Activity Report 2011

Section Dissemination

Edition: 2012-03-22
1. ADAM Project-Team ................................................................. 4
2. ATEAMS Project-Team .......................................................... 10
3. BONSAI Project-Team ............................................................ 13
4. DART Project-Team ............................................................... 16
5. DOLPHIN Project-Team .......................................................... 19
6. MINT Team .......................................................... 24
7. MODAL Team .......................................................... 27
8. MOSTRARE Project-Team ...................................................... 29
9. NON-A Team .......................................................... 31
10. POPS Project-Team ............................................................. 34
11. RMOD Project-Team ............................................................ 37
12. S.H.A.M.A.N Team .............................................................. 39
13. SEQUEL Project-Team ...................................................... 41
14. SIMPAF Project-Team .......................................................... 45
ADAM Project-Team

9. Dissemination

9.1. Animation of the scientific community

9.1.1. Examination Committees

Laurence Duchien was in the examination committee of the following HDR thesis:

- François Taïani, November 2011, University of Rennes (referee),
- Laurent Réveillére, November 2011, University of Bordeaux (referee),
- Philippe Collet, December 2011, University of Nice-Sophia-Antipolis, (member).

She also was in the examination committee of the following Ph.D. thesis:

- Janick Laval, June 2011, University of Lille 1 (chair),
- Carlos Parra, March 2011, University of Lille 1 (co-advisor),
- Daniel Romero, July 2011, University of Lille 1 (co-advisor),
- Zeina Azmeh, September 2011, University of Montpellier, (member),
- Marie-Eléonore Marnion, December 2011, University of Lille 1 (chair),
- Damien Cassou, March 2011, University of Bordeaux (referee),
- Olfa Djebbi, May 2011, Université Paris I-Panthéon (referee),
- Cristobàl Costa Soria, May 2011, Universitat Politecnica de Valencia, Spain (referee),
- Abdelhakim Hannousse, November 2011, University of Nantes (referee).

Romain Rouvoy was in the examination committee of the following Ph.D. thesis:

- Christian Ruz, June 2011, University of Nice (co-referee),
- Daniel Romero, July 2011, University of Lille 1 (co-advisor),
- Grégory Nain, December 2011, University Rennes 1 (member).

Lionel Seinturier was in the examination committee of the following Ph.D. thesis:

- Daniel Romero, July 2012, University of Lille 1 (director)
- Judicael Ribault, January 2011, University of Nice (referee)
- Eric Simon, March 2011, University of Grenoble (referee)
- Yves Vanrompay, May 2011, Katholieke Universiteit Leuven, Belgium (member)
- Mohamed Zouari, June 2011, University Rennes 1 (referee)
- Loris Bouzonnet, September 2011, University of Grenoble (referee)
- Kiev Dos Santos Gama, October 2011, University of Grenoble (referee)
- Anthony Hock-Koon, October 2011, University of Nantes (referee),
- Ali Assaf, October 2011, Ecole des Mines de Nantes (member)
- Kahina Hamadach, November 2011, University of Lille 1 (president)
- Vincent Aranega, November 2011, University of Lille 1 (president)

Philippe Merle was in the examination committee of the following Ph.D. thesis:

- Virginie Legrand Contes, December 2011, University of Nice-Sophia-Antipolis, (co-advisor).
9.1.2. Journals, Conferences, Workshop

Laurence Duchien has been

- member of the following committees:
  - Program committee MAPLE/SCALE 2011, [http://sites.lero.ie/maplescale2011](http://sites.lero.ie/maplescale2011),

- reviewer for the following journals:
  - Editorial board of the TSI (Hermes) journal,

Philippe Merle has been member of the following committees:


Lionel Seinturier has been

- guest co-editor of a special issue of the Elsevier Science of Computing journal on Software Evolution, Adaptability and Maintenance,
- member of the steering committee of the DisCoTec Workshop on Context-aware Adaptation Mechanisms for Pervasive and Ubiquitous Services,
- member of the following committees:
  - 10th ACM International Conference on Generative Programming and Component Engineering (GPCE’11),
  - IEEE International Conference on Computer, Networks, System, and Industrial Engineering (CNSI’11),
  - 3rd IEEE International Conference on Service-Oriented Computing and Applications (SOCA’11),
  - 37th Euromicro Conference on Software Engineering and Advanced Applications (SEAA’11), MOCS Track and DANCE workshop,
  - ACM International Workshop on Security and Dependability for Resource Constrained Embedded Systems (S&D4RCES’11),
  - 4th DisCoTec Workshop on Context-aware Adaptation Mechanisms for Pervasive and Ubiquitous Services (CAMPUS’11),
  - Atelier Adaptation Dynamique des Logiciels (ADAPT’11) at RenPar’20,

Romain Rouvoy has been

- member of the following committees:
  - member of the steering committee of the DisCoTec Workshop on Context-aware Adaptation Mechanisms for Pervasive and Ubiquitous Services,
  - member of the steering committee of the IFIP International Conference on Distributed Applications and Interoperable Systems,

- program co-chair of the following scientific events:
  - 10th International Workshop on Adaptive and Reflective Middleware (ARM’11),
  - 11th IFIP International Conference on Distributed Applications and Interoperable Systems (DAIS’11),

- member of the following program committees:
  - 4th DisCoTec Workshop on Context-aware Adaptation Mechanisms for Pervasive and Ubiquitous Services (CAMPUS’11),
  - 3rd International Workshop on Middleware for Pervasive Mobile and Embedded Computing (M-MPAC’11),
  - 6th International Workshop on Middleware for Service-Oriented Computing (MW4SOC’11),
  - 2nd International Workshop on Green Computing Middleware (GCM’11),
  - 6th International Workshop on Middleware Tools, Services and Run-time Support for Networked Embedded Systems (MidSens’11),
  - 1st International Workshop on Social Service Computing (SSC’11),
  - 1st International Workshop on Adaptive Services for the Future Internet (WAS4FI’11)
  - 1st International Workshop on Distributed Systems: Security, Privacy and Trust Challenges (DS:SPT’11),
  - 1st International Workshop on Middleware and Architectures for Autonomic and Sustainable (MAASC’11),
  - 1st International Workshop on Variability-intensive Systems Testing, Validation & Verification (VAST’11),


Martin Monperrus has been

- referee for the following journals: ACM TOSEM, Springer SoSym, Elsevier Science of Computer Programming

- external referee for the following conferences: AOSD, FSE
9.2. Scientific and Administrative Responsibilities

Team members have several scientific and administrative responsibilities in the university, the INRIA institute and at the national level:

- **Laurence Duchien** is in the steering committee of the ERCIM Software Evolution Group since 2006. She is Co-chair (with Jean-Louis Giavitto) of the Languages and Verification group of the GDR CNRS GPL (Génie de la Programmation et du Logiciel – [http://gdr-gpl.imag.fr](http://gdr-gpl.imag.fr)) since 2008. She will be Director of GDR GPL since January 2012. Since 2010, she is referent for the professional insertion of the PhD program in Computer Science at PRES University Lille Nord de France. In 2011, she served as a member of the Comité de sélection for recruiting professors at INSA Lyon and as chair of the Comité de sélection for recruiting professors at University Lille 1. In 2011, she served as a member of Inria Lille-Nord Europe committee for junior scientists. In 2011, she served as an expert and reviewed projects for various ICT programs: ANR ARPEGE and EGIDE PHC Barrande.

- **Lionel Seinturier** is junior member of Institut Universitaire de France since October 2011. He has been elected member of Conseil National des Universités (CNU 27, collège A) in October 2011 for a 4-year term. In 2011 he served as a member of the Prime d’Excellence Scientifique jury for the Higher Education Ministry. He is financial director of Laboratoire d’Informatique Fondamentale de Lille since October 2007. He is an elected member of the LIFL council (since 2007) and of the Lille 1 UFR IEEA council (since 2007). In 2011, he served as a member of the Comités de sélection for recruiting associate professors at University Lille 1, Institut National Polytechnique Grenoble and INSA Toulouse. In 2011, he served as a member of Inria C2D Lille committee for granting "Inria délégations". In 2011, he served as an expert and reviewed projects for various ICT programs: ANR ARPEGE, ANR MN, EGIDE COFECUB France-Brazil, DRRT Nord label Jeune Entreprise Innovante and DRRT Nord Crédit Impôt Recherche.

9.3. Supervision

The PhD Students advised by team members are listed in Table 1.

9.4. Teaching

Permanent members teach the following courses:

- **Laurence Duchien** teaches several courses on:
  - Software Product Lines, 6 H ETP, Level M2, Master of Computer Science speciality IAGL, University Lille 1, France,
  - Software Project Management, 50 HETP, Level M2, Master MIAGE, University Lille 1, France,
  - Network Computer, 37.5 H ETP, Level L3, Licence MIAGE, University Lille 1, France,
  - Object-Oriented Design, 42 H ETP, Level M2, Master of Computer Science, University Lille 1, France,
  - Research and Innovation Initiation, 17 H ETP, Level M2, Master of Computer Science, University Lille 1, France,
  - Tutoring Internship, 22 H ETP, Level M2, Master of Computer Science, University Lille 1, France.
Table 1. Supervision activities of ADAM

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Start Date</th>
<th>Advisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rémi Druilhe</td>
<td>Réduction de l’emprunte énergétique dans la maison numérique</td>
<td>10/2010</td>
<td>Lionel Seinturier (Dir) et Laurence Duchien</td>
</tr>
<tr>
<td>Alexandre Feugas</td>
<td>Maintien de la qualité de service au cours de l’évolution d’applications orientées services</td>
<td>10/2010</td>
<td>Laurence Duchien (Dir), Sébastien Mosser</td>
</tr>
<tr>
<td>Nicolas Haderer</td>
<td>AntDroid: Opportunistic Mobile Sensing of User Activities</td>
<td>09/2010</td>
<td>Lionel Seinturier (Dir) et Romain Rouvoy</td>
</tr>
<tr>
<td>Jonathan Labéjof</td>
<td>Evolution des architectures orientées service hétérogènes</td>
<td>11/2009</td>
<td>Lionel Seinturier (Dir), Philippe Merle</td>
</tr>
<tr>
<td>Matias Martinez</td>
<td>Automated Program Repair at Development and Runtime</td>
<td>10/2011</td>
<td>Laurence Duchien (Dir), Martin Monperrus</td>
</tr>
<tr>
<td>Rémi Mélisson</td>
<td>Set Tob Box virtualization in a Software Defined Network context</td>
<td>10/2010</td>
<td>Laurence Duchien (Dir), Romain Rouvoy</td>
</tr>
<tr>
<td>Adel Noureddine</td>
<td>Software Engineering for Green Autonomic Systems</td>
<td>11/2010</td>
<td>Lionel Seinturier (Dir) et Romain Rouvoy</td>
</tr>
<tr>
<td>Russel Nzekwa</td>
<td>Building Feedback Control Loops for Self-Adaptive Very-Large-Scale Environments</td>
<td>10/2009</td>
<td>Lionel Seinturier (Dir) et Romain Rouvoy</td>
</tr>
<tr>
<td>Fawaz Fernand Paraïso</td>
<td>Interopérabilité des environnements middleware de cloud computing</td>
<td>10/2011</td>
<td>Lionel Seinturier (Dir), Philippe Merle</td>
</tr>
<tr>
<td>Clément Quinton</td>
<td>Migration d’applications dans les environnements middleware de cloud computing</td>
<td>10/2011</td>
<td>Laurence Duchien (Dir), Lionel Seinturier</td>
</tr>
<tr>
<td>Gabriel Tamura</td>
<td>QoS-CARE: A Reliable System for Preserving QoS Contracts through Dynamic Reconfiguration</td>
<td>10/2009</td>
<td>Laurence Duchien (Dir), Rubby Casallas</td>
</tr>
</tbody>
</table>
She heads the research program in Master of Computer Science at University Lille 1 (http://www.fil.univ-lille1.fr/portal/index.php?dipl=MInfo&sem=RIC&ue=ACCUEIL). She is referent for the professional insertion in the PhD program in Computer Science at PRES University Lille Nord de France.

- **Lionel Seinturier** heads the E-Service specialty of the Master of Computer Science at the University Lille 1. He teaches several courses on middleware, component-based software engineering, aspect-oriented programming, and object-oriented design in Master of Computer Science at the University Lille 1:
  - Conception d’applications réparties, 18h, M1, University Lille 1, France
  - Infrastructures et frameworks Internet, 6h, M2, University Lille 1, France

- **Romain Rouvoy** supervises the Agil-IT Junior Enterprise (http://agil-it.fr) and teaches at University Lille 1:
  - Mise à niveau Web, 25h ETP, Level L3, Master of Computer Science speciality MIAGE, UFR IEEA, University Lille 1, France,
  - Technologies Web, 20h ETP, Level L3, Master of Computer Science speciality MIAGE, UFR IEEA, University Lille 1, France,
  - Conception d’Applications Réparties, 18h ETP, Level M1, Master of Computer Science, UFR IEEA, University Lille 1, France,
  - Qualité du Logiciel, 30h ETP, Level M2, Master of Computer Science speciality MIAGE, UFR IEEA, University Lille 1, France,
  - Infrastructures et Frameworks Internet, 23h ETP, Level M2, Master of Computer Science speciality IAGL, UFR IEEA, University Lille 1, France,
  - Innovation & Initiation à la Recherche, 14h ETP, Level M2, Master of Computer Science speciality IPI-NT, UFR IEEA, University Lille 1, France,
  - Suivi de projets, 60h ETP, Level M2, Master of Computer Science, UFR IEEA, University Lille 1, France,
  - Suivi d’alternants, 60h ETP, Level M2, Master of Computer Science, UFR IEEA, University Lille 1, France.

- **Martin Monperrus** teaches at the University Lille undergraduate and graduate courses. In particular:
  - Introduction to programming, 48h, L1, University Lille 1, France
  - Object-oriented design, 39h, L3, University Lille 1, France
  - Automated software engineering, 28h, L3, University Lille 1, France

**9.5. Miscellaneous**

- The team has organized the 3rd “Journées du GDR CNRS GPL”². The event gathered 226 participants from June 7 to June 20, 2011.
- The team has organized its internal seminar in Mombreux from August 31 to September 2, 2011.
- The team has participated to RIC (Research, Innovation, Creation) Day, Lille, October 2011³.

---
² http://www.lifl.fr/idm-gpl
³ http://www.lifl.fr/~duchien/RIC/11-12_10_2011.html
ATEAMS Project-Team

9. Dissemination

9.1. Animation of the scientific community

- Jan van Eijck: Member of the European Network in Computational Logic
- Jan van Eijck: Member of the International Quality Assessment Committee
- Mark Hills: Participation WG 2.11 Program Generation
- Mark Hills: Program committee chair K workshop
- Mark Hills: Reviewing Journal of Logic and Algebraic Programming
- Mark Hills: Reviewing Science of Computer Programming
- Mark Hills: Reviewing Software: Practice and Experience
- Mark Hills: Keynote lecture (AMMSE) for Computer Science and AI in Flanders, Belgium
- 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: Head of Software engineering Department, CWI
- Paul Klint: Head of CWI Research group Software Analysis and Transformation (SEN1)
- 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: External advisor PlanComps project (UK)
- Paul Klint: Program committee CEE-SET
- Paul Klint: Program committee EVOL
- Paul Klint: Program committee ICECCS
- Paul Klint: Program committee SERENE
- Paul Klint: Program committee WasDETT
- Paul Klint: Program committee SLE
- Paul Klint: Program committee SLE
- Paul Klint: Co-organizer INRIA Software Engineering Conference (Amsterdam)
- Paul Klint: Keynote speaker SLE
- Paul Klint: Invited speaker PlanCoMPS meeting (Swansea)
- Paul Klint: Invited speaker XBRL (Kansas, U.S.A.)
- Paul Klint: Invited speaker AIESEC (Utrecht, The Netherlands)
- Paul Klint: PhD committee Jeroen Arnoldus, Technical University Eindhoven, Feb 1, 2011
- Paul Klint: PhD committee Thomas Bernard, University of Amsterdam, March 11, 2011
- Paul Klint: PhD committee Damien Cassou, University of Bordeaux, March 17, 2011
Paul Klint: PhD committee Lennart Kats, Delft University, December 13, 2011

Tijs van der Storm: Participation WG 2.11 Program Generation

Tijs van der Storm: Invited speaker Scientific Meeting CWI

Jurgen Vinju: Editor of the special issue of Science of Computer Programming on Language Descriptions Tools and Applications (to appear)

Jurgen Vinju: Co-editor of the special issue of Science of Computer Programming on Source Code Analysis and Manipulation (in preparation)

Jurgen Vinju: Program committee ESEC/FSE

Jurgen Vinju: Program committee GPCE

Jurgen Vinju: Program committee ICMT

Jurgen Vinju: Program committee K Workshop

Jurgen Vinju: Program committee LOPSTR

Jurgen Vinju: Program committee SCAM

Jurgen Vinju: Steering committee SCAM

Jurgen Vinju: Program committee SLE

Jurgen Vinju: Workshop selection chair SLE

Jurgen Vinju: Program committee SQM

Jurgen Vinju: Program committee WASDETT

Jurgen Vinju: Invited speaker Theoretical Computer Science Amsterdam

Jurgen Vinju: Secretary Van Wijngaarden Awards CWI

Jurgen Vinju, Mark Hills, Tijs van der Storm: Participation WG 2.11 Program Generation

Jurgen Vinju: Reviewing Journal of Software Maintenance and Evolution: Research and Practice

Jurgen Vinju: Reviewing Transactions on Software Engineering (TSE)

Vadim Zaytsev: Publicity chair GTTSE

Vadim Zaytsev: Publicity co-chair SLE

Vadim Zaytsev: Program chair of Wikimedia Conference Netherlands (WCN)

Vadim Zaytsev: Program committee SCAM

Vadim Zaytsev: Program committee SCAM

Vadim Zaytsev: Invited talk TU Delft

Vadim Zaytsev: Wikimania presentation “Wiki migration using Rascal”

9.2. Teaching

ATEAMS taught the following courses in 2011:

Master: Software Evolution, 8 hours per week, Universiteit van Amsterdam, The Netherlands. Jurgen Vinju responsible, assistants Paul Klint, Vadim Zaytsev, Tijs van der Storm, Anastasia Izmaylova, Davy Landman and Atze van der Ploeg.

Master: Software Construction, 8 hours per week, Universiteit van Amsterdam, The Netherlands. Tijs van der Storm responsible, assistants Jurgen Vinju and Mark Hills.

Master: Software Testing, 8 hours per week, Universiteit van Amsterdam, The Netherlands. Jan van Eijck responsible, assistants Bert Lisser and Floor Sietsma.

Bachelor: 5 language Summer school (Rascal day), 8 hours, Tijs van der Storm responsible, assistants Mark Hills, Jeroen van den Bos and Atze van der Ploeg.

Master: Software Evolution, Open Universiteit, The Netherlands. Paul Klint and Jurgen Vinju facilitate two guest courses and the course material.
These are the PhD students of ATEAMS in 2011:

PhD: Bas Basten, Ambiguity Detection for Programming Language Grammars, Universiteit van Amsterdam, December 15th 2011, supervisors Paul Klint, Jurgen Vinju

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


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

PhD in progress: Davy Landman, Recovery and Synthesis of Domain Specific Language Design, started 2011

PhD in progress: Floor Sietsma, Logics of Communication and Knowledge, started 2009, supervisors Jan van Eijck, Krzysztof Apt

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

ATEAMS members supervised the following masters theses in 2011:


Jouke Stoel, Finding Naming Bugs with Formal Concept Analysis (to appear)

Davy Landman, Exploring Methods for Locating Features in Software Systems: a DSL Perspective

Gijs van Lammeren, Automatic Scaling of the Windows Azure Platform: A study on the efficiency of scaling policies

Jan de Mooij, Testcase Generation based on Property-based Testing

Joost Pastoor, Sensor query performance optimization by caching

Lennart Tange, Test-based modeling

Roberto van der Horst, The Influence of First-Class Relations on Coupling and Cohesion: A Case Study

Marvin Jacobsz, Een performance analyse van “Hiphop for PHP”

Aart van den Dolder, Bepaling van de geschiktheid van Oracle Forms applicaties voor inbeheername door middel van automatische code review volgens het SIG Maintainability model

Randy Fluit, Differentiating Context-free Grammars

Willem Fibbe, Calculating detailed source code metrics and applying them to find code clones

Freddy Offenga, Aanleiding tot refactoring : Een exploratief onderzoek naar detectie en uitvoering van de Rename Method refactoring

Rob Smit, Idioms-based Business Rule Extraction

Lammert Vinke, Estimate the post-release Defect Density based on the Test Level Quality

Lennart Tange, Test-based Modeling

Niels Beekman, Evaluation of storage mechanisms for a content repository

Maarten Hoekstra, Static source code analysis with respect to ORM performance anti-patterns
8. Dissemination

8.1. Animation of the scientific community

8.1.1. Administrative activities

- 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 take part yearly to the organization of an annual national workshop on sequence analysis and bioinformatics. This year, the workshop is hosted in Lille.
- H. Touzet is a national representative (chargée de mission) for the Institute for Computer Sciences (INS2I) in CNRS. She is more specifically in charge of relationships between the Institute and biology sciences.
- Member of the INRIA evaluation committee (M. Giraud)
- Scientific secretary of the Gilles Kahn PhD award committee (M. Giraud)
- Member of ITMO Genetics, Genomics and Bioinformatics of AVIESAN (H. Touzet)
- The team is in charge of the PPF Bioinformatique. This is an initiative of Université Lille 1 that coordinates bioinformatics activities at the local level. It gathers seven labs coming from biology, biochemistry and computer science. Main topics are proteomics, microbiology, population genetics, etc. In this context, we organized three one-day workshops, that gathered around 60 people each: high performance computing for biology, text mining in biology, Analysis of NGS data.
- Head of PPF bioinformatics – University Lille 1 (H. Touzet)
- Head of CIB, 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)
- Coordinator for the RAweb 2011 of INRIA Lille Nord Europe (A. Ouangraoua)
- Member of Cordis-Postdoc committee for LNE center (M Pupin)
- Member of UFR IEEA council (M. Pupin)
- Member of Polytech’Lille council (S. Janot)
- Member of the LIFL Laboratory council (H. Touzet)
- Member of hiring committee (jury d’audition) of IUT de Strasbourg (L. Noé), Université Lille 1 (M Pupin), Université Bordeaux 1 (M Giraud), INRIA (M Giraud), Université Montpellier 2 (M. Salson)

\(^3\text{CNRS: National Center for Scientific Research}\)
8.1.2. Project reviewing activities
- Reviewer for the Research Foundation Flanders (FWO) (J.-S. Varré)
- Reviewer for CNRS PEPS and PEPPII programs (H. Touzet)

8.1.3. PhD theses, and HdR committees
- Member of the thesis committee of Anne-Laure Gaillard, Univ. Bordeaux 1 (M. Giraud),
- Member of the thesis committee of Kunthea Phok, INRA Toulouse, Anouar Ben Hassena, Université Rennes 1, and habilitation committee of Eric Tannier, Université Lyon 1 (H. Touzet)

8.1.4. Editorial and article reviewing activities

8.2. 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).

8.2.1. Licence (bachelor)
Teaching in computer science (University of Lille 1, unless otherwise stated)
- Programming (OCaml), 50h, L2 (second year of bachelor) (J.-S. Varré)
- Algorithms (Ada), 58h, L3 (third year of bachelor) (L. Noé)
- Networks, 36h, L3 (third year of bachelor) (L. Noé)
- System, 36h, L3 (third year of bachelor) (L. Noé)
- Algorithms and Data Structures, 60h, L3 (third year of bachelor) (J.-S. Varré)
- Introduction to Programming (OCaml), 54h, L1 (first year of bachelor) (M. Salson)
- Coding and information theory, 36h, L2 (second year of bachelor) (M. Salson)
- C programming, 42h, L3 (third year of bachelor) (M. Salson)
- Imperative Programming, 48h, L1 (first year of bachelor) (M. Giraud)
- Computation and Architecture, 36h, L1 (first year of bachelor) (M. Giraud, Univ. cath. of Lille)
- Introduction to programming, 50h, first year of engineering school (L3) (S. Janot)
- Introduction to Databases, 30h, first year of engineering school (L3) (S. Janot)
- Programming (OCaml), 36h, L1 (first year of bachelor) (M. Pupin)
- Professional project, 18h, L3 (third year of bachelor) (M. Pupin)
- Algorithmics, second year of bachelor, 30h, L2 (second year of bachelor) (A. Saffarian)
8.2.2. Master

Lectures on bioinformatics, University of Lille 1.

- **Bioinformatics**, 54h, M1 (first year of master in genomics and proteomics) (L. Noé)
- **Bioinformatics**, 24h, M1 (first year of master in genomics and microbiology) (A. Ouangraoua)
- **Bioinformatics**, 36h, M2 (second year of master in cellular and molecular engineering) (J.-S. Varré)
- **Applications and Algorithms in bioinformatics**, 21h, M1 (first year of master in computer science) (S. Blanquart)
- **Introduction to Programming (JAVA)**, 30h, M1 (first year of master) (M. Pupin)
- **Individual project**, organiser, M1 (first year of master in computer science) (L. Noé)
- **Databases**, 12h, second year of engineering school (M1) (S. Janot)
- **Introduction to Artificial Intelligence**, 25h, second year of engineering school (M1) (S. Janot)
- **Artificial Intelligence and Constraint programming**, 25h, third year of engineering school (M2) (S. Janot)
- **Final project**, organiser, third year of engineering school (M2) (S. Janot)

8.2.3. PhD

- **Azadeh Saffarian**, Prediction and pattern matching algorithms for RNA multi-structures, Université Lille 1, November 16, 2011, co-directed by H. Touzet and M. Giraud.
- **Tuan Tu Tran**, Massively parallel algorithms and data structures for bioinformatics, Université Lille 1, in progress, co-directed by J-S. Varré and M. Giraud.
- **Antoine Thomas**, Algorithms for genome rearrangement with duplications, Université Lille 1, in progress, co-directed by J-S. Varré and A. Ouangraoua.
- **Evguenia Kopylova**, New algorithmic and bioinformatic approaches for the analysis of data from next-generation sequencing, Université Lille 1, in progress, co-directed by H. Touzet and L. Noé.

8.3. Popular science

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](http://www.lifl.fr/~giraud/puzzles). In 2011, we demonstrated these puzzles to more than 350 pupils in 7 high schools of the region (J.F. Berthelot, S. Blanquart, M. Giraud, L. Ott, A. Saffarian, M. Salson).
DART Project-Team

7. Dissemination

7.1. Animation of the scientific community

Cedric Dumoulin was reviewers in the following revues or conferences:


Abdoulaye Gamatié gave an invited talk at LCTES’11 on Model Driven Design Framework for Massively Parallel Embedded Systems. He was in the program committee of the LCTES’2011, MSR’2011 (PC Chair), ESLsYn’2011, ACCA’2011 and M-BED’2011 conferences. He was also organizing local chair of the MSR’2011 conference. He was member of a PhD thesis committee in 2011. Finally, he was member of the following selection committees in 2011: PhD candidates and Post-doctorates at INRIA Lille - Nord Europe, Associate Professor at IUT A - Université Paul Sabatier in Toulouse.

Anne Etien was member of the program committee of ECMFA 2011, Informis 2011, the Model and Evolution Workshop organized jointly to the Models conference. She was also reviewer for the international Journal Sosym.

Pierre Boulet chaired and organized MBED’11 a workshop collocated with DATE’11, Grenoble, France, March 18, 2011 (http://www.ecsi.org/m-bed-2011). He was member of the program committee of RAPIDO’11. He has also reviewed papers for the Journal of Systems Architecture, for Design Automation for Embedded Systems and for the Software and System Modeling (SoSyM) journal. He was also a referee of three PhDs and two “habilitations à diriger des recherches” in 2011.


Vlad Rusu was referee for the PhDs of of Machiel vad der Bijl (Univ. Twente, the Netherlands) on Compositionality and Refinement on Model-Based Testing, and Adrián Riesco (Univ. Madrid) on Debugging and Heterogenous Verifications in Maude.

Frédéric Guyomarch gave an invited talk for the celebration of the 20th LERMA’s birthday on the FIT solver for simulation of electromagnetic problems.

We have participated in the organisation of the “Journées sur l’Ingénierie Dirigée par les Modèles” (IDM Days), co-located with the “Journées du GDR Génie de la Programmation et du Logiciel” (GDR GPL Days) (http://rmol.lille.inria.fr/idm-gpl/pier).

We also organized the 3rd Workshop on Rapid Simulation and Performance Evaluation: Methods and tools (Rapido’2011 http://www.2.lifl.fr/rapido/Rapido/Home.html)

DART project members co-organized (in cooperation with CEA and Polytechnico di Milano) the 3rd Rapido workshop on Saturday 22 Jan 2011 in Heraklion, Crete, Greece. This workshop on Rapid Simulation and Performance Evaluation: Methods and tools (http://www.2.lifl.fr/rapido/Rapido/Home.html) occurred in conjunction with the 6th International Conference on High-Performance and Embedded Architectures and Compilers of the Hipecp FP7 network of excellence (NoE HiPEAC). More than 30 researchers attended the conference. Four talented invited speakers gave keynotes and 8 papers have been selected and presented in the workshop on different aspects of design and simulation of embedded systems.
7.2. Teaching

**Licence:**

- Licence : Introduction to computers architecture, 44h, L1 Université de Lille 1, France (Frédéric Guyomarch)
- Licence : Mathematics for informatics, 64h, L2 Université de Lille 1, France (Frédéric Guyomarch)
- Licence : Datastructures, 44h, L1 Université de Lille 1, France (Frédéric Guyomarch)
- Licence : Algorithmics and programming in JAVA, 64h, L1 Université de Lille 1, France (Frédéric Guyomarch)
- Licence: System Programming, 60h, L3, Université Lille 1, France (Philippe Marquet)
- Licence: Algorithmics and programming: an introduction, 30h, L3, Polytech’Lille, France (Julien Forget)
- Licence: Languages and translators, 14h, L3, Polytech’Lille, France (Julien Forget)
- Licence: Advanced programming, 10h, L3, Polytech’Lille, France (Julien Forget)
- Licence: Algorithmics, 24h, L3, Polytech’Lille, France (Julien Forget)
- Licence: Introduction aux Bases de données, 50h, L3, Université Lille 1 (EPU), France (Anne Etien)

**Master:**

- Master : Advanced Object Conception, 69h, M1, Université Lille 1, France (Cédric Dumoulin)
- Master : New Technologies for the Web, 75h, M2, Université Lille 1, France (Cédric Dumoulin)
- Master : Embedded System Design, 18h, M2, Télécom Lille 1, France (Abdoulaye Gamatié et Pierre Boulet)
- Master : Distributed Systems, 18h, M2, Université Lille 1, France (Pierre Boulet)
- Master : UML profiles for Embedded Systems, 3h, M1, University of Oran, Algeria (Pierre Boulet)
- Master: Design of Operating System, 42h, M1 Université Lille 1, France (Philippe Marquet)
- Master: Parallel and Distributed Programming, 24h, M1 Université Lille 1, France (Philippe Marquet)
- Master: Introduction to Innovation and Research, 15h, M2 Université Lille 1, France (Philippe Marquet)
- Master: Operating systems, 40h, M1, Polytech’Lille, France (Julien Forget)
- Master: Advanced operating system programming, 8h, M1, Polytech’Lille, France (Julien Forget)
- Master: Fundamentals of computer science, 8h, M1, Polytech’Lille, France (Julien Forget)
- Master: Distributed systems, 8h, M2, Polytech’Lille, France (Julien Forget)
- Master : Bases de données, 20h, M1, Université Lille 1 (EPU), France (Anne Etien)
- Master : Ingénierie Logicielle, 20h, M2, Université Lille 1 (EPU), France (Anne Etien)

7.2.1. Undergraduate

Laure Gonnord teaches several basic courses such as algorithmics, programming in C, compilation and an introduction to theoretical computer science for engineers.

Laure Gonnord has co-supervised with Christophe Alias (Compsys) Guillaume Andrieu’s undergraduate internship on modular termination of C programs.

7.2.2. Graduate

Vlad Rusu co-supervises the PhD thesis of Andrei Arusoaie with Dorel Lucanu (University of Iasi, Romania) on the design and analysis of DSMLs using in the K framework (since October 2011).
7.2.3. Post-Graduate

Vlad Rusu is the supervisor of the postdoctoral research of Christophe Calvès on the formal definition of Kermeta in the K framework (since September 2010).

Abdoulaye Gamatié has supervised Sarra Boumedien, Master Student Sfax Tunisia, March-July for her master thesis on Clock-based Design of a Multimedia Application on SoCs.

PhD & HdR (Les thèses soutenues doivent figurer dans la bibliographie):

- PhD in progress: Amen Souissi, "Propagation bidirectionnelle des modifications effectuées sur un modèle appartenant à une chaîne de transformation de modèles", 01/10/2009, Pierre Boulet et Cedric Dumoulin
- PhD in progress: Amine EL KOUHEN, Méta-modèle d’adaptation des outils de modélisation, Janvier 2011, Cédric DUMOULIN (LIFL), Sébastien GERARD (CEA), Pierre BOULET (LIFL)
- Vincent Aranega has defended his PhD thesis entitled "Tracabilité pour la mise au point de modèle et la correction de transformation" on November 2011.
DOLPHIN Project-Team

9. Dissemination

9.1. Animation of the scientific community

Members from the DOLPHIN project team are involved into the following activities relation to the animation of the scientific community.

9.1.1. Research management

- Co-fondator and chair of the group META (Metaheuristics: Theory and Applications, http://www.lifl.fr/~talbi/META). This group is associated with the ROADEF (French Operations Research Society), and the CNRS research groups GDR ALP and MACS.
- Co-fondator and co-chair of the Euro Working Group en Tarification et Gestion du Revenu. This group is associated with EURO (European Operations Research Society).
- Chair of the group PM2O (Multi-objective Mathematical Programming, http://www.lifl.fr/PM2O). This group is associated with the ROADEF (French Operations Research Society), and the CNRS research group GDR RO (Operations Research).
- International correspondant for ROADEF (French Operations research Society)
- Secretary and Tresorer of EA (National group on evolutionary computation - http://www2.lifl.fr/EA).
- Direction of the CIB (Bioinformatics Center) of the Genopole of Lille.
- Scientific Committee of the Genopole of Lille.
- Steering Committee of the INRIA nation-wide ADT Aladdin-Grid5000.
- Co-leader of an ALADDIN working group on scalability of Grid-enabled algorithms and applications.
- Member of the Scientific Committee of High-Performance Computing of Université Lille1.
- Coordinator of the High Performance Computing collaborative research action at LIFL.
- Leader of the PPF "High Performance Computing" at Université Lille1.
- Member of the committee of the jury to deliver the TSL best paper award (INFORMS: Transportation Section and Logistics).

9.1.2. Participation to working groups

- EURO-PAREO (European working group on Parallel Processing in Operations Research).
- EURO-PRM (European working group on Pricing and Revenue Management).
- EURO-EU/ME (European working group on Metaheuristics).
- EURO-ESICUP (European Working Group on Cutting and Packing).
- EURO-MCDA (European Working Group on Multicriteria Decision Aiding).
- ECCO (European Chapter on Combinatorial Optimization).
- ERCIM (European Research Consortium for Informatics and Mathematics) working group on Soft Computing.
- EA - JET (National Group on Evolutionary Computation).
- KSO (National Group on Cutting and Packing).
- MCDM (International society on multiple criteria decision making)
Optimization, Learning and Statistical Methods - Dissemination - Project-Team DOLPHIN

- PM2O (National Group on Multi-objective Mathematical Programming).

9.1.3. Editions
- Special Issue (Graph and Optimization Meeting 2008) in Networks, volume 58, issue 2, 2011

9.1.4. Organizations of sessions, workshops and conferences
- Organization of the Stream on Pricing and Revenue Management at IFORS 2011 (The International of Operational Research Societies), Melbourne
- Publicity chair of international conference EA 2011 (Angers, France)
- Co-organization of the 6th summer school of EA 2011 (Calais, France)
- Organization of sessions at ROADEF 2011 (St Etienne, France)

9.1.5. Editorial boards
- Editorial board of the International Journal of Intelligent Computing and Cybernetics (IJICC)
- Editorial board of the International Journal of Innovative Computing and Applications (IJICA)
- Editorial board of the International Journal of Pervasive Computing and Communications
- Editorial board of the Book Series in Intelligent Systems Engineering, Nova science Publishers, NY, USA
- Advisory board of the Book Series on Nature Inspired computing, Wiley & Sons, NY, USA
- Honorary Advisory Board of the International Journal on Mathematical Modeling and Numerical Optimization (IJMMNO)
- Editorial board of the Mediterranean Journal of Artificial Intelligence (MJAI)
- Editorial board of the International Journal of Data Mining, Modelling and Management (IJDMM)

9.1.6. Reviews
- Review of research projects:
  - Evaluation of a three-year project for the ANR (Agence Nationale pour la Recherche)
  - Evaluation of a JEI (Jeune Entreprise Innovante) and evaluation of a proposal for the CIR (Crédit Impôt recherche).
  - Evaluation of PEPS - PEPII for CNRS
  - Evaluation of national project fund by Luxembourg
- Review of journal papers:
  - Journal of Soft Computing
  - Journal of Discrete Applied Mathematics
  - COR: Computers & Operations Research (Elsevier)
  - Transportation Science(Inform)
  - European Journal of Operational Research (Elsevier)
  - Journal of Heuristics (Springer)
9.1.7. Program committees

- EA 2011
- LION 6
- GECCO 2011
- IFORS 2011, Melbourne, 2011
- CPAIOR 2012, Nantes, 2012
- ROADEF 2011, "douzième congrès de la Société Française de Recherche Opérationnelle et d’Aide à la Décision"
- "Journée Polyèdre et Optimisation Combinatoire" (JPOC), Valenciennes, 2011
- ALEA 2011: Artificial Life and Evolutionary Algorithms, as a part of EPIA 2011, Lisbon, Portugal, 2011
- EMO 2011: 6th International Conference on Evolutionary Multi-criterion Optimization, Ouro Preto, Brazil, 2011

El-Ghazali Talbi was member of the program committee of the following conferences

- GECCO’2011, Dublin, Ireland.
- EA’2011, Angers, France.
- MIC’2011, Udine, Italy, July 2011.
- HAIS’2011 6th Int. Conf. on Hybrid Artificial Intelligence Systems”, Wroclaw, Poland, May 2011.
- IESM’2011 Int. Conf. on Industrial Engineering and Systems Management, Metz, France, May 2011.
- ICSI’2011 Int. Conf. On Swarm Intelligence, Cergy, France, June 2011.
- iCAST’2011: 3rd IEEE International Conference on Awareness Science and Technology, Dalian, China, Sept 2011.
- GreenITEC’11 Workshop on ”GreenIT Evolutionary Computation” as part of GECCO’ 2011, Dublin, Ireland, July 2011.
9.1.8. Phd and HdR committees

El-ghazali Talbi was a jury member of the following Phd thesis:

- Semya Elaoud, "Genetic and exact methods to solve multi-objective optimization problems", University of Mons, Belgium.
- Juan Jose Durillo, "Metaheuristics for multi-objective optimization: design, analysis and applications", University of Malaga, Spain.
- Elisabeth Montero, "Calibration strategies for bio-inspired population-based algorithms that solve combinatorial optimization problems", University of Nice-Sophia Antipolis.

Clarisse Dhaenens was a jury member of the following PhD thesis:


Laetitia Jourdan was a jury member of the following Phd thesis:

- Mohammed Amir Esseghir, "Metaheuristiques pour le problème de la sélection d’attributs: approches mémétiques, adaptatives et particulaires".

9.1.9. Commission

- Presidence of the C2D commission of the Lille INRIA center (Commission Détachement Délégation).
- Participation to a selection committee (Position McF 484, Université Lille I).
- Participation to a selection committee (Position McF, Université de Valenciennes).
- Participation to a selection committee (Concours de Chargé de Recherche INRIA (CR1-CR2).
- Participation to a selection committee for chaire INRIA-Lille 3 (COS 2011)
- Participation to "Comité de Centre INRIA Lille Nord Europe"

9.2. Teaching

Initiation à la programmation, 54h (L1) Université de Lille 1, France
Programmation orienté objet, 80h (DUT informatique), Université de Lille 1, France
Méthodes mathématiques pour la modélisation, 64h, (DUT informatique), Université de Lille 1, France
Conception orientée objet, 48h (DUT informatique), Université de Lille 1, France
Systèmes d’exploitation, 48h (DUT informatique), Université de Lille 1, France
Algorithmique - 50 H eq TD (L3), Engineering school Polytech’Lille.
Graphs and combinatorics - 55 H eq TD (L3), Engineering school Polytech’Lille.
Operations Research - 70 H eq TD, Engineering school Polytech’Lille.
Fouille de données 25h (M1), L1, Université de Lille 1, France,
Informatique Décisionnelle 35h (M1), Université de Lille 1, France,
Mise à niveau en informatique décisionnelle et en recherche opérationnelle 25h (M1), Université de Lille 1, France
Algorithmique Avancée, Complexité, calculabilité, 32h (M1), Université de Lille 1, France
Operations Research - 70 H eq TD (M1), Engineering school Polytech’Lille.
Combinatorial Optimization, 35h (M2), Université de Lille 1, France
Grid Computing, 16h (M2), Université de Lille 1, France
Parallel and Distributed Programming, 12h (M1), Université de Lille 1, France
Advanced Object Programming, 52h (M1), Université de Lille 1, France
Design of Distributed Applications, 60h (M1), Université de Lille 1, France
Algorithms and Applications, 28h, Université de Lille 1, France

PhD soutenues :

PhD : Alexandre Huart, Optimisation de ressources en logistique urbaine, Université de Valenciennes, 9/12/2011, L. Brotoorne and F. Semet.
PhD : Mostepha Khouadjia, Solving Dynamic Vehicle Routing Problems: From Single-Solution Based Metaheuristics to Parallel Population Based Metaheuristics, Université de Lille 1, 2/12/2011, L. Jourdan and E-G. Talbi
PhD : The-Van Luong, Parallel metaheuristics on GPU, Université de Lille 1, 01/12/2011, N. Melab and E-G. Talbi

PhD in progress :

• Mathieu Djamai, Contributions in peer-to-peer systems for combinatorial optimization, October 2009, N. Melab and B. Derbel.
• Trong-Tuan Vu, Robust distributed algorithms for large scale problem solving, October 2011, N. Melab and B. Derbel.
• Francois Legillon, Ordonnancement d’applications dans les clouds hybrides, October 2011, E-G. Talbi and N. Melab.
• Yacine Kessaci, Energy-aware scheduling in clouds, October 2009, E-G. Talbi and N. Melab.
• Mustapha Diaby, Yield Management and Supply chain Management, September 2010, L. Brotcorne and E-G. Talbi
• Nadia Dahmani, Multi-objective packing problems, September 2010, F. Clautiaux and E-G. Talbi
• Sezin Afsar, Bilevel approaches for energy pricing problems, October 2011, L. Brotcorne
• Khedidja Seridi, Méthodologies multiobjectives pour le biclustering, October 2010 L. Jourdan and E-G. Talbi
MINT Team

9. Dissemination

9.1. Animation of the scientific community

Invited talks:

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

Journal reviewing:
- ACM Transactions on Computer-Human Interaction (ToCHI): N. Roussel, G. Casiez
- Computer Aided Design: L. Grisoni
- International Journal of Human Computer Studies (IJHCS): G. Casiez
- Transactions on Ultrasonic Ferroelectricity and Frequency Control (TUFFC): F. Giraud
- Transactions on Mechatronics: F. Giraud
- Control Engineering Practice: F. Giraud

Conference organization:
- FITG II + ArtLab, the second Forum on tactile and gestural interaction (September 22-23, about 200 participants): N. Roussel & C. Chaillou, co-organizers
- Computer Animation and Social Worlds (CASA) 2011: L. Grisoni, Program Committee
- IHM 2011: N. Roussel, long papers chair
- Workshop on Virtual Reality Interaction and Physical Simulation (VRIPHYS) 2011: L. Grisoni, Program Committee

Conference reviewing:
- ACM CHI 2011: N. Roussel, G. Casiez
- ACM UIST 2011: G. Casiez
- ACM CSCW 2011: N. Roussel
- ACM SIGGRAPH: L. Grisoni
- Eurographics STAR: L. Grisoni
- GI 2011: G. Casiez, L. Grisoni
- 3DUI 2011: N. Roussel
- Interact 2011: N. Roussel
- ITS 2011: N. Roussel, G. Casiez
- IHM 2011: G. Casiez
- World Haptics 2011: G. Casiez
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 Visual Studies**: L. Grisoni, member of the expert group
- **ICAVS** (International Cluster for Advanced Visual Studies, Plaine Image, Tourcoing): L. Grisoni, member of the scientific committee of this initiative.

Evaluation committees and invited expertise:

- **AERES** (evaluation agency for research and higher education): L. Grisoni, member of a visiting committee (LE2i, Dijon, January 2011); N. Roussel, member of a visiting committee (LCOMS, Metz, December 2011)
- **UNIT** (engineering and technology digital university) Scientific Committee member: N. Roussel
- **ANRT** (national board for research and technology): N. Roussel, expert reviewer
- **DRRT** (regional board for research and technology): N. Roussel, expert reviewer
- Bordeaux 1 Computer Science hiring committees members: L. Grisoni (professor position)
- Lille 1 Computer Science hiring committees members: L. Grisoni (Vivier animation), G. Casiez, N. Roussel (president, MCF 0484)
- Rennes 1 Computer Science hiring committees members: L. Grisoni, G. Casiez
- **JCJC SIMI3** (ANR): L. Grisoni, expert reviewer
- **JCJC SIMI2** (ANR): G. Casiez, expert reviewer
- **ANR Blanc Inter II SIMI2**: L. Grisoni, expert reviewer
- **ANR Contint**: L. Grisoni, reviewer
- **SIMI 2** (ANR): G. Casiez, expert reviewer
- **CNRS PEPII-53**: L. Grisoni, expert reviewer
- Research Foundation Flanders FWO: G. Casiez, expert reviewer

PhD committees:

- Suzanne Tak (University of Canterbury, December 2011): G. Casiez, reviewer
- Guillaume Faure (Paris-Sud Univ., December 2011): G. Casiez, examiner
- Jonathan Chaboissier (Paris-Sud Univ., December 2011): N. Roussel, examiner
- Jeremy Ringard (Lille 1 Univ., October 2011): C. Chaillou and S. Degrande, co-advisors
- Anthony Martinet (Lille 1 Univ., October 2011): L. Grisoni and G. Casiez, co-advisors
- Benjamin Tissoires (Toulouse Univ., September 2011): N. Roussel, reviewer
- Adriano Scoditti (Grenoble Univ., September 2011): N. Roussel, examiner
- Clément Nadal (Toulouse Univ., July 2011): F. Giraud, examiner
- Sylvain Malacria (Telecom ParisTech, May 2011): G. Casiez, examiner
- Christophe Wiertlewski (UPMC, October 2011): B. Lemaire-Semail reviewer
- Quentin Avril (Rennes, September 2011): L. Grisoni, reviewer
Scientific mediation:

- “Fête de la Science”, **touring researchers** initiative (October): N. Bremard, J. Gilliot, L. Grisoni, D. Marchal, C. Moerman, P. Olivo, Y. Rekik, N. Roussel and D. Selosse
- **CS Unplugged** workshops: N. Roussel (Toulouse-Lautrec elementary school, Villeneuve d’Ascq)
- “Forum Départemental des Sciences”, Villeneuve d’Ascq: N. Roussel (debate on the digital city, in December)
- “Comptoirs du numériques” presentations, Paris (June): L. Grisoni, N. Roussel
- “Place de la toile” radio program, France Culture: N. Roussel (January)
- Workshops and demonstrations at Inria’s Euratechnologies Plateau: L. Grisoni, N. Roussel
- “Rencontres INRIA-Industrie” on the television of the future (November): demonstration of contactless gesture-based control by L. Grisoni and N. Bremard
- “Rencontres INRIA-Industrie” on the health for home and mobility (November): demonstration of contactless gesture-based control by S. Degrande and L. Grisoni
- “Journées Recherche Innovation Création”, Lille 1 Univ. (October): N. Roussel
- Interaction via le geste sans contact: un retour d’expérience sur la collaboration art-science: L. Grisoni, Léonore Mercier, **FITG-ArtLab** days
- **Conf’lunch** and **Unithé ou café** talks: N. Roussel (Rennes in February, Lille in May)

9.2. 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

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
- Multi-Touch Interaction, 24h, M1, University of Lille, G. Casiez/F. Aubert
- Advanced Computer Graphics, 20h, M2, University of Lille, L. Grisoni/F. Aubert
- Virtual Reality, 36h, M2, University of Lille, G. Casiez/F. Giraud/F. Aubert
- 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, 10h, G2, Ecole Centrale de Lille: N. Roussel

Ongoing PhD thesis

- J. Aceituno: Lille 1 Univ., advised by N. Roussel, started October 2011
- J. Gilliot: Lille 1 Univ., co-advised by N. Roussel and G. Casiez, started December 2010
- Y. Rekik: Lille 1 Univ., co-advised by L. Grisoni and N. Roussel, started September 2010
- Y. Yi: Beihang University (China), co-advised by B. Lemaire-Semail and Y. Zhang, started September 2010
- E-G. Craciun: Suceava Univ. (Romania), co-advised by L. Grisoni and S-G. Pentiuc, started October 2009
- C. Moerman: Lille 1 Univ., co-advised by C. Chaillou and L. Grisoni, started October 2009
- D. Selosse: Lille 1 Univ., co-advised by L. Grisoni and J. Dequidt, started October 2009
- T. Zheng: Lille 1 Univ., co-advised by B. Lemaire-Semail and F. Giraud, started October 2008
- J-P. Deblonde: Lille 1 Univ., co-advised by L. Grisoni and G. Casiez, started October 2007
9. Dissemination

9.1. Animation of the scientific community

9.1.1. Editorial responsibilities

C. Biernacki belongs to the scientific committee of “Model mixtures and learning” in SFdS’11 (Gammarth, Tunisia) and to the program comity of "Extraction et gestion des connaissances" in EGC’12 (Bordeaux, France). Since ’10, he is an Associate Editor of the journal “Case Studies in Business, Industry and Government Statistics” (CSBIGS) http://legacy.bentley.edu/csbigs/ .

9.1.2. Invited conferences

- C. Biernacki and V. Vandewalle are invited speakers to one conference [ 19 ]
- C. Preda is an invited speaker in ’11 to three conferences [ 18 ], [ 20 ], [ 21 ]

9.1.3. Scientific animation

- Since ’09, C. Biernacki is a treasurer 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/ . In ’11, he reviewed 3 PhD theses.
- Cristian Preda:
  - organized a session of applied statistics for the Statistics and Probability Society of Romania (Bucarest, April 2011)
  - was Scientific Supervisor for the statistical methodology developed in the PSIP FP7 European project http://psip-project.eu
  - performed research conferences and teaching on statistics at the University of Granada, University of Luxembourg and University of Bucharest
  - organized several conferences for the Seminar of Statistics and Informatics of the Faculty of Medicine, University Lille 2.
- Guillemette Marot organizes, in the context of the PPF bioinfo Lille 1, two scientific meetings:

9.2. Teaching

Christophe Biernacki (head of the M2 Ingénierie Statistique et Numérique http://mathematiques.univ-lille1.fr/Formation/ ):

Master: Mathematical statistics, 60h, coaching project, 10h, M1, U. Lille 1, France
Master: Data analysis, 97.5h, Analysis of variance and experimental design, 22.5h, coaching internship, 20h, M2, U. Lille 2, France
Alain Célisse:
  Master: Statistique Fondamentale, 45h, M2, U. Lille 1, France
  DUT: Mathématiques pour l’Informatique, 122h, L1, U. Lille 1, France
  DUT: Algèbre, 80h, L2, U. Lille 1, France

Serge Iovleff:
  DUT: Discrete mathematics, 72h, Modelization, 88h, Algebra & Geometry, 32h, Probability & statistics & analysis 64h, L1, U. Lille 1, France

Julien Jacques:
  Licence: Statistique Inférentielle, 50h, L3, École Polytechnique Universitaire de Lille, U. Lille 1, France
  Master: Modélisation Statistique, 30h, M1, École Polytechnique Universitaire de Lille, U. Lille 1, France
  Master: Séries Temporelles, 25h, M2, École Polytechnique Universitaire de Lille, U. Lille 1, France

Guillemette Marot:
  Licence: Biostatistique, 18h, L1, U. Lille 2, France
  Master: Biostatistique, 48h, M1, U. Lille 2, France

Cristian Preda:
  Licence: Probabilités, 36h, L3, École Polytechnique Universitaire de Lille, U. Lille 1, France
  Master: Statistique Exploratoire, 40h, M1, École Polytechnique Universitaire de Lille, U. Lille 1, France
  Master: Functional Data Analysis, 18h, M2, U. Lille 1, France
  Master: Functional Data Analysis, 10h, M2, Department of Statistics, University of Granada, Spain

Vincent Vandewalle:
  DUT STID: Linear algebra, 93h, Simulation Technics, 31.5h, Descriptives statistics, 36h, Basic mathematics, 12h, Probabilities, 108h, L1, U. Lille 2, France
  DUT STID: Analysis, 20h, L2, U. Lille 2, France

PhD: Alexandre Lourme, Contribution à la Classification par Modèles de Mélange & Classification Simultanée d’Échantillons d’Origines Multiples, U. Lille 1, June’11, Christophe Biernacki supervisor
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
9. Dissemination

9.1. Animation of the scientific community

9.1.1. Invited Talks

S. TISON was invited to RTA 2011 and TLCA 2011 to give talk on “Tree Automata, (Dis-)Equality Constraints and Term Rewriting: What’s New?”

9.1.2. Program Committees

J. NIEHREN is member of the steering committee of RTA (International Conference on Rewriting Techniques and Applications), of the editorial board of FUNDAMENTA INFORMATICAE. He was in the program committees of CIKM 2011 (International Conference on Information and Knowledge Management), RTA 2011 (International Conference on Rewriting Techniques and Applications), LATA 2011 (International Conference on Language and Automata Theory and Applications), APWeb 2011 (Asian Pacific Web Conference), and LID 2011 (Logic in Databases).

S. TISON was member of the program committee of STACS 2011 (Annual Symposium on Theoretical Aspects of Computer Science). She is member of of the editorial board of RAIRO - ITA and of the steering committee of STACS.

S. STAWORKO was member of the program committee of SUM 2011 (International Conference on Scalable Uncertainty Management) and co-chair of LID 2011 (International Workshop on Logic in Databases).

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 KDD 2011 (ACM SigKDD Conference on Knowledge Discovery and Data Mining), ICML 2011 (International Conference on Machine Learning), ICDM 2011 (IEEE International Conference on Data Mining), SDM 2011 (SIAM International Conference on Data Mining) and IDA 2011 (Intelligent Data Analysis conference).

A. BONIFATI was Chair for the program committee for the Semistructured Data, XML and Web Data Management track, ICDE 2011. She was also member of the program committees of SIGMOD 2011 (International Conference on Management of Data), VLDB 2011 (International Conference on Very Large Databases), EDBT 2011 (International Conference on Extending Data-base Technology).

9.1.3. French Scientific Responsibilities

A.C. CARON is member of the french national evaluation committee for computer science assistant professors (CNU 27). She was member of selection committee for assistant professor in Lille.

R. GILLERON was a member of the scientific committee of the program Programme blanc SIMI2, ANR and a member of the selection committees of assistant professors in Marseille and Lille and finally a member of the evaluation committees of the habilitation thesis of O. Teytaud (LRI, Paris 11) and R. Bailly (LIF, Marseille)

S. TISON is head of the computer science lab in Lille (LIFL). She was co-head of the scientific committee of the program Programme blanc SIMI2, ANR. She is member of the scientific committee of the program Chaires Industrielles, ANR. She chaired the AERES evaluation committee of the computer science lab I3S (Nice/Sophia). She chairs the scientific council of "Pôle de Compétitivité Industries du Commerce". She was member of the national PES commission 27. She was member of the selection committee in Lille for professor positions.

J. NIEHREN was president of the selection committee for postdocs and PhD students of the research center INRIA Lille Nord Europe, and member of the selection committee for 1 professor position at Ecole Polytechnique Lille.
M. TOMMASI was a member of the Technological Development Committee (CDT), a member of the Computers Users Committee (CUMI) of Inria Lille and a member of the scientific committee for selection of assistant professors in St Etienne. Expertises/rapport JEI/CIR

9.2. 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 G. GARRIGA
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
Licence: Statistical Learning, 63h, L3, Université Lille 3, France by M. KELLER
Licence: Propositional Logic, 18h, L2, Université Lille 3, France by S. STAWORKO
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 Managment 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

PhD & HdR

NON-A Team

8. Dissemination

8.1. Animation of the scientific community

8.1.1. Editorial boards

- Jean-Pierre Richard is currently Associate Editor of *Int. J. of Systems Science*.
- Mamadou Mboup is currently Managing Editor of *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](http://www.ifac-control.org/areas)): 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.
- Cédric Joint was in committee of Conférence Méditerranéenne sur l’Ingénierie sûre des Systèmes complexes, 2011;
- Lotfi Belkoura was in committee of Journées Identification Modélisation Expérimentale, 2011;
- Gang Zheng was in committee of IEEE International Conference on Intelligent Control and Information Processing, 2011;
- Mamadou Mboup was in the Program committee of IEEE International Workshop on Machine Learning for Signal Processing 2011;
- Jean-Pierre Barobt was in evaluation committee of PES-(61 section of CNU).

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, and heading the 3rd year professional training "Research" of the École Centrale de Lille;
- 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;
• Cédric Join is heading the AII-ASRI, IUT Nancy-Brabois;
• The team members are also involved in numerous examination committees of theses and Habilitations, in France and abroad.

8.1.4. Stay
• Thierry Floquet: 2-week stay in University of Cagliari, Italy, with Dr. Alessandro Pisano.

8.1.5. Visitors
• Emilia Fridman, Professor of Tel Aviv University, Israel, June 2011, supported by École Centrale de Lille;
• Marc Bodson, Professor of University of Utah, USA, June 2011, supported by École Centrale de Lille;
• Benachir Bouchikhi, Professor of University Moulay Ismail of Meknès, supported by “Partenariat Hubert Curien Volubilis”;
• Hisaya Fujioka, Associate Professor of Kyoto University, September 2011, supported by Kyoto University.

8.1.6. Participation to conferences
• IFAC World Congress, 2011, Italy (Jean-Pierre Richard, Jean-Pierre Barbot, Wilfrid Perruquetti, Mamadou Mboup, Gang Zheng, Denis Efimov, Samer Riachy);
• International Workshop in honour of Prof. Giorgio Bartolini Retirement, 2011, Italy (Wilfrid Perruquetti, Jean-Pierre Barobt);
• IEEE Conference on Decision and Control, 2011, USA (Wilfrid Perruquetti, Jean-Pierre Barbot);
• IEEE Chinese Conference on Control and Decision, 2011, China (Gang Zheng);
• Journées Nationales de la Recherche en Robotique, 2011, France (Wilfrid Perruquetti);
• Summer School on Robotics and Automation, 2011, Alger (Wilfrid Perruquetti);
• Conférence Méditerranéenne sur l’Ingénierie sûre des Systèmes complexes, 2011, Maroc (Cédric Join);
• Summer school on Automatic control, 2011, Romania (Lotfi BelKoura);
• Journée d’Identification et de Modélisation Expérimentale, 2011, France (Lotfi Belkoura);
• IEEE International Workshop on Machine Learning for Signal Processing, 2011, China (Mamadou Mboup);
• Colloque on Signal and Image Processing, 2011, France (Mamadou Mboup).

8.1.7. Reviews
8.1.8. Theses and Habilitations


8.2. Teaching

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Course title</th>
<th>Level</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbot</td>
<td>Process Control</td>
<td>Master</td>
<td>Univ. Tlemcen, Algeria</td>
</tr>
<tr>
<td>Gibaru</td>
<td>Applied Mathematics</td>
<td>Master</td>
<td>USTL-UVHC-ULCO</td>
</tr>
<tr>
<td>Mboup</td>
<td>Advanced Signal Processing</td>
<td>Master</td>
<td>Univ.Paris 5, ENIT-Tunis</td>
</tr>
<tr>
<td>Perruquetti</td>
<td>Nonlinear control</td>
<td>Master AG2i</td>
<td>EC Lille</td>
</tr>
<tr>
<td>Perruquetti</td>
<td>Robotics</td>
<td>Master AG2i</td>
<td>EC Lille - USTL</td>
</tr>
<tr>
<td>Richard</td>
<td>Mathematical tools for nonlinear systems</td>
<td>Master AG2i</td>
<td>EC Lille - USTL</td>
</tr>
<tr>
<td>Richard</td>
<td>Dynamical systems</td>
<td>Research training</td>
<td>EC Lille</td>
</tr>
<tr>
<td>Belkoura</td>
<td>An introduction to distributions</td>
<td>Master AG2i</td>
<td>EC Lille - USTL</td>
</tr>
</tbody>
</table>

- 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.
- Jean-Pierre Barbot is in charge of the Master Thesis training in control of the University of Tlemcen, Algeria.
POPS Project-Team

8. Dissemination

8.1. Animation of the scientific community

8.1.1. Conference organization

Program (co-)chairs

- Nathalie Mitton is/was program chair or co-program chair for WiSARN-Fall 2011 and IThings 2012.
- Xu Li is/was chair or co-chair for IoT-ET 2012, AdHoc-NOW 2011, WiSARN 2011-Spring, SCNC 2011.

Program committee members (TPC)

- Jean Carle is/was TPC member of AdHoc-Now 2011, PIMRC 2011, ANT 2011, IUTP 2011, IUPT 2012.
- Michael Hauspie is/was in a TPC member for MCCIS 2011.
- Tahiry Razafindralambo is/was a TPC member for MASS 2011, MSWIM 2011, PE-WASUN 2011.
- Isabelle Simplot-Ryl is/was a TPC member of ICC-AHSN 2012, ICC-WSN 2012, LCN 2011, ICC2011.

Publicity chair

- Nathalie Mitton was/is publicity chair of MASS 2011, AdHocNow 2011, SPECTS 2011 & 2012.
- Tahiry Razafindralambo was publicity chair of AdHocNets 2011.

Misc

- Nathalie Mitton was poster chair of MobiHoc 2011.
- Tahiry Razafindralambo was web chair of AdHocNow 2011.
- Xu Li was/is submission chair for MASS 2011.

8.1.2. Invited talks

- Tahiry Razafindralambo was invited speaker at AdHocNow 2011 and gave a tutorial at WPMC 2011.
- Xu Li was invited speaker at University of Paderborn, Germany, Chinese Academy of Sciences, Beijing, China and Shanghai Jiaotong University, Shanghai, China.
- David Simplot-Ryl was invited speaker at WiSARN-Fall 2011.
8.1.3. Editorial activity

- Nathalie Mitton and Xu Li are editorial board members of AHSWN since 2011.
- 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 (2011).
- Nathalie Mitton and Xu Li are guest editors of special issue in Springer PPNA (2011)
- Xu Li is guest editor of special issues in Elsevier’s COMCOM, JCM and AHSWN (2011)
- Jean Carle is/was reviewer for IJPEDS, IPL, TPDS.
- David Simplot-Ryl is involved in numerous international conferences and workshops (e.g. recently AdHocNets 2011, IEEE MASS 2011, IEEE INFOCOM 2011-2012) and in editorial activities (e.g. special issue in IEEE Network Magazine on the "Internet of Things" or member of associate editor of IEEE Transactions Parallel and Distributed Systems).

8.1.4. Misc

+ Nathalie Mitton was/is member of the ANR programme blanc SIMI3 and expert for ANR ARPEGE program.
+ Nathalie Mitton is a member of the Inria COST-GTAl.

8.2. Teaching

- Jean Carle
  DUT Informatique : Réseau, 74 h, L1, Université Lille 1, France
  Informatique : Structure de données, 32 h, L1, Université Lille 1, France
  Informatique : Réseau avancé, 86 h, L2, Université Lille 1, France

- Gilles Grimaud
  Licence Informatique : Réseaux, Niveau L3, 54h, Université de Lille 1
  Master Informatique : Architecture des Systèmes, Niveau M1, 64h, Université de Lille 1
  Master Informatique : Architecture des réseaux, Niveau M2, 20h, Université de Lille 1
  Master Informatique : Cryptographie Appliquée, Niveau M2, 12h, Université de Lille 1
  Master Informatique : Innovation et Initiation à la Recherche, Niveau M2, 12h, Université de Lille 1
  Master Informatique Enseignement a Distance : Cryptographie Appliquée, Niveau M2, 12h, Université de Lille 1
  Master Informatique Enseignement a Distance : Innovation et Initiation a la Recherche, Niveau M2, 12h, Université de Lille 1

- Michael Hauspie
  DUT Informatique : Programmation Système. Niveau L2, 72h. IUT A, Université Lille 1
  DUT Informatique : Introduction à l’OpenGL. Niveau L2, 3x24h. IUT A, Université Lille 1
  DUT Informatique : Projet tuteuré. Niveau L2, 16h. IUT A, Université Lille 1
  Licence Pro. RT-CGIR : Services Réseau. Niveau L3, 60h. IUT A, Université Lille 1
  Licence Pro. SIL-DA2I : Administration Système. Niveau L3, 35h. IUT A, Université Lille 1

- Samuel Hym
Licence : Initiation à la programmation impérative, 54h eqTD, L1, Université Lille 1, France
Licence : Automates et logiques, 28h eqTD, L2, Université Lille 1, France
Licence : Programmation système, 37,5h eqTD, L3, Université Lille 1, France
Licence : Programmation des systèmes, 38,5h eqTD, L3, Université Lille 1, France
Licence : Tutorat de stage en entreprise, 4h eqTD, L3, Université Lille 1, France
Licence : Tutorat d’alternance, 8h eqTD, L3, Université Lille 1, France
Master : Algorithmique Avancée, Complexité, Calculabilité, 30h eqTD, M1, Université Lille 1, France
Master : Administration système, 8h eqTD, M2, Université Lille 1, France

• Nathalie Mitton
  Licence : Transmission et protocoles 34H EqTD, L3, Université Lille 1, France
  Master : RFID Systems, 8H EqTD, M2, Université Lille 1, France
  Master : RFID and sensor networks, 8H EqTD, M2, Telecom Lille 1, France

• Tahiry Razafindralambo
  Licence : Introduction to Networking, 20h, L2, IUT A, Universite Lille 1 - GEII, France.
  Master : Network architecture and technology, 12h, M2, Universite Lille 1, France.
  Master : Networked Objects, 9h, M2, telecom Lille 1, France.
  Master : Networking, 20h, M2, Universite Lille 1 - Master TIIR/Distance, France.

• Marie-Emilie Voge
  Licence : Responsabilité Pédagogique, 18 hEqTD, L2, université Lille 1, France
  Licence : Stage Unix, 6 hEqTD, L2, université Lille 1, France
  Licence : Algorithmes et Structures de Données, 36 hEqTD, L2, université Lille 1, France
  Licence : Algorithmique, 108 hEqTD, L2, université Lille 1, France
  Licence : Algorithmique, 69 hEqTD, L3, université Lille 1, France
  Master : Algorithmique Avancée et Complexité, 28 hEqTD, M1, université Lille 1, France

PhD & HdR :

HdR : Nathalie Mitton, INTERNET DES OBJETS, AUTO-ORGANISATION ET PASSAGE A L’ECHELLE, Université Lille 1, May 26th 2011
PhD : Alia Ghaddar, IMPROVING THE QUALITY OF AGGREGATION USING DATA ANALYSIS IN WSNS, Université Lille 1, December 2nd 2011, Tahiry Razafindralambo and Isabelle Simplot-Ryl
PhD : Jovan Radak, Algorithms for Realistic Wireless Sensor Networks, Université Lille 1, December 15th 2011, Nathalie Mitton
PhD in progress : Tony Ducrocq, Toward an unified RFID and wireless sensor network, December 1st 2010, Nathalie Mitton and Michael Hauspie
PhD in progress : Nicolas Gouvy, Geographical routing protocols for wireless sensor and actuator networks, September 1st 2010, Nathalie Mitton and David Simplot-Ryl
PhD in progress : Karen Miranda, Self deployment algorithms for mobile routers, January 1st 2011, Tahiry Razafindralambo and David Simplot-Ryl
PhD in progress : Milan Erdelj, Algorithm for Mobile Sensor Deployment, September 1st 2010, Tahiry Razafindralambo and David Simplot-Ryl
PhD in progress : Geoffroy Cogniaux, In place eXecution from serial memories, January 1st 2010, Gilles Grimaud and Michael Hauspie
8. Dissemination

8.1. Animation of the scientific community

8.1.1. Examination Committees

Stéphane Ducasse was in the examination committee of the following PhD theses:
- Package Dependencies Analysis and Remediation in Object-Oriented Systems, Jannik Laval, University of Lille-1, France. 17/06/11 (advisor).
- Analyse et optimisation de patterns de code, Rim CHAABANE, University Paris VIII, France. 14/09/2011 (reporter)

Nicolas Anquetil was in the examination committee of the following PhD theses:
- Package Dependencies Analysis and Remediation in Object-Oriented Systems, Jannik Laval, University of Lille-1, France. 17/06/11 (co-advisor).
- Analyse et optimisation de patterns de code, Rim CHAABANE, University Paris VIII, France. 14/09/2011

8.1.2. Scientific Community Animation

Stéphane Ducasse has been/is:
- Associate Editor of JOT (Journal of Object Technology).
- Reviewer for the following journals:
  - IEEE Transactions on Software Engineering (TSE),
  - ACM Transactions on Software Engineering and Methodology (TOSEM),
  - Journal on Software Maintenance and Evolution (JSME),
  - Journal of Systems and Software (JSS),
  - IEEE Software,
  - International Journal on Information and Software Technology (IST)
- Member of the following committees:
  - International Conference on Software Maintenance (ICSM).
  - International Conference on Objects, Models, Components, Patterns (TOOLS).
  - Program Chair of the International Smalltalk Conference.
  - IEEE International Workshop on Visualizing Software for Understanding and Analysis (VISSOFT 11)

Nicolas Anquetil was:
- Reviewer for the following journals:
  - Journal of Systems and Software (JSS);
  - Software Quality journal (SQJ);
  - Empirical Software Engineering (EMSE);
  - Journal of Object Technology (JOT);
  - Journal of the Brazilian Computer Society (JBCS).
- Member of the following committees:
  - International Conference on Software Maintenance (ICSM).
  - European Conference on Software Maintenance and Reengineering (CSMR).
- Co-organizer for the Journées nationales IDM, CAL, and GDR/GPL (June 2011).
Marcus Denker has been/is:
- PC Member ICSE 2012 Tool Demonstration (International Conference on Software Engineering)
- PC Member Varicomp 2011 (2nd International Workshop on Variability and Composition)
- PC Member AOSD 2011 (9th Annual Aspect-Oriented Software Development Conference)
- PC Member RAM-SE 2011 (ECOOP Workshop on Reflection, AOP, and Meta-Data for Software Evolution)
- PC Member IWST 2011 (ESUG International Smalltalk Workshop)
- Reviewer TOOLS 2011 (International Conference Objects, Models, Components, Patterns)

Damien Pollet has been/is:
- Co-organizer for the Journées nationales IDM, CAL, and GDR/GPL (June 2011).
- Maintainer of the LaTeX style files for submissions to the Journal of Object Technology.

8.2. Teaching

Marcus Denker gave a lecture about Reflection and Context at Université catholique de Louvain, March 2011.

Stéphane Ducasse teaches a course on advanced OO design in the Master of IMUS (University of Savoie) and a course on metamodeling and reflective systems at Ecole des Mines de Douai.

Damien Pollet organizes and teaches bachelor and master-level courses on algorithms, programming in C and Java, object-oriented design, remote objects and web applications at the engineering school Telecom Lille 1.

Nicolas Anquetil teaches at the IUT (Institut Universitaire Technologique) of Lille 1, courses on Graphical User Interface programming with Java and Software Quality and Tests.

Jean-Baptiste Arnaud and Jannik Laval are teaching assistants (moniteur) at the IUT.
S.H.A.M.A.N Team

9. Dissemination

9.1. Animation of the scientific community

9.1.1. Examination Committees

- **Christian Duriez** was reviewer for 2 ANR Projects (TECSAN and SAGA calls)

9.1.2. Journals, Conferences, Workshop

- **Stéphane Cotin** has been reviewer for the following conferences and journals:
  - Medical Image Computing and Computer Assisted Intervention (MICCAI)
  - Transaction on Medical Imaging (TMI)
  - Revue Electronique Francophone d’informatique Graphique (REFIG)
  - IEEE Transaction on Haptics (ToH)

- **Jérémie Dequidt** has been reviewer for the following conference and journal:
  - Medical Image Computing and Computer Assisted Intervention (MICCAI)
  - Transaction on Medical Imaging (TMI)

- **Christian Duriez** has been reviewer for the following conference and journals (this year):
  - IEEE Transaction on Visualization and Computer Graphics (TVCG), IEEE Transaction on Haptics (ToH)

- **Jérémie Allard** has been member of the following committees:
  - 8th Workshop on Virtual Reality Interaction and Physical Simulation – VRIPHYS 2011
  - Displays for the Near Future Symposium - LAVAL 2011

  and reviewer for the following conferences and journal:
  - SIGGRAPH
  - Motion in Games (MIG)
  - Computers & Graphics journal.

9.1.3. Scientific and Administrative Responsibilities

- **Christian Duriez** is involved in the organization of the colloquium POLARIS for scientists in computer-science and automation in Lille (http://www.colloquiumpolaris.fr/)

- **Stéphane Cotin** is vice-president of the CDT (Commission des Développements Technologiques) at Inria

- **Jérémie Dequidt** was a member of the Computers Users Committee (CUMI) of Inria Lille

9.2. Teaching

Permanent members teach the following courses:


- **Christian Duriez** teaches courses on finite element method at ICAM (Institut Catholique d’Arts et Métiers) in Lille (about 64h courses)

- **Shaman Team** teaches courses about medical simulation in the Master IVI (8h courses/ 8h tutorials)
PhD & HdR :


PhD in progress : Yiyi Wei, Discrete Exterior Calculus Approach for Aneurysm Related Simulation, 2008, 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 interne, 2011, Stéphane Cotin and Christian Duriez

PhD in progress : Alexandre Bilger, Biomecanical 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 Golembiovsksy, 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 Leconte, Christian Duriez
9. Dissemination

9.1. Animation of the scientific community

9.1.1. Awards

Sébastien Bubeck received the second prize for the best French Ph.D in Artificial Intelligence (AI prize 2011).

9.1.2. Tutorials


9.1.3. Workshops and Schools

- R. Munos co-organized the Machine Learning Summer School 2011 (MLSS’11) in Bordeaux (2 weeks of lectures for about 80 international students), with François Caron, Manuel Davy, Pierre Del Moral, Pierrick Le Grand, Manuel Lopes.
- R. Munos co-organized (with Florence Forbes, Bernard Espiau et Monique Thonnat) the Journées INRIA autour de l’apprentissage statistique, Décembre 2011.

9.1.4. Invited Talks

- M. Ghavamzadeh, Max Planck Institute for Intelligent Systems, Tübingen, Host: Prof. Jan Peters (June 2011).
- M. Ghavamzadeh, University of Liège - Systems & Modeling Research Unit, Host: Prof. Damien Ernst (June 2011).
- M. Ghavamzadeh, University of Waterloo - School of Computer Science, Host: Prof. Pascal Poupart (November 2010).
- M. Ghavamzadeh, McGill University - School of Computer Science, Host: Prof. Joelle Pineau (November 2010).
- M. Ghavamzadeh, University of Alberta - AI Seminar, Host: Prof. Csaba Szepesvári (November 2010).
- A. Lazaric, University of Liège - Systems & Modeling Research Unit, Host: Prof. Damien Ernst (October 2011).
- R. Munos, University of Liège, Department of Electrical Engineering, February 2011.
- R. Munos, ICAPS, workshop Monte-Carlo Tree Search, Freiburg, June 2011
- R. Munos, Oxford, department of Computer Science, November 2011

9.1.5. Review Activities

- Participation to the program committees of international conferences
  - E. Duflos and P. Vanheeghe were members of the Fusion’2011 International Program Committee
- P. Vanheeghe is reviewing papers for the journal : IEEE Transaction on Signal Processing.
- D. Ryabko: UAI 2011.
- M. Ghavamzadeh: International Joint Conference on Artificial Intelligence (IJCAI 2011), European Workshop on Reinforcement Learning (EWRL 2011), International Conference on Artificial Neural Networks (ICANN 2011), National Conference on Artificial Intelligence (AAAI 2011).

- **International journal and conference reviewing activities** (in addition to the conferences in which we belong to the PC)
  - M. Ghavamzadeh is Editorial Board Member of the Machine Learning Journal (MLJ, 2011-2014).

9.1.6. Evaluation activities, expertise

- **Emmanuel Duflos** was appointed Director of Research of the Ecole Centrale in Lille. He has also reviewed proposals for the ANR programs.
- **M. Ghavamzadeh** is a grant proposal reviewer for the Natural Sciences and Engineering Research Council of Canada (NSERC).
- **J. Mary** is expert for the “Ministère de l’Enseignement Supérieur et de la Recherche” on control of “Crédit Impôt Recherche”, member of the COS at Lille 3 for one assistant professor in computer science, member of the COS at 3 for one assistant professor un computer science at École Centrale de Lille for one assistant professor in computer science.
- **R. Munos** project evaluation for Research Foundation Flanders (FWO), Belgique, 2011, member of the evaluation committee for the Machine Learning, Université Libre de Bruxelles (ULB). Member of the Comité de sélection Professeur 27ème section for Polytech Paris-Sud, 2011.
- **P. Preux:** reviewer for the CNRS program PEPPi biology-mathematics-computer science, reviewer for the ANR program CONTINT, and the ANR program “blanc”, president of the committee of selection (COS) at the University of Lille 3 for one assistant professor in computer science, member of the committee of selection (COS) at the École Centrale de Lille for one assistant professor in computer science.
- **D. Ryabko** is a member of COST-GRI evaluation committee.
Philippe Vanheeghe has reviewed proposals for Discovery Grant applications of the Natural Sciences and Engineering Research Council of Canada (NSERC - CRSNG), as well as for the ANR.

9.1.7. Participation to PhD and HDR juries

- D. Ryabko is an examiner of the Ph.D. of K. Eltysheva.
- R. Munos examiner of the Ph.D. of Louis Dorard (University College of London), Raphael Fonteneau (University of Liège), and member of PhD juries for Lei Yu (University Cergy Pontoise) and Wassim Jouini (Supelec Rennes).
- R. Munos is member of HDR Committee for Daniil Ryabko (INRIA Lille - Nord Europe) and Aurélien Garivier (Télécom ParisTech), 2011.
- P. Preux is member of the Ph.D. juries of Halem Benhabiles and Manuel Loth (Université de Lille 1)
- E. Duflos was rapporteur for the for PhD thesis of Michele Pace (INRIA Bordeaux), Pierre Neri (ENAC - University of Toulouse), Frédéric Faurie (University of Bordeaux), Sébastien Rougerie (University of Toulouse) and the Habilitation à Diriger des Recherche of Frédéric Dambreville.

9.1.8. Other Scientific Activities

- R. Munos is Vice Président du Comité des Projets at INRIA Lille-Nord Europe since September 2011.
- R. Munos is member of the Commission d’Evaluation INRIA.
- R. Munos is Président du jury d’admissibilité CR1-CR2 INRIA Lille - Nord Europe.
- R. Munos is member of the jury d’admission DR2 INRIA en 2011.

9.2. Teaching

9.2.1. Courses

- J. Mary, Master : “Programmation web avancée et design pattern”, 32h eq TD, M2, Université de Lille 3, France.
- J. Mary, Master : “Introduction à la Programmation R”, 32h eq TD, M1, Université de Lille 3, France.
- J. Mary, Master : “Programmation R avancée”, 32h eq TD, M1, Université de Lille 3, France.
- P. Chainais, Master : “Ondelettes et Applications”, 24h, niveau M1, Ecole Centrale de Lille, 2ème année.
- P. Chainais, Master : “Décision et Apprentissage”, 24h, niveau M2, Ecole Centrale de Lille, 3ème année.
- P. Preux, Master : “Mathématiques, Informatique, Modélisation”, 72h, niveau M1 psychologie, Lille 3.
- E. Duflos, Master : “Modélisation et Inférence Bayesienne”, 40h, niveau M2, Ecole Centrale de Lille, 3ème année.
- P. Vanheeghe, Master : “Estimation, Identification, Observation”, 32h, niveau M2, Ecole Centrale de Lille, 3ème année.

9.2.2. PhD and HdR
• HdR : Daniil Ryabko, Learnability in Problems of Sequential Inference, Université de Lille 1, December 19, 2011, [3].
• PhD : Manuel Loth, Active Set Algorithms for the LASSO, Université de Lille 1, July 8, 2011, Philippe Preux, [1].
• PhD : Odalric Maillard, Active Set Algorithms for the LASSO, Université de Lille 1 / Université de Toulouse, October 3, 2011, Rémi Munos and Philippe Berthet, [2].
• PhD: Nicolas Viandier, June 2011 (see section 10, [4]) : encadrement Emmanuel Duflos, Juliette Marais (IFSTTAR).
• 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.
SIMPAF Project-Team

8. Dissemination

8.1. Animation of the scientific community

C. Calgaro is in charge of the communication of the Math. Department and she is in charge of the relation between the University of Lille and high schools. Accordingly, she organizes various events like “Les Métiers des maths”, “Stage de maths en seconde” and “Demain l’université”. With the help of the Communication Department of INRIA, C. Calgaro, E. Creusé and T. Goudon have 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”.

F. Lagoutière organized CEMRACS 2011, and A. Gloria and Y. Penel proposed and supervised two research projects at CEMRACS 2011.

8.2. Teaching

T. Goudon and P. Lafitte are members of the jury of the national hiring committee of the “Agrégation de mathématiques”.

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

C. Besse and E. Creusé are involved in the project of a new International Master degree at the University of Lille devoted to Scientific Computing.

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