



RESEARCH CENTER
Lille - Nord Europe

FIELD

Activity Report 2016

Section Dissemination

Edition: 2017-08-25

1. BONSAI Project-Team	4
2. DEFROST Team	8
3. DOLPHIN Project-Team	10
4. DREAMPAL Project-Team	17
5. FUN Project-Team	18
6. INOCS Team	22
7. LINKS Project-Team	27
8. MAGNET Project-Team	29
9. MEPHYSTO Project-Team	33
10. MINT Project-Team	36
11. Mjolnir Team	38
12. MODAL Project-Team	42
13. NON-A Project-Team	48
14. RAPSODI Team	51
15. RMOD Project-Team	54
16. SEQUEL Project-Team	57
17. SPIRALS Project-Team	63

BONSAI Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organization

10.1.1.1. General Chair, Scientific Chair

- RepSeq 2016, workshop on immune repertoire sequencing at ECCB 2016 (M. Giraud, M. Salson).

10.1.1.2. Member of the Organizing Committees

- SMPGD, Statistical Methods in Post Genomic Data (H. Touzet).

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- WABI 2016 (H. Touzet).
- RECOM-seq 2016 (H. Touzet).

10.1.2.2. Reviewer

- ECCB 2016 (J.-S. Varré, R. Chikhi).
- PSC 2016 (M. Salson).
- RECOMB-CG 2016 (J.-S. Varré).
- TCBB 2016 (J.-S. Varré).
- RECOMB 2016 (R. Chikhi).

10.1.3. Journal

10.1.3.1. Reviewer - Reviewing Activities

- Bioinformatics (M. Salson, J.-S. Varré, R. Chikhi, H. Touzet).
- PLoS Genetics (R. Chikhi).
- Genome Research (R. Chikhi).
- Nucleic Acids Research (R. Chikhi).
- Journal of Discrete Algorithms (M. Salson).
- Briefing in Bioinformatics (H. Touzet).

10.1.4. Invited Talks

- RegPep2016 (regulated peptides) in Rouen (France), Symposium 8 "In silico approaches to peptide identification and design" (M. Pupin).
- SMPGD keynote in Lille (France), (R. Chikhi).
- National meeting of GDR Informatique Mathématique in Paris (H. Touzet).
- MatBio 2016 in London (H. Touzet).
- Summer school in metagenomics in Paris (H. Touzet).

10.1.5. Scientific Expertise

- Reviewer for a Swiss National Science Foundation grant (R. Chikhi).
- Member of the scientific committee of the national program Environmics (H. Touzet).
- Reviewer for a CRSNG grant (H. Touzet).

- Reviewer for labex CIMI PhD grant (H. Touzet).
- Member of three HCERES committees: L2N (LINA and IRCCyN, Nantes), Loria (Nancy), I2M (Marseille) (H. Touzet).

10.1.6. Research Administration

- Member of the CUB for Inria Lille (S. Blanquart).
- Member of the Charles Viollette Institute Laboratory council (V. Leclère).
- Member of the Charles Viollette Institute scientific committee (V. Leclère).
- Member of the scientific operational committee of Xperium, Univ. Lille 1 (V. Leclère).
- Member of the Inria local committee for technology development (M. Pupin).
- Member of the executive council of the IFB, Institut Français de Bioinformatique, (M. Pupin).
- Member of the Inria local committee for the IT users (M. Salson).
- Member of the national scientific committee of INS2I–CNRS (H. Touzet).
- Member of the scientific committee of MBIA – INRA (H. Touzet).
- Head of the national CNRS network GDR Bioinformatique moléculaire (<http://www.gdr-bim.cnrs.fr>, H. Touzet).
- Vice-head of the Lille Bioinformatics platform, bilille (H. Touzet).
- Member of the CRIStAL Laboratory council (H. Touzet).
- Member of the CRIStAL scientific council, coordinator of the thematic group “Modeling for life sciences” (J.-S. Varré).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Teaching in computer science:

- Master: Y. Dufresne, *Algorithmics and complexity*, 36h, M1 Computer Science, Univ. Lille 1.
- License: Y. Dufresne, *Oriented object design*, 42h, L3 Computer Science, Univ. Lille 1.
- License: S. Janot, *Introduction to programming (C)*, 50h, L3 Polytech’Lille, Univ. Lille 1.
- License: S. Janot, *Databases*, 30h, L3 Polytech’Lille, Univ. Lille 1.
- Master: S. Janot, *Databases*, 12h, M1 Polytech’Lille, Univ. Lille 1.
- Master: S. Janot, *Logic and Semantic Web*, 80h, M1 Polytech’Lille, Univ. Lille 1.
- License: L. Noé, *Networks*, 42h, L3 Computer science, Univ. Lille 1.
- License: L. Noé, *Programming (Python)*, 54h, L3 Computer science’ S3H, Univ. Lille 1.
- License: L. Noé, *Coding and information theory*, 36h, L2 Computer science, Univ. Lille 1.
- License: L. Noé, *Functional Programming*, 30h, L2 Computer science, Univ. Lille 1.
- License: P. Pericard, *Data structures*, 18h, L3 Polytech’Lille, Univ. Lille 1.
- License: P. Pericard, *Introduction to programming (C)*, 34h, L3 Polytech’Lille, Univ. Lille 1.
- License: P. Pericard, *Programming (C)*, 22h, L3 Polytech’Lille, Univ. Lille 1.
- License: P. Pericard, *Databases*, 22h, M1 Polytech’Lille, Univ. Lille 1.
- License: M. Pupin, *Introduction to programming (Python)*, 78h, L1 Computer science, Univ. Lille 1.
- License: M. Pupin, *Professional project*, 18h, L3 Computer science, Univ. Lille 1.
- Master: M. Pupin, *Introduction to programming (JAVA)*, 24h, M1 Mathématiques et finance, Univ. Lille 1.
- License: T. Rocher, *Algorithmics and programming*, 32h, L3 Polytech’Lille, Univ. Lille 1.

- License: T. Rocher, *Algorithmics and programming (remedial course)*, 8h, L3 Polytech'Lille, Univ. Lille 1.
- License: T. Rocher, *Databases*, 26h, L3 Polytech'Lille, Univ. Lille 1.
- License: C. Saad, *Algorithmics and programming*, 28h, L3 Polytech'Lille, Univ. Lille 1.
- License: C. Saad, *Databases*, 36h, L3 Polytech'Lille, Univ. Lille 1.
- Master: M. Salson, *Skeptical thinking*, 18h, M2 Journalist and Scientist, ESJ, Univ. Lille 1.
- License: M. Salson, *Coding and information theory*, 63h, L2 Computer science, Univ. Lille 1.
- License: J.-S. Varré, *Web programming*, 36h, L2 Computer Science, Univ. Lille 1.
- License: J.-S. Varré, Y. Dufresne, *Object oriented programming*, 36h, L2 Computer Science, Univ. Lille 1.
- License: J.-S. Varré, *Algorithms and data structures*, 50h, L2 Computer science, Univ. Lille 1.
- License: J.-S. Varré, *System*, 36h, L3 Computer science, Univ. Lille 1.
- Master: J.-S. Varré, Y. Dufresne, *Software project*, 24h, M1 Computer science, Univ. Lille 1.

Teaching in bioinformatics:

- License: S. Blanquart, R. Chikhi, M. Giraud, *Bioinformatics*, 40h, L3 Computer Science, Univ. Lille 1.
- Master: S. Blanquart, *Algorithms and applications in bioinformatics*, 24h, M1 Computer Science, Univ. Lille 1.
- Master: S. Blanquart, *Methods in phylogenetics*, 4h, M2 Biodiversité Evolution Ecologie, Univ. Lille 1.
- License: V. Leclère, *Biotechnology*, 24h, L3 Biology, Univ. Lille 1.
- Master: L. Noé, *Bioinformatics*, 40h, M1 Biotechnologies, Univ. Lille 1.
- Master: M. Pupin *Bioinformatics*, 40h, M1 Biology and Biotechnologies, Univ. Lille 1.
- Master: M. Salson, *Algorithms for life sciences*, 18h, M2 Complex models, algorithms and data, Univ. Lille 1.

Teaching in biology:

- Master, V. Leclère, *Mycology, secondary metabolites, food microbiology*, 37 h, M1 Biology, Univ. Lille 1.

10.2.2. Teaching administration

- Head of the computer science modules in the 1st year of licence, univ. Lille 1 (M. Pupin).
- Head of the licence semester "Computer Science – S3 Harmonisation (S3H)", univ. Lille 1 (L. Noé).
- Member of UFR IEEA council (M. Pupin, J.-S. Varré).
- Head of the 3rd year of licence of computer science, univ. Lille 1 (J.-S. Varré).
- Head of the GIS department (Software Engineering and Statistics) of Polytech'Lille (S. Janot).
- Member of UFR Biologie council (V. Leclère).
- Head of the master "Innovations en biotechnologies végétales, enzymatiques et microbiennes", univ. Lille 1 (V. Leclère).

10.2.3. Supervision

- PhD : C. Vroland, Algorithmique pour la recherche de motifs approchée et application à la recherche de cibles de microARN, univ. Lille 1, 2016/05/18, H. Touzet, V. Castric, M. Salson.
- PhD : Y. Dufresne, Algorithmes pour l'annotation automatique de peptides non-ribosomiques, univ. Lille 1, 2016/12/01, M. Pupin, L. Noé.

- PhD in progress: P. Pericard, Methods for taxonomic assignation in metagenomics, 2013/11/01, H. Touzet, S. Blanquart.
- PhD in progress: T. Rocher, Indexing VDJ recombinations in lymphocytes for leukemia follow-up, 2014/11/01, M. Giraud, M. Salson.
- PhD in progress: C. Saad, Caractérisation des erreurs de séquençage non aléatoires, application aux mosaïques et tumeurs hétérogènes, 2014/10/01, M.-P. Buisine, H. Touzet, J. Leclerc, L. Noé, M. Figeac.
- PhD in progress: L. Siegwald, Bionformatic analysis of Ion Torrent metagenomic data, 2014/01/03, H. Touzet, Y. Lemoine (Institut Pasteur de Lille).
- PhD in progress: P. Marijon, Graph assembly analysis for third generation sequencing data, 2016/10/01, J.-S. Varré, R. Chikhi (Institut Pasteur de Lille).

10.2.4. Juries

- Member of the HDR committee of Laurent Mouchard (Univ. Rouen, J.-S. Varré).
- Member of the PhD committee of Qassin Esmael (Univ. Lille 1, M. Pupin, V. Leclère).
- Member of the PhD committee of Souhir Sabri (Univ Montpellier, V. Leclère).
- Member of the PhD committee of Wahiba Chaara (Univ. Paris 6, M. Giraud).
- Member of the PhD committee of Leandro Ishi (Univ. Lyon, R. Chikhi).
- Member of the PhD committee of Jerome Audoux (Univ. Montpellier, R. Chikhi, M. Salson).
- Member of the PhD jury of Clara Benoit (Univ. Lyon, R. Chikhi).
- Member of the HDR jury of Morgane Thomas-Chollier (IBENS, Ecole Normale Supérieure Paris, H. Touzet).
- Member of the HDR jury of Annie Chateau (LIRMM, Université de Montpellier, H. Touzet).
- Member of the HDR jury of Pierre Peterlongo (Inria Rennes, H. Touzet).
- Member of the HDR jury of Séverine Bérard (ISEM, Université de Montpellier, H. Touzet).
- Member of the PhD jury of Thomas Hume (LaBRI, Université Bordeaux 1, H. Touzet).
- Member of the PhD jury of Aymeric Antoine-Lorquin (IRISA, Université de Rennes 1, H. Touzet).
- Member of the hiring committee MdC of Univ. Nancy (M. Pupin).
- Member of the hiring committee MdC of Univ Lille 1 (V. Leclère).
- Member of the hiring committee professor of Univ. Rouen (H. Touzet).
- Member of the hiring committee Research Engineer of Univ. Paris-Diderot (M. Pupin).
- Member of the hiring committee of research engineer of Univ Lille 1 (V. Leclère).

10.3. Popularization

The team has always been very active in popularizing computational biology and computer science in general.

- M. Salson participated in an exchange with scientific journalists organized by the French association of scientific journalists (AJSPI). A journalist was hosted during one week in the team and M. Salson spent one week in the newsroom of *La Recherche*, a French science magazine.
- Within a project on skeptical thinking with a popularization association “Les Petits Débrouillards”, M. Salson is part of the monitoring committee and gave lectures to social workers.
- The team participates to dissemination actions for high school students and high school teachers on a regular basis: multiple presentations on bioinformatics and research in bioinformatics with our dedicated “genome puzzles”, booth about computer science unplugged for high school girls, booth at Xperium about development of biopesticides (including a demo on the use of Norine), plenary presentations at the “Day for Programming and Algorithmic Teaching”, presentations at “Salon de l’étudiant”, visit of high school students in the team (M. Giraud, M. Pupin, M. Salson, J.-S. Varré, R. Chikhi, V. Leclère)

DEFROST Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Conference Program Committees

- Jeremie Dequidt is member of the CP committee of the AFIG (Association Française d'Informatique Graphique) conference and VRIPHYS conference
- Christian Duriez is member of the CP committee of Eurohaptics

10.1.1.2. Reviewer

- Jeremie Dequidt has been reviewer for International Journal of Computer Assisted Radiology and Surgery (IJCARS) and AFIG 2016
- Damien Marchal has been reviewer for IEEE 3D User Interface 2016 (3DUI 2016) and EuroHaptic 2016.
- Christian Duriez has been reviewer for the conferences IEEE VR 2016 and ICRA 2017.

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

- Christian Duriez is member of the editorial board of IEEE Transaction on Haptics

10.1.2.2. Reviewer - Reviewing Activities

- Christian Duriez has been reviewer for the journals ACM Transaction on Graphics, Computer and Graphics, IEEE Transactions on Robotics, Soft Robotic Journal (SORO).

10.1.3. Invited Talks

- Christian Duriez and Thor Bieze were invited for a talk at the Spring School on Soft-robotics at Livorno (April 2016)
- Christian Duriez was invited for a talk at the conference POSS in Paris (november 2016).

10.1.4. Scientific Expertise

Christian Duriez is a scientific advisor of InSimo (Inria Spin-off)

10.1.5. Research Administration

Christian Duriez is vice-responsible of Research Jobs Committee at Inria Lille.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- Licence : Jeremie Dequidt, Programming, 54h, L3, University of Lille/Polytech Lille, France
- Licence : Jeremie Dequidt, Advance Programming, 16h, L3, University of Lille/Polytech Lille, France
- Licence : Jeremie Dequidt, Databases, 12h, L3, University of Lille/Polytech Lille, France
- Licence : Frederick Largilliere, Computer science fundamentals, 48h, L1, University of Lille 3, France
- Licence : Frederick Largilliere, Certificate of computer science and internet knowledge, 27.5h, L2 - L3, University of Lille 3, France
- Master : Jeremie Dequidt, Theoretical Computer Science, 24h, M1, University of Lille/Polytech Lille, France
- Master : Jeremie Dequidt, Surgical Simulation, 12h, M2, University of Lille/Polytech Lille, France
- Master : Thor Morales Bieze, Bio-inspired robotics, 20h, M2, University of Lille/Polytech Lille, France
- Master : Damien Marchal, Reality-Virtual et Interaction, 20h, M2, University of Lille, France
- Master : Christian Duriez, Interactive physics-based enginesh, M2, University of Lille, France

10.2.2. Supervision

- PhD in progress: Frederick Largilliere, Stiffness control of interfaces based on soft robots through numerical modelization, 01/11/2013, Laurent Grisoni, Christian Duriez
- PhD in progress: Thor Morales Bieze, Design, modeling and control of soft, continuum manipulators, 10/10/2013, Rochdi Merzouki, Christian Duriez
- PhD in progress: Zhongkai Zhang, Visual servoing control of soft robots based on real-time Finite Element Method, 01/10/2015, Jeremie Dequidt, Christian Duriez
- PhD in progress: Maxime Thieffry, High velocity control of soft robots, 01/10/2016, Christian Duriez, Alexandre Kruszewski, Thierry Marie Guerra

10.2.3. Juries

- Christian Duriez was president of the committee of the PhD jury of José Dolz (University of Lille 2)
- Christian Duriez was reviewer of the PhDs of Johan Sarrazin (University of Grenoble) and Pierre-Luc Manteaux (University of Grenoble)
- Christian Duriez was examiner of the PhD of Zilong Shao (University of Lille)

10.3. Popularization

- Olivier Goury and Christian Duriez participated in "Fête de la science: Opération Chercheurs itinérants", which involves giving scientific lectures in middle and high schools.
- Christian Duriez and Mario Sanz Lopez participated in the "Bourse aux Technologies" at Bercy, Paris (22 March).
- Popularization session 13:45 on the topic of Arduino by Mario Sanz Lopez.
- Popularization session 13:45 on the topic of Software development good practices by Bruno Carrez.
- Damien Marchal participated in "Chti'Code". Chti'Code is an action of the University of Lille 1, which aims to promoting computer education in primary schools. Damien Marchal intervened with computer science student in 4 CM2 classes for a total of 20h.
- Jeremie Dequidt was jury member of the second robotic competition SI / @ Baggio.

DOLPHIN Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- N. Melab: Chair of the HPCS'2016 workshop (Parallel Optimization using / for Multi and Many-core High Performance Computing) organized in conjunction with HPCS'2016, Innsbruck, Austria, June 7th 2015.
- N. Melab: Chair of 5 simulation and HPC-related seminars at Lille 1 oct-dec. 2016 (CENAERO, Intel, Atos-Bull, FFT, UPMC).
- E-G. Talbi: General chair of META'2016 Int. Conf. on Metaheuristics and Nature Inspired Computing, Marrakech, Morocco, Oct 2016, 105 participants.
- E-G. Talbi, Program co-chair of HM'2016 Int. Conf on Hybrid Metaheuristics, Exeter, UK, May 2016.

10.1.1.2. Member of the Organizing Committees

- D. Brockhoff: co-organizer of the Surrogate-Assisted Multi-Criteria Optimization workshop at the Lorentz Center in Leiden, The Netherlands, Feb/Mar 2016
- D. Brockhoff: co-organizer of the Blackbox Optimization Benchmarking workshop (BBOB-2016) at GECCO in Denver, CO, USA
- CEC 2016 special session entitled "Advances in Decomposition-based Evolutionary Multiobjective Optimization", Vancouver, Canada, organized by Saul Zapotecas Martinez, Bilel Derbel, Qingfu Zhang, Carlos A. Coello Coello, July 2016
- E-G. Talbi: organisation of META'2016 Int. Conf. on Metaheuristics, Marrakech, Morocco, Oct 2016.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- E-G. Talbi, HM'2016
- E-G. Talbi, META'2016

10.1.2.2. Member of the Conference Program Committees

- CEC -IEEE Congress on Evolutionary Computation 2016
- CIBCB - IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology 2016
- GECCO conference 2016
- HM 2016
- ICORES 2016
- LION Conference 2016
- MICAI 2016
- MIM 2016
- MOD 2016
- PPSN 2016

- ROADEF 2016
- GECCO conference 2016
- IEEE Congress on Evolutionary Computation (CEC), Vancouver, Canada, July 24-29, 2016
- The ACM Genetic and Evolutionary Computation Conference (GECCO), Denver, Colorado, USA, July 20-24, 2016
- IEEE International Workshop on Nature Inspired Distributed Computing (IPDPS/NIDISC'2016), Chicago, Illinois, USA, May 23-27, 2016
- IEEE Intl. Workshop on Parallel Computing and Optimization (IPDPS/PCO), Chicago, Illinois, USA, May 23-27, 2016
- Grid'5000 winter school, Grenoble, France, February 2-5, 2016
- Colloque sur l'Optimisation et les Systèmes d'information (COSI), Sétif, Algérie, May 30 - June 1, 2016
- Intl. Conf. on Contemporary Computing (IC3), Noida, India, Aug. 11-13, 2016
- The 2nd Intl. Conf. on Cloud Computing Technologies and Applications (CloudTech), Marrakesh, Morocco, May 24-26, 2016.
- 8th IEEE Intl. Conf. on Cloud Computing Technology and Science (CloudCom), Luxembourg, Dec. 12-15, 2016
- PPSN 2016: 14th International Conference on Parallel Problem Solving from Nature (Edinburgh, UK, 2016)
- GECCO 2016: Genetic and Evolutionary Computation Conference, Evolutionary Combinatorial Optimization and Metaheuristics (ECOM) track (Denver, USA, 2016)
- CEC 2016: IEEE Congress on Evolutionary Computation (Vancouver, Canada, 2016)
- EvoCOP 2016: 16th European Conference on Evolutionary Computation in Combinatorial Optimisation (Porto, Portugal, 2016)

10.1.2.3. Reviewer

- Dimo Brockhoff: CEC'2016, GECCO'2016 (EMO track), PPSN'2016, FOGA'2017, EMO'2017

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- L. Jourdan: Review Editor *Frontiers in Big Data*
- N. Melab: Guest Editor (in collaboration with M. Mezmaç) of a special on Multi/Many-core computing for parallel Metaheuristics in *Wiley Concurrency and Computation: Practice and Experience*, April 2016.
- N. Melab: Guest Editor (in collaboration with A. Zomaya and I. Chakroun) of a special on Parallel Optimization using/for Multi and Many-core High Performance Computing in *Journal of Parallel and Distributed Computing (JPDC)*, 2016.
- E-G. Talbi : Editor of the Journal « *Computers and Industrial Engineering (CAIE, Elsevier)* » Area «Computational Intelligence».

10.1.3.2. Reviewer - Reviewing Activities

- *IEEE Transactions on Evolutionary Computation, Evolutionary Computation, Journal of Heuristics, Artificial Intelligence Journal*
- *Applied Soft Computing*
- *Computers in Biology and Medicine*
- *Computers & Industrial Engineering*
- *Computers & Operations Research*

- EJOR European Journal of Operational Research
- IEEE Transaction on Evolutionary Computation
- International Journal of Metaheuristics
- International Journal of Molecular Sciences
- International Journal of Production research
- International Transactions in Operational
- JOH Journal of Heuristics
- JOCO Journal of Combinatorial Optimization
- JPDC Journal of Parallel and Distributed Computing
- Nature Scientific Report
- Soft Computing (SOCO)
- Transactions on Computational Biology and Bioinformatics
- ACM Computing Surveys
- Computation and Concurrency: Practice and Experience (CCPE)
- Parallel Processing Letters
- Parallel Computing
- Journal of Parallel and Distributed Computing (JPDC)
- 4OR: A Quarterly Journal of Operations Research (Springer)
- ASOC: Applied Soft Computing (Elsevier)
- CAIE: Computers & Industrial Engineering (Elsevier)
- ITOR: International Transactions in Operational Research (Wiley)
- NEUCOM: Neurocomputing (Elsevier)

10.1.4. Invited Talks

- D. Brockhoff: invited talk on multiobjective optimization, MEXICO/Mascot-Num meeting, Nov 2016, Nantes
- D. Brockhoff: invited tutorial at GECCO'2016 on Evolutionary Multiobjective Optimization, Jul 2016, Denver, CO, USA
- B.Derbel and A. Liefoghe: Designing and understanding EMO algorithms, Invited talk, City University, Hong Kong, November 2016
- A. Liefoghe: Fitness landscape analysis, problem features and performance prediction for multi-objective optimization, Workshop on Landscape-aware heuristic search (PPSN 2016), Edinburgh, UK, September 2016 (joint work with Fabio Daolio, Sébastien Verel, Hernan Aguirre, and Kiyoshi Tanaka)
- L. Jourdan, "Combinatorial optimization for Bioinformatics", invited talk (1day), summer school of Bioinformatics, Angers, 2016
- L. Jourdan, "The emerging use of Optimization methods for Datamining in Big Data", invited talk, summer school of Cyber-Physical Systems (CPS), Toulouse, 2016.
- L. Jourdan, "Modélisation et optimisation multi-objectif pour l'extraction de connaissances Le cas des applications médicales", Mars 2016, Séminaire Expert, Worldline.
- C. Dhaenens "Exemple de collaboration réussie entre l'entreprise et le monde de la recherche", CCI Grand Lille, Fev. 2016.
- N. Melab: Tutorial on Grid'5000, Arcus international project "E2D2", May 2016, Université Lille 1.

- E-G. Talbi: Multi-objective metaheuristics, Invited seminar, Colorado State University, Fort Collins, Colorado, USA, Mar 2016.
- E-G. Talbi: Optimization under uncertainty, Invited seminar, Univeridad Elche, Elche, Spain, Apr 2016.
- E-G. Talbi: Parallel evolutionary algorithms for multi-objective optimization, Keynote speaker BIOMA'2016 7th Int. Conf. on Bioinspired Optimization Methods and their Applications, Bled, Slovenia, May 2016.
- E-G. Talbi: Parallel metaheuristics, Invited seminar, CINVESTAV, Mexico, Sept 2016.
- E-G. Talbi: Combining metaheuristics with mathematical programming and data mining, Keynote speaker, NEO'2016 Int. Workshop on Numerical and Evolutionary Optimization, Tlalneptla, Mexico, Sept 2016.
- E-G. Talbi: A survey of hybrid metaheuristics with exact methods and machine learning, Tutorial, META'2016 Int. Conf. on Metaheuristics and Nature Inspired computing, Marrakech, Morocco, Oct 2016.

10.1.5. Leadership within the Scientific Community

- L. Jourdan : Co-president of the working group "ATOM: Multi-objective optimization", GDR RO.
- L. Jourdan, A. Liefoghe : Secretary of the association "Artificial Evolution" (EA).
- C. Dhaenens: member of the scientific council of GDR RO (Operations research)
- C. Dhaenens: nominated member at Co-NRS, section 6 (National committee of CNRS)
- N. Melab: scientific leader of Grid'5000 (<https://www.grid5000.fr>) at Lille, Since 2004
- N. Melab: Chargé de Mission of High Performance Computing and Simulation at Université Lille 1, Since 2010
- E-G. Talbi : Co-president of the working group "META: Metaheuristics - Theory and applications", GDR RO and GDR MACS.
- E-G. Talbi : Co-Chair of the IEEE Task force on Cloud Computing within the IEEE Computational Intelligence Society.

10.1.6. Scientific Expertise

- D. Brockhoff: external reviewer of a research proposal for the National Science Centre Poland
- N. Melab: Member of the advisory committee for the IT and management engineer training at Faculté Polytechnique de Mons
- E-G. Talbi : Expert for Qatar Foundation QNRF projects, 2016.

10.1.7. Research Administration

- C. Dhaenens: Vice-head of CRISAL laboratory (Centre de Recherche en Informatique, Signal et Automatique de Lille), common to CNRS, University of Lille and Ecole Centrale de Lille, 430 people.
- L. Jourdan: member of the Bureau du Département de domaine Informatique pour l'école doctorale SPI, University of Lille
- N. Melab: Member of the steering committee of "Maison de la Simulation" at Université Lille 1
- E-G. Talbi, Coordinator of the International Relationships of Inria Lille Nord Europe.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- Master : Dimo Brockhoff, Introduction to Optimization, 18h ETD, M2 Apprentissage, Information et Contenu, U. Paris-Saclay, France

- Master : Dimo Brockhoff, Advanced Optimization, 18h ETD, M2 Apprentissage, Information et Contenu, U. Paris-Saclay, France
- Master : Dimo Brockhoff, Introduction to Optimization, 54h ETD, MSc in Data Sciences & Business Analytics, CentraleSupélec/ESSEC, France
- Master : Laetitia Jourdan, Business Intelligence, 30h, M1, University of Lille 1, France
- Master : Laetitia Jourdan, Datamining, 60h , M1, University of Lille 1, France
- Master : Laetitia Jourdan, Datawarehouse, 30h, M1, University of Lille 1, France
- Licence: Laetitia Jourdan : Informatique, 48h, L1 University of Lille 1, France
- Master: Laetitia Jourdan : Responsible of Master MIAGE Formation en Alternance, ,University of Lille 1, France
- Licence: Laetitia Jourdan: Co-responsible of Licence 1 Computer Science, University of Lille 1, France
- Engineering school : Clarisse Dhaenens, Graphs and Combinatorics, 80 HeqTD, Polytech Lille, University Lille 1, France
- Engineering school : Clarisse Dhaenens, Operations Research, 70 HeqTD, Polytech Lille, University Lille 1, France
- Engineering school : Clarisse Dhaenens, Algorithmics and programming, 45 HeqTD, Polytech Lille, University Lille 1, France
- Engineering school : Clarisse Dhaenens, responsible of the 5th year of statistics and computer science department.
- Engineering school : Marie-Eléonore Kessaci, Graphs and Combinatorics, 44 HeqTD, Polytech Lille, University Lille 1, France
- Engineering school : Marie-Eléonore Kessaci, Algorithmics and programming, 51 HeqTD, Polytech Lille, University Lille 1, France
- Engineering school : Marie-Eléonore Kessaci, Databases, 71 HeqTD, Polytech Lille, University Lille 1, France
- Engineering school : Marie-Eléonore Kessaci, Mathematics, 20 HeqTD, Polytech Lille, University Lille 1, France
- Engineering school : Marie-Eléonore Kessaci, responsible of the 3th year of statistics and computer science department.
- Master lecture: N. Melab, Supercomputing, 24h, Master 2, Université Lille 1, France
- Master lecture: N. Melab, Operations Research, 78h, Master 1, Université Lille 1, France
- Master leading: N. Melab, Co-head (with C. Chainais) of the master 2 of advanced scientific computing, U. Lille 1
- Licence: A. Liefoghe, Algorithmic and Data structure, 36h ETD, L2, Université de Lille 1, France
- Licence: A. Liefoghe, Algorithmic for Operations Research, 36h ETD, L3, Université de Lille 1, France
- Master: A. Liefoghe, Databases, 30h ETD, M1, Université de Lille 1, France
- Master: A. Liefoghe, Advanced Object-oriented Programming, 53h ETD, M2, Université de Lille 1, France
- Master: A. Liefoghe, Combinatorial Optimization, 10h ETD, M2, Université de Lille 1, France
- Master: A. Liefoghe, Multi-criteria Decision Aid and Optimization, 25h ETD, M2, Université de Lille 1, France
- A. Liefoghe is supervising the Master 2 MIAGE IPI-NT
- Master : Bilel Derbel, Combinatorial Optimization, 35h, M2, University Lille 1, France

- Master : Bilel Derbel, Grid Computing, 16h, M2, University Lille 1, France
- Master : Bilel Derbel, Parallel and Distributed Programming, 35h, M1, University Lille 1, France
- Master : Bilel Derbel, Algorithms and Applications, 28h, M1, University Lille 1, France
- Engineering school : El-Ghazali Talbi, Advanced optimization, 36h, Polytech'Lille, University Lille 1, France
- Engineering school : El-Ghazali Talbi, Data mining, 36h, Polytech'Lille, University Lille 1, France
- Engineering school : El-Ghazali Talbi, Operations research, 60h, Polytech'Lille, University Lille 1, France
- Engineering school : El-Ghazali Talbi, Graphs, 25h, Polytech'Lille, University Lille 1, France

10.2.2. Supervision

- PhD in progress: Gauvain Marquet, Mono-objective decomposition for multi-objective optimization, University Lille 1, Sep. 2014, Bilel Derbel and El-Ghazali Talbi
- PhD in progress: Maxence Vandromme, Datamining et optimisation combinatoire adaptés à la prévention et à l'orientation de patients, début : 1/06/2014, CIFRE with Alicante Co-direction : Clarisse Dhaenens and Laetitia Jourdan
- PhD in progress : Sylvain Dufourny, Optimisation de décisions économiques concurrentielles dans un simulateur de gestion d'entreprise, Novembre 2012, Clarisse Dhaenens
- PhD in progress : Aymeric Blot, Réagir et s'adapter à son environnement : Concevoir des méthodes autonomes pour l'optimisation combinatoire à plusieurs objectifs, september 2015, co-directed Laetitia Jourdan and Marie-Eléonore Marmion
- PhD in progress : Lucien Mousin, Exploiter la connaissance pour mieux optimiser, october 2015, co-directed Clarisse Dhaenens and Marie-Eléonore Marmion
- PhD in progress : AnneLise Bedenel, Classification supervisée et non supervisée en présence de descripteurs évoluant dans le temps. Application à la comparaison d'assurances en ligne, co-directed Laetitia Jourdan and Christophe Biernacki (Modal Inria Team)
- PhD (cotutelle in progress): Jan GMYS, Parallel Branch-and-Bound for solving permutation problems on multi- and many-core clusters, Nouredine Melab (Université Lille 1) and Daniel Tuytens (UMONS, Belgium), Defense end of 2017
- PhD in progress : A. Q. Nguyen, Green scheduling on cloud computing systems, 11/2012, El-Ghazali Talbi and Pascal Bouvry
- PhD in progress : Oumayma Bahri, Fuzzy multi-objective optimization, 11/2013, El-Ghazali Talbi and Nahla Ben-Omar
- PhD in progress : Sohrab Faramarzi, Optimization of medical lab, 02/2016, El-Ghazali Talbi

10.2.3. Juries

- C. Dhaenens: PhD Thesis: B. Tounsi, "Contributions à la chaîne logistique e-commerce : Intégration dans l'e-fulfillment et tarification de services de livraison", Université Lille 1, Dec. 2016.
- C. Dhaenens: HDR : L. Boudjeloud, "Approches coopératives et semi-interactives pour le traitement de données massives et temporelles", Université de Lorraine, Dec. 2016.
- L. Jourdan: PhD Thesis: Métaheuristiques hybrides distribuées et massivement parallèles, de Omar ABDELKAFI Université de Haute Alsace, November 7th 2016 (Présidente de Jury)
- L. Jourdan: PhD Thesis: Le routage avec transbordement et collaboration, de Nicolas Danloup, Université de Béthune Artois, December 1st 2016 (Présidente de Jury) Hyperheuristics in Logistics, de Kassem DANACH, Ecole Centrale Lille, December 21st 2016 (Présidente de Jury).
- L. Jourdan: PhD Thesis: Contribution à la synthèse et l'optimisation multi-objectif par essais particuliers de lois de commande robuste RST de système dynamique, de 'Riadh Madiouni', de l'Université Paris Est - Créteil, June 20th 2016 (Rapporteur)

- L. Jourdan: PhD Thesis: A dynamic programming operator for metaheuristics to solve vehicle routing problems with optional visits, de 'Leticia VARGAS' du LAAS-CNRS, June 24th 2016. (Rapporteur)
- L. Jourdan: PhD Thesis: Conception d'alliages par optimisation combinatoire multiobjectifs : thermodynamique prédictive, fouille de données, algorithmes génétiques et analyse décisionnelle de 'Edern Menou' Université de Nantes, October 19th 2016. (Rapporteur)
- HDR: Sebastien Verel, "Apport à l'analyse des paysages de fitness pour l'optimisation mono-objective et multi-objective", Université du Littoral - Côte d'Opale, December 12th, 2016.
- PhD thesis: Ania Kaci, "Conception d'une architecture extensible pour le calcul massivement parallèle", Université Paris-Est, December 14th, 2016.
- PhD thesis: Escobar Fernando, "High Performance Computing Architectures based on Reconfigurable Platforms for Scientific Applications, Université de Mons, March 30th, 2016.
- PhD thesis: K. Lefrouni, "Contrôle de congestion dans les réseaux de communication", EMI – Université Mohammed V Rabat, Maroc, Jan 2016.
- PhD thesis: S. Nielsen, "Diversity preserving genetic algorithms – Application to the inverted folding problem and analogous formulated benchmarks", University of Luxembourg, Luxembourg, Feb 2016.
- PhD thesis: K. E. Vazquez Ortiz, "Advanced methods to solve the maximum parsimony problem", Université d'Angers, France, June 2016.
- PhD thesis: Urrego Agudelo Lilliam, "A novel method for the approximation of risk of blackout in operational conditions", Université Paris-Est, Créteil, Nov 2016.

10.3. Popularization

- Clarisse Dhaenens, Fanny Dufossé, Laetitia Jourdan, Marie-Eléonore Marmion: Operational research - for 2nde during integration week (June 2016)
- Laetitia Jourdan, Marie-Eléonore: Computer Unplugged, Numériqu'elle Day (November 2016)
- Laetitia Jourdan: Computer Unplugged, Primary School (December 2016)

DREAMPAL Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Selection

8.1.1.1. Member of the Conference Program Committees

V.Rusu was a member in the PC of the 2016 edition of the Int. Workshop on Rewriting Logic and Applications, and will be the organizer of the next edition of the event. He was also PC member of Approches Formelles pour la Validation Logicielle (AFADL'2016).

8.1.2. Research Administration

Vlad Rusu is elected member at Inria's Evaluation Committee. As such he has been involved in several activities regarding promotions of researchers, team creations, and team evaluations.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence : V.Rusu, Logic, 30hrs, L3, Univ. Lille, France.

Doctorat : V. Rusu, External adviser for PhD students, Univ. Iasi, Romania.

FUN Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- Nathalie Mitton is a member of the Steering committee of CIoT.
- Nathalie Mitton is general chair for AdHocNow 2016 and InterIoT 2016 and symposium chair of Wireless Ad hoc and Sensor Networks symposium ICNC 2017.
- Valeria Loscri is TPC chair for BODYNETS 2016, general co-chairs for PASC 2016, TPC co-chair for CoWPER 2016, TPC chair for the IoT day 2016
- Mouna Rekik was publicity chair for AdHocNet 2016.
- Aziz Mbacke is publicity chair for AdHocNow 2016.
- Riccardo Petrolo was web chair for AdHocNow 2016.
- Jean Razafimandimby Anjalalaina, was Publicity Chair for IoTIP 2016.

10.1.1.2. Member of the Organizing Committees

- the next CapTronic workshop on Factories of the future. Attendees : industries, ≈ 50 participants
- the International Conference on Ad Hoc Networks and Wireless (AdHoc-Now) from July 4th to July 6th (<https://project.inria.fr/AdHocNow2016/>), Attendees : academics, international ≈ 50 participants
- the Rescom days in January 12th and 13th, Attendees : academics, french-speaking ≈ 70 participants

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Valeria Loscri is co-program chairs for AdHocNow 2016.
- Nathalie Mitton is/was (co-)program chair of the RESCOM community days in January 2016, for AdHocNow 2016, UIC 2016, VTC-Spring 2016, IoTIP 2016, ICNC 2016 and CSE 2016. She is co-program chair for WSCP 2017, VTC2017 and SWC 2017.

10.1.2.2. Member of the Conference Program Committees

- Valeria Loscri is/was in the Technical Program Committee (TPC) of MoWNet'16, IDCs 2016, HPCC 2016, WiMob 2016, ICARSC 2016, GIoTS 2017, MoWNet 2017, WiMob 2017, NanoComm 2017.
- Nathalie Mitton is/was in the Technical Program Committee (TPC) ICC 2016, SmartComp 2016, GlobeCom 2016, WPMC2016, PASC 2016, Wisarn 2016, CCNC 2017, VTC 2017
- Simon Duquennoy is TPC member of EWSN 2016 (and 2017), IEEE DCoSS 2016 (and 2017), IEEE MASS 2016, InterIoT 2016, UIC 2016

10.1.3. Journal

- Valeria Loscri is Co-editor in the Special Issue on Smart Wireless Access Networks and Systems For Smart Cities, Elsevier Ad Hoc Networks.
- Valeria Loscri is Co-editor for the book MIoT2015, Management of Cyber Physical Objects in the Future Internet of Things on behalf of Springer.

- Valeria Loscri is Co-editor for the book Vehicular Social Networks, on behalf of CRC Press Taylor and Francis Group.
- Valeria Loscri is a member of the 'Research Group on IoT Communications and Networking Infrastructure' at ComSoc Communities.

10.1.3.1. Member of the Editorial Boards

- Nathalie Mitton is editorial board members of AHSWN since 2011.
- Nathalie Mitton is editorial board member of Adhoc Networks since 2012.
- Nathalie Mitton is editorial board member of IET-WSS since 2013.
- Nathalie Mitton is editorial board member of ComSoc MMTC e-letter since 2014.
- Nathalie Mitton is editorial board member of Wiley Transactions Emerging Telecommunications Technologies since 2016.
- Nathalie Mitton is editorial board member of Wireless Communications and Mobile Computing since 2016.
- Valeria Loscri is editorial board member of International Journal of Advanced Robotic Systems since 2016

10.1.4. Invited Talks

- Nathalie Mitton was invited speaker at CNRS Josy Days in Paris in October 2016
- Nathalie Mitton was invited speaker at Smyle Workshop at EPFL in Neuchatel, Switzerland, in September 2016
- Riccardo Petrolo was invited speaker at Rice University in Houston, USA in September 2016
- Nathalie Mitton was invited speaker at 4th International Workshop on Next Generation Green Wireless Networks (NextGWiN 2016) in Dublin, Ireland, September 2016
- Nathalie Mitton was invited speaker at Southeast University Seminar in Nanjing, China in June 2016
- Valeria Loscri was invited speaker at BIS days in Paris, June 2016
- Nathalie Mitton was invited speaker at 10th European eAccessibility Forum "e-Accessibility in a Connected World in Paris, May 2016
- Nathalie Mitton was invited speaker at UCN@Sophia Labex seminar Sophia Antipolis, April 2016
- Nathalie Mitton was invited speaker at "US-EU Workshop on the Next Generation Internet", Los Angeles, March 2016
- Nathalie Mitton was invited speaker at "IoT day Paris Descartes" on March 2016
- Valeria Loscri and Nathalie Mitton were invited speakers at JEAI days in Lille on February 2016
- Simon Duquenoey was invited speaker at Bristol for the Sphere IRC project, in November 2016

10.1.5. Leadership within the Scientific Community

Nathalie Mitton is a member of the Steering Committee of the GDR Rescom.

10.1.6. Scientific Expertise

Nathalie Mitton is an elected member of the evaluation community of Inria. She has acted as a reviewer for ANRT and ANR project submissions. She is also member of the scientific committees of the competitiveness cluster of MATIKEN and for CITC (International Contactless Technologies Center).

Valeria Loscri is Scientific European Responsible for Inria Lille - Nord Europe. She has been reviewer in the context of 2017 Air Force Young Investigator Research Program. *Simon*

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

E-learning

Mooc, Nathalie Mitton, "Villes intelligentes : défis technologiques et sociétaux" , 5-week mooc by the IPL CityLab@Inria team, FUN, Inria, to open in January 2016

Master : Valeria Loscri, Objets Communicants, 24h (Mineure Habitat Intelligent), Ecole des Mines de Douai, France.

Master : Nathalie Mitton, Wireless sensor networks, 16h eqTD (Master MINT), Université Lille 1 and Telecom Lille 1, France

Bsc: Nathalie Mitton, Contactless technologies, 20h eqTD, Université de Valenciennes, France

Bsc: Farouk Mezghani, Contactless technologies, 20h eqTD, Université de Valenciennes, France

BSC: Riccardo Petrolo, Réseaux Informatique, 36h TP and TD (Licence Info), Université Lille 1, France

BSC: Riccardo Petrolo, Technologies du Web, 36h TP and TD (Licence 1), Université Lille 1, France

Master : Viktor Toldov, Systèmes Numériques (VHDL), 6h eqTD (Formation d'ingénieur), Télécom Lille, France

Licence : Jean Razafimandimby, Algorithms and Programming 1, 32h TP and TD, Université Lille 1, France

Licence : Jean Razafimandimby, Algorithms and Programming 2, 32h TP and TD, Université Lille 1, France

10.2.2. Supervision

PhD defended on July 26th 2016: Mouna Rekik, geographic multi path routing protocol based on swarm intelligence for wireless sensor and actuator networks in the context of Smart Grids, co-supervision Université Lille 1 and University of Sfax (Tunisia), 2013-2017, Nathalie Mitton and Zied Chtourou

PhD defended on Oct 25th 2016: Riccardo Petrolo, Internet of Things and Smart Cities, Université Lille 1, 2013-2016, Nathalie Mitton and Valeria Loscri

PhD in progress: Viktor Toldov, : Interférence et consommation dans les réseaux de capteurs, Université Lille 1, 2013-2016, Nathalie Mitton and Laurent Clavier

PhD in progress: Jean Razafimandimby, Distributed Cooperation and Communication among Heterogeneous Devices, Université Lille 1, 2014-2017, Nathalie Mitton and Valeria Loscri

PhD in progress: Aziz Mbacke, Smart Deployment of heterogeneous sensors and RFID in a Smart City, Université Lille 1, 2015-2018, Nathalie Mitton and Hervé Rivano (Urbanet)

PhD in progress: Jad Nassar, Ubiquitous networks for smart grids, Université Lille 1, 2015-2018, Nathalie Mitton and Nicolas Gouvy (HEI)

10.2.3. Juries

- PhD/HDR committees :
 - Simon Duquennoy was a member of the PhD defense committee of
 - * Mathieu Michel, University Mons Belgium, September 2016
 - * Anwar Hithnawi, ETH Zurich in November 2016.
 - Valeria Loscri was a member of the PhD defense committee of Riad Mazloun, University Paris 6, December 2016.

- Valeria Loscri was reviewer of the the following PhD thesis: Orazio Briante, Università Mediterranea di Reggio Calabria, May 2016.
- Nathalie Mitton is/was reviewer of the following PhD thesis:
 - * Remy Leone, UPMC, June 2016,
 - * Quentin Bramas, UPMC, October 2016,
 - * Laurent Reynaud, Univ. Lyon 1, March 2017.
- Nathalie Mitton was a member of the HDR defense committee of Nadjib AIT SAADI, University of Paris-Est Creteil Val de Marne (UPEC) 18 July 2016.
- Researcher selection committees :
 - Valeria Loscri was member of the Inria CR2 Lille competition selection committee.
 - Nathalie Mitton was member of the Inria CR2 Grenoble competition selection committee.
 - Nathalie Mitton was member of the Inria Research Grant Position selection committee.
 - Nathalie Mitton was member of the Assistant Professor (MdC) at Universités de Valenciennes, Rennes et de Lorraine, Institut Mines Telecom ParisTech competition selection committees.
- Nathalie Mitton is a member of the scientific committee of "Convergences du Droit et du Numérique".
- Valeria Loscri is a member of the committee of "Journée Nationale de l'Internet des Objets".

10.3. Popularization

- Tahiry Razafindralambo and Simon Duquennoy gave a talk for 13-45 in April 2016
- Emilio Compagnone gave a talk for 13-45 in May 2016
- Cristina Cano gave a talk at "30 min de Sciences" in May 2016
- Emilio Compagnone and Valeria Loscri gave a talk and a demo at Robotic Day at Euratechnologies in July 2016
- Nathalie Mitton, Cristina Cano and Viktor Toldov gave talks at IoTWeek by CITC on June 2016
- Nathalie Mitton gave a talk at NormaFret by i-Trans competitiveness cluster in September 2016
- Aziz Mbacke, Jad Nassar and Julien Vandaele gave some talks in high schools for the "Fête de la Science" in October 2016
- Nathalie Mitton co-authored popularization articles in La main à la pâte (to be published in January 2017), white paper on e-accessibility for BrailleNet/G3ict and an article in *Big Data à découvert* by CNRS edition.

INOCS Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

Luce Brotcorne:

- Meeting of the EURO Working group on Pricing and Revenue Management, Hamburg, Germany, April 2016.

Bernard Fortz:

- Winter School on Network Optimization, Estoril, Portugal, January 2016.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

Bernard Fortz:

- INFORMS Telecommunications conference, Boca Raton, FL, USA, March 2016.

9.1.2.2. Member of the Conference Program Committees

Luce Brocorne:

- ROADEF 2016, Compiègne, France, February 2016.
- EURO 2016, Stream Organizer, Poznan, Poland, July 2016.

Bernard Fortz:

- ORBEL 30, Louvain-la-Neuve, Belgium, January 2016.

Martine Labbé:

- DRCN, Paris, France, March 2016.
- International Symposium on Combinatorial Optimization (ISCO), Vietri sul Mare, Italy, May 2016.
- Ninth Triennial Symposium on transportation analysis (TRISTAN IX), June 2016.
- Meeting of the EURO working group on Locational Decisions (EWGLA), Malaga, Spain, September 2016.
- XLVIII Brazilian Symposium on Operational Research (XLVIII SBPO), Vitória, Brazil, September 2016.
- Matheuristics 2016, Brussels, Belgium, September 2016.

Frédéric Semet:

- Ninth Triennial Symposium on transportation analysis (TRISTAN IX), June 2016.
- National Conference of the Tunisian Operations Research Society (TORS), December 2016.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Luce Brotcorne:

- Associate editor: Computers and Operations Research

Bernard Fortz:

- Associate editor: INFORMS Journal on Computing
- Guest editor of special issues of Networks and EURO Journal on Computational Optimization

Martine Labbé:

- Editor in chief: EURO Journal on Computational Optimization
- Associate editor: International Transactions in Operations Research
- Member of the Advisory Board: Transportation Science

9.1.4. Invited Talks

Luce Brotcorne:

- CESO 2016, Plenary speaker, Paris, France, May 2016
- EDF Lab Seminar, Paris, France, France, September 2016
- RIM seminar, Erasmus, Rotterdam, Netherlands, December 2016.

Diego Cattaruzza:

- Invited seminar, HEC-École de gestion de l'université de Liège, Liège, Belgium, February 2016.

Bernard Fortz:

- OMOR seminar, ESSEC, Cergy, France, December 2016.
- SDN day 2016, Orange Gardens, Paris, France, November 2016.

Martine Labbé:

- Winter School on Network Optimization, Invited Lecturer, Lisbon, Portugal, January 2016.
- First International Workshop in Bilevel Programming, Monterrey, Plenary Speaker, Mexico, March 2016.
- ROADEF Conférence, Plenary Speaker, Compiègne, France, February 2016.
- European Study Group with Industry, Plenary Speaker, Avignon, France, May 2016
- Graphs and Optimization (GO) Meeting, Plenary Speaker, Rigi Kaldbad, Switzerland, July 2016.
- Séminaire POC15, Plenary Speaker, Paris, France, October 2016 .

Frédéric Semet

- Symposium in honor of G. Laporte, Eindhoven, Netherlands, April 2016.
- AIRO Conference, Plenary Speaker, Trieste, Italy, September 2016.

9.1.5. Leadership within the Scientific Community

Luce Brotcorne:

- Coordinator of EURO Working Group: “Pricing and Revenue Management”.

Bernard Fortz:

- Member of the board of administration and treasurer of ORBEL (Belgian OR Society).
- ORBEL representative for EURO and IFORS.

- Coordinator of EURO Working Group: “European Network Optimization Group (ENOG)”.

Martine Labbé:

- Vice-chair of the SIAM Activity Group on Optimization (SIAG/OPT).
- Chair of the SIAG/Optimization Prize committee.

Frédéric Semet:

- Member of the board of EURO Working Group: “Vehicle routing and logistics optimization (VEROLOG)”.
- Member of the steering committee of CNRS GdR 3002 : Operations Research.
- Coordinator of GdR Working Group: “Transportation and Logistics (GT2L)”.

9.1.6. Scientific Expertise

Luce Brotcorne:

- Member of the scientific committee of France-Netherlands Exchange Program.
- Member of the evaluation committee for Inria/MITACS Exchange Program.

Bernard Fortz:

- President of the FRIA PE1 - jury 1.
- Member of the CIRRELT scientific orientation committee.

Martine Labbé:

- Member of the Scientific Advisory Board of IWR and its Graduate school HGS Math-Comp, Heidelberg University.
- Member of the Centro de Matemática, Aplicações Fundamentais e Investigação Operacional, University of Lisbon.
- Member of the 2016 selection jury for the research program “Mathematics and ...” of the Vienna Science and Technology Fund.

Frederic Semet:

- Member of the CIRRELT scientific orientation committee.
- Scientific board member of PICOM competitiveness cluster.
- Reviewer for Agence Nationale de la Recherche (ANR), Fond de Recherche Nature et Technologie du Québec.

9.1.7. Research Administration

Luce Brotcorne:

- Scientific Manager (correspondant scientifique) for international relations department
- Member of the International Relations working (COST-GTRI).
- Member of the committee for the Technological Development (CDT).
- Member of the committee for the recruitment of Junior Research Scientist (CR1/CR2) at Inria Bordeaux and Inria Lille in 2016
- Member of the committee for the recruitment of assistant professor at University of Valenciennes in 2016

Frédéric Semet:

- Deputy director of CRIStAL.
- Elected member of the scientific council of Centrale Lille

9.2. Teaching - Supervision - Juries

9.2.1. Supervision

PhD : Lijuan Zhang, Optimisation and Simulation of a cross-dock facility, 18/03/2016, Frédéric Semet, Benoit Trouillet

PhD : Diego Ponce Lopez, The Discrete Ordered Median Problem revisited: new formulations, properties and algorithms, Université Libre de Bruxelles, 18/07/2016, Martine Labbé, Justo Puerto

PhD : Martim Joyce Moniz, Models and methods for Traffic Engineering problems with single-path routing, Université Libre de Bruxelles, 06/10/2016, Bernard Fortz, Luis Gouveia

PhD : Sezin Afsar, Revenue Optimization and Demand Response Models using Bilevel Programming in Smart Grid Systems, 07/12/2016, Luce Brotcorne, Gilles Savard

PhD : Bayrem Tounsi, Contributions in E-commerce supply chain : Integration in E-fulfillment and delivery services pricing, 19/12/2016, Luce Brotcorne, Yezekael Hayel

PhD : Kacem Danach, Hyperheuristics in logistics 21/12/2016, Shahin Gelareh, Frédéric Semet

PhD in progress : Burak Celik, Models and methods for Stackelberg games using bilevel optimization and mixed integer linear programming, from Nov 2016, Luce Brotcorne, Martine Labbé

PhD in progress : Yaheng Cui, Models and methods for decentralized decision in logistics networks, from Oct 2016, Luce Brotcorne, Eric Ballot

PhD in progress : Wenjuan Gu, Location routing for short and local fresh food supply chain, from Oct 2016, Maxime Ogier, Frédéric Semet

PhD in progress : Léonard Von Niederhausen, Design and pricing of new services in energy in a competitive environment, from Oct 2015, Luce Brotcorne, Didier Aussel

PhD in progress : Yuan Yuan, Vehicle Routing Problems with Synchronization for City Logistics, from Oct 2016, Diego Cattaruzza, Frédéric Semet

PhD in progress : Carlos Casorrán Amilburu, Models and algorithms for Solving Bimatrix Stackelberg games, from October 2014, Martine Labbé.

PhD in progress : Jérôme De Boeck, Optimization problems in energy, from October 2015, Bernard Fortz.

PhD in progress : Luciano Porretta, Models and methods for the study of genetic associations, from May 2011, Bernard Fortz.

PhD in progress : Fabio Sciamannini, Column generation approaches for solving variants of node coloring problems, from October 2014, Bernard Fortz, Martine Labbé.

9.2.2. Juries

Luce Brotcorne:

- PhD : “Design, Planning and Execution of Sustainable Intermodal Port-Hinterland Transport Networks”, Ypsilantis Panagiotis, Erasmus University, Rotterdam. Rob Zuidwijk.

Bernard Fortz:

- PhD : “Revenue Optimization and Demand Response Models using Bilevel Programming in Smart Grid Systems”, Sezin Afşar, Inria Lille-Nord Europe. Luce Brotcorne and Gilles Savard.
- HdR : “Problèmes d’optimisation en milieu urbain : modèles, méthodes et défis”, Andréa Cynthia Santos, Université de Technologie de Troyes.
- PhD : “The discrete ordered median problem revisited: new formulations, properties and algorithms”, Diego Ponce, Université Libre de Bruxelles and Université de Séville. Martine Labbé and Justo Puerto.

- PhD : “Optimization of information flows in telecommunication networks” (rapporteur), Thibaut Lefebvre, CNAM. Sourour Elloumi, Eric Gourdin, Cédric Bentz.

Martine Labbé:

- PhD : “Recherche de flots stables dans des réseaux de transport multi-agents” (rapporteur), Nadia Chaabane, IUniversité de Toulouse. Cyril Briant and Marie-José Huguet.
- PhD : “Models and methods for Traffic Engineering problems with single-path routing”, Martim Joyce Moniz, Université Libre de Bruxelles, Bernard Fortz and Luis Gouveia.
- HdR : “Network Optimization: Algorithmic Approaches and Polyhedral Investigations:”, Markus Leitner, University of Vienna.

Frédéric Semet:

- PhD : “Design, Planning and Execution of Sustainable Intermodal Port-Hinterland Transport Networks”, Juliette Médina, Ecole des Mines de Nantes. Fabien Le Huédé, Olivier Peton.

9.3. Popularization

- PICOM workshop on Logistics, May 2016.
- Rendez-vous du Plateau Meetings: Prescriptive analytics for an agile logistics, December 2016.

LINKS Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Selection

9.1.1.1. Member of the Conference Program Committees

J. Niehren was member of the program committees of LPAR (International Conference on Logic Programming and Automatic Reasoning) 2016.

S. Tison is member of the program committees of FSCD (First International Conference on Formal Structures for Computation and Deduction) 2016.

S. Staworko is member of the program committees of PODS (ACM Symposium on Principles of Database Systems) 2016.

I. Boneva was member of program committee of EDBT (International Conference on Extending Database Technology) 2016 Vision Track.

P. Bourhis was member of program committee of Provenance week 2016, IJCAI (International Joint Conference on Artificial Intelligence) 2016.

9.1.2. Journal

9.1.2.1. Member of the Editorial Boards

S. Tison is in the editorial committee of RAIRO-ITA (Theoretical Informatics and Applications).

J. Niehren is in the editorial board of Fundamenta Informaticae.

9.1.2.2. Reviewer - Reviewing Activities

Too many to be enumerated.

9.1.3. Leadership within the Scientific Community

S. Tison has been member of the "Comité National de la Recherche Scientifique (CoNRS)" (Section 6) until June 2016.

9.1.4. Scientific Expertise

P. Bourhis has expertised a project in the 'Recherche Formation Innovation Atlantic' program of Pays de la Loire Region.

S. Tison has been a member of the scientific board of the company See-d

9.1.5. Research Administration

S. Tison is an elected member of the academic council of "ComUE Lille Nord de France " since November 2015.

S. Tison is a vice president of the University of Lille 1 since October 2015, where she is responsible for industrial partnerships, innovation, and valorisation.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Bachelor : S. Tison, Discrete Mathematics, 36h, Université Lille 1, France

Bachelor : S. Salvati, Computer Science Info, L1, 96h, Université de Lille 1, France

Bachelor : S. Salvati, Automata and Languages, L3, 36h, Université de Lille 1, France

Bachelor : S. Salvati, Algorithmic and Operational Research, L3, 36h, Université de Lille 1, France
 Master 2 (MOCAD): P. Bourhis and J. Niehren Information extraction, 20h30, M2, Université Lille 1, France
 Master 2 (MOCAD) : I. Boneva and P. Bourhis, Algorithms for Database, 21h, M1, Université Lille 1, France
 Master 1 : S. Tison, Advanced algorithms and complexity, M1, 54h, Université Lille 1, France
 Master 1 : S. Tison, Business Intelligence, M1, 28h, Université Lille 1, France
 Master 1 : A. Lemay, XML Technologies, 16h, M2, Université Lille 3, France
 Master 1 : S. Staworko is co-head of the master 'Web Analyst' in Université Lille 3, France
 DUT : I. Boneva, 100h, Université Lille 1, France
 A. Lemay is pedagogical responsible for Computer Science and numeric correspondent for UFR LEA Lille 3.

9.2.2. Supervision

PhD defended : T. Sebastian, Streaming algorithms for XPath. 2011-2016. Supervised by Niehren.
 PhD defended: A. Boiret. Normalization and Learning of Transducers on Trees and Words. 2011-2016. Supervised by Niehren and Lemay.
 PhD in progress: D. Gallois. Since 2015. Recursive Queries. Supervised by Bourhis and Tison.
 PhD in progress: M. Sakho. Hyperstreaming Query answering on graphs. Since 2016. Supervised by Niehren and Boneva.
 PhD in progress: J.M. Lozano. On data integration for mixed database formats. Supervised by Boneva and Staworko.

9.2.3. Juries

P. Bourhis was a member of PhD committee for Antoine Amarilli (ParisTech)
 S. Tison was a member of the PhD committees for Yoann Dufresne and A. Boiret and reviewer for the PhD of Carles Creus (Universitat Politecnica de Catalunya).
 A. Lemay was a member of the PhD committee for A. Boiret
 J. Niehren was a member of PhD committees for A. Boiret, T. Sebastian and Louis Gallaraga (ParisTech).

9.2.4. Internships

A. Durey, University of Lille I. On Implementation of a Shex validator, from Jun 2016 until Sep 2016. Supervisor I. Boneva.
 R. Li, Ecole Centrale de Lille, from May 2016 until Aug 2016. On aggregate queries for data mining. Supervisors J. Niehren and P. Bourhis.

9.2.5. Selection Committees

I. Boneva was member of the selection committee for an assistant professorship at the University of Lille I.
 S. Tison was member of the selection committee for a professorship at the University of Rouen.

9.3. Popularization

I. Boneva has supervised second year students from DUT while they conducted activities on introduction to programming to 9-10 years old students in Villeneuve d'Ascq.

9.4. Standardization

I. Boneva is a member of the Data Shapes Working Group of the W3C which the mission is to produce a language for defining structural constraints on RDF graphs. <http://www.w3.org/2014/data-shapes/charter>

MAGNET Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

AURÉLIEN BELLET co-organized the workshop Private Multi-Party Machine Learning @ NIPS 2016.⁰

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

PASCAL DENIS served as co-chair of the Polaris Colloquium, a monthly Guest Lecture series in Computer Science and Signal Processing, co-sponsored by Inria Lille–Nord Europe and University of Lille CRISAL Lab.

10.1.2.2. Member of the Conference Program Committees

AURÉLIEN BELLET served as PC member for IJCAI 2016, ICML 2016, NIPS 2016 and AISTATS 2017.

PASCAL DENIS served as Senior PC member for IJCAI 2016. He was PC member for ACL 2016, AAI 2016, CAP 2016, EMNLP 2016, and NAACL 2016.

RÉMI GILLERON served as PC member for NIPS 2016 and AISTATS 2017.

JAN RAMON served as PC member for AISTATS 2016 and 2017, BAI workshop @ IJCAI 2017, iee big data 2016, BNAIC 2016, DS 2016, ECAI 2016, ECML-PKDD 2016, IEEE ICDM 2016, ICHI 2016, IJCAI 2016, ILP 2016, ISMIS 2017, KDD 2016, MLG 2016, NIPS 2016, PMPML workshop @ NIPS 2016, SSDM workshop @ ECML-PKDD 2016.

MARC TOMMASI served as PC member for NIPS 2016, ICML 2016, IJCAI 2016, EGC 2017.

FABIEN TORRE served as PC member for EGC 2017, workshop CluCo 2017, AAFD & SFC 2016, CNIA 2016

FABIO VITALE served as PC member for AISTATS 2017 and ECMLPKDD 2016, NIPS 2016.

10.1.2.3. Reviewer

GÉRAUD LE FALHER was reviewer for ECMLPKDD 2016, NIPS 2016 and IJCAI 2016. MIKAELA KELLER was a reviewer for ICLR 2016 and ICML 2016.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

JAN RAMON is member of the editorial boards of data mining and knowledge discovery, machine learning and guest editorial board of ECML-PKDD 2016.

10.1.3.2. Reviewer - Reviewing Activities

AURÉLIEN BELLET was reviewer for IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) and IEEE Transactions on Cybernetics (TCYB).

JAN RAMON: data mining and knowledge discovery (dami) 5; knowledge and information systems (kais): 4; machine learning :3; neurocomputing: 2; artificial intelligence: 2; plos one : 1

FABIO VITALE was reviewer for the journal EJOR (European Journal of Operational Research - Elsevier), and the journal Internet Mathematics.

⁰<https://pmpml.github.io/PMPML16/>

GÉRAUD LE FALHER was reviewer for the International Journal of E-Planning Research.

10.1.4. Invited Talks

AURÉLIEN BELLET was invited the Learning, Privacy, and Mobile Data Workshop at Google Research Seattle,⁰ the Statistical Machine Learning (SMILE) seminar in Paris,⁰ the Workshop on Distributed Machine Learning (Télécom ParisTech),⁰ and at the company EURA NOVA.⁰

PASCAL DENIS was invited to the STL seminar, Université Lille 3 (February 2016).

10.1.5. Scientific Expertise

PASCAL DENIS was reviewer for Flanders Research Foundation (FWO, Belgium) and the Brussels Institute for Research and Innovation (Innoviris).

JAN RAMON was reviewer of H2020 projects.

10.1.6. Research Administration

FABIEN TORRE is in the board of the national evaluation committee for teaching and research in computer science (CNU 27)

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence MIASHS: FABIO VITALE, Introduction à l'algorithmique, 66h, L2, Université Lille 3.

Licence MIASHS: MARC TOMMASI, Réseaux, 28h, L1, Université Lille 3.

Licence MIASHS: RÉMI GILLERON, Traitement de données, 24h, L1, Université Lille 3.

Licence MIASHS: GÉRAUD LE FALHER, Traitement de données, 36h, L1, Université Lille 3.

Licence MIASHS: MATHIEU DEHOUCK et THIBAUT LIÉTARD, Projet informatique de traitement de données en SHS, 20h, L2, Université Lille 3.

Licence MIASHS: MIKAELA KELLER, Codage et représentation de l'information, 24h, L1, Université Lille 3.

Licence SoQ (SHS): FABIEN TORRE, Traitement de contenus textuels, 24h, L3, Université Lille 3.

Licence SoQ (SHS): RÉMI GILLERON, Algorithmique de graphes, 24h, L3, Université Lille 3.

Licence SHS: MIKAELA KELLER, Langages du Web, 24h, L3, Université Lille 3.

Licence SHS: MIKAELA KELLER, Représentation numérique de l'information, 24h, L3, Université Lille 3.

Licence économie gestion: RÉMI GILLERON, Traitement de données et documents, 24h, L1, Université Lille 3.

Licence MARC TOMMASI, MIKAELA KELLER C2i, université Lille 3.

Master MOCAD: PASCAL DENIS co-taught the Machine Learning and Decision under Uncertainty class, 37,5h, Université Lille 1.

Master MIASHS: RÉMI GILLERON et FABIEN TORRE, Web et référencement, 24h, M1, Université Lille 3.

Master MIASHS: GÉRAUD LE FALHER, Web et réseaux, 24h, M1, Université Lille 3.

Master MIASHS: MIKAELA KELLER, Programmation et bases de données, 24h, M1, Université Lille 3.

⁰<https://sites.google.com/site/learningprivacymobiledata/>

⁰<https://sites.google.com/site/smileinparis/>

⁰<http://machinelearningforbigdata.telecom-paristech.fr/fr/article/workshop-friday-novembre-25-distributed-machine-learning>

⁰<http://euranova.eu>

Master LTTAC: FABIEN TORRE, Algorithmique des textes – Javascript, 36h, M1, Université Lille 3.

Master ID: FABIEN TORRE, information structurée, 20h, M2, Université Lille 3.

Master ID: FABIEN TORRE, programmation Web, 20h, M2, Université Lille 3.

Master / Master Spécialisé Big Data: AURÉLIEN BELLET, Advanced Machine Learning, 25.5h, Télécom ParisTech.

Formation continue (Certificat d'Études Spécialisées Data Scientist): AURÉLIEN BELLET, Supervised Learning and Support Vector Machines, 10h, Télécom ParisTech.

Formation continue: AURÉLIEN BELLET, Graph Mining, 3h, Télécom ParisTech pour Allianz.

E-learning

SPOC: MARC TOMMASI, RÉMI GILLERON and ALAIN PREUX: Culture numérique, 5 semesters at the bachelor level, Moodle, Lille 3 university, more than 7000 students.

Pedagogical resources: texts, videos, quizz and exercices available on <http://culturenumerique.univ-lille3.fr/>, creative commons.

10.2.2. Supervision

PhD in progress: GÉRAUD LE FALHER, Machine Learning in Signed Graphs, Inria Lille – Nord Europe, since Oct. 2014, MARC TOMMASI, FABIO VITALE and CLAUDIO GENTILE (University of Insubria, Italy).

Phd in progress: DAVID CHATEL, Semi-supervised spectral clustering since Sep 2012, MARC TOMMASI and PASCAL DENIS.

Phd in progress: MATHIEU DEHOUCK, Graph-based Learning for Multi-lingual and Multi-domain Dependency Parsing, since Oct 2015, PASCAL DENIS and MARC TOMMASI.

Phd in progress: PAULINE WAUQUIER, Recommendation in Information Networks, since Dec 2013, MIKAELA KELLER and MARC TOMMASI.

Phd in progress: THIBAUT LIÉTARD, Adaptive Graph Learning with Applications to Natural Language Processing, AURÉLIEN BELLET, PASCAL DENIS and RÉMI GILLERON.

Master: THIBAUT LIÉTARD, Metric learning for Graph-based coreference resolution, ENS Rennes, co-supervised by AURÉLIEN BELLET and PASCAL DENIS.

Master: PAUL VANAESBROUCK, Decentralized Machine Learning on Graphs, Ecole Polytechnique, co-supervised by AURÉLIEN BELLET and MARC TOMMASI.

Master: PIERRE DELLENBACH, Private learning of heavily distributed data, Ecole Polytechnique, co-supervised by AURÉLIEN BELLET and JAN RAMON.

Master: ROBIN VOGEL, Learning to Rank Rare Instances, ENSAE, co-supervised by AURÉLIEN BELLET, STÉPHAN CLÉMENÇON et ANNE SABOURIN (Télécom ParisTech), et STÉPHANE GENTRIC (Morpho).

10.2.3. Juries

- AURÉLIEN BELLET was member of the recruitment committee for MdC in Computer Science at Télécom Saint-Etienne.
- PASCAL DENIS et MARC TOMMASI were members of the recruitment committee for MdC in Computer Science at Université Lille 3.
- PASCAL DENIS was member of the Commission Emploi Recherche (CER) at Inria Lille – Nord Europe.
- RÉMI GILLERON was member of the PhD committees of HUGO LOUCHE (Examinateur) and TOM SEBASTIAN (Président).
- MARC TOMMASI was member of the habilitation committee of ALBERT BIFFET (Rapporteur).

- MARC TOMMASI was member of the PhD committees of GUILLAUME RABUSSEAU (Rapporteur), RAPHAËL PUGET (Rapporteur), MICHAËL PERROT (Examineur), HADRIEN GLAUDE (Examineur).
- MARC TOMMASI was head of the jury for the recruitment committee of Junior Research Scientists (CR1/CR2) at Inria Lille.

10.3. Popularization

MARC TOMMASI presented the MAGNET team at the EuraTechnologies ICT innovation ecosystem (<https://www.inria.fr/centre/lille/agenda/r-dv-du-plateau-inria-apprentissage-automatique-et-reseaux-d-information>).

AURÉLIEN BELLET presented some of his work at the popularization seminar “30 minutes de sciences” and at an Assemblée Générale of Inria Lille - Nord Europe.

THIBAUT LIÉTARD has participated to the “chercheur itinérant” initiative (<https://www.inria.fr/centre/lille/recherche/sciences-pour-tous2/mediation/chercheurs-itinerants-au-lycee-2016>).

RÉMI GILLERON has participated at the forum “F O O R <: Forum Ouvert Oeuvres et Recherches” where he presented the research work done with PASCAL DENIS for the artwork “This is Major Tom to Ground Control”

MEPHYSTO Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

D. Bonheure was General chair of the committee of the BRUXELLES-TORINO TALKS IN PDE'S MAY 2-5 2016 UNIVERSITÀ DEGLI STUDI DI TORINO DIPARTIMENTO DI MATEMATICA "GIUSEPPE PEANO"

9.1.2. Journal

9.1.2.1. Member of the Editorial Boards

D. Bonheure is associate editor at the Bulletin of the Belgian Mathematical Society - Simon Stevin (<http://projecteuclid.org/info/euclid.bbms>)

A. Gloria is associated editor at the North-Western European Journal of Mathematics (<http://math.univ-lille1.fr/~nwejm/>).

9.1.3. Invited Talks

D. Bonheure was invited speaker at

- 02/12/2016, Recent progress in Partial Differential Equations, Université Aix-Marseille
- 03/10/2016 au 07/10/2016, New trends in Partial Differential Equations, Centro De Giorgi, SNS Pisa
- 28/09/2016 au 30/09/2016, 3rd Conference on Recent Trends in Nonlinear Phenomena, Perugia
- 12/09/2016 au 17/09/2016, Partial Differential Equations and Related Topics – On the occasion of Giorgio Talenti's 75th birthday , Alghero

Stephan De Bièvre was invited speaker at

- Université Fourier, Grenoble, Mathematical Physics Seminar, April 2016
- Université de Nantes, Mathematical Physics Seminar, May 2016
- Spectral and Scattering theories in QFT, IV, Porquerolles, May 2016
- 11th AIMS Conference on Dynamical systems, ODE, and Applications, Orlando, July 2016
- Conference "Coherent States and their Applications: A Contemporary Panorama", CIRM Marseille, November 2016

A. Gloria was invited speaker at

- ENS Rennes, January 2016
- GAMM conference, Paris, January 2016
- Winter school on stochastic homogenization, Augsburg, February 2016
- British Mathematical Colloquium, Bristol, March 2016
- Courant Institute, NYU, New York, May 2016
- 15th European Mechanics of Materials Conference, Brussels, September 2016
- Probability seminar, Warwick, October 2016
- Workshop "Functional inequalities, heat kernels, and random processes", Oberwolfach institute, December 2016

M. Simon was invited speaker at

- YEP XIII: Large Deviations for Interacting Particle Systems and Partial Differential Equations, Eindhoven (Netherlands)
- Workshop in Stochastic Analysis, Universidade Federal de Campinas, Brazil
- Tokyo University, Probability Seminar
- Workshp "Large Scale Stochastic Dynamics", Oberwolfach institute, Germany

9.1.4. Leadership within the Scientific Community

D. Bonheure is member of the Executive board of the Belgian Mathematical Society.

S. De Bièvre is

- the scientific coordinator of the CEMPI (2012-2019),
- member of the drafting committee of the IDEX UDL, and of the delegation that presented the project to the jury in Paris (April 2015, January 2016),
- member of the Executive Committee of the International Association of Mathematical Physics (since 2012).

9.1.5. Scientific Expertise

D. Bonheure is a member of the ESF College of Expert Reviewers from 20 October 2016 to 19 October 2019

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Denis Bonheure, Integral and differential calculus, 46h, L1 (mathematics & physics), Université Libre de Bruxelles, Belgium

Licence : Denis Bonheure, Mathematics for management engineering, 30h, L1 (mathematics & physics), Université Libre de Bruxelles, Belgium

Licence : Guillaume Dujardin, Integral and differential calculus, 60h, L2 (mathematics & physics), Université Libre de Bruxelles, Belgium

Licence : Stephan De Bièvre, Probability, 15h, L2 (physics), Université Lille 1

Licence : Stephan De Bièvre, Probability, 50h, L3 (mathematics), Université Lille 1

Licence : Stephan De Bièvre, Financial mathematics, 30h, L1 (economics), Université Lille 1

Master : Denis Bonheure, Variational methods and PDEs, 30h, M2, Université Libre de Bruxelles, Belgium

Master : Antoine Gloria, Anderson localization, 30h, M2, Université Libre de Bruxelles, Belgium

Master : Antoine Gloria, Fluctuations in stochastic homogenization, 4h30, Doctoral course, YEP XIII, Eindhoven, Netherlands

9.2.2. Supervision

PhD in progress : Mitia Duerinckx, Topics in stochastic homogenization of PDEs, 01/10/2014, A. Gloria & S. Serfaty (NYU).

PhD in progress : Pierre Mennuni, Université Lille 1, 01/10/2016, S. De Bièvre, A. De Laire (Lille 1) & G. Dujardin

PhD in progress : Hussein Cheikh-Ali, Université Libre de Bruxelles and Université de Lorraine, D. Bonheure (ULB) & F. Robert (Nancy)

PhD in progress : Robson Alves do Nascimento Filho, Université Libre de Bruxelles, D. Bonheure (ULB)

9.2.3. Juries

S. De Bièvre was in the jury of the PhD theses of A. Newman (Loughborough, England), A. Vasseur (Nice) and J.P. Miqueu (Rennes).

9.3. Popularization

M. Simon gave a talk at ESPE (Ecole Supérieure du Professorat et de l'Education) during the week "Semaine des mathématiques", about the mathematical properties of the official soccer ball. Marielle Simon is part of the program "MathenJeans".

MINT Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Selection

9.1.1.1. Member of the Conference Program Committees

Laurent Grisoni : PC for VISIGRAPP (IEEE InfoViz Art Track), Computer Graphics International (CGI, computer graphics), MOCO (international workshop on gesture), ISEA (art-science), GRAPP (computer graphics)

9.1.1.2. Reviewer

Florent Berthaut: Reviewer for ACM CHI Conference and NIME conference
Laurent Grisoni: Eurohaptics, ACM UIST, ACM CHI

9.1.2. Journal

9.1.2.1. Member of the Editorial Boards

Frédéric Giraud is Associate Editor of IEEE Transactions on Haptics

9.1.2.2. Reviewer - Reviewing Activities

Florent Berthaut: Reviewer for IEEE Multimedia
Laurent Grisoni: Computer & Graphics,

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Licence: Florent Berthaut, Spreadsheets et VBA programming, LEA L3 TCI (22h), Web programming, LEA L3, Université Lille 3, France
- Licence: Frédéric Giraud, Physique pour le génie électrique (30h), Université Lille 1
- Master: Christophe Giraud-Audine: Control of electrical machines (30h), Power Electronics (30h), signal processing (30h), niveau M1, ENSAM, France
- Master: Florent Berthaut, Web programming, LEA M1 TSM (16,5h) and LEA M1 RIC1 (48h), Database, LEA M1 ANI (22h), Université Lille 3, France
- Master : Frédéric Giraud, Control of electrical machines (30h), Power Electronics (40h) niveau M1, Université Lille1, France
- Master : Laurent Grisoni, NIHM : nouvelles Interactions Homme-Machine, (6h), niveau M2, Université Lille 1, France
- Master: Laurent Grisoni, représentation et compression de données (24h), introduction à la programmation (38h), cryptographie (8h), Ecole Polytech'lille (dept IMA)
- Master: Laurent Grisoni: gestion de projet en Co-design interdisciplinaire, Master Sciences et Culture du Visuel, Université de Lille Sciences Humaines et Sociales, Master Sciences et Cultures du Visuel (12h)
- Master : Laurent Grisoni, IHM et Interface à Gestes, (24h), niveau M2 (IMA5), Polytech Lille, France

9.2.2. Supervision

- PhD : Ehsan Enferad, Modélisation et Commande d'une Interface Tactile à Stimulation Hybride par Modulation de Friction et Retourneement Temporel, nov. 2015, F. Giraud, C. Giraud-Audine
- PhD in progress: Cagan Arslan, Fusion de données pour l'interaction homme-machine, oct. 2015, L. Grisoni/J. Martinet
- PhD in progress: Farzan Kalantari, Interaction sur dispositif à retour tactile et kinesthésique, oct. 2014, L. Grisoni, F. Giraud
- PhD Sofiane Ghenna, Contrôle multimodal d'actionneurs piézo-électriques pour applications tactiles, F.Giraud, C.Giraud-Audine, University Lille1, 30th November 2016
- PhD Thomas Sednaoui, Tactile feedback integration on mobile communication devices, B Semail, F Casset, University Lille1, 14th dec. 2016
- PhD : Eric Vezzoli, Tactile feedback devices: friction control and texture generation, University Lille1, 22 Sept 2016, B. Lemaire-Semail, F. Giraud
- PhD in progress: Hanae Rateau, l'interaction esquissée, oct. 2012, L. Grisoni
- PhD in progress: Vincent Gouezou: L'architecte et ses outils, au travers de l'histoire et dans sa relation actuelle au numérique, oct. 2014, L. Grisoni 25% (with F. Vermandel, architect, Lille school of architecture)
- PhD in progress: Charlotte Planckeel, Le sens de la lacunae en archéologie de l'Âge du bronze, archéologie et outils numériques, L. Grisoni (25%, with A. Lehoerff, Lille 3, archeologist)
- PhD in progress: Olivier Capra, Interaction de présentation, oct. 2016, L. Grisoni, F. Berthaut

9.3. Popularization

- Futur en Seine (Paris, 9-10 june 2016; <http://www.futur-en-seine.paris/>). Presentation of E-Vita.
- Nuit des bibliothèques (Lille, 15th october 2016, <http://www.bm-lille.fr/nuit-des-bibliotheques.aspx>). Presentation of the haptic book to the readers of the public library.
- Forum du CNRS (Lille, 19th November 2016, <http://leforum.cnrs.fr/>). Presentation of 2 demos.
- Nuit des partenaires (Lille, 29th november 2016, <https://www.univ-lille.fr/soireepartenaires/>). Présentation of the Haptic book.
- Salon Humanités connectées, Toulouse, dec. 2016.
- Rencontres Inria Entreprises (25 novembre 2016), imaginarium.
- journées RV en haut de france, 24 novembre 2016, imaginarium.
- tables ronde journées régionales de l'innovation, amiens, 20 novembre 2016.
- BOEUF project workshops. Introduction to PureData and digital orchestras @ La condition publique (Roubaix) and l'Imaginarium (Tourcoing) <http://www.cristal.univ-lille.fr/oeuvres-et-recherches/2016/11/28/workshop-les-orchestres-numeriques-espace-recherche-scv/>

Mjolnir Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- **VISAP** (IEEE): Fanny Chevalier (general co-chair)
- Rencontre Inria Industrie “**Interactions avec les objets et services numériques**”: Nicolas Roussel (scientific chair)

10.1.1.2. Member of the Organizing Committees

- **IHM**: Fanny Chevalier (Work-in-Progress co-chair), Stéphane Huot (AFIHM’s 20th anniversary co-chair)

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- **CHI** (ACM): Géry Casiez (associate chair), Nicolas Roussel (associate chair)
- **UIST** (ACM): Fanny Chevalier (associate chair), Géry Casiez (associate chair)
- **Infovis** (IEEE): Fanny Chevalier (PC member)
- **MobileHCI** (ACM): Sylvain Malacria (associate chair)
- **IHM**: Fanny Chevalier (PC member)

10.1.2.2. Reviewer

- **SIGGRAPH** (ACM): Fanny Chevalier
- **UIST** (ACM): Sylvain Malacria, Thomas Pietrzak
- **IHM**: Sylvain Malacria
- **GI** (ACM): Sylvain Malacria
- **TEI** (ACM): Thomas Pietrzak
- **MobileHCI** (ACM): Thomas Pietrzak
- **Haptic Symposium** (IEEE): Thomas Pietrzak

10.1.3. Journal

10.1.3.1. Reviewer - Reviewing Activities

- **Transactions on Computer Human Interaction** (ACM): Sylvain Malacria, Géry Casiez, Thomas Pietrzak
- **Transactions on Visualization and Computer Graphics** (IEEE): Fanny Chevalier
- **Information Design Journal** (John Benjamins Publishing Company): Fanny Chevalier
- **Interacting with Computers** (Oxford Journals): Thomas Pietrzak

10.1.4. Invited Talks

- *Direct spacetime sketching and editing of visual media*, Microsoft Research, Redmond: Fanny Chevalier
- *Opportunities and limits of Adaptive User Interfaces*, Technology and Routines workshop, Bavarian Academy of Sciences and Humanities, Munich, Germany: Sylvain Malacria

- *Towards the full experience of playing drums on a virtual drumkit*, Symposium on Haptic and Music, McGill University, Montréal, Canada: Thomas Pietrzak

10.1.5. Scientific Expertise

- PICOM competitiveness cluster: Nicolas Roussel (scientific board member)
- Agence Nationale de la Recherche: Fanny Chevalier (committee member for the *JCJC*, *PRCE* and *PRC* programs)
- European Research Council: Géry Casiez (reviewer for the Starting Grant program)

10.1.6. Research Administration

For Inria:

- **Evaluation committee**: Nicolas Roussel (member)
- Gender equity and equality committee: Nicolas Roussel (member)
- Strategic orientation committee for the information system (COSS scientifique): Nicolas Roussel (member)
- International relations working group (COST-GTRI): Stéphane Huot (member)

For Inria Lille – Nord Europe:

- Scientific officer (délégué scientifique): Nicolas Roussel
- Research jobs committee (CER): Fanny Chevalier (member), Nicolas Roussel (member)
- Technical development committee (CDT): Nicolas Roussel (member)
- Consultative committee (Comité de centre): Fanny Chevalier (member)
- Operational legal and ethical risk assessment committee (COERLE): Stéphane Huot (local correspondent)
- Support to researchers (accompagnement des chercheurs): Stéphane Huot (adviser)
- Activity reports (RAweb): Nicolas Roussel (local correspondents)

For the CRISAL lab of Univ. Lille 1:

- Laboratory council: Géry Casiez (elected member)

10.1.7. Learned societies

- **Association Francophone d'Interaction Homme-Machine** (AFIHM): Géry Casiez (board member, president), Stéphane Huot (board member and scientific council member), Thomas Pietrzak (board member)

10.1.8. Hiring committees

- Inria's eligibility jury for senior researcher positions (DR2): Nicolas Roussel
- Inria's eligibility jury for junior researcher positions (CR2) in Saclay: Nicolas Roussel
- ENAC's hiring committee for an assistant professor position: Nicolas Roussel
- Polytech Nantes' hiring committee for a Computer Science Assistant Professor position: Fanny Chevalier (member)

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- Master Informatique *Image Vision Interaction (IVI)*: Géry Casiez (16 hrs), Fanny Chevalier (16 hrs), Thomas Pietrzak (16 hrs), *NIHM : Nouvelles Interactions Homme-Machine*, M2, Univ. Lille 1
- Master Informatique: Thomas Pietrzak (50 hrs), Sylvain Malacria (30 hrs), Nicolas Roussel (8 hrs), *IHM : Interactions Homme-Machine*, M1, Univ. Lille 1

- Master Informatique: Géry Casiez, *Multi-Touch Interaction*, 10 hrs, M1, Univ. Lille 1
- Master: Géry Casiez (6 hrs), Thomas Pietrzak (10.5 hrs), *3DETech : 3D Digital Entertainment Technologies*, M2 level, Télécom Lille
- Master Sciences Humaines et Sociales *Réseaux Sociaux Numériques (RSN)*: Fanny Chevalier, *Statistiques et visualisation de données*, 8hrs, M2, Univ. Lille 1
- Master Sciences Humaines et Sociales *Réseaux Sociaux Numériques (RSN)*: Fanny Chevalier, *Outils et pratiques numériques*, 6hrs, M1, Univ. Lille 1
- Master Computing for Medicine: Fanny Chevalier, *Information Visualization in Medicine*, 1hr, Masters, Univ. of Toronto
- Graduate course in Computer Sciences: Fanny Chevalier, *Topics in Interactive Computing: Information Visualization*, 16hrs, MSc and PhD, Univ. of Toronto
- Licence Informatique: Thomas Pietrzak (45 hrs), *Logique*, L3, Univ. Lille 1
- Licence Informatique: Thomas Pietrzak (36 hrs), *Automates et Langages*, L3, Univ. Lille 1
- Licence Sciences pour l'Ingénieur (SPI): Sylvain Malacria, *Introduction à l'Interaction Homme Machine*, 26hrs, L3, Institut Villebon Georges Charpak
- Research Masters in Computer Science & HCID Masters (EIT ICT Labs European Master in Human-Computer Interaction and Design): Stéphane Huot, *Advanced Programming of Interactive Systems*, 13.5 hrs, M1 & M2, Univ. Paris Saclay
- DUT Informatique: Géry Casiez, *IHM*, 72 hrs, 1st year, IUT A de Lille - Univ. Lille 1
- DUT Informatique: Géry Casiez, *Algorithmique*, 80 hrs, 1st year, IUT A de Lille - Univ. Lille 1
- DUT Informatique: Géry Casiez, *Modélisation mathématique*, 14 hrs, 2nd year, IUT A de Lille - Univ. Lille 1
- DUT Informatique: Géry Casiez, *Projets*, 18 hrs, 2nd year, IUT A de Lille - Univ. Lille 1

10.2.2. Supervision

PhD in progress: Hakim Si Mohammed, *Improving Interaction based on a Brain-Computer Interface*, started October 2016, advised by Anatole Lecuyer, Géry Casiez & Nicolas Roussel (in Rennes)

PhD in progress: Nicole Ke Chen Pong, *Comprendre et améliorer le vocabulaire interactionnel des utilisateurs*, started October 2016, advised by Nicolas Roussel & Sylvain Malacria

PhD in progress: Thibault Raffailac, *Languages and system infrastructure for interaction*, started October 2015, advised by Stéphane Huot & Stéphane Ducasse

PhD in progress: Amira Chalbi-Neffati, *Comprendre et mieux concevoir les animations dans le contexte des interfaces graphiques*, started October 2014, advised by Nicolas Roussel & Fanny Chevalier

PhD in progress: Jeronimo Barbosa, *Design and Evaluation of Digital Musical Instruments*, McGill University, started in 2013, advised by Marcelo Wanderley & Stéphane Huot (since 2016)

PhD in progress: Alexandre Kouyoumdjian, *Multimodal selection of numerous moving targets in large visualization platforms: application to interactive molecular simulation*, started October 2013, advised by Stéphane Huot, Patrick Bourdot & Nicolas Ferey (in Saclay)

PhD in progress: Justin Mathew, *New visualization and interaction techniques for 3D spatial audio*, started June 2013, advised by Stéphane Huot & Brian Katz (in Saclay)

PhD: Oleksandr Zinenko, *Interactive code restructuring*, Univ. Paris Saclay, defended in November 2016, advised by Stéphane Huot & Cédric Bastoul (Université de Strasbourg)

PhD: Alix Goguy, *Understanding and designing touch interaction using finger identification*, Univ. Lille 1, defended in October 2016 [11], advised by Géry Casiez.

PhD: Andéol Evain, *Optimizing the use of SSVEP-based brain-computer interfaces for human-computer interaction*, defended in December 2016, advised by Anatole Lecuyer, Géry Casiez & Nicolas Roussel (in Rennes)

10.2.3. Thesis committees

- Michael Glueck (PhD, University of Toronto): Fanny Chevalier
- Nicole Sultanum (PhD, University of Toronto): Fanny Chevalier
- Ignacio Avellino (PhD, Université Paris Saclay): Nicolas Roussel

10.2.4. Juries

- Morten Esbensen (PhD, IT University of Copenhagen): Nicolas Roussel, reviewer
- Élisabeth Rousset (PhD, Université de Grenoble): Géry Casiez, reviewer
- Sébastien Pelurson (PhD, Université de Grenoble): Géry Casiez, reviewer
- Waseem Safi (PhD, Université Cean Normandie): Thomas Pietrzak, examiner

10.3. Popularization

- “*Vers une meilleure appréciation des algorithmes qui nous entourent*”, talk for **Rencontres Inria Industrie**, Plaine Image, Tourcoing, November: Fanny Chevalier
- Prospective talk on HCI as part of BeyondLab’s “*Aux portes du futur*” evening, November: Nicolas Roussel
- “*Chorégraphie des Transitions animées*”, talk for CRISAL journée Recherche Innovation Création, Lille, October: Amira Chalbi-Neffati
- “*Les objets deviennent intelligents, et nous ?*”, talk at Lycée Diderot (Carvin) as part of Inria Lille’s “**Chercheurs Itinérants**” program, October: Nicolas Roussel
- “*Efficacité et performance des transitions animées*”, talk at EuraTechnologies (plateau Inria), March: Fanny Chevalier
- Presentation of the Mjolnir team, talk at EuraTechnologies (plateau Inria), January: Nicolas Roussel

MODAL Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Christophe Biernacki co-organised a one-day meeting “Introduction aux modèles statistiques scalables: Modélisation, nouveaux paradigmes, écosystème Big Data” on December 5th 2016 at IHP (Paris). The website is here <https://bigdata-stat.sciencesconf.org/> and it brought together about 40 registered people (maximum number for this session).

Christophe Biernacki, Benjamin Guedj and Sophie Dabo-Niang were in the organizing committee of the workshop “Big Data: Modelling, Estimation and Selection” at École Centrale de Lille on June 9th and 10th 2016 (<https://indico.math.cnrs.fr/event/830/>).

Alain Celisse and Guillemette Marot co-organized SMPGD in Lille: The Statistical Methods for Post Genomic Data workshop is an annual meeting dedicated to statistical methods for post genomic data analysis. The aim of the workshop is to present works from mathematical to applied Statistics, but also new areas in high throughput Biology that could need new statistical developments. The workshop is usually organized around 3 to 4 invited speakers, and 3 to 4 invited sessions, and one session of contributed abstracts (oral presentations and posters). As SMPGD is especially interested in the statistical, mathematical, algorithmics or modelling questions raised by modern biology, presentations are expected to focus on these points.

Benjamin Guedj co-founded and co-organised a one-day workshop called **Young Statisticians and Probabilists (YSP)**, in Paris in January 2016. The topics were sequential learning, random trees, random maps and random matrices theory. Nearly 80 PhD students, postdocs and young researchers attended.

Benjamin Guedj is the organizer of the **Modal team scientific seminar**.

10.1.1.2. Member of the Organizing Committees

Benjamin Guedj has been a member of the steering committee for the FEM (**Forum Emploi Maths**) in Paris in December 2016. The FEM is the largest mathematics jobs fair in France and gathers universities, students, graduates, companies and institutions. Over 2,000 people attended this edition.

Sophie Dabo-Niang has been a member of the steering committees for the following events.

- CIMPA Research School: "Statistical methods for evaluation of extreme risks": April, 5-15, 2016, St-Louis, Senegal
- Workshop: "Financial and actuarial Mathematics": July 11-15, 2016, AIMS-Mbour, Senegal
- The first AWMA (African Women in Mathematics Association) regional Forum, July 8-9, 2016, AIMS-Mbour, Senegal
- Session "EO075: Quantile regression models for dependent data ", "The 9th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2016)" ([Link](#)), December 9-11, 2016, Seville, Spain.
- Session "Asymptotic properties in nonparametric spatial problems ", "Third conference of the International Society for NonParametric Statistics (ISNPS)", June, 11-16, 2016, Avignon, France.
- Workshop "Statistical methods for recurrent data ", November 7th, 2016, [Link](#).
- Workshop, "Learning with functional data", October, 7th, 2016, Lille, France. [Link](#)

Cristian Preda has co-organized the International Workshop on Applied Probability 2016 ([Link](#)).

Vincent Vandewalle is a member of the animation team of the bilille platform (<https://wikis.univ-lille1.fr/bilille/animation>). He has co-organized two scientific days, one in June 2016 on metagenomic analysis and another one in November 2016 on systems biology.

Serge Iovleff, Cristian Preda and Vincent Vandewalle have organised a one day workshop at Lille in October 2016 about learning with functional data. During this workshop, a large scope of methods for learning with functional data with application to various domains has been presented (<https://functional-data.univ-lille1.fr>).

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

Sophie Dabo-Niang has been a member of the scientific committees of two conferences:

- STAHY 2016 Workshop, September 26-27, Quebec, Canada.
- International colloquium on financial Econometrics, November - 18 -19, 2016, Rabat, Maroc. [Link](#)

10.1.2.2. Reviewer

Alain Celisse has acted as a reviewer for [AISTATS 2016](#).

Benjamin Guedj has acted as a reviewer for [NIPS 2016](#) and [AISTATS 2017](#).

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Cristian Preda is a member of the editorial boards of

- Methodology and Computing in Applied Probability (Associate Editor)
- Romanian Journal of Mathematics and Computer Science" (Associate Editor)

Christophe Biernacki is an Associate Editor of the North-Western European Journal of Mathematics (NWEJM).

Sophie Dabo-Niang is a member of the editorial board of *Revista Colombiana de Estadística*.

10.1.3.2. Reviewer - Reviewing Activities

The Modal team is involved in 34 scientific outlets, among which are the most prestigious international journals related to statistics.

1. Advances in Data Analysis and Classification (Christophe Biernacki)
2. Annals of Applied Statistics (Sophie Dabo-Niang)
3. Annals of Statistics (Alain Celisse)
4. Bernoulli (Alain Celisse, Cristian Preda)
5. BMC Research Notes (Christophe Biernacki)
6. BMC Medical Research Methodology (Benjamin Guedj)
7. Canadian Journal of Statistics (Christophe Biernacki)
8. Chemometrics (Cristian Preda)
9. Computational Statistics and Data Analysis (Christophe Biernacki, Sophie Dabo-Niang, Cristian Preda, Vincent Vandewalle)
10. Data Mining and Knowledge Discovery (Christophe Biernacki)
11. Electronic Journal of Statistics (Alain Celisse, Sophie Dabo-Niang)
12. ESAIM: Probability and Statistics (Sophie Dabo-Niang)
13. Journal de la SFdS (Christophe Biernacki)
14. Journal of Classification (Christophe Biernacki)
15. Journal of Computational and Graphical Statistics (Vincent Vandewalle)
16. Journal of Machine Learning Research (Christophe Biernacki, Alain Celisse)

17. Journal of Multivariate Analysis (Sophie Dabo-Niang, Benjamin Guedj)
18. Journal of Nonparametric statistics (Sophie Dabo-Niang)
19. Journal of Statistical Planning and Inference (Christophe Biernacki)
20. Journal of Statistical Software (Christophe Biernacki)
21. Journal of the American Statistical Association (Benjamin Guedj)
22. Journal of the Royal Statistical Society, series A (Benjamin Guedj)
23. Knowledge and Information Systems (Christophe Biernacki)
24. Mathematical Reviews (Benjamin Guedj)
25. Methodology and Computing in Applied Probability (Cristian Preda)
26. Metrika (Sophie Dabo-Niang)
27. Molecular Ecology Resources (Benjamin Guedj)
28. Neurocomputing (Benjamin Guedj)
29. Statistical Inference for Stochastic Processes (Sophie Dabo-Niang)
30. Statistical Methods and Applications (Sophie Dabo-Niang)
31. Statistics (Sophie Dabo-Niang)
32. Statistics and Computing (Serge Iovleff)
33. Statistics and Probability Letters (Sophie Dabo-Niang, Benjamin Guedj)
34. The American Statistician (Christophe Biernacki)

10.1.4. Invited Talks

Christophe Biernacki's talks in 2016:

- Working Group on Model-Based Clustering Summer Session, Paris, July 17-23, 2016, <https://maths.ucd.ie/~brendan/wgmbc2016.html>, [28]
- Workshop on Model-based Clustering and Classification, September 5-7, 2016, Catania (Italy), <http://mbc2.unict.it/>, [29]
- Académie des Sciences, des Lettres et des Arts, Journée Scientifique "Big Data & Data Science", October 28th 2016, Tunis (Tunisia), <http://www.beitalhikma.tn/p7536/>, [26]
- 9th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2016, ERCIM 2016), 9-11 December 2016, University of Seville, Spain <http://cmstatistics.org/CMStatistics2016/>, [27]
- Talk to the seminar of the "Laboratoire de Mathématiques de Besançon", February 29th 2016

Sophie Dabo-Niang's talks in 2016:

- Environmental Econometrics Day, Spatial Risk estimation and Application to environmental data, April, 24, 2016, Rabat, Morocco.
- CRoNoS FDA, satellite workshop of Compstat2016 ([Link](#)), Functional Binary Choice Models With Choice-Based Sampling, August, 26-28, Oviedo, Spain.
- AAS/AMU symposium on "Current Research Trends in Mathematical Sciences and applications", May, 17-20, 2016, UNESCO Chair of Mathematics, National Mathematical Centre (NMC), Abuja Nigeria.
- Learning with functional data, Functional Binary Choice Models With Choice-Based Sampling, October, 7, 2016, Lille, France.

Benjamin Guedj has been invited to deliver a talk to the [48èmes Journées de Statistique](#) (JdS) of the [French Statistical Society](#) (June 2016, Montpellier, France).

Serge Iovleff gave a lightning talk entitled "MixAll: Un logiciel de classification non-supervisée" to the [5ème Rencontres R 2016](#).

Cristian Preda's talks in 2016:

1. International Workshop on Applied Probability (IWAP2016), 20-23 June, 2016, Toronto, Canada
2. 48e Journées de Statistique de la Société Française de Statistique, Montpellier, June 2016
3. 147th ICB Seminar Tenth International Seminar on statistics and clinical practice, May 15 - 18, 2016, Warsaw, Poland
4. 19-th Conference of the Romanian Society of Statistics and Probability, Universitatea Tehnica de Constructii Bucuresti, 27 mai 2016

10.1.5. Leadership within the Scientific Community

Christophe Biernacki is the president (since 2012) of the data mining and learning group of the French statistical association (SFdS, <http://www.sfds.asso.fr/>).

Benjamin Guedj is the president (since 2016) of the **Young Statisticians group** of the **French Statistical Society**.

Benjamin Guedj has joined the board of **AMIES**, the French Agency fostering collaborations between mathematicians and the private sector.

Guillemette Marot is responsible of bilille, the bioinformatics and bioanalysis platform of Lille. More information about the platform is available at <https://wikis.univ-lille1.fr/bilille/>

10.1.6. Scientific Expertise

Christophe Biernacki acted as an expert for two HCERES committees: one for teaching evaluation, one for research evaluation. He is also an elected member to the "Conseil National des Universités" (CNU) since October 2015.

Sophie Dabo-Niang offers expertise for Oreal's Award "Women in Science" since 2014.

10.1.7. Research Administration

Christophe Biernacki was "Délégué Scientifique Adjoint" of the Inria Lille center until June 2016. He is still member of the "Bureau du Comité des Projets" (BCP) of the Inria Lille center.

Sophie Dabo-Niang is the head of the MeQAME research team of Laboratory LEM-CNRS 9221.

Benjamin Guedj is a member of the scientific Council of the **Laboratoire Paul Painlevé** (maths department of the University of Lille).

Cristian Preda is a member of the Research Council of the University Lille 1.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Christophe Biernacki is the head of the M2 "Ingénierie Statistique et Numérique" <http://mathematiques.univ-lille1.fr/Formation/> at University Lille 1.

Serge Iovleff is responsible for the Computer Science Licence semester.

Licence: Sophie Dabo-Niang, Probability, 24h, Lille 3, France

Licence: Serge Iovleff, Discrete Mathematics, 68H, Computer Science, IUT, Lille 1, France

Licence: Serge Iovleff, Linear Algebra 24H, Computer Science, IUT, Lille 1, France

Licence: Serge Iovleff, Analysis and Numerical Methods, 75H, Computer Science, IUT, Lille 1, France

Licence: Serge Iovleff, Graphs and languages, 36H, Computer Science, IUT, Lille 1, France

Licence: Serge Iovleff, Mathematical Modélisation, 38H, Computer Science, IUT, Lille 1, France

Licence: Serge Iovleff, Internships supervision, 15H, Computer Science, IUT, Lille 1, France

Licence: Serge Iovleff, Operational Research, 14H, Computer Science, IUT, Lille 1, France

Licence: Guillemette Marot, Biostatistics, 9h, L1, U. Lille Droit et Santé, France
 Licence: Cristian Preda, Probability, 40h, L1, Polytech'Lille, France
 Licence: Cristian Preda, Inferential Statistics, 50h, L1, Polytech'Lille, France
 Licence: Vincent Vandewalle, Probability, 132h, L2, U. Lille 2, France
 Licence: Vincent Vandewalle, Classification, 32h, L2, U. Lille 2, France
 Licence: Vincent Vandewalle, Analysis, 24h, L2, U. Lille 2, France
 Licence: Vincent Vandewalle, Machine Learning, 20h, L3, U. Lille 2, France
 Master: Christophe Biernacki, coaching project, 10h, M1, U. Lille 1, France
 Master: Christophe Biernacki, data analysis, 97.5h, M2, U. Lille 1, France
 Master: Christophe Biernacki, coaching internship, 20h, M2, U. Lille 1, France
 Master: Sophie Dabo-Niang, Advanced Statistics, 24h, Lille 3, France
 Master: Sophie Dabo-Niang, Biostatistics Statistics, 40h, Master, Lille 1, France
 Master: Sophie Dabo-Niang, Non-parametric Statistics, 24h, Master, UGB, Senegal
 Master: Sophie Dabo-Niang, Spatial Statistics, 24h, Lille 3, France
 Master: Benjamin Guedj, Statistical Learning: Theory and Algorithms, 18h, Lille 1, France
 Master: Benjamin Guedj, Statistical Learning: Theory and Algorithms, 24h, Université Pierre & Marie Curie, France
 Master: Benjamin Guedj, Statistical Learning: Theory and Algorithms, 30h, Institut de Statistique des Universités de Paris (ISUP), France
 Master: Serge Iovleff, Object Oriented programming, 20H, Master Mathématiques Appliquées, Statistique - Ingénierie Mathématique, Lille 1, France
 Master: Serge Iovleff, Probability and stochastic processes, AIMS (MBour-Sénégal)
 Master: Guillemette Marot, Biostatistics, 44h, M1, U. Lille Droit et Santé, France
 Master: Guillemette Marot, Coaching project, 12h, M1, U. Lille Droit et Santé, France
 Master: Guillemette Marot, Supervised classification, 13h, M1, Polytech'Lille, France
 Master: Cristian Preda, Data Analysis, 40h, M1, Polytech'Lille, France
 Master: Cristian Preda, Biostatistics, 12h, M2, Polytech'Lille, France
 Master: Vincent Vandewalle, Classification 60h, M1, U. Lille 1, France
 Doctorat: Guillemette Marot, Data Analysis with R, 14h, U. Lille Droit et Santé, France

10.2.2. Supervision

PhD: Jérémie Kellner, "Gaussian processes and kernel methods", Université Lille 1, 12/2016, Alain Celisse.
 PhD: Quentin Grimonprez, "Variable selection in high dimensional setting with correlation", Inria DGA & Université Lille 1, 12/2016, Guillemette Marot, Julien Jacques, Alain Celisse.
 PHD: Florence Loingeville, "Modèle linéaire généralisé hiérarchique Gamma-Poisson pour le contrôle de qualité en microbiologie", Université Lille 1, 01/2016, Cristian Preda.
 PhD: Mohamed Yayaha, Lille 3, Sophie Dabo-Niang and Aboubacar Amiri.
 PhD: Aladji Bassene, Lille 3 & UGB (Sénégal), Sophie Dabo-Niang.
 PhD in progress: Le Li, "PAC-Bayesian Online Clustering: theory and algorithms", iAdvize & Université d'Angers, 11/2014, Benjamin Guedj, Sébastien Loustau.
 PhD in progress: Maxime Baelde, "Identification, localisation, séparation temps réel de sources sonores dans les flux audio multi-canaux", A-Volute, Inria & Université Lille 1, 01/2016, Christophe Biernacki.

PhD in progress: Anne-Lise Bedenel, "Appariement de descripteurs évoluant dans le temps", PIXEO, Inria & Université Lille 1, 06/2015, Christophe Biernacki, Laetitia Jourdan.

PhD in progress: Adrien Ehrhardt, "Modèles prédictifs pour données volumineuses et biaisées. Application à l'amélioration du scoring en risque crédit", CACF, Inria & Université Lille 1, 06/2016, Christophe Biernacki, Philippe Heinrich, Vincent Vandewalle.

PhD in progress: Maxime Brunin, "Early stopping rules in statistical learning", 09/2014, Christophe Biernacki, Alain Celisse.

PhD in progress: Emad Drwesh, Lille 3, Sophie Dabo-Niang, Jérôme Foncel.

PhD in progress: Mohamed Salem Ahmed, Lille 3, Sophie Dabo-Niang and Mohamed Attouch.

PhD in progress: H. Sarter, "Outils statistiques pour la sélection de variables et l'intégration de données cliniques et omiques : développement et application au registre EPIMAD", 12/2016, C. Gower, Guillemette Marot.

10.2.3. Juries

Christophe Biernacki participated as a reviewer to 5 PhD theses and 1 HdR committee, and as an examiner to 1 PhD thesis and 2 HdR committees. He also participated to 1 recruitment committee for a professor and was president of 1 recruitment committee for an assistant professor.

Alain Celisse has participated as an examiner to 1 PhD thesis.

Sophie Dabo-Niang has participated as an examiner to 4 PhD thesis.

Guillemette Marot was a member of two recruitment committees (MCU Univ. Nice, IE Univ. Lille). She was also an examiner to 1 PhD thesis.

Cristian Preda has participated as an examiner to 1 HdR committee.

Vincent Vandewalle has participated as an examiner to 1 PhD thesis.

10.3. Popularization

Christophe Biernacki has given about 10 talks during 2016 for institutions (Inria, universities, Ecole des Mines), companies and other related events. He gave also presentations towards students and industrials to the Xperium platform of the University of Lille about "Intelligence des données" (<https://modal.lille.inria.fr/xperium/>, <http://learningcenters.nordpasdecalais.fr/innovation/fr/xperium>). About 1,500 people came to this event during two years. He organized also a first short meeting in April 2016 in Lille for obtaining a feedback from company and academic users about the MASSICCC platform developed by the Modal and Select teams (<https://massiccc.lille.inria.fr/#/>). Here is the link towards this event: https://modal.lille.inria.fr/wikimodal/lib/exe/fetch.php?media=meeting_massiccc_7avril2016.pdf.

Sophie Dabo-Niang participates in the promotion of research among young children around a day of "Girls and Science, a light equation" organized in Lille (October 2016) and Senegal (Dakar, march 2016).

Benjamin Guedj has given a talk to high school students ("Terminale ISN") at Euratechnologies. The talk consisted in an overview of machine learning impacts our everyday lives and how mathematicians contribute to learning in the big data era.

Vincent Vandewalle has given one presentation towards students to the Xperium platform of the University of Lille about "Intelligence des données" (<https://modal.lille.inria.fr/xperium/>, <http://learningcenters.nordpasdecalais.fr/innovation/fr/xperium>). He also has animated a formation on probabilities and statistics for middle School mathematics teachers through the Maison Pour la Science (<http://www.maisons-pour-la-science.org/node/10641>).

NON-A Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- W. Perruquetti is the chairman of the IFAC Technical Committee “Social Impact of Automation”, International Federation of Automatic Control, TC 9.2, and a member of the IFAC Technical Committees “Nonlinear Control Systems”, TC 2.3, and “Discrete Event and Hybrid Systems”, TC 1.3.
- A. Quadrat is a member of the IFAC Technical Committee “Linear Control Systems”, International Federation of Automatic Control, TC2.2
- J.-P. Richard is a member of the IFAC Technical Committee “Linear Control Systems”, International Federation of Automatic Control, TC2.2
- G. Zheng is a member of the IFAC Technical Committee “Social Impact of Automation”, International Federation of Automatic Control, TC9.2
- G. Zheng is co-chair of the working group “Commande et pilotage en environnement incertain” of GRAISYHM

10.1.1.2. Member of the Organizing Committees

C. Jamroz, A. Quadrat, J.-P. Richard and G. Zheng were members of the organizing committee of “JAMACS’16 : Journées Automatique du GDR MACS 2016”, Villeneuve d’Ascq, 15-16/11/2016.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

W. Perruquetti is a member of the steering committee of IFAC CPHS’16 (7-9 December 2016, Florianopolis, Brazil), an IPC member of IEEE VSS’16 (1-4 June 2016, Nanjing, Jiangsu, China) and of IFAC HMS’16 (August 30-September 2 2016, Kyoto, Japan) and an Associate Editor of the 20th IFAC World Congress (10-14 July 2017, Toulouse, France).

W. Perruquetti and J.-P. Richard are members of the Advisory panel (NOC) of 20th IFAC World Congress, Toulouse, France, 10-14 July 2017.

10.1.2.2. Reviewer

The members of NON-A team are reviewers and contributors of all top-ranked conferences in the field of automatic control (IEEE Conference on Decision and Control, IFAC World Congress, European Control Conference, American Control Conference, etc.).

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- A. Polyakov: International Journal of Robust and Nonlinear Control
- A. Polyakov: Journal of Optimization Theory and Applications (JOTA)
- A. Polyakov: Automation and Remote Control
- A. Quadrat: Multidimensional Systems and Signal Processing (MSSP)

10.1.3.2. Reviewer - Reviewing Activities

The members of NON-A team are reviewers of all top-ranked journals in the field of automatic control (IEEE Transactions on Automatic Control, Automatica, SIAM Journal of Control and Optimization, International Journal of Robust and Nonlinear Control, etc.).

10.1.4. Invited Talks

D. Efimov gave a plenary talk at the conference “JAMACS’16 : Journées Automatique du GDR MACS 2016”, Villeneuve d’Ascq, France, 15-16/11/2016.

10.1.5. Leadership within the Scientific Community

The NON-A team is the leader in the field of non-asymptotic control and estimation using homogeneity framework.

Moreover, the NON-A team is also leader in algebraic systems theory. In particular, two invited sessions “Algebraic methods and symbolic-numeric computation in systems theory” were organized at the 22nd International Symposium on Mathematical Theory of Networks and Systems (MTNS 2016), University of Minnesota, USA, 12-15/07/2016. Moreover, a mini-workshop “New trends on multidimensional systems and their applications in control theory and signal processing” was organized at Centre International de Rencontres Mathématiques (CIRM), Luminy, France, 03-07/10/2016.

10.1.6. Scientific Expertise

A. Quadrat was a member of the “jury d’admission des concours Inria CR2 & CR1”. He was also a member of the “Commission des Emplois de Recherche”, Inria Lille, and a member of the “Autorité de déchiffrement” for the local elections.

10.1.7. Research Administration

- W. Perruquetti is Vice-deputy of INS2I CNRS.
- J.-P. Richard is an Expert for the French Ministry of Research, MENESR/MEIRIES.
- R. Ushirobira was a Member (nominated) of the “Comité du Centre” of Inria Lille (Dec. 2013 - Sept. 2016) and a Member of the “Commission de Développement Technologique” (CDT).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence: D. Efimov, Laboratory works in automatics, 20 h, EC de Lille.

Licence: D. Efimov, Practical works in automatics, 28 h, ISEN, Lille.

Licence: D. Efimov, Laboratory works in discrete systems, 20 h, ENSAM, Lille.

Licence: R. Ushirobira, Travaux Pratiques en Automatique, 8 h, U. Lille 1, France.

Licence: R. Ushirobira, Travaux Pratiques en Automatique, 24 h, EC-Lille, France.

Licence: R. Ushirobira, Travaux dirigés/Travaux Pratiques en Automatique, 12 h+9 h, U. Lille 1.

Master: D. Efimov, Analysis of dynamical systems, 24 h, U. Lille 1.

Master: R. Ushirobira, Travaux Pratiques en Automatique, 32 h, U. Lille 1.

Master: G. Zheng, Robotic, 20 h, U. Lille 1.

Master: G. Zheng, Automatic control, 24 h, U. Lille 1.

10.2.2. Supervision

PhD: Hafiz Ahmed, “Modeling and synchronization of biological rhythms: from cells to oyster behavior”, 2013-2016, supervisors: D. Efimov, R. Ushirobira and D. Tran

PhD: Zilong Shao, “Oscillatory control of robot manipulator”, EC Lille, 2012-2016, supervisors: D. Efimov, W. Perruquetti, G. Zheng

PhD in progress: Haik Jan Davtjan, “Estimation in complex systems”, EC Lille, 2016, UCoCoS EU project, supervisors: D. Efimov, J.-P. Richard

PhD in progress: Maxime Feingesicht, “Dynamic Observers for Control of Separated Flows”, Ecole Centrale de Lille, 2015, supervisors: J.-P. Richard, F. Kerherve, A. Polyakov

PhD in progress: Nadhynee Martinez Fonseca, “Non-asymptotic control and estimation problems in robotic system designed for manipulation of micro-organisms”, National Polytechnic Institute of Mexico, 2015-now, supervisors: I. Chairez-Oria, A. Polyakov

PhD in progress: Tatiana Kharkovskaya, “Interval Observers for Distributed Parametr Systems”, ITMO University-EC Lille, 2015, supervisors: D. Efimov, J.-P. Richard and A. Kremlev

PhD in progress: Langueh Désiré Kokou, “Inversion a gauche, singularités d’inversion, immersion et formes normales pour les systèmes dynamiques”, 2015, supervisors: T. Floquet, G. Zheng

PhD in progress: Gabriele Perozzi, “Save exploration of aerodynamic field by microdron”, Onera-Region, 2015, supervisors: D. Efimov, J.-M. Biannic and L. Planckaert

PhD in progress: Francisco Lopez-Ramirez, “Control and estimation via implicit homogeneous Lyapunov function”, Inria, 2015, supervisors: D. Efimov, W. Perruquetti and A. Polyakov

PhD in progress: Guillaume Rance, “Asservissement paramétrique de systèmes flexibles à retard et application aux viseurs”, CIFRE Safran Electronics & Defense, 2014, supervisors: A. Quadrat, A. Quadrat, H. Mounier

PhD in progress: Haik-Jan Silm, “Estimation in complex systems”, 2016, supervisors: D. Efimov, R. Ushirobira, W. Michels, J.-P. Richard

PhD in progress: Yue Wang, “Development of a blimp robot for indoor operation”, EC Lille, 2016, supervisors: D. Efimov, W. Perruquetti, G. Zheng

Master: Boussad Abci, EC Lille, 2015-2016, supervisors: D. Efimov, J.-P. Richard

Master: Rabehi Djahid, EC Lille, 2015-2016, supervisors: D. Efimov, J.-P. Richard

10.2.3. Juries

- A. Quadrat was an Examiner Member of the PhD Thesis of Mohamed Belhocine, “Modélisation et analyse structurelle du fonctionnement dynamique des systèmes électriques”, ENS Cachan. He was also a Member of Recruiting Committee for a MCF CNU 26-27 position at the University of Limoges.
- J.-P. Richard was an Examiner Member of the PhD Thesis of Arvo Kaldmae (Estonia), “Design of discrete-time and delayed nonlinear systems”, of Lucien Etienne (Italy), “Elements of observation and estimation for networked control systems”, and of Zilong Shao (Centrale Lille) “Identification and control of position-controlled robot arm in the presence of joint flexibility”.
- R. Ushirobira was a Member of Recruiting Committee for a MCF CNU 61 position at CNAM (Paris) and for a MCF CNU 61 position at ENSAE (Cergy).

10.3. Popularization

- Mediation: Scientific baccalaureate students. Meeting on the Inria platform EuraTechnologies (23/03/2016, Lille): “SN Lille Académie : À la découverte des sciences numériques !”.
- Mediation: BeyondLab community. A co-working night event within BeyondLabon using “Living sensor” for water quality monitoring, featuring our PhD student Hafiz Ahmed (Lille, 16/03/2016).
- Contribution to the prospective report “Systems & Control for the Future of Humanity” coordinated by F. Lamnabhi-Lagarrigue, Research Agenda Task Force (to appear, special issue of Annual Reviews in Control to be distributed during the IFAC 2017).
- The book “Mathématiques pour l’ingénieur” (2009, ISBN : 978-9973-0-0852-7 (ATAN, 385 pages)) has been downloaded more than 65000 times.

RAPSODI Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

The team organized the second edition of the conference *ABPDE Asymptotic Behavior of systems of PDE arising in physics and biology: theoretical and numerical points of view* in Lille (June 15-17, 2016). See <https://indico.math.cnrs.fr/event/939/>.

The kick-off meeting of the GdR MaNu was organized by Clément Cancès, Corinne Jamroz, and Nicolas Seguin (Univ. Rennes) in Saint-Valery-sur-Somme in October 2016. See <https://indico.math.cnrs.fr/event/1575/>.

Claire Chainais-Hillairet and Clément Cancès are members of the organizing committee of the eighth symposium on Finite Volumes for Complex Applications (FVCA8) to be held in Lille next June 2017. See <https://indico.math.cnrs.fr/event/1299/>.

I. Lacroix-Violet is in charge of the organization of the weekly seminary of the Numerical Analysis and Partial Differential Equations (ANEDP) research team at the Laboratoire Paul Painlevé, Université de Lille 1.

10.1.2. Journal

10.1.2.1. Member of the editorial boards

C. Chainais-Hillairet is a member of the editorial board of the North-Western European Journal of Mathematics (<http://math.univ-lille1.fr/nwejm/>) and of the International Journal on Finite Volumes (<http://www.i2m.univ-amu.fr/IJFV/>).

10.1.2.2. Reviewer - Reviewing activities

The members of the team RAPSODI reviewed numerous papers for numerous international journals.

10.1.3. Invited Talks

C. Cancès was an invited speaker at the international conference *Advanced numerical methods: recent developments, analysis, and applications* held in the framework of the IHP quarter on *Numerical Methods for PDEs*.

10.1.4. Scientific Expertise

C. Chainais-Hillairet and E. Creusé were experts for the HCERES.

10.1.5. Research Administration

Clément Cancès is the head of the MaNu Research Group (GdR MaNu, <http://gdr-manu.math.cnrs.fr/>) funded by the Institute for Mathematical Sciences and Interaction (INSMI) of the French National Center for Research (CNRS).

E. Creusé is AMIES Facilitator (Agency for the Interaction of Mathematics with Enterprise and Society) for the Northern France area. He is also the industrial representative of the Paul Painlevé Laboratory.

C. Chainais-Hillairet is head of the Commission Emplois de Recherche of the Lille - Nord Europe Inria research center.

Caterina Calgaro is a member of the Commission de la Formation et de la Vie Universitaire of the Academic Council of Université Lille 1.

Ingrid Lacroix-Violet, Benoît Merlet and Thomas Rey are members of the Conseil du Laboratoire Paul Painlevé.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

The group is strongly involved in teaching at the Université Lille 1. C. Calgaro and C. Chainais-Hillairet are in charge respectively of the Master of Mathematical Engineering and of the Master 2 of Scientific Computing, whereas E. Creusé is responsible of the "Cursus Master Ingénierie" in Mathematics, Lille 1 University. C. Cancès gives lectures at Polytech' UPMC.

10.2.2. Supervision

PhD : Pierre-Louis Colin has defended his PhD thesis on June 27, 2016. *Analyse numérique de modèles de dérive-diffusion : convergence et comportements asymptotiques*, Univ. Lille 1. advisors: C. Chainais-Hillairet and I. Lacroix-Violet.

PhD : Roberta Tittarelli, *A posteriori error estimators for Maxwell equations in potential and temporal formulations*, Univ. Lille 1, defended on September 27, 2016, advisors: E. Creusé & F. Piriou.

PhD in progress: Ahmed Aït Hammou Oulhaj, *Design and analysis of nonlinear numerical schemes for solving parabolic problems: application to porous media flows*, since 01/10/2014, advisors: C. Cancès & C. Chainais-Hillairet.

PhD in progress: Claire Colin, *Analyse numérique et simulations de modèles multifluides*, since 01/10/2015, advisors: C. Calgaro & E. Creusé.

PhD in progress: Luca Ferrari, *Line energies and applications to image reconstruction of partially masked objects*, since 01/09/2015, advisors: A. Chambolle (CNRS & CMAP, École Polytechnique) & B. Merlet.

PhD in progress: Nicolas Peton, *Numerical methods for a stratigraphic model with nonlinear diffusion and moving frontier areas*, 15/10/2015, C. Cancès, Q. H. Tran (IFPEN) & S. Wolf (IFPEN).

PhD in progress: Antoine Zurek, *Numerical and theoretical analysis of models describing the corrosion of materials*, since 01/10/2016, advisors: C. Chainais-Hillairet & B. Merlet.

10.2.3. Juries

C. Cancès reported on Mayya Groza's PhD thesis, defended on November 10, 2016 at Univ. Nice - Sophia Antipolis. Title: *Modélisation et discrétisation des écoulements diphasiques en milieux poreux avec réseaux de fractures discrètes*

C. Chainais-Hillairet reported on Polina Shpartko's PhD thesis, defended on June 6, 2016 at TU Wien. Title: *Analytical and numerical study of drift-diffusion models for spin-transport in semiconductors*. She was also a member of the jury of Toko Kamtchueng's PhD thesis, defended on December 7, 2016 at Université d'Orléans. Title: *Formulation généralisée du transport réactif pour les modèles de réseaux de pores saturés en eau*.

E. Creusé reported on Azba Riaz' PhD thesis, defended on April 4, 2016 at Univ. Cergy-Pontoise. Title: *A new discontinuous Galerkin formulation for time dependant Maxwell's equation : a priori and a posteriori error estimation*. He was also a member of the jury of Florent Dewez' PhD thesis defended on November 3, 2016 at Univ. Lille 1. Title: *Estimations sans pertes pour des méthodes asymptotiques et notion de propagation pour des équations dispersives*.

B. Merlet reported François Dayrens' PhD thesis, defended in July 1st, 2016 at University Lyon 1. Title: *Minimizing movement and gradient flows for second order geometric functionals*.

10.3. 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 1 and high schools. Accordingly, she organizes various events which promote mathematics among young peoples like

Les Mathématiques itinérantes (<http://mathematiques.univ-lille1.fr/Ouvertures/Mathematiques-itinerantes/>)

La semaine des Mathématiques (<http://mathematiques.univ-lille1.fr/Ouvertures/Mathematiques-itinerantes/>)

Stage en sciences pour les élèves de seconde (<http://www.univ-lille1.fr/etudes/stageseconde>)

Members of the team participate regularly in these actions.

Thomas Rey animates a Mathematics workshop (Math en Jeans) in the Adolphe Delégorgue middle school at Courcelles-lès-Lens.

RMOD Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Chair of Conference Program Committees

- Anne Etien acted as Program chair for the following international events: IWST16 (International Workshop on SmallTalk Technologies) and VISSOFT 2016 (IEEE Working Conference on Software Visualization): NIER and Tool Track
- Stéphane Ducasse acted as Program Chair for ESUG 2016.

10.1.1.2. Member of the Conference Program Committees

- Stéphane Ducasse
 - International Conference 18th International Conference on Fundamental Approaches to Software Engineering (FASE) 2016.
 - For health reasons, I declined the PC participation to ICSE 2013, ECOOP 2013, ECOOP 2014, ECOOP 2015 (but I was the workshop chair) ECOOP 2016.
 - IWST'16 (International Workshop on SmallTalk Technologies).
- Anne Etien
 - DChanges'16 (4th International Workshop on Document Changes: Modeling, Detection, Storage and Visualization);
 - ME'16 (10th Workshop on Models and Evolution);
 - Modelwards'16 (4th International Conference on Model-Driven Engineering and Software Development).
 - IWST'16 (International Workshop on SmallTalk Technologies).
- Nicolas Anquetil
 - ICSoft-EA'16 (11th International Conference on Software Technologies and Applications);
 - IWST'16 (International Workshop on SmallTalk Technologies).
- Marcus Denker
 - SANER 2017 (23rd IEEE International Conference on Software Analysis, Evolution, and Reengineering)
 - Meta 2016 (International Workshop, SPLASH 16)
 - SLE 2016 (International Conference on Software Language Engineering)
 - DLS 2016 (Dynamic Languages Symposium at SPLASH)
 - IWST'16 (International Workshop on SmallTalk Technologies).
- Clément Béra
 - ICOOLPS'16 (11th Implementation, Compilation, Optimization of Object-Oriented Languages, Programs and Systems Workshop)
 - IWST'16 (International Workshop on SmallTalk Technologies).

10.1.2. Journal

10.1.2.1. Reviewer - Reviewing Activities

- Anne Etien reviewed manuscripts for the Software Quality Journal
- Nicolas Anquetil reviewed manuscripts for the ACM Transactions on Software Engineering and Methodology (TOSEM); Journal of Software: Evolution and Process (JSME); Computers & Operations Research (COR).
- Stéphane Ducasse reviewed manuscripts for Information ; Journal of Software: Evolution and Process (JSME); Journal of Science of Computer Programming; Journal of Object Technologies (JOT).
- Stéphane Ducasse and Marcus Denker are Moderators for arXiv cs.SE. <http://arxiv.org/list/cs.SE/recent>

10.1.3. Invited Talks

- Stéphane Ducasse gave a presentation at CITI laboratory Lyon, Diverse Team seminar Inria Rennes, La Sorbonne
- Clément Béra gave a presentation “Sista: Speculative inlining, Smalltalk-style”, with Eliot Miranda (Cadence Design Systems) at the Stanford EE Computer Systems Colloquium, Stanford University (<https://www.youtube.com/watch?v=f4Cvia-HZ-w>).

10.1.4. Scientific Expertise

- Anne Etien reviewed several proposals for *Jeune Entreprise Innovante* and *Crédit Impôt Recherche*;
- Nicolas Anquetil acted as expert to evaluate project proposal for *Fondo Nacional de Desarrollo Científico y Tecnológico* (FONDECYT), Chile;
- Marcus Denker reviewed a research proposal for FONDECYT (Chilean National Science and Technology Commission);
- Damien Pollet reviewed projects proposal for NWO (Netherlands Organisation for Scientific Research) Veni grant proposal;
- Stéphane Ducasse participated to FWO (Belgium) PhD grant panel;
- Damien Cassou was a member of the Apps Togo jury, a contest from Ministry of Industry of Togo to encourage innovation in apps development (<http://www.republicoftogo.com/Toutes-les-rubriques/Tech-Web/Voici-les-meilleures-applis-du-moment>).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master : C. Demarey, Intégration Continue, 4h, M2, GIS2A5, Polytech-Lille, France

Master : C. Demarey, Intégration Continue, 12h, M2, IAGL, Université de Lille 1, France

Master: Anne Etien, Metamodelisation for Reverse Engineering, 25h, M2, Montpellier, France

Master: Anne Etien, Test et Maintenance, 10h, M2, Polytech-Lille, France

Master: Anne Etien, Test et Maintenance, 14h, M2, Polytech-Lille, France

Master : Anne Etien, Système d’information objet, 22h, M1, Polytech-Lille, France

Master : Anne Etien, Bases de données, 44h, M1, Polytech-Lille, France

Master : Anne Etien, Bases de données Avancées, 12h, M1, Polytech-Lille, France

Licence : Anne Etien, Bases de données, 22h, L3, Polytech-Lille, France

Licence : Nicolas Anquetil, Conception et programmation objet avancées, 52h, L2, Univ. Lille1, IUT-A, France

Licence : Nicolas Anquetil, Principes des systèmes d’exploitation, 40h, L2, Univ. Lille1, IUT-A, France

Licence : Nicolas Anquetil, Modélisation mathématique, 14h, L2, univ. Lille1, IUT-A, France

Licence : Nicolas Anquetil, Conception et développement d’applications mobiles, 30h, L2, univ. Lille1, IUT-A, France

Licence : Nicolas Anquetil, Méthodologie de la production d’applications, 33h, L2, univ. Lille1, IUT-A, France

Licence : Damien Pollet, Java lecture, 30h, L3, Telecom Lille, France

Licence : Damien Pollet, Java lecture, 20h, L3, Telecom Lille, France

Licence : Damien Pollet, Java project, 20h, L3, Telecom Lille, France

Licence : Damien Pollet, Computer architecture, 10h, L3, Telecom Lille, France

Master : Damien Pollet, Technologies for information systems, 30h, M1, Telecom Lille, France

Master : Damien Pollet, Network algorithms, 30h, M2, Telecom Lille, France

Master : Damien Pollet, Software engineering, 6h, M1, Telecom Lille, France

Licence: Damien Cassou, Algorithmique et programmation, 25h, L1, Polytech-Lille, France

Licence: Damien Cassou, OpenDevs—Communauté de Développeurs, 30h, L3, Univ. Lille-1, France

Licence : Clément Béra, Algorithmique et programmation, 35h, L1, Polytech-Lille, France

Licence : Clément Béra, Conception orienté objet, 35h, L1, Univ. Lille-1, France

Master : Clément Béra, Génie Logiciel, 40h, M3, Univ. Lille-1, France

Master : Vincent Blondeau, Bases de données, 12h, M1, Polytech-Lille, France

E-learning

Mooc: Stéphane Ducasse, Damien Cassou, Luc Fabresse, “Programmation Objet Immersive en Pharo / Live Object Programming in Pharo”, 7 weeks, by France Université Numérique and Inria, for programmers, 3400 participants

10.2.2. Supervision

PhD in progress : Vincent Blondeau, “Studying and Enhancing Testing Habits of Developers in a Large IT Company”, CIFRE Worldline, started Oct 2014, Anne Etien, Nicolas Anquetil.

PhD in progress : Brice Govin, “Support to implement a rejuvenated software architecture in legacy software”, CIFRE Thales, started Jan 2015, Anne Etien, Nicolas Anquetil, Stéphane Ducasse.

PhD in progress : Gustavo Santos, “Assessing and Improving Code Transformations to Support Software Evolution”, started April 2014, Anne Etien, Nicolas Anquetil.

PhD: Camille Teruel, “Security for dynamic languages”, 21/01/2016, Stéphane Ducasse, Damien Cassou

PhD in progress: Marco Naddéo, “Evolvable and reusable software: from language design to developer tools”, started 01/01/2014, Viviana Bono (University of Turin), Damien Cassou, Stéphane Ducasse

PhD in progress: Clément Béra, “Evolvable Runtimes for a Changing World”, started Oct 2014, Stéphane Ducasse, Marcus Denker.

PhD in progress: Klérisson Paixao, “Automating reactions for API changes based on dynamic analysis”, started 16/08/2014, Marcelo Maia, Damien Cassou, Nicolas Anquetil.

10.2.3. Juries

- Anne Etien: Jonathan Pepin, PhD thesis, “Architecture d’entreprise : alignement des cartographies métiers et applicatives du système d’informations”, Dec. 5th, 2016, University of Nantes (France).
- Nicolas Anquetil: David Michael Cutting, PhD thesis, “Enhancing Legacy Software System Analysis by Combining Behavioural and Semantic Information Services”, Aug. 5th, 2016, University of East Anglia, Norwich (England).

10.3. Popularization

- Stéphane Ducasse and Damien Cassou were important contributors of the “Enterprise Pharo” book (<http://files.pharo.org/books/enterprise-pharo/>).
- Brice Govin and Vincent Blondeau participated in the contest “My thesis in 180 seconds”

SEQUEL Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- C. Dimitrakakis, ICML Workshop on the theory and practice of differential privacy.
- Ph. Preux, “Big Data : Modelisation, Estimation and Selection”, June 2016, Villeneuve d’Ascq.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- Conference on Learning Theory (COLT)
- International Joint Conference on Artificial Intelligence (IJCAI)
- European Conference on Machine Learning (ECML)
- ICPRAM
- French conferences:
 - Extraction et Gestion de Connaissances (EGC),
 - Journées Francophones de Planification, Décision, Apprentissage (JFPDA),
 - Apprentissage Automatique et Fouille de Données & Société Française de Classification

10.1.2.2. Reviewer

- Thirtieth AAAI Conference on Artificial Intelligence (AAAI-16)
- Conference on Learning Theory (COLT 2016)
- European Workshop on Reinforcement Learning (EWRL 2016)
- European Conference on Machine Learning (ECML 2016)
- International Conference on Machine Learning (ICML 2016)
- Neural Information Processing Systems (NIPS 2016)
- International Joint Conference on Artificial Intelligence (IJCAI 2016)
- Conference on Autonomous Agents and Multia-Agent Systems (AAMAS 2016)
- International Conference on Artificial Intelligence and Statistics (AISTATS 2016)
- French conferences:
 - Extraction et Gestion de Connaissances (EGC),
 - Journées Francophones de Planification, Décision, Apprentissage (JFPDA),
 - conférence francophone sur l’Apprentissage Automatique (CAp),
 - Apprentissage Automatique et Fouille de Données & Société Française de Classification
 - Conférence Nationale d’Intelligence Artificielle (CNIA)

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Journal of Games.
- Neurocomputing.
- Revue d’Intelligence Artificielle

10.1.3.2. Reviewer - Reviewing Activities

- Automatica
- Artificial Intelligence Journal
- Machine Learning Journal
- Journal of Artificial Intelligence Research
- Journal of Machine Learning Research
- AMS Mathematical Review
- IEEE Transaction on Signal Processing
- IEEE Tansaction on Cybernetics

10.1.4. Invited Talks

- R. Gaudel, *From Bandits to Recommender Systems*, Presented on September 29th, 2016 at ENSAI, Rennes, France
- R. Gaudel, *Recommendation as a sequential process*, Presented on December 12th, 2016 at CMLA Mathématiques Appliquées, Cachan, France
- E. Kaufmann, *The information complexity of best arm identification*, Multi-armed Bandit Workshop 2016 at STOR-i, Lancaster University, UK, January 2016.
- E. Kaufmann, *The information complexity of sequential resource allocation*, seminar of the Collegio Carlo Alberto, Turin, March 2016.
- E. Kaufmann, *Optimal Best Arm Identification with Fixed Confidence*, Workshop on Computational and Statistical Trade-offs in Learning , Institut des Hautes Etudes Scientifiques (Orsay), March 2016.
- E. Kaufmann, *The information complexity of sequential resource allocation*, Stalab seminar, University of Cambridge, UK, April 2016.
- E. Kaufmann, *Stratégies bayésiennes et fréquentistes dans un modèle de bandit*, 1er congrès de la Société Mathématique de France, Tours, June 2016.
- E. Kaufmann, *Stratégies bayésiennes et fréquentistes dans un modèle de bandit*, Journées MAS, Grenoble, August 2016.
- E. Kaufmann, *Revisiting the Exploration-Exploitation Tradeoff in Bandit Models*, Workshop on Optimization and Decision-Making in Uncertainty, Simons Institute, Berkeley, September 2016.
- A. Lazaric, *Spectral Methods for Learning in POMDPs*, University of Liège, Belgium, February 2016.
- A. Lazaric, *Spectral Methods for Learning in POMDPs*, CMLA Mathématiques Appliquées, Cachan, France, February 2016.
- A. Lazaric, *Incremental Kernel Regression with Ridge Leverage Score Sampling*, “Data Learning and Inference” (DALI), Sestri Levante, Italy, April 2016.
- A. Lazaric, *Optimism and Randomness in Linear Multi-armed Bandit*, “International Conference on Monte-Carlo Techniques”, July 2016.
- J. Mary, *Structured Bandits*, “University of Strasbourg”, May. 2016.
- J. Mary, *Tutorial on Deep Neural Networks*, “Journées Big Data”, by the Laboratoire Painlevé. Jun. 2016.
- J. Mary, *Machine Learning and AI*, “EDF Seminar”, Dec. 2016.
- O. Pietquin, *Closing the Interaction Loop with (Inverse) Reinforcement Learning*, Presented on November 15, 2016 at AWRL, Hamilton, New-Zealand
- O. Pietquin, *Challenges of End-to-End Spoken Dialogue Systems*, Presented on December 10, 2016 at FILM@NIPS Workshop, Barcelona, Spain

- O. Pietquin, *Keeping the Human in the Loop: Challenges for Machine Learning*, Presented on March 10, 2016 at Xerox Research Center in Europe, Grenoble, France
- M. Valko, *Spectral Methods for Learning in POMDPs*, University of Liège, Belgium, February 2016.
- M. Valko, *Where is Justin Bieber?*, Presented on September 22nd, 2016 at Comenius University in Bratislava, Slovakia (*FMFI 2016*)
- M. Valko, *Bandit learning*, Presented on September 15–19th, 2016 at Information technologies - Applications and Theory, at Tatranské Matliare, High Tatras, Slovakia (*ITAT 2016*)
- M. Valko, *Decision-making on graphs without graphs*, Presented on June 16-17th, 2016 at Graph-based Learning and Graph Mining workshop, at Inria Lille, France (*GBLGM 2016*)
- M. Valko, *Sequential learning on graphs with limited feedback*, Presented on May 11–13th, 2016 at Data Driven Approach to Networks and Language, at ENS Lyon, France (*NETSpringLyon 2016*)
- M. Valko, *Benefits of Graphs in Bandit Settings*, Presented on January 11–12th, 2016 at Multi-armed Bandit Workshop 2016 at STOR-i, Lancaster University, UK (*STOR-i 2016*)

10.1.5. Scientific Expertise

- Agence Nationale pour la Recherche (ANR)
- ANRT
- D2RT Ile de France
- Institut National de Recherche en Agronomie (INRA)
- Fonds National pour la Recherche Scientifique (FNRS), Belgium
- H2020 program
- A. Lizaric was a member of the hiring committee for junior researchers at Inria Lille (2016).
- M. Valko is an elected member of the evaluation committee and participates in the hiring, promotion, and evaluation juries of Inria, notably
 - Hiring committee for junior researchers at Inria Sophia Antipolis (2016)
 - Selection committee for Inria award for scientific excellence, junior and senior (2016)
 - Selection committee for CR promotions (2016)
- Ph. Preux has chaired the hiring committee for an associate professor position at Université de Lille 3
- J. Mary was webpage chair for ICML'2016 in NYC

10.1.6. Research Administration

- Philippe Preux is:
 - Délégué Scientifique Adjoint (DSA) at Inria Lille
 - member of the Evaluation Committee (CE) at Inria
 - member of the Project Committee Board (BCP, Bureau du Comité des Projets) at Inria Lille
 - head of the "Data Intelligence" (DatInG) thematic group at CRIStAL.
 - member of the Scientific Committee of CRIStAL.
- R. Gaudel is member of the board of CRIStAL.
- R. Gaudel is manager of proml mailing list. This mailing list gathers French-speaking researchers from Machine Learning community.
- J. Mary is member of the "Commission Développement Technologique" at Inria Lille.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- Licence: C. Dimitrakakis, C2i, 25h eqTD, L1-2, Université de Lille 3, France.
- Licence: C. Dimitrakakis, Traitement de données, Université de Lille 3, France.
- Licence: C. Dimitrakakis, Modélisation de bases de données, Université de Lille 3, France.
- Licence: C. Dimitrakakis, Fonctionnement des réseaux, Université de Lille 3, France.
- Master: A. Lazaric, Reinforcement Learning, 25h eqTD, M2, ENS Cachan, France
- Master: A. Lazaric, Reinforcement Learning, 25h eqTD, M2, Ecole Centrale Lille, France
- Master: Ph. Preux, Advanced data mining, 30h eqTD, M2, Université de Lille 3, France
- Master: Ph. Preux, Fundamental algorithms for data mining, 30h eqTD, M1, Université de Lille 3, France
- Licence: Ph. Preux, Neural Networks, 28h eqTD, L3, Université de Lille 3, France
- Licence: Ph. Preux, Graph Theory, 28h eqTD, L3, Université de Lille 3, France
- Licence: Ph. Preux, C2i, 25h eqTD, L1-2, Université de Lille 3, France.
- Master: M. Valko, 2016/2017 Fall: Graphs in Machine Learning, 27h eqTD, M2, ENS Cachan
- Licence: R. Gaudel, 2016/2017 Spring: programmation R pour statistiques et sociologie quantitative, 44h eqTD, L1, université Lille 3, France
- Licence: R. Gaudel, 2016/2017 Fall: préparation au C2i niveau 1, 30h eqTD, L1-3, université Lille 3, France
- Licence: R. Gaudel, 2016/2017 Spring: préparation au C2i niveau 1, 25h eqTD, L1-3, université Lille 3, France
- Licence: R. Gaudel, 2016/2017 Fall: travail collaboratif et à distance dans un monde numérique, 13h eqTD, L1-3 (enseignement à distance), université Lille 3, France
- Licence: R. Gaudel, 2016/2017 Fall: algorithmes fondamentaux de la fouille de données, 30h eqTD, M1, université Lille 3, France
- Licence: R. Gaudel, 2016/2017 Fall: Fouille de données avancée, 30h eqTD, M2, université Lille 3, France
- Master: B. Piot, 2016/2017 Spring: Web Design, 60h eqTD, M2, Univ. Lille, France
- Master: B. Piot, 2016/2017 Spring: Object Programming, 70h eqTD, M2, Univ. Lille, France
- Master: B. Piot, 2016/2017 Fall: Web Design, 30h eqTD, M2, Univ. Lille, France
- Master: B. Piot, 2016/2017 Fall: Object Programming, 22h eqTD, M2, Univ. Lille, France
- Master: B. Piot, 2016/2017 Fall: Databases, 30h eqTD, M1, Univ. Lille, France
- Master: J. Mary, 2016/2017 Fall: algorithmes fondamentaux de la fouille de données, 30h eqTD, M1, Univ. Lille, France
- Master: J. Mary, 2016/2017 Fall: Programmation Web Avancée, 30h eqTD, M2, Univ. Lille, France
- Master: J. Mary, 2016/2017 Fall: Reinforcement Learning, 16h eqTD, M2, Univ. Lille, France

10.2.2. Supervision

- HdR: Michal Valko, Bandits on graphs and structures, ENS-Cachan, June 15th, 2016
- PhD: Frédéric Guillou, On recommendation systems in sequential context, University of Lille, Dec. 2nd, 2016, advisors: Philippe Preux, Romaric Gaudel, Jérémie Mary
- PhD: Tomas Kocak, Apprentissage séquentiel avec similitudes, University of Lille, Nov. 28th, 2016, advisor: Michal Valko, Rémi Munos

PhD: Hadrien Glaude, Méthodes des moments pour l'inférence de systèmes séquentiels linéaires rationnels, University of Lille, July. 8th, 2016, advisor: Olivier Pietquin

PhD in progress: Pratik Gajane, Sequential Learning and Decision Making under Partial Monitoring, University of Lille, started Oct. 2014, advisor: Philippe Preux

PhD in progress: Marc Abeille, Randomized Exploration-exploration Strategies, University of Lille, started Oct. 2014, advisor: Alessandro Lazaric

PhD in progress: Merwan Barlier, Dialogues intelligents basés sur l'écoute de conversations homme/homme, University of Lille, started Oct. 2014, advisor: Olivier Pietquin

PhD in progress: Alexandre Berard, Learning from post-editing for machine translation, University of Lille, started Oct. 2014, advisor: Olivier Pietquin

PhD in progress: Lilian Besson, Apprentissage séquentiel multi-joueurs pour la radio intelligente, CentraleSupélec Rennes, started Oct. 2016, advisor: Emilie Kaufmann

PhD in progress: Reda Alami, Bandit à Mémoire pour la prise de décision en environnement dynamique, Orange LABS, University of Paris-Saclay, started Oct. 2016, advisor: Odalric-Ambrym Maillard, Raphaël Feraud

PhD in progress: Daniele Calandriello, Efficient Sequential Learning in Structured and Constrained Environment, Inria, started Oct. 2014, advisor: Michal Valko, Alessandro Lazaric

PhD in progress: Ronan Fruit, Transfer in Hierarchical Reinforcement Learning, University of Lille, started Dec. 2015, advisor: Alessandro Lazaric

PhD in progress: Guillaume Gautier, DPPs in ML, started Oct. 2016, advisor: Michal Valko; Rémi Bardenet

PhD in progress: Jean-Bastien Grill, Création et analyse d'algorithmes efficaces pour la prise de décision dans un environnement inconnu et incertain, Inria/ENS Paris/Lille 1, started Oct. 2014, advisor: Rémi Munos, Michal Valko

PhD in progress: Julien Perolat, Reinforcement learning: the 2-player case, University of Lille, started Oct. 2014, advisor: Olivier Pietquin, Bilal Piot

PhD in progress: Florian Strub, Deep sequential learning and its application to human-robot interaction, University of Lille, started Jan. 2016, advisor: Olivier Pietquin, Jérémie Mary

PhD in progress: Romain Warlop, Novel Learning and Exploration-Exploitation Methods for Effective Recommender Systems, University of Lille, started Sep. 2015, advisor: Jérémie Mary

PhD in progress: Aristide Tossou, Privacy in Sequential Decision Making (provisional), Chalmers, started Feb. 2015, advisor: Christos Dimitrakakis

10.2.3. Juries

PhD and hdr juries:

- E. Kaufmann: Marie-Liesse Cauwet, LRI, Orsay.
- A. Lazaric: Matteo Pirotta, Politecnico di Milano, Italy.
- J. Mary: examiner for Raphaël Puget, université Paris 6.
- J. Mary: reviewer for Robin Allesiardo, université Paris Saclay
- Ph. Preux: reviewer for Hongliang Zhong, Laboratoire d'Informatique Fondamentale, Marseille
- Ph. Preux: president of the defense jury of the HDR of Matthieu Geist, Université de Lille
- O. Pietquin: advisor of the HDR of Matthieu Gestit, Université de Lille
- O. Pietquin: Hatim Khouzami, University of Avignon

PhD mid-term evaluation:

- A. Lazaric: Claire Vernade (mid-term evaluation), Telecom ParisTech, France.
- E. Kaufmann: opponent for the licenciate thesis of Stefan Magureanu, KTH, Stockholm, Sweden.

10.3. Popularization

- A. Lazaric was interviewed for Inria-Lille magazine (December issue).
- J. Mary gave a 55 min talk in front of students of Lycée Sainte-Famille at Amiens.
- Ph. Preux gave 2 talks on “Artificial Intelligence” in a high-school in Villeneuve d’Ascq within the “Fête de la science”.
- O. Pietquin was interviewed by France Culture (Supersonic) on March 23rd, 2016

SPIRALS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Laurence Duchien has been General Chair of (**EJCP'2016**), that is an international summer school in the domain of software engineering. The summer school was held in Lille from 27 June to 1 July 2016.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

Laurence Duchien

- International Systems and Software Product Line Conference, Vision Track (SPLC)
- IEEE Conference on Software Engineering Education & Training (CSEE&T)
- International Workshop on Software Engineering for Systems-of-Systems (SESoS)
- European Conference on Software Architecture (ECSA)

Philippe Merle

- International Symposium on Security in Computing and Communications (SSCC)
- International Workshop on Adaptive and Reflective Middleware (ARM)
- Informatique des Organisation et Systèmes d'Information et de Décision (INFORSID)
- Workshop on CrossCloud Infrastructures & Platforms (CrossCloud)
- International Conference on Cloud Computing and Services Science (CLOSER), Special Session on Experiences with OCCI

Martin Monperrus

- International Symposium on Software Testing and Analysis (ISSTA)
- International Conference on Software Maintenance and Evolution (ICSME)

Romain Rouvoy

- ACM/IFIP/USENIX Middleware conference (Middleware)
- ACM Symposium on Applied Computing (SAC), track on Dependable, Adaptive, and Trustworthy Distributed Systems (DADS)
- International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC)
- International Conference on Ambient Systems, Networks and Technologies (ANT)
- International Conference on Formal Aspects of Component Software (FACS)
- IEEE International Workshop on Big Data Management for the Internet of Things (BIOT)
- International Workshop on Meta-Programming Techniques and Reflection (Meta)

Lionel Seinturier

International Conference on Service Oriented Computing (ICSOC)
 ACM/IEEE Joint Conference WICSA and CompArch (ICSA)
 ACM Symposium on Applied Computing (SAC), tracks Software Architecture Theory Technology and Applications (SA-TTA), Operating Systems (OS)
 IEEE International Symposium on Software Crowdsourcing (ISSC)
 Euromicro Conference on Software Engineering and Advanced Applications (SEAA), track Model-based development Components and Services (MOCS)
 International Conference on Software Paradigm Trends (ICSOFT-PT)
 International Cloud Forward Conference (CF)
 International Workshop on Interplay of Security, Safety and System/Software Architecture (ISSA)
 International Workshop on Models@run.time @ MODELS
 International Workshop on Models@run.time @ ICAC
 Workshop on Software Engineering for Sustainable Systems (SE4SuSy)
 International Workshop on Advanced Information Systems for Enterprises (IWAISE)
 Workshop on Model-driven Engineering for Component-based Software Systems (ModComp)

10.1.3. Journal*10.1.3.1. Member of the Editorial Boards*

Martin Monperrus is member of the editorial board of the international journal Springer Empirical Software Engineering (IF-2015: 1.933).

Romain Rouvoy is member of the editorial board of the journal Lavoisier Technique et Science Informatiques (TSI).

Lionel Seinturier is editor for software engineering of the ISTE-Wiley Computer Science and Information Technology book collection.

10.1.3.2. Reviewer - Reviewing Activities

Laurence Duchien: Lavoisier Technique et Science Informatiques (TSI), Wiley Software Practice and Experience (SPE), Elsevier Journal of Software and Systems (JSS).

Martin Monperrus: Springer Empirical Software Engineering (EMSE), Elsevier Information and Software Technology (IST), IEEE Transactions on Software Engineering (TSE).

Romain Rouvoy: Wiley Journal of Software: Evolution and Process (JSME), Elsevier Journal of Pervasive and Mobile Computing (PMC), Elsevier Journal of Computer Networks (COMNET), Elsevier Journal of Computer Communications (COMCOM), Elsevier Journal of Network and Computer Applications (JNCA), Elsevier Journal on Science of Computer Programming (SCICO).

Lionel Seinturier: ACM Computing Surveys, Elsevier Information and Software Technology (IST), Wiley Software Practice and Experience (SPE), Elsevier Science of Computer Programming (SCP), Springer International Journal on Software and Systems Modeling (SoSyM), Springer Knowledge and Information Systems (KAIS), Elsevier Computers & Electrical Engineering (CAEE), Oxford The Computer Journal, Revue Africaine de la Recherche en Informatique et Mathématiques Appliquées (ARIMA), Inderscience International Journal of Computer Applications in Technology (IJCAT).

10.1.4. Invited Talks

Romain Rouvoy gave on keynote at ECAAS 2016 in the 1st workshop on Engineering Context-Aware Applications and Services, on mobile crowdsensing.

Walter Rudametkin gave an invited talk on browser fingerprinting at CiComp 2016, the 8th International Congress on Computational Sciences.

Lionel Seinturier gave an webinar at the West University of Timisoara, Romania, on High-level Language Support for Reconfiguration Control in Component-Based Architectures.

10.1.5. Leadership within the Scientific Community

Martin Monperrus is the co-head of the "Groupe de Travail Génie Logiciel Empirique" of the GDR GPL.

Romain Rouvoy is the co-head of the "Groupe de Travail Génie Logiciel pour les Systèmes Cyber-physiques" of the GDR GPL.

10.1.6. Scientific Expertise

Laurence Duchien was member of the recruitment committee for Chaire Inria at Ecole des Mines de Nantes, and deputy head of the recruitment committee for Chargés de Recherche at Inria Lille - Nord Europe. She did some scientific expertises for Direction des Relations Internationales of the French Ministry of Research.

Martin Monperrus has evaluated grants for the Natural Sciences and Engineering Research Council of Canada (NSERC).

Romain Rouvoy has evaluated Discovery Grants for the Natural Sciences and Engineering Research Council of Canada (NSERC) and research proposals for the STIC-AmSud Program.

Lionel Seinturier was member of the recruitment committees for professors in computer science at the University of Bordeaux, and the University of Grenoble. He was scientific expert for ANRT and University Paris 6. He was member of the Agence Nationale de la Recherche (ANR) Scientific Evaluation Committee for Software and Network (CES25).

10.1.7. Research Administration

Laurence Duchien is member of the Scientific Advisory Board for the Certus Center of the Simula Lab Norway (2014-2016). She is member of the CNRS CoCNRS section 6 committee, and of the "bureau" of this committee.

Philippe Merle is member of the scientific board of Inria. He is in charge of creating the Lille's instance of the Irill research and innovation institute on free software. He is president of the CUMI (Comité des Utilisateurs des Moyens Informatiques), alternate member of the Comité de centre, member of the CLHSCT (Comité Local d'Hygiène, de Sécurité et de Conditions de Travail).

Romain Rouvoy is member of the CLDD (Commission Locale de Développement Durable), member of the CUB (Commission des Utilisateurs du Bâtiment), member of the CER (Commission Emplois Recherche), and member of the Horizon Startup committee for the Inria Lille - Nord Europe research center.

Lionel Seinturier is president of the CDT (Commission Développement Technologique), member of the BCP (Bureau du Comité des Projets), and scientific correspondent for DPEI (Direction Partenariat Europe et International), for the Inria Lille - Nord Europe research center. He heads the committee (so-called "vivier 27 rang A") that selects members of recruitment committees in Computer Science at the University of Lille.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Laurence Duchien teaches at the University of Lille 1, IEEA faculty. She heads the Carrières et Emplois service and is referent for the professional insertion in the PhD program in Computer Science at ComUE University Lille Nord de France. She is Director of Doctoral Studies for Computer Science in the Doctoral School Engineering Science (SPI) - ComUE Lille Nord de France.

Software Project Management, 50h, Level M2, Master MIAGE

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

Software Product Lines, 8h, Level M2, Master of Computer Science

Research and Innovation Initiation, 22h, Level M2 IAGL, Master of Computer Science

Tutoring Internship, 16h, Level M2, Master of Computer Science

Martin Monperrus teaches at the University of Lille 1, IEEA faculty. He heads the **IAGL** specialty of the Master of Computer Science at the University of Lille 1.

Introduction to programming, 48h, Level L1, Licence of Computer Science

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

Automated software engineering, 40h, Level M2 IAGL, Master of Computer Science

Romain Rouvoy teaches at the University of Lille 1, IEEA faculty. He heads the **Master of Computer Science** program at the University of Lille 1. He supervises the **Agil-IT** Junior Enterprise.

Infrastructures et Frameworks Internet, 32h, Level M2 IAGL, Master of Computer Science

Innovation & Initiation à la Recherche, 14h, Level M2 IAGL, Master of Computer Science speciality

Outils pour la Programmation des Logiciels, 12h, Level M2 IAGL, Master of Computer Science

Suivi de projets, 20h, Level M2, Master of Computer Science

Suivi d'alternants, 20h, Level M2, Master of Computer Science

Walter Rudametkin Ivey teaches at the University of Lille 1, Polytech engineering school.

GIS4 Programmation par Objets

GIS4 Architectures Logicielles

GIS2A3 (apprentissage) Projet programmation par Objet

IMA2A4 (apprentissage) Conception Modélisation Objet

GBIAAL4 Bases de données

Lionel Seinturier teaches at the University of Lille 1, IEEA faculty.

Conception d'Applications Réparties, 50h, Level M1, Master MIAGE

Conception d'Applications Réparties, 36h, Level M1, Master of Computer Science

Infrastructures et Frameworks Internet, 52h, Level M2 E-Services IAGL and TIIR, Master of Computer Science

10.2.2. Supervision

Defended HdR: Martin Monperrus, On Oracles for Automated Diagnosis and Repair of Software Bugs, 3 May 2016.

Defended PhD: Vincenzo Musco, Usages of Graphs and Synthetic Data for Software Propagation Analysis, 3 November 2016, Philippe Preux (Inria SequeL) & Martin Monperrus.

Defended PhD: Maxime Colmant, Multi-Dimensional Analysis of Software Power Consumptions in Multi-Core Architectures, 24 November 2016, Lionel Seinturier & Romain Rouvoy.

Defended PhD: Geoffrey Hecht, Détection et analyse de l'impact des défauts de code dans les applications mobiles, 30 November 2016, Romain Rouvoy.

Defended PhD: María Gómez Lacruz, Towards Improving the Quality of Mobile Apps by Leveraging Crowdsourced Feedback, 2 December 2016, Lionel Seinturier & Romain Rouvoy.

Defended PhD: Bo Zhang, Self-optimization of Infrastructure and Platform Resources in Cloud Computing, 12 December 2016, Lionel Seinturier & Romain Rouvoy.

In progress PhD: Benjamin Danglot, December 2016, Martin Monperrus.

In progress PhD: Lakhdar Meftah, November 2016, Romain Rouvoy & Isabelle Chrisment (Inria Madynes).

In progress PhD: Miguel Gonzalez, October 2016, Martin Monperrus & Romain Rouvoy & Walter Rudametkin.

In progress PhD: Sarra Habchi, Une supervision de contexte sensible à la confidentialité pour les développements logiciels en crowdsource, October 2016, Romain Rouvoy.

In progress PhD: Antoine Vastel, Cartographie de la qualité d'expérience pour l'accès à l'internet mobile, October 2016, Romain Rouvoy & Walter Rudametkin.

In progress PhD: Yahya Al Dhuraibi, Un cadre flexible pour l'élasticité dans les nuages, October 2015, Philippe Merle.

In progress PhD: Stéphanie Challita, Un cadre formel et outillé pour la gestion de toute ressource en nuage, October 2015, Philippe Merle.

In progress PhD: Thomas Durieux, Search-based Monitoring and Root Cause Diagnosis in Production, September 2015, Lionel Seinturier & Martin Monperrus.

In progress PhD: Gustavo Sousa, Towards dynamic software product lines to optimize management and reconfiguration of cloud applications, October 2012, Laurence Duchien & Walter Rudametkin Ivey.

In progress PhD: Amal Tahri, Evolution logicielle multi-vues, des réseaux domestiques au Cloud, March 2013, Laurence Duchien.

10.2.3. Juries

Laurence Duchien

HDR Tewfik Ziadi (University Paris 6), reviewer

HDR Christelle Urtado (University of Montpellier), reviewer

HDR Anne Etien (University of Lille 1), chair

HDR Martin Monperrus (University of Lille 1), garant

HDR Fabien Dagnat (University Rennes 1), reviewer

Bui Thi Mai Anh (University Paris 6), examiner

Alix Gogey (University of Lille 1), chair

Guillaume Bécan (University Rennes 1), reviewer

Martin Monperrus

Alan Charpentier (University of Bordeaux), examiner

Vincenzo Musco (University of Lille 1), co-supervisor

Romain Rouvoy

Assaad Moawad (University of Luxembourg), reviewer

Simon Dupont (École des Mines de Nantes), reviewer

Lucas Perronne (University of Grenoble), reviewer

Alexandre Caron (University of Lille 1), chair

Maxime Colmant (University of Lille 1), co-supervisor

Geoffrey Hecht (University of Lille 1 & UQAM), co-supervisor

María Gómez Lacruz (University of Lille 1), co-supervisor

Bo Zhang (University of Lille 1), co-supervisor

Lionel Seinturier

HDR Brahim Hamid (University of Toulouse), reviewer

Sebastian Martinez (University Bretagne Occidentale), reviewer

Julie Rochas (University of Nice), reviewer

Hamza Chehili (University Constantine 2, Algérie), reviewer

Naweulo Zhou (University of Grenoble), reviewer

Anca Iordache (University Rennes 1), examiner

Maxime Colmant (University of Lille 1), co-supervisor

María Gómez Lacruz (University of Lille 1), co-supervisor

Bo Zhang (University of Lille 1), co-supervisor

10.3. Popularization

Romain Rouvoy is in charge of a demonstrator of APISENSE[®] as part of the Xperium initiative of the **LILLIAD Learning center Innovation** at the University of Lille 1.

Lionel Seinturier has participated in October to the event Chercheur itinérant organized by the Inria Lille Nord Europe research center in the context of La Fête de la science. Two classrooms (3ème) have been visited. The theme of the visit was crowd-sensing and data gathering from mobile devices.