaga, Spain, September 22–23, 2011.

• G. Salaün was a program committee member for VADER’11 (2nd International Workshop on Variability, Adaptation and Dynamism in software systEms and seRvices), Hersonissos, Crete, Greece, October 2011.

• G. Salaün is an editorial board member of the journal “Service Oriented Computing and Applications” published by Springer Verlag.

9.3. Lectures and Invited Conferences

In 2011, we gave talks in several international conferences and workshops (see bibliography below). Additionally:

• R. Mateescu and G. Salaün participated in the SARDES team seminar held at Allevard (France) on January 13, 2011. G. Salaün gave a talk entitled “Translating Pi-calculus into LOTOS NT”.

• H. Garavel participated in the seminar of the 3rd-year license students of ENS-Lyon (Ecole Normale Superieure de Lyon) held in Le Pleynet (France) on January 26, 2011. He gave a talk entitled “Modélisation et vérification de systèmes informatiques complexes”.


• G. Salaün gave a talk entitled “Realizability of Choreographies using Process Algebra Encodings” at LRI (Orsay, France) on March 28, 2011.

• G. Salaün gave a talk entitled “Specifying and Verifying the SYNERGY Reconfiguration Protocol with LOTOS NT and CADP” at the University of Málaga (Spain) on May 11, 2011.

• F. Lang participated in the ROCKS (RigorOus dependability analysis using model ChecKing techniques for Stochastic systems) held in Saarbrücken (Germany) on March 26–27, 2011. He gave a talk entitled “Ten Years of Performance Evaluation of Concurrent Systems using CADP”.

• H. Garavel participated in the DCDS’11 (3rd International Workshop on Dependable Control of Discrete Systems) held in Saarbrücken (Germany) on June 15–17, 2011.

• H. Garavel participated in the 8th LASER Summer School on “Software Engineering – Tools for Practical Software Verification” held on Elba Island (Italy) on September 4–10, 2011. He gave a talk entitled “CADP 2010: A Toolbox for the Construction and Analysis of Distributed Processes”.
• R. Mateescu gave a keynote presentation entitled “Model Checking and Performance Evaluation with CDP Illustrated on Shared-Memory Mutual Exclusion Protocols at the SAF’2012 workshop held in Sophia-Antipolis (France) on October 12, 2011.

• M. Güdemann participated in the seminar “Journées scientifiques EA-ARC-ADT” held in Paris (France) on November 16–17, 2011.


9.4. Teaching Activities

The VASY project team is a host team for the computer science master entitled “Mathématiques, Informatique, spécialité : Systèmes et Logiciels”, common to Grenoble INP and Université Joseph Fourier.

In 2011:

• H. Garavel, F. Lang, and W. Serwe gave, jointly with Pascal Raymond (CNRS, VERIMAG), a course on “Méthodes formelles de développement” to the computer science engineering students of CNAM (Conservatoire National des Arts et Métiers) Grenoble (30 hours).

• F. Lang and W. Serwe gave a course on “Modélisation et Vérification des Systèmes Concurrents et Temps-Réel” to the 3rd year students of ENSIMAG (18 hours).

• G. Salaün gave lectures on “Algorithmics and Object-Oriented Programming” to the 2nd year students of ENSIMAG (36 hours).

• G. Salaün gave a course on “Specification, Verification, and Adaptation of Web Services” to master students in Málaga, Spain, in May 2011 (10 hours).

• G. Salaün is co-responsible of the ISI (Ingénierie des systèmes d’information) department of ENSIMAG since September 1, 2011.

• R. Mateescu was a reviewer for Eric Madelaine’s habilitation thesis, entitled “Specification, Model Generation, and Verification of Distributed Applications”, defended at the University of Nice – Sophia-Antipolis on September 29, 2011.

• G. Salaün co-supervised the PhD thesis of Meriem Ouederni (University of Málaga, Spain), defended at the University of Málaga, Spain, on October 28, 2011.

• H. Garavel was a jury member for Matthias Raffelsiepers’s PhD thesis, entitled “Cell Libraries and Verification”, defended at the Technical University of Eindhoven on November 2, 2011.

• G. Salaün defended an habilitation thesis [22] on November 22, 2011.

• R. Mateescu was a reviewer for Rodrigo Tacla Saad’s PhD thesis, entitled “Parallel Model Checking for Multiprocessor Architecture”, defended at INSA Toulouse on December 20, 2011.

9.5. Miscellaneous Activities

Within the MINALOGICpôle de compétitivité mondial, H. Garavel is a member of the operational committee of the EmSoC cluster (Embedded System on Chip).

H. Garavel is a member of the scientific council of the GtS (Groupement d’Intérêt Scientifique) consortium 3SGS on supervision, safety, and security of large systems.

H. Garavel is a member of the evaluation committee for the ANR (Agence Nationale de la Recherche) programme “Ingénierie Numérique et Sécurité”.

H. Garavel is a member of the LIG working group in charge of restructuring the scientific themes of the laboratory.
H. Garavel participated in the selection committee for a professeur des universités position at the University of Nice – Sophia-Antipolis.

H. Garavel was a reviewer for the German Research Foundation (DFG), the Netherlands Organisation for Scientific Research (NWO), and the Dutch Technology Foundation (STW).

F. Lang is a member of the “commission du développement technologique”, which is in charge of selecting R&D projects for INRIA Grenoble Rhône-Alpes.

R. Mateescu is the correspondent of the “Département des Partenariats Européens” for INRIA Grenoble Rhône-Alpes.

On November 1st, 2011, R. Mateescu was elected coordinator of the ERCIM Working Group FMICS (Formal Methods for Industrial Critical Systems) for the next three years.

G. Salaün is a member of the LiG Council (Conseil de laboratoire).

G. Salaün is a member of the ENSIMAG Council (Conseil de l’école).
9. Dissemination

9.1. Animation of the scientific community

- V. Acary is co-animator (with R. Leine ETH Zurich) of the European network for nonsooth dynamics. Member of the ENOC (EUROMECH Nonlinear Oscillations Conference) comittee. Reviewer in 2011 for IEEE Transactions on Automatic Control, Math reviews, ASME Journal of Applied Mechanics, Applied Numerical Mathematics, American Control Conference

9.2. Teaching

Licence : F. Descoubes (Optimisation numérique, 22.5 equiv. TD), J. Malick (Optimisation numérique, 50 equiv. TD)

Master : B. Brogliato (Nonsmooth Dynamical Systems, Master 2 Acsyon, Université de Limoges, 13.5 equiv. TD)
MISTIS Project-Team

7. Dissemination

7.1. Animation of the scientific community


Since September 2009, F. Forbes is head of the committee in charge of examining post-doctoral candidates at INRIA Grenoble Rhône-Alpes (“Comité des Emplois Scientifiques”).

Since September 2009, F. Forbes is also a member of the INRIA national committee, "Comité d’animation scientifique", in charge of analyzing and motivating innovative activities in Applied Mathematics. In this context, she organized with R. Munos, B. Espiau and M. Thonnat an INRIA workshop on Statistical Learning in Paris (December).

F. Forbes is part of an INRA (French National Institute for Agricultural Research) Network (MSTGA) on spatial statistics. She is also part of an INRA committee (CSS MBIA) in charge of evaluating INRA researchers once a year.

S. Girard is a member of the committee (Comité de Sélection) in charge of examining applications to Faculty member positions at University Paris I.

F. Forbes and S. Girard were elected as members of the bureau of the “Analyse d’images, quantification, et statistique” group in the Société Française de Statistique (SFdS).

S. Girard was selected as an expert for

- the national fund for the scientific development of Chili (FONDECYT) to evaluate research proposals,
- evaluation of interdisciplinary and inter-institutes projects (PEPII) for the CNRS,
- the national fund for research of Québec - Nature and technology (FRQNT) to evaluate research proposals.

S. Girard was involved in the following PhD committees

- Mohammed El Anbari “Regularisation and variable selection using penalized likelihood”, Paris-Sud University and Cadi Ayyad University, december 2011.

F. Forbes was involved in the PhD committees of Flora Jay from TimB, Univ. Grenoble I. PhD title:”Méthodes bayésiennes pour la génétique des populations: relations entre structure génétique des populations et environnement” (October 2011).

F. Forbes was also involved in the HDR committee of Cécile Hardouin, assistant professor at Paris Ouest Nanterre La Défense University (July 2011). Title:“Quelques contributions à la modélisation et l’analyse statistique de processus spatiaux”.

F. Forbes was also involved in the Master committee of Arun Shivanandan from IBIS team(June 2011). Title: Stochastic modelling and indentification of arabinose uptake network in Escherichia coli.
7.2. Teaching

Stéphane Girard

Master : Statistique inférentielle avancée, 27h, M1, Ensimag (Grenoble INP), France.
Master : Statistique des valeurs extrêmes, 45h, M2, Université Grenoble I, France.

Florence Forbes

Master : Mixture models and EM algorithm, 12h, M2, UFR IM2A, Université Grenoble I, France.

L. Gardes and M.-J. Martinez are faculty members at Univ. Pierre Mendès France, Grenoble II.
J.-B. Durand is a faculty member at Ensimag, Grenoble INP.

PhD & HdR :

PhD : Lamiae Azizi, Champs aléatoires de Markov cachés pour la cartographie du risque en épidémiologie, Université Joseph Fourier, December 13, Florence Forbes and Myriam Garrido
PhD in progress : Jonathan El Methni, Différentes contributions à l’estimation des quantiles extrêmes, October, 2010, Stéphane Girard et Laurent Gardes
PhD in progress : Christine Bakhous, Problèmes de sélection de modèles en IRM fonctionnelle, November, 2010, Florence Forbes and Michel Dojat
PhD in progress : Gildas Mazo, Estimation de quantiles extrêmes spatiaux, October, 2011, Florence Forbes and Stéphane Girard
8. Dissemination

8.1. Animation of the scientific community

8.1.1. Program Committees
Stéphane Redon was a member of the program committee of the 2011 SIAM Conference on Geometric and Physical Modeling (GD/SPM 2011).

8.1.2. Steering Committees
Stéphane Redon is a member of the steering committee of the Nanoscience Foundation in Grenoble.

8.2. Participation to conferences, seminars

- M. Bosson attended the First Les Houches school in computational physics - soft matter (June 2011).
- S. Grudinin participated in a conference "From Computational Biophysics to Systems Biology (CBSB11)", Juelich, Germany (July 20-22, 2011).
- S. Grudinin participated in a workshop "Innovative Approaches to Computational Drug Discovery", Lausanne, Switzerland (October 3-6, 2011).
- S. Grudinin gave a talk "Quadratic Optimization to Predict Protein-Protein Interactions" at a workshop "INRIA Workshop on Statistical Learning", Paris, France (December 5-6, 2011) where he participated with P. Popov.
- S. Redon gave a talk “Adaptive Algorithms for Modeling and Simulating Nanosystems” at McGill University, Montreal, Canada (August 28, 2011).

8.3. Teaching

8.3.1. Maël Bosson
- Licence: Analysis (Lebesgue theory, Fourier transform, distribution theory), 36h, INPG ENSIMAG, France
- Licence: Advanced numerical methods 12h, INPG ENSIMAG, France
- Licence: Numerical Analysis, 12h, INPG Pagora, France
- High School: Mobinet, 12h, INRIA Grenoble Rhone-Alpes, France
- High School: Introduction to chemistry, 3h, CIME Nanoschool, Grenoble, France

8.3.2. Sergei Grudinin
- Licence: Seminars on “Modeling and Simulations of Macromolecules”, 10h (May 23 - 37; September 19-26 2011), MIPT, Moscow, Russia

8.3.3. Stéphane Redon
- Licence: “Introduction to computer science”, INF311 and INF321, 80h, Ecole Polytechnique, Paris, France
NECS Project-Team

9. Dissemination

9.1. Animation of the scientific community

- C. Canudas de Wit has participated to several concertation meetings in the CORDIS research program at the ITC department in the EU. He participated as evaluator in the FP7 program “Factories of the Future”: FP7-2010-NMP-ICT-FoF, and as reviewer of EU projects in the FP6 program on Embedded Systems and Control. He was nominated at the Board of Governors of the IEEE Control System Society for 2011, and he has been elected for 3 more years. He is also the responsible of joint activities between the IEEE-CSC and the EUCA (European Control Associated) where he belongs to the steering board.

- F. Garin has been a member of the recruiting committee, held in May 2011, for an Associate Professor position (poste de Maître de Conférences) in IUT 1 (University Joseph Fourier, Grenoble) and the Automatic Control Department of GIPSA-LAB.
  She organized the 3rd annual Consortium Meeting of the FeedNetBack European project, held at INRIA in Montbonnot, on October 11-12th 2011.

- A. Kibangou was a member of the Technical Program Committee of the European Signal Processing Conference (EUSIPCO) 2011. For the Carnot Institute LSI, he was member of the “Sensor Networks Initiative” of the ICT-MNT Carnot alliance. In this framework, he was a contributor to a white book devoted to the vision of the ICT-MNT Carnot alliance on Internet of things. He was member of two selection committees for University Joseph Fourier in 2011.
  He serves as a reviewer for the following international journals: Automatica, IEEE Transactions on Control Systems and Technology, Signal Processing (Elsevier), Electronics Letters, Int. J. of Adaptive control and Signal Processing, and System control letters. Locally, he is the organizer of seminars for the Control Department of GIPSA-LAB.

- A. Seuret is co-animator of the “Time-delay System” group (GDR SAR) since March 2008. He is leader of a Workpackage of the European Project FeedNetBack. He is general chair of the Summer School on Automatic Control of Grenoble since 2010.
  He is also reviewer for the major Journals and Conferences of the field. Among them, there are journals (IEEE Trans. on Automatic Control, Automatica, System Control and Letter, International Journal of Systems Science) and conferences (Conference on Decision and Control (CDC), American Control Conference (ACC), IFAC Workshops on Robust Control (ROCOND) and on Time Delay Systems (TDS)).

- D. Simon is member of the RTNS’11 (international conference on Real Time and Network Systems) and CIFA’12 (Conference Internationale Francophone d’Automatique) program committees. He has been also member of the scientific and organization committees of CAR’11 (Control Architectures for Robots) at Montbonnot, Grenoble. He served as reviewer for the PhD of H. H. Nejad (July 2011, CRAN, Nancy), C. Faure (October 2011, IFPEN and ISIEE, Paris), J. B Chaudron (December 2011, Onera and ISAE, Toulouse) and examiner for the PhD defense of S. Durand (January 2011, Grenoble INP), F. Felicioni (January 2011, Loria Nancy and University Rosario, Argentina) and E. Roche (October, Grenoble INP). Involvement and talks within the API (Automatique Pour l’Informatique) PEPS headed by E. Rutten (SARDES).
  He has been also a peer-reviewer for MSR’11 (Modélisation des Systèmes Réactifs) and MED’11 (Mediterranean Conference on Control and Automation) conferences.
H. Fourati has been a peer-reviewer for international journals (IEEE Sensors Journal, IEEE/ASME Transactions on Mechatronics).

9.2. Teaching

9.2.1. Courses

- A. Kibangou
  DUT: Mathematics, 20h, Licence 2, IUT 1 (GEII 1), University Joseph Fourrier, France.
  DUT: Automatic Control, 46h, Licence 2, IUT 1 (GEII 1), University Joseph Fourrier, France.
  He is in charge of the Automatic control Lab of the GEII 1 department at IUT 1 of Grenoble.

- A. Seuret
  MASTER: Automatic Control, 40h, MASTER 1 and 2, Grenoble INP, France.
  He organizes the 32th International Summer School of GIPSA-Lab on Automatic Control, September, 12-16, 2011, Grenoble, France.
  The Summer School was on Robust Control and Linear Parameter Varying approaches: Application to vehicles dynamics, with the scientific direction of O. Sename (Grenoble INP), see http://www.gipsa-lab.inpg.fr/summerschool/auto2011/.

- H. Fourati
  DUT: Informatique Industrielle, 24h, Licence 1, IUT 1 (GEII2), University Joseph Fourrier, France.
  DUT: Automatismes industriels et réseaux : réseaux, 90h, Licence 1 et 2, IUT 1 (GEII2), University Joseph Fourrier, France.

9.2.2. Advising

Postdocs:


PhD students in progress:

– Valentina Ciarla, Commande d’un système de puissance électrique pour personne âgée et/ou handicapée, Grenoble INP, Dec. 2010 - Nov. 2013, co-advised by C. Canudas de Wit, Franck Quaine (UJF) and Violaine Cahouet (UJF).

PhD defended:
– Sylvain Durand, Reduction of the energy consumption in embedded electronic devices with low control computational cost [12], Grenoble INP, 17/01/2011, co-advised by N. Marchand and D. Simon.
– Emilie Roche, Commande à échantillonnage variable pour les systèmes LPV : application à un sous-marin autonome [13], Grenoble INP, 18/10/2011, co-advised by O. Sename and D. Simon.

Master students:

Bachelor students:
9. Dissemination

9.1. Animation of the scientific community

- J.-A. Désidéri is appointed part-time by ONERA (Numerical Simulation and Aeroacoustics Department, DSNA-Châtillon, and Applied Aerodynamics Department, DAAP-Meudon). This primarily results in the supervision of theses in computational fluid dynamics and optimization. This year, M. Bompard defended his thesis and five other theses are in progress. This supervision stimulates a scientific cooperation between our laboratories at both levels of senior researchers (organization of seminars and a short-course of continuing education, multi-disciplinary prospective) and doctoral students (participation in technical brainstormings, exchange of software, etc).

- J.-A. Désidéri and J. Peter (ONERA/DSNA) have been the coordinators of the continuing education short course: *Verification of numerical simulations in continuous mechanics. Notion of Validation* at Collège de Polytechnique, June 7-8, 2011. At this occasion, J.-A. Désidéri gave the seminar: *Analysis of approximation errors in classical PDE problems with application to continuous mechanics* (4.5 hrs).

9.2. Participation in scientific committees

- R. Duvigneau is member of the CFD (Computational Fluid Dynamics) committee of ECCOMAS (European Community for Computational Methods in Applied Science).

- R. Duvigneau is member of CNU (Conseil National des Universités) for the 26th section (applied mathematics and application of mathematics).

- J.-P. Zolésio is chair of WG 7.2 on Computational Techniques in Distributed Systems, International Federation for Information Processing (IFIP) TC7: System Modeling and Optimization.

9.3. Teaching


Licence: Solid Mechanics (statics, kinematics, dynamics, energetics), 45.5 hrs, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (F. Z. Oujebbour).


Master: Conservation laws and traffic flow models, 32 hrs, M2, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (P. Goatin).

PhD & HdR:

PhD in progress : Sébastien Bourrasse, *Méthodes de raffinement de maillages non structurés basées sur le vecteur adjoint pour le calcul de coefficients aérodynamiques*, October 2011, Supervisors: Jean-Antoine Désidéri and Jacques Peter (ONERA/DSNA).


PhD in progress : Maria Laura Delle Monache, *Traffic flow modeling by conservation laws*, October 2011, supervisor: P. Goatin


PhD in progress : Mohamed Kaicer, *Group lending : analysis of asymmetric information using game theory. Analysis design and implementation of a simulator adapted to microfinance market*, October 2009, Supervisors: R. Aboulaich (Rabat) and A. Habbal.


8. Dissemination

8.1. Animation of the scientific community

Hubert Charles is director of studies of the "Bioinformatique et Modélisation (BIM)" track at the INSA-Lyon. He is co-director of the Biosciences Department of the INSA-Lyon, and co-director of the Doctoral School E2M2. He was member of the PhD committee of Léo Coutellec (INSA-Lyon).

Christian Gautier is Director of the PRABI. He is member of the "Conseil d’administration" of the University of Lyon 1, and of the selecting committee for biology at the École Polytechnique, Paris. He is deputy director of the IFR 41 "Bio-environnement et santé" of the University of Lyon 1.

Vincent Lacroix was a member of the PhD committee of Florian Sikora (University of Paris-Est).

Yvan Rahbé is director of the INSA-Lyon BF2I laboratory. He was reviewer of the PhDs of Julien Chuche (University of Bordeaux), Sandrine Nsango (University of Strasbourg) and Benjamin Fartek (University of the Réunion).

Yvan Rahbé was a member of the PhD committee of Florian Sikora (University of Paris-Est).

Marie-France Sagot is a member of the Scientific Advisory Board ("Conseil Scientifique (COS)" for the INRIA Grenoble Rhône-Alpes Research Center. She was co-chair of the 11th Workshop on Algorithms and Bioinformatics (WABI), at the Max-Planck Institute, Saarbrücken, Germany, September 5-7 (http://pbil.univ-lyon1.fr/members/sagot/htdocs/wabi2011/wabi2011.html) and is co-chair for one area track of the 20th Annual International Conference on Intelligent Systems for Molecular Biology (ISMB) in 2012. She is Editor-in-Chief of IEEE/ACM Transactions on Computational Biology and Bioinformatics, and Associate Editor of BMC Bioinformatics, Algorithms for Molecular Biology, Journal of Discrete Algorithms, and Lecture Notes in BioInformatics. She is member of the Steering Committee for the European Conference on Computational Biology (ECCB), for the International Symposium on Bioinformatics Research and Applications (ISBRA), and for the Latin American Theoretical Informatics Symposium (LATIN). She was member of the Program Committee for CiE, PSC, RECOMB, SPIRE. She was member of the HDR committee of Etienne Birmelé (University of Évry) and of the PhD committee of David Parsons (INSA-Lyon). She was reviewer of the HDR of Pierre Brézellec (University of Évry), and of the PhDs of Anne-Laure Gaillard (University of Bordeaux) and Gilles Vieira (University of Évry).

Fabrice Vavre is director of the GDR 2153(CNRS) "Interactions multipartenaires dans les populations et les communautés d’insectes". He is also member of the management committee and responsible of a working group in the COST Action FA0701 "Arthropod Symbiosis: from fundamental studies to pest and disease management". He was reviewer of the HDR of Matthieu Sicard (University of Poitiers), and of the PhDs of Magali Thierry (University of the Réunion) and Emilie Dion (University of Rennes).

Alain Viari was, until May 2011, the scientific deputy of the INRIA Grenoble Rhône-Alpes Research Center. He is member of the scientific advisory board of the MIA (Mathematics and Applied Mathematics) at the INRA and of the IMM (Institut de Microbiologie et Maladies Infectieuses / Aviesan). He is also a member of the Steering Committee of the IRT (Institut de Recherche Technologique) Lyon-Biotech. Since May 2011, he is a member of the Scientific Advisory Board ("Conseil Scientifique (COS)" for the INRIA Grenoble Rhône-Alpes Research Center. He was reviewer of the PhD of Giovanni Battaglia (supervisor: Roberto Grossi, Univ. of Pisa, Italy).

Cristina Vieira is director of the GDRE "Comparative genomics" since the GDRE was renewed in 2010.

8.2. Teaching

Four members of the BAMBOO project are professors or associate professors at the University Claude Bernard in Lyon and at the INSA Lyon: Hubert Charles, Christian Gautier (émérite since Oct. 2011), Vincent Lacroix, and Cristina Vieira. They therefore have a full teaching service (at least 192 hours) except for Cristina Vieira who became since 2010 a Junior Member of the Institut Universitaire de France.
Various members of the EPI have developed over the years courses in biometry, bioinformatics and evolutionary biology at all levels of the University as well as at the “École Normale Supérieure” (ENS) of Lyon and the INSA (“Institut National de Sciences Appliquées”). Two members of the EPI have also in the past participated in, or sometimes organised courses or teaching modules at the international level: creation and support of a Master’s course in Ho-Chi-Minh, Vietnam, and creation and direction of a PhD Program in Computational Biology in Lisbon, Portugal (http://bc.igc.gulbenkian.pt/pdbc/).

The following are the HDR and PhDs defended in BAMBOO in 2011.

HdR: Etienne Birmelé, Étude structurelle des réseaux: modèles aléatoires, motifs et cycles, Université d’Évry, November 3

PhD: Alexandra Carvalho, Motif representation and discovery, IST, July 13, supervisors A. Oliveira and M.-F. Sagot

PhD: Nuno Mendes, Efficient algorithms for the identification of miRNA motifs in DNA sequences, IST, June 6, supervisors A. T. Freitas and M.-F. Sagot

PhD: Alexandra Popa, The evolution of recombination and genomic structures: a modeling approach, Université Lyon 1, May 24, supervisors C. Gautier and D. Mouchiroud
7. Dissemination

7.1. Animation of the scientific community

7.1.1. Invited seminar and lectures


7.1.2. Scientific Popularization

- Guillaume Beslon gave two conferences during the 2011 "Fête de la Science" in Lyon.
- Guillaume Beslon gave a conference in the context of the "Défi Rap" (trophées lycéens de robotique), Lyon, May 2011.

7.1.3. Jurys and committees

In 2011, members of Beagle have served into various committees:

- Hugues Berry is member of the committee for the Spécif / Gilles Kahn award (2011-2014).
- Christophe Rigotti is member of the Scientific Council (C.S.) of INSA Lyon.
- Guillaume Beslon is director of the Rhône-Alpes Complex Systems Institute (IXXI).
- Carole Knibbe is president of the steering committee of the Rhône-Alpes Complex Systems Institute (IXXI).

Of course, members of Beagle also regularly participate to scientific evaluation (reviews, selection committees, projects evaluation...). In 2011 we have been involved in project reviewing for ANR (appels Blancs), for French Ile-de-France région (calls "DIM" and "LSC"), for the COFECUB (Coopération Universitaire et Scientifique avec le Brésil) evaluation committee, for selection committees in the university of Cergy-Pontoise, of the University of Lyon, for the University of Nice and for the INRIA.
We also regularly participate to PhD and HDR (“Habilitation à Diriger des Recherches”) defense committees, either as reviewers or as committee members. In 2011, members of the BEAGLE team participated to the following committees (committees of our own students not included):

- Angélique Stephanou – H. Berry participated to defense committee for the HDR of Ms. Angélique Stéphanou (Univ. Grenoble).
- Régis Martinez – H. Berry participated to defense committee for the PhD of M. Regis Martinez (Univ. Lyon 2).
- Luician Alecu – H. Berry participated to defense committee for the PhD of M. Luician Alecu (Univ. Nancy).
- Hervé Le Nagard – G. Beslon reviewed and participated to defense committee for the PhD of M. Hervé Le Nagard (Univ. Paris 12, faculté de médecine Bichat).
- Guillaume Hutzler – G. Beslon reviewed and participated to defense committee for the HDR of M. Guillaume Hutzler (Univ. Evry Val d’Essonne).
- Geoffrey Portelli – G. Beslon reviewed and participated to defense committee for the PhD of M. Geoffrey Portelli (Univ. Paul Sabatier, Toulouse).
- Edi Prifti – G. Beslon reviewed and participated to defense committee for the PhD of M. Edi Prifti (Univ. Paris 6 Pierre et Marie Curie).
- Alice Demarez – H. Berry reviewed and participated to defense committee for the PhD of Ms. Alice Demarez (Univ. Paris Descartes).

7.1.4. Participation to INRIA's Life

- Hugues Berry is member (elected) of INRIA Commission d’Evaluation (CE).
- Hugues Berry is member (elected) of INRIA Commission Administrative Paritaire (CAP).

7.2. Teaching

7.2.1. Teaching at Universities

Most of us teach Computer Science at INSA Lyon or University Lyon 1:

- Guillaume Beslon teaches at the computer science department of INSA-Lyon (computer architecture, bioinspired intelligence), 196h.
- Carole Knibbe teaches at the computer science department of Université Claude Bernard Lyon 1 (programming, algorithmics), 196h.
- Christophe Rigotti teaches at the 1er cycle department of INSA-Lyon (bases of computer science), 196h.
- David Parsons teaches at the computer science department of INSA-Lyon (programming, C++, Prolog, Java), 196h.
- Bérénice Batut, Jules Lallouette and Stephan Fischer are “monitors” at the dept. 1er cycle of INSA-Lyon (bases of computer science, mathematics), 96h each.

Three of us (G. Beslon, C. Knibbe and C. Rigotti) teach in the “Master d’informatique de Lyon” (Univ. Claude Bernard Lyon 1) and two of us (G. Beslon and C. Knibbe) teach in the “Modélisation des Systèmes Complexes” Master program of ENS Lyon. In 2011, we also taught in specific programs such as the Systems Biology minor of the Bioscience Master of ENS Lyon.
7.2.2. PhD supervision


7.2.3. Internships

9. Dissemination

9.1. Animation of the scientific community

- Organization of the international conference "Chance at the heart of the cell" (http://cgphimc.univ-lyon1.fr/CGPHIMC/CHC2), Lyon, 21-23 November 2011.
- The co-organization of a monthly seminar (INRIabcd, every last Friday), jointly with Inria team BEAGLE, and the organization of a seminar on biomathematics (on Thursday, twice a month).
- Participation to the "Fête de la Science" sur le campus de la Doua.
- A conference entitled "Quand les cellules tueuses se réveillent..." in the "Université Ouverte" cycle of conferences for a wide audience, organized by the Université Lyon 1 (April 19th, 2011).
- Reviewer for several applied mathematics journal and biomathematics journals (International journal of biomathematics, Mathematical Biosciences, SIAM Journal on Control and Optimization, Journal of Mathematical Biology, etc.)
## 8. Dissemination

### 8.1. Editorial, organizational, and reviewing activities

#### Eugenio Cinquemani

<table>
<thead>
<tr>
<th>Type</th>
<th>Journal, conference, agency</th>
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<tbody>
<tr>
<td>Member Organization Committee</td>
<td>Workshop on Identification and Control of Biological Interaction Networks, INRIA Grenoble - Rhône-Alpes, February 2011</td>
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#### Hidde de Jong

<table>
<thead>
<tr>
<th>Type</th>
<th>Journal, conference, agency</th>
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<tbody>
<tr>
<td>Member Editorial Board</td>
<td>Journal of Mathematical Biology</td>
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<tr>
<td>Member Editorial Board</td>
<td>ACM/IEEE Transactions on Computational Biology and Bioinformatics</td>
</tr>
<tr>
<td>Member Program Committee</td>
<td>Biosystems</td>
</tr>
<tr>
<td>Coordinator (with C. Ambroise and F. Molina)</td>
<td>AIME 11, JOBIM 11, MARAMI 11, QR 11</td>
</tr>
<tr>
<td>Advisor</td>
<td>INRA Jouy-en-Josas, ingénieur de recherche INRA</td>
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<tr>
<td>Member Organization Committee</td>
<td>Working group on Transcriptome, protéome, modélisation,</td>
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<td></td>
<td>inférence et analyse des réseaux biologiques of GDR CNRS</td>
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<td>3003 Bioinformatique moléculaire</td>
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<td></td>
<td>Grenoble team for iGEM 2011 competition</td>
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<tr>
<td>Project reviews</td>
<td>Workshop on Identification and Control of Biological Interaction Networks, INRIA Grenoble - Rhône-Alpes, February 2011</td>
</tr>
<tr>
<td></td>
<td>ANR, Région Acquitaïne, Région Ile-de-France, FP7, FRS, CNRS, NSERC</td>
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#### Johannes Geiselmann

<table>
<thead>
<tr>
<th>Type</th>
<th>Journal, conference, agency</th>
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<tbody>
<tr>
<td>Member PhD and HdR Committee</td>
<td>Dimitar Angelov (ENS Lyon), Ariel Lindner (INSERM U10011, Cochin, Paris), Jacques Coves (Université Joseph Fourier), Khady Sall (iRTSV and Université Joseph Fourier, Grenoble), Li-Chen Zhang (Université de la Méditerranée, Marseille), Juliette Trepereau (Institute of Structural Biology and Université Joseph Fourier, Grenoble), Damien Goutte-Gattat (Université Joseph Fourier, Grenoble)</td>
</tr>
<tr>
<td>Member Selection Committee</td>
<td>Doctoral school ED-CSV, Grenoble</td>
</tr>
<tr>
<td>Member Organization Committee</td>
<td>Workshop on synthetic biology, University of Ottawa, Canada</td>
</tr>
<tr>
<td>Advisor</td>
<td>Grenoble team for iGEM 2011 competition</td>
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<td>Project reviews</td>
<td>ANR, Welcome Trust</td>
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#### Stéphane Pinhal

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<th>Type</th>
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<tr>
<td>Advisor</td>
<td>Grenoble team for iGEM 2011 competition</td>
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</table>
8.2. Other administrative activities

Eugenio Cinquemani is member of the Comité des Utilisateurs des Moyens Informatiques (CUMI) and of the Commission des Emplois Scientifiques at INRIA Grenoble - Rhône-Alpes.

Hidde de Jong is local representative of the Department of International Relations of INRIA at the Grenoble - Rhône-Alpes research center. He is also member of the working group on International Relations of the Conseil d’Orientation Scientifique et Technique (COST) of INRIA.

Johannes Geiselmann is head of the Control of Gene Expression group in the Laboratoire Adaptation et Pathogénie des Microorganismes (UMR 5163) and director of the laboratory.

Yves Markowicz is director of the BSc department at Université Joseph Fourier. He is also a national representative of the UNSA trade union.

François Rechenmann is leader of the editorial committee of the Interstices website (http://interstices.info).

Delphine Ropers represents INRIA Grenoble - Rhône-Alpes in the scientific board of IXXI, the Complex Systems Institute in Lyon (http://www.ixxi.fr). She is also member of the Commission de Formation Permanente at INRIA Grenoble - Rhône-Alpes.

Diana Stefan is a representative of the PhD candidates within the committees of the Doctoral School MSTII in Grenoble.

8.3. Seminars, presentations, and PhD thesis defenses

<table>
<thead>
<tr>
<th>Sara Berthoumieux</th>
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<tbody>
<tr>
<td><strong>Title</strong></td>
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<tr>
<td>Identification of metabolic network models from incomplete high-throughput datasets</td>
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Eugenio Cinquemani
<table>
<thead>
<tr>
<th>Title</th>
<th>Event and location</th>
<th>Date</th>
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<tbody>
<tr>
<td>Identification of metabolic network models from incomplete high-throughput datasets</td>
<td>Seminar Automatic Control Lab, ETH Zürich (Switzerland)</td>
<td>May 2011</td>
</tr>
<tr>
<td>Regulation of arabinose uptake in Escherichia coli: stochastic modelling and identification using time-lapse fluorescence microscopy data</td>
<td>Poster presentation at Conference on Stochastic Systems Biology, Monte Veritá, Ascona (Switzerland)</td>
<td>Jul. 2011</td>
</tr>
<tr>
<td>Learning the structure of genetic network dynamics: A geometric approach</td>
<td>Talk in invited session on Hybrid Systems in Biological Networks at IFAC 2011, Milan (Italy)</td>
<td>Sep. 2011</td>
</tr>
<tr>
<td>Identification of approximate metabolic network models from high-throughput data</td>
<td>Seminar Dipartimento di Informatica e Sistemistica, Universita’ degli Studi di Pavia (Italy)</td>
<td>Dec. 2011</td>
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**Hidde de Jong**

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<tr>
<th>Title</th>
<th>Event and location</th>
<th>Date</th>
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<tbody>
<tr>
<td>Modélisation mathématique de réseaux de régulation bactériens</td>
<td>Seminar Centre d’Alembert, Université Paris-Sud, Orsay</td>
<td>Jan. 2011</td>
</tr>
<tr>
<td>Metabolic coupling in gene regulatory networks in bacteria</td>
<td>Invited talk at workshop Towards Systems Biology, Grenoble</td>
<td>May 2011</td>
</tr>
<tr>
<td>Metabolic coupling in gene regulatory networks in bacteria</td>
<td>Invited talk at Journée Bio-Maths, Université Pierre et Marie Curie and Université Paris Diderot, Jussieu</td>
<td>Jun. 2011</td>
</tr>
<tr>
<td>Metabolic coupling in gene regulatory networks in bacteria</td>
<td>Invited talk at Mathematical Biology workshop and IGTC Summit, Victoria (Canada)</td>
<td>Jul. 2011</td>
</tr>
<tr>
<td>Importance of metabolic coupling for the dynamics of gene expression</td>
<td>Talk in invited session on Hybrid Systems in Biological Networks at IFAC 2011, Milan (Italy)</td>
<td>Sep. 2011</td>
</tr>
<tr>
<td>Modeling of gene regulatory networks in bacteria</td>
<td>Invited talk at Journées Atip-Avenir (CNRS/INSERM), Roscoff</td>
<td>Oct. 2011</td>
</tr>
<tr>
<td>Mathematical modeling of gene regulatory networks in bacteria</td>
<td>Seminar University of Twente (the Netherlands)</td>
<td>Nov. 2011</td>
</tr>
</tbody>
</table>

**Johannes Geiselmann**
<table>
<thead>
<tr>
<th>Title</th>
<th>Event and location</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>The stress regulon of Escherichia coli</td>
<td>Seminar at University of Milano (Italy)</td>
<td>Mar. 2011</td>
</tr>
<tr>
<td>Experimental analysis and modeling of bacterial regulatory networks</td>
<td>Seminar at University of Geneva (Switzerland)</td>
<td>May 2011</td>
</tr>
<tr>
<td>Synthetic biology in Escherichia coli</td>
<td>Talk at Workshop on synthetic biology, University of Ottawa (Canada)</td>
<td>Oct. 2011</td>
</tr>
<tr>
<td><strong>Stephan Lacour</strong></td>
<td><strong>Study of the RpoS-Crl regulon in Escherichia coli using transcriptional fusions</strong></td>
<td><strong>Poster presentation at 4th FEMS Congress of European Microbiologists, Geneva (Switzerland)</strong></td>
</tr>
<tr>
<td><strong>Delphine Ropers</strong></td>
<td><strong>Des mathématiques pleines de vie</strong></td>
<td><strong>Presentation at Olympiades de Mathématiques 2011, Lycée Roger Deschaux, Sassenage</strong></td>
</tr>
</tbody>
</table>

### 8.4. Popular science writing

The members of IBIS are actively involved in the dissemination of research results in systems biology and bioinformatics to a wider, non-specialist audience. François Rechenmann is leader of the editorial committee of the Interstices (http://interstices.info). Interstices offers pedagogic presentations of research themes and activities in the computer science domain, including at its interface with life sciences.

Delphine Ropers gave a presentation on mathematical modeling in the life sciences at the prize award ceremony of the Olympiades de Mathématiques 2011.

### 8.5. Teaching

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

#### Eugenio Cinquemani

<table>
<thead>
<tr>
<th>Subject</th>
<th>Year</th>
<th>Location</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification of dynamical models of genetic networks</td>
<td>5</td>
<td>INSA de Lyon</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Jérome Izard

<table>
<thead>
<tr>
<th>Subject</th>
<th>Year</th>
<th>Location</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Génétique procaryote</td>
<td>2</td>
<td>Université Joseph Fourier</td>
<td>40</td>
</tr>
</tbody>
</table>

#### Hidde de Jong

<table>
<thead>
<tr>
<th>Subject</th>
<th>Year</th>
<th>Location</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modeling and simulation of genetic regulatory networks</td>
<td>5</td>
<td>INSA de Lyon</td>
<td>16</td>
</tr>
<tr>
<td>Modeling and simulation of genetic regulatory networks</td>
<td>5</td>
<td>ENS, Paris</td>
<td>8</td>
</tr>
</tbody>
</table>
Hidde de Jong organized with Daniel Kahn a module on the modeling of genetic and metabolic networks at INSA de Lyon.
9. Dissemination

9.1. Animation of the scientific community

- C. Kazantsev is the Director of the Grenoble branch of the National Research Institute for Mathematics Teaching [http://www-irem.ujf-grenoble.fr/irem/accueil/](http://www-irem.ujf-grenoble.fr/irem/accueil/).
- N. Papadakis is in charge of EDP/MOISE fortnightly seminar, see [http://ljk.imag.fr/MOISE/Seminaires/seminaires.php](http://ljk.imag.fr/MOISE/Seminaires/seminaires.php). This seminar generally features a talk from either a member of the team, or scientists working on subjects of interest for us, especially physicists from Rhône-Alpes region.
- N. Papadakis co organizes the working group Optimal Transport and Image Processing, see [http://ljk.imag.fr/MOISE/Seminaires/seminaires.php](http://ljk.imag.fr/MOISE/Seminaires/seminaires.php) that consists of a presentation given by a member of the LJK or invited scientists.
- M. Nodet and D. Auroux organized the conference Problèmes Inverses : des Plasmas à l’Océanographie (Nice, June 2011), in honor of J. Blum’s 60th birthday.
- Clémentine Prieur organized the annual meeting of the GDR MASCOT NUM in Villard de Lans in March 2011. It was in honor of Professor A. Antoniadis and many international guest stars were invited.
- Clémentine Prieur was one of the three invited editors of a special number of the Journal de la Société Française de Statistiques on sensitivity analysis [http://smf4.emath.fr/Publications/JSFdS/152_1/html/](http://smf4.emath.fr/Publications/JSFdS/152_1/html/).
- Cécile Helbert participated to the organization of a special topic session “industrial and business statistics in France” in the 11th annual ENBIS conference that aims to bring together professionals who are involved in business and industrial statistics. They offer opportunities to meet each other and to share ideas and best practices. The accepted contributions are from a wide range of applications, including industry, manufacturing, administration, business and risk management, marketing, sales, logistics and service.
- A. Rousseau gave a plenary lecture to the National Conference of Mathematics Teachers (APMEP) on the basics of mathematical modelling for environmental sciences.
- A. Rousseau is a member of Evaluation Committee at INRIA.
- M. Nodet and A. Rousseau are members of the national board of the Agrégation externe de mathématiques.
- A. Rousseau participated in a career fair at MIT with M. Thonnat (Deputy Scientific Director at INRIA), A. Theis-Viémont and E. Chareyre (Human Resources at INRIA). The European Career Fair is an annual recruiting event, organized by the MIT European Club, that connects employers from Europe with the most talented candidates that live in the US.
- In the framework of MaiMoSiNE, "Maison de la Modélisation et de la Simulation Nanosciences et Environnement", a training course was organised on the DATICE code ([http://maimosine.fr/fiche_formation/26](http://maimosine.fr/fiche_formation/26)), gathering participants from LGGE (Grenoble), LSCE (Saclay), and BAS (British Antarctic Survey Cambridge) institutes.
E. Blayo has co-organized (with S. Charles (UCB Lyon) and D. Bicout (UJF Grenoble)) a one-day (October 10, 2011) conference "Sensitivity analysis for environmental sciences”.

9.2. Teaching

Licence, Master, Doctorat:

- Licence : Mathematics for engineers, 72h, L1, UJF
- Licence : Descriptive Statistics, 71h, L1, UPMF
- Licence : Statistics studies 2, 30h, L1, UPMF
- Licence : Quality, 24h, L2, UPMF
- Licence : Plans of experiences, 30h, L2, UPMF
- Licence : Data mining, 16h, L2, UPMF
- Licence : Quality, 10h, L3, UPMF
- Master : Numerical modelling for coastal oceanography, 18h, M2, UBO and ENSTA Bretagne, Brest, France
- Master : Finite element method, 45h, M1, UJF
- Master : Model coupling, 27h, M2, UJF and G-INP
- Master : Inverse methods, 27h, M2, UJF and G-INP
- Master : Modelling and control of PDEs, 20h, M2, G-INP
- Doctorat : Introduction to data assimilation, 14h, University of Grenoble
- Doctorat : Méthodes de couplage de modèles pour la décomposition de domaines, 20h, Université de Montpellier 2, France
- Doctorat : Introduction to data assimilation, Grenoble University, France

PhD & HdR

- PhD in progress : Pierre-Antoine Bouttier, Variational data assimilation into highly nonlinear ocean models, October 2009, E. Blayo and J. Verron
- PhD in progress: Bertrand Bonan, Inverse methods for large scale ice-sheet models, Sept. 2010, Advisors: M. Nodet and C. Ritz (LGGE).
- PhD in progress : David Cherel, Couplage de modèles en mécanique des fluides océaniques, 01/10/2008, E. Blayo & A. Rousseau
- PhD in progress : Manel Tayachi, Couplages de modèles hydrologiques et océanographiques, 01/05/2010, E. Blayo & A. Rousseau
- PhD in progress : Laurent Violeau (EPI TOSCA), Stochastic Lagrangian Models and Applications to Downscaling in Fluid Dynamics, 01/10/2010, M. Bossy (EPI TOSCA, INRIA Sophia) & A. Rousseau

PhD in progress: Xavier Meunier, La circulation des courants océaniques de bords ouest : un verrou de modélisation océanique pour les modèles de prévision climatique, Sept. 2011, Advisors, B. Barnier (LEGI), L. Debreu, J. LeSommer (LEGI)

PhD in progress: Federico Zertuche, Exploitation des simulateurs multifidelites pour l’analyse de risque. Début 1er octobre 2011, Advisor Céline Helbert
7. Dissemination

7.1. Teaching

V. Calvez and E. Grenier regularly teach partial differential equations and complex system modeling and parametrization at ENSL and Lyon I University (L3, M1, M2 lectures).
8. Dissemination

8.1. Animation of the scientific community

8.1.1. Editorial activities and reviewing

Peter Sturm is associate editor of the journals IVC, JMIV, JCST, and CVA.
Peter Sturm was Area Chair of CVPR’11 and program committee member of 4 international workshops.

8.1.2. Conference organization

Peter Sturm has been Program Chair of the IEEE International Conference on Computer Vision (ICCV’11), Barcelona, Spain.
Amaël Deuau, Frédéric Devernay (PRIMA), Régis Perrier, and Peter Sturm have organized the “Congrès des jeunes chercheurs en vision par ordinateur” (ORASIS’11), Praz-sur-Arly, France.
Peter Sturm is Program Chair of the “Congrès de Reconnaissance des Formes et Intelligence Artificielle” (RFIA’12), Lyon, France.

8.1.3. Membership of scientific councils and similar bodies

Emmanuel Prados is a member of the Steering Committee of the FRB (Fondation pour la Recherche sur la Biodiversité) program "Modelling and scenarios for the biodiversity" since June 2010.
Peter Sturm is a member of the INRIA COST-GTAI (national working group on “actions incitatives”) since 2005.
Peter Sturm is a member of the Scientific Committee (COS) of INRIA Grenoble, since 2011.
Peter Sturm is a member of the Scientific Council of Barcelona Media (Spain), since 2010.
Peter Sturm was leader of the geometric computer vision task group of the national network GdR ISIS (with Adrien Bartoli, Université d’Auvergne), 2006-2011.

8.2. Participation to conferences, seminars

Emmanuel Prados has been invited for a seminar at the "Deterministic Models and Algorithms Department" of Jean Kuntzmann Laboratory. Title of the talk: "Systemic modelling of the interactions between environment, economy and society at local scales: problems and bottlenecks.", Grenoble, France, April 19th, 2011. Organizer: Nicolas Papadakis.
Pierre-Yves Longaretti gave a talk on "Urban and periurban sustainability at regional scales at the 2020 and 2050 horizons" at the Colloque “PIRVE” (Programme de Recherche Interdisciplinaire Ville et Environnement), Nantes, May 5th-6th, 2011.
Peter Sturm gave a keynote speech on “A historical survey of geometric computer vision” at the 14th International Conference on Analysis of Images and Patterns (CAIP’11), Seville, Spain, September 2011.
Peter Sturm gave a keynote speech on “A historical survey of geometric computer vision” at the 11th Workshop on Omnidirectional Vision and Camera Networks (OMNIVIS’11), Barcelona, Spain, November 2011.
Pierre-Yves Longaretti gave an invited seminar at the Department of Regional and Urban Planning of the University of Urbana-Champaign, Illinois, US. Title of the talk: “Why we are on a global collapse path and what we can do about it”. Urbana-Champaign, April 14th, 2011. Organizer: Brian Deal (head of the department).

8.3. Teaching

Licence: Introduction to applied math, 14h, L1, UJF, E. Arnaud
Master: image project, 22h, M1, UJF, E. Arnaud
Master: Introduction to image analysis, 8h, M1, UJF, E. Arnaud
Master: Multimedia indexing, 24h, M2, UJF, E. Arnaud
Master: Knowledge representation and reasoning, 14h, M2, UJF, E. Arnaud
Master: Supervising of apprentices, 30h, M2, E. Arnaud
Master: Visual computing, 30h, M2, P. Sturm
Master: Computer Vision, 30h, M2, P. Sturm
Master: 3D Computer Vision, 6h, M2, P. Sturm

8.4. PhD

PhD : Amaël Delaunoy, *Multi-view Shape Reconstruction from Images: Contributions Towards Generic and Practical Solutions using Deformable Meshes*, University of Grenoble, December 2nd, 2011, advised by Peter Sturm and Emmanuel Prados


PhD : Régis Perrier, *Estimation de l’attitude d’un satellite à l’aide de caméras pushbroom et de capteurs stellaires*, University of Grenoble, September 27th, 2011, advised by Peter Sturm and Elise Arnaud

PhD in progress : Mathieu Vadon, *Semiautomatic calibration of the land use module of Tranus*, since October 2010, University of Grenoble, advised by Emmanuel Prados and Elise Arnaud.

PhD in progress : Julien Alapetite, since 2009, University of Grenoble, advised by Denis Dupré (CERAG) and Pierre-Yves Longaretti.

PhD in progress : Ashutosh Natraj, since 2009, University of Picardie Jules Verne, advised by Pascal Vasseur, Cédric Démonceaux, and Peter Sturm.
9. Dissemination

9.1. Animation of the Scientific Community

9.1.1. Participation in Committees

Frédéric Le Mouël is elected expert for faculty hiring committee (computer science section, 27e section) in INSA Lyon. Stéphane Grumbach is a PC member of DASFAA’11, DEXA’11, WRIPE’11, OSSC’11, Sensorcom’11, SKG’11.

9.1.2. Editorial Boards

9.1.2.1. Technique et Sciences Informatiques Journal

Participant: Antoine Fraboulet.

Multidisciplinary journal designed to provide a synthesis tool for French researchers and industrial in computer science. http://tsi.revuesonline.com/

9.1.3. Conferences and workshop organization

9.1.3.1. fOSSa 2011

Participant: Julien Ponge [Steering committee, Program committee].

fOSSa 2011 was organized by INRIA, INSA de Lyon, the CITI laboratory, the IIRILL laboratory and Engineering Group Italia. The conference gathers a unique blend of opensource actors, including academics, educators, associations and industrials. The 2011 edition comprised tracks on: education, community management, development, openness and new trends in opensource.

http://fossa.inria.fr/

9.1.3.2. EuroSys 2010 Conference

Participant: Frédéric Le Mouël [Webmaster co-chair].

EuroSys 2010 is organised by EuroSys, the European Chapter of SIGOPS, sponsored by ACM SIGOPS.

The EuroSys conference series brings together professionals from academia and industry. It has a strong focus on systems research and development: operating systems, data base systems, real-time systems and middleware for networked, distributed, parallel, or embedded computing systems. As a highly recognized conference - rank 11 out of 581 in terms of 2007 CiteSeer impact factor - EuroSys has become a premier forum for discussing various issues of systems software research and development, including implications related to hardware and applications.


9.1.3.3. SEmba Workshop (2009, 2010 and 2011)

Participant: Nicolas Stouls [Program Chair].

In the context of the SEmba project (introduced Section 8.2.1), the SEmba workshop is an annual meeting where all participant of the project are invited to present there recent works. The two days are organized in four sessions corresponding to the three themes of the project and to an opening to work in the scope, but realized out of the region. This workshop meet 40 participants in 2009, 60 participants in 2010 and 70 participants in 2011, coming from all over the region.

Here is a link to the Workshop Program.
9.1.4. Program committees

Stéphane Frénot has participated to the following conference program committees: NOMS’2012. He has chaired the mini-conf on Management Strategies at CNSM’2011.

Frédéric Le Mouël has participated to the following conference program committees: INFORSID’2011, PECCS’2011, UIC’2010, UBICOMM’2010; has been workshop chairman at: ERTSI’2010; has participated to the following workshop program committee: OTM Acadeny’2010.

Julien Ponge has participated to the ICSOC’2011 TPC. He has chaired the fOSSa 2011 DEV track.

9.2. Teaching

All Amazones team member are associate professor at INSA Lyon. We teach both at the Telecommunications and the Information Technology department, at the First Cycle department and at the RTS Master of INSA Lyon. We make external courses at ENSEIRB in Bordeaux and in the University of Lebanon. Our course material cover Operating Systems, Algorithmics and C programming, Hardware architectures, Java and OSGi programming, Middleware, Software Design.

9.3. Theses and Internships

9.3.1. Theses

9.3.1.1. Theses in preparation

Rolcha Goya "Operating system for handling IoT", Iranian Grant, since 10/2011, 1st year.

Manuel Selva "Real time SOA", Bull SA Grant, since 10/2011, 1st year.


Zheng Hu "Legacy equipment management in home environment", Orange labs grant, since 01/2010, 2nd year.

Yufang Dan "Ambient calculus for distributed, service oriented virtual machines", CSC china grant, since 09/2010, 2nd year.


Ahmad Ahmad-Kassem "High level abstraction for network programming", ANR-09-BLAN-0131-01 grant, since 10/2009, 3rd year.

Fuda Ma "High level modeling for applications distributed over networks", CSC china grant, since 09/2010, 2nd year.

9.3.2. Participation in thesis committees

Stéphane Frénot has been member of the PhD Jury of Mr. Juan Navas, "Une infrastructure pour l’optimisation de systèmes embarqués volutifs à base de composants logiciels", University of Britany, 6 may, 2011.

9.3.3. Internships

Alexis Giorkallos "Compressing/Cyphering logs" (French Report).

Damien Reimert "Ambiant Context Simulation" (French Report).

Moemen Cherni "Dynamic temporal specification building for service oriented application admission control" (French Report).

Yann Chevalier "Memory management in JamVM" (French Report).

Ferit Baver Elhuseyni "A Cross-layer Approach to Achieve Efficient Service Delivery in Mobile Delay-Tolerant Networks with a Service-Oriented Network Coding".

Herman Mekontso Tehinda "Specification and Service Substitution within OSGi framework" [14].

Joffrey d’Hayer “Implementing Hashing function on Lytect FGPA card” (French Document)
DNET Team

9. Dissemination

9.1. Animation of the scientific community

- Eric Fleury was a member of the Interdisciplinary Workshop on Information and Decision in Social Networks scientific committee, MIT.
- Eric Fleury was a member of the CFIP program committee.
- Eric Fleury was co-chair of the Social networks, from structures to politics workshop.
- Eric Fleury was a member of the 20th International Conference on Computer Communications and Networks (ICCCN 2011) program committee.
- Eric Fleury was a topic chair for Euro-Par 2011.
- Eric Fleury was an invited speaker at the research summer school "école Intelligence Ambiante" (Lille, France).
- Eric Fleury was an invited speaker at the "Journées thématiques Rescom Réseaux de Capteurs et leurs applications.
- Eric Fleury has participated in the event All connected, an investigation on new numerical usages, co production with CCSTI Grenoble – La Casemate / Universcience – Cité des sciences et de l’industrie. The exhibition is an action of the NANOYOU project (FP7/2007-2013)
- Guillaume Chelius was an invited speaker at the IN’Tech Seminar on smart objects (Grenoble, France).
- Guillaume Chelius was an invited speaker at the "modèles et algorithmes" seminar at INRIA Paris-Rocquencourt (Paris, France).
- Guillaume Chelius was an invited speaker at the "Conf’Lunch" seminar at INRIA Rennes-Bretagne Atlantique (Rennes, France).
- Guillaume Chelius has participated with the HiKoB startup to the "Rencontres INRIA Industrie” on healthcare @ home (Paris, France).
- Guillaume Chelius has participated with the HiKoB startup to the "Grenoble Innovation Fair” 2011 (Grenoble, France).

9.1.1. Leadership within scientific community

- Christophe Crespelle was member of the Ph.D. jury of Assia Hamzaoui (LIP6, Université Paris 6, France).
- Christophe Crespelle was member of the Ph.D. jury of Xiaomin Wang (LIP6, Université Paris 6, France).
- Eric Fleury was member of the HDR jury of Anthony Busson (Université Paris Sud, France).
- Eric Fleury was member of the HDR jury of Nathalie Mitton (Université de Lille – INRIA Nord Europe, France).
- Eric Fleury was member of the HDR jury of Lamia Benamara (LIP6, UPMC, France).
- Eric Fleury was member of the Ph.D. jury and reviewer of the Ph.D. of Thomas Aynaud (LIP6, UPMC, France).
Eric Fleury was member of the Ph.D. jury and reviewer of the Ph.D. of Dorian Mazauric (Université de Nice – INRIA Sophia Antipolis, France).

Eric Fleury was member of the Ph.D. jury and reviewer of the Ph.D. of Oussama Allali (LIP6, UPMC, France).

Eric Fleury was Vice President of the expert committee for the ANR INFRA call.

Eric Fleury is a member of the national PES board for the computer science section.

Eric Fleury is Co-chair of the Networking group ResCom of the CNRS GDR ASR. He is also a member of the scientific committee of the GDR ASR.

Eric Fleury is in the steering committee of the IXXI – Rhône Alpes Complex Systems Institute.

Eric Fleury has been an expert for the Fund for Scientific Research - FNRS.

Guillaume Chelius is a member of the IXXI – Complex Systems Institute scientific board.

9.2. Teaching

9.2.1. Teaching by Christophe Crespelle

Licence : Algorithmique et programmation procédurale, 48h, niveau L1, Université Claude Bernard Lyon 1, France

Master : Architecture de sécurité des réseaux, 37h, niveau M2, Université Claude Bernard Lyon 1, France

Master : Sécurité et sûreté de fonctionnement, 12h, niveau M2, Université Claude Bernard Lyon 1, France

Master : Recherche opérationnelle, 24h, niveau M1, Université Claude Bernard Lyon 1, France

Master : Réseaux du futur, 12h, niveau M2, Université Claude Bernard Lyon 1, France

Master : Grands graphes de terrain, 18h, niveau M2, ENS de Lyon, France

9.2.2. Teaching by Eric Fleury

Eric Fleury is a professor at ENS Lyon in the Computer Science Department since 2007. The ENS de Lyon is one of the four Écoles normales supérieures in France.

Licence : "Introduction to Algorithm" and "Architecture, System and Networking".

Eric Fleury is in charge for the CS department of the option in modeling complex systems.

Since September 2009, Eric Fleury is the Head of the Computer Science Department at ENS de Lyon.

9.2.3. Teaching by Guillaume Chelius

Master : Wireless Networks class in the Master 2 System and Networks, IFI (Hanoi, Vietnam)

Master : Algorithms for Networks and Communications in the Fundamental Computer Sciences

9.2.4. PhDs

PhD in progress : Andreea Chis, Methods and tools for the compilation and software optimization of wireless embedded systems dedicated to applications, October 2007 - January 2012, E. Fleury and A. Fraboulet

PhD in progress : Qinna Wang, Uncovering overlapping dynamic communities, October 2008 - March 2012, E. Fleury

PhD in progress : Adrien Friggeri, Exploring Socially Cohesive Communities, September 2009 - October 2012, E. Fleury and G. Chelius

PhD in progress : Lucie Martinet, iBird: Individual Based Investigation of Resistance Dissemination, September 2011, E. Fleury and C. Crespelle
GRAAL Project-Team

8. Dissemination

8.1. Scientific Missions

Scheduling in Aussois, IV  The GRAAL project at École normale supérieure de Lyon organized a workshop in Aussois, France on May 30-June 1, 2011. The workshop focused on scheduling for large-scale systems and on scientific computing. This was the sixth edition of this workshop series, after Aussois in August 2004, San Diego in November 2005, Aussois in May 2008, Knoxville in May 2009 and Aussois in June 2010. The next workshop will be held in Pittsburgh in June 2012.

Anne Benoit was a member of the PhD defense committee of Alexandru Dobrila (Besançon, examineur).
Frédéric Desprez was a member of the following PhD defense committees: Ketan Maheshwari (Nice University, examineur), Pedro Velho (Grenoble, examineur, président), Guilherme Koslovski (ENS Lyon, examineur), Pierre Riteau (Rennes University, rapporteur), Diana Moise (ENS Cachan, rapporteur).
Frédéric Desprez was a member of the ANR committee SIMI 2 – Science informatique et applications (“Blanc” et “Jeunes chercheuses et jeunes chercheurs”), and “Appel Blanc international’.
Gilles Fedak was a member of the following PhD defense committee : Fei Teng (Ecole Centrale Paris, examineur). Gilles Fedak was project evaluator International Open Call (Appel Blanc International). He was an expert for the Netherlands Organisation for Scientific Research (NWO).
Loris Marchal was a member of the PhD defense committee of Sékou Diakité (Besançon, examineur).
Christian Pérez was a member of the following PhD defense committees: Carlos Hermán Rojas (Grenoble University, rapporteur), Alexandra Carpen-Amarie (ENS Cachan, rapporteur, président), Marcela Rivera (Nice University, rapporteur), and Baptiste Poirriez (Rennes University, examineur).
Frédéric Vivien was a member of the following PhD defense committees: Abir Benabid (Université Paris 6, rapporteur), Amina Guermouche (Université Paris Sud, examineur).
Frédéric Vivien was a member of the AERES committee for the evaluation of the FEMTO-ST laboratory, Besançon, France.

8.2. Animation of the scientific community

8.2.1. Edition and Program Committees

Anne Benoit is a member of the Editorial Board (Associate Editor) of JPDC, the *Journal of Parallel and Distributed Computing*.

She was the General Chair of the 20th International Heterogeneity in Computing Workshop, HCW 2011, held in Anchorage, USA, May 2011 (in conjunction with IPDPS 2011). She is a member of the organizing committee of the SIAM Conf. on Parallel Processing for Scientific Computing (PP 2012), Savannah, USA, February 2012; Program vice chair of the 26th IEEE Int. Conf. on Advanced Information Networking and Applications (AINA 2012), for Track 5: "Distributed and Parallel Systems", Fukuoka, Japan, March 2012; Program vice co-chair of the IEEE Cluster 2012 Conference, in "Applications and Algorithms", Beijing, China, September 2012. She was a member of the program committees of SPAA 2011 (ACM Symposium on Parallelism in Algorithms and Architectures), IPDPS 2011 (IEEE International Parallel and Distributed Processing Symposium), and HiPC 2011 (IEEE International Conference on High Performance Computing). In 2012, she is a member of the program committees of HPDC, CCGrid and IPDPS.


Jean-Yves L’Excellent is a member of the program committee of Vecpar 2012.

Loris Marchal was in the program committee of IPDPS 2011 and ICPP 2011, and is in the program committee of IPDPS 2012 and ICPP 2012.

Christian Pérez was a member of the program committees of the 17th IEEE International Conference on Parallel and Distributed Systems (ICPADS 2011), December 7-9, Tainan, Taiwan, the IEEE Cluster 2011 Conference, September 26-30, Austin, TX, USA, the Euro-Par 2011, August 29th-September 2nd, Bordeaux, France, the The Ninth International Conference on Service Oriented Computing (ICSOC 2011), December 5-8, Paphos, Cyprus, the ParCo Conference, August 30th-September 2th, Ghent, Belgium, the Second Workshop on MapReduce and its Application (MapReduce’2011), June 18-19, Delft, the Netherlands, the Second workshop on New Frontiers in High-performance and Hardware-aware Computing (HipHaC’11), February 13th, San Antonio, TX, USA, the Second Conference Facing the Multicore-Challenge II, September 28-30, Karlsruhe, Germany, and the Twentieth edition of the Rencontres francophones du Parallélisme (RenPar’20), May 10-13, Saint Malo, France He was co-organizer of the Grid’5000 Spring School, April 18-21, Reims, France.

Bora Uçar was a member of the program committee of Algorithms and Applications track of ICNC’11, the Second International Conference on Networking and Computing, Osaka, Japan, November 30–December 2, 2011; HPSS 2011, Algorithms and Programming Tools for Next Generation High-Performance Scientific Software, held as a workshop of Euro-Par 2011, Bordeaux, France, August
29–September 2, 2011; I IC3, The fourth international conference on Contemporary Computing, JIIT University, Noida, India, August 8–10, 2011; PCO’11, Parallel Computing and Optimization, a workshop of the IPDPS 2011 (25th IEEE International Parallel & Distributed Processing Symposium), May 16–20, 2011. Bora Uçar was also a member of the organizing committee of CSC11, The 5th SIAM Workshop on Combinatorial Scientific Computing, Darmstadt, Germany, May 19–21, 2011.

Yves Robert co-edited a special issue of Parallel Computing. This special issue is a follow-on of ISPDC’2009 and HeteroPar’2010 and gathers extended versions of the best contributions to these events.

Yves Robert will be program vice-chair for the Algorithms track of HiPC’2012, the IEEE International Conference on High-Performance Computing. He will be the program co-chair of ICPP’2013, the International Conference on Parallel Processing. This international conference will be held at ENS Lyon in September 2013.

Frédéric Vivien is an associate editor of Parallel Computing.

Frédéric Vivien was a member of the program committee of the 12e congrès annuel de la Société française de Recherche Opérationnelle et d’Aide à la Décision (ROADEF 2011), March 2-4 2011, Saint-Étienne, France; the PhD forum of the IEEE International Parallel & Distributed Processing Symposium (IPDPS 2011), May 16-20, 2011, Anchorage, USA; the 31st Int'l Conference on Distributed Computing Systems (ICDCS 2011), June 20-24, 2011 Minneapolis, USA; the annual IEEE International Conference on High Performance Computing (HiPC 2011), Bengaluru (Bangalore), India, Dec. 18 - 21, 2011; the 20th Euromicro International Conference on Parallel, Distributed and Network-Based Computing (PDP 2012), Munich, Germany, February 15-17, 2012; the 12th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid 2012), May 13-16, 2012, Ottawa, Canada; and he was the local chair for the Theory topic of Euro-Par 2011, August 29-September 2, Bordeaux, France, 2011.

8.3. Teaching

Doctorat: Sparse Direct Linear Solvers, 4 hours, University of Aachen, Germany, by Jean-Yves L’Excellent.

Doctorat: A three-hours course on parallel sparse matrix vector multiplies, iterative solvers, and models and methods for efficient parallelization at University of Murcia, Spain, 28 and 29 November 2011, by Bora Uçar.

Licence: Réseaux, 12 hours, L3, UCBL, France.

Licence: Probabilités, 32 hours, L3, ENS Lyon, by Yves Robert

Master: Algorithmique Parallèle, 39 hours, M1, ENS Lyon, France, by Frédéric Vivien

Master: Administration Réseaux, 16 hours, M2, UCBL, France. Lyon, France.

Master: Certification CCNA, 15 hours, M2, UCBL, France.

Master: Certification CCNA, 15 hours, M2 apprentissage, UCBL, France.

Master: Client/Serveur, 6 hours, M2, UCBL, France.

Master: Grids and Clouds, 26 hours, M2, ENS Lyon, France, by Eddy Caron, Christian Pérez

Master: Introduction aux Systèmes et Réseaux, 55 hours, M2 double compétence en informatique, UCBL, France.

Master: Réseaux, 18 hours, M1, ÉNS-Lyon, France.

Master: RTS, 9 hours, M2 recherche, INSA, France.

Master: Scheduling, 36 hours, M2, ENS Lyon, France, by Loris Marchal and Frédéric Vivien

Master: Sécurité Administration Réseaux, 6 hours, M2, UCBL, France.
Master: Sécurité Administration Réseaux, 20 heures, M2 apprentissage, UCBL, France.
Master: Sécurité Administration Réseaux, 20 heures, M2 double compétence en informatique, UCBL, France.
Master: Algorithmique Combinatoire, 54 heures, M1, Université de Franche-Comté, by Jean-Marc Nicod
Master: Algorithmique Distribuée, 27 heures, M2, Université de Franche-Comté, by Jean-Marc Nicod
Master: Modélisation et Evaluation des Systèmes Informatiques, 15 heures, M2, Université de Franche-Comté, by Jean-Marc Nicod
Master: Algorithmique Concurrente, 35 heures, M2 (on-line learning), Université de Franche-Comté, by Jean-Marc Nicod
Master: Modélisation et Evaluation des Systèmes Informatiques, 35 heures, M2 (on-line learning), Université de Franche-Comté, by Jean-Marc Nicod

PhD & HdR:

PhD : Mathias Jacquelin, “Memory-aware algorithms: From multicore processors to large scale platforms”, ENS-Lyon, July 20, 2011, Loris Marchal and Yves Robert
PhD: Clément Rezvoy, “Large Scale Parallel Inference of Protein and Protein Domain Families”, ENS Lyon, September 28, 2011, Daniel Kahn and Frédéric Vivien
PhD in progress : Guillaume Aupy, “Scheduling for reliability”, October 1, 2011, Anne Benoit and Yves Robert
PhD in progress : Cristian Klein, “Multi-Level Cooperative Resource Management”, October 1, 2009, Cristian Pérez
PhD in progress : Vincent Pichon, “Programmation d’applications scientifiques de couplage de codes à base de composants logiciels”, April 6, 2009, André Ribes (EDF) and Christian Pérez
PhD in progress : Paul Renaud-Goud, “Energy-aware scheduling algorithms”, October 1, 2009, Anne Benoit and Yves Robert
PhD in progress : Mohamed Sid-Lakhdar, “Exploiting clusters of multicores for the solution of large-scale spare linear systems with multifrontal methods”; October 01, 2011, Frédéric Vivien and Jean-Yves L’Excellent
PhD in progress : Lamiel Toch, “Batch scheduling using virtualization”, October 01, 2009, Laurent Philippe and Jean-Marc Nicod
PhD in progress : Dounia Zaidouni “Resilient algorithms for exascale platforms”, October 01, 2011, Yves Robert and Frédéric Vivien
PhD in progress: Georges Markomanolis “Environnement de simulation pour l’aide au dimensionnement de grilles de calcul”, December 1, 2009, Frédéric Desprez and Frédéric Suter
PhD in progress: Adrian Muresan “Ordonnancement et déploiement d’applications de gestion de données à grande échelle sur des plates-formes de type Clouds”, September 1, 2009, Eddy Caron and Frédéric Desprez
PhD in progress: Sylvain Gault “Ordonnancement dans les plates-formes MapReduce”, December 1, 2010, Frédéric Desprez
PhD in progress: Anthony Simonet “Exécution efficace des applications parallèles de traitement intensif de données sur les infrastructures distribuées hybrides”, November 1, 2011, Gilles Fedak
9. Dissemination

9.1. Animation of the scientific community

- Brigitte Plateau is the director of Grenoble-INP ENSIMAG.
- Yves Denneulin has been appointed deputy director of the LIG.
- Corinne Touati is the Grenoble INP correspondent for international relations with Japan.
- Yves Denneulin and Jean-Marc Vincent are co-directors of the LICIA (Franco-Brazilian Laboratory).
- Jean-François Méhaut has been appointed as expert for the action HPC PME (Genci, Inria, Oseo) as well as for the ANR “COSINUS” program and the “Blanc” program.
- Jean-François Méhaut was a member of two selection committees in Joseph Fourier University and Grenoble INP.
- Arnaud Legrand was a member of the selection committee in University of Bordeaux 1 (LABRI).
- Bruno Gaujal was a member of the selection committee in ENS de Lyon.
- Jean-François Méhaut is a member of the HDR commission of Joseph Fourier University.

9.1.1. Invited Talks

- The 2011 International Conference on Mathematical Aspects of Game Theory and Applications (MAGTA 2011) (Panayotis Mertikopoulos)
- Network Games, Control and Optimization Conference, Paris (NetgCoop 2011) (Bruno Gaujal).
- Twenty years of LaBRI (Bordeaux). Jean-François Méhaut gave an invited talk entitled “twenty years of multithreading”.

9.1.2. Journal, Conference and Workshop Organization

- Chair and organizer of the JLPC (Joint Laboratory on Petascale Computing) workshop (J-F. Méhaut)
- Co-chair of the 1st International Workshop on Optimization for Green Wireless Communication Networks (GreenNet 2011) (C. Touati)
- Web chair of the International Conference on NETwork Games, COntrol and OPtimization (NetG-Coop 2011) (C. Touati)
- Co-general chair of PCGrid 2011 (D. Kondo).

9.1.3. Program Committees

- D. Kondo was a program committee member of CCGrid 2011, ServP2P 2011, and BADS 2011.
- 7th International ICQT Workshop on Advanced Internet Charging and QoS Technology (ICQT’11) (C. Touati)
- A. Legrand was program committee member of CCgrid 2011 and IPDPS 2011 and 2012.
9.1.4. Thesis Defense

- Pierre Coucheney *Optimisation des réseaux sans fil: une approche par la théorie des jeux* (August 31)
- Ahmed Harbaoui *Vers une modélisation et un dimensionnement automatique des applications réparties* (October 21)
- Carlos Prada Rojas *Une approche à base de composants logiciels pour l’observation de systèmes embarqués* (June 24)
- Kelly Rosa Braghetto *Modeling Techniques for Business Process Performance Analysis* (September 21)
- Pedro Velho *Accurate and Fast Simulations of Large-Scale Distributed Computing Systems* (July 4)
- Christiane Vilaca Pousa Ribeiro *Contributions on Memory Affinity Management for Hierarchical Shared Memory Multi-core Platforms* (June 29)
- Blaise Yenke *Ordonnancement des sauvegardes/reprises d’applications de calcul haute performance dans les environnements dynamiques* (January 7)

9.1.5. Thesis Committees

Researchers of the MESCAL project-team have served on the following "habilitation" thesis (HDR) committees:

- Brigitte Plateau served on the HDR thesis committee of J.-M. Menaud (Ecole des Mines de Nantes) and Agnès Front (LIG).

And researchers of the MESCAL project-team have served on the following PhD thesis committees:

- Brigitte Plateau served on the thesis committee of Eric Simon (LIG) and presided the jury of Ahmed Harbaoui (Orange Labs).
- Bruno Gaujal served on the thesis committee of Euriell Le Corronc (Angers) as a reviewer.
- Jean-François Méhaut presided the jury of the PhD defense of Benjamin Negrevergne (Grenoble). He was a member of the thesis committee of Cristian Rosa (Nancy) Cédric Augonnet (Bordeaux), Bogdan Cornea (Montbelliard), Khawar Sajjad (Versailles) and Paulin Melatagia (Yaoundé, Cameroon).
- Jean-Marc Vincent was a member of the thesis committee of Bogdan Cornea (Besançon) and Xavier Grehant (Paris).
- Yves Denneulin served on the thesis committee of Guilherme Piêgas Koslovski (Lyon), Nicolas Ferry (Nice) and Hiep-Thuan Do (Orléans) as a reviewer and presided the jury of the thesis of Willy Malveau (Grenoble) and the jury of the HDR of Vivien Quema (Grenoble).

9.1.6. Popular Science

- Several members of MESCAL were involved in “fête de la science” showing everyday practical use of game theory.
- MESCAL team actively promotes science to young and non-scientific audience. This year, Corinne Touati participated to the "stage Maths C2+" and the bi-annual "semaine de l’ingénieur" to promote the use of mathematics to junior high and high school students in Rhône-Alpes.
- Jean-Marc Vincent contributed to the national initiative for introducing computer science to high school professors in mathematics. This material was collected in a book [71].

9.2. Teaching

Several members of mescal are university professors and comply with their recurrent teaching duties. In addition, here are more details on new lectures that were initiated by MESCAL members in 2011.
• Performance evaluation. Two new lectures on system modeling and performance evaluation started in Ensimag in 2011 at M1 and M2 levels.
• Game Theory and Applications, 24 hours, M2R, ENS de Lyon, France.
• A teaching unit has been opened in the University of Yaoundé 1, on distributed systems.
• "Research School" (open to M1, M2 and PhD students) on Game Theory for Networks, ENS de Lyon, France.
MOAIS Project-Team

9. Dissemination

9.1. Animation of the scientific community

- 2011 2010 Chair / Symposium co-chair

- 2011 Program committee
  - EGPGV (Eurographics Symposium on Parallel Rendering and Visualization)
    * Program Committee member since 2007
  - Eurographics 2012 (short papers topic)
  - VRC 2011
  - WEHA 2011 (Workshop on Exploitation of Hardware Accelerators)
  - ICAT 2011 (21st International Conference on Artificial Reality and Telexistence)
  - SEARIS 2011 (Fourth Workshop on Software Engineering and Architectures for Realtime Interactive Systems)
  - ISVC 2011 et 2012 (International Symposium on Visual Computing)
  - SVR 2011 (Symposium on Virtual and Augmented Reality), Brazil
  - PAPP 2011 (International Workshop on Applications of Declarative and Object-oriented Parallel Programming)
  - CLCAR 2011 (Conferencia Latinamericana de Computación de Alto Rendimiento)
  - RenPar 2011 (20ièmes Rencontres Francophones du Parallelisme), may 10-13, 2011, Saint Malo, France
  - HCW’2011 (20th IEEE Heterogeneous Computing Workshop) may 2011, Anchorage, Alaska, USA
  - LSAP 2011 (3rd Workshop on Large-Scale System and Application Performance) june 2010, San Jose, USA
  - ISPDC (10th Internat Symposium on Parallel and Distributed Computing) july 6-8, 2011, Cluj-Napoca, Romania
  - IC3 2011 (4th International Conference of Contemporary Computing) august 8-10, 2011, New Delhi, India
  - ParCo’2011, august 30 - sept. 2, 2011, Ghent, Belgium
  - ScalSol (scalable solutions for greenIT), august 31 - sept. 2, 2011, Pafos, Cyprus
  - WAOA 2011, september 8-9, Saarbruecken, Germany
  - PPAM 2011, september 10-14, 2011, Torun, Poland
  - LaSCoG (7th Workshop on Large Scale Computations on Grids) september 2011, Torun, Poland
– New perspectives in scheduling theory, october 9-14, 2011, Hangzhou, China
– 23th SBAC-PAD, october 26-29, 2011, Esperito Santo, Brazil

2011 Other.
– Steering Board member of EGPGV 2011 (Eurographics Symposium on Parallel Rendering and Visualization)
– Local chair of EuroPar 2011 (Parallel and Distributed Programming), Bordeaux, France

9.2. Teaching

Master M1. Introduction à la visualisation scientifique et à la programmation parallèle des architectures hybrides. 12 h de cours. Université de Saint Jacques de Compostelle, Espagne.

Master M2R. Architectures parallèles et protocoles hautes performances. 8h de cours. Université d’Orléans, France.


Master M2. Modèles de calcul, Complexité, Approximation et Heuristiques.

Master M1. Ordonnancement dans les systèmes informatiques et manufacturiers.

Algorithme avancée” ENSIMAG 2A-apprentissage.

Ensimag - Master M1. Algorithmique et Programmation Orientée Objet.

Ensimag - Master M1. Information et Codage Numérique.


Master M2R Mosig. Parallel Systems.
9. Dissemination

9.1. Animation of the scientific community

Walid Dabbous served in the programme committees of WNS3’2011, NOMEN’2012, ICC’12 NGN. He is co-editor or a special issue of the PPNA journal on Experimental Evaluation of Peer-to-Peer Applications. He is member of the scientific council of the INRIA Bell-Labs laboratory on Self Organizing Networks. He is an affiliate professor at Ecole Polytechnique, Palaiseau.

Claude Castelluccia served in the program committees of the following international conferences: Wisec2011 and SESOC2011. He is the co-founder of the ACM WiSec (Wireless Security) conference.

Thierry Turletti Senior ACM and IEEE member, served in 2011 in the program committees of the following international conferences: 19th International Packet Video Workshop and 4th ACM Workshop on mobile Video Delivery (Movid). He is member of the Editorial Boards of the Journal of Mobile Communication, Computation and Information (WINET) published by Springer Science and of the Advances in Multimedia Journal published by Hindawi Publishing Corporation.

Chadi Barakat is General Co-Chair of the upcoming ACM CoNEXT 2012 conference on emerging Networking EXperiments and Technologies to be held in Nice on Dec 10-13, 2012. He served on the Technical Program Committee for IEEE Infocom 2011 and ACM CoNEXT 2011. He was invited to give talks at the CFIP Conference in Sainte Maxime - 2011. He is currently the scientific referee for international affairs at Inria Sophia Antipolis and member of the Conseil d’Orientation Scientifique et Technologique (COST) at Inria within the working group of international affairs (COST-GTRI).

Vincent Roca is strongly involved in the RMT, FECFRAME and MSEC working groups at the IETF (he was in particular co-chair of the MSEC, Multicast Security working group in 2010-2011).

Arnaud Legout was PC co-chair of the ICCCN 2009 conference track on P2P networking. He was also reviewer of journals (IEEE/ACM Transactions on Networking, IEEE/ACM Transactions on Computers, IEEE Network, Computer Communications, ACM SIGCOMM CCR), and conferences (IEEE Infocom, ACM Sigmetrics). He also served as an expert to the European Commission to evaluate EC funded projects.


9.2. Teaching

9.2.1. Teaching Activities

Undergraduate course at IUT-2’ (UPMF University), on network Communications, by Vincent Roca (24h).

Undergraduate course on Networking, by Walid Dabbous (36h), Ecole Polytechnique, Palaiseau, France.

Undergraduate course on Networks and Telecommunications, by Mohamed Ali Kaafar (40h), Ensimag Engineering school, France.
Undergraduate course at Polytech’ Grenoble, on Wireless Communications, by Vincent Roca (12h).
Undergraduate course at IUT, Nice-Sophia Antipolis University, Local Area Networks by Chadi Barakat (28h), France.
Undergraduate course at IUP GMI Avignon on Peer-to-peer networks, by Arnaud Legout (38h), France.
Master Crypto and Security: course on Wireless Security by Claude Castelluccia (20h), Ensimag/University of Grenoble, France.
Master MOSIG: course on Wireless Security by Claude Castelluccia (12h), Ensimag/INPG, France.
Master Phelma: course on Computer Networks by Mohamed Ali Kaafar (12h), INPG, France.
Master Ubinet: course on Evolving Internet - architectural challenges by Walid Dabbous and Chadi Barakat 42 hours, University of Nice-Sophia Antipolis, France.
Master RTM: course on Wireless networking by Chadi Barakat, 7h, IUP Avignon, France.
Master CAR: course on Internet monitoring by Chadi Barakat, 3h, Telecom Paris Tech, France.
Master TSM: course on Voice over IP by Chadi Barakat, (7h), University of Nice-Sophia Antipolis, France.
Master Ubinet: course on Peer-to-peer networks, by Arnaud Legout (21), University of Nice-Sophia Antipolis.

9.2.2. PhD students

PhD : Daniele Perito defended his PhD titled “Trustworthy Code Execution on Embedded Devices” on October 13th, at Grenoble University. His thesis was supervised by Claude Castelluccia.
PhD: Stevens Le Blond defended his PhD titled “Is Privacy Dead (in P2P Networks)?” on April 28th. His thesis was co-supervised by Arnaud Legout and Walid Dabbous.
PhD: Rao Naveed Bin Rais defended his PhD titled “Adaptive Communication Mechanisms for Networks with Episodic Connectivity” on February 1st, at University of Nice-Sophia Antipolis. His thesis was supervised by Thierry Turletti.
PhD : Mohamad Jaber defended his PhD titled “Internet traffic profiling and identification” on October 6th at University of Nice-Sophia Antipolis. His thesis was supervised by Chadi Barakat.
PhD: Imed Lassoued defended his PhD titled “Adaptive Monitoring and Management of Internet Traffic” on December 13 at University of Nice-Sophia Antipolis. His thesis was supervised by Chadi Barakat.
PhD in progress : Sana Ben Hamida works on “Embedded System Security” since 2009. Her thesis is supervised by Claude Castelluccia.
PhD in progress : Lukasz Olejnik works on “Internet Tracking and Profiling” since 2011. His thesis is supervised by Claude Castelluccia.
PhD in progress : Min-Dung Tran works on “Privacy-Preserving Ad systems” since 2011. His thesis is co-supervised by Claude Castelluccia and Mohamed Ali Kaafar.
PhD in progress : Abdelberri Chaabane works on “Online Privacy in heterogeneous networks” since September 2010. His thesis is supervised by Mohamed Ali Kaafar.
PhD in progress : Dong Wang works on “Modeling social media and its impact on new digital economy” since September 2011. His thesis is supervised by Mohamed Ali Kaafar.
PhD in progress: Anshuman Kalla works on “Efficient transmission mechanisms for Information Centric Network Architectures” since December 2011. His thesis is co-supervised by Thierry Turletti and Walid Dabbous.
PhD in progress: Shafqat Ur-Rehman works on “Benchmarking in Wireless Networks” since 2008. His thesis is co-supervised by Thierry Turletti and Walid Dabbous.

PhD in progress: Amir Krifa works on “Towards better content dissemination applications for Disruption Tolerant Networks” since 2009. His thesis is supervised by Chadi Barakat.

PhD in progress: Ashwin Rao works on “Performance evaluation of communication networks”. His thesis is co-supervised by Arnaud Legout and Walid Dabbous.

PhD in progress: Ludovic Jacquin works on “High Bandwidth Secure Communications” since 2009. His thesis is co-supervised by Vincent Roca and Jean-Louis Roch.

PhD in progress: Ferdaouss Mattoussi works on “Self-configuration and optimization of FEC over wireless protocol layers” since 2010. Her work is co-supervised by Vincent Roca and Bessem Sayadi.

9.2.3. Interns

Ana Nika (from Mar 2011 until Jul 2011)
Subject: Henna: A new naming mechanism for very heterogeneous networks prone to connection disruptions
Institution: National University of Athens (Greece)

Claudio Freire (from March 2011 until Sep 2011)
Subject: Extending NEPI, Adding support for PlanetLab experimentation platform
Institution: Universidad de Buenos Aires (Argentina)

Sandun Wijayarathne (from April 2011 to August 2011)
Subject: Support of mobility in content centric networks
Institution: Ubinet Master, University of Nice-Sophia Antipolis (France)

Mauricio Jost (from April 2011 to August 2011)
Subject: Monitoring the quality of internet access by active probing
Institution: Ubinet Master, University of Nice-Sophia Antipolis (France)

Blerina Lika (from June 2011 to July 2011)
Subject: Rate and error control in content centric network
Institution: National University of Athens (Greece)

Anestasia Fedane (from Feb 2011 to July 2011)
Subject: Privacy in Location-Based Services
Institution: University of Grenoble (France)

Min-Dung Tran (from Feb 2011 to July 2011)
Subject: Information Leakage in Ad systems
Institution: University of Grenoble (France)

William Lecat (from April 2011 to June 2011)
Subject: Differentially private spatial aggregation
Institution: Ecole Polytechnique (France)

Hervé Falciani (from March 2011 to August 2011)
Subject: Personal Data on Content Centric Networking
Institution: Ubinet Master, University of Nice-Sophia Antipolis (France)

Manu Sekar (from Feb 2011 to July 2011)
Subject: Energy versus Security tradeoff in Wireless Sensor Networks
Institution: INPG (France)
RESO Project-Team

9. Dissemination

9.1. Animation of the scientific community

Paulo Gonçalves
– Editorial board: EURASIP, officier of the Local Liaison Board
– Reviewing committee: IEEE Trans. on Signal Processing, Colloque GRETSI,

Laurent Lefèvre
– Conference and events organization :
  * Co-organizer of Entretiens Jacques Cartier : Colloquium on “Information and Communications Technologies: Are they Green ?”, Montreal, Canada, October 3-4, 2011
  * Co-organizer of the Green Days @ Paris event: “Energy efficiency : how to apply our models and solutions in production infrastructures ?”, Paris, France, May 31 and June 1, 2011
– University committee: 1 review of PhD thesis
– national expertise: CNU section 27 - Member of the Eco-info group - Member of Hemera INRIA Large Wingspan project : co-leader of the Working group : Energy Efficient Large Scale Experimental Distributed Systems and of the scientific challenge : Energy profiling of large scale applications
– public dissemination: Contribution to the paper “Internet Géant énergivore” - Okapi journal, April 2011 - Green-Net project nominated as one of the best innovations in Green-IT for the “Prix de la Croissance Verte Numérique”, France, November 2011

Isabelle Guérin Lassous
– Editorial board: Computer Communications (Elsevier), Ad Hoc Networks (Elsevier) and Discrete Mathematics and Theoretical Computer Science.
– Program committee: Globecom’11, SSS’11, MUE’11, HotMesh’11, MedHocNet’11, IPDPS’11, PerSens’11, PECSS’11, Algotel’11 and CFIP’11.
– University committee: Member of the Department council of University Lyon 1, 4 reviews of PhD thesis, 2 reviews of HDR thesis
– national expertise: CNU section 27, International program for French Research Ministry

Thomas Begin
– University committee: Member of the LIP laboratory council since February 2010, Member of one PhD jury

Olivier Glück
– University committee: Member of the CEVU (Conseil des Etudes et de la Vie Universitaire) of University Lyon 1, Member of the UFR Faculté des Sciences et Technologies faculty council of University Lyon 1, Member of the computer science department council of University Lyon 1, Member of one PhD jury

Jean-Patrick Gelas
– Program committee: Energy Efficient Grids, Clouds and Clusters Workshop (E2GC2 2009 and 2010); The Fifth Workshop on High-Performance, Power-Aware Computing (HPPAC 2009)
– University committee: Master (M2) jury.

9.2. Teaching

Thomas Begin
 Licence : Réseaux, 18 heures, niveau L3, Université Lyon 1, France
 Master : Réseaux, 60 heures, niveau M1, Université Lyon 1, France
 Master : Réseaux avancés : architecture et protocoles, 12 heures, niveau M2, ENS Lyon, France
 Master : Réseaux avancés, 56 heures, niveau M2, Université Lyon 1, France
 Master : Architecture des réseaux, 18 heures, niveau M2, Université Lyon 1, France

Jean-Patrick Gelas
 Master : Réseaux avancés : IPv6 and IP routing, 40 h, niveau M2, Université Lyon 1, France
 Master : Architecture des réseaux : Router under the hood, 6h, niveau M2, Université Lyon 1, France
 Master : Systèmes d’exploitation, 24h, niveau M2, Université Lyon 1, France
 Master : Réseaux, 35h, niveau M2, Université Lyon 1, France
 Master : Systèmes et logiciels embarqués, 45h, niveau M2, Université Lyon 1, France

Paulo Gonçalves
 Master : Responsible for the teaching axis “Models and Optimization for Emergent Infrastructure”. Master (M1/M2) of the Department of Computer Sciences, ENS Lyon (Informatique fondamentale)
Olivier Glück
Licence : Initiation Réseaux, 9 heures, niveau L2, Université Lyon 1, France
Licence : Réseaux, 2x70 heures, niveau L3, Université Lyon 1, France
Master : Services et Protocoles Avancés sur Internet, 30 heures, niveau M2, Université Lyon 1, France
Master : Administration des Systèmes et des Réseaux, 16 heures, niveau M2, Université Lyon 1, France
Master : Réseaux avancés : architecture et protocoles, 6 heures, niveau M2, ENS Lyon, France

Isabelle Guérin Lassous
Master : Réseaux ad hoc, 12 heures, niveau M1, Université Lyon 1, France
Master : Qualité de Service et Systèmes Communicant Multimédia, 40 heures, niveau M2, Université Lyon 1, France
Master : Réseaux du Futur, 5 heures, niveau M2, Université Lyon 1, France
Master : Réseaux, 21 heures, niveau M2, Université Lyon 1, France
Master : Réseaux sans Fil, 33 heures, niveau M2, Université Lyon 1, France
Master : Outils pour la recherche, 4 heures, niveau M2, Université Lyon 1, France
Master : Qualité de Service et Contrôle de Trafic, 30 heures, niveau M2, Ecole Supérieure d’Ingénieurs Réunion Océan Indien
Master : Réseaux sans Fil, 10 heures, niveau M2, Ecole Supérieure d’Ingénieurs Réunion Océan Indien

Laurent Lefèvre
Master : Advanced Networks : green, autonomic and robust networks, 48 heures, niveau M2, Addis Abeba University, Ethiopia
Master : Réseaux avancés : architecture et protocoles, 6 heures, niveau M2, ENS Lyon, France

PhD in progress : Thiago Abreu, “Integration of traffic awareness in substitution networks”, Mar. 1, 2011, I. Guérin-Lassous (Dir.) and T. Begin
PhD in progress : Inès Doghri, "Multipath Techniques for Heterogeneous Multihop Wireless Networks", Dec. 15, 2008, I. Guérin Lassous (Dir.) and L. Reynaud (Orange)


PhD in progress : Ghislain Tsafack Chetsa, “Energy profile and green levers for applications and services over large scale and distributed infrastructures", (2011-2014), L. Lefèvre (Dir.) and J.-M. Pierson (IRIT, co-dir.)

PhD in progress : Van Nam Nguyen, "Quality of Service in Heterogeneous Networks", Dec. 15, 2009, I. Guérin Lassous (Dir.) and V. Moraru (IFI, Vietnam)

9.3. Invited presentations

Paulo Gonçalves


Olivier Glück


Isabelle Guérin Lassous

*QoS issues in multihop wireless networks*, UPC, Barcelona (Spain), June 6-10, 2011, Invited seminar (4 days).
SARDES Project-Team

8. Dissemination

8.1. Animation of the scientific community

- J.B. Stefani is a member of the Programme Committee of the ACM SAC 2012 international conference, and a member of the editorial board of the international journal Annals of Telecommunications.
- J.B. Stefani is a member of the Technology Council of STMicroelectronics.
- V. Quéména was the Organizer of the fourth edition of the Winter School on Hot Topics in Distributed Computing.
- V. Quéména was a PC member for SRDS, AlgoTel, CFSE and CSE.
- A. Schmitt is a member of the steering committee of the Journées Françaises des Langages Applicatifs (JFLA).
- D. Pous is on the program committee of the Journées Françaises des Langages Applicatifs (JFLA).
- N. de Palma organized the first workshop of green computing middleware that was associate to the middleware conference MW 2011.
- N. de Palma was a PC member for the CFSE conference and ICAS conference.
- S. Bouchenak is a member of the program committee of the International Workshop on Cloud Computing Platforms, CloudCP 2011, of INFOCOMP 2011 and of CFSE 2011.
- S. Bouchenak is a co-General Chair of CFSE/RenPar/SympA conferences, 2013.
- Fabienne Boyer is in the program committee of the Green Computing Middleware (GCM’2011) workshop and of the Workshop on Middleware and Architectures for Autonomic and Sustainable Computing (MAASC’2011).

8.2. Teaching

V. Quéména is a full-time professor at Grenoble INP, since sept. 2011.
Noël de Palma is a full-time professor at Grenoble University.
Olivier Gruber is a full-time professor at Grenoble University.
Olivier Gruber is the head of the Parallel, Distributed, and Embedded Systems track in the international Master of Science in Informatics at Grenoble (MOSIG).
Renaud Lachaize is a full-time lecturer at Grenoble University.
Sara Bouchenak is a full-time lecturer at Grenoble University.
Fabienne Boyer is a full-time lecturer at Grenoble University.
Fabienne Boyer is the head of the M2PGI (Master Professionnel Génie Informatique) Alternance at Grenoble.
A. Schmitt is teaching a Bachelor level course on Computational Models at U. Joseph Fourier.
D. Pous and A. Schmitt are teaching the Proof Assistant: from Theory to Practice course at the MSTII Doctoral School (U. Grenoble).
D. Pous is teaching a Bachelor level course on Natural Deduction at U. Joseph Fourier.

HdR : Alan Schmitt, Static Analyses for Manipulations of Hierarchically Structured Data, may 2011.
PhD : Alessio Pace, "Gossiping in the wild – Tackling practical problems faced by gossip protocols when deployed on the Internet", Grenoble University, October 2011, V. Quéma, JB Stefani.
PhD : Willy Malvault, "Vers une architecture pair-à-pair pour l’informatique dans le nuage", Grenoble University, October 2011, V. Quéma, JB Stefani.
PhD in progress : Claudio Mezzina, "Reversibility in the higher-order $\pi$-calculus", Feb. 2012, J. B. Stefani.
PhD in progress : Quentin Sabah, "Isolated actors for multi-core programming", Grenoble University, exp. May 2013, J. B. Stefani..
PhD in progress : Xin An (U. Grenoble), "Discrete control and design space exploration for reconfigurable architectures", started in sept. 2010, adv. E. Rutten and A. Gamatié (INRIA Lille).
PhD in progress : Sébastien Guillet (UBS, Lorient), "Control and decision for dynamically partially reconfigurable FPGA architectures", started in dec. 2009, adv. F. de la Motte (Lorient) and E. Rutten.
8. Dissemination

8.1. Leadership within the scientific community

8.1.1. Participation in Committees

Jean-Marie Gorce: nominated as a member of CNU61 in december 2011, member of the “Expert for recruiting committees of 27e section” in INSA Lyon ; expert reviewer for the French National Agency for Research (ANR) and for ANRT for CIFRE projects.

Marine Minier: member of the “Expert for recruiting committees of 27e section” of the Université de Nice and Université de Saint-Etienne.

H. Rivano: elected member of the CNRS National Committee and member of recruiting CNRS committees of section 07 for Chargé de Recherche et Directeur de Recherche.

Fabrice Valois: Invited professor of Shanghai JiaoTong University (February-July). Member of "atelier thématique A3 STIC-NANO " of the "Service de la Stratégie Nationale de la Recherche et de l’Innovation" for the minister of research.

8.1.2. Editorial Boards


Tanguy Risset: Integration, the VLSI Journal.

Jean-Marie Gorce, Guillaume Villemaud: Guest editors for a special issue of Eurasip Journal of Wireless Communications and Networking on wireless channel and propagation.

8.1.3. Conferences and workshops organization


Hervé Rivano: Member the steering committee of ResCom in GDR ASR.

Bernard tourrencneau: Organizer of "Journées IP Capteurs" (January, Lyon, France).

Fabrice Valois: Organizer of "Journées IP Capteurs" (January, Lyon, France). Organizer and member of the steering committee of RESCOM.

8.1.4. Participation in program committees


Fabrice Valois: Algotel 2011 (Mai, Cap Estérel, France), CFIP(Mai, Nice, France), VTC-Spring (May, Budapest, Hungary), ICC 2011 (June, Kyoto, Japan), IWCRC (June, Istanbul, Turkey), SensorComm (August Côte d’Azur, France), iCOST (October, Shanghai, China), WiMob (October, Shanghai, China), WPMC (October, Brest, France), Globecom 2011 (December, Houston, USA).
8.2. Theses, Internships

8.2.1. Theses

8.2.1.1. Theses defended in 2011


8.2.1.2. Theses in preparation


Cédric Chauvenet: “IPv6/6LoWPAN network architecture design over low power”, CIFRE Watteco/CITI grant, since 02/2010.


Cengis Hasan: “Optimization of resource allocation for small cells networks”, Orange labs grant, since 01/2010.

Aissa Khoumeri: “low power and low cost architectures for wireless networks”, FUI Ecnhome grant, since 10/2011.

Quentin Lampin: “QOS and time-constrained WSN Networks”, Orange labs grant, since 01/10/2009.

Matthieu Lauzier: “Design and evaluation of information gathering systems for dense mobile wireless sensor networks”, Euromedia grant, since 01/10/2011.


Alexandre Mouradian: “Proposition et validation de protocoles de communication temps-réel pour les réseaux de capteurs sans fil”, ANR ARESA2 grant, since 10/2010.

Anis Ouni: “Optimization of capacity and energy consumption in wireless mesh networks”, ECOSCells project grant, since 10/2009.


8.2.2. Participation in thesis Committees


Claire Goursaud: thesis of Anya Apavatjrut (July, Lyon, INSA Lyon)[Director], Marine Minier: thesis of Baudoin Collard (January 2011, Louvain-La-Neuve - Belgium, UCL). (October, Lyon, INSA LYON)[examinator].

Hervé Rivano: thesis of Julien Champ (December, Montpellier, ED ISS)[Examinator], thesis of Florent Hernandez (November, Montpellier, ED ISS)[Examinator].

Marco Fiore: thesis of Razvan Stanica (November, Toulouse, ENSIEEHT)[Examinator].

Bernard Tourancheau: thesis of Leila Ben Saad (November, Lyon, ENS Lyon)[Director].

Fabrice Valois: HDR of Aline C. Viana (December, Paris, Université de Paris 6)[examinator], thesis of Yacine Mezali (December, Orsay, École Polytechnique)[reviewer], thesis of Stéphane Pomportes (December, Paris, Université Paris-Sud)[reviewer].

Guillaume Villemaud: thesis of Cédric Lévy-Bencheton (May, Grenoble, INSA Lyon)[Director].

8.2.3. Internships

Yesser Bouguerra [PFE student]: Mécanismes d’allocations d’adresses dans les réseaux multi-saut (Marco Fiore, Fabrice Valois)

Arthur Caillau [License student]: Developpement d’un outil d’étude des reseaux radio mailles (Herve Rivano)

Mickael Dardaillon [Master student]: Implementation materielle d’algorithmes de cryptographie pour les reseaux de capteurs (Tanguy Risset, Cédric Lauradoux)

Ghuzlan Hasan [Master student]: Communication IPv6 pour reseau de capteurs (Bernard Tourancheau)

Bilel Fersi [PFE student]: Voting Algorithms for Intrusion Detection in WSNs (Cedric Lauradoux, Isabelle Auge-Blum)

Antoine Fossaluzza [PFE student]: Evaluation de la propagation de signaux en environnements vehiculaires (Marco Fiore)

Fraga Fraga Iago [PFE student]: Analyse complexe de réseaux de connectivité vehiculaire (Marco Fiore)

Silvana Hernandez Jaramillo [Master student]: Evaluation des canaux de transmission de type Femtocells (Guillaume Villemaud, Florin Hutu)

Massimo Montalto [PFE student]: Evaluation de la propagation de signaux en environnements vehiculaires (Marco Fiore)

Petru Polacek [Master student]: Design of Low power, low cost physical layer architectures for the new generations of home area networks (Florin Hutu, Guillaume Villemaud)

Damien Reimert [Master student]: Environnement de simulation pour capteurs Indoor (???)

Chakroun Selima [Master student]: Mécanismes d’allocations d’adresses dans les réseaux multi-saut (Marco Fiore, Fabrice Valois)
Dounia Zaidouni [Master student]: Optimization of vehicular access in presence femto-cell road coverage (Marco Fiore, Herve Rivano)

Yin Zhang [PFE student]: Développement d’une couche MAC pour un réseau BAN (???)

8.3. Teaching

The members of SWING are heavily involved in teaching activities at Telecommunications department of INSA Lyon (master 1 and 2 level). Tanguy Risset, Jean-Marie Gorce and Fabrice Valois are professor in the Telecommunications department of INSA Lyon. Claire Goursaud and Isabelle Augé-Blum are associate professor in the Telecommunications department of INSA Lyon. Jean-Marie Gorce was the vice-head of the Telecommunications department of INSA Lyon until september 2009, and since he has been replaced by Tanguy Risset. The teaching is carried out by members of INSA Lyon as part of their teaching duties, and for INRIA/CNRS or PhD’s as extra work.

Some members are involved in the teaching activity of other departments of INSA Lyon. Marine Minier is associate professor in the Computer Science department of INSA Lyon. Jacques Verdier, Florin Hutu and Guillaume Vilmoeud are associate professor in the Electrical Engineering department of INSA Lyon. Nikolaï Lebedev is associate professor in the engineering school in Chemistry, Physics and Electronics, Lyon. Bernard Tourrencheau is involved in the teaching activity at University of Lyon in different masters. Some members are also involved in administrative duties related to teaching at University of Lyon. Tanguy Risset is the responsible for the Networking program of the Master Mastria from University of Lyon, and Jean-Marie Gorce is the responsible for the Telecommunications program of the future Master EEAP from University of Lyon. Bernard Tourrencheau

Moreover, the SWING team is involved in international teaching program. Fabrice Valois is the head of a Special program of Engineering in Telecommunications between INSA Lyon and Shanghai - Jiao Tong University.

The members of SWING also supervise several student projects and internships at all levels (Master 1 and 2, Engineering Schools).

Altogether that represents more than 2400 hours per year.

8.4. Participation in conferences and workshops

8.4.1. Participation in conferences/workshops/schools

Anya Apavatjrut: PIMRC 2011 (September, Toronto, Canada).

Ahmed Benfarah: SecureNets (May, Paris, France), Summer school on "Topics in Wireless Networks Security" (May, Milano, Italy), ICIUWB 2011 (September, Bologne, Italy).

Leila Ben Saad: Journées scientifiques du cluster ISLE Semb (Octobre, Valence, France), NTMS 2011 (February, Paris, France), Sensorcomm (August, Nice, France), Wimob (October, Shanghai, China).

Cédric Chauvenet: Journées scientifiques du cluster ISLE Semb (Octobre, Valence, France).

Paul Ferrand: IWPCM (March, Lyon, France), EuCAP (April, Roma, Italy), COST IC1004 (October, Lisbonne, Portugal).

Virgile Garcia: VTC-Fall 2011 (September, San Francisco, USA), PIMRC 2011 (September, Toronto ,Canada), Séminaire Self-Net(January, Versailles, France).

Marco Fiore: IEEE Infocom 2011 (April, Shanghai, China), IEEE/IFIP MedHocNet 2011 (June, Favignana, Italy).

Katia Jaffres-Runser: NetCod 2011 (July, Beijing, China).

Nikolai Lebedev: OptNet 2011 workshop (September, Sheffield, UK).
Cédric Lauradoux: WISEC 2011 (June, Hamburg, Germany), Journées scientifiques du cluster ISLE Semba (Octobre, Valence, France).
Meiling Luo: Eucap 2011 (April, Roma, Italy), VTC-Fall 2011 (September, San Francisco, USA).
Alexandre Mouradian: ETR11 (August, Brest, France), RESCOM réseaux (October, Paris, France).
Anis Ouni: PIMRC’11 (September, Toronto, Canada), VTC2011-Spring (May, Budapest, Hungary), SNOW’11 (March, Sälen, Sweden), RESCOM 2011 (October, Paris, France).
Tanguy Risset: CGO 2011 (Avril, Chamonix, France).
Hervé Rivano: Algotel 2011 (May, Cap Estérel, France), PIMRC 2011 (September, Toronto, Canada), ResCom (November, Lyon, France).
Fabrice Valois: IN’Tech (January, Grenoble, France), IEEE Infocom 2011 (April, Shanghai, China), SensorComm (July, Venice, Italy), ResCom (October, Paris, France), journée "Prospective Recherche : rencontres TPE/PME/PMI - recherche universitaire” (October, Paris, France).
Jean-Marie Gorce: IC904 Cognitive radio Cost meeting, October 2011 (Barcelona), IC1004 green cooperative communications meeting, October 2011 (Lisbon), IWPCM February 2011 (Lyon).
9. Dissemination

9.1. Animation of the scientific community
- Nicolas Holzschuch is member of the international program committee (IPC) of the Eurographics Symposium on Rendering 2011,
- Nicolas Holzschuch is member of the "Commission d'évaluation" of INRIA,
- Joëlle Thollot is member of the IPCs of NPAR 2011 and Computational Aesthetics 2011,
- Georges-Pierre Bonneau is member of the IPC of GD/SPM 2011.

9.2. Teaching and PhD defense

9.2.1. Teaching activities
Joëlle Thollot and Georges-Pierre Bonneau are both full Professor of Computer Science. They teach general computer science topics at basic and intermediate levels, and advanced courses in computer graphics and visualization at the master levels.
Nicolas Holzschuch teaches computer graphics at intermediate and advanced levels.

9.2.2. PhD of Pierre Bénard
This PhD thesis [10] deals with non-photorealistic rendering, a sub-field of computer graphics which aims at defining creation and processing tools to stylize images and animations. It has applications in all the fields that need stylized depictions, such as entertainment (e.g., video games, animated films, cartoons), virtual heritage, technical illustration, etc. Besides quality and expression of style, a crucial criterion to assert the quality of an image is the absence of visual artifacts. While already true for traditional art, this consideration is especially important in computer graphics. Indeed the intrinsic discrete nature of an image can lead to artifacts. This is even more noticeable during animations, as temporal artifacts are added to spatial ones. Precisely defining these artifacts is complex as certain flaws of a given style may be part of its unique and desirable quality (e.g., the imperfections in a hand-made work). The goal of this thesis is twofold: (1) To analyse and perceptually evaluate these artifacts; (2) To propose new methods for stylizing real-time 3D animations. First we present a set of techniques to ensure the coherence of line drawings extracted from 3D animated scenes. Then we propose two methods to stylize shaded regions, which allow to create a wide variety of patterns. The shared ground layer of all these approaches is the use of temporally varying textures to represent the simulated media (e.g., watercolor pigments, brush strokes). Finally we describe two user studies aiming at evaluating the quality of the results produced by such techniques.

9.2.3. PhD of Cyril Crassin
In this thesis [11], we present a new approach to efficiently render large scenes and detailed objects in real-time. Our approach is based on a new volumetric pre-filtered geometry representation and an associated voxel-based approximate cone tracing that allows an accurate and high performance rendering with high quality filtering of highly detailed geometry. In order to bring this voxel representation as a standard real-time rendering primitive, we propose a new GPU-based approach designed to entirely scale to the rendering of very large volumetric datasets. Our system achieves real-time rendering performance for several billion voxels. Our data structure exploits the fact that in CG scenes, details are often concentrated on the interface between free space and clusters of density and shows that volumetric models might become a valuable alternative as a rendering primitive for real-time applications. In this spirit, we allow a quality/performance trade-off and exploit temporal coherence. Our solution is based on an adaptive hierarchical data representation depending on the current view and occlusion information, coupled to an efficient ray-casting rendering algorithm. We
introduce a new GPU cache mechanism providing a very efficient paging of data in video memory and implemented as a very efficient data-parallel process. This cache is coupled with a data production pipeline able to dynamically load or produce voxel data directly on the GPU. One key element of our method is to guide data production and caching in video memory directly based on data requests and usage information emitted directly during rendering. We demonstrate our approach with several applications. We also show how our pre-filtered geometry model and approximate cone tracing can be used to very efficiently achieve blurry effects and real-time indirect lighting.

**9.2.4. PhD of Pierre-Edouard Landes**

Processing graphical data, either for its editing or the synthesis of new content, demands a good balance between the different sources of information one may exploit. Unlike "procedural" techniques, synthesis by example stands out thanks to its extreme ease-of-use: indeed, tasks such as identification, analysis and reproduction of the distinguishing features of the user-provided examples are left to the method itself. Such approaches, along with today’s intricate editing methods have greatly favored the production of compelling graphical content at a wide scale, and henceforth facilitated the adoption of computer-assisted tools by artists. But in order to meet with success, they also have to be highly controllable without being a mere extension of the artist’s hand. We explore here such concerns in the context of expressive rendering and study the interactions, may they be collaborative or competitive, between the different sources of information at the core of such processes. In our opinion, there are three main sources of information: the automatic analysis of the inputs before processing; the use of prior knowledge through predetermined models; and users’ explicit intervention. Through a clever combination of these sources, we propose new expressive synthesis techniques which satisfy the aforementioned usability. More than photographic realism, expressive rendering strives for the fulfillment of less easily quantifiable goals such as the intelligibility or the aesthetic value of its results. The subjectivity behind the assessment of such criteria thus forces us to attach much importance to the careful choice of the source of information to favor; the required amount of user intervention (without being detrimental to the method’s theoretical value); and the possible resort to prior models (without endangering its generality). Three main synthesis instances are studied in this document [13]: texture generation, image de-colorization, and artistic line rendering. The great disparity of inputs (raster and vector textures, complex images, 3d meshes), terms of synthesis (imitation, conversion, depiction) and objectives (preservation of a texture’s visual signature, plausible restitution of chromatic contrasts, creation of drawings in accordance with users’ styles) gives rise to distinct balances between those sources of information and requires the consideration of various modes of user interaction.

**9.2.5. PhD of Charles de Rousiers**

Reproducing efficiently the appearance of complex materials is a crucial problem in the synthesis of realistic images. These are used involved in the production of video games and movies. Apart from global light transport, the realism of a synthetic image is mostly due to the adequate representation of local light transport, i.e. the interactions between light and matter. Modeling these interactions gives rise to a large variety of reflectance models. We therefore propose a classification of these models based on the scales of their abstract geometric details. We present in the thesis [12] the following contributions:

- a transmitting reflectance model for transparent rough surfaces such a frosted glass. The efficiency of our model allows real-time performances,
- a study and a model of energy propagation in material composed of dense packed discrete particles,
- an alternative basis for representing and lighting efficiently measured materials having a low frequency reflectance.

Our contributions permit the abstraction of local interactions while keeping the realism of fully simulated local light transport models.
E-MOTION Project-Team

7. Dissemination

7.1. Animation of the scientific community

A. Spalanzani and C. Laugier organised the french-mexican summer school on robotics and vision (SSIR’11). C. Laugier organised a workshop on intelligent vehicles during IROS’11. C. Laugier was co-chair of the IEEE-RAS Technical committee on “Autonomous ground vehicle and ITS” C. Laugier was member of the Advisory/Steering Committee of IEEE/RSJ IROS 2011. C. Laugier was Editor at IEEE ICRA conference Editorial Board (CEB). C. Laugier is program co-chair at IEEE/RSJ IROS 2012. A. Martinelli was Associate editor of ICRA 2011 and IROS 2011.

7.2. Teaching

Master : “autonomous Robotics”, C. Laugier (responsible), A. Martinelli, M. Perrollaz, A. Nègre, 24h, M2, MOSIG-INP, France

Master (CNAM) : “autonomous Robotics”, CNAM, France

Doctorat (école d’été): “autonomous Robotics”, C. Laugier, 6h, SSIR’11.

Doctorat (école d’été): “Filtering, Localization and Mapping”, A. Martinelli, 4h, SSIR’11.

PhD & HdR:

PhD in progress: Alessandro Renzaglia, 3D coverage by using stochastic approach, 2009, A. Martinelli.

PhD in progress: Chiara Troiani, vision and inertial sensor fusion for 3D navigation, 2011, A. Martinelli.

PhD in progress: Jorge Rios-Martinez, Comfortable navigation using social conventions, 2009, A. Spalanzani.

PhD in progress: Arturo Escobedo, Shared Control navigation, 2011, A. Spalanzani.

PhD in progress: Raphael Laurent, Bayesian modelling to implement and compare different theories of speech communication, 2011, P. Bessière.

PhD in progress: Stéphanie Lefèvre, context-aware bayesian filtering for collision prediction at roads intersections, 2009, C. Laugier

PhD in progress: Gabriel Synnaeve, Bayesian programming applied to a multi-player video games P. Bessière.
9. Dissemination

9.1. Animation of the scientific community

9.1.1. Organization of conferences and editorial boards

- SGP 2011, Paper Chair, Stefanie Hahmann.
- SBIM 2011, Symposium Chair, Jean-Claude Léon.
- MIG 2011, Program Committee, Rémi Ronfard.
- EG 2011, Program Committee, Marie-Paule Cani.
- SBIM 2011, Program Committee, Marie-Paule Cani.
- Eurographics 2011, IPC, Stefanie Hahamann.
- SMI 2012, Program Committee, Stefanie Hahmann.
- Journal CAD (Elsevier), special issue of SPM 2011, co-editor Stefanie Hahmann [[29]].
- Journal Graphical Models (Elsevier), special issue on Geometric Modeling, co-editor Stefanie Hahmann.

9.1.2. Management and administration of scientific organisations

- Director at Large within the ACM SIGGRAPH executive committee, Marie-Paule Cani, 2008-2011.
- Marie-Paule Cani has joined the ACM Publication board in September 2011, where she represents the Computer Graphics domain.
- Vice president of AFIG (Association Française d’Informatique Graphique) in charge of international issues, Marie-Paule Cani, 2008-2011.
- President of GTMG (Groupe de Travail en Modelisation Géometrique) part of GDR IM and GDR IG, Stefanie Hahmann.
- Member of the Conseil du Laboratoire at LJK, Francois Faure, Stefanie Hahmann, Rémi Ronfard.
- Director of the Géométrie et Image department at LJK, Rémi Ronfard.
- Vice chair of SIAM activity group Geometric Design, Stefanie Hahmann.
- Responsible of Maths-Info Department of the Grenoble doctoral school MSTII, Stefanie Hahmann.

9.1.3. Public dissemination

- Exposing Hand Navigator at "Fête de la Science", cité la Vilette, Jean-Claude Léon, Maxime Quiblier.
- Publication in "Le journal du CNRS", and radio announcement (France Inter) of cloth animation results [1].

9.2. Teaching

9.2.1. Responsibilities of academic programs

- Responsible of the French Campus numérique of anatomy, Olivier Palombi.
- Member of CNU 42-01 (anatomy), Olivier Palombi.
- Member of the commission n.6 for the renewing of the ECN (Examen Classant National) in medical studies for the French ministère de l’éducation, Olivier Palombi.
- Promoting medical studies at Salon de l’Etudiant, Alpes Expo, Olivier Palombi.

9.2.2. Educational activities

- Marie-Paule Cani, 200 hours a year, Professor ENSIMAG/Grenoble INP.
- Stefanie Hahmann, 200 hours a year, Professor ENSIMAG/Grenoble INP, M2R MIA.
- Jean Claude Léon, 300 hours a year, Professor ENSE3/Grenoble INP.
- Olivier Palombi, 200 hours a year, Professor UJF, medicine.
- Rémi Ronfard, 18 hours, M2 Pro, UJF.

Note that MOSIG is joint master program between University Joseph Fourier (UJF) and Institut Polytechnique de Grenoble (INPG) taught in English since it hosts a number of internal students. If belongs to the doctoral school MSTII.
EXMO Project-Team

9. Dissemination

9.1. Leadership within scientific community

- Jérôme Euzenat is founding member of the “Semantic Web Science Association” (steering committee for the ISWC conference series) and member of the steering committee of the LMO conference series.

9.2. Editorial boards, conference and workshop committees

- Manuel Atencia has been programme committee member of the International work conference on artificial neural networks (IWANN), and the International Semantic Web Conference (ISWC).
- Jérôme David has been programme committee member for the 2011 issues of the the Ontology matching workshop (OM), and the International Conference on Mobile Web Information Systems (MobiWIS).
- Jérôme Euzenat has been programme committee member for the 2011 issues of the conferences International Joint Conference on Artificial Intelligence (IJCAI), International Semantic Web Conference (ISWC), Worldwide Web Conference (WWW), ACM conference on Knowledge capture (KCap), International and Interdisciplinary Conference on Modeling and Using Context (Context), International Conference on Conceptual Modelling (ER), ODBase, and National Conference on Artificial Intelligence (AAAI) "AI and the web” track. Jérôme Euzenat has also been programme committee member for the IJCAI workshop "Automated Reasoning about Context and Ontology Evolution" (ARCOE), ER workshop on "Modeling and reasoning for business intelligence" (MoREBI), and IJCAI workshop on "Discovering meaning on the go in large and heterogeneous data".
- Cássia Trojahn dos Santos has been programme committee member for the 2011 issues of the Brazilian Symposium in Information and Human Language Technology (STIL), the International Semantic Web Conference (ISWC), and the Ontology Matching Workshop (OM).

9.3. Conferences, meetings and tutorial organisation

- Jérôme Euzenat has organised (with Pavel Shvaiko, Tom Heath, Christoph Quix, Ming Mao, and Isabel Cruz) the 6th "Ontology matching" workshop of the 10th ISWC, Bonn (DE), 2011 [17].
- Jérôme Euzenat and Cássia Trojahn dos Santos have organised (with many other colleagues) the Ontology Alignment Evaluation Initiative 2011 at the "Ontology matching" workshop of the 10th ISWC, Bonn (DE), 2011 [9].

9.4. Visits

- Angela Locoro (Universitá di Genova) visited Exmo, October 15–December 15.
9.5. Invited conferences and other talks

- EXMO: Computer-mediated exchange of structured knowledge, Pontificia Universidade Católica do Rio Grande do Sul, Porto Alegre (BR), 12/01/2011 (Cássia Trojahn dos Santos)
- Building correspondences between ontologies and lexical resources, Seminar, University of Wolverhampton (UK), 04/02/2011 (Cássia Trojahn dos Santos)
- Interlinking the web of data: challenges and solutions, invited talk, 5th Semantic days, Oslo (NO), 9/06/2011 (Jérôme Euzenat).

9.6. Teaching

- Jérôme Euzenat co-ordinates with Éric Gaussier the "AI and the web" option of the second year of informatics research master, Joseph Fourier university and INP, Grenoble.
- Jérôme Euzenat teaches "Semantic web: from XML to OWL" (with Pierre Genevès, Nabil Layaida and Marie-Christine Rousset) at the second year of informatics research master, Joseph Fourier university and INP, Grenoble (18h).
- Ontology matching lecture (Jérôme Euzenat, 2h): European Summer School on Ontology Engineering and the Semantic Web, Cercedilla (ES), resp. Mathieu d’Aquin.

9.7. Miscellaneous

- Jérôme Euzenat has been evaluator on EU FP7 projects.
- Jérôme Euzenat has been reviewer on the FCT (PT), SFI and IRCSET (IE) grant proposals.
9. Dissemination

9.1. Leadership within the scientific community

- Conference, workshop, and summer school organization:
  - C. Schmid: Co-organizer of the INRIA Visual Recognition and Machine Learning Summer School, Paris, July 2011. Attracted a total of 175 participants (31% from France, 50% from Europe and 20% from America and Asia).

- Editorial boards:

- Program chair:

- Area chair:

- Program committees:

- Prizes:
  - C. Schmid was nominated IEEE Fellow, 2012.
  - J. Verbeek was awarded an Outstanding Reviewer Award at CVPR ’11.
  - In the PASCAL visual object classes challenge 2011 our work on human action recognition achieved best results on three out of ten action classes and the best result on average over all classes, see http://pascallin.eecs.soton.ac.uk/challenges/VOC/voc2011/ for more details.
  - We participated in two tracks of TrecVid 2011, one of the major benchmarks in automatic video analysis. In the Copy Detection task our results were best for 23 of the 56 transformation types. In the Multimedia Event Detection task we ranked 8-th out of 22 participants.

9.2. Teaching

Courses:

- M. Douze and Z. Harchaoui, Multimedia Databases, 3rd year ENSIMAG, 18h.
- C. Schmid, Object recognition and computer vision, Master-2 MVA, ENS ULM, 10h.
- C. Schmid, Lecture on local features and large scale search at the 3e cycle romand d’informatique, Geneva, Switzerland, February 2011.
- C. Schmid and Z. Harchaoui, Tutorial on local features, image search and classification as well as learning at the Winter Research School at ENS Lyon, January 2011.
PhD theses:


9.3. Invited presentations

- Z. Harchaoui: Seminar at Xerox Research Center Europe, September, Meylan, 2011.
- Z. Harchaoui: Seminar at Kyoto University, Japan, November 2011.
- Z. Harchaoui: Presentation at NIPS Workshop, Sierra Nevada, Spain, December 2011.
- T. Mensink: Seminar at Calvin group, ETH Zürich, Switzerland, September 2011.
- J. Verbeek: Presentation at 2nd IST Workshop on Computer Vision and Machine Learning, Institute of Science and Technology, Vienna, Austria, October 2011.
- J. Verbeek: Presentation at Workshop on 3D and 2D Face Analysis and Recognition, Ecole Centrale de Lyon, January 2011.
Morpheo Team

9. Dissemination

9.1. Animation of the scientific community

- Edmond Boyer:
  - is a member of the editorial board of the Image and Vision Computing journal.
  - was co-organizer of the ICCV 2011 workshop 4DMOD on 4D Modeling.
  - was an area chair for ICCV 2011.
  - was a member of the program committees of: cvpr2011, cvmp2011, PERHAPS 2011, SGA2011, RFIA2011, ORASIS2011.
  - has been reviewing for the journals: IEEE PAMI, IJCV, IEEE TVCG.
  - was reviewer of one habilitation and three PhD thesis and he was examiner of one PhD thesis.
  - was a member of the recruiting committees of the university Joseph Fourier and of the ENSIMAG.
  - Edmond Boyer gave invited talks at Imagina2011 and at TU Munich.

- Jean-Sébastien Franco:
  - has reviewed for the following conferences: CVPR 2011, ICCV 2011, VR 2011, and the 4DMOD ICCV 2011 workshop on 4D modeling.
  - has reviewed for the Agence National de la Recherche CONTINT call.
  - has reported for the PhD thesis of Jordi Salvador, UPC Barcelona.
  - has given an invited talk at the Dagstuhl Seminar 11261, Outdoor and Large Scale Scene Analysis.

- Franck Hétroy:
  - was co-organizer of Journées 2011 du Groupe de Travail en Modélisation Géométrique (GTMG).
  - has also reviewed a project for the Chilean National Commission for Scientific and Technological Research (CONICYT).

- Lionel Reveret:
  - was a member committee of EUROGRAPHICS 2012.
  - has reviewed for the conferences: EUROGRAPHICS 2011 and SIGGRAPH Asia 2011.
  - has been reviewing for the journals: IEEE TVCG, Computer Graphics Forum.

9.2. Teaching

- Edmond Boyer:
  - Master: 3D Modeling, 12h, M2R GVR, Université Joseph Fourier Grenoble.
  - Master: synthèse d’images, 15h, M1 informatique, Université Joseph Fourier Grenoble.
Master: projet de programmation, 15h, M1 informatique - M1 MoSig, Université Joseph Fourier Grenoble.
Master: Introduction to Image Analysis, 15h, M1 MoSig, Université Joseph Fourier Grenoble.

- Jean-Sébastien Franco:
  Licence: Algorithmics, 56h, Ensimag 1st year, Grenoble INP.
  Licence: Introduction to Networks, 27h, Ensimag 1st year, Grenoble INP.
  License: C Project, 51.5h, Ensimag 1st year, Grenoble INP.
  Master: travaux d’étude et de recherche, 3h, Ensimag 2nd year, Grenoble INP.
  Master: 3D Graphics, 19.5h, Ensimag 2nd year, Grenoble INP.
  Master: modélisation et programmation C++, 27h, Ensimag 2nd year, Grenoble INP.

- Franck Hétroy:
  Master: algorithmique et programmation orientée objets, 36h, Ensimag 2nd year, Grenoble INP.
  Master: modélisation et programmation C++, 27h, Ensimag 2nd year, Grenoble INP.
  Master: projets de spécialité image, 28h, Ensimag 2nd year, Grenoble INP.
  Master: travaux d’étude et de recherche, 3h, Ensimag 2nd year, Grenoble INP.
  Master: géométrie algorithmique, 9h, Ensimag 3rd year, Grenoble INP.
  Licence: algorithmique et structures de données, 36h, Ensimag 1st year, Grenoble INP.
  Licence: logiciel de base, 18h, Ensimag 1st year, Grenoble INP.

- Lionel Reveret:
  Master: travaux étude et recherche, 3h, Ensimag 2nd year, Grenoble INP.
  Master: projets image, 50h, Ensimag 2nd year, Grenoble INP.
  Master: Multidimensionnal Statistical Analysis, TP, 18h, Ensimag 2nd year, Grenoble INP.
  Master: 3D Animation and Maya development, 18h, Ensimag 3rd year, Grenoble INP.
  Master: Computer Graphics - Animation, 12h, M2R MOSIG, Grenoble INP.

PhD : Sahar Hassan, Intégration de connaissances anatomiques a priori dans des modèles géométriques, université Joseph Fourier - Grenoble 1, 20/06/2011, supervised by Georges-Pierre Bonneau and Franck Hétroy [2].
PhD : Benjamin Petit, Téléprésence, immersion et interactions pour le reconstruction 3D temps-réel, université Joseph Fourier, 21/02/2011, supervised by Edmond Boyer and Bruno Raffin [3].
PhD : Robin Skowronski, Perception de l'environnement, application aux drones légers, Université Bordeaux 1, 03/11/2011, supervised by Jean-Sébastien Franco and Pascal Guittion [confidential publication].
PhD : Maxime Tournier Dimension Reduction for Character Animation, Université Grenoble, 17/10/2011, supervised by Lionel Reveret.
PhD in progress : Benjamin Aupetit, Géométrie différentielle discrète et analyse spectrale de maillages spatio-temporels, 01/10/2011, supervised by Edmond Boyer and Franck Hétroy.
PhD in progress : Phuong Ho, *Traitement numérique de la géométrie pour la reconstruction cohérente de séquences temporelles À partir de données stéréo multi-vues*, 01/02/2011, supervised by Bruno Lévy and Franck Hétry.

PhD in progress: Yann Savoye, *Reconstruction Dynamique de la Forme et du Mouvement Humain*, Université Bordeaux 1, supervised by Jean-Sébastien Franco and Pascal Guitton.


PhD in progress: Simon Courtemanche, *Caractérisation des Mouvements en Escalade Sportive par Mesure Vidéo*, Université Grenoble, supervised by Lionel Reveret and Edmond Boyer.
9. Dissemination

9.1. Animation of the scientific community

- Radu Horaud is a member of the following editorial boards:
  - advisory board member of the *International Journal of Robotics Research*,
  - associate editor of the *International Journal of Computer Vision*, and
  - area editor of *Computer Vision and Image Understanding*.
- Peter Sturm is associate editor of the journals IVC, JMIV, JCST, and CVA.
- Peter Sturm was Area Chair of CVPR’11 and program committee member of 4 international workshops.
- Peter Sturm has been Program Chair of the IEEE International Conference on Computer Vision (ICCV’11), Barcelona, Spain.

9.2. Invited talks

R. Horaud gave the following invited talks:

- Invited review lecture "3D Shape Representation Using Graph Kernels" at the Third International Conference on Scale-Space and Variational Methods in Computer Vision (SSVM?1), May 2011.
- Invited lecture at the "3D Forum" of the Samsung Advanced Institute of Technology, Seoul, South Korea, April 2011.

9.3. Teaching

Master: Visual computing, 30 hours, P. Sturm
Master: Computer Vision, 30 hours, P. Sturm
Master: 3D Computer Vision, 6h, P. Sturm
Doctorate: Data Analysis and Manifold Learning, 24 hours, University of Grenoble, R. Horaud.

9.4. PhD defenses

PhD: Amaël Delaunoy, *Multi-view Shape Reconstruction from Images : Contributions Towards Generic and Practical Solutions using Deformable Meshes*, University of Grenoble, December 2nd, 2011, advised by Peter Sturm and Emmanuel Prados

PhD: Mauricio Diaz, *Estimating Illumination and Photometric Properties using Photo Collections*, University of Grenoble, October 26th, 2011, advised by Peter Sturm

PhD: Régis Perrier, *Estimation de l’attitude d’un satellite à l’aide de caméras pushbroom et de capteurs stellaires*, University of Grenoble, September 27th, 2011, advised by Peter Sturm and Elise Arnaud
9. Dissemination

9.1. Animation of the scientific community


Sabine Coquillart has served as Program Committee co-chair for the 2011 Joint Virtual Reality Conference of EGVE - EuroVR, Nottingham, Sep. 2011.

Dominique Vaufreydaz has served as co-organizer of The distinguished lecture series of LIG (see http://liglab.fr/spip.php?article884 ) and as organizer of LIG seminars.

Sabine Coquillart has served as

- member of the EUROGRAPHICS Executive Committee reelected for a three year term (2011-2013).
- member of the EUROGRAPHICS Working Group and Workshop board.
- member of the EuroVR Executive Committee.
- member of the Editorial Board of the Journal of Virtual Reality and Broadcasting.

Patrick Reignier is a board member of the Association Francaise pour l’Intelligence Artificielle (AFIA).

Frédéric Devernay is a member of the GDR 720 ISIS (Information, Signal, Images et ViSion) executive committee, responsible for the “Geometry, 3D and motion” theme, and was a member of the organizing committee for the Journees ORASIS 2012 (French workshop for your researchers in computer vision).

9.1.1. Participation on Conference Program Committees

James L. Crowley has served as a member of the program committee for the following conferences and Workshops

- HCI 2011 - IEEE International Workshop on Human-Computer Interaction: Real-time vision aspects of natural user interfaces, November 7, 2011, Barcelona, Spain
- ICMI-2011 - 13th International Conference on Multimodal Interaction, ICMI 2011, Alicante, Spain, 14-18 November 2011
- VS2011 - Eleventh International Workshop on Visual Surveillance 2011, Barcelona, Spain, November 13th 2011,
Sabine Coquillart has served as a member of the program committee for the following conferences:

- WSCG 2011 - International Conferences in Central Europe on Computer Graphics, Visualization and Computer Vision - Prague, Czech Republic, Jan-Feb 2011.

Sabine Coquillart has served as a member of the best paper award committee for the 2011 Joint Virtual Reality Conference of EGVE.

Alexandre Demeure is co-organizer of the EICS 2011 workshop: Enhancing interaction with supplementary Supportive User Interfaces.

Dominique Vaufreydaz has served as a member of the program committee for the following conferences/journals:

- MTEL2011 at ISM2011, Reviewer and member of the program committee of the Sixth Workshop on Multimedia Technologies for E-Learning in conjunction with the IEEE International Symposium on Multimedia 2011, Dana Point (California), USA, December 2011.
- Special journal extension of the Fifth IEEE International Workshop on Multimedia Technologies for E-Learning.

Frédéric Devernay has served as a member of the program committee for the following conferences and Workshops:


Dominique Vaufreydaz was an expert for the Jeunes Chercheuses et Jeunes Chercheurs Program from Agence Nationale pour la Recherche (ANR).
Patrick Reignier was an expert for the *Jeunes Chercheuses et Jeunes Chercheurs* Program from Agence Nationale pour la Recherche (ANR).

**9.1.2. Participation In International Programs**

James Crowley is an expert for the European Commission Future and Emerging Technologies program.

Sabine Coquillart has served on the following advisory Panels

- steering committee for the ICAT conference - International Conference on Artificial Reality and Telexistence.
- Chairman of the steering committee for the EGVE Working Group - EUROGRAPHICS Working group on Virtual Environments.
- Evaluator for proposals submitted for European Commission funding under the framework of FET Open.
- Reviewed proposals for the Austrian Science Fund (FWF).

**9.1.2.1. Invited Presentations by James Crowley**

James Crowley has given the following invited presentations in 2011

- Smart Environments as an Inside-Out Robot, National Seminar for Young Robotics Researchers, JNRR, La Rochelle, 19 October 2011
- Context Aware Services for Smart Habitats, Summer School on Ambient Intelligence, Lilles, France, 5 July 2011.
- Perception of Human Activity for Smart Environments, Schneider Electric Co. Lecture Series, Grenoble 11 April 2011
- Intelligence dans les Murs : L’invasion progressive de l’Informatique Omniprésent, Grenoble Rotary Club, 28 March 2011

**9.1.2.2. Invited Presentations by Sabine Coquillart**

Sabine Coquillart has given the following invited presentations in 2011

- “3D User Interfaces: from Virtual Reality to Pseudo-VR”, XEROX Research Center, Meylan, April 2011.

**9.2. Teaching**

Augustin Lux and James Crowley were co-responsible for the Master of Science in Informatics at Grenoble (MoSIG).

Patrick Reignier is responsible for the Licence Pro Développeur Web pour l’Entreprise.

James Crowley:

- Master: Intelligent Systems, M1 year of the Master of Science in Informatics at Grenoble. This course is common with ENSIMAG 2nd year.
- Master: Computer Visio, M2 year of the Master of Science in Informatics at Grenoble. This course is common with ENSIMAG 2nd year.
Sabine Coquillart:
Master : Virtual Reality and 3D User Interfaces, M2 GVR (both course and TPs), INPG.

Frédéric Devernay:
Licence : Informatics (28h), L1, INPG, France
Master : Algorithmics (48h), M2, ENSIMAG, France.

Patrick Reignier:
Master : Web Programming, Java EE, Programming Languages
Licence : Algorithmics, Web programming

Dominique Vaufreydaz is responsible for several courses from the Economic Faculty of Grenoble:
Licence : Traitement de texte et tableur pour l’économie, 48h eq TD, L1, Grenoble II, France.
Licence : Informatique appliquée à l’économie et à la gestion, enseignement à distance, Licence, Grenoble II, France.
Licence : Pratique avancée du Tableur, 72h eq TD, L3, Grenoble II, France.
Licence Professionnelle : Enquêtes et traitement d’enquêtes avec le logiciel Sphinx, 11h eq TD, Licence pro Métiers de l’Emploi et de la Formation, 11h eq TD, Grenoble II, France.
Licence Professionnelle : Administration Windows, 39.5h eq TD, Licence pro Métiers de l’Emploi et de la Formation, Grenoble II, France.
Master : Enquêtes et traitement d’enquêtes avec le logiciel Sphinx, 11h eq TD, M2 STRATEGIES ECONOMIQUES DU SPORT ET DU TOURISME, Grenoble II, France.
Master : Pratique avancée du Tableur, 22h eq TD, M1 Économie internationale et stratégies d’acteurs, Grenoble II, France.
Master : Mise à niveau Informatique pour l’économie, 22h eq TD, M2 DIAGNOSTIC ECONOMIQUE D’ENTREPRISE, Grenoble II, France.

PhD & HdR:
PhD in progress : Han Yue, Localisation d’un utilisateur dans un espace perceptif à grande échelle par analyse multimodale hétérogène, Oct 2008, Directed by Éric Castelli (Laboratoire MICA, Hanoi, Vietnam) and co-directed by Dominique Vaufreydaz
PhD in progress : Remi BARRAQUAND, Apprentissage de Comportement pour l’Interaction Sociale, Oct 2008, James Crowley and Patrick Reignier
PhD in progress : Antoine MELE, Mise En Correspondspondandte Rapide, Oct 2008, James Crowley and Augustin Lux
PhD in progress : Mathieu GUILLAME-BERT, Induction des Patternes de Activités, Oct 2009, James Crowley
PhD in progress : Marion Decrouez, Localisation visuelle mobile embarquée sur plateformes de calcul massivement parallèle, date du Oct 2009, Frederic Devernay
PhD in progress : Varun Jain, Perception Visuelle des Emotions, Oct 2011, James Crowley
PhD in progress : Julian Quiroga, Perception de l’Activité Humaine, Oct 2011, Frederic Devernay
PhD in progress : Evanthia Mavridou, Une Nouvelle invariante Visuelle pour la Reconnaissance, Oct 2011, James Crowley and Augustin Lux
8. Dissemination

8.1. Animation of the Scientific Community

Cécile Roisin is a member of the steering committee of the ACM Symposium on Document Engineering.
N. Layaïda is a member of INRIA Grenoble-Rhône-Alpes Committee for Employment of Scientists: INRIA hiring of Post-docs, Delegates and Secondments.
N. Layaïda is an invited expert of the Qatar Foundation and Qatar Computing Research Institute.
P. Genevès was a project evaluator for the Qatar Foundation.
Jacques Lemordant is on the jury of the international ST Innovation Cup.

8.2. Teaching

License & Master

Licence: Computer Networks, 130h/year, L2, University of Grenoble – C. Roisin
Licence: Programming in Java, 20h/year, L3, University of Grenoble – C. Roisin
Licence: Web Technologies (XML, XSLT), 20h/year, L3, University of Grenoble – C. Roisin
Licence: Language Theory, 18h/year, L3, University of Grenoble – N. Gesbert
Master: Foundations for XML: logics and automata, 18h/year, M2 (Mosig), University of Grenoble – P. Genevès
Master: Multimedia systems, 6h/year, M2, University of Grenoble – N. Layaida

PhD & HdR

PhD: Everardo Bárcenas Patiño, Automated reasoning on trees with cardinality constraints, Grenoble University, 14 February 2011, advisors: Vincent Quint and Nabil Layaïda
PhD in progress: Melisachew Chekol, Reasoning on regular queries for graphs, since October 2009, advisors: Jérôme Euzenat and Nabil Layaïda