



RESEARCH CENTER  
Lille - Nord Europe

FIELD

Activity Report 2012

# Section Dissemination

Edition: 2013-04-24



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## **ATEAMS Project-Team**

# **7. Dissemination**

## **7.1. Scientific Animation**

### **7.1.1. Teaching**

Master : Jurgen Vinju, Paul Klint, Software Evolution, 6 EC, Universiteit van Amsterdam, The Netherlands

Master : Tijs van der Storm, Jurgen Vinju, Software Construction, 6 EC, Universiteit van Amsterdam, The Netherlands

Master : Jan van Eijck, Bert Lissers, Software Testing, 6 EC, Universiteit van Amsterdam, The Netherlands

Master : Paul Klint, EASY Meta-Programming with Rascal, full-day course at Summer School on Language Frameworks, Sinaia, Romania

Master : Paul Klint, Rascal tutorial, one-day course, FUNDP, Namur, Belgium

Master : Tijs van der Storm, one-day course on Rascal, Universidade do Minho (Braga)

Graduate: Tijs van der Storm, one-day course on Rascal, Programming Language class, UT Austin, U.S.A.

### **7.1.2. Supervision**

PhD : Floor Sietsma, Logics of Communication and Knowledge, Universiteit van Amsterdam, 13-12-2012, supervisors Jan van Eijck, Krzysztof Apt

PhD in progress : Paul Griffioen, Next Generation Computational Auditing, started 2011, supervisors Paul Klint, Philip Elsas

PhD in progress : Anastasia Izmaylova, A General Language Parametric Framework for Software Refactoring, started 2011, supervisors Paul Klint, Jurgen Vinju

PhD in progress : Jeroen van den Bos, Digital Forensics Software Engineering, started 2010, supervisors Paul Klint, Tijs van der Storm

PhD in progress : Atze van der Ploeg, Rapid Language Parametric Prototyping of Software Visualization and Exploration, started 2011, supervisor Paul Klint.

PhD in progress : Davy Landman, Recovery and Synthesis of Domain Specific Language Design, started 2011, supervisors Jurgen Vinju, Paul Klint, supervisors Jurgen Vinju, Paul Klintto .

PhD in progress : Riemer van Rozen, Software Engineering Principles for the Gaming Domain, started 2011, supervisor Paul Klint

PhD in progress : Ali Afroozeh, Ambiguity and Disambiguation for Context-free Grammars, started 2012, supervisor Jurgen Vinju

PhD in progress : Ashim Shahi, Principled Quality Assessment of Software, started 2012, supervisor Paul Klint, Jurgen Vinju

PhD in progress : Michael Steindorfer, Scaling meta-programming to data-programming, started 2012, supervisor Paul Klint, Jurgen Vinju

Paul Klint, Jurgen Vinju, Tijs van der Storm and Jan van Eijck together also supervised more than 30 master thesis projects for Universiteit van Amsterdam in 2012.

**7.1.3. Juries**

- Jurgen Vinju, PhD: Veronica Isabel Uquillas Gomez, Vrije Universiteit Brussel & Université Lille, Belgium & France.
- Paul Klint, PhD: J. Dormans, Universiteit van Amsterdam, The Netherlands.
- Paul Klint, PhD: R. Poss, Universiteit van Amsterdam, The Netherlands.
- Paul Klint, PhD: L. Kwiatkowski, Vrije Universiteit, The Netherlands.
- Jan van Eijck, PhD: Peter Gammie, University of Camberra, Australia.

**7.1.4. Invited speakers**

- Jurgen Vinju - IFIP WG 2.4, Vadstena, Sweden.
- Tijs van der Storm - IFIP TC2 2.16, London, England.
- Tijs van der Storm - IFIP TC2 2.16, Austin, U.S.A.
- Paul Klint - Invited speaker at PRECISE Conference, Namur, Belgium.
- Paul Klint - Keynote "The Spinoff Game" at Entrepreneurial Research Day, ICT Labs, Paris, France.
- Mark Hills - Invited speaker at International Workshop On Rewriting Logic and its Applications, Tallinn, Estonia.

**7.1.5. Positions, memberships and editorial work**

- Jan van Eijck : Member of the European Network in Computational Logic
- Jan van Eijck : Member of the International Quality Assessment Committee
- Jan van Eijck: Member of the NWO committee "Vrije Competitie" for Computer Science.
- Jan van Eijck: Book editor "Games, Actions, and Social Software", Springer.
- Jan van Eijck: Program committee IWCS
- Jan van Eijck: Program committee LORI-4
- Jan van Eijck: Reviewer ESSLLI
- Jan van Eijck: Reviewer Journal of Semantics
- Jan van Eijck: Reviewer Journal of Logic and Computation
- Jan van Eijck: Reviewer Fundamenta Informaticae
- Jan van Eijck: Reviewer Synthese
- Jan van Eijck: Reviewer Journal of Philosophical Logic
- Jan van Eijck: Reviewer Journal of Logic, Language and Information
- Jan van Eijck: Cambridge University Press, Australian National University (Canberra)
- Tijs van der Storm: Program co-chair IPA Lentedagen
- Tijs van der Storm: External reviewer OOPSLA
- Tijs van der Storm: External reviewer POPL 2013
- Tijs van der Storm: Reviewer Information and Software Technology
- Tijs van der Storm: Reviewer Software Practice & Experience
- Tijs van der Storm: Science of Computer Programming
- Mark Hills : Reviewing Software Practise & Experience
- Mark Hills : Reviewing IET Software
- Mark Hills : Program committee FMOODS
- Paul Klint : Editor for Science of Computer Programming
- Paul Klint : Editor for Springer Service Science Book Series

- Paul Klint : Visiting Professor University of London, Royal Holloway
- Paul Klint : Treasurer European Association for Programming Languages and Systems (EAPLS)
- Paul Klint : Steering committee member ETAPS
- Paul Klint : Board member Instituut voor Programmatuur en Architectuur (IPA)
- Paul Klint : External advisor PlanComps project (UK)
- Paul Klint : Full Professor at UvA, Software Engineering Chair
- Paul Klint : Director Master Software Engineering, UvA
- Paul Klint : Treasurer European Association for Programming Languages and Systems (EAPLS)
- Paul Klint : Steering committee member ETAPS
- Paul Klint : Board member Instituut voor Programmatuur en Architectuur (IPA)
- Paul Klint : Program committee SLE
- Jurgen Vinju : Head of CWI Research group Software Analysis and Transformation (SEN1)
- Jurgen Vinju : Program committee ICMT
- Jurgen Vinju : Program committee CC
- Jurgen Vinju : Program committee SCAM
- Jurgen Vinju : Steering committee SCAM
- Jurgen Vinju : Steering committee SLE
- Jurgen Vinju : Co-organizer workshop SL(E)BOKSLE
- Jurgen Vinju : Member Working Council (CWI)
- Jurgen Vinju : Workshop selection chair SLE
- Jurgen Vinju : Reviewing Journal of Software Maintenance and Evolution: Research and Practice
- Jurgen Vinju : Reviewing Transactions on Software Engineering (TSE)
- Jurgen Vinju : Reviewer Journal on Empirical Software Engineering (EMSE)
- Jurgen Vinju : Reviewer Science of Computer Programming (SCP)
- Jurgen Vinju : Member meetings between Inria & CWI management, Paris and Amsterdam.
- Vadim Zaytsev: Program committee LDTA
- Vadim Zaytsev: Program committee SCAM
- Vadim Zaytsev: Program committee SQM
- Vadim Zaytsev: Program committee Wikimedia Conference Netherlands
- Vadim Zaytsev: Reviewer Science of Computer Programming (SCP)
- Vadim Zaytsev: Reviewer Journal on Empirical Software Engineering (EMSE)
- Vadim Zaytsev: Reviewer IET Software
- Vadim Zaytsev: Program chair Wikimedia Conference Netherlands (WCN)
- Vadim Zaytsev: Social media chair SoTeSoLa
- Vadim Zaytsev: Hackathon coordinator SoTeSoLa
- Vadim Zaytsev: Colloquium organiser of Programming Environment Meetings (PEM)

## 7.2. Popularization

In 2012 our team has invested a large amount of time and energy in reaching out, in close collaboration with our support staff:

- The “Understanding Software” symposium with more than 250 participants from industry and academia. This was organized in honor of celebrating the 40th anniversary of Paul Klint at CWI. The symposium was a great success, with internationally renowned speakers and a large and diverse audience. The topic was entirely devoted to the research topics of our team.
- Turing centennial exposition, including Enigma machine and X1, hosted more than 1000 visitors.
- Lego Turing Machine, including IDE, was an online hit with millions of viewers. Articles about the machine and its meaning appeared in all major Dutch journals and we estimate a reach of more than 3 million readers.
- ICT Delta - we presented at the Dutch national symposium ICT Delta where industry meets academia in ICT.
- Floor Sietsma appeared on national television and radio, and in most newspapers to explain about her role as the youngest Phd candidate and her research.
- Paul Klint chaired public discussion on Government Data Policy, IPOort, The Hague, April 10, 2012
- Jurgen Vinju went to different companies to explain about Rascal and building your own software metrics, and software engineering in general (Sogyo, Software Factory)
- Tijs van der Storm, Jurgen Vinju and Vadim Zaytsev presented at “IPA Spring Days” about domain specific languages and related topics to all Dutch PhD students in Computer Science.
- Tijs van der Storm organized a Lisp course for Devnology
- Tijs van der Storm presented at Optiver about Domain-Specific Languages

## DART Project-Team

## 9. Dissemination

### 9.1. Scientific Animation

Samy Meftali was member of the program committee of:

- Conference on Design and Architectures for Signal and Image Processing. DASIP 2012. October 23-25, 2012. Karlsruhe, Germany
- International Conference on EMBEDDED SYSTEMS in TELECOMMUNICATIONS and INSTRUMENTATION, 5-7 novembre 2012, Annaba. Algeria.
- The International Symposium on System-on-Chip Tampere, Finland. October 11-12, 2012.

Vlad Rusu was member of the program committee of the IFIP Joint International Conference on Formal Techniques for Distributed Systems (FMOODS & FORTE 2012).

### 9.1. Teaching - Supervision - Juries

#### 9.1.1. Teaching

Licence : Frédéric Guyomarch, Algorithmics and programming, 70h, L1, Université Lille 1, France

Licence : Frédéric Guyomarch, Data structures, 50h, L1, Université Lille 1, France

Licence : Frédéric Guyomarch, Architecture, 30h, L1, Université Lille 1, France

Licence : Frédéric Guyomarch, Graph theory, 40h, L2, Université Lille 1, France

Master : Frédéric Guyomarch, Advanced architectures, 30h, M1, Université Lille 1, France

Licence : Samy Meftali, Architectures élémentaires, 90h eqTD, L2, Université Lille 1, France

Licence : Samy Meftali, Architecture, 40h, L3, Université Lille 1, France

Master : Samy Meftali, Architectures évoluées, 68h, M1, Université Lille 1, France

Licence : Philippe Marquet, Introduction to Computer Science, 15h, Secondary Education Teacher Training, Université Lille 1, France

Licence : Philippe Marquet, System Programming, 60h, L3, Université Lille 1, France

Master: Philippe Marquet, Design of Operating System, 42h, M1, Université Lille 1, France

Master: Philippe Marquet, Web of Things: Embedded System Programming, 20h, M1, Université Lille 1, France

Master: Philippe Marquet, Parallel and Distributed Programming, 24h, M1, Université Lille 1, France

Master: Philippe Marquet, Introduction to Innovation and Research, 15h, M2, Université Lille 1, France

Licence : Vlad Rusu, Architectures élémentaires, 30h, L2, Université Lille 1, France

Master : Vlad Rusu, Introduction to Formal Verification with PVS, 20h, M2, Universidad Complutense de Madrid, Espagne

#### 9.1.2. Supervision

PhD : Wendell Rodrigues, *Une Méthodologie pour le Développement d'Applications Hautes Performances sur des Architectures GPGPU: Application à la Simulation des Machines Électriques*, Université de Lille 1, 26-01-2012, Frédéric Guyomarch and Jean-Luc Dekeyser

#### 9.1.3. Juries

Frédéric Guyomarch was the external examiner for Jing Guo's PhD (University of Hertfordshire, UK). entitled *Fully Automated Transformation of Hardware-Agnostic, Data-Parallel Programs for Host-Driven Executions on GPUs*.



Vlad Rusu was on the PhD committee of Michaël Lauer (Université de Toulouse) entitled *Une méthode globale pour la vérification d'exigences temps réel Application à l'Avionique Modulaire Intégrée*

Samy Meftali was on the PhD committee of Yaset OLIVA VENEGAS(INSA Rennes) entitled *High Level Modeling of Run-Time Managers for the Design of Heterogeneous Embedded Systems*

Samy Meftali was on the PhD committee of Amine Anane(Univ. Montréal) entitled *Application du concept des transactions pour la modélisation et la simulation multicoeur des systèmes sur puce*

## **9.2. Popularization**

Pamela Wattebled is chair of the organizing committee of Majecstic 2012. MajecSTIC 2012 is the 9th edition of the conference MajecSTIC. This conference is organized by young researchers. This year it takes place in Lille and organized by Pamela WATTEBLED-MEFTALI (project-team DART), Nicolas GOUVY (project-team FUN) and Adel NOUREDDINE (project-team ADAM).

## **DOLPHIN Project-Team**

# **9. Dissemination**

## **9.1. Scientific Animation**

### ***9.1.1. Organizations of sessions, workshops and conferences***

- Conference chair and organization of META'2012 Int. Conf. on Metaheuristics, Sousse, Tunisia, Oct 2012.
- Program chair of NIDISC'2012 workshop on Nature Inspired Distributed Computing in conjunction with IEEE/ACM IPDPS'2012, Shanghai, China, May 2012.
- Organization of the Theory of Randomized Search Heuristics Workshop (ThRaSH'2012), Lille, France, May 2012
- Organization of the French summer school on evolutionary computation (EA'2012), Quiberon, France, June 2012
- Co-organization of the evolutionary multiobjective optimization session at EURO 2012 (Vilnius, Lithuania)
- Scientific committee for conference CPAIOR 2012 (Nantes)
- Organization committee for RIO conference 2012 (Valenciennes)
- Co-guest-editor for a special issue on Evolutionary Multiobjective Optimization in the Journal of Multi-criteria Decision Analysis (Wiley)
- Co-organizer of the PPSN'2012 workshop on Theoretical Aspects of Evolutionary Multiobjective Optimization, Taormina, Italy, September 1, 2012, together with Gunter Rudolph (TU Dortmund University, Germany)
- Organization of the "Intelligent optimization in Bioinformatics" session at LION'2012 (LION-BIO), Paris, France, January 2012.

### ***9.1.2. Research management***

- Manager (Chargé de mission) of supercomputing for Université Lille 1.
- Scientific leader for Lille of the Grid'5000 nation-wide and EGI european-wide grid infrastructures.
- Scientific leader of the challenge "Large scale combinatorial optimization" of the HEMERA nation-wide grid and cloud computing research action (AEN) of Inria.
- Member of the steering committee of the Aladdin-Grid5000 nation-wide technological development action of Inria.
- Co-leader of the PPF "Supercomputing" at Université Lille 1.
- Coordinator of the High Performance Computing research action at LIFL labs.
- co-leader of the group PM2O of the ROADEF
- secretary of the association Evolution Artificielle
- Scientific co-leader of the EuroWorking Group on Pricing and Revenue Management.
- Board Member of the ROADEF society.

### ***9.1.3. Reviewing***

#### ***9.1.3.1. Research projects***

- Reviewer of research projects, National Science Center, Poland.
- Expert reviewer for the ANR "Emergence" programme.

- Expert reviewer for the CNRS PEPS “Biologie-Mathématiques-Informatique” programme.
- Expert reviewer BQR university of Paris 13
- Expert reviewer for the ANR “Emergence” programme.

#### *9.1.3.2. Journal papers*

- IEEE Transactions on Computers (IEEE TC).
- Journal of Parallel and Distributed Computing (JPDC).
- Parallel Computing.
- Computational Optimization and Applications (COAP, Springer)
- Engineering Optimization (GENO, Taylor & Francis)
- European Journal of Operational Research (EJOR, Elsevier)
- Journal of Heuristics (HEUR, Springer)
- Knowledge-Based Systems (KNOSYS, Elsevier)
- Evolving Systems
- International Journal on Artificial Intelligence Tools (IJAIT)
- Knowledge and Information Systems (KAIS)
- Memetic Computing
- Soft Computing
- Supercomputing
- Artificial Intelligence Journal
- Evolutionary Computation
- IEEE Transactions on Evolutionary Computation
- Journal of Multicriteria Decision Analysis
- Systems, Man and Cybernetics - Part B
- Theoretical Computer Science
- Computers and operations Research
- Transportation Science
- Transportation Research
- Operation Research

#### *9.1.4. Program committees*

- IEEE CSE’2012, Track: Distributed and Parallel Computing.
- High Performance Computing & Simulation (HPCS’2012).
- IEEE IPDPS workshops: PCO’2012 and NIDISC’2012.
- Grid’5000 school 2012.
- 6th Learning and Intelligent Optimization Conference, LION 2012 (Paris, France, 2012)
- 12th European Conference on Evolutionary Computation in Combinatorial Optimisation, EvoCOP 2012 (Malaga, Spain, 2012)
- Special Session on Evolutionary Multiobjective Optimization, IEEE Congress on Evolutionary Computation, CEC-EMO 2012 (Brisbane, Australia, 2012)
- Genetic and Evolutionary Computation Conference (Philadelphia, USA, 2012) (GECCO’2012)
- 2nd International Conference on Operations Research and Enterprise Systems, ICORES 2012 (Barcelona, Spain, 2012)

- 13e congrès de la Société française de Recherche Opérationnelle et d'Aide à la décision, ROADEF'2012 (angers, France, 2012)
- Genetic and Evolutionary Computation Conference (GECCO'2012)
- Learning and Intelligent Optimization (LION'2012)
- Parallel Problem Solving from Nature (PPSN'2012)
- Simulated Evolution And Learning (SEAL'2012)
- BIOMA'2012 Fifth Int. Conf. on Bioinspired Optimization Methods and their Applications, Bohinj, Slovenia, May 2012.
- GSC'2012 Workshop (Green Supply Chain 2012, Arras, May 2012.
- EvoPar'2012, 1st EvoApplication track on Parallel Architectures and Distributed Infrastructures, Malaga, April 2012.
- VANETs - from Theory to Practice (VTP 2012) workshop held in conjunction with the WoWMoM conference, San Francisco, USA, June 2012.
- Advisory board of EVOLVE'2012, Mexico, Aug 2012.
- SEAL'12 Ninth Int. Conf. on Simulated Evolution and Learning, Hanoi, Vietnam, Dec 2012.
- GPC'2012 Int. Conf. On Grid and Pervasive Computing, Hong Kong, May 2012.
- IC3'2012 Int. Conf. On Contemporary Computing, New Delhi, India, Aug 2012.
- SCCG'2012 Int. Workshop on Soft Computing Techniques in Cluster and Grid Computing Systems in conjunction with Int. Conf. On P2P, Parallel, Grid, Cloud and Internet Computing (3PGCIC), Victoria, Canada, Nov 2012.
- TPNC'2012 Int. Conf. on the Theory and Practice of Natural Computing, Tarragona, Spain, Sept 2012.
- INNOV'2012 Int. Conf. on Communications, Computations, Networks and Technologies, Venice, Italy, Oct 2012.
- HPCS'2012 Int. Conf. on High Performance Computing and Simulation, Madrid, Spain, July 2012.
- GECCO'2012 (Genetic and Evolutionary Computation Conference), Philadelphia, USA.
- PPSN XII (Parallel Problem Solving Conference), Taormina, Italy, Sept 2012.
- EvoCop'2012 (Int. Conf of Evolutionary Computation for Combinatorial Optimization), Malaga, Spain, Apr 2012
- EvoBio'2012 (European Workshop on Evolutionary Computation and Bioinformatics), Malaga, Spain, Apr 2013.
- NPC'2012 (IFIP NPC International Conference on Network and Parallel Computing), Gwangju, Korea, Sept 2012
- BICCIB'2012 (International Conference on Biologically Inspired Computing and Computers in Biology), San Diego, USA, May 2012

### **9.1.5. Phd committees**

L. Brotcorne was a jury member of the following PhD thesis:

- Pierre Lebodic, “ Variantes non standards de Problèmes d'optimisation combinatoires”, Université de Paris Sud, Sept 2012, Jury member (referee): L. Brotcorne.

C. Dhaenens was a jury member of the following PhD thesis:

- Ahmed Atahran, “Etude et résolution d'un problème de Transport à la demande”, Université de Tours, Dec 2012. Jury: C. Dhaenens (referee), C. Lenté, O. Péton, F. Semet, V. T'kindt, R. Wolfer Cavalo.
- Nadarajen Veerapen, “contrôle autonome d'opérateurs pour la recherche locale”, Université d'Angers, Nov 2012. Jury: L. Bordeaux, C. Dhaenens (referee), Y. Hamadi, B. Mazure, F. Saubion.

L. Jourdan was a jury member of the following PhD thesis:

- Daniel de Angelis Cordeiro, “The impact of cooperation on new high performance computing platforms”, Université de Grenoble, encadrant : Denis Trystam - Feb 2012 Jury member (referee): L. Jourdan
- Rong-Qiang Zeng *Métaheuristiques Multi-objectif basées sur des voisinages pour l’approximation d’ensembles de Pareto* Université d’Angers, encadrants : Jin-Kao Hao, Matthieu Basseur - July 2012 - Jury member (referee): L. Jourdan
- Cecile Vila, “Optimisation multicritère prenant en compte les préférences de panels d’usagers: Application à l’éclairage de bureaux”, ENTPE Lyon, Dec 2012, L. Jourdan (referee).
- Frédéric Lardeux, “Algorithmes autonomes et modélisations de problèmes”, Université d’Angers, encadrant : Frederic Saubion - Nov 2012- Jury member (referee): L. Jourdan

N. Melab participate to the following Phd/HDR juries:

- Mohamed Esseghir Lalami, “Contribution à la résolution de problèmes d’optimisation combinatoire: méthodes heuristiques et parallèles”, Université de Toulouse, Oct 2012, Jury: N. Melab (referee)
- Mouad Yagoubi, “Optimisation évolutionnaire multi-objectif parallèle : application à la combustion Diesel”, Université de Paris Sud XI, July 2012, Jury member: N.Melab.
- Imen Ketata, “Méthode de découverte de sources de données en environnement de grille de données tenant compte de la sémantique”, Université Paul Sabatier, Jan 2012, Jury member: N.Melab.

E-G. Talbi participate to the following Phd/HDR juries:

- C. Rego (HDR), “Heuristic search and learning for combinatorial optimization”, University of Versailles Saint-Quentin en Yvelines, Jan 2012, Jury : A. Bui, F. Glover, A. Lokketangen, C. Roucairol, E-G. Talbi (reviewer), M. Widmer.
- D. Delahaye (HDR), “Modélisation et optimisation du trafic aérien”, Ecole Nationale d’Aviation Civile de Toulouse, Mar 2012, Jury : J-K. Hao, M. Mongeau, M. Sevaux, M. Schoenauer, E-G. Talbi (reviewer).
- Jesica De Armas Adrian, “Cutting problems: Parallel exact and approximate approaches for mono-objective and multi-objective formulation”, University of La Laguna, Tenerife, Spain, Apr 2012, Reviewer.
- I. Michael Scriven, “Derivation and application of approximate electromagnetic noise models using decentralized parallel particle swarm optimization”, Griffith University, Brisbane, Australia, July 2012, Jury : A. Lewis, E-G. Talbi, J-W. Lu.
- Tony Wauters, “Reinforcement learning enhanced heuristic search for combinatorial optimization”, University of Gant, Belgium, Nov 2012, Jury: D. Cattrysse, P. De Causmaecker, A. Nowé, E-G. Talbi, K. Tuyls, G. Vanden Berghe, K. Verbeeck
- Afetah Moghaddam, “Production scheduling - Unavailability of the resources”, Université Technologique de Troyes, Troyes, France, Nov 2012, Jury: R. Aggoune, H. E. Aguirre, L. Amodeo, N. Sauer, E-G. Talbi, J. Teghem, F. Yalaoui
- Yuhan Guo, “Metaheuristics for solving large size long-term car pooling problem and an extension”, Université d’Artois, Béthune, France, Nov 2012. Jury: V-D. Cung, G. Goncalves, J-K. Hao, T. Hsu, M-J. Huguet, E-G. Talbi. President.
- Carlos Segura Gonzalez, “Parallel optimization schemes: A hybrid scheme based on hyperheuristics and evolutionary computation”, Dec 2012, University of La Laguna, Tenerife, Spain. Reviewer.
- S. Puechmorel (HDR), “Modèles dynamiques en gestion du trafic aérien”, Dec 2012, Ecole Nationale d’Aviation Civile de Toulouse, Reviewer.

### 9.1.6. Commission

- President of the Technological Development Commission (CDT) of Inria Lille.
- Member of the admission committee of associate professors (COS- MCF) in computer science at Université du Littoral - Côte d'Opale.
- Expert member for the AEQES Belgium agency for the evaluation of teaching - evaluation of Bachelor and Master in computer science and engineering teaching at UMONS, UCL and ULB universities.
- Presidence of the CER commission of the Lille Inria center (Commission des Emplois de Recherche).
- Member of the admission committee of associate professors (COS- MCF) in operations research at Université de Tours.
- Member of the admission committee of associate professors (COS- MCF) in operations research at Université de Grenoble.
- Member of the admission committee of associate professors (COS- MCF) in Applied Mathematics at Université Lille 3.
- Invited Member on the Inria CR Evaluation Commission.
- Invited Member of the Inria COST GTRI.
- Président du jury du prix de la TSL (Transportation and Logistics Sections) Informs 2012.
- Membre de la commission de selection des Bourses Eole attribuées par le réseau Franco Néerlandais
- Déléguée Scientifique des Relations Internationale du Centre de Lille

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Licence : C. Dhaenens, Algorithmics, 30h, L3, Engineering school Polytech'Lille.

Licence : C. Dhaenens, Graphs and combinatorics, 90h, L3, Engineering school Polytech'Lille.

Licence : L. Jourdan, Data mining, 25h, L1, Université de Lille 1, France,

Licence: L. Jourdan, Initiation à la programmation, 54h, L1, Université de Lille 1, France

Licence : L. Jourdan, Programming, 54h, L1, Université de Lille 1, France

Licence : F. Clautiaux, Object oriented programming, 80h, DUT informatique, Université de Lille 1, France

Licence : F. Clautiaux, Mathematical tools for modelling, 64h, DUT informatique, Université de Lille 1, France

Licence : F. Clautiaux, Object oriented design, 48h, DUT informatique, Université de Lille 1, France

Licence : F. Clautiaux, Operating systems, 48h, DUT informatique, Université de Lille 1, France

Licence: A. Liefoghe, Algorithmic and Data structure, 36h, L2, Université de Lille 1, France

Licence: A. Liefoghe, Algorithmic - Operations Research, 36h, L3, Université de Lille 1, France

Master: A. Liefoghe, Decision Support Systems mining, 24h, M1, Université de Lille 1, France,

Master: A. Liefoghe, Databases, 30h, M1, Université de Lille 1, France

Master: A. Liefoghe, Object-oriented Design and Programming, 52h, M1, Université de Lille 1, France

Master: A. Liefoghe, Combinatorial Optimization, 10h, M2, Université de Lille 1, France

Master: N. Melab, Co-head of the supercomputing (Calcul Scientifique) master 2 at Université Lille 1.

Master: N. Melab: Operations Research, 82h, M2, Université Lille 1

Master: N. Melab, Supercomputing, 55h, M1 et M2, Université Lille 1  
 Master: C. Dhaenens, Operations Research, 70h, M1, , Engineering school Polytech'Lille.  
 Master: E-G. Talbi, Operations research, 40h, M1, Polytech'Lille, France  
 Master: E-G. Talbi, Data mining, 35h, M2, Polytech'Lille, France  
 Master: E-G. Talbi, Advanced Optimization, M2, Polytech'Lille, France  
 Master: L. Jourdan, Informatique Décisionnelle, 70h, M1 et M1 FA , Université de Lille 1, France,  
 Master: L. Jourdan, Mise à niveau en informatique décisionnelle et en recherche opérationnelle 25h, M1, Université de Lille 1, France  
 Administration: head of apprenticeship in Computer Sciences at UFR IEEA  
 Master: B. Derbel, co-supervisor of the Master 2 MOCAD (Complex Models, Algorithms, Data)  
 Master: B. Derbel, Combinatorial Optimization, 35h, M2, Université de Lille 1, France  
 Master: B. Derbel, Grid Computing, 16h, M2, Université de Lille 1, France  
 Master: B. Derbel, Parallel and Distributed Programming, 12h, M1, Université de Lille 1, France  
 Master: B. Derbel, Advanced Object Programming, 52h, M1, Université de Lille 1, France  
 Master: B. Derbel, Design of Distributed Applications, 60h, M1, Université de Lille 1, France

### 9.2.2. Supervision

PhD soutenues :

PhD : Ahcène Bendjoudi, Hierarchical parallel branch and bound on large scale Grids, June 2012, E-G. Talbi and N. Melab.

PhD in progress :

- S. Afsar, Bilevel approaches for energy pricing problems, Oct 2011, L. Brotcorne
- O. Bahri, Multi-objective optimization and possibility theory, Dec 2012, E-G. Talbi, N. Ben Amor
- M. Bué, Définition d'offres de services en tenant compte du comportement de réservation hôtelière des clients , Oct 2012, L. Brotcorne and F. Clautiaux
- I. Chakroun, Méthodes B&B parallèles sur GPU, N.Melab.
- N. Dahmani, Multi-objective packing problems, Sept 2013, F. Clautiaux and E-G. Talbi
- M. Diaby, Yield Management and Supply chain Management, Sept 2010, L. Brotcorne and E-G. Talbi
- M. Djamai, Méthodes exactes arborescentes pair-à-pair sur grilles de calcul, Sept 2009, B. Derbel et N.Melab.
- S. Dufourny, Optimization of economic decisions in a competitive business management simulator, Oct 2011, C. Dhaenens
- N. Dupin, Robust scheduling of nuclear outages, Apr 2011, M. Porcheron, E-G. Talbi, F. Vanderbeck
- J. Hamon, Analysis of data from high throughput genotyping: cooperation between statistics and combinatorial optimization, C. Dhaenens
- J. Jacques, Knowledge extraction by optimization methods for improving the process of inclusion in clinical trials, Oct 2010, C. Dhaenens and L. Jourdan
- S. Jacquin, Hybrid approaches for optimization problems under uncertainty, Oct 2012, E-G. Talbi, L. Jourdan
- Y. Kessaci, Métaheuristiques multiobjectifs pour l'ordonnancement d'applications sur Clouds, Oct 2009, N. Melab and E-G. Talbi.
- F. Legillon, Métaheuristiques pour l'arbitrage d'applications sur fédérations de Clouds, Oct 2011, N. Melab and E-G. Talbi.

- R. Leroy, Parallel Tree-based Exact Algorithms using Heterogeneous Many and Multi-core Computing for Solving Challenging Problems in Combinatorial Optimization, Oct 2012, N.Melab.
- K. Seridi, Métaheuristiques multiobjectives pour le biclustering, Oct 2009, L. Jourdan and E-G. Talbi
- A. Sthathakis, Satellite payload reconfiguration optimization, Oct 2011, P. Bouvry, G. Danoy, E-G. Talbi
- B. Tounsi, Bi-level modeling and solving of transportation problems, Oct 2012, L. Brotcorne
- T-D. Tran, Benchmarking Continuous Multiobjective Optimization Algorithms, Dec 2012, D. Brockhoff and E-G. Talbi.
- T-T. Vu, Méthodes exactes pair-à-pair en environnement virtualisé volatile et à large échelle, Oct 2011, B. Derbel et N.Melab.



## MODAL Project-Team

## 9. Dissemination

### 9.1. Scientific Animation

Since '12, C. Biernacki participates to the international group "IFCS Committee on Initiative to Stimulate Benchmarking in Classification Research". Since '12, C. Biernacki is the president of the data mining and learning group of the French statistical association (SFdS) <http://www.sfds.asso.fr/>. Since '11, he is leader of the team "Probability & Statistics" of the Laboratory of mathematics of U. Lille 1 <http://math.univ-lille1.fr/>.

Guillemette Marot organizes, in the context of the PPF bioinfo Lille 1, two scientific meetings:

- Phylogénie (35 people), Lille 1, june 2012, <http://www.lifl.fr/~touzet/PPF/phylogenie12.html>
- Analyse bioinformatique des données de métagénomique (80 people expected), Pasteur Lille, december 2012, <http://www.lifl.fr/~touzet/PPF/metagenomique12.html>

#### 9.1.1. Editorial activities

C. Biernacki belongs to the program committee of "Extraction et gestion des connaissances" in 2012 and 2013 and to the program comity of "Journées Françaises de Statistique" in 2013. He organised a special session "clustering of mixed data" in the conference SFdS 2012 in Brussels. Since '10, he is an Associate Editor of the journal "Case Studies in Business, Industry and Government Statistics" (CSBIGS) <http://legacy.bentley.edu/csbig/>.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Licence : Cristian Preda, Probabilités, 36h, L3, École Polytechnique Universitaire de Lille, U. Lille 1, France.

Licence : Julien Jacques, Statistique Inférentielle, 50h, L3, École Polytechnique Universitaire de Lille, U. Lille 1, France

Licence : Guillemette Marot, Biostatistique, 18h, L1, U. Lille 2, France

Licence : Alain Céliste, Algèbre, 80h, L2, U. Lille 1, France

Licence : Alain Céliste, Mathématiques pour l'Informatique, 122h, L1, U. Lille 1, France

Licence : Serge Iovleff, Analysis, 24h, U. Lille 1, France.

Licence : Serge Iovleff, Probability and Statistics, 24h, U. Lille 1, France.

Licence : Serge Iovleff, Discrete mathematics and algebra, 72h, U. Lille 1, France

Licence : Serge Iovleff, Graphes and Languages, 80h, U. Lille 1, France

Licence : Serge Iovleff, Algebra, Geometry and Arithmetic, 32h, U. Lille 1, France

Licence : Serge Iovleff, Options of Mathematics, 48h, U. Lille 1, France

Licence : Vincent Vandewalle, Linear algebra, 91h, Simulation Techniques, 16h, Descriptive statistics, 62h, Probabilities, 44h, L1, U. Lille 2, France

Licence : Vincent Vandewalle, Analysis, 24h, Project management, 9h, L2, U. Lille 2, France

Licence : Vincent Vandewalle, Data analysis, 30h, L3, U. Lille 2, France

Licence : Matthieu Marbac-Lourdelle, Data analysis, 48h, Institut Supérieur d'Agriculture, U. catholique de Lille, France.

Master : Cristian Preda, Statistique Exploratoire, 40h, M1, École Polytechnique Universitaire de Lille, U. Lille 1, France.

Master : Cristian Preda, Functional Data Analysis, 18h, M2, U. Lille 1, France.

Master : Julien Jacques, Statistique Exploratoire, 40h, M1, École Polytechnique Universitaire de Lille, U. Lille 1, France.

Master : Julien Jacques, Modélisation Statistique, 30h, M1, École Polytechnique Universitaire de Lille, U. Lille 1, France

Master : Julien Jacques, Séries Temporelles, 25h, M2, École Polytechnique Universitaire de Lille, U. Lille 1, France

Master : Guillemette Marot, Biostatistique, 48h, M1, U. Lille 2, France

Master : Alain Céliste, Statistique Fondamentale, 45h, M2, U. Lille 1, France

Doctorat : Cristian Preda, Functional Data Analysis, 10h, M2, Department of Statistics, University of Granada, Spain.

Christophe Biernacki was in a one year delegation at Inria with no teaching. From '05, he is the head of the M2 Ingénierie Statistique et Numérique <http://mathematiques.univ-lille1.fr/Formation/>.

Vincent Vandewalle is head of the DUT Statistique et Informatique Décisionnelle, <http://iut.univ-lille2.fr/fr/le-departement-stid.html>

### **9.2.2. Supervision**

HdR : Julien Jacques, Contribution to statistical learning of complex data using generative models, Université Lille 1, November 28, 2012.

PhD in progress : Alexandru Amarioarei, Statistics, Scan statistics and applications, started in 2010, Cristian Preda supervisor

PhD in progress : Michael Genin, Statistics, Scan statistics and epidemiology, started in 2010, Cristian Preda and Alain Duhamel (CEREM, U. Lille 2) supervisors

PhD in progress : Julie Hamon, Analysis of data from high throughput genotyping: cooperation between statistics and combinatorial optimization, started in 2010, Julien Jacques and Clarisse Dhaenens (DOLPHIN Inria Lille team-project) supervisor

PhD in progress : Loïc Yengo, Simultaneous Variables Clustering and Selection in Regression Models, started in 2010, Christophe Biernacki and Julien Jacques supervisors

PhD in progress : Clément Thery, Classification supervisée ou semi-supervisée des bases de grande dimension, avec variables qualitatives et quantitatives, started in 2011, Christophe Biernacki supervisor

PhD in progress : Matthieu Marbac-Lourdelle, Generatives models taking into account the correlation between variables, started in 2011, Christophe Biernacki and Vincent Vandewalle supervisors

## NON-A Project-Team

## 8. Dissemination

### 8.1. Scientific Animation

#### 8.1.1. Editorial boards

- Jean-Pierre Richard is currently Associate Editor of *Int. J. of Systems Science*.
- Mamadou Mboup is currently Editor-In-Chief (from December 2012) *African Diaspora Journal of Mathematics* and Associate Editor of *EURASIP Journal on Advances in Signal Processing*.
- Thierry Floquet is currently Associate Editor of *Nonlinear Analysis : Hybrid Systems* and *e-sta*.

#### 8.1.2. Program Committees

- IFAC Technical Committees: The members of Non-A are participating to several technical committees of the IFAC (International Federation of Automatic Control, see the TC list on <http://www.ifac-control.org/areas>): TC 1.2 - Adaptive and Learning Systems, TC 1.3 - Discrete Event and Hybrid Systems, TC 1.5 Networked Systems, TC 2.2 Linear Control Systems, TC 2.3 Nonlinear Control Systems, TC 2.5 Robust Control, TC 9.2 Control for Society.
- Jean-Pierre Richard was the president of the International Program Committee of the 1st Int. Conf. on Systems & Computer Science, 2012, Lille.
- Mamadou Mboup was in the International Program committee of 22nd IEEE Workshop on Machine Learning for Signal Processing 2012 and 1st International Conference Systems and Computer Science 2012;
- Jean-Pierre Barbot was in the organizing committee of the MECATRONICS congress (France-Japan and Europe-Asia) and REM workshop November 21 – 23, 2012 – Supméca, Paris (France);
- Wilfrid Perruquetti and Lotfi Belkoura were in International Program committee of 7eme Conférence Internationale Francophone d'Automatique, Grenoble, France, 2012;
- Lotfi Belkoura was the NOC Chair and organizer of 1st Int. Conf. on Systems & Computer Science, 2012, Lille (IEEE Technical co-sponsorship);
- Wilfrid Perruquetti was in the International Program committee of 12th International IEEE Workshop on Variable Structure Systems (VSS), 2012, Bombay, India;
- Wilfrid Perruquetti was in the International Program committee of 1st Int. Conf. on Systems & Computer Science, 2012, Lille;
- Jean-Pierre Richard was in the International Program committee of 20th IEEE Mediterranean Conference on Control and Automation, 2012, Barcelone; 10th Workshop on Time Delay Systems, 2012, Boston; 2nd Int. Conf. on Communications, Computing and Control Applications, 2012, Marseilles; 3rd IEEE International Workshop on SmARt COmmunications in NEtwork Technologies, 2012, Canada.

#### 8.1.3. Scientific and administrative responsibilities

- Jean-Pierre Richard is president of the GRAISyHM, federation from the French government. He is an expert for the evaluation of projects submitted to ANR, CNRS, DGRI and AERES. He is a member of the Scientific Committee of the GdR MACS, CNRS.
- Wilfrid Perruquetti is the scientific head of ANR program Blanc SIMI3, and is heading the 3rd year professional training "ISD: Information System and Decision" of the École Centrale de Lille; He is an expert for ANR, AERES and ARC (Australian Research Council);

- Mamadou Mboup is heading the group SYSCOM - CReSTIC, University of Reims Champagne-Ardenne;
- Lotfi Belkoura is heading the Master "AG2i: Automatique, Génie Informatique et Image", University of Lille 1 and École Centrale de Lille. This Master, after a national evaluation (A), is presently "SMaRT: Systèmes, Machines autonomes et Réseaux de Terrain";
- Thierry Floquet is an expert for the evaluation of projects submitted to ANR and Israel Science Foundation, and a member of Conseil National des Universités, 61ème Section. He is as well the head of the groupe SyNeR of LAGIS laboratory;
- Lotfi Belkoura is an expert of "National Council for Research and Development" (Roumanie) [www.ue1Cscdi-direct.ro](http://www.ue1Cscdi-direct.ro)
- Gang Zheng is a member of Conseil National des Universités, 61ème Section.
- Cédric Join is heading the AII-ASRI, IUT Nancy-Brabois.
- Jean-Pierre Barbot is the heading of the ECS-Lab EA 3649.

## 8.2. Teaching - Supervision - Juries

### 8.2.1. Teaching

The members of the team teach at different level in universities and engineering schools and, in particular, at Master Thesis level:

Licence : Samer Riachy; Systèmes linéaires (36h), Asservissements (48h), Introduction à la thermodynamique (32h), Echantillonnage et systèmes discrets (36h), Conversion d'énergie (48h); L3; Ecole Nationale Supérieure de l'Electronique et de ses Applications; France

Licence : Jean-Pierre Richard; Automatique et Intelligence ambiante (12h); L2; EC-Lille; France

Licence : Jean-Pierre Richard; Systèmes dynamiques (30h), Métiers de la recherche (4h), Modélisation des systèmes complexes(12h), Commande et observation (12h), Séminaire episteme (24h); L3; EC-Lille; France

Licence : Lotfi Belkoura; Initiation à l'Automatique (20h), Régulation Industrielle (60h); L3; Lille 1; France

Master : Jean-Pierre Richard; Systèmes dynamiques non linéaires et à retards (30h); M2; Lille 1 – EC-Lille, France

Master : Lotfi Belkoura; Systèmes automatisés (60h); M1; Lille 1; France

Master : Lotfi Belkoura; Distributions (8h); M2; Lille 1; France

General responsibility:

- Jean-Pierre Richard is in charge of the professional training "Research" of Ecole Centrale de Lille since 2003 (training for last-year students of EC Lille who are preparing a research career). ([http://www.ec-lille.fr/85787934/0/fiche\\_\\_\\_pagelibre/](http://www.ec-lille.fr/85787934/0/fiche___pagelibre/)).
- Wilfrid Perruquetti is in charge of the professional training "ISD: Information System and Decision" of Ecole Centrale de Lille since 2010 ([http://www.ec-lille.fr/syst\\_auto/0/fiche\\_\\_\\_formation/](http://www.ec-lille.fr/syst_auto/0/fiche___formation/)).
- Lotfi Belkoura is in charge of the SMART Master Thesis training in control of University of Lille 1 and Ecole Centrale de Lille.

### 8.2.2. Supervision

PhD & HdR :

HdR : Join C., "Une approche algébrique pour la pratique de l'estimation, du diagnostic, de la commande et de la finance", Université de Lorraine, June 2012

HdR : Efimov D., "Analysis, control and estimation of nonlinear oscillations", Inria, November 2012

PhD : Delpoux R., "Fast identification and estimation of nonlinear systems via algebraic techniques", École Centrale de Lille, November 2012, Supervisor: T. Floquet

PhD : Fiter C., "Contribution to the control of systems with time-varying and state-dependent sampling", École Centrale de Lille, September 2012, Supervisors: J.P. Richard, W. Perruquetti, L. Hetel

PhD : Zhang B., "New control schemes for bilateral teleoperation under asymmetric communication channels: Stabilization and performance under variable time delays", École Centrale de Lille, July 2012, Supervisors: J.P. Richard, A. Kruszewski

PhD in progress : EL Afou Y., "Control strategies for greenhouse climate parameters", Université des Sciences et Technologies de Lille, started 2009, Supervisors: L. Belkoura, C. Join, A. Lachhab, B. Bouchikhi

PhD in progress : Guerra M., "Supervisory control of collective motion of mobile robots", started 2012, Supervisors: W. Perruquetti, D. Efimov, G. Zheng

PhD in progress : Maalej S., "Algebraic estimation for robust control", started 2011, Supervisors: A. Kruszewski and L. Belkoura

PhD in progress : Oueslati M., "Improving the accuracy of a 6-axis industrial robot for machining", started 2009, Supervisor: O. Gibaru

PhD in progress : Sert H., "Intelligent module decision for autonomous indoor navigation of wheelchair robot", started 2012, Supervisors: W. Perruquetti and A. M. Kökösy

PhD in progress : Mincarelli D., "Algebraic approach for observation of switched systems", started 2010, Supervisors: T. Floquet and L. Belkoura

### 8.2.3. Juries

The team members are also involved in numerous examination committees of Theses and Habilitations, in France and abroad.

## 8.3. Popularization

### 8.3.1. Participation to conferences

- European Signal Processing Conference, Bucharest, Romania, August 2012 (Mamadou Mboup);
- 22nd IEEE Workshop on Machine Learning for Signal Processing, Santander, Spain, September 2012 (Mamadou Mboup);
- 1st International Conference Systems and Computer Science, Lille, France, August 2012 (Lotfi Belkoura, Jean-Pierre Richard, Wilfrid Perruquetti, Mamadou Mboup, Gang Zheng, Denis Efimov, Andrey Polyakov, Diego Mincarelli);
- 16th IFAC Symposium on System Identification, Brussels, July 2012 (Wilfrid Perruquetti, Mamadou Mboup, Rosane Ushirobira);
- IEEE Conference on Decision and Control, 2012, USA (Jean-Pierre Richard, Wilfrid Perruquetti, Jean-Pierre Barbot, Denis Efimov, Diego Mincarelli);
- IEEE Chinese Conference on Control and Decision, 2012, China (Gang Zheng);

- ASME 11th Biennial Conference on engineering systems design and analysis, 2012, France (Samer Riachy);
- IFAC Conference on Time-delay systems (TDS), June 2012, USA (Jean-Pierre Richard, Thierry Floquet);
- IFAC Robust Control symposium (ROCOND), 2012, Denmark (Jean-Pierre Richard);
- IFAC ADHS, 2012, Netherlands (Jean-Pierre Richard, Denis Efimov, Diego Mincarelli)
- IEEE 20th Mediterranean Conference on Control and Automation, 2012, Barcelona (Jean-Pierre Richard);
- IEEE CIFA, 2012, France (Jean-Pierre Richard, Jean-Pierre Barbot, Wilfrid Perruquetti, Gang Zheng);
- IFAC Conference on analysis and control of chaotic systems (CHAOS), 2012, Mexico (Jean-Pierre Barbot).

### **8.3.2. Reviews**

The members of Non-A are reviewers for most of the journal of the control and signal communities: IEEE Transactions on Automatic Control, IEEE Transactions on Systems and Control Technologies, IEEE Transactions on Industrial Electronics, IEEE Transactions on Signal Processing, Automatica, SIAM Journal on Control and Optimization, Journal of Computation and Applied Mathematics, Systems & Control Letters, International Journal of Control, International Journal of Robust and Nonlinear Control, International Journal of Systems Science, Journal Européen des Systèmes Automatisés, IET Control Theory & Applications, Fuzzy Sets and Systems, Mathematics and Computers in Simulation, International Journal of Modeling and Simulation, Journal of the Franklin Institute, ...

## SEQUEL Project-Team

## 9. Dissemination

### 9.1. Scientific Animation

#### 9.1.1. Awards

Shih-Chieh Huang, supervised by Rémi Coulom received the Taiwan Computer Game Association PhD Thesis Award during the 2012 Taiwan Computer Game Workshop on June 30, 2012.

#### 9.1.2. Tutorials

- *A. Lazaric* and *M. Ghavamzadeh* co-chaired a tutorial on *Statistical Learning Theory in Reinforcement Learning and Approximate Dynamic Programming* at the Twenty-Ninth International Conference on Machine Learning (ICML), 2012, which was held in Edinburgh, Scotland in June. Here is the webpage of the tutorial  
<http://chercheurs.lille.inria.fr/~ghavamza/ICML2012-Tutorial.html>

#### 9.1.3. Workshops and Schools

- *J. Mary* co-organized the “New Challenges for Exploration and Exploitation” workshop and competition together with A. Garivier, L. Li, R. Munos, O. Nicol, R. Ortner, and Ph. Preux.
- *H. Kadri* was the main organizer of the ICML workshop on “Object, functional and structured data: towards next generation kernel-based methods” along with Fl. d’Alché-Buc, M. Pontil, and A. Rakotomamonjy.
- *E. Duflos* co-organized the *one-day workshop on Non Parametric Bayesian for Signal and Image Processing* () in Paris (in the frame of the GDR ISIS), with François Caron. The guest speaker was Mickael Jordan from the University of Berkeley.

#### 9.1.4. Invited Talks

- *P. Chainais*, Journées Bordelaises d’Analyse Mathématique des Images, Bordeaux, Host: Prof. J.F. Aujol & C. Dossal (November 2012).
- *P. Chainais*, Nat’Images, Nice, Host: G. Peyré (July 2012).
- *M. Ghavamzadeh*, University of Waterloo, Canada - AI Seminar, Host: Prof. Pascal Poupart (2012).
- *M. Ghavamzadeh*, McGill University, Canada - School of Computer Science, Host: Prof. Joelle Pineau (2012).
- *M. Ghavamzadeh*, University of Alberta, Canada - AI Seminar, Host: Prof. Csaba Szepesvári (2012).
- *M. Ghavamzadeh*, Workshop on “Large-Scale Online Learning and Decision-Making”, London (2012).
- *D. Ryabko*, The Fifth Workshop on Information Theoretic Methods in Science and Engineering (WITMSE 2012), Amsterdam, The Netherlands, Aug. 2012s.
- *Ph. Preux*, Université de Clermont-Ferrand, June 2012.
- *M. Valko*, University of Oxford, UK, Host: David Silver (April 2012).
- *M. Valko*, Large-scale Online Learning and Decision Making, UK, Host: Prof. Marc Tommasi (April 2012).
- *M. Valko*, LAMPADA workshop, France, Host: Jakub Zavodny (July 2012).
- *A. Lazaric*, Politecnico di Milano, Italy - AI Seminar, Host: Prof. Nicola Gatti (April 2012).

### 9.1.5. Review Activities

- **Participation to the program committees of international conferences**
  - International Conference on Pattern Recognition Applications and Methods (ICPRAM 2012)
  - Algorithmic Learning Theory (ALT 2012)
  - AAAI Conference on Artificial Intelligence (AAAI 2012)
  - European Workshop on Reinforcement Learning (EWRL 2012)
  - Annual Conference on Neural Information Processing Systems (NIPS 2012)
  - International Conference on Artificial Intelligence and Statistics (AISTATS 2012)
  - European Conference on Machine Learning (ECML 2012)
  - International Conference on Machine Learning (ICML 2012 and 2013)
  - International Conference on Uncertainty in Artificial Intelligence (UAI 2012)
  - French Conference on Planning, Decision-making, and Learning in Control Systems (JFPDA 2012)
  - FUSION 2012
- **International journal and conference reviewing activities** (in addition to the conferences in which we belong to the PC)
  - IEEE Transactions on Image Processing
  - Journal of Statistical Physics
  - Digital Signal Processing
  - IEEE Statistical Signal Processing SSP'2012
  - European Signal Processing Conference EUSIPCO 2012
  - IEEE Transactions on Information Theory
  - Annual Conference on Neural Information Processing Systems (NIPS 2012)
  - International Conference on Machine Learning (ICML 2012)
  - European Conference on Machine Learning (ECML 2012)
  - Uncertainty in Artificial Intelligence (UAI 2012)
  - Machine Learning Journal (MLJ)
  - Journal of Machine Learning Research (JMLR)
  - Journal of Artificial Intelligence Research (JAIR)
  - IEEE Transactions on Automatic Control (TAC)
  - IEEE Transactions of Signal Processing
  - Journal of Autonomous Agents and Multi-Agent Systems (JAAMAS)

### 9.1.6. Evaluation activities, expertise

- *P. Chainais* is a grant proposal reviewer for the ANR SIMI2.
- *Ph. Preux* is expert for the AERES, ANR, ANRT, and CNRS.
- *M. Ghavamzadeh* is in the Editorial Board Member of Machine Learning Journal (MLJ, 2011-present).
- *M. Ghavamzadeh* is in the Steering Committee Member of the European Workshop on Reinforcement Learning (EWRL, 2011-present).
- *P. Preux*, *R. Gaudel* and *J. Mary* are experts for *Crédit Impôt Recherche* (CIR).
- *E. Duflos* is a project proposal reviewer for ANR.



### 9.1.7. Other Scientific Activities

- *R. Munos* is Vice Président du Comité des Projets at Inria Lille-Nord Europe since September 2011.
- *D. Ryabko* is a member of COST-GTRI committee at Inria.
- *D. Ryabko* is a general advisor at Inria Lille.
- *R. Gaudel* manages the proml diffusion list.
- *E. Duflos* is Director of Research of Ecole Centrale de Lille since September 2011.
- *E. Duflos* is the Head of the Signal and Image Team of LAGIS (UMR CNRS 8219) since January 2012.
- *R. Gaudel* is board member of LIFL.

## 9.2. Teaching

- *A. Lazaric*, PhD, “Advanced topics in Machine Learning”, 24 hours, Department of Electronics and Informatics, Politecnico di Milano (Italy).
- *P. Chainais*, Ecole Centrale de Lille, “Machine Learning”, 36 hours, 3rd year.
- *P. Chainais*, Ecole Centrale de Lille, “Wavelets and Applications”, 24 hours, 2nd year.
- *P. Chainais*, Ecole Centrale de Lille, “Introduction to Matlab”, 16 hours, 3rd year.
- *P. Chainais*, Ecole Centrale de Lille, “Signal processing”, 22 hours, 1st year.
- *P. Chainais*, Ecole Centrale de Lille, “Data Compression”, 16 hours, 2nd year.
- *P. Chainais* is Responsible for a new 3rd year program called Decision making & Data analysis.
- *Ph. Preux*, “Decision under uncertainty”, 46 hours, M2, Master in Computer Science, Université de Lille 1.
- *R. Munos*, Master: “Introduction to Reinforcement Learning”, 30 hours, M2, Master “Mathématiques, Vision, Apprentissage”, ENS Cachan.
- *R. Gaudel*, Master: “Data Mining”, 24 hours, M2, Master “Mathématiques et Informatique Appliqués aux Sciences Humaines et Sociales”, Université Lille 3.
- *R. Gaudel*, Master: “Web Mining”, 24 hours, M2, Master “Mathématiques et Informatique Appliqués aux Sciences Humaines et Sociales”, Université Lille 3.
- *R. Gaudel*, Licence: “Programmation”,  $2 \times 16$  hours, L1, Licence “Mathématiques et Informatique Appliqués aux Sciences Humaines et Sociales”, Université Lille 3.
- *R. Gaudel*, Licence: “Information and Communication Technologies”,  $2 \times 12$  hours, L1, Licence “Sociologie, Histoire, Développement Social”, Université Lille 3.
- *R. Gaudel*, Licence: “Artificial Intelligence”, 27 hours, L2, Licence “Mathématiques et Informatique Appliqués aux Sciences Humaines et Sociales”, Université Lille 3.
- *R. Gaudel*, Licence: “C2i”, 25 hours, L1-3, any Licence, Université Lille 3.
- *J. Mary*, Master : “Programmation et analyse de donnée en R”, 48h eq TD, M1, Université de Lille 3, France.
- *J. Mary*, Master : “Graphes et Réseaux”, 32h eq TD,L1, Université de Lille 3, France.
- *J. Mary*, Master : “Système”, 12h eq TD,L1, Université de Lille 3, France.
- *E. Duflos*, Master (3rd year of Engineer School): “Advanced Estimation” , 20 hours, M2, Option "Data Analysis and Decision", Ecole Centrale de Lille.
- *E. Duflos*, Master (3rd year of Engineer School): “Multi-Objects Filreting” , 16 hours, M2, Option "Data Analysis and Decision", Ecole Centrale de Lille.

## 9.3. Supervision

- PhD : *Jean Francois Hren*, Planification optimiste pour systèmes déterministes, Université de Lille 1, June 2012.
- PhD : *Alexandra Carpentier*, Toward optimal sampling in low and high dimension, Université de Lille 1, Octobre 2012.
- PhD: *Christophe Salperwyck*, *Apprentissage incrémental en ligne sur flux de données*, Université de Lille 3, November 30, 2012, Philippe Preux, [4].
- PhD : *Emmanuel Delande*, “Multi-sensor PHD filtering with application to sensor management”, Jan. 2012, encadrement : E. Duflos and P. Vanheegehe.
- PhD in progress : *Boris Baldassari*, *Apprentissage automatique et développement logiciel*, Sep. 2011, encadrement: Philippe Preux.
- PhD in progress : *Victor Gabillon*, “Active Learning in Classification-based Policy Iteration”, Sep. 2009, encadrement: M. Ghavamzadeh, Ph. Preux.
- PhD in progress : *Azadeh Khaleghi*, “Unsupervised Learning of Sequential Data”, Sep. 2010, encadrement: D. Ryabko, Ph. Preux.
- PhD in progress : *Sami Naamane*, “Filtrage collaboratif adverse et dynamique”, Nov. 2011, encadrement: J. Mary, Ph. Preux.
- PhD in progress : *Olivier Nicol*, “Apprentissage par renforcement sous contrainte de ressources finies, dans un environnement non stationnaire, face à des flux de données massifs”, Nov. 2010, encadrement: J. Mary, Ph. Preux.
- PhD in progress : *Amir Sani*, “Learning under uncertainty”, Oct. 2011, encadrement: R. Munos, A. Lazaric.
- PhD in progress : *Emilie Kaufmann*, “Bayesian Bandits”, Oct. 2011, encadrement: R. Munos, O. Cappé, A. Garivier.
- PhD in progress : *Marta Soare*, “Pure Exploration in Multi-arm Bandit”, Oct. 2012, encadrement: R. Munos, A. Lazaric.
- PhD in progress : *Adrien Hoarau*, “Multi-arm Bandit Theory”, Oct. 2012, encadrement: R. Munos.

#### 9.4. Juries

- Ph. Preux is an examiner of the H.D.R. of Ludovic Denoyer, Paris 6.
- *E. Duflos* is an examiner of the Ph.D. of GU Wei (IRCICA).

#### 9.5. Popularization

- *J. Mary* received a bachelor student for one week to present some research oriented activities in informatics.
- *J. Mary* was involved in different PICOM meeting with private companies to present research on sequential data analysis.

## SIMPAF Project-Team

## 9. Dissemination

### 9.1. Scientific Animation

- A. Gloria is in charge with D. Bonheure of the "PDE and analysis" seminar at ULB since September 2012.
- M. Rousset was in charge of the PDE and numerical analysis seminar of the mathematics department Paul Painlevé until September 2012.
- S. de Bièvre was part of the organizing committee of the "CEMPI Inaugural Conference" in September 2012.

### 9.2. Teaching - Supervision - Juries

#### 9.2.1. Teaching

S. De Bièvre is in charge of the Doctoral formation in Applied Mathematics at the University of Lille.

E. Creusé is in charge of the first year of the master program "Ingénierie Mathématique" of the Lille 1 University.

C. Besse is in charge of the international Master degree at the University of Lille 1 devoted to Scientific Computing.

Members of the team are involved in MSc degrees at USTL (C. Calgaro, S. De Bièvre, G. Dujardin, M. Rousset).

P. Lafitte is involved in a MSc in Ile de France (M2S) and is in charge of the PDE teaching in first year at École Centrale Paris.

I. Lacroix-Violet teaches numerical analysis in L3 at Polytech Lille (98h).

A. Gloria teaches at ULB (licence 2, master 2, 120h).

#### 9.2.2. Supervision

HdR : A. Gloria, "Qualitative and quantitative results in stochastic homogenization", Lille 1, February 24th 2012

PhD in progress : É. Soret, since September 2011, "Stochastic acceleration and equilibration, Supervision by S. De Bièvre and T. Simon (Painlevé)

PhD in progress : P.-L. Colin, "Étude théorique et numérique de modèles mathématiques de corrosion", 09/01/2012, C. Chainais-Hillairet et I. Lacroix-Violet

#### 9.2.3. Juries

C. Chainais, G. Dujardin and P. Lafitte are members of the jury of the national hiring committee of the "Agrégation de mathématiques".

## 9.3. Popularization

C. Calgaro is in charge of the communication of "Laboratoire Paul Painlevé" and she is in charge of the relation between the University of Lille and high schools. Accordingly, she organizes various events like "Les Mathématiques itinérantes" and "Stage de seconde à contenu scientifique". With the help of the Communication Department of Inria, C. Calgaro, E. Creusé and T. Goudon produced a documentary fiction (in French) for a general audience on how research in applied mathematics is being done. The title is "Avis de recherche" (see <http://www.inria.fr/avisderecherche>).

On Wednesday, 19th of September 2012, C. Calgaro and C. Besse organized with the mathematics department P. Painlevé laboratory, the Société Mathématique de France, Inria, CNRS and Lille 1 University the conference "Un texte, un mathématicien" in Lille. The invited speaker was C. Villani, the 2010 Fields medalist. This conference had a great success with over 1200 participants.

## BONSAI Project-Team

# 8. Dissemination

## 8.1. Scientific Animation

- + The team actively participates in the national GDR *Bioinformatique moléculaire*. H. Touzet has been a member of the executive committee since 2007. In this context, we hosted the national annual workshop, Seqbio, devoted to sequence analysis and bioinformatics (2 days, 80 participants, december 2011).
- + We organize a regular pluridisciplinary seminar on bioinformatics, whose audience is composed of researchers in biology and bioinformatics. In the last twelve months, we proposed three events: *manycores programming in biology* (2 days, 35 participants), *phylogeny* (2 days, 38 participants), *Analysis of NGS data* (1 day, 110 participants).
- + We organized the annual meeting of the GTGC workgroup (Comparative Genomics Working Group) (1.5 days, 40 participants, december 2012).

## 8.2. Teaching - Supervision - Juries

### 8.2.1. Teaching

Our research work finds also its expression in a strong commitment in pedagogical activities at the University Lille 1. For several years, members of the project have been playing a leading role in the development and the promotion of bioinformatics (more than 400 teaching hours per year). We are involved in several graduate diplomas (research master degree) in computer science and biology (*master biologie-santé*, *master génomique et protéomique*, *master biologie-biotechnologie*) in an Engineering School (Polytech'Lille), as well as in permanent education (for researchers, engineers and technicians).

M. Pupin, M. Salson, *Introduction to programming (OCaml)*, 96h, L1 (licence "Computer science", univ. Lille 1)

M. Salson, *Coding and information theory*, 36h, L2 (licence "Computer science", univ. Lille 1)

J.-S. Varré *Programming with Caml*, 55h, L2 (licence "Sciences for Engineers", univ. Lille 1)

J.-S. Varré *Algorithms and Data structures*, 50h, L2 (licence "Computer science", univ. Lille 1)

L. Noé, *Algorithms (Ada)*, 58h, L3 (licence "Computer science", univ. Lille 1)

L. Noé, *Networks*, 36h, L3 (licence "Computer science", univ. Lille 1)

L. Noé, *System*, 36h, L3 (licence "Computer science", univ. Lille 1)

M. Pupin, *Databases*, 36h, L3 (licence "Computer science", univ. Lille 1)

M. Pupin, *Professional project*, 18h, L3 (licence "Computer science", univ. Lille 1)

M. Salson, *C programming*, 42h, L3 (licence "Computer science", univ. Lille 1)

S. Janot, *Introduction to programming*, 50h, first year of engineering school (L3) (Polytech'Lille, univ. Lille1)

S. Janot, *Introduction to databases*, 30h, first year of engineering school (L3) (Polytech'Lille, univ. Lille1)

A. Ouangraoua *Programming with MATLAB*, 36h, L1 (licence "Mechanical Engineering", École de Technologie Supérieure de Montréal)

L. Noé, *Bioinformatics*, 54h, M1 (master "Génomique Protéomique", univ. Lille 1)

L. Noé, *Individual project*, organiser, M1 (master "Computer science", univ. Lille 1)

M. Pupin, *Introduction to programming (JAVA)*, 30h, M1 (master “Mathématiques et finance”, univ. Lille 1)

M. Salson, J.-S. Varré, *Bioinformatics*, 100h, M1 (master “Biology and Biotechnologies”, univ. Lille 1)

S. Blanquart, *Algorithms and applications in bioinformatics*, 24h, M1 (master “Computer Science”, univ. Lille 1)

S. Janot, *Databases*, 12h, second year of engineering school (M1) (Polytech’Lille, univ. Lille 1)

S. Janot, *Introduction to artificial intelligence*, 25h, second year of engineering school (M1) (Polytech’Lille, univ. Lille 1)

M. Pupin, J.-S. Varré *Computational biology*, 30h, M2 (master “Modèles complexes, algorithmes et données”, univ. Lille 1)

M. Pupin, *Practical bioinformatics*, 35h, M2 (master “Génomique Protéomique”, univ. Lille 1)

S. Blanquart, *Methods in phylogenetics*, 4h, M2 (master “Ecology Environment”, univ. Lille 1)

M. Giraud, L. Noé, M. Pupin, *High-performance bioinformatics*, 28h, M2 (master “Calcul Scientifique”, univ. Lille 1)

M. Pupin, J.-S. Varré, *ISN - Computer science for secondary school*, 30h, second-level teachers.

### 8.2.2. Supervision

PhD : *Tuan Tu Tran*, Bioinformatics Sequence Comparisons on Manycore Processors, Univ. Lille 1, defense scheduled on 21 December 2012, co-directed by J.-S. Varré and M. Giraud

PhD : *Aurélien Vanvlassenbroeck*, Experimental and *in silico* study of the nonribosomal synthesis done by fluorescent *Pseudomonas*, Université Lille 1, 17 July 2012, co-directed by M. Pupin, V. Leclère (ProBioGEM lab) and P. Jacques (ProBioGEM lab)

PhD in progress : *Antoine Thomas*, Algorithms for genome rearrangement with duplications, Université Lille 1, co-directed by J.-S. Varré and A. Ouangraoua.

PhD in progress : *Evguenia Kopylova*, New algorithmic and bioinformatic approaches for the analysis of data from next-generation sequencing, Université Lille 1, co-directed by H. Touzet and L. Noé.

PhD in progress : *Christophe Vroland*, microRNA repertoire and target evolution: developing efficient indexing techniques and comparison between close plant species, Université Lille 1, co-directed by H. Touzet, M. Salson from BONSAI and V. Castric (“Genetics and evolution in plants” laboratory).

### 8.2.3. Juries

- Member of the thesis committee of W. Abdelwahed (Univ. Lille 1, M. Pupin) and S. Benabderahmane (Univ. Nancy 1, M. Pupin), Ph. Bordron, (Univ. Nantes, J.-S. Varré, L. Noé), Benoit Groz (Univ. Lille 1, H. Touzet), Tarek El Falah (Univ. Rouen, J.-S. Varré)
- Member of the habilitation committee of J. Bourdon (Univ. Nantes, H. Touzet)

### 8.2.4. Administrative activities

- National representative (*chargée de mission*) for the Institute for Computer Sciences (INS2I) in CNRS<sup>3</sup>. She is more specifically in charge of relationships between the Institute and life sciences (H. Touzet)
- Member of the Inria evaluation committee (M. Giraud)
- Member of the Inria local committee for scientific grants (H. Touzet)
- Scientific secretary of the Gilles Kahn PhD award committee (M. Giraud)

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<sup>3</sup>CNRS: National Center for Scientific Research

- Member of ITMO Genetics, Genomics and Bioinformatics of AVIESAN (H. Touzet)
- Member of CSS MBIA (mathematics, bioinformatics and artificial intelligence) at INRA (H. Touzet)
- Head of PPF bioinformatics – University Lille 1 (H. Touzet)
- Head of Bilille, Lille bioinformatics platform (M. Pupin)
- Head of ReNaBi-NE (pôle Nord-Est du Réseaux National de Bioinformatique), a cluster of 4 bioinformatics platforms (M. Pupin)
- Member of UFR IEEA council (M. Pupin)
- Head of the GIS department (Statistics and Computer Sciences) of Polytech’Lille (S. Janot)
- Member of the LIFL Laboratory council (L. Noé, H. Touzet)
- Member of hiring committee (jury d’audition) of Univ. Lille 1 (M. Pupin, H. Touzet), Univ. Pierre et Marie Curie (L. Noé), ENS Bio (H. Touzet), Université Aix-Marseille (H. Touzet), Univ. Bordeaux 1 (M. Giraud)

### **8.3. Popularization**

- We continued the activity developed on bioinformatics puzzles by our two-months exhibition in 2010 at Palais de la découverte (science museum in Paris). These “puzzles du génome” explain the basics of sequence assembly, RNA secondary structures and phylogenetic reconstruction <http://www.lifl.fr/~giraud/puzzles>. In 2012, we demonstrated these puzzles to more than 150 high schools pupils (J.F. Berthelot, S. Blanquart, M. Giraud, M. Salson, A. Thomas, M. Pupin).

## **SHACRA Project-Team**

# **9. Dissemination**

## **9.1. Scientific Animation**

### **9.1.1. Journals, Conferences, Workshop**

- **Jérémie Dequidt** has been reviewer for the following conference and journal:
  - Medical Image Computing and Computer Assisted Intervention (MICCAI)
  - Transaction on Medical Imaging (TMI)
  - Computer Methods and Programs in Biomedicine (CMPB)
- **Christian Duriez** has been reviewer for the following conference and journals:
  - Computer Methods in Applied Mechanics and Engineering (CMAME),
  - Computer Methods and Programs in Biomedicine (CMPB),
  - IEEE Transaction on Medical Imaging (TMI),
  - IEEE Transactions on Biomedical Engineering (TBME-EMBS)
  - IEEE Transaction on Haptics (ToH),
  - Proceedings of IEEE,
  - Computer and Graphics,
  - Eurographics 2012,
  - Eurohaptics 2012,
  - International Conference on Control, Automation, Robotic and Vision (ICARCV 2012),
  - IEEE Virtual Reality Conference (VR 2012),
  - Medical Image Computing and Computer Assisted Intervention (MICCAI 2012)

member of the following committees:

- Associate Editor of WorldHaptic Conference 2013
- **Jérémie Allard** has been member of the following committees:
  - Workshop on Virtual Reality Interaction and Physical Simulation (VRIPHYS)

and reviewer for the following conference and journal:

- SIGGRAPH
- Computers & Graphics

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

### **9.2.1. Teaching**

Licence: Jeremie Dequidt, Programming, 48h, L3, Polytech'Lille, France

Licence: Jeremie Dequidt, Database, 12h, L3, Polytech'Lille, France

Licence: Jeremie Dequidt, Advanced Programming, 6h, L3, Polytech'Lille, France

Licence: Jeremie Dequidt, Hardware, 31h, L3, Polytech'Lille, France

Licence: Jeremie Dequidt, Unix Systems, 24h, L3, Polytech'Lille, France

Licence: Jeremie Dequidt, Numerical Analysis, 30h, L3, Polytech'Lille, France

Master: Jeremie Dequidt, 3D Modeling, 5h, M2, Polytech'Lille, France

Licence: Alexandre Bilger, Programming, 48h, L1, Université Lille 1, France

Master: Alexandre Bilger, Programming, 14h, L1, Polytech'Lille, France

Licence: Alexandre Bilger, Data Encoding, 32h, L1, Université Lille 1, France

Licence: Nazim Haouchine, Programming, 22h, L3, Polytech'Lille, France

Licence: Nazim Haouchine, Database, 36h, L3, Polytech'Lille, France

Licence: Ahmed Yureidini, Database, 32h, L1, Université de Lorraine, France

Licence: Ahmed Yureidini, Programming, 36h, L1, Université de Lorraine, France

Licence: Ahmed Yureidini, Hardware Architecture, 36h, L1, Université de Lorraine, France

### 9.2.2. Supervision

PhD & HdR :

PhD: **Yiyi Wei**, Discrete Exterior Calculus Approach for Aneurysm Related Simulation, USTL, 23/03/2012, **Stéphane Cotin and Songde Ma**

PhD in progress : **Ahmed Yureidini**, Modélisation d'organes par fonctions implicites, 2009, **Stéphane Cotin and Erwan Kerrien**

PhD in progress : **Hugo Talbot**, Real-time simulation of cardiac ablation in the framework of arrhythmia, 2010, **Stéphane Cotin and Hervé Delingette**

PhD in progress : **Vincent Majorczyk**, Simulation de Fluide GPU, 2010, **Stéphane Cotin and Jérémie Allard**

PhD in progress : **Guillaume Kazmitcheff**, Modélisation et simulation d'interventions chirurgicales sur l'oreille moyenne, 2011, **Stéphane Cotin and Christian Duriez**

PhD in progress : **Alexandre Bilger**, Biomechanical simulation for Deep Brain Stimulation, 2011, **Stéphane Cotin and Christian Duriez**

PhD in progress : **Zhifan Jiang**, Recalage d'images déformables pour la biomécanique, 2011, **Stéphane Cotin, Jérémie Dequidt, Mathias Brieu**

PhD in progress : **Tomas Golembiowski**, Modèles déformables adaptatifs pour la simulation de structures creuses, 2011, **Stéphane Cotin, Ludek Matyska, Christian Duriez**

PhD in progress : **Julien Bosman**, Simulations à base de particules et interactions multi-physiques en temps-réel, 2011, **Stéphane Cotin and Christian Duriez**

PhD in progress : **Mouhamadou Diallo**, Modélisation biomécanique du prolapsus génital, 2011, **Mathias Brieu, Pauline Lecomte, Christian Duriez**

PhD in progress : **Nazim Haouchine**, Augmented Reality Tools for Minimally Invasive Hepatic Surgery, 2012, **Stéphane Cotin, Marie-Odile Berger, Jérémie Dequidt**

PhD in progress : **Francois Dervaux**, Image driven simulation for interventional radiology procedures, 2012, **Stéphane Cotin, Jérémie Dequidt, Erwan Kerrien**

### 9.2.3. Juries

- **Jérémie Allard** was in the examination committee of :
  - Guillaume Bousquet, October 2012, University of Grenoble

## 9.3. Popularization

During this year, team researchers and students animated several scientific events. The different scientific animations are listed below:

- MICCAI 2012: some of the team students helped for the organization of the MICCAI conference that occurred in October in Nice,



- Futur en Seine: a scientific exhibition took place in Paris (in the 104 building) the 16th and 17th June 2012 and was a public event. Researchers and students presented demonstration videos done using SOFA during the whole week-end.
- Recontre Inria-Industrie: this was a public event taking place in Strasbourg the 21st of November 2012. Researchers and students presented demonstration videos done using SOFA during the whole week-end.
- Hugo Talbot did a visit in the "Humanoids and Intelligence Systems" laboratory at the Karlsruhe Institute for Technology and presented his Ph.D. work at this occasion.
- Unithe ou Cafe: this is a vulgarization event at Inria presenting the research work done by Inria teams and is dedicated to all employees. Hugo Talbot presented his Ph.D. work during a session called "La cardiologie au coeur du numerique".
- Sofa Training Days Grenoble 2012: this is a 5 days-learning session held in october, with more than 20 attendees (researchers, ingeneers...). Various topics were presented by several members of the team.
- Some high school students have spent a week in the team and have been interested on topics related to Medical Simulation and in a large view to scientific researches.

## ADAM Project-Team

# 9. Dissemination

## 9.1. Scientific Animation

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

- Chair of the 3ème Journées du GDR CNRS GPL, Rennes, June 2012,
- Chair of the 4ème Journée Lignes de Produits, Lille, November 2012,
- Member of the Editorial Board of Lavoisier TSI,
- Member of the following PC committees:
  - 7th International Symposium on Software Engineering for Adaptive and Self-Managing Systems, (SEAMS), Zürich, Switzerland, June 2012,
  - 15th International ACM SIGSOFT Symposium on Component Based Software Engineering (CBSE), Bertinoro, Italy, June 2012,
  - Joint 10th Working IEEE/IFIP Conference on Software Architecture & 6th European Conference on Software Architecture (WICSA/ECSA), Helsinki, Finland, August 2012,
- Reviewer for the following journals: Elsevier Journal of System and Software, Springer Software and System Modeling, Elsevier Science of Computer Programming,
- Reviewer for the LNCS book Models@runtime.

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

- PC member of the 11th Workshop on Adaptive and Reflective Middleware (ARM), Montréal, Canada, December 2012,
- PC co-chair of the 1ère Conférence en Ingénierie du Logiciel (CIEL), Rennes, June 2012.

**Adel Noureddine** served as Organization Chair of the 9th MajecSTIC conference that was held in Lille in October 2012. MajecSTIC is the national conference for PhD students and young researchers in Information and Communication Technologies and covers topics from Computer Science to Electrical Engineering.

**Romain Rouvovoy** served in the following scientific animations actions.

- Member of the steering committee of the IFIP International Conference on Distributed Applications and Interoperable Systems,
- Member of the following PC committees:
  - 27th International ACM Symposium on Applied Computing - 7th Track Dependable and Adaptive Distributed Systems (DADS), March 2012,
  - 1st Nordic Symposium on Cloud Computing & Internet Technologies (NordiCloud), August 2012,
  - 8th International Conference on the Quality of Information and Communications Technology (QUATIC) - Track Quality in Cloud Computing, September 2012,
  - 2nd International Workshop on Adaptive Services for the Future Internet (WAS4FI), September 2012,
  - 1st International Workshop on Self-Aware Internet of Things (Self-IOT), September 2012,
  - 6th International Workshop on Middleware Tools, Services and Run-time Support for Networked Embedded Systems (MidSens), December 2012,
  - 7th International Workshop on Middleware for Next Generation Internet Computing Workshop (MW4NG), December 2012,
  - 11th International Workshop on Adaptive and Reflective Middleware (ARM), December 2012,
- Reviewer for the following journals: Elsevier Science of Computer Programming, Elsevier Information and Software Technology, IEEE Software, Springer Journal of Internet Services and Applications, Wiley Journal of Software: Evolution and Process, Lavoisier TSI.

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

- Guest co-editor of a special issue of the Elsevier Science of Computing journal on Software Evolution, Adaptability and Maintenance,
- Member of the editorial board of the ISTE-Wiley series of books on Computer Science and Information Technology and editor for the Software Engineer domain of this series,
- PC Chair of the 2nd IEEE International Workshop on Advanced Information Systems for Enterprise (IWAISE),
- Member of the following PC committees:
  - 4th IEEE International Conference on Service-Oriented Computing and Applications (SOCA), Taipei, December 2012,
  - 38th Euromicro Conference on Software Engineering and Advanced Applications (SEAA), MOCS Track & DANCE workshop, Cesme, Turkey, September 2012,
  - IEEE International Workshop on Future Green Communications (FGC), Paris, April 2012,
  - 6ème Conférence francophone sur les architectures logicielles (CAL), Montpellier, May 2012,
- Reviewer for the following journals: Elsevier Science of Computer Programming, Elsevier Journal of Systems Architecture, Central European Journal of Computer Science, Lavoisier TSI.

**Martin Monperrus** served as:

- Referee for ACM Transactions on Software Engineering and Methodology (TOSEM), Elsevier Science of Computer Programming (SCP), IEEE Transactions on Software Engineering (TSE), Wiley Software Practice and Experience (SPE)
- External Referee for International Conference on Foundations of Software Engineering (FSE), ICSE New Ideas and Emerging Results Track (ICSE NIER), European Conference on Modeling Foundations and Applications (ECMFA)

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Permanent members teach the following courses.

**Laurence Duchien** heads the **research program** in Master of Computer Science at University Lille 1. She heads the Carrières et Emplois service and is referent for the professional insertion in the PhD program in Computer Science at PRES University Lille Nord de France. She teaches the following courses.

Software Project Management, 50h, Level M2, Master MIAGE, University Lille 1,

Design of distributed applications, 42h, Level M1, Master of Computer Science, University Lille 1,

Object-Oriented Design, 42h, Level M2, Master of Computer Science, University Lille 1,

Software Product Lines, 6h, Level M2, Master of Computer Science, University Lille 1,

Research and Innovation Initiation, 22h, Level M2, Master of Computer Science, University Lille 1,

Tutoring Internship, 22h, Level M2, Master of Computer Science, University Lille 1.

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

Introduction to programming, 48h, Level L1, Licence of Computer Science, UFR IIEEA, University Lille 1,

Object-oriented design, 39h, Level L3, Licence of Computer Science, UFR IIEEA,

Automated software engineering, 40h, Level M2, Master of Computer Science speciality IAGL, UFR IIEEA, University Lille 1.

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

Initiation à la Programmation, 48h, Level L1, Licence of Computer Science, UFR IEEA, University Lille 1,

Conception d'Applications Réparties, 42h, Level M1, Master of Computer Science, UFR IEEA, University Lille 1,

Qualité du Logiciel, 30h, Level M2, Master of Computer Science speciality MIAGE, UFR IEEA, University Lille 1,

Infrastructures et Frameworks Internet, 8h, Level M2, Master of Computer Science speciality IAGL, UFR IEEA, University Lille 1,

Innovation & Initiation à la Recherche, 14h, Level M2, Master of Computer Science speciality IAGL, UFR IEEA, University Lille 1,

Intergiciels Orienté Services, 50h, Level M2, Master of Computer Science speciality IPI-NT, UFR IEEA, University Lille 1,

Suivi de projets, 60h, Level M2, Master of Computer Science, UFR IEEA, University Lille 1,

Suivi d'alternants, 60h, Level M2, Master of Computer Science, UFR IEEA, University Lille 1.

**Lionel Seinturier** heads the **E-Services** specialty of the Master of Computer Science at the University Lille 1. He gives the following graduate courses at the University Lille 1.

Conception d'applications réparties, 18h, M1, University Lille 1,

Infrastructures et frameworks Internet, 6h, M2, University Lille 1.

### 9.2.2. Supervision

PhD : Gabriel Hermosillo, Towards Creating Context-Aware Dynamically-Adaptable Business Processes Using Complex Event Processing, University Lille 1, 5 June 2012, Laurence Duchien & Lionel Seinturier.

PhD : Gabriel Tamura, QoS-CARE: Un Système Fiable pour la Préservation de Contrats de Qualité de Service à travers de la Reconfiguration Dynamique, University Lille 1 & University Los Andes, Bogota, Colombia, 28 May 2012, Laurence Duchien.

PhD in progress : Benoit Cornu, Automated Runtime Software Repair, October 2012, Lionel Seinturier & Martin Monperrus.

PhD in progress : Rémi Druilhe, Réduction de l'emprunte énergétique dans la maison numérique, October 2010, Laurence Duchien & Lionel Seinturier.

PhD in progress : Alexandre Feugas, Maintien de la qualité de service au cours de l'évolution d'applications orientées services, October 2010, Laurence Duchien.

PhD in progress : Nicolas Haderer, AntDroid: Opportunistic Mobile Sensing of User Activities, October 2010, Lionel Seinturier & Romain Rouvoy.

PhD in progress : Jonathan Labéjof, R\* - Réflexivité au service de l'évolution des systèmes de systèmes, October 2009, Lionel Seinturier & Philippe Merle. To be defended on 20 December 2012.

PhD in progress : Matias Martinez, Automated Program Repair at Development and Runtime, October 2011, Laurence Duchien & Martin Monperrus.

PhD in progress : Adel Noureddine, Software Engineering for Green Autonomic Systems, October 2010, Lionel Seinturier & Romain Rouvoy.

PhD in progress : Russel Nzekwa, Building Feedback Control Loops for Self-Adaptive Very-Large-Scale Environments, October 2009, Lionel Seinturier & Romain Rouvoy.

PhD in progress : Fawaz Paraiso, Interopérabilité des environnements middleware de cloud computing, October 2011, Lionel Seinturier & Philippe Merle.

PhD in progress : Clément Quinton, Migration d'applications dans les environnements middleware de cloud computing, October 2011, Laurence Duchien.

PhD in progress : Marc Sango, Composants logiciels, boucle de contrôle et adaptation pour applications safety critical dans le domaine ferroviaire, October 2012, Laurence Duchien & Christophe Gransart.

### 9.2.3. Juries

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

- Thierry Geraud, University Marne-la-Vallée, June 2012 (chair).

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

- Nabil Fakhfakh, University of Malaga, Spain, January 2012 (referee),
- Gabriel Tamura, University Lille 1 & University Los Andes, Bogota, Colombia, May 2012 (director),
- Gabriel Hermosillo, University Lille 1, June 2012 (director),
- Michal Malohlava, Charles University, Prague, September 2012 (referee),
- Takoua Ben Rhoula Aouina, University Paris 11, November 2012 (referee),
- Loic Petit, University of Grenoble, December 2012 (examiner).

**Philippe Merle** was in the PhD examination committee of Jonathan Labéjof, University Lille 1, December 2012 (co-advisor).

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

- Gabriel Tamura, University Lille 1 & University Los Andes, Bogota, Colombia, May 2012 (examiner),
- Gabriel Hermosillo, University Lille 1, June 2012 (co-director),
- Sandrines Santilles, Märladalen University, Sweden, June 2012 (opponent),
- Ali Hassan, Telecom Bretagne, September 2012 (referee),
- Mohamed Lamine Boukhanoufa, University Paris 11, September 2012 (examiner),
- Jonathan Labéjof, University Lille 1, December 2012 (director).

## 9.3. Popularization

Nicolas Petitprez participated to **Salon de la Vente à distance** that was held in Lille from October 23 to 25, 2012. Inria held a booth in this exhibition that is dedicated to professionals from the retail industry. Nicolas demonstrated the results and the prototype that has been developed in the context of the FUI Macchiato (see Section 8.2 ) project.

Laurence Duchien participated to a panel on Mobile computing for Banking applications that was held in April 2012 in Paris.

Aurélien Bourdon gave several demonstrations of the PowerAPI software library (see Section 5.6 ), especially for the Recherche, Innovation, Creation (RIC) day that was held on 6 October 2012 in Lille and that targets graduate students from the M.Sc and Computer Engineering programs. He also gave this demonstration during visits such as the one of Michel Cosnard, CEO of Inria, and the one of Jean-François Pauwels, vice-president for research at University Lille 1. Finally the demonstration was also played during workshops dedicated to green computing, such as **Eco-conception des logiciels un outil novateur pour le pilotage des projets informatiques** in October 2012, and Rencontre Inria Industrie in March 2012.

## FUN Team

## 8. Dissemination

### 8.1. Scientific Animation

#### 8.1.1. Conference organization

##### Program (co-)chairs

- Nathalie Mitton is/was program chair or co-program chair for iThings 2012, EPRA 2012 and AdHocNets 2012.

##### Program committee members

- Nathalie Mitton is/was in the Technical Program Committee (TPC) for LoGASN 2012, WPMC 2012, iThings 2012, WWASN 2012, CMC 2012.
- Tahiry Razafindralambo is/was a TPC member for BIONETICS 2012, ALGOTEL 2012, MSWIM 2012, DCOSS 2012, PE-WASUN 2012, MASS 2012.

#### 8.1.2. Editorial activity

- Nathalie Mitton and Xu Li are editorial board members of AHSWN since 2011
- Nathalie Mitton is editorial board member of AdhocNetworks since 2012
- Xu Li is editorial board member of Parallel and Distributed Computing and Networks since 2010
- Xu Li is associate editor, European Transactions on Telecommunications since 2011
- Nathalie Mitton is guest editor for special issues in Eurasip journal (2012)
- Nathalie Mitton and Xu Li are guest editors of special issue in Springer PPNA (2012)
- Xu Li is guest editor of special issues in Elsevier's COMCOM, JCM and AHSWN (2011)

#### 8.1.3. Misc

- + Nathalie Mitton is member of the ANR programme blanc SIMI3.
- + Nathalie Mitton is a member of the Inria COST-GTAI, Technological development committee (CDT) and Building User committee (CUB).
- + Tahiry Razafindralambo is a member of the Inria Lille Nord Europe Research Center committee and a member of CNU section 27 of Université de La Réunion (2012).

## 8.2. Teaching - Supervision - Juries

### 8.2.1. Teaching

Master : Tahiry Razafindralambo, Wireless networks, 40h eqTD, Université de la Réunion, France

Master : Nathalie Mitton, Wireless sensor networks, 30h eqTD, Université Lille 1, France

Master : Nathalie Mitton, RFID Middlewares, 16h eqTD, Institut Telecom and Université Lille 1, France

### 8.2.2. Juries

Nathalie Mitton was committee member of the following PhD thesis:

- Yacine Mezali, UPMC, Paris, France, March 2012
- Oscar Botero, Institut Telecom, France, May 2012
- Nazim Abdeddaim, Université de Grenoble, France, October 2012
- Gilles Fritz, ESISAR, INP, France, December 2012

## RMOD Project-Team

## 8. Dissemination

### 8.1. Scientific Animation

#### 8.1.1. Examination Committees

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

- *Supporting Integration Activities in Object-Oriented Applications*, Veronica Uquillas-Gomez, Vrije Universiteit Brussel, Belgium. 04/10/12 (advisor)
- *Application-Level Virtual Memory for Object-Oriented Systems*, Mariano Martinez-Peck. Ecole des Mines de Douai. October 29th (advisor).
- *Analyse statique et dynamique de code et visualisation des logiciels via la métaphore de la ville*, Pierre Caserta, Université de Nancy, France. 7/12/12.
- *Efficient Object Versioning for Object-Oriented Languages from Model to Language Integration*, Frédéric Pluquet, Université Libre de Bruxelles, Belgium France. 3/07/12. (referee)

**Stéphane Ducasse** was in the examination committee of the following HDR:

- *Faciliter la vérification et la validation des méta-modèles : une approche agile, outillée et orientée données*, Dr. Alain Plantec, Université de Bretagne Occidentale, Brest, 28/11/12.
- *MDE 2.0: Pragmatic formal model verification and other challenges*, Jordi Cabot, Université de Rennes, France. 12/10/12.

**Nicolas Anquetil** was in the examination committee of the following PhD theses:

- *Supporting Integration Activities in Object-Oriented Applications*, Veronica Uquillas-Gomez, Vrije Universiteit Brussel, Belgium. 04/10/12 (advisor)
- *Analyse et conception d'un modèle de qualité logiciel*, Karine Mordal, Université Vincennes – Saint-Denis – Paris 8, France. 03/12/2012 (reviewer)

**Marcus Denker** was in the examination committee of the following PhD theses:

- *Bridging the Gap between Machine and Language using First-Class Building Blocks*, Toon Verwaest. University of Bern, Switzerland. 12/03/2012 (reviewer).
- *Application-Level Virtual Memory for Object-Oriented Systems*, Mariano Martinez-Peck. Ecole des Mines de Douai. October 29th (reviewer).

### 8.2. Teaching - Supervision - Juries

#### 8.2.1. Teaching

Licence : Simon Allier, Programmation d'interface graphique, 46 hours, L2, Université Lille 1 (IUT-A), France

Licence : Nicolas Anquetil, Programmation d'interface graphique, 64 hours, L2, Université Lille 1 (IUT-A), France

Licence : Nicolas Anquetil, Projet final, 16 hours, L2, Université Lille 1 (IUT-A), France

Licence : Damien Cassou, conception orientée objet, 42 hours, L3 Miage, Université Lille 1, France

Master : Damien Cassou, conception objet avancée, 42 hours, M1, Université Lille 1, France

Master : Damien Cassou, maintenance de grands logiciels, 8 hours, M2, Université Lille 1, France

Master : Damien Cassou, Metaprogramming and Reflection in Common Lisp, 2 hours, M2, University of Potsdam, Germany

Master : Christophe Demarey, Architectures Logicielles, 30 hours, GIS4, Polytech'Lille, France

Master : Marcus Denker, Reflection and Context, 1.5 hours, M2, Universite catholique de Louvain, Belgique

Master : Stéphane Ducasse, MetaModeling, 16 hours, M2, Ecole des Mines de Douai, France

Licence : Stéphane Ducasse, MetaModeling, 6 hours, L3, Université de Lille, France

Employed Engineers : Stéphane Ducasse, Advanced Object-Oriented Design, 9 hours, engineers, Inria engineer formation, France

Master : Stéphane Ducasse, Advanced Object-Oriented Design, 21 hours, M1, Université de Savoie, France

Licence : Stéphane Ducasse, Object-Oriented Design, 4.5 hours, L2, Université de Lille (IUT-A), France

Licence : Anne Etien, Bases de données et Analyse Informatique, 60 hours, L3, Polytech Lille, France

Licence : Anne Etien, Structures de données, 14 hours, L3, Polytech Lille, France

Master : Anne Etien, Programmation par objets, 35 hours, M1, Polytech Lille, France

Master : Anne Etien, Systèmes d'information objets, 10 hours, M1, Polytech Lille, France

Master : Anne Etien, Bases de données, 30 hours, M1, Polytech Lille, France

Master : Anne Etien, Ingénierie Logicielle, 20 hours, M2, Polytech Lille, France

Licence : Damien Pollet, Challenge création entreprise, 8 hours, M1, Telecom Lille 1, France

Licence : Damien Pollet, Technologies des systèmes d'information ouverts, 27 hours, L3, Telecom Lille 1, France

Licence : Damien Pollet, Introduction à l'algorithmique, 9 hours, L1, Telecom Lille 1, France

Licence : Damien Pollet, Conception et programmation orientée objet, 166 hours, L3, Telecom Lille 1, France

Licence : Damien Pollet, Architecture des ordinateurs, 4.5 hours, L3, Telecom Lille 1, France

Master : Damien Pollet, Ingénierie logicielle, 2 hours, M1, Telecom Lille 1, France

Licence : Igor Stasenko, Vector graphics, 1 hour, L3, Argentina

### 8.2.2. Supervision

#### PhD & HdR

PhD : Mariano Martinez-Peck, Application-Level Virtual Memory for Object-Oriented Systems, Ecole des Mines de Douai, October 29th 2012, Stéphane Ducasse, Marcus Denker

PhD : Veronica Uquillas-Gomez, Supporting Integration Activities in Object-Oriented Applications, Vrije Universiteit Brussel, October 4th 2012, Stéphane Ducasse, Nicolas Anquetil

PhD in progress : Camillo Bruni, no title yet, 2011-03-01, Stéphane Ducasse, Marcus Denker

PhD in progress : Andre Hora, Improving Static Analysis with Domain-Specific Rules, 01/12/2011, Nicolas Anquetil, Stéphane Ducasse

PhD in progress : Camille Teruel, Security for dynamic languages, 01/12/2012, Stéphane Ducasse, Damien Cassou

PhD in progress : Nick Papoylias, Languages and Development Environments for Mobile Autonomous Robots, October 1st 2010, Marcus Denker, Stéphane Ducasse

PhD in progress : Jean Baptiste Arnaud, Towards First Class References as a Security Infrastructure in Dynamic Languages, September 1st 2009, Marcus Denker, Stéphane Ducasse

PhD in progress : Martin Dias, Supporting Merging, December 3rd 2012, Damien Cassou, Stéphane Ducasse

PhD in progress : Guillermo Polito, Isolation and Reflection in Dynamic Object Oriented Languages, 01-04-2012, Noury Bouraqadi, Luc Fabrese, Marcus Denker, Stéphane Ducasse



### 8.3. Popularization

- Nicolas Anquetil presented SourceCity (an integrated environment for software analysis, in which software systems are visualized as interactive, navigable 3D cities) at several occasions.
- Nicolas Anquetil presented Moose during the RIC days, which introduce research to master students.
- Muhammad Bhatti discussed about how to create a startup company during the RIC days.
- Muhammad Bhatti presented to PhD students how to promote research results.
- Damien Cassou received a student from *Collège (3ème)* to present research activities and software development.
- Marcus Denker, Esteban Lorenzano and Stéphane Ducasse will present at fOSSa 2012 in December.
- Marcus Denker and Stéphane Ducasse gave presentations about Pharo at the open source conference FOSDEM 2012.

## MINT Project-Team

# 9. Dissemination

## 9.1. Scientific Animation

### Invited talks:

- “From input devices to interaction techniques”: G. Casiez, University of Waterloo, Canada (June)
- “Les interfaces du passé ont encore de l’avenir”: N. Roussel, L3I, La Rochelle (July 5th)
- “Les interfaces du passé ont encore de l’avenir”: N. Roussel, SIGCHI Toulouse (June 18th)
- "Une démarche art-science" L. Grisoni, journée Contact innovation, Ministère de la recherche, Paris (january 17th)
- "gesture toolkit through artistic experiments": L. Grisoni, Workshop on movement qualities and physical models visualizations, IRCAM (Paris), (march 2nd).
- "Art and research, open source and open minds": L. Grisoni, main track/Open-Arts session, FoSSa 2012 conference, Lille (december 5th)
- inter-regional meeting organized by pole images of Liege, november 9th: L. Grisoni, 15 minutes talk on collaboration with V. Ciciliato (artistic installation tempo scaduto, Fresnoy)

### Journal editorial board:

- **Journal d’Interaction Personne-Système** (JIPS): N. Roussel (co-editor in chief), G. Casiez

### Journal reviewing:

- Interacting with Computers (Elsevier): N. Roussel
- Lavoisier, art-science: L. Grisoni

### Conference organization:

- **FITG 2012**, the third *Forum on Tactile and Gestural Interaction*: N. Roussel, co-organizer
- **Ergo’IHM 2012**: N. Roussel, short papers chair
- **Ergo’IHM 2012**: T. Pietrzak, program committee
- ACM UIST 2012: G. Casiez, program committee
- ACM VRST 2012: G. Casiez, program committee
- VRIPHYS 2012 (workshop on Virtual Reality and Physical Simulation): L. Grisoni, program committee

### Conference reviewing:

- ACM CHI 2012: N. Roussel, T. Pietrzak, L. Grisoni (3D workshop)
- ACM UIST 2012: N. Roussel, T. Pietrzak
- ACM Mobile HCI 2012: T. Pietrzak
- ACM NordiCHI 2012: T. Pietrzak
- WWW 2012: N. Roussel (poster track)
- VRST 2012: N. Roussel
- TEI 2012: G. Casiez
- Ergo’IHM 2012: N. Roussel, G. Casiez, T. Pietrzak, L. Grisoni

**Scientific associations:**

- **AFIHM**, the French speaking HCI association: N. Roussel and T. Pietrzak, members of the Executive Committee (vice-president and secretary since November 2011)
- RTP (pluridisciplinar thematic network) **Visual studies** (2010-2012): L. Grisoni, member of the RTP board
- SCV (Science et culture du visuel) **website**: L. Grisoni, scientific board, responsible of the art-science activity. This initiative covers the CNRS scientific project ICAVS, and the funded equipex project IrDIVE (2012-2020).
- SCV (Science et culture du visuel) **website**: S. Degrande, leader of Virtual Reality room design (funded by equipex IrDIVE).
- LIFL (University Lille 1 Computer science laboratory) conseil: L. Grisoni

**Evaluation committees and invited expertise:**

- **uTOP** (open university project) working groups: N. Roussel
- **UNIT** (engineering and technology digital university) scientific committee: N. Roussel
- Inria's *Science mediation* committee: N. Roussel
- Inria's admission jury for junior researcher positions: N. Roussel
- Université Lille 1, Computer Science hiring committees: L. Grisoni, G. Casiez, N. Roussel (PR 0498 & PR 1631)
- Université Paul Sabatier, Toulouse, Computer Science hiring committee: N. Roussel (MCF 0822)
- Université de Bretagne Orientale, Brest, Computer Science hiring committee: L. Grisoni (PR 0030)
- Université de Lille 3, Psychology hiring committee: L. Grisoni (PR 0457)
- ANR emergence axes 2 et 3: L. Grisoni (review)
- ANR INS ingénieur num et sécurité: L. Grisoni (review)
- ANR JCJC SIMI2 : L. Grisoni (review)
- ANRT CIFRE: L. Grisoni (review)

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

**Licence**

- Introduction to Programming, 48h, L1, University of Lille, France, F. Aubert
- Advanced Programming, 36h, L3, University of Lille, France, F. Aubert, G. Casiez
- Compilation, 36h, L3, University of Lille, France, T. Pietrzak
- Algorithms and data structures, 36h, L3, University of Lille, France, T. Pietrzak
- Algorithms and imperative programming, 40h, L2, University of Lille, France, T. Pietrzak

**Master**

- Introduction to Computer Graphics, 42h, M1, University of Lille, F. Aubert
- Human-Computer Interaction, 48h, M1, University of Lille, G. Casiez, L. Grisoni, P. Plénacoste, T. Pietrzak
- Multi-Touch Interaction, 24h, M1, University of Lille, G. Casiez, F. Aubert
- Advanced 3D modeling, 20h, M2, University of Lille, L. Grisoni, F. Aubert
- Virtual Reality, 36h, M2, University of Lille, G. Casiez, F. Giraud, F. Aubert, T. Pietrzak
- Artificial Vision, 12h, M2, University of Lille, G. Casiez, L. Grisoni
- Multitouch interaction, 7h, M2, Telecom Lille 1, G. Casiez
- Gesture recognition, 5h, M2, Telecom Lille 1, G. Casiez
- Introduction to virtual reality, 3h, M2, Telecom Lille 1, G. Casiez
- Human-Computer Interaction, 24h, M2, Polytech'Lille, G. Casiez, L. Grisoni
- Human-Computer Interaction, 6h, G2, Ecole Centrale de Lille: N. Roussel
- Introduction to Unity for Virtual Reality, 10h, M2, University of Lille: D. Marchal
- Game Development with Unity, 8h, Formation professionnelle, University of Lille: D. Marchal

### 9.2.2. Supervision

#### Completed Habilitation thesis

Géry Casiez, "Du mouvement à l'interaction et au geste : études, techniques, outils et périphériques", Lille 1 Univ., November 12th 2012, [11]

Frédéric Giraud, "Modélisation et commande des actionneurs piézoélectriques : des applications mécatroniques au domaine de la réalité virtuelle", Lille 1 Univ., March 19th 2012

#### Completed PhD thesis

T. Zheng, "Actionneurs piézo-électriques dans des interfaces homme-machine à retour d'effort", Lille 1 Univ., March 23rd 2012, co-advised by B. Lemaire-Semail and F. Giraud

J-P. Deblonde, "Exploitation de la dynamique du geste en IHM - Application aux fonctions de transfert pour le pointage et l'extraction d'événements discrets", Lille 1 Univ., September 28th 2012, co-advised by L. Grisoni and G. Casiez, [12]

#### Ongoing PhD thesis

N. Bremard, "interaction hybride via smartphone", Lille 1 Univ., started December 2012, advised by L. Grisoni

J. Aceituno, "Designing the ubiquitous desktop", Lille 1 Univ., started October 2011, advised by N. Roussel

J. Gilliot, "Indirect multi-touch interaction", Lille 1 Univ., started December 2010, co-advised by N. Roussel and G. Casiez

Y. Rekik, "Multi-finger gestural interaction", Lille 1 Univ., started September 2010, co-advised by L. Grisoni and N. Roussel

E-G. Craciun, "Nouvelles interfaces pour la simulation des opérations d'assemblage dans des environnements virtuels", Suceava Univ. (Romania), started October 2009, co-advised by L. Grisoni and S-G. Pentiu

C. Moerman, "Interactions multi-touch intuitive sur un contenu 3D, application à l'agencement virtuel d'habitation", Lille 1 Univ., started October 2009, co-advised by C. Chaillou and L. Grisoni

D. Selosse, "Annotation interactive de modèles 3D, application à la reconstruction", Lille 1 Univ., started October 2009, co-advised by L. Grisoni and J. Dequidt

### 9.2.3. Juries

#### Habilitation committees

- Géry Casiez (Lille 1 Univ., November 2012): N. Roussel, warrant and examiner

#### PhD committees

- Mathieu Nancel (Paris-Sud Univ., December 2012): G. Casiez, examiner
- Khaled Aslan Almoubayed (Nantes Univ., November 2012): N. Roussel, reviewer
- Christophe Bortolaso (Toulouse Univ., June 2012): N. Roussel, president

### 9.3. Popularization

- Presentation of recent HCI works to about twenty students from ENS Cachan visiting LIFL (December 14th): N. Roussel
- Animation of **FITG 2012**, the third Forum on tactile and gestural interaction, and its round table on the place of HCI in Inria's strategic plan for 2013-2017 (November 13-14): N. Roussel
- Ten minutes interview for Radio Campus on FITG 2012 and Human-Computer Interaction (October 31st): N. Roussel
- Presentation of recent HCI works to journalists visiting Inria's *Plateau* at EuraTechnologies (September 25th): N. Roussel
- Invited talk as part of the "*Pépites de la Métropole*" series organized by Lille Métropole (June 28th): N. Roussel
- Presentation of recent HCI works to ENSCI visitors on Inria's *Plateau* at EuraTechnologies (June 12th): N. Roussel
- Interview for a regional popular science magazine project (*NordEka !*, May 24th): N. Roussel
- Interview for La Recherche ("*Des tablettes tactiles à sensation*", dossiers n°49, April 18th): N. Roussel
- Invited talk for a round table on design, innovation and intellectual property organized by students from Lille 2 University's Master of Industrial Property (March 16th): N. Roussel
- Interviews for the third edition of the **Transdigital Cookbook** on science, technology, art and business (June 2012): L. Grisoni, N. Roussel
- Animation of a **half-day public conference** on the World Wide Web Consortium, new standards and the mobile web at EuraTechnologies (February 14th): N. Roussel
- Co-animation of the second edition of Inria's internal *Science mediation seminar* (January 23rd): N. Roussel
- Organization of a three-days visit of LIFL and Inria Lille for about 30 students from ENS Cachan Bretagne and Rennes University's Master of Computer Science & talk on Human-Computer Interaction (January 4-6): N. Roussel
- Interview on Radio campus, 25 January 2012, about equipex IrDIVE: L. Grisoni (30 minutes)
- Interview for Le Monde Science & techno, cahier n°21049, September 22th, article "Interagir à distance avec un écran": L. Grisoni
- Interview for L'Usine Nouvelle, article on technologies for gestural interaction, November 2012: L. Grisoni
- Invited talk for a round table on Innovation and digital contents, organized by town council of Lens urban area, November 30th (regional **innovation week**): L. Grisoni, representing Inria institute

## MOSTRARE Project-Team

# 9. Dissemination

## 9.1. Scientific Animation

### 9.1.1. Invited Talks

Bonifati was invited to BDA 2012 (French Conference on databases) to give a tutorial on “Schema matching and mapping: from Usage to Evaluation”. Niehren was invited to the workshop “INQUEST:INnovative QUerying of STreams at Oxford”. The title of his presentation was “Querying XML Streams with Networks of Automata”. Tommasi was invited to give a tutorial on (probabilistic) grammatical inference in “Journées SDA2 Systèmes Dynamiques, Automates et Algorithmique du pôle Algorithmique et Combinatoire du GDR IM (Informatique Mathématique) du CNRS”, see <http://jmc2012.colloques.univ-rouen.fr/>. Tison gave a lecture on Tree Automata, Turing Machines and Term Rewriting at International School on Rewriting.

### 9.1.2. Program Committees

A. BONIFATI was member of the program committee of EDBT 2012, SIGMOD 2012, and VLDB 2012.

P. DENIS was member of the program committee of AAAI 2012, ACL 2012, COLING 2012, EACL 2012, ATALA Workshop on Discourse and NLP 2012, TALN 2012, CSE 2012; he was external Member on CS Assistant Professorship search committee at University of Marseille and expert Member on Research Engineer search committee at CNRS.

A. FRENO was member of the program committee of ANNPR 2012.

G. GARRIGA continues to be member of the editorial board of Machine Learning Journal and of the Intelligent Data Analysis Journal. She was member of the program committees of ECML 2012 (area chair), CIKM 2012, ASONAM 2012, ECAI 2012, ICDM 2012 PhD Forum.

R. GILLERON was member of the program committee of ECML 2012.

J. NIEHREN is member of the steering committee of RTA (International Conference on Rewriting Techniques and Applications), of the editorial board of FUNDAMENTA INFORMATICA. He was in the program committees of CMSB 2012, RTA 2012, TTATT 2012, APWeb 2012, LATA 2012, NCMA 2012, ATANLP 2012.

S. TISON is member of the editorial board of RAIRO - ITA and of the steering committee of RTA and STACS. She was member of the program committee of TTATT 2012, PODS 2012, LATA2012, SOFSEM 2012

M. TOMMASI was member of the program committee of ATANLP 2012

### 9.1.3. French Scientific Responsibilities

A. BONIFATI was member of the selection committee in Lille for professor positions.

R. GILLERON was a member of the scientific committee of the Program Programme Blanc SIMI2, ANR. He was member of the national PES commission 27. He was member of the selection committees of assistant professors in Saint Etienne.

S. TISON is head of the computer science lab in Lille (LIFL). She was member of the scientific committee of the program Chaires Industrielles, ANR. She chairs the scientific council of "Pôle de Compétitivité Industries du Commerce". She was member of the national PES commission 27. She is elected member of the “Comité National de la Recherche Scientifique (CoNRS)” since 2012. She was in the AERES evaluation committee of LIAFA and PPS.

M. TOMMASI is leader of the LAMPADA project.

F. TORRE is member of the french national evaluation committee for computer science assistant professors (CNU 27).

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Master (Mocad): Information extraction, 18h, M2, Université Lille 1, France by J. NIEHREN  
 Master (Mocad): Information extraction, 18h, M2, Université Lille 1, France by P. DENIS  
 Master (Mocad): Information extraction, 18h, M2, Université Lille 1, France by A. BONIFATI  
 Master (Mocad): Information extraction, 18h, M2, Université Lille 1, France by A. FRENO  
 Master: Supervised classification, 45h, M1, Université Lille 1, France by R. GILLERON  
 Master: Unsupervised classification, 30h, M1, Université Lille 3, France by R. GILLERON  
 Master: Information retrieval, 30h, M1, Université Lille 3, France by R. GILLERON  
 Master: Semantic Web, 36h, M2, Université Lille 1, France by R. GILLERON  
 Master: Advanced Databases, 36h, M1, Université Lille 3, France by S. STAWORKO  
 Licence: Statistical Learning, 63h, L3, Université Lille 3, France by M. KELLER  
 Master: Modelization XML, 24h, M1, Université Lille 3, France by S. STAWORKO  
 Licence: Artificial Intelligence and Logic, 63h, L3, Université Lille 3, France by S. STAWORKO  
 Master: Introduction to XML, 40h, M1, Université Lille 3, France by S. STAWORKO  
 Master : Networks, 25h, M2, Université Lille 3, France by M. TOMMASI  
 Master : XML, 25h, M2, Université Lille 3, France by M. TOMMASI  
 Master : Databases, XML, 25h, M2, Université Lille 3, France by M. TOMMASI  
 Master : Document Management systems, 25h, M1, Université Lille 3, France by M. TOMMASI  
 Master : Introduction to algorithms, 25h, M1, Université Lille 3, France by M. TOMMASI  
 Licence : Databases, object oriented programming, 60h, L3, Université Lille 3, France by M. TOMMASI  
 Master : Advanced algorithms and complexity, M1, 57h, Université Lille 1, by S. TISON  
 Licence: Databases, 53h, L3, Université Lille 1, France, by A-C. CARON  
 Master: Advanced databases, 50h, M1, Université Lille 1, France, by A-C. CARON  
 Master: Semantic Web, 20h, M2, Université Lille 1, France, by A-C. CARON  
 Licence: XML Technologies, 50h, M1, Université Lille 1, France by Y. ROOS  
 Master: XML Modelization, 40h, M1, Université Lille 1, France by Y. ROOS  
 Master: XML Technologies, 16h, M2, Université Lille 3, France by A. LEMAY

### 9.2.2. Supervision

PhD June 2012: J.-B. FADDOUL, Machine learning and applications to social network analysis. Since Dec. 2008. Supervised by Gilleron and Chidlowskii from XEROX European Research Center (XRCE).

PhD September 2012: B. GROZ, XML database security and access control. Since Sept. 2008. Supervised by Tison and Staworko.

PhD in Progress: G. LAURENCE, Learning XML transformations for data exchange on the web. Since Sept. 2008. Supervised by Tommasi, Niehren, Staworko and Lemay.

PhD in Progress: J. DECOSTER, Statistical relational learning of XML transformations. Since Sept. 2009. Supervised by Tommasi and Torre.

PhD in Progress: A. M. NDIONE, Probabilistic algorithms for tree automata and transducers. Since Sept. 2010. Supervised by Niehren and Lemay.

PhD in Progress: T. SEBASTIAN, Streaming algorithms for XSLT. Since May 2011. Supervised by Niehren.

PhD in Progress: T. RICATTE, Graph Based Learning for Decisional Databases. May 2011. Supervised by Garriga and Gilleron.

PhD in Progress: A. BOIRET, Top-down tree transformations with look-ahead : foundations and learning. Since Sept. 2011. Supervised by Niehren and Lemay.

PhD in Progress: A. CHATEL, Guided Unsupervised Learning. Since Sept. 2012. Supervised by Denis and Tommasi.

PhD in Progress: R. CIUCANU, Towards learning cross-model database mappings. Since Sept. 2012. Supervised by Boneva, Bonifati and Staworko.

### 9.2.3. Committees

A. BONIFATI was member of the PhD committee of Asma Souihli, Telecom ParisTech (Paris, France) and Rashed Khalil Khalil Salem at Université Lumière Lyon II (Lyon, France); P. DENIS was member of the PhD jury of Emili Sapena at UPC Barcelona; R. GILLERON was member of the PhD jury of J.B. Faddoul (Lille), Y. Benabbas (Lille) and A. Bellet (Saint-Etienne); J. NIEHREN was a reviewer of the Habilitation committee of Pierre Senellart at Telecom Paris. S. STAWORKO was member of the PhD jury of B. Groz (Lille); M. TOMMASI was member of the PhD jury of M. Oita (Telecom Paris); F. TORRE was member of the PhD jury of J.B. Faddoul (Lille)

## 9.3. Popularization

**QuiXProc** A video (<http://videotheque.inria.fr/videotheque/doc/787>) was projected at WWW 2012 (at the booth of Inria); a demonstration “des flux financiers vers les flux XML” was done during the “Rencontres Inria - Industrie: Technologies du web et mobilité au service de l’innovation bancaire et de l’assurance”.

**Artistic project** Denis, Keller and Gilleron collaborate to the artistic project “This is Major Tom to Ground Control” by Véronique Béland ([http://www.veroniquebeland.com/Veronique\\_Beland/This\\_is\\_Major\\_Tom\\_to\\_Ground\\_Control.html](http://www.veroniquebeland.com/Veronique_Beland/This_is_Major_Tom_to_Ground_Control.html)). They contribute to the definition of a probabilistic generator of texts.