



RESEARCH CENTER
Saclay - Île-de-France

FIELD

Activity Report 2014

Section Dissemination

Edition: 2015-03-24

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AMIB Project-Team

7. Dissemination

7.1. Promoting Scientific Activities

7.1.1. Scientific events organisation

7.1.1.1. General chair, scientific chair

Yann Ponty

PARC 2014 (PIMS Analytic RNA Combinatorics meeting), Simon Fraser University (Vancouver, Canada)

Christine Froidevaux and Adrien Rougny

Franco-Japanese Workshop 2014: "Logic Based Methods for Systems Biology". This workshop has been organized at PCRI (Orsay, France) from October 6th to October 8th, 2014. There were 14 participants coming from the following institutions: National Institute of Informatics (Tokyo, Japan), Yamanashi University (Yamanashi, Japan), Tokyo Institute of Technology (Tokyo, Japan), Inria AMIB (LRI, France), Institut de Recherche en Communication et Cybernétique de Nantes (Nantes, France), INRA - Centre de Val de Loire (Nouzilly, France) and Laboratoire d'Informatique de Paris 6 (Paris, France). This workshop took place in the context of a National Institute of Informatics (NII) Collaborative Research Project on "Food and Health with Information Technology".

7.1.2. Scientific events selection

7.1.2.1. Chair of conference program committee

Yann Ponty

CMSR 2014 (Computational Methods for Structural RNAs). Satellite event of ECCB'14 (Strasbourg, France).

Loïc Paulevé

SASB 2014 (5th international workshop on Static Analysis and Systems Biology), Munich (Germany)

7.1.2.2. Member of the conference program committee

Sarah Cohen-Boulakia

DILS 2014 (Data integration in the life sciences)

TAPP 2014 (Theory and Practice of Provenance)

SWEET 2014 (Int. sigmod Workshop on scalable workflow enactment engines and technologies)

Alain Denise

ECCB 2014 (European Conference on Computational Biology)

CARI 2014 (African Conference on Research in Computer Science and Applied Mathematics)

CMSR 2014 (Computational Methods for Structural RNAs). Satellite event of ECCB'14 (Strasbourg, France).

Sabine Peres

ECCB 2014 (European Conference on Computational Biology)

Yann Ponty

ECCB 2014 (European Conference on Computational Biology)
 ISMB 2014 (International conference on Intelligent Systems for Molecular Biology)
 BICOB 2014 (International Conference on Bioinformatics and Computational Biology)
 BIOVIS 2014 (Symposium on Biological Data Visualization)

7.1.2.3. Reviewer

Yann Ponty

LATIN 2014 (Latin American Theoretical INformatics Symposium)

Loïc Paulevé

FORMATS 2014 (Formal Modelling and Analysis of Timed Systems)

7.1.3. Journal

7.1.3.1. Member of the editorial board

Sarah Cohen-Boulakia

Journal of Data Semantics (Springer)

Alain Denise

Mathematics of Bio-molecules, speciality of the journal *Frontiers in Molecular Bio-sciences* (Ed. Frontiers).

Technique et Science Informatiques (Ed. Hermès)

Yann Ponty

Mathematics of Bio-molecules, speciality of the journal *Frontiers in Molecular Bio-sciences* (Ed. Frontiers).

7.1.3.2. Reviewer

The members of the team reviewed numerous papers for numerous journals, including: *Bioinformatics*, *BMC Bioinformatics*, *RNA*, *Nucleic Acids Research*, *Journal of Mathematical Biology*, *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, *Journal of Discrete Algorithms*, *Algorithms for Molecular Biology*, *PLOS One*, *Journal of Theoretical Biology*, *Theoretical Computer Science*...

7.1.4. Team seminar

The team seminar, organized by Loïc Paulevé and Sabine Peres, hosted 10 talks delivered by invited speakers from multiple institutions in France and abroad, including:

Alexander Bockmayr (Freie Universität Berlin)

Jan Holub (CTU Prague)

Philippe Icard (BIOTICLA Caen)

Anne Siegel (IRISA)

Denis Thieffry (IBENS)

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

We have and we will go on having trained a group of good multi-disciplinary students both at the Master and PhD level. Being part of this community as a serious training group is obviously an asset. Our project is also very much involved in two major student programs in France: the Master BIBS (Bioinformatique et Biostatistique) at Université Paris-Sud/École Polytechnique and the parcours d'Approfondissement en Bioinformatique at École Polytechnique. We are also involved in a student partnership with McGill University (partenariat France Quebec offering French and Canadian students co-supervised internships (short term -3 to 6 months- or long term -part of the PhD studies-). J.-M. Steyaert is involved in the development of an interdisciplinary cooperation between Polytechnique and AP-HP that will favor interships of Polytechnicians and Masters students in AP-HP operational services.

Ch. Froidevaux is a member of the Scientific Committee of the Computer Science Doctoral School of Paris-Sud University.

Ch. Froidevaux is co-heading the Master (M1 and M2) at the University Paris Sud. At Ecole Polytechnique, J.-M. Steyaert was in charge of M1 and M2 until october 2014. M. Régnier is now in charge. Most team members are teaching in this master.

J. Bernauer was appointed *Chargé d'enseignement* in the Computer Science Department of École Polytechnique (DIX) in 2013.

Master BIBS: J. Bernauer, Informatique théorique et Programmation Python, 20h, M2, Université Paris-Sud, France

Master BIBS: M. Régnier and J.-M. Steyaert, Combinatoire, Algorithmes, Séquences et Modélisation (CASM), 32h, M2, Université Paris-Sud, France

Master : M. Régnier, Basic Algorithms in Computational Biology, 4h, M2, MIPT, Russia.

Cycle Ingénieur Polytechnicien: M. Régnier, Modal Bioinformatique, 8h, 2ème année, École Polytechnique, France

7.2.2. Supervision

PhD

Adrien Guilhot-Gaudeffroy (co-supervised by Ch. Froidevaux, and J. Bernauer, AMIB and J. Azé LIRMM) has defended his PhD thesis (29/09/2014) <https://hal.archives-ouvertes.fr/tel-01081605>

PhD in progress

Mélanie Boudard, *Game theory and stochastic learning for predicting the three-dimensional structure of large RNA molecules*, Univ. Paris XI, Encadrant(els): D. Barth (Univ. Versailles), J. Cohen (CNRS, LRI) and A. Denise.

Bryan Brancotte, *Ranking biological and biomedical data: algorithms and applications*, Université Paris Sud, 01/10/2012, Encadrants: S. Cohen-Boulakia and A. Denise.

Alice Heliou, *Identification et caractérisation d'ARN circulaires dans des séquences NGS*, Ecole Polytechnique, Encadrants: Mireille Régnier et H. Becker

Amélie Heliou, *Game theory and conformation sampling for multi-scale and multi-body macromolecule docking*, Ecole Polytechnique, Encadrantes: J. Bernauer and J. Cohen

Daria Iakovishina, *A Combinatorial Approach to Assembly Algorithm*, Inria, Encadrante: Mireille Régnier

Vincent Le Gallic, *Design de structures secondaires avec contraintes de séquences : une approche globale fondée sur les langages formels*, Univ. Paris Sud. Encadrants: A. Denise and Y. Ponty

Cécile Pereira, *Nouvelles approches bioinformatiques pour l'étude à grande échelle de l'évolution des activités enzymatiques*, Univ. Paris XI, Encadrants: Olivier Lespinet and Alain Denise

Adrien Rougny, *Reasonings on biological knowledge to build and analyze signalling networks*, Univ. Paris Sud. Encadrante: Ch. Froidevaux

Antoine Soulé, *Evolutionary study of RNA-RNA interactions in yeast*, Ecole Polytechnique, Encadrants: J.-M. Steyaert and J. Waldispühl (University McGill, Canada).

7.2.3. Juries

Expertise

S. Cohen-Boulakia acted as an external expert in the ERC Consolidator Grant, panel 'Computer Science and Informatics'

Y. Ponty is a member of the ‘Comité National’ (hiring/evaluation committee) of CNRS in computer science (section 6) and bioinformatics (cid 51); he acted as an external expert for the Emergence program of Ville de Paris, and for the JCJC program of ANR.

M. Régnier was a member of PES/PEDR attribution juries for INRIA and CNRS. She is a member of DIGITEO program Committee and SDV working group in Saclay area. She acted as an external expert for regional initiatives.

A. Denise was a member of the HCERES evaluation committee of INRA MIAT Unit.

Hiring committees

Maitre de conferences, Paris Sud, 2014 Computer Science department: Sarah Cohen-Boulakia, Sabine Peres, Christine Froidevaux;

Professeur, Bordeaux, 2014, Computer Science department: Alain Denise;

CR2, INRIA-IDF: M. Régnier;

CR2, INRIA-RENNES: M. Régnier;

PhD juries

M. Folschette (Nantes U.) : M. Régnier;

N. Obeid (Toulouse U.): Ch. Froidevaux;

S. Videla (Rennes U.): Ch. Froidevaux;

R. Champeimont (Pierre et Marie Curie U.): A. Denise;

D. Symeonidou (Paris-Sud U.): A. Denise;

A. Jacquot (Paris-Nord U.): A. Denise;

HDR juries

Ch. Sinocquet (Nantes U.): Ch. Froidevaux

M. Smail (Nancy U.): Ch. Froidevaux

P. Amar (Paris-Sud U.) : A. Denise

A. Allauzen (Paris-Sud U.) : A. Denise

F. Tahy (Evry U.) : M. Régnier;

J. Bernauer (Paris-Sud U.) : Ch. Froidevaux, J.-M. Steyaert

7.3. Popularization

Y. Ponty authored the pop. sci. paper *Bio-algorithmique des ARN : petite promenade aux interfaces* [31] for 1024, the journal of the French society of computer science (SIF).

AVIZ Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

AVIZ members are active worldwide in the domains of Visualization, Visual Analytics, HCI, and computer graphics.

9.1.1. Keynotes and Invited Talks

- Jean-Daniel Fekete: “Visualisation de réseaux par matrices d’adjacence”, Horizon Maths 2014, Dec. 16, 2014.
- Jean-Daniel Fekete: “Matrix-Based Visualization of Graphs”, keynote speaker for the Graph Drawing 2014 Symposium, Würzburg, Germany, Sep. 25th, 2014.
- Jean-Daniel Fekete: “Visualizing Dynamic Interactions”, Summer School in Cognitive Sciences 2014, Web Science and the Mind, Université du Québec à Montréal, Jul 10th, 2014.
- Jean-Daniel Fekete: “La visualisation d’information pour comprendre et interagir avec les données” seminar at IRT SystemX, Saclay, Jul. 1st, 2014.
- Jean-Daniel Fekete: “Dataviz & BigData : Mythes & réalités”, Panel at Microsoft Techdays, Paris, Feb. 11th, 2014.
- Tobias Isenberg: “*Touching the Third Dimension—Exploration of Scientific Data on Surfaces*”. Microsoft eScience Workshop, Guarujá, Brazil, Oct. 22, 2014.
- Tobias Isenberg: “Direct-Touch Interaction for Scientific Visualization”. Center for Data Science Kick-Off Meeting, Orsay, France, June 30, 2014.
- Tobias Isenberg: “Direct-touch Interaction for Scientific Visualization”. Forum on Tactile and Gestural Interaction, Tourcoing, France, May 13, 2014.
- Tobias Isenberg: “Interaction with 3D Scientific Data on Touch-Sensitive Surfaces”. University of Granada, Spain, May 7, 2014.
- Tobias Isenberg: “Interaction with 3D Scientific Data on Touch-Sensitive Surfaces”. University of Rostock, Germany, Apr. 16, 2014.
- Petra Isenberg: “How Important is Display Technology for Visualization and Visual Analytics?” Capstone at the 2014 European Workshop on Visual Analytics (EuroVA), Swansea, UK.
- Pierre Dragicevic: “Wrong Stats are Miscommunicated Stats”. Yves Guiard’s Emeritus Ceremony, Telecom ParisTech, 9 July 2014.
- Pierre Dragicevic: “**Bad Stats are Miscommunicated Stats**”. Keynote at VIS’14 BELIV workshop, 10 Nov 2014.
- Samuel Huron: “La sédimentation visuelle”. Invited speaker at Sud Web 2014, Toulouse
- Wesley Willett: “**Tools and Strategies for Social Data Analysis**”. SIGCHI Paris, 27 January 2014.
- Benjamin Bach: “Visualizing functional brain connectivity”. Invited talk at **The 10th IEEE International Conference on e-Science**, Guarujá, Brazil, Oct. 2014.

9.1.2. Scientific Associations

- Jean-Daniel Fekete is a member of the Steering Committee of EuroVis (Eurographics WG on Data Visualization).
- Jean-Daniel Fekete is a member of the Steering Committee of the IEEE Information Visualization Conference.

- Jean-Daniel Fekete is a member of the IEEE VIS Executive Committee.
- Tobias Isenberg is a member of the Steering Committee of the Expressive conference.
- Tobias Isenberg is a member of the Executive Committee of the Visualization and Computer Graphics Technical Committee of the IEEE Computer Society (VGTC), serving as publications chair.

9.1.3. Conference Organization

- Jean-Daniel Fekete was the President of the IEEE Conference on Visualization VIS'2014 in Paris.
- Petra Isenberg and Tobias Isenberg co-organized the IEEE VisWeek Workshop on Beyond Time and Errors—Novel Evaluation Methods for Visualization (BELIV 2014) at IEEE VIS 2014.
- Tobias Isenberg was Workshops co-chair at IEEE VIS 2014.
- Tobias Isenberg was Publicity co-chair at IEEE SUI 2014.
- Petra Isenberg was poster co-chair at ITS 2014.
- Petra Isenberg was exhibits co-chair at ITS 2014.
- Charles Perin, Pierre Dragicevic and Jean-Daniel Fekete organized the Bertin Exhibition at IEEE VIS'2014.
- Charles Perin was Student Volunteers co-chair at IEEE VIS'2014.
- Jeremy Boy designed the sponsors brochure for collecting funds for the IEEE VIS'14 Conference.
- Jeremy Boy designed the interface for displays showing the conference program at the IEEE VIS'14 Conference venue.
- Jeremy Boy redesigned all the Fast-Forward material for the IEEE VIS'14 Conference.
- Jeremy Boy and Heidi Lam designed the Vis in other venues posters for the IEEE VIS'14 Conference.
- Jeremy Boy, Sung Hee Kim, Sukwon Lee, Ji Soo Yi, and Niklas Elmqvist organized the workshop on visualization literacy at the IEEE VIS'14 Conference.
- Benjamin Bach co-chaired the celebration of the 25th anniversary of the IEEE VIS conference.

9.1.4. Conference Program Committees

- Jean-Daniel Fekete was a member of the program committee of IEEE VAST.
- Tobias Isenberg was a member of the program committee for ACM ITS Posters.
- Tobias Isenberg was a member of the program committee for ACM SUI.
- Tobias Isenberg was a member of the program committee for IEEE VISAP.
- Tobias Isenberg was a member of the program committee for IEEE InfoVis.
- Tobias Isenberg was a member of the program committee for IEEE SciVis.
- Tobias Isenberg was a member of the program committee for ACM/Eurographics Expressive.
- Tobias Isenberg was a member of the program committee for EuroVis full papers.
- Tobias Isenberg was a member of the program committee for EuroVis short papers.
- Tobias Isenberg was a member of the program committee for IEEE 3DUI.
- Petra Isenberg was a member of the program committee for AVI 2014.
- Petra Isenberg was a member of the program committee for CHI 2014.
- Petra Isenberg was a member of the program committee for InfoVis 2014.
- Petra Isenberg was a member of the program committee for ITS 2014.
- Petra Isenberg was a member of the program committee for SUI 2014.
- Petra Isenberg was a member of the program committee for PerDis 2014.
- Pierre Dragicevic was a member of the program committee for VIS 2014.

- Pierre Dragicevic was a member of the best poster committee for VIS 2014.
- Pierre Dragicevic was a member of the workshop committee for CHI 2015.
- Wesley Willett was a member of the works-in-progress program committee for CHI 2014.
- Wesley Willett was a member of the program committee for the iConference 2015.
- Wesley Willett was a member of the program committee for GI 2015.

9.1.5. Journal Editorial Board

- Jean-Daniel Fekete is associate editor of IEEE Transactions on Visualization and Computer Graphics.
- Tobias Isenberg is associate editor of Elsevier Computers & Graphics.

9.1.6. Conference Reviewing

3DUI IEEE Symposium on 3D User Interfaces: Tobias Isenberg
 3DVis IEEE VIS International Workshop on 3DVis: Tobias Isenberg
 alt.chi Alt.chi Forum: Pierre Dragicevic
 AVI International Working Conference on Advanced Visual Interfaces: Pierre Dragicevic, Petra Isenberg
 BioVis IEEE Symposium on Biological Data Visualization: Tobias Isenberg
 CAe International Symposium on Computational Aesthetics in Graphics, Visualization, and Imaging: Tobias Isenberg
 CHI ACM Conference on Human Factors in Computing System: Pierre Dragicevic, Tobias Isenberg, Samuel Huron, Charles Perin, Wesley Willett, Jeremy Boy, Benjamin Bach
 CSCW ACM Conference on Computer Supported Cooperative Work: Wesley Willett
 DIS ACM conference on Designing Interactive Systems: Pierre Dragicevic, Petra Isenberg
 EuroVA EuroVis Workshop on Visual Analytics: Pierre Dragicevic, Petra Isenberg
 EuroVis Eurographics/IEEE Conference on Visualization: Tobias Isenberg, Petra Isenberg, Samuel Huron, Charles Perin, Wesley Willett, Benjamin Bach
 GD International Symposium on Graph Drawing: Samuel Huron
 IHM Conférence Francophone sur l'Interaction Homme-Machine: Charles Perin
 iConference iSchools conference on critical information issues in contemporary society: Wesley Willett
 InfoVis IEEE Information Visualization Conference: Tobias Isenberg, Petra Isenberg, Charles Perin
 ITS ACM Conference on Interactive Tabletops and Surfaces: Pierre Dragicevic, Tobias Isenberg, Petra Isenberg, Wesley Willett
 IUI ACM International Conference on Intelligent User Interfaces: Tobias Isenberg
 MobileHCI International Conference on Human-Computer Interaction with Mobile Devices and Services: Petra Isenberg
 NPAR ACM Symposium on Non-Photorealistic Animation and Rendering: Tobias Isenberg
 PacificVis IEEE Pacific Visualization Symposium: Wesley Willett, Benjamin Bach
 PG Pacific Conference on Computer Graphics and Applications: Tobias Isenberg
 PerDis International Symposium on Pervasive Displays: Petra Isenberg
 SciVis IEEE Scientific Visualization Conference: Tobias Isenberg
 SIGGRAPH ACM Conference on Computer Graphics and Interactive Techniques: Tobias Isenberg
 SUI ACM Symposium on Spatial User Interaction: Tobias Isenberg, Petra Isenberg
 UIST ACM Symposium on User Interface Software and Technology: Pierre Dragicevic, Tobias Isenberg, Charles Perin, Wesley Willett

VAST IEEE Conference on Visual Analytics Science and Technology: Petra Isenberg, Charles Perin

9.1.7. Journal Reviewing

C&G Elsevier Computers and Graphics: Tobias Isenberg

CG&A IEEE Computer Graphics and Applications: Tobias Isenberg, Samuel Huron, Wesley Willett

CGF Computer Graphics Forum: Tobias Isenberg

COSU Computer Supported Cooperative Work: Petra Isenberg

IJHCS International Journal of Human-Computer Studies: Tobias Isenberg

TOG ACM Transactions on Graphics: Pierre Dragicevic

TVCG IEEE Transactions on Visualization and Computer Graphics: Pierre Dragicevic, Tobias Isenberg, Petra Isenberg, Wesley Willett, Benjamin Bach

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- “Interactive Information Visualization” (M2 module), taught by Jean-Daniel Fekete, Pierre Dragicevic, Benjamin Bach, Nadia Boukhelifa, Lonni Besançon at Univ. Paris-Sud
- “Visual Analytics” (M2 module) taught by Wesley Willett, Petra Isenberg, Pierre Dragicevic, Jean-Daniel Fekete, Nadia Boukhelifa at Ecole Centrale, Paris
- “Innovative Interactive Systems for Medical Visualization” taught by Tobias Isenberg at the ‘SUMMER’ FP7 Marie Curie Research Training Network summer-school, TU Delft, the Netherlands
- “Non-Photorealistic Rendering” taught by Tobias Isenberg at the University of Granada, Spain
- “Non-Photorealistic Rendering” taught by Tobias Isenberg at Polytech Paris-Sud, France

9.2.2. Supervision

- PhD: Yvonne Jansen, Physical and Tangible Information Visualization, Université Paris-Sud, 10 March 2014, Pierre Dragicevic and Jean-Daniel Fekete.
- PhD: Benjamin Bach, Connections, Changes, and Cubes: Unfolding Dynamic Networks for Visual Exploration, Université Paris-Sud, 9 May 2014, Emmanuel Pietriga and Jean-Daniel Fekete.
- PhD: Nicolas Heulot, Étude des projections de données comme support interactif de l’analyse visuelle de la structure de données de grande dimension, Université Paris-Sud, 4 Jul 2014, Jean-Daniel Fekete.
- PhD: Charles Perin, Direct Manipulation for Information Visualization, Université Paris-Sud, 17 Nov 2014, Jean-Daniel Fekete
- PhD: Samuel Huron, Constructive Visualization: A token-based paradigm allowing to assemble dynamic visual representation for non-experts, Université Paris-Sud, 29 Sep 2014, Jean-Daniel Fekete.
- PhD in progress: Jeremy Boy, Visualization for the People, Telecom ParisTech, Jean-Daniel Fekete and Françoise Detienne.
- PhD in progress: Pascal Goffin, From Individual to Collaborative Work, Université Paris-Sud, 2013, Petra Isenberg and Jean-Daniel Fekete
- PhD in progress: Mathieu Le Goc, Dynamic and Interactive Physical Visualization, Université Paris-Sud, 2013, Pierre Dragicevic and Jean-Daniel Fekete
- PhD in progress: Evanthia Dimara, Information Visualization for Decision Making, Université Paris-Sud, 2014, Pierre Dragicevic, Anastasia Bezerianos and Jean-Daniel Fekete
- PhD in progress: Lonni Besançon, Interactive visualization using touch input and tangibles, Université Paris-Sud, 2014, Tobias Isenberg and Mehdi Ammi.

9.2.3. Juries

- Pierre Dragicevic: CR hiring committee at Inria Lille
- Pierre Dragicevic: Member of the “Commission Scientifique” (CS) at Inria Saclay
- Pierre Dragicevic: Member of the “Commission Consultative de Spécialistes de l’Université (CCSU)” at Université Paris-Sud
- Tobias Isenberg: PhD committee of Dr. Martin Luboschik, Illustrative Informationsvisualisierung [Illustrative Information Visualization], University of Rostock, Germany, Apr. 16, 2014.

9.3. Popularization

- Pierre Dragicevic and Yvonne Jansen are curating an online [List of Physical Visualizations and Related Artefacts](#) with now 180+ entries.
- Benjamin Bach is curating an online [List of Temporal Visualizations based on Space-Time cube visualizations](#).
- Benjamin Bach is maintaining a [Webpage](#) describing the efforts of the Microsoft Research-Inria Joint Research Center on visualizing functional brain connectivity.
- Jeremy Boy and Jean-Daniel Fekete developed a [Series of Visualizations for the People](#).
- Jeremy Boy: [CO2: La carte de la pollution mondiale](#), Mediapart data-journalism article.
- Jeremy Boy: [Les diplômés, est-ce que ça paye?](#), Mediapart data-journalism article.
- Jeremy Boy: [Le poids du nucléaire dans le monde](#), Mediapart data-journalism article.
- Jeremy Boy, Samuel Huron, and Jean-Daniel Fekete organized a workshop on Data Visualization at Futur En Seine 2104, Paris, France.

COMETE Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

Note: In this section we include only the activities of the permanent internal members of Comète.

8.1.1. Scientific events organisation

8.1.1.1. Member of the organizing committee

Catuscia Palamidessi is member of:

The Executive Committee of **SIGLOG**, the ACM Special Interest Group on Logic and Computation. Since 2014.

The Organizing Committee of **LICS**, the ACM/IEEE Symposium on Logic in Computer Science. Since 2010.

The Council of **EATCS**, the European Association for Theoretical Computer Science. Since 2005.

The Steering Committee of **ETAPS**, the European Joint Conferences on Theory and Practice of Software. Since 2006.

The IFIP Technical Committee 1 – Foundations of Computer Science. Since 2007.

The IFIP Working Group 2.2 – Formal Description of Programming Concepts. Since 2001.

The IFIP Working Group 1.7 – Theoretical Foundations of Security Analysis and Design. Since 2010.

Frank D. Valencia is member of:

The steering committee of the International Workshop in Concurrency **EXPRESS**. Since 2010.

8.1.2. Scientific events selection

8.1.2.1. Chair of conference program committee

Catuscia Palamidessi:

has served as PC co-chair (together with Erika Ábrahám) of **FORTE 2014**: the 34th IFIP International Conference on Formal Techniques for Distributed Objects, Components and Systems. Berlin, Germany, 3-6 June 2014. Co-located with **DisCoTec 2014**.

is serving as PC chair of **LICS 2015**. 30th Annual ACM/IEEE Symposium on Logic in Computer Science. Kyoto, Japan, 6-10 July 2015.

Frank Valencia:

is serving as PC chair (with Camilo Rueda and Martin Leucker as co-chairs) of **ICTAC 2015**: The 12th International Colloquium on Theoretical Aspects of Computing. Cali, Colombia Oct 29-31 2015. Co-located with **11th International Workshop on Developments in Computational Models DCM 2015**.

is serving as chair of the organising committee (with Camilo Rueda and Martin Leucker as co-chairs) of **ICTAC 2015**: The 12th International Colloquium on Theoretical Aspects of Computing. Cali, Colombia Oct 29-31 2015.

8.1.2.2. Member of the conference program committee

Catuscia Palamidessi is/has been a member of the program committees of the following conferences and workshops:

ATVA 2015. The 13th International Symposium on Automated Technology for Verification and Analysis. Shanghai, China, 12-15 October 2015.

FORTE 2015. The 35th IFIP International Conference on Formal Techniques for Distributed Objects, Components and Systems. Inria Grenoble, France, 2-4 June 2015.

TPDP 2015. Theory and Practice of Differential Privacy London, UK, 18 April 2015.

QUEST 2014. The 11th International Conference on Quantitative Evaluation of Systems. Florence, Italy, 8-12 September 2014.

POST 2014. The 3rd Conference on Principles of Security and Trust. Grenoble, 5-13 April 2014.

Konstantinos Chatzikokolakis is/has been a member of the program committees of the following conferences and workshops:

PETS 2015: The 15th Privacy Enhancing Technologies Symposium

FCS 2015: Workshop on Foundations of Computer Security

TPDP 2015: 1st workshop on the Theory and Practice of Differential Privacy

QAPL 2015: 13th Workshop on Quantitative Aspects of Programming Languages

ICISSP 2015: 1st International Conference on Information Systems Security and Privacy

ICFEM 2014: The 6th International Conference on Formal Engineering Methods

PETS 2014: The 14th Privacy Enhancing Technologies Symposium

HotPETs 2014: 7th Workshop on Hot Topics in Privacy Enhancing Technologies

QAPL 2014: 12th Workshop on Quantitative Aspects of Programming Languages

APVP 2014: 5ème Atelier sur la Protection de la Vie Privée

Frank D. Valencia is/has been a member of the program committees of the following conferences and workshops:

PPDP 2014. The 16th International Symposium on Principles and Practice of Declarative Programming (PPDP 2014). Canterbury, UK, September 8-10, 2014.

ICLP DC 2014. Tenth ICLP Doctoral Consortium. Vienna, Austria, July 20, 2014?

PPDP 2015. The 17th International Symposium on Principles and Practice of Declarative Programming (PPDP 2014). Siena, Italy, July 14-16, 2015.

ICLP DC 2015. 11th ICLP Doctoral Consortium. Cork, Ireland, 31 August 2015.

8.1.2.3. Reviewer

The members of the team reviewed several papers for international conferences and workshops.

8.1.3. Journal

8.1.3.1. Member of the editorial board

Catuscia Palamidessi is/has been:

Member of the Editorial Board of **Mathematical Structures in Computer Science**, published by the Cambridge University Press.

Member of the Editorial Board of the **Electronic Notes of Theoretical Computer Science**, Elsevier Science.

Member of the Editorial Board of **LIPICs: Leibniz International Proceedings in Informatics**, Schloss Dagstuhl –Leibniz Center for Informatics.

Konstantinos Chatzikokolakis is:

Editorial board member of the newly established **Proceedings on Privacy Enhancing Technologies** (PoPETs), a scholarly journal for timely research papers on privacy.

8.1.3.2. Reviewer

The members of the team reviewed several papers for international journals.

8.1.4. Other Editorial Activities

Catuscia Palamidessi is/has been:

Co-editor of the special issue of **Logical Methods in Computer Science** dedicated to selected papers of **DisCoTec 2014**.

Co-editor (with Franck van Breughel, Elham Kashefi and Jan Rutten) of *Horizons of the Mind. A Tribute to Prakash Panangaden*. **LNCS 8464** Springer, 499 pages, 2014.

Co-editor (with Erika Ábrahám) of the proceedings of **FORTE 2014**. **LNCS 8461** Springer, 301 pages, 2014.

Frank D. Valencia has been:

Co-editor of the special issue of **Mathematical Structures in Computer Science** dedicated to the 18th International Workshop on Expressiveness in Concurrency. Published on 12 December 2014.

Co-editor of the special issue of **Mathematical Structures in Computer Science** dedicated to the 17th International Workshop on Expressiveness in Concurrency. Published on 10 November 2014.

8.1.5. Other Activities

8.1.5.1. Invited talks

Catuscia Palamidessi has given invited talks at the following conferences and workshops:

CONCUR 2014 and TGC 2014 (Joint keynote speaker) The 25th Conference on Concurrency Theory and the 9th International Symposium on Trustworthy Global Computing. Rome, Italy, September 2014.

NWPT 2014. The 26th Nordic Workshop on Programming Theory. Halmstad, Sweden October 2014.

8.1.5.2. Participation in other committees

Catuscia Palamidessi has been serving in the following committees:

Member of the Swedish Research Council Committee for Computer Science, 2014. The main duty of this committee is to evaluate and select the grant applications.

Member of the committee for the ACM SIGSAC 2014 Doctoral Dissertation Award for Outstanding PhD Thesis in Computer and Information Security.

Member of the WWTF jury – selection committee for a tenure-track position at the Faculty of Informatics at the Vienna University of Technology. Fall 2014.

President of the selection committee for the **EATCS Best Paper Award** at the ETAPS conferences. Since 2006.

Member of the **EAPLS PhD Award** committee. Since 2010.

8.1.5.3. Service

Catuscia Palamidessi serves as:

Member of the Comité d'Orientation Scientifique et Technique, Groupe de travail Relation Internationales (COST-GTRI). Since November 2007.

Directrice adjointe du LIX, le Laboratoire d'Informatique de l'École Polytechnique. Since April 2010.

Member of the Comité de These for Mathematics and Computer Science at the École Polytechnique. Since October 2007.

Reviewer for the projects proposal for the program PRIN, sponsored by the Italian MIUR (“Ministero dell'Istruzione, dell'Università e della Ricerca”). Since 2004.

Frank Valencia served as:

President of the Selection Committee for the LIX Postdoctoral Fellowship. May - July 2014.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

PhD : Catuscia Palamidessi has been teaching a course for PhD students, on Quantitative Information Flow and on Differential Privacy at the department of Computer Science of the University of Pisa, Italy. April 2014. Total 20 hours.

Master : Frank D. Valencia has been teaching the masters course "Computability Theory", 60 hours, at the Pontificia Universidad Javeriana de Cali, Colombia. July 27 - Nov 1, 2014.

8.2.2. Supervision

PhD (2011-14) **Nicolás E. Bordenabe**. Ecole Polytechnique. Grant Inria/DGA. Co-supervised by Catuscia Palamidessi and Konstantinos Chatzikokolakis.

PhD in progress (2014-) **Michel Guzman**. Ecole Polytechnique. Grant Inria CORDI-S. Co-supervised by Catuscia Palamidessi and Frank D. Valencia.

PhD in progress (2013-) **Salim Percy**. Ecole Polytechnique. Grant Digiteo-Digicosme. Co-supervised by Frank D. Valencia and Stefan Haar.

PhD (2011-14) **Luis Fernando Pino Duque**. Ecole Polytechnique. Grant Inria/DGA. Co-supervised by Catuscia Palamidessi and Frank D. Valencia.

PhD in progress (2012-) **Marco Stronati**. Ecole Polytechnique. Grant EDX Monge. Co-supervised by Catuscia Palamidessi and Konstantinos Chatzikokolakis.

PhD in progress (2011-) **Lili Xu**. Ecole Polytechnique and Chinese academy of Science, Beijing, China. Co-supervised by Catuscia Palamidessi and Huimin Li.

8.2.3. Juries

Catuscia Palamidessi has been reviewer for the thesis of the following PhD students:

Xihui Chen (UNI-Lu, L). PhD thesis reviewer and member of the committee board at the PhD defense. Title of the thesis: *Location Assurance and Privacy in Location-based Services*. Advised by Sjouke Mauw. Defended in June 2014.

Meilof Veeningen (TUE, Eindhoven, The Netherlands). PhD thesis reviewer and member of the committee board at the PhD defense. Title of the thesis: *Objective Privacy – Formal analysis of data minimisation in privacy-enhancing protocols*. Advised by Sandro Etalle. Defended in June 2014.

Fabrizio Biondi (ITU, Copenhagen, Denmark). PhD thesis reviewer and member of the committee board at the PhD defense. Title of the thesis: *Markovian Processes for Quantitative Information Leakage*. Advised by Andrzej Wasowski. Defended in May 2014.

Tri Mihn Ngo (University of Twente, Italy). PhD thesis reviewer and member of the committee board at the PhD defense. Title of the thesis: *Qualitative and Quantitative Information Flow Analysis for Multi-threaded Programs*. Advised by University of Twente. Defended in April 2014.

Francesca Pampaloni (IMT, Lucca, Italy). PhD thesis reviewer and member of the committee board at the PhD defense. Title of the thesis: *Quantitative Models of Information Flow: Tuning the Power of the Adversary*. Advised by Michele Boreale. Defended in March 2014.

Frank Valencia has been reviewer for the thesis of the following PhD students:

Laura Titolo (University of Udine, Italy). Title of the thesis: *An Abstract Interpretation Framework for Diagnosis and Verification of Timed Concurrent Constraint Languages*. Advised by Marco Comini. Defended in May 12, 2014.

8.2.4. Other didactical duties

Catuscia Palamidessi is:

Co-responsible of the Master 2 course on Concurrency since 2003, first at the DEA in Theoretical Computer Science (Paris) and then at the MPRI.

External member of the scientific council for the PhD in Computer Science at the University of Pisa, Italy. Since 2012.

Member of the advising committee for the PhD of Andrea Margheri, University of Florence, Italy.

8.3. Popularization

Catuscia Palamidessi has organized the round table “Security & Privacy : challenges of the future digital society” at the **Forum STIC**, University of Paris-Saclay, December 2014.

Konstantinos Chatzikokolakis has been one of the speakers at the above round table.

Konstantinos Chatzikokolakis has given the popularization talk “Protection de la vie privée et anonymat” at the **Journée ISN**, Académie de Créteil, March 2014.

COMMANDS Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

- A. Kröner: Local organizer of the Workshop “Geometric control and related fields” within the Special Semester on New Trends in Calculus of Variations, Linz, Austria, 17.11.-21.11.2014.

9.1.1.1. general chair, scientific chair

- H. Zidani: NETCO’2014, June 23-27, 2014, Tours.

9.1.1.2. member of the organizing committee

- F. Bonnans: PGMO-COPI’14 conf., October 28-31, 2014, Ecole Polytechnique, Palaiseau.

9.1.2. Scientific events selection

9.1.2.1. member of the conference program committee

- F. Bonnans: EUROPT Workshop on Advances in Continuous Optimization, 10-12 July, 2014, Perpignan.

9.1.3. Journal

9.1.3.1. Participation to editorial boards

- F. Bonnans is Corresponding Editor of “ESAIM:COCV” (Control, Optimization and Calculus of Variations), and Associate Editor of “Applied Mathematics and Optimization”, “Optimization, Methods and Software”, and “Series on Mathematics and its Applications, Annals of The Academy of Romanian Scientists”.
- H. Zidani is Associate Editor of “Set-Valued and Variational Analysis”, and "Communication of Pure and Applied Analysis".

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master

F. Bonnans: Numerical analysis of partial differential equations arising in finance and stochastic control, 24h, M2, Ecole Polytechnique and U. Paris 6, France.

F. Bonnans: Optimal control, 10h, M2, Ensta, France.

H. Zidani: Optimal control, 10h, M2, Ensta, France.

E-learning

F. Bonnans, several lecture notes on the page

<http://www.cmap.polytechnique.fr/~bonnans/notes.html>

9.2.2. Supervision

- PhD in progress : Florine Bleuse, Optimal control and robustness for rechargeable hybrid vehicles. Started October 2013, F. Bonnans and P. Martinon, IFPEN fellowship.
- PhD in progress : Benjamin Heymann, Dynamic optimization with uncertainty; application to energy production. Started October 2013, F. Bonnans, Polytechnique fellowship.
- PhD in progress : Nicolas Gréville, Numerical methods for solving stochastic equilibrium problems; application to energy markets. Started January 2013, F. Bonnans, CIFRE fellowship (EDF R & D).

- PhD in progress: Athena Picarelli, First and Second Order Hamilton-Jacobi equations for State-Constrained Control Problems. Started November 2011, O. Bokanowski and H. Zidani, SADCO fellowship.
- PhD in progress: Cristopher Hermosilla, Feedback controls and optimal trajectories. Started November 2011, H. Zidani, SADCO fellowship.
- PhD in progress: Mohamed Assellaou, Reachability analysis for stochastic controlled systems. Started October 2011, O. Bokanowski and H. Zidani.

9.3. Popularization

The paper [10] about running strategies was reported in several media in 2014, especially by Figaro (May 29), Usine Nouvelle (May 18), Science Daily (May 15), MedicalXPress (May 15), Ipodiatry (May 21) and French Huffington Post in 2013.

DAHU Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. general chair, scientific chair

Luc Segoufin was the general chair of the conference Highlights of Logic, Games and Automata, held in Paris in September 2014.

Serge Abiteboul co-chaired with Patrick Flandrin the Conference: La Datamasse : directions et enjeux pour les données massives, Sciences Academy, Paris 2014

9.1.1.2. member of the organizing committee

Sylvain Schmitz and Luc Segoufin were part of the organizing committee for the conference Highlights of Logic, Games and Automata, held in Paris in september 2014.

9.1.2. Scientific events selection

9.1.2.1. member of the conference program committee

Luc Segoufin: Intl. Conf. on Foundations of Software Science and Computation Structures (FoSSaCS' 14).

Victor Vianu: Joint meeting of Conf. on Computer Science Logic (CSL' 14) and ACM/IEEE Symp. on Logic in Computer Science (LICS' 14). Intl. Conf. on Data, Processes, and Software Systems, Hangzhou, China. Intl. Symp. on Foundations of Information and Knowledge Systems (FoIKS' 14). SIGMOD PhD Symposium 2014.

Serge Abiteboul: Intl. Conf. on Digital Intelligence. Buda Intl. Workshop on Big Uncertain Data. Intl. Conf. on Extending database Technology. Intl. Conf. on Principles of database systems (PODS' 14), Award committee. Intl. Conf. on Data engineering (ICDE' 2015). Intl. Conf. on Database Theory (ICDT' 2015), Award committee. Intl. Conf. on the Management of data (2015), Demonstrations.

Cristina Sirangelo: Intl. Conf. on Database Theory (ICDT' 15). Symp. on Principles of Database Systems (PODS' 15).

9.1.3. Journal

9.1.3.1. member of the editorial board

Victor Vianu: Editor-in-Chief of the Journal of the ACM Associate Editor of ACM Transactions on Computational Logic (TOCL)

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

E-learning

Mooc: Serge Abiteboul (with Benjamin Nguyen), Bases de données relationnelles, 6 weeks, Association Sillages, june 2014, accredited by Ocean

Serge Abiteboul (with Benjamin Nguyen and Yannick Lebras) Introduction aux Bases de Données Relationnelles, course for the CPGE, pdf, <http://abiteboul.com/Lili/bdrelationnelles.pdf>

Master : Cristina Sirangelo, Complexité avancée, 36 hours ETD, M1, MPRI, France

Master : Cristina Sirangelo, Algorithmique, 25 hours ETD, Préparation à l'agrégation, École Normale Supérieure de Cachan, France

Licence : Cristina Sirangelo, Bases de données, 24 hours ETD, L3, École Normale Supérieure de Cachan, France

Licence : Cristina Sirangelo, Projet de bases de données, 22 hours ETD, L3, École Normale Supérieure de Cachan, France

Doctorat : Cristina Sirangelo, Bases de données et sites Web dynamiques, 18 hours ETD, École Normale Supérieure de Cachan, France

Doctorat : Cristina Sirangelo, Création de sites Web, 18 hours ETD, École Normale Supérieure de Cachan, France

Doctorat : Cristina Sirangelo, Recherche sur le Web, 18 hours ETD, École Normale Supérieure de Cachan, France

Licence : Serge Abiteboul, Base de données , ENS Cachan and ENS Paris

Master : Serge Abiteboul (with Pierre Senellart), Web data management, MPRI Paris

Licence : Serge Abiteboul, Bases de données pour les professeurs de CPGE, ENS Cachan, 3 heures.

Master : Sylvain Schmitz, Langages formels, 30 hours ETD, M2 Préparation à l'agrégation, École Normale Supérieure de Cachan, France

Master : Sylvain Schmitz, Logical and Computational Structures for Linguistic Modeling, 18 hours ETD, M2 MPRI, France

9.2.2. Supervision

HdR : Cristina Sirangelo, Representing and querying incomplete information: a data interoperability perspective, Ecole Normale Supérieure de Cachan, December 5th 2014 [11]

PhD in Progress: Nadime Francis, graph databases, 01/09/2011, Cristina Sirangelo and Luc Segoufin

PhD in progress: Nathan Grosshans, branching program, 15/09/2014, Luc segoufin and Pierre McKenzie (Montreal)

PhD in progress: David Montoya, Personal information management systems, 01/02/2014, Serge Abiteboul

9.2.3. Juries

Luc Segoufin was a member of the HDR jury of Cristina sirangelo.

Cristina Sirangelo was member of a hiring committee for an assistant professor position at Polytech Paris-Sud.

Sylvain Schmitz was a member in two hiring committees for "agrégé préparateur" assistant professor positions at ENS Cachan.

9.3. Popularization

Serge Abiteboul participated in 2014 to the following reports of the Conseil national du numérique: Digital education (Jules Ferry 3.0, Bâtir une école créative et juste dans un monde numérique) and Platform neutrality (Neutralité des plateformes)

Serge Abiteboul started in 2014 a Blog invited by Le monde newspaper: <http://binaire.blog.lemonde.fr>

Serge Abiteboul coordinated the production of a report on Education to Big data [23].

Serge Abiteboul was audited on the Digital Risk by Office Parlementaire d'Évaluation des Choix Scientifiques et Technologiques.

Serge Abiteboul was interviewed on radio notably by: La Matinale d'Europe 1, BFM Business, Radio Campus, Autour de la question, RFI. He had articles notably in: Le monde, Fenêtres sur Cours, Sciences et Avenir, Le Parisien Magazine. He gave talks to Cap digital, Assises Médias Entreprises, Conférence Idées, Université d'été de l'Institut des Actuaire, 10 ans de la Fondation Steri, Orange Labs, Google.

DEFI Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

- H. Haddar organized a minisymposium on "Inverse Scattering" at IPTA 2014 <http://ipta2014.iopconfs.org/218704>
- H. Haddar co-organized with Marc Bonnet a minisymposium on "Asymptotic Expansions" at IPTA 2014 <http://ipta2014.iopconfs.org/218704>
- H. Haddar co-organized with Nicolas Chaulet a minisymposium on "Asymptotics, Inverse Problems and Applications" at SIAM Conference on IMAGING SCIENCE <http://www.math.hkbu.edu.hk/SIAM-IS14/Minisymposia.html>

9.1.1.1. General chair, scientific chair

- G. Allaire is the scientific chair and one of the five organizers of the conference Conca60-BCAM, Bilbao (december 2014).
- G. Allaire is the scientific chair and one of the main organizers of the CEA/GAMNI seminar on computational fluid mechanics, IHP Paris (January 2014).
- O. Pantz is Co-chairman of the symposium *Optimization tools for large scale industrial systems* for COPI'14, École Polytechnique, (October 2014)

9.1.1.2. Member of the conference program committee

- G. Allaire and H. Haddar are members of the scientific committee of PICOF'2014 <http://www.lamsin.tn/picof14/>

9.1.2. Journal

9.1.2.1. Member of the editorial board

- G. Allaire is member of the editorial boards of
 - Structural and Multidisciplinary Optimization,
 - Discrete and Continuous Dynamical Systems Series B,
 - Computational and Applied Mathematics,
 - Mathematical Models and Methods in Applied Sciences (M3AS),
 - Annali dell'Università di Ferrara,
 - OGST (Oil and Gas Science and Technology),
 - Journal de l'École Polytechnique - Mathématiques.
- H. Haddar is member of the editorial advisory board of Inverse Problems
- J.-R. Li is an Associate Editor of the SIAM Journal on Scientific Computing.

9.1.2.2. Reviewer

The members of the team reviewed numerous papers for numerous international journals. Too many to make a list.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Licence : Grégoire Allaire, "Numerical Analysis and Optimization", (main instructor) 27 equivalent TD hours, L3, Ecole Polytechnique, Palaiseau, France
- Licence : Olivier Pantz, "Numerical Analysis and Optimization", 72 equivalent TD hours, L3, Ecole Polytechnique, Palaiseau, France
- Licence : Housseem Haddar, "Numerical Analysis and Optimization", 56 equivalent TD hours, L3, Ecole Polytechnique, Palaiseau, France
- Master : Grégoire Allaire, "Optimal design of structures", (main instructor) 13,5 equivalent TD hours, M1, Ecole Polytechnique, Palaiseau, France
- Master : Grégoire Allaire, "Transport et Diffusion", (main instructor) 6,5 equivalent TD hours, M1, Ecole Polytechnique, Palaiseau, France
- Master : Grégoire Allaire, "Functional analysis and applications", (main instructor) 18 equivalent TD hours, M2, University Pierre et Marie Curie, Paris, France
- Master : Housseem Haddar, "Inverse problems", (main instructor) 24 equivalent TD hours, M2, Ecole Polytechnique, Palaiseau, France
- Master : Olivier Pantz, "Optimal design of structures", 14 equivalent TD hours, M1, Ecole Polytechnique, Palaiseau, France
- Master : Olivier Pantz, "Introduction to calculus of variation and asymptotic analysis", 40 equivalent TD hours, M1, Ecole Polytechnique, Palaiseau, France
- Doctorat : Housseem Haddar, "Introduction to qualitative methods for inverse electromagnetic scattering theory" at CIME summer school, 12 equivalent TD hours, Cetraro, Italy
- Doctorat : Olivier Pantz, "Introduction course" at the 'FreeFem++ days'. University Pierre et Marie Curie, Paris, France

9.2.2. Supervision

- Ph.D. in progress: L. Audibert, Qualitative methods for non destructive testing of concrete like materials, 2012, H. Haddar
- Ph.D. in progress: T. Mercier, Data assimilation for temperature estimates in PWR, 2012, H. Haddar
- Ph.D. in progress: M. Lakhali, Time domain inverse scattering for buried objects, 2014, H. Haddar
- Ph.D. in progress: T.P. Nguyen, Direct and Inverse scattering from locally perturbed layers, 2013, H. Haddar
- Ph.D. in progress: T. Rienmuller, Scattering for inhomogeneous waveguides, 2014, A. Lechleiter and H. Haddar
- Ph.D. in progress: B. Charfi, Identification of the singular support of a GIBC, 2014, H. Haddar and S. Chaabane
- Ph.D. in progress: G. Fournet, Inclusion of blood flow in micro-vessels in a new dMRI signal model, 2013, J.-R. Li and L. Ciobanu
- Ph.D. in progress: S. Schiavi, Homogenized models for Diffusion MRI, 2013, H. Haddar and J.-R. Li
- Ph.D. in progress: K. Van Nguyen, Modeling, simulation and experimental verification of water diffusion in neuronal network of the Aplysia ganglia, 2014, J.-R. Li and L. Ciobanu
- PhD in progress : A. Maury, shape optimization for non-linear structures, 2013, G. Allaire and F. Jouve
- PhD in progress : J.-L. Vié, optimization algorithms for topology design of structures, 2013, G. Allaire and E. Cancès

- PhD in progress : C. Patricot, coupling algorithms in neutronic/thermal-hydraulic/mechanics for numerical simulation of nuclear reactors, 2013, G. Allaire and E. Hourcade
- PhD in progress : A. Talpaert, the direct numerical simulation of vapor bubbles at low Mach number with adaptative mesh refinement, 2013, G. Allaire and S. Dellacherie
- PhD in progress : A. Bissuel, linearized Navier Stokes equations for optimization, floating and aeroacoustic, 2014, G. Allaire
- PhD in progress : M. Giacomini, Shape optimization and Applications to aeronautics, 2013, O. Pantz and K. Trabelsi
- PhD in progress : L. Azem, Modeling and simulation of damage and fracture, O. Pantz and H. Zorgati

9.3. Popularization

- H. Haddar gave a lecture at UnithéouCafé on "Décoder les ondes". The video is available at the youtube inriachannel <https://www.youtube.com/watch?v=baS8mL66xiE>

DISCO Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

With E. Zerz (RWTH Aachen University), Alban Quadrat co-organized two invited sessions at the *21th International Symposium on Mathematical Theory of Networks and Systems* (MTNS), Groningen (The Netherlands), 07-11/07/2014. The contributions of these invited sessions will appear as extended chapters of the book *Algebraic and Symbolic Computation Methods in Dynamical Systems*, Springer series ADD@S, Springer, 2015 (A. Quadrat, G. Regensburger, E. Zerz eds.).

With E. Zerz (RWTH Aachen University), Alban Quadrat co-organized a special issue for the international journal *Multidimensional Systems and Signal Processing* (Springer), entitled *Symbolic Methods in Multidimensional Systems Theory*. This issue will appear at the beginning of 2015.

9.1.1.1. General chair, Scientific chair

Catherine Bonnet is co-chair of the Organizing Committee of SIAM CT15 which will held 8-10 July in Paris. She is also with Maurice Robin (DIGITEO) the Local Conference Organizer.

Catherine Bonnet is co-organizer with Alexandre Chapoutot and Paolo Mason of the Working Group Shy of DigiCosme on the Plateau de Saclay.

Alban Quadrat is a scientific committee member of the *Journées Nationales de Calcul Formel* (JNCF), <http://www.lifl.fr/jncf2014/index.html>.

9.1.1.2. Member of the organizing committee

Catherine Bonnet was a member of the organizing committee of the *Symposium in honor of Professor Abdelhaq El Jai* 29-30 May 2014 in Ifrane, Morocco.

Frédéric Mazenc was a member of the organizing committee of the *2014 European Control Conference*, July, Strasbourg, France.

9.1.2. Scientific events selection

Catherine Bonnet is in the board of directors of Cap' maths.

Sorin Olaru was the Scientific organizer of the Workshop "Interpolation-based techniques for constrained control: from improved vertex control to robust model predictive control alternatives." at ECC 2014.

Alban Quadrat was an inviter speaker at the conference *Homological Perturbation Lemma*, Galway (Ireland), 01-05/12, and at the conference *DelSys' 2014*, Grenoble (France), 12-14/11, and gave a talk at the department of mathematics, SUNY Cortland, New York (USA), 16/09, and at the seminar of the University of Versailles, 17/12. He also attended the *Journées Nationales de Calcul Formel*, CIRM, Luminy (France), 03-07/11.

9.1.2.1. Member of the conference program committee

Catherine Bonnet was a member of the scientific committee of the *Symposium in honor of Professor Abdelhaq El Jai* 29-30 May 2014 in Ifrane, Morocco.

Sorin Olaru was a member of the program committees of the European Control Conference 2014, 18th International Conference on System Theory, Control and Computing - ICSTCC 2014.

Guillaume Sandou was a member of the Programm Committee of the 2014 IEEE Symposium on Computational Intelligence in Production and Logistics Systems (CIPLS'14), Orlando, USA, December 2014.

9.1.3. Journal

9.1.3.1. Member of the editorial board

Frédéric Mazenc is Member of the *Mathematical Control and Related Fields* editorial board.

Frédéric Mazenc is Member of the *European Journal of Control* editorial board.

Frédéric Mazenc is Associate Editor for the *Asian Journal of control*.

Frédéric Mazenc is Associate Editor for the *Journal of Control and Decision*.

Frédéric Mazenc is Associate Editor for *IEEE Transactions on Automatic Control*.

Frédéric Mazenc was Associate Editor for the conferences *2015 American Control Conference*, Chicago, USA and the *53th IEEE Conference on Decision and Control*, Los Angeles, USA, (2014).

Sorin Olaru is a member of the editorial board of *IMA Journal of Mathematical Control and Information*.

Alban Quadrat is an associate editor of the journal *Multidimensional Systems and Signal Processing*, Springer.

9.1.3.2. Reviewer

The team reviewed many papers for international journals (European Journal of Control, Automatica, IEEE Trans. Aut Contr, IEEE Trans. on Control Systems Technology, IMA Journal of Mathematical Control and Information, Information Sciences, IEEE Symposium Series on Computational Intelligence, SICON, Journal of Process Control, Journal of Franklin Institute, Transactions on Cybernetics, Asian Journal of Control) and conferences (IEEE Conference on Decision and Control, American Control Conference, European Control Conference, IFAC World Congress 2014) and for a book for Springer.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Le Ha Vy Nguyen, Signals and Systems, 28h, L3, Paris-Sud University

Master : Le Ha Vy Nguyen, Information Processing and Source Coding, 12h, M1, Paris-Sud University

Master : Le Ha Vy Nguyen, Numerical Methods for Physics, 12h, M1, Paris-Sud University

Licence : Guillaume Sandou, Signals and Systems, 87h, L3, Supélec

Licence : Guillaume Sandou, Mathematics and programming, 18h, L3, Supélec

Master : Guillaume Sandou, Automatic Control, 8h, M1, Supélec

Master : Guillaume Sandou, Numerical methods and optimization, 28h, M1 and M2, Supélec

Master : Guillaume Sandou, Modelling and system stability analysis, 21h, M2, Suplec

Master : Guillaume Sandou, Control of energy systems, 22h, M2, Suplec

Master : Guillaume Sandou, Robust control and mu-analysis, 9h, M2, Suplec

Master : Guillaume Sandou, Systems identification, 32h, M2, ENSTA

Master : Guillaume Sandou, Embedded Systems, 18h, M2, Ecole Centrale Paris

Master : Guillaume Sandou, Automatic control, 23h, M2, Ecole Centrale Paris

Master : Guillaume Sandou, System Analysis, 22h, M2, Ecole des Mines de Nantes

Licence : Sorin Olaru, Numerical methods and Optimization, 24h, niveau M1, SUPELEC, France

Licence : Sorin Olaru, Hybrid systems, 16h, niveau M2, SUPELEC, France

Licence : Sorin Olaru, Automatic Control, 8h , niveau M1, SUPELEC, France

Licence : Sorin Olaru, Signals and systems, 8h , niveau L3, SUPELEC, France

Licence : Sorin Olaru, Embedded systems, 8h , niveau M1, Centrale Paris, France

9.2.2. Supervision

- Postdoc: Y. Bouzidi, *Constructive study of analysis and synthesis problems of multidimensional systems*, Inria Saclay - Île-de-France, ANR MSDOS, 2014-2015, A. Quadrat.
- PhD : Thach Ngoc Dinh, *Interval Observers and Delay Systems*, University Paris-Sud, December 2011. Date of the defence: 24 Nov., 2014. Supervisor: Frédéric Mazenc. Co-Supervisor: Silviu I. Niculescu, Silvère Bonnabel.
- PhD José Luis Avila Alonso, *Leucémie Aigue Myéloblastique : Modélisation et Analyse de Stabilité*, Defended July 2nd 2014. University Paris-Sud, STITS. Supervisor : Catherine Bonnet. Co-supervisors : Jean Clairambault and Silviu I. Niculescu.
- PhD in progress Walid Djema, *Analysis of an AML model enabling evaluation of polychemiotherapies delivered in the case of AML which have a high level of Flt-3 duplication (Flt-3-ITD)*. Supervisor : Catherine Bonnet. Co-supervisors : Jean Clairambault and Frédéric Mazenc.
- PhD Le Ha Vy Nguyen, *H_∞ Stabilité et Stabilisation de diverses classes de systèmes fractionnaires et à retards*, Defended December 9th 2014. University Paris-Sud, STITS. Supervisor: Catherine Bonnet.

9.2.3. Juries

- Catherine Bonnet was a reviewer of the Habilitation thesis of Lucie Beaudoin entitled 'Problèmes inverses et commande robuste de quelques équations aux dérivées partielles', Université Toulouse 3 Paul Sabatier, France, June 20th 2014.
- Frédéric Mazenc was a reviewer of the PhD thesis of Houda Thabet, entitled "Détection de défauts des systèmes non linéaires à incertitudes bornées continus", (Université de Bordeaux, December 2014).
- Frédéric Mazenc was a reviewer of the PhD thesis of Hassan Omran, entitled "Contribution à la commande de systèmes non linéaires sous échantillonnage aperiodique", (Ecole Centrale de Lille, March 2014).
- Frédéric Mazenc was an invited member of the PhD thesis of José Avial, entitled "Leucémie Aigue Myéloblastique : Modélisation et Analyse de Stabilité", (université Paris-Sud soutenue au L2S, CNRS, July 2014).
- Sorin Olaru was a reviewer for John Anderson Sandoval Moreno's PhD thesis. The thesis was defended in November 2014, Gipsa-Lab, Univ. Joseph Fourier Grenoble.

9.3. Popularization

Catherine Bonnet has been a portrait in the exhibition '*Infinités Plurielles*', Marie-Hélène Le Ny

Alban Quadrat gave a scientific popularization talk entitled *Une science du contrôle ou Qu'appelle-t-on théorie du contrôle en science ?* at the conference *Contrôle et Contrainte en Science-Fiction*, University of Picardie Jules Verne, Beauvais (France), organized by the department of Lettres, Langues, Arts et Sciences Humaines (FLASH), 23-25/04/2014.

GALEN Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. Member of the organizing committee

- Blaschko, Matthew: Co-Organizer of Learning and inference in discrete graphical models tutorial, in conjunction with IEEE Computer Vision and Pattern Recognition (CVPR).
- Kokkinos, Iasonas: Co-Organizer of BASes for Images and Surfaces (BASIS) tutorial, in conjunction with IEEE Computer Vision and Pattern Recognition (CVPR).
- Paragios, Nikos: (i) Co-Organizer of Bayesian and graphical Models for Biomedical Imaging (BAMBI) workshop, in conjunction with the Medical Image Computing and Computer Assisted Intervention (MICCAI), (ii) Co-Organizer of the Learning and inference in discrete graphical models tutorial, in conjunction with IEEE Computer Vision and Pattern Recognition (CVPR).

9.1.2. Scientific events selection

9.1.2.1. Member of the conference program committee

- Blaschko, Matthew: Neural Information Processing Systems (NIPS), British Machine Vision Conference (BMVC), Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP).
- Kumar, Pawan: Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP).
- Paragios, Nikos: IEEE Computer Vision and Pattern Recognition (CVPR), Medical Image Computing and Computer Assisted Intervention (MICCAI).

9.1.2.2. Reviewer

- Argyriou, Andreas: Neural Information Processing Systems (NIPS).
- Blaschko, Matthew: Artificial Intelligence and Statistics (AISTATS), Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCVPR), IEEE Conference on Computer Vision and Pattern Recognition (CVPR)
- Kokkinos, Iasonas: European Conference on Computer Vision (ECCV), IEEE Conference on Computer Vision and Pattern Recognition (CVPR), Neural Information Processing Systems (NIPS), Artificial Intelligence and Statistics (AISTATS), Asian Conference on Computer Vision (ACCV).
- Kumar, Pawan: European Conference on Computer Vision (ECCV), Advances in Neural Information Processing Systems (NIPS).
- Paragios, Nikos: European Conference on Computer Vision (ECCV).

9.1.3. Journal

9.1.3.1. Editor-in-Chief

- Paragios, Nikos: Computer Vision and Image Understanding Journal (CVIU).

9.1.3.2. Member of the editorial board

- Kumar, Pawan: Computer Vision and Image Understanding (CVIU).
- Kokkinos, Iasonas: Image and Vision Computing Journal (IVC), Guest Editor Special Issue on Generative Models in Computer Vision - Computer Vision and Image Understanding Journal (CVIU).

- Paragios, Nikos: Medical Image Analysis Journal (MedIA), SIAM Journal on Imaging Sciences, Guest Editor Special Issue on Discrete Graphical Models in Biomedical Image Analysis - Medical Image Analysis Journal (MedIA).

9.1.3.3. Reviewer

- Kokkinos, Iasonas: International Journal of Computer Vision (IJCV), IEEE Transactions on Pattern Analysis and Machine Intelligence (T-PAMI), IEEE Transactions on Image Processing (T-IP), Image and Vision Computing (IVC), Computer Vision and Image Understanding (CVIU).
- Kumar, Pawan: IEEE Transactions on Pattern Analysis and Machine Intelligence (T-PAMI), Computer Vision and Image Understanding (CVIU).
- Paragios, Nikos: International Journal of Computer Vision (IJCV), IEEE Transactions on Pattern Analysis and Machine Intelligence (T-PAMI), IEEE Transactions on Medical Imaging (T-MI).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Masters

Blaschko, Matthew

- Master: Foundations of Machine Learning, 36, M1, Ecole Centrale Paris, FR
- Master: Structured Prediction, 24, M2, Ecole Centrale Paris, FR

Kokkinos, Iasonas

- Master: Machine Learning for Computer Vision, 24, M2, Ecole Normale Supérieure-Cachan, FR
- Master: Introduction to Deep Learning, 24, M2, Ecole Centrale de Paris, FR
- Master: Introduction to Signal Processing, 36, M1, Ecole Centrale de Paris, FR
- Master: Introduction to Computer Vision, 36, M1, Ecole Centrale de Paris, FR

Kumar, Pawan

- Master: Introduction to Discrete Optimization, 12, M2, Ecole Centrale de Paris, FR
- Master: Discrete Optimization and Learning, 12, M2, Ecole Normale Supérieure-Cachan, FR

Paragios, Nikos

- Master: Advanced Mathematical Models in Computer Vision, 24, M2, Ecole Normale Supérieure-Cachan, FR

E-learning

MOOC: Coursera

Pedagogical resources : Kumar, Pawan & Paragios, Nikos, Discrete Inference and Learning in Artificial Vision, M2, <https://www.coursera.org/course/artificialvision>

9.2.2. Supervision

- HdR : Matthew Blaschko, Advances in Empirical Risk Minimization for Image Analysis and Pattern Recognition, École Normale Supérieure de Cachan, 7 novembre 2014
- PhD in progress : Puneet Kumar Dokania, Learning to Rank with Missing and High-Order Information, 2012-2015, M. Pawan Kumar
- PhD in progress : Diane Bouchacourt, Large Scale Diverse Learning for Structured Output Prediction, 2014-2017, M. Pawan Kumar

- PhD in progress: Haithem Boussaid, Efficient Inference and Learning in Graphical Models for Multi-organ Shape Segmentation, 2011-2015, I. Kokkinos
- PhD in progress: Stavros Tsogkas, Learning structured mid-level representations for object recognition, 2011-2015, I. Kokkinos
- PhD in progress: Siddhartha Chandra, Efficient Learning and Optimization for 3D Visual Data, 2013-2016, Iasonas Kokkinos, Pawan Kumar
- PhD in progress: Stefan Kinauer, Surface-based representations for high-level vision tasks, 2013-2016, Iasonas Kokkinos.
- PhD in progress : Wacha Bounliphone, Statistical tools for Imaging-Genetics data integration, 2013-2016, Matthew Blaschko & Arthur Tenenhaus
- PhD in progress : Jiaqian Yu, Structured Prediction Methods for Computer Vision and Medical Imaging, 2014-2017, Matthew Blaschko
- PhD in progress : Eugene Belilovsky, Structured Output Prediction on Large Scale Neuroscience Data, 2014-2017, Matthew Blaschko
- PhD in progress : Stavros Alchatzidis, Message Passing Methods, Parallel Architectures & Visual Processing, 2011-2014, Nikos Paragios
- PhD in progress : Enzo Ferrante, 2D-to-3D Multi-Modal Deformable Image Fusion, 2012-2015, Nikos Paragios
- PhD in progress : Vivien Fecamp, Linear-Deformable Multi-Modal Deformable Image Fusion, 2012-2015, Nikos Paragios
- PhD in progress : Evgenios Kornaropoulos, Diffusion Coefficient: a novel computer aided biomarker, 2010-2013, Nikos Paragios
- PhD in progress : Maxim Berman, Learning Higher Order Graphical Models, 2014-2017, Nikos Paragios
- PhD in progress : Hariprasad Kannan, Efficient Inference on Higher Order Graphs, 2014-2017, Nikos Paragios
- PhD in progress : Huu Dien Khue Le, Graph-based Visual Perception : Theories and Applications, 2014-2017, Nikos Paragios

9.2.3. *Juries*

- **Matthew Blaschko**
 - **PhD Thesis Participation:** K. Gkirtzou - FR (PhD).
 - **Grant Reviewing Services:** European Research Council (ERC).
- **Iasonas Kokkinos**
 - **PhD Thesis Participation:** N. Dimitriou - GR (PhD).
 - **Grant Reviewing Services:** Swiss National Science Foundation.
- **Kumar, Pawan**
 - **PhD Thesis Participation:** K. Park - Australia (PhD), G. Lin - Australia (PhD).
- **Paragios, Nikos**
 - **PhD Thesis Participation:** M. Blascho - FR (PhD), D. Fortun - FR (PhD), A. Gastounioti - GR (PhD), B. Romain - FR (PhD), J. Tang - CA (PhD), J. Weissenberg - CH (PhD).
 - **Grant Reviewing Services:** Agence National de la Recherche, Austrian Research Council, Danish Research Council, Dutch Research Council, European Research Council, Israel Research Foundation, Swiss National Science Foundation.

9.3. Popularization

- **Blaschko, Matthew**
 - **Presentations:** Third School on Machine Learning and Knowledge Discovery in Databases (BR), Computer Vision and Pattern Recognition Tutorial (US), KU Leuven (BE), Machine Learning Challenge MICCAI Workshop (US), Agence Nationale de la Recherche (FR)
- **Kokkinos, Iasonas**
 - **Presentations:** Imagenet workshop (in conjunction with ECCV, CH), TTI-Chicago (USA), KTH University (SE), Dagstuhl Seminar on Shape Analysis (DE).
- **Kumar, Pawan M.**
 - **Presentations:** University of Oxford (UK), Ecole des Ponts (FR), Swedish AI Society Workshop (SAIS '14, SE), Xerox Research Center Europe (XRCE) (FR).
- **Paragios, Nikos**
 - **Presentations:** Reconnaissance de Formes et l'Intelligence Artificielle (RFIA'14, FR), Medical Imaging Summer School (MISS'14, IT), International Conference on Pattern Recognition (ICPR'15, SE), Algorithmic issues for Inference in Graphical Models (AIGM'14, FR), University of Patras (GR), Swiss Federal Institute of Technology in Zurich (ETHZ) (CH).

GECO Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific events organisation

- Davide Barilari, Ugo Boscain and Mario Sigalotti were organizers of the IHP trimester “Geometry, Analysis and Dynamics on Sub-Riemannian Manifolds”, Fall 2014, Institut Henri Poincaré, Paris.
- Ugo Boscain and Mario Sigalotti were organizers of the CIRM School (Marseille) “Sub-Riemannian manifolds: from geodesics to hypoelliptic diffusion”, September 2014.

8.1.1.1. Member of editorial boards

- Ugo Boscain is Associate Editor of SIAM Journal of Control and Optimization
- Ugo Boscain is Managing Editor of Journal of Dynamical and Control Systems
- Mario Sigalotti is Associate Editor of Journal of Dynamical and Control Systems
- Ugo Boscain is Associate Editor of ESAIM Control, Optimisation and Calculus of Variations
- Ugo Boscain is Associate Editor of Mathematical Control and Related Fields
- Ugo Boscain is Associate editor of Analysis and Geometry in Metric Spaces

8.2. Teaching - Supervision - Juries

8.2.1. Supervision

- PhD: Moussa Gaye, “Some problems of geometric analysis in almost-Riemannian geometry and of stability of switching systems”, supervisors: Ugo Boscain, Yacine Chitour, Paolo Mason, defended in November 2014.
- PhD in progress: Guiherme Mazanti, “Stabilité et taux de convergence pour les systèmes à excitation persistante”, started in 1/9/2013, supervisors: Yacine Chitour, Mario Sigalotti.

8.2.2. Juries

- Ugo Boscain was referee for the PhD thesis of Sylvain Arguillere, Paris 6, July 2014.
- Ugo Boscain was member of the commission for the PhD defense of Laurent Sifre, Ecole Polytechnique, October 2014.
- Mario Sigalotti was member of the commission for the PhD defense of Dolly Tatiana Manrique Espindola, Université de Lorraine, December 2014.
- Ugo Boscain was member of the commission for the HDR of Gregoire Charlot, Université de Grenoble, September 2014.
- Mario Sigalotti was member of the commission for a MCF position at INPT ENSEEIHT, Toulouse.
- Ugo Boscain was member of the jury for positions of CR at INSMI.

GEOMETRICA Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. general chair, scientific chair

Monique Teillaud co-organized the “Workshop on Geometric Structures with Symmetry and Periodicity”, part of the Computational Geometry Week 2014, with Ileana Streinu (Smith College, Northampton, MA), in Kyoto University, Japan, June 8-9. http://www-sop.inria.fr/geometrica/events/wocg14-symmetry_and_periodicity/

Jean-Daniel Boissonnat organized the first GUDHI workshop in Sophia Antipolis, October 27-29. <https://project.inria.fr/gudhi/first-gudhi-workshop/>

9.1.2. Scientific events selection

9.1.2.1. responsible of the conference program committee

Olivier Devillers was program co-chair of 2014 Symposium on Computational Geometry.

9.1.2.2. member of the conference program committee

Monique Teillaud, European Symposium on Algorithms, ESA, <http://algo2014.ii.uni.wroc.pl/esa/>

9.1.2.3. member of the steering committee

Jean-Daniel Boissonnat is a member of the steering committee of the international conference on Curves and Surfaces.

Monique Teillaud is a member of the Steering Committee of the European Symposium on Algorithms (ESA).

9.1.3. Journal

9.1.3.1. member of the editorial board

Jean-Daniel Boissonnat is a member of the Editorial Board of *Journal of the ACM*, *Discrete and Computational Geometry*, *Algorithmica*, *Journal on Computational Geometry*, *International Journal on Computational Geometry and Applications*.

Frédéric Chazal is a member of the Editorial Board of *SIAM Journal on Imaging Sciences*, *Graphical Models* and *Discrete and Computational Geometry*.

Olivier Devillers is a member of the Editorial Board of *Graphical Models*.

Monique Teillaud is a member of the Editorial Boards of CGTA, *Computational Geometry: Theory and Applications*, and of IJCGA, *International Journal of Computational Geometry and Applications*.

M. Yvinec is a member of the editorial board of *Journal of Discrete Algorithms*.

Monique Teillaud and Mariette Yvinec are members of the CGAL editorial board.

9.1.4. Inria committees

Frédéric Chazal was a member of the recruitment committee of Inria Saclay (vice-chair).

Monique Teillaud was a member of the Inria Evaluation Committee until August.

She was a member of the national Inria DR2 interview committee and the local CR2 interview committees in Nancy and Lille.

She was also a member of the Advanced and Starting “Research Positions” interview committees.

Monique Teillaud was a member of the local Committee for Technologic Development until her move to Nancy.

She was also a member of the local committee for transversal masters.

9.1.5. National committees

Jean-Daniel Boissonnat was a member of the Conseil de l'AERES (Agence d'Evaluation de la Recherche et de l'Enseignement Supérieur).

Frédéric Chazal was a member of the Comités d'évaluation scientifique "Mathématiques et Informatique Théorique" of the ANR.

9.1.6. Web site

M. Teillaud is maintaining the Computational Geometry Web Pages <http://www.computational-geometry.org/>, hosted by Inria Sophia Antipolis until November. This site offers general interest information for the computational geometry community, in particular the Web proceedings of the Video Review of Computational Geometry, part of the Annual Symposium on Computational Geometry.

9.1.7. Geometrica seminar

The seminar featured presentations by the following scientists:

Omri Azencot (Technion) : An Operator Approach to Tangent Vector Field Processing

Mirela Ben Chen (Technion - Israel Institute of Technology) : Can Mean-Curvature Flow be Modified to be Non-singular?

Benjamin Burton (University of Queensland) : Untangling knots using combinatorial optimisation

A. Chiara de Vitis (Pavia) : Geometrical and Topological Descriptors for Protein Structures

C. Couprie (Courant Institute) : Graph-based Variational Optimization and Applications in Computer Vision

J. Demantke (IGN) : Geometric Feature Extraction from LIDAR Point Clouds and Photorealistic 3D Facade Model Reconstruction from Terrestrial LIDAR and Image Data

Kyle Heath (Stanford University) : Image Webs: Discovering and using object-manifold structure in large-scale image collections

N. Mitra (UCL London) : Computational Design Tools for Smart Models Synthesis

P. Machado Manhães de Castro (UFPE, Brasil) : Invariance for Single Curved Manifolds

Natan Rubin (Freie Universität Berlin) : On Kinetic Delaunay Triangulations: A Near Quadratic Bound for Unit Speed Motions

D. Salinas (Gipsa Lab, Grenoble) : Using the Rips complex for Topologically Certified Manifold Learning

Régis Straubhaar (Université de Neuchâtel) : Numerical optimization of an eigenvalue of the Laplacian on a domain in surfaces

Jian Sun (Mathematical Sciences Center, Tsinghua University) : Rigidity of Infinite Hexagonal Triangulation of Plane

Anaïs Vergne (Télécom ParisTech) : Algebraic topology and sensor networks

Yuan Yao (School of Mathematical Sciences, Peking University) : The Landscape of Complex Networks

H. Zimmer (Aachen) : Geometry Optimization for Dual-Layer Support Structures

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master : J.D. Boissonnat, C. Maria, M. Yvinec, *Algorithmic Geometry of Triangulations*, 24h, International Master Sophia Antipolis.

Master : S. Oudot, *Computational Geometry: from Theory to Applications*, 18h, École polytechnique.

Master : S. Oudot, *Geometric Methods for Data Analysis*, 12h, École Centrale Paris.

Master: Jean-Daniel Boissonnat, Frédéric Chazal *Computational Geometric Learning*, 24h, Master MPRI, Paris.

M. Teillaud, *Génération de maillages dans la bibliothèque CGAL*, in the framework of a training course for young researchers (PhD students and master students on environmental sciences) on modelling, organized by ECCOREV, 3h, Aix-en-Provence.

9.2.2. Supervision

HDR: Steve Oudot, Persistence Theory: From Quiver Representations to Data Analysis [14], Université Paris-Sud, November 26th 2014.

PhD : Clément Maria, Algorithms and Data Structures in Computational Topology [13], Université de Nice Sophia Antipolis, October 28, 2014, Jean-Daniel Boissonnat.

PhD: Ross Hemsley, Probabilistic methods for the analysis of algorithms on random tessellations [12], Université de Nice Sophia Antipolis, December 16, 2014, Olivier Devillers.

PhD: Mickaël Buchet, Topological and geometric inference from measures [11], Université Paris XI, December 2014, Frédéric Chazal and Steve Oudot.

PhD in progress: Thomas Bonis, Topological persistence for learning, started on December 2013, Frédéric Chazal.

PhD in progress: Mathieu Carrière, Topological signatures for geometric shapes, started in November 2014, Steve Oudot.

PhD in progress: Ruqi Huang, Algorithms for topological inference in metric spaces, started on December 2013, Frédéric Chazal.

PhD in progress: Eddie Amaari, A statistical approach of topological Data Analysis, started on Sept. 2014, Frédéric Chazal (co-advised with Pascal Massart).

PhD in progress : Rémy Thomasse, Smoothed complexity of geometric structures and algorithms, started December 1st 2012, Olivier Devillers.

PhD in progress : Mael Rouxel-Labbé, Anisotropic Mesh Generation, started October 1st, 2013, Jean-Daniel Boissonnat and Mariette Yvinec.

PhD in progress : Alba Chiri de Vitis, Computational Geometry in High Dimensions, started February 2014. Jean-Daniel Boissonnat and David Cohen-Steiner.

9.2.3. Juries

Monique Teillaud was a member of the HDR defense committee of Francis Lazarus (univ. Grenoble).

Monique Teillaud was a member of the PhD defense committee of Yacine Bouzidi (Univ. de Lorraine).

Monique Teillaud was a member of the PhD defense committee (member of the three-member advisory committee) of Vissarion Fisikopoulos (Univ. Athens, Grece).

Monique Teillaud was a member of the PhD defense committee of Arnaud de Mesmay (École Normale Supérieure).

Jean-Daniel Boissonnat was a member of the HDR defense committees of Q. Mérigot and S. Oudot.

Frédéric Chazal was a member (reviewer) of the PhD defense of Arnaud de Mesmay (Ecole Normale Supérieure de Paris).

Frédéric Chazal was a member of the PhD defense of Clément Levrard (Université Paris-Sud).

Steve Oudot was a member of the PhD defense of Clément Maria (Université Nice Sophia Antipolis).

Marc Glisse was a member of the PhD defense committee of Octavio Razafindramanana, Université François Rabelais de Tours.

9.2.4. Internships

Thomas Bonis, image and shape classification using persistent homology (F. Chazal)

François Godi, Computing the bottleneck distance for persistence diagrams (Jean-Daniel Boissonnat)

Venkata Yamajala, Equating the witness and the Delaunay complexes (Jean-Daniel Boissonnat)

Chunyuan Li, Persistence-based object recognition (F. Chazal and M. Ovsjanikov)

Eddie Aamari, topological Data Analysis (F. Chazal)

Mathieu Carrière, local topological signatures for shapes (S. Oudot)

9.3. Popularization

Thomas Bonis and Mathieu Carrière presented the *Photomaton 3d* at the *Fête de la Science* in October 2014. This animation consists in scanning a volunteering person in 3d using a Kinect and dedicated software, then illustrating the concepts of 3d shape comparison, retrieval and matching.

GRACE Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. member of the organizing committee

- D. Augot is member of the committee of the **CCA** seminar on coding and cryptology. This seminar regularly attracts around 30 participants.
- J. Nielsen, with L. de Feo, organized a Digiteo event **CLIC** related to J. Nielsen's Ditigeo funding **IDEALCODES**. This non-recurrent event attracted 30 participants.

9.1.2. Scientific events selection

9.1.2.1. member of the conference program committee

- D. Augot was a member of the WAIFI 2014 programm committee (International Workshop on the Arithmetic of Finite Fields, Gebze, Turkey)

9.1.3. Reviewer

- D. Augot was a reviewer for ITW (Information Theory Workshop) 2015.
- B. Smith was a reviewer for Eurocrypt 2014, CRYPTO 2014, PKC (Public Key Cryptography) 2014, and ANTS (Algorithmic Number Theory Symposium) 2014.

9.1.4. Journal

9.1.4.1. member of the editorial board

- D. Augot is member of the editorial board of the *RAIRO - Theoretical Informatics and Applications*, a Cambridge journal published by EDP Sciences.
- D. Augot is member of the editorial board of the *International Journal of Information and Coding Theory*, InderScience publishers.

9.1.4.2. reviewer

- D. Augot was reviewer for
 - *Designs, Codes and Cryptography*;
 - *Discrete Mathematics*.
 - *IEEE Transactions in Information Theory*;
- A. Couvreur was reviewer for
 - *Design, Codes and Cryptography*;
 - *Finite Fields and Their Applications*;
 - *IEEE Transactions on Communication*;
 - *Journal of Symbolic Computation*.
- B. Smith was a reviewer for
 - *Designs, Codes and Cryptography*
 - *Mathematics of Computation*
 - *ETRI Journal*

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master

- D. Augot, Error-correcting codes and applications to cryptography, 6h00, level M2, MPRI, France.
- A. Couvreur, Error-correcting codes and applications to cryptography, 12h, level M2, MPRI, France.
- A. Couvreur is *Chargé d'enseignement* at the École Polytechnique for the academic year 2014-2015.
- A. Couvreur gave a one-week crash course in cryptology at the university of Masuku (Franceville, Gabon). Level M1.
- B. Smith, Algorithmes arithmétiques pour la cryptologie, 13.5h (equiv TD), level M2, MPRI, France.
- F. Morain, Algorithmes arithmétiques pour la cryptologie, 9h (equiv TD), M2, level M2, MPRI, France.
- B. Smith, Cryptologie, 18h (equiv TD), M1, École polytechnique, France
- F. Morain, 9 lectures of 1.5h, 3rd year (M1) course “cryptology” at École polytechnique.
- F. Levy-dit-Vehel, “Cours de Cryptographie”, 30h. (equiv TD), 3rd year (M1), ENSTA ParisTech, France.

Licence

- F. Morain 10 lectures of 1.5h, 1st year course “Introduction à l’informatique” (INF311) at École polytechnique (L3). Responsibility of this module (350 students).
- B. Smith Introduction à l’informatique, 40h (equiv TD), L3, École polytechnique, France course “Introduction à l’informatique” (INF311) at École polytechnique (L3).
- A. Couvreur Introduction à l’informatique, 40h (equiv TD), L3, École polytechnique, France course “Introduction à l’informatique” (INF311) at École polytechnique (L3).
- A. Couvreur Les bases de la programmation et de l’algorithmique, 32h (equiv TD), M1, École polytechnique, France course (INF411) at École polytechnique (M1).
- F. Levy-dit-Vehel, “Mathématiques discrètes pour la protection de l’information”, 24h. (equiv TD), 2nd year (L3), ENSTA ParisTech, France.

E-learning

I. Márquez-Corbella, with D. Augot’s help, is currently preparing a MOOC on *code-based cryptology*. This MOOC is intended for an audience of M2 or PhD students who are interested in this sub-branch of cryptology. This can bring in students from coding theory, cryptology, or even physicists interested in post-quantum cryptography. N. Sendrier and M. Finiasz will complement and bring scientific authority to these lectures, by addressing more advanced topics. This bilingual MOOC (Spanish and English) is planned to be open in March, with a five week duration. It is supported by the Inria MOOC Lab, and will be hosted on the platform FUN.

9.2.2. Supervision

- D. Augot, advised two students, Gaspard Ferey and Sylvain Colin, for a “Projet personnel en laboratoire”, whose object of study was attacks on code-based cryptosystems and their relation to the Chor-Rivest cryptosystem. 12h, level M1, Polytechnique, France.
- A. Couvreur advised one student, Alexander Schaub, for a “Projet personnel en laboratoire” on an oblivious transfer protocol using a noisy channel. 12h, level M1, Polytechnique, France.

- A. Couvreur advised the Masters thesis of Elise Barelli (Master Cryptis, University of Limoges). 6 month internship, level M2.
- B. Smith supervised Charlotte Scribot's Masters thesis (Master P7). 6 month internship, level M2.
- B. Smith co-supervised the third year of Cécile Gonçalves' PhD project.
- F. Levy-dit-Vehel supervised Julien Lavauzelle's end of ENSTA studies internship (level M2), 5 months.

9.2.3. Juries

- D. Augot was a member of Maurice Denise's PhD committee, for her defense "Codes correcteurs quantiques pouvant se décoder itérativement", June 26th.
- D. Augot was a member of Nicolás Bordenabe's PhD committee, for his defense "Measuring Privacy with Distinguishability Metrics: Definitions, Mechanisms and Application to Location Privacy", September 12th.
- D. Augot was a reviewer of Clément Pernet's HDR thesis "High Performance and Reliable Algebraic Computing", and member of his defense committee, November 21st.
- A. Couvreur is a member of the jury of the *agrégation de mathématiques*.
- B. Smith was a member of Ivan Boyer's PhD jury, for his defense "Variétés abéliennes et jacobiennes de courbes hyperelliptiques, en particulier à multiplication réelle ou complexe", January 24th.
- B. Smith was a member of Jean-Christophe Zapalowicz's PhD jury for his defense "Sécurité des générateurs pseudo-aléatoires et des implémentations de schémas de signature à clé publique", November 21st.

9.3. Invitations to seminars and conferences

- D. Augot made a presentation, "Décodage des codes de Reed-Solomon et logarithme discret dans les corps finis", at the Cryptography Seminar of Université de Rennes I, March 21st
- D. Augot made a presentation for the Secret project-team at Inria Rocquencourt "Bitcoin hors-sol", November 13th.
- A. Couvreur was an invited speaker at *Journées Codage et Cryptographie*, Grenoble in march 2014.
- A. Couvreur has been invited to give a talk at regular seminars in Rennes, Caen, University Paris 6, University Paris 8 and Bordeaux.
- B. Smith was an invited speaker at *YACC 2014*, Porquerolles, June 2014.
- B. Smith was an invited speaker in the *Computational Number Theory* workshop at *FOCM 2014*, Montevideo, Uruguay, December 2014.
- B. Smith was an invited speaker at the inaugural *MCrypt Workshop*, Les Deux Alpes, August 2014.
- B. Smith was an invited speaker at *DLP2014* (Theoretical and Practical Aspects of the Discrete Logarithm Problem), Ascona, Switzerland, May 2014.
- B. Smith gave a talk in the regular *PolSys* seminar at UPMC, March 2014.

9.4. Popularization

- D. Augot made a presentation "Quand $1 \oplus 1$ égal 0" at Lycée Albert Einstein, Sainte-Geneviève-des-Bois, May 19th.
- J. Piantant was one of the presenters for Inria's stand at « **Bouge la Science** » at Supélec.
- A. Couvreur gave a conference "Les mathématiques pour protéger l'information" for the pupils of Collège Moreau in Monthléry (91).

9.5. Institutional commitment

- A. Couvreur is an elected member of Saclay's *comité de centre*.
- A. Couvreur was a member of the commission for the recruitment of post-doc researchers in 2014 at LIX in the programm Qualcomm-Carnot.
- A. Couvreur is the *jeune chercheur référent* for the *commission de suivi doctoral* of Inria Saclay.
- D. Augot was a member of RTRA Digiteo program committee.
- D. Augot is a member of LIX's *conseil de direction*.
- D. Augot is a member of the *conseil de l'école doctorale en informatique de Paris-Sud*
- D. Augot is the vice-head of Inria's *comité de suivi doctoral*
- D. Augot is a member of LIX's *conseil de laboratoire*
- D. Augot and B. Smith were reviewers for ANRT CIFRE fundings.
- F. Morain, J. Pieltant and B. Smith are elected members of the *Conseil de Laboratoire* of the LIX.
- F. Morain is vice-head of the Département d'informatique of Ecole Polytechnique.
- F. Morain represents École polytechnique in the committee in charge of *Mention HPC* in the *Master de l'université Paris Saclay*.
- B. Smith is a *Correspondant* for International Relations at Saclay.
- B. Smith is a member of the COST-GTRI.
- B. Smith is a member of the teaching committee of the Department of Computer Science of the École polytechnique.

INFINE Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. Member of the organizing committee

Aline Carneiro Viana served as:

- Workshop co-Chair of the 11th Annual IEEE International Conference on Sensing, Communication, and Networking (SECON 2014);
- Grant Chair of the N2Women 2014 Workshop (an ACM SIGMOBILE program that is supported by the IEEE Communications Society, Microsoft Research and HP Labs)
- Publicity Chair of 12th Annual IEEE International Conference on Sensing, Communication, and Networking (IEEE SECON 2015), 20th Annual ACM International Conference on Mobile computing and Networking (ACM MobiCom 2014) and IEEE IFIP Wireless Days 2014;
- Publication co-Chair of 21st Annual ACM International Conference on Mobile computing and Networking (ACM MobiCom 2015);

Emmanuel Baccelli served as:

- co-Chair of the 4th ACM MOBIHOC Workshop on Pervasive Wireless Healthcare (MobileHealth 2014);

9.1.2. Scientific events selection

9.1.2.1. Responsible of the conference program committee

- **Aline Carneiro Viana** is the TPC co-chair of the Symposium on Selected Topics in Communications together Jun Luo (from Nanyang Technological University, Singapore) to be organized jointly with IEEE/CIC International Conference on Communications in China (ICCC 2015)

9.1.2.2. Member of the conference program committee

Aline Carneiro Viana has served in the program committees of the following conferences/workshops:

- 7th IFIP International Conference on New Technologies, Mobility and Security (IFIP NTMS 2015)
- 12th Annual IEEE Conference on Sensing, Communication and Networking (IEEE SECON 2015)
- IEEE IFIP Wireless Days 2014
- IEEE 10th International Conference on Wireless and Mobile Computing, Networking and Communications (IEEE WiMob'2014)
- 32th Simpósio Brasileiro de Redes de Computadores e Sistemas Distribuídos (SBRC 2014)

Cédric Adjih has been TPC member/reviewer for: IEEE Globecom 2014 (Global Communications Conference), and IEEE ICC 2015 (International Conference on Communications)

Emmanuel Baccelli has been TPC member for: IEEE SECON 2014 (IEEE Conference on Sensing, Communication and Networking), and SaSeIoT 2014 (International Conference on Safety and Security in Internet of Things).

9.1.3. Journal

9.1.3.1. Member of the editorial board

- **Aline Carneiro Viana** is Associate Editor of ACM Computer Communication Review (ACM CCR)

9.1.3.2. Reviewer

Aline Carneiro Viana has performed reviews for the following journals/transactions:

- IEEE Transaction on Mobile Computing (TMC)
- IEEE Transactions on Parallel and Distributed Systems (TPDS)
- IEEE Wireless Communications Magazine
- Elsevier: Computer Communications; Elsevier Computer Networks; Elsevier Ad Hoc Networks; Pervasive Mobile Computing (PMC); Sustainable Computing, Informatics and Systems (SUS-COM)
- IEEE Communications Letters

Cédric Adjih has performed reviews for the IEEE Journal on Selected Areas in Communications (JSAC), and the journal “Ad Hoc Networks”.

Emmanuel Baccelli has performed reviews for the following journals/transactions:

- IEEE Transactions on Sensor Networks,
- IEEE Transactions on Emerging Telecommunications Technologies.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Engineering School: Cédric Adjih, “Microcontrollers: from embedded systems to the Internet of Things”, 3 hours TD, Telecom SudParis.

Masters

Emmanuel Baccelli, “Telematics”, M1 Advanced Computer Networks, at Freie Universität Berlin; 15 semaines, 50 étudiants.

E-learning

Master: Laurent Massoulié, “epidemic algorithms”, M2 ACN (Advanced Communication Networks) entre Ecole Polytechnique et Institut Telecom; 11 semaines, 4 étudiants.
“Graphes aléatoires”, M2 Probabilités et Statistiques, 4 semaines, UPMC, 10 étudiants.

9.2.2. Supervision

Aline Carneiro Viana:

- PhD: **Thiago Henrique Silva**, “Large scale study of city dynamics and urban social behavior using participatory sensor networks”, Federal University of Minas Gerais, May 2014.
- PhD in progress: **Eduardo Mucelli**, “Revealing new facets of human behavior”, November 2011, Aline Carneiro Viana. **Felipe Domingos**, “Identifying Social Attributes in VANETs”, January 2013, Aline Carneiro Viana. **Roni Shigueta**, “Resource allocation in highly mobile wireless networks”, January 2012, Aline Carneiro Viana. **Guangshuo Chen**, “Understanding and predicting human demanded content and mobility”, September 2014, Aline Carneiro Viana.
- Post-doc in progress: K. P. Naveen on content caching and content-centric networking.

Cédric Adjih:

- PhD in progress: **Fatma Soma**, on handling mobility in routing in wireless sensor networks, thesis started in 2013 and co-advised with Inès El Korbi (Institut Supérieur d’Informatique et de Gestion de Kairouan, Tunisie).

Emmanuel Baccelli:

- PhD in progress: **Oliver Hahm** on the optimization of energy-efficient communication protocols for the Internet of Things, **Hauke Petersen** on the resilience of emergency spontaneous wireless networks.
- Post-doc in progress: **K. P. Naveen** on content caching and content-centric networking.
- Masters thesis in the domain of IoT, during 2014: 1 completed, 3 on-going.
- Bachelor thesis in the domain of IoT, during 2014: 2 completed.

9.2.3. Juries**Aline Carneiro Viana:**

- **Examiner:** *Oana Iova*, "Algorithms and Protocols for all-IP Wireless Sensor Networks in the Internet of Things", Université de Strasbourg, France. December 2014. *Tiphaine Phe-Neau*, "Properties and impact of vicinity in mobile opportunistic networks", UPMC – Sorbonne Universités, France. January 2014.
- **Invited:** *Thiago Henrique Silva* "Large scale study of city dynamics and urban social behavior using participatory sensor networks" at the Federal University of Minas Gerais, Brazil, May 2014.
- **PhD Qualification advisor:** *Felipe Domingos*, "Identifying Social Attributes in VANETs", at the Federal University of Minas Gerais, Brazil, August 29, 2014. *Roni Shigueta*, "Resource allocation in mobile networks", at the Pontifical University of Paraná (PUC-PR), Brazil, November 26, 2014.

9.3. Popularization**Aline Carneiro Viana:**

- **Presentation at the "Futur en Seine" festival:** Title: "Understanding human behavior for context- and content- networking", June 12, 2014.
- **Presentation at the ESSOURIAU High School at Ulis in the context of the Math week:** Title: "Le smartphone, votre 6e sens ?", Mars 21, 2014.
- **Interview for the Interstices scientific magazine.**

Cédric Adjih, Emmanuel Baccelli, Oliver Hahm:

- **Demonstration of RIOT at CeBIT 2014**, the world's leading IT trade show.
- **Description of IoT-LAB, and test of IoT-LAB nodes** at the **IETF 6TiSCH plugfest** during IETF-89 in London.
- **Demonstration of RIOT on heterogeneous IoT hardware** At the IETF 6TiSCH plugfest during IETF-89 in London (https://bitbucket.org/6tisch/meetings/wiki/140306a_ietf89_london_plugfest).
- **Demonstration of IoT-LAB (Contiki RPL experiments)** at the **Bits-n-Bytes event of IETF-90** in Toronto.
- **Demonstration of RIOT (CCN - 6LoWPAN interoperating)** at the **Bits-n-Bytes event of IETF-90** in Toronto.
- **Demonstration of IoT-LAB** also at the **LLN plugfest** of the same IETF-90 in Toronto.
- **Demonstration of RIOT tsch functionalities with OpenWSN integration** at the **LLN plugfest** of the same IETF-90 in Toronto.

Oliver Hahm co-authored an article on RIOT and IoT device programming in the iX Developer magazine's 2014 special issue on Embedded Software. O. Hahm, C. Mehlis, M. Lenders, T. Eichinger, L. Ortmann, "Betriebssysteme für eingebettete Systeme im Internet der Dinge: Freie Fahrt für Experimentierfreudige," iX Developer Magazine, Special issue on Embedded Software, February 2014.

IN-SITU Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific events organisation

8.1.1.1. Member of the organizing committee

- UIST 2014, *ACM Symposium on User Interface Software and Technology*, Hawaii, 2014: Stéphane Huot (Video Previews Co-Chair)

8.1.2. Scientific events selection

8.1.2.1. Chair of conference program committee

- IHM 2014, *Conférence Francophone d'Interaction Homme-Machine*: Olivier Chapuis (Papers Co-Chair)

8.1.2.2. Member of the conference program committee

- CHI 2014, *ACM Conference on Human Factors in Computing*: Wendy Mackay
- UIST 2014, *ACM Symposium on User Interface Software and Technology*: Wendy Mackay
- DIS 2014, *ACM conference on Designing Interactive Systems*: Wendy Mackay
- NIME 2014, *New interfaces for Musical Expression*: Stéphane Huot, Theophanis Tsandilas
- MOCO 2014 - *International Workshop on Movement and Computing*: Michel Beaudouin-Lafon
- DI 2014 - *First International Conference Digital Intelligence*: Michel Beaudouin-Lafon
- GD 2014 - *22nd International Symposium on Graph Drawing*: Anastasia Bezerianos
- GRAPP 2014 - *10th International Conference on Computer Graphics Theory and Applications*: Cédric Fleury
- IHM 2014, *Conférence Francophone d'Interaction Homme-Machine*: Theophanis Tsandilas

8.1.2.3. Reviewer

- ACM CHI 2014: Caroline Appert, Michel Beaudouin-Lafon, Anastasia Bezerianos, Olivier Chapuis, Stéphane Huot, Can Liu, Theophanis Tsandilas
- ACM UIST 2014: Caroline Appert, Michel Beaudouin-Lafon, Anastasia Bezerianos, Olivier Chapuis, Can Liu, Theophanis Tsandilas
- ACM EICS 2014 - *ACM Symposium on Engineering Interactive Computing Systems*: Stéphane Huot
- ACM ITS 2014 - *ACM Conference on Interactive Tabletop and Surfaces*: Anastasia Bezerianos, Olivier Chapuis, Theophanis Tsandilas
- ACM MobileHCI 2014 - *ACM Conference on Human-Computer Interaction with Mobile Devices and Services*: Caroline Appert, Olivier Chapuis
- IEEE 3DUI 2014 - *IEEE Symposium on 3D User Interfaces*: Cédric Fleury
- IEEE InfoVis 2014 - *IEEE Information Visualization Conference*: Anastasia Bezerianos
- IEEE EuroVis 2014 - *Eurographics/IEEE Symposium on Visualization*: Anastasia Bezerianos
- IEEE VAST 2014 - *Visual Analytics Software and Technology*: Anastasia Bezerianos
- 3DVIS @ IEEE VIS 2014 - *IEEE VIS Workshop on 3DVis*: Cédric Fleury
- 3DCVE @ IEEE VR 2014 - *IEEE VR Workshop on Collaborative Virtual Environments*: Cédric Fleury

- GI 2014 - Graphics Interface Conference: Theophanis Tsandilas

8.1.3. Journal

8.1.3.1. Member of the editorial board

- Editor for the Human-Computer Interaction area of the new ACM Books Series (published with Morgan & Claypool Publishers): Michel Beaudouin-Lafon (2013-)
- CACM, *Communications of the ACM*, ACM: Wendy Mackay (2008-)
- TOCHI, *Transactions on Computer Human Interaction*, ACM: Michel Beaudouin-Lafon (2009-)
- JIPS, *Journal d'Interaction Personne-Système*, AFIHM: Michel Beaudouin-Lafon (2009-)
- IJHCS, *International Journal of Human-Computer Study*, Elsevier: Michel Beaudouin-Lafon (Member of the Advisory Board, 2009-)
- JCSCW, *Journal of Computer Supported Cooperative Work*, Springer: Michel Beaudouin-Lafon (Member of the Advisory Board, 2010-)

8.1.3.2. Reviewer

- Transactions on Computer-Human Interaction (TOCHI), ACM: Caroline Appert, Michel Beaudouin-Lafon, Olivier Chapuis, Stéphane Huot, Wendy Mackay
- Transactions on Visualization and Computer Graphics (TVCG): Anastasia Bezerianos, Cédric Fleury
- International Journal of Human-Computer Studies (IJHCS), Elsevier: Olivier Chapuis, Stéphane Huot
- Journal on Multimodal User Interfaces (JMUI), Springer: Caroline Appert, Stéphane Huot
- International Journal of Geo-Information (IJGI), ISPRS: Caroline Appert
- Journal d'Interaction Personne-Système (JIPS): Michel Beaudouin-Lafon

8.1.4. Research Organizations

- Agence Nationale de la Recherche (ANR), CES "Contenus, connaissances, interactions": Caroline Appert (Evaluation Committee member)
- Agence Nationale de la Recherche (ANR), "Blanc", "Blanc International" and "Jeunes Chercheuses Jeunes Chercheurs" programs: Caroline Appert (reviewer), Theophanis Tsandilas (reviewer)
- AERES Evaluation Committee of Laboratoire d'Informatique de Grenoble (LIG): Michel Beaudouin-Lafon (president)
- Alliance des Sciences et Technologies du Numérique (ALLISTENE), Working group "Knowledge, Content and Interaction": Wendy Mackay and Michel Beaudouin-Lafon (members)
- Alliance des Sciences et Technologies du Numérique (ALLISTENE), Working group "Interactions des mondes physiques, de l'humain et du monde numérique" for the National Research Strategy agenda: Michel Beaudouin-Lafon (co-chair)
- Steering Committee of "Institute for Digital Society" (Université Paris-Saclay): Michel Beaudouin-Lafon (member)
- Scientific Committee of IRCAM: Michel Beaudouin-Lafon (member)
- Scientific Committee of AmiQual4Home "Équipement d'Excellence" (Grenoble): Michel Beaudouin-Lafon (member)
- Research Commission of Institut Telecom: Michel Beaudouin-Lafon (member)
- Research Commission of DigiCosme LABEX (Université Paris-Saclay): Michel Beaudouin-Lafon (member)
- Working Group of the future Computer Science Department of Université Paris-Saclay: Michel Beaudouin-Lafon (member)

8.1.5. Learned Societies

- Association Francophone d'Interaction Homme-Machine (AFIHM): Olivier Chapuis (member of the board, vice-president), Stéphane Huot (member of the board and of the scientific council – CPPMS)
- Paris SIGCHI Local Chapter: Caroline Appert (treasurer), Anastasia Bezerianos (president)
- ACM SIGCHI Conference Management Committee: Wendy Mackay (member)
- ACM Europe Council: Michel Beaudouin-Lafon (member)
- EUACM, ACM Europe's public policy office: Michel Beaudouin-Lafon (member)
- ACM Publications Board subcommittees: Michel Beaudouin-Lafon (future of the ACM DL), Wendy Mackay (new publications)

8.1.6. Hiring committees

- Univ. Paris-Sud hiring committee, Commission Consultative des Spécialistes de l'Université 27ème section (computer science), members: Michel Beaudouin-Lafon, Stéphane Huot, Wendy Mackay, Caroline Appert
- Univ. Paris-Sud hiring committee, Comités de Sélection 27ème section (computer science), members: Michel Beaudouin-Lafon, Stéphane Huot, Wendy Mackay
- Inria Senior PES committee, member: Wendy Mackay

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Interaction Masters (Research Master in Computer Science, Interaction Specialty): Anastasia Bezerianos & Michel Beaudouin-Lafon, Chairs, Cédric Fleury, Internships organization, M2, Univ. Paris-Sud

HCID Masters (EIT ICT Labs European Master in Human-Computer Interaction and Design): Michel Beaudouin-Lafon & Anastasia Bezerianos, Chairs, M1 & M2), Univ. Paris-Sud

DUT Informatique: Stéphane Huot, Director of studies for the 1st year, IUT Orsay – Univ. Paris-Sud

Masters in Computer Science & HCID Masters: Anastasia Bezerianos, Cédric Fleury & Theophanis Tsandilas, *Programming of Interactive Systems*, 63 hrs, M1, Univ. Paris-Sud

Research Masters in Computer Science: Wendy Mackay & Anastasia Bezerianos, *Formation à la Recherche* 45 hrs, M2 (all research specialties), Univ. Paris-Sud

Interaction Masters & HCID Masters: Michel Beaudouin-Lafon, *Fundamentals of Human-Computer Interaction*, 38 hrs, M1/M2, Univ. Paris-Sud

Interaction Masters & HCID Masters: Wendy Mackay, *Design and Evaluation of Interactive Systems*, 63 hrs, M1/M2, Univ. Paris-Sud

Master 2 Professional: Anastasia Bezerianos, *Design and Evaluation of Interactive Systems*, 38 hrs, M2Pro, Univ. Paris-Sud

Interaction Masters: Anastasia Bezerianos, *Mixed Reality and Tangible Interaction*, 18 hrs, M2, Univ. Paris-Sud

Interaction Masters: Michel Beaudouin-Lafon & Cédric Fleury, *Groupware and Collaborative Interaction*, 38 hrs, M2, Univ. Paris-Sud

HCID Masters: Caroline Appert, *Evaluation of interactive systems*, 63 hrs, M1, Univ. Paris-Sud

HCID Masters: Anastasia Bezerianos, Wendy Mackay, Michel Beaudouin-Lafon, *Human-Computer Interaction project*, 50 hrs, M1, Univ. Paris-Sud

Polytech Fifth year: Cédric Fleury, *Réalité Virtuelle et Interaction*, 40 hrs, M2, Univ. Paris-Sud

Polytech Third year: Anastasia Bezerianos, Olivier Chapuis, *Interaction Homme-Machine*, 18 hrs, M1, Univ. Paris-Sud

Polytech Third year: Cédric Fleury, *Projet Java-Graphique-IHM*, 24 hrs, M1, Univ. Paris-Sud

Polytech First year: Cédric Fleury, *Introduction à l'Informatique*, 38 hrs, L1, Univ. Paris-Sud

Licence Second year: Anastasia Bezerianos, *Developpement Logiciel*, 15 hrs, L2, Univ. Paris-Sud

DUT Informatique: Stéphane Huot, *Introduction à l'Interaction Homme-Machine*, 100 hrs, L1, IUT Orsay – Univ. Paris-Sud

DUT Informatique: Stéphane Huot, *Programmation Orientée Objet*, 21 hrs, L2, IUT Orsay – Univ. Paris-Sud

8.2.2. Supervision

PhD Students

PhD : Jérémie Garcia, *Supporting creative activities with interactive paper*, defended on 10 June 2014, Wendy Mackay & Theophanis Tsandilas

PhD in progress : David Bonnet, *Gesture-based interactions and instrumental interaction*, October 2011, Michel Beaudouin-Lafon & Caroline Appert

PhD in progress : Ghita Jalal, *Co-Adaptive Systems*, September 2013, Wendy Mackay

PhD in progress : Alexandre Kouyoumdjian, *Multimodal Selection of Numerous Moving Targets in Large Visualization Platforms: Application to Interactive Molecular Simulation.*, October 2013, Stéphane Huot, Patrick Bourdot & Nicolas Ferey (LIMSI-CNRS)

PhD in progress : Can Liu, *Collaborative Multiscale Navigation and Interaction*, October 2012, Michel Beaudouin-Lafon, Olivier Chapuis & Eric Lecolinet (Telecom ParisTech)

PhD in progress : Justin Mathew, *New visualization and interaction techniques for 3D spatial audio*, June 2013, Stéphane Huot & Brian Katz (LIMSI - CNRS)

PhD in progress : Daniel Strazzulla, *Multimedia Communication*, October 2012, Wendy Mackay

PhD in progress : Oleksandr Zinenko, *Interactive Code Restructuring*, September 2013, Stéphane Huot & Cédric Bastoul (Université de Strasbourg)

PhD in progress : Ignacio Avellino, *Remote Collaboration in Large Interactive Spaces*, September 2014, Michel Beaudouin-Lafon & Cédric Fleury

PhD in progress : Nolwenn Maudet, *Substrates and Co-Adaptive Instruments*, September 2014, Wendy Mackay & Michel Beaudouin-Lafon

PhD in progress : Jessalyn Alvina, *Mobile Co-Adaptive Instruments*, September 2014, Wendy Mackay

PhD in progress : Marc-Emmanuel Perrin, *Novel Interaction Models for Multi-surface Visualization*, September 2014, Michel Beaudouin-Lafon & James Eagan (Télécom ParisTech)

Masters students

Nolwenn Maudet, UTC Compiègne, “Substrates and Co-Adaptive Instruments ”: Wendy Mackay (2014)

Ignacio Avellino, RWTH Aachen, “Audio-Video support for Remote Collaboration”: Cédric Fleury (2014)

Guilherme Soares, Univ. Paris-Sud, “Instrumental Interaction for Neuroanatomy Imaging”: Michel Beaudouin-Lafon (2014)

Niyati Chowdhury, Univ. Trento, “Interactive Brain Visualization”: Michel Beaudouin-Lafon and Wendy Mackay (2014)

Olutosin Oduwole, Univ. Paris-Sud, “Distributed Video Editing on a Wall-Size Display”: Wendy Mackay & Can Liu (2014)

Thanassis Taousakos, Univ. Paris-Sud, “Detecting and Simplifying Users’ Routines on Mobile Devices”: Anastasia Bezerianos & Caroline Appert (2014)

Paola Pastor, Univ. Paris-Sud, “Making non-interactive surfaces interactive”: Wendy Mackay & Daniel Strazzulla (2014)

Chen Wang, Univ. Paris-Sud, “BFF Band: Rethinking Personal Communication”: Wendy Mackay & Daniel Strazzulla (2014)

Lucien Bobo, ENS Cachan, “Comm Apps for Remote Communication”: Wendy Mackay & Daniel Strazzulla (2014)

Louis Faucon, Ecole Polytechnique, “Interactive Communication Bands”: Wendy Mackay & Daniel Strazzulla (2014)

Jianqiao Li, Ecole Polytechnique, “Dynachord - Combining chord and gesture recognition”: Wendy Mackay (2014)

Miguel Rodriguez and Gabriella Villalobos, Univ. Paris-Sud, “Video Clipper - Structured Capture of Video Data”: Wendy Mackay (2014)

Bruno Fruchard, Univ. Paris-Sud, "Development of flexible mobile interfaces on Android". Olivier Chapuis & Anastasia Bezerianos (2014)

8.2.3. *Juries*

- University of Munich Doctoral Consortium: Wendy Mackay, jury member
- Olivier Beaudoux (ESEO Angers) – Habilitation à Diriger des Recherches: Michel Beaudouin-Lafon, jury member
- Frédéric Bevilacqua (IRCAM) – Habilitation à Diriger des Recherches: Michel Beaudouin-Lafon, reviewer
- Riad Akrouf (LRI) – PhD committee: Michel Beaudouin-Lafon, examiner
- Jérémie Gilliot (Université de Lille, Lille) – PhD committee: Stéphane Huot, reviewer
- Samuel Huron (Université Paris-Sud) – PhD committee: Wendy Mackay, jury member
- Yvonne Jansen (Inria Saclay) – PhD committee: Michel Beaudouin-Lafon, president
- Cédric Mivielle (Télécom Paris) – PhD committee: Wendy Mackay, jury member
- Charles Perrin (Inria) – PhD committee: Michel Beaudouin-Lafon, president
- Maria Cristina Riff Rojas (Université Paris-Sud) – PhD committee: Wendy Mackay, examiner
- Thomas Vincent (Université de Grenoble, Grenoble) – PhD committee: Stéphane Huot, reviewer
- Jean-Luc Vinot (Université Toulouse III - Paul Sabatier) – PhD committee: Wendy Mackay, reviewer
- Tenure case in the USA: Michel Beaudouin-Lafon, reviewer

8.3. Popularization

- “*L’homme doit contrôler l’ordinateur, pas l’inverse*”, Interview on Arte Television Future Mag, February 2014: Wendy Mackay <http://www.futuremag.fr/interview-integrale/lunettes-connectees-interview-avec-wendy-mackay>
- “*Quid sit musicus*”, World premiere at IRCAM on June 18, 2014 of the piece composed and directed by Philippe Leroux: Jérémie Garcia designed and developed technology and tools used in the composition and performance of the piece.
- “*PaperTonnetz*” and “*Dessines moi un paysage*”, Public Exhibition at Futur-en-Seine festival, June 2014: Jérémie Garcia. The demonstration was covered by the online news site 01net.com.
- “*L’être humain au coeur de la recherche en IHM*”, SIF Blog, Le Monde, July 2014: Interview of Wendy Mackay by Serge Abiteboul and Claire Mathieu.
- “*Interfaces de demain, la fin du tactile ?*”, conference at Université du Temps Libre Essonne, December 2014: Michel Beaudouin-Lafon.
- Scientific committee of the S-Cube association (Scientipole-Savoirs-Société) on the Saclay campus for an exhibit on the brain: Michel Beaudouin-Lafon (2013-2014).

M3DISIM Team

8. Dissemination

8.1. Promoting Scientific Activities

Dominique Chapelle

- Member of the editorial boards of journals *Computers & Structures* and *M2AN*
- Program committee of conference “Functional Imaging and Modeling of the Heart 2015”
- Invited lecturer in workshops “Model Order Reduction and Data” (Jacques-Louis Lions Lab, Paris 6, 6–8 Jan.), and “Modeling and Simulation in Biomechanics” (Graz Univ., 15–17 Sept.)
- Member of the Academic Senate of FCS Paris-Saclay
- Member of the board of directors of the VPH Institute

Philippe Moireau

- Member of the Inria Saclay-Ile de France CR2 Jury
- Reviewer this year for Region Aquitaine Grants
- Reviewer of the PhD Thesis of Atte Alto on *Infinite Dimensional Systems: Passivity and Kalman Filter Discretization*

Sébastien Imperiale

- Reviewer in Inverse problem, SIAM journal on Numerical Analysis, Geophysics, Journal of Computational Physics

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Dominique Chapelle

Lectures on cardiac biomechanical modeling in Master’s programs SIM (Univ. Créteil) and BME (Paris 5 and ParisTech)

Philippe Moireau

Bachelor’s degree: “MA103 - Introduction aux EDP et à leur approximation numérique”, 14h, M1, ENSTA ParisTech, France

Master’s: “MA201 - La méthode des éléments finis”, 14h classes, M2, ENSTA ParisTech, France

Master’s: “Data assimilation module”, 6h lectures, Paris VI University, France

Sébastien Imperiale

Master’s: “MA201 - La méthode des éléments finis”, 12h, M2, ENSTA ParisTech, France

Master’s: “Simnum - Simulation numérique en C++”, 36h, M1, ENSTA ParisTech, France

Annabelle Collin

Oral examination: “Algebra and Geometry”, Paris 6 University, spring 2012

Bachelor’s degree: “Multivariable Calculus”, Paris 6 University, fall 2012

8.2.2. Supervision

PhD defended in October: Annabelle Collin, “Dimensional reduction and electro-mechanical coupling for the modeling of electrophysiology and muscle contraction”, UPMC, started September 2011, advisors D. Chapelle and J.-F. Gerbeau

PhD in progress: Bruno Burtshell, “Mechanical modeling and numerical methods for poromechanics: Applications to cardiac perfusion”, Ecole Polytechnique, started October 2013, advisors D. Chapelle and P. Moireau

8.2.3. Juries

Dominique Chapelle: member of PhD committees of J. Mullaert (Paris 6, 17 Dec.) and C. Dupont (Ecole Polytechnique, 18 Dec., chairman)

Philippe Moireau: member of PhD committee of A. Collin

8.3. Popularization

D. Chapelle interviewed for article in “Usine Nouvelle” on cardiac modeling

D. Chapelle invited at “Futur en Seine” event for presentation and debate on predictive systems

P. Moireau presentation for the Inria Direction of Financial Affairs on the “heart forecasting”

Maxplus Project-Team

9. Dissemination

9.1. Animation de la communauté scientifique/Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. Member of the organizing committee

- X. Allamigeon: co-organisateur avec F. Meunier (ENPC, CERMICS) de sessions invitées “Complexity of Linear Programming and Games” à la conférence “Conference on Optimization & Practices in Industry” du Programme Gaspard Monge pour l’Optimisation, Palaiseau, Octobre 2014.
- X. Allamigeon, co-organisateur des journées du Programme Gaspard Monge pour l’Optimisation, jointes avec la conférence COPI, Palaiseau, Octobre 2014.
- M. Akian, organisatrice de la session “Max-plus methods for optimal control and zero-sum games”, à la “53rd IEEE Conference on Decision and Control”, Los Angeles, USA, Dec. 2014.
- S. Gaubert, co-organisateur des journées annuelles du Programme Gaspard Monge d’Optimisation (PGMO), associées à la “Conference on Optimization & Practices in Industry” (COPI), Palaiseau, Octobre 2014, <http://www.fondation-hadamard.fr/fr/pgmo-copi-14>.
- S. Gaubert, co-organisateur du Séminaire Parisien d’Optimisation.
- S. Gaubert, co-organisateur (avec William McEneaney, San Diego) de deux sessions “Max-Plus Methods in Optimal Control and Game Theory” au “21st International Symposium on Mathematical Theory of Networks and Systems” (MTNS 2014), Groningen, Pays-Bas, Juillet 2014.

9.1.2. Scientific events selection

9.1.2.1. Member of the conference program committee

- S. Gaubert, membre du comité scientifique de “Conference on Optimization & Practices in Industry” (COPI), Palaiseau, Octobre 2014.
- S. Gaubert, membre du comité scientifique de SIAM CT’15 qui se tiendra à Paris en Juillet 2015.

9.1.3. Journal

9.1.3.1. Member of the editorial board

- S. Gaubert est membre du comité éditorial de la collection Mathématiques et Applications, SMAI et Springer.
- S. Gaubert est membre du comité éditorial du journal RAIRO Operations research.

9.1.4. Other

- M. Akian :
 - Membre élue du conseil du laboratoire du CMAP.
- S. Gaubert :
 - Directeur du PGMO (Programme Gaspard Monge d’optimisation, programme de mécénat d’EDF administré par la FMJH).
 - Vice-président du comité des projets du Centre de Recherche Inria de Saclay – Île-de-France depuis Janvier 2008, et membre nommé de la commission d’évaluation de l’Inria.
 - Membre du conseil scientifique du CMAP.
 - Membre du CNU en 26ième section.

9.2. Enseignement - Encadrement - Jurys /Teaching - Supervision - Juries

9.2.1. Enseignement/Teaching

- X. Allamigeon
 - Petites classes et encadrement d’enseignements d’approfondissement de Recherche Opérationnelle en troisième année à l’École Polytechnique (programme d’approfondissement de Mathématiques Appliquées) (niveau M1).
- S. Gaubert
 - Cours “Systèmes à Événements Discrets”, option MAREVA, ENSMP.
 - Cours “Algèbre max-plus pour le contrôle optimal et les jeux” du Parcours Optimisation et Théorie des Jeux - Modélisation en Économie (OJME) du M2 Mathématiques et Applications de l’Université de Paris 6 et de l’École Polytechnique.
 - Cours magistral, petites classes et organisation des enseignements d’approfondissement de Recherche Opérationnelle en troisième année à l’École Polytechnique (programme d’approfondissement de Mathématiques Appliquées), avec polycopié [85].
- A. Hochart
 - Cours niveau L1 à l’Univ. Paris Diderot (Paris VII), 18h, dans le cadre d’un monitorat.

9.2.2. Encadrement/Supervision

- PhD : Pascal Benchimol, inscrit à l’École Polytechnique à partir de septembre 2011, directeur de thèse: S. Gaubert, coencadrement: X. Allamigeon, avec une participation à l’encadrement de M. Joswig (TU Berlin) dans le cadre du programme bourse Monge (bourses données pour des doctorants avec un partenaire étranger), soutenue le 2 décembre 2014.
- PhD in progress : Andrea Marchesini, inscrit à l’École Polytechnique, depuis septembre 2012, directeur de thèse: Marianne Akian, codirection: S. Gaubert, avec une participation à l’encadrement de Françoise Tisseur (U. Manchester).
- PhD in progress : Antoine Hochart, inscrit à l’École Polytechnique, depuis octobre 2013, directeur de thèse: Stéphane Gaubert, codirection: Marianne Akian.
- PhD in progress : Eric Fodjo, inscrit à l’École Polytechnique, depuis octobre 2013, directeur de thèse: Marianne Akian.
- PhD in progress : Nikolas Stott, inscrit à l’École Polytechnique, depuis octobre 2014, directeur de thèse: Stéphane Gaubert, codirection: Xavier Allamigeon et Éric Goubault.
- PhD in progress : Vianney Boeuf, inscrit à l’École Polytechnique, depuis octobre 2014, directeur de thèse: Stéphane Gaubert, codirection: Stéphane Raclot (BSPP), Marianne Akian, Xavier Allamigeon.
- M2 internship: Nikolas Stott, Mines Paristech, option MAREVA, avril–juillet 2014. Sujet : “Invariants semi-algébriques pour la vérification”. Directeurs: Stéphane Gaubert, codirection: Xavier Allamigeon et Éric Goubault.
- Enseignement d’approfondissement de l’École Polytechnique (élèves de troisième année) d’Alexandre Hannebelle, Armelle Patault, Pierre-Yves Queault et Jean-Nicolas Roussel, cosupervisé avec le Cdt Stéphane Raclot (BSPP), Régis Reboul (Préfecture de Police) et Philippe Robert (projet Inria RAP), avec le concours de Marianne Akian, Xavier Allamigeon, et Vianney Boeuf. Étude préliminaire d’évaluation de performance de l’évolution projetée de la chaîne de réponse aux appels d’urgence.

9.2.3. Jurys/Committees

- X. Allamigeon
 - Examinateur dans le jury de soutenance de thèse de Pascal Benchimol (Décembre 2014).
- S. Gaubert

- Membre de la commission de recrutement en informatique à l'École Polytechnique.
- Membre du jury de concours Inria CR2 de l'Inria Rhône-Alpes.
- Membre du jury de concours Inria CR2 de l'Inria Saclay – Île-de-France.
- Jury de thèse de Thomas Nowak (président), École Polytechnique, 5 Septembre 2014.
- Jury de thèse de Pablo Maldonado, UPMC, 4 Novembre 2014.
- Jury de thèse de Vinicus Mariano Goncalvez, Mina Gerais, Rapporteur, 28 Novembre 2014.
- Jury de thèse de Pascal Benchimol, École Polytechnique, 2 Décembre 2014.

9.3. Popularization

J.P. Quadrat : administre le site d'intérêt général <http://www.maxplus.org>, dédié à l'algèbre max-plus.

9.4. Participation à des colloques, séminaires/Conférences, Seminars

- M. Akian
 - Séminaire Parisien d'Optimisation, IHP, 7 avril 2014. Titre de l'exposé: "Complexité de l'itération sur les politiques pour les jeux à somme nulle".
 - Structured Matrix Days, Limoges, May 2014. Invited talk: "Log-majorization of eigenvalues of matrix polynomials and tropical scaling".
 - Conference on "New trends in optimal control" (NETCO), Tours, June 2014. Titre de l'exposé: "Policy iteration for stochastic zero-sum games".
 - 19th Conference of the International Linear Algebra Society (ILAS), August 2014, Seoul. Titre de l'exposé: "Tropical bounds for eigenvalues of matrices using Hungarian dual variables".
 - Conference on Optimization & Practices in Industry, session invitée "Complexity of Linear Programming and Games", Palaiseau, Octobre 2014. Titre de l'exposé: "Complexity of policy iteration for stochastic zero-sum games".
 - 53rd IEEE Conference on Decision and Control, Los Angeles, décembre 2014, session invitée "Max-plus methods for optimal control and zero-sum games". Titre de l'exposé: "Generic uniqueness of the bias vector of mean payoff zero-sum games".
- X. Allamigeon
 - Séminaire donné dans le cadre du Research Training Group "Methods for Discrete Structures", TU Berlin, Avril 2014. Titre de l'exposé : "Tropicalizing semialgebraic pivoting rules".
 - Séminaire SIESTE, ENS Lyon, Mai 2014. Titre de l'exposé : "Relations entre la complexité de la programmation linéaire et celle des jeux à paiement moyen".
 - 41st International Colloquium on Automata, Languages, and Programming (ICALP), Copenhagen, Juillet 2014. Titre de l'exposé : "The Tropical Shadow-Vertex Algorithm Solves Mean Payoff Games in Polynomial Time On Average".
 - Conférence "Recent Advances in Linear Optimization", Paris, Juillet 2014. Titre de l'exposé : "The Tropical Shadow-Vertex Algorithm Solves Mean Payoff Games in Polynomial Time On Average".
 - Conference on Optimization & Practices in Industry, session invitée "Complexity of Linear Programming and Games", Palaiseau, Octobre 2014. Titre de l'exposé : "The Tropical Shadow-Vertex Algorithm Solves Mean Payoff Games in Polynomial Time On Average".
- P. Benchimol

- Séminaire au laboratoire CERMICS (Ecole Nationale des Ponts et Chaussées), Champs sur Marne, France, Février 2014. Titre de l'exposé : "La méthode du simplexe tropical".
- ROADEF - 15ème congrès annuel de la Société française de recherche opérationnelle et d'aide à la décision, Bordeaux, Février 2014. Titre de l'exposé : "La méthode du simplexe tropical".
- 21st International Symposium on Mathematical Theory of Networks and Systems (MTNS 2014), Groningen, Pays-Bas, Juillet 2014, session invitée "Max-Plus Methods in Optimal Control and Game Theory". Titre de l'exposé : "Combinatorial Simplex Algorithms Can Solve Mean Payoff Games".
- 20th Conference of the International Federation of Operational Research Societies (IFORS 2014), Barcelone, Espagne, Juillet 2014. Titre de l'exposé : "Combinatorial Simplex Algorithms Can Solve Mean Payoff Games".
- Conférence "Recent Advances in Linear Optimization", Paris, Juillet 2014. Titre de l'exposé : "Long and winding central paths".
- Conference on Optimization & Practices in Industry, session invitée "Complexity of Linear Programming and Games", Palaiseau, Octobre 2014. Titre de l'exposé : "Long and winding central paths".
- S. Gaubert
 - Séminaire Université de Metz, Département de Matheématiques, Janvier 2014: "Tropical convexity applied to dynamic programming: a guided tour".
 - Séminaire ENS Ulm, Département d'informatique, Janvier 2014: "De la convexité tropicale aux jeux répétés".
 - Séminaire donné dans le cadre du Research Training Group "Methods for Discrete Structures", TU Berlin, Avril 2014. Titre de l'exposé : "Non-linear Perron-Frobenius theory applied to zero-sum games".
 - Séminaire au département de Mathématiques de Chambéry, Mai 2015: "The central path can be tortuous".
 - Séminaire au CIFASIS, Rosario, Argentina, June 2015: "The central path can be tortuous".
 - Workshop Mathematical Aspects of Game Theory and Applications (MAGTA 2014), Roscoff, June 2014. Titre de l'exposé : "Solving mean payoff games by tropical linear programming".
 - MTNS conference, Groningen, July 2013, session invitée "Max-Plus Methods in Optimal Control and Game Theory": "Bundle-based pruning in the max-plus curse of dimensionality free method".
 - ILAS conference (Satellite of ICM), Seoul, August 2014. Invited plenary talk: "From tropical linear algebra to zero-sum games".
 - Séminaire SIESTE, ENS Lyon, Décembre 2014, "Non-linear Perron-Frobenius theory applied to zero-sum games".
 - 53rd IEEE Conference on Decision and Control, Los Angeles, décembre 2014, session invitée "Max-plus methods for optimal control and zero-sum games". Titre de l'exposé: "Non-linear eigenvalue problems arising from growth maximization of positive linear dynamical systems".
- A. Hochart
 - Conférence MODE 2014 (Mathématiques de l'Optimisation et de la décision), Rennes, Mars 2014. Titre de l'exposé : "Points fixes d'opérateur de Shapley sans paiement et propriétés structurelles des jeux à paiement moyen".

- Conference on “New trends in optimal control” (NETCO), Tours, June 2014. Poster: “Fixed point of payment-free Shapley operators and structural properties of mean payoff games”.
- Workshop Mathematical Aspects of Game Theory and Applications (MAGTA 2014), Roscoff, June 2014. Poster: “Fixed point of payment-free Shapley operators and structural properties of mean payoff games”.
- MTNS conference, Groningen, July 2013, session invitée “Max-Plus Methods in Optimal Control and Game Theory”: “Fixed Point Sets of Payment-Free Shapley Operators and Structural Properties of Mean Payoff Games”.
- Conference on Optimization & Practices in Industry, Palaiseau, Octobre 2014. Titre de l’exposé : “Generic uniqueness of the bias vector of mean-payoff zero-sum games”.
- A. Marchesini
 - 19th Conference of the International Linear Algebra Society (ILAS), August 2014, Seoul. Titre de l’exposé: “Asymptotic eigenvalue problems”.
 - Séminaire des doctorants (CMAP), 12 décembre 2014. Titre de l’exposé: “Valeurs propres tropicales”.
- C. Walsh
 - Séminaire, Titre de l’exposé: “The Tropical Martin boundary”, 16 avril 2014, Séminaire de Géométrie Tropicale, Ecole Polytechnique.
 - Conférence, Titre de l’exposé: “Hilbert isometries”, 16–20 juin 2014, Géométrie et dynamiques des espaces de Finsler, CIRM, Marseille.

MEXICO Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. General chair, Scientific chair

- Serge Haddad was co-chair for workshop and tutorials for 34th Int. Conf. on Application and Theory of Petri nets (ATPN), Tunis, Tunisia

9.1.1.2. Member of the organizing committee

- Paul Gastin co-organized the Dagstuhl seminar on "Quantitative Models: Expressiveness, Analysis, and new applications", January 19 to 24, see <http://www.dagstuhl.de/en/program/calendar/semhp/?semnr=14041>.

9.1.2. Scientific events selection

9.1.2.1. Member of the conference program committee

- Serge Haddad was a member of the program committees of
 - FOR-MOVES (associated with ICSOC 2014),
 - 22nd International Conference on Real Time Networks and Systems (RTNS 2014), Versailles, France,
 - 8th International Workshop on Verification and Evaluation of Computer and Communication Systems (VECOS 2014), Bejaia, Algeria,
 - PNSE 2014,
 - 12th IFAC - IEEE International Workshop on Discrete Event Systems (WODES), Cachan, France
- Stefan Haar was a member of the program committees of PNSE 2014 and ETFA 2014. He will be co-chairing the PC of ACSD 2015 (Brussels) and be a member of the PC for ICTAC 2015.
- Thomas Chatain was a member of the program committee of ACSD 2014 and will be a member of the PC of ACSD 2015.
- Stefan Schwoon was a member of the PC of ICATPN 2014 and will be in the PCs for ICATPN 2015 and SPIN 2015.
- Benedikt Bollig was a member of the scientific committee of the workshop INFINITY' 14, co-located with FSTTCS' 14.

9.1.2.2. Reviewer

- Benedikt Bollig was a reviewer for AFL' 14, DLT' 14, TACAS' 14, FOSSACS' 14, ICALP' 14, CSL-LICS' 14, CONCUR' 14, MFCS' 14, TIME' 14, FSTTCS' 14.
- Stefan Haar was a reviewer for CDC 2014 and ACC 2015.
- Stefan Schwoon was a reviewer for the conferences POST, CSL-LICS, and ICALP in 2014.

9.1.3. Journal

9.1.3.1. Member of the editorial board

- Paul Gastin is on the advisory boards of *Journal of Automata, Languages and Combinatorics* and of the EATCS Springer Book series *Monographs in Theoretical Computer Science* and *Texts in Theoretical Computer Science*.

- Serge Haddad was Editor of one edition of the TOPNOC journal (LNCS 8910).
- Stefan Haar is an associate editor for the *Journal of Discrete Event Dynamic systems*.

9.1.3.2. Reviewer

- Benedikt Bollig was a reviewer for *ACM Transactions on Computational Logic, Theoretical Computer Science*, and *Acta Informatica*.
- Stefan Haar was a reviewer for *Automatica, Journal of Computer and System Sciences, IEEE Transactions on Automatic Control*, and *Information Systems*
- Thomas Chatain was a reviewer for *International Journal of Foundations of Computer Science* and *ACM Transactions on Embedded Computing Systems*.
- Stefan Schwoon acted as reviewer for the journals *Fundamenta Informaticae* (several occasions), *TOPLAS*, and *TECS* in 2014.
- Paul Gastin and Serge Haddad are regularly reviewers for many international conferences and journals.

Serge Haddad was also a member of the AERES evaluation committee of the VERIMAG laboratory in 2014.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Note: We only list here the teaching activities of researchers, not the courses of full-time teachers in the team.

Master

Benedikt Bollig and Paul Gastin, Non-Sequential Theory of Distributed Systems, 24 heures de cours, M2, ENS de Cachan

9.2.2. Supervision

PhD :

- Benoît Barbot, *Acceleration for Statistical Model Checking* [11]; ENS Cachan, Defence on November 20, 2014. Supervisor : Serge Haddad and Claudine Picaronny.
- Aiswarya Cyriac, *Verification of Communicating Recursive Programs via Split-width* [12], ENS Cachan, Defence on January 28, 2014; Supervisors: Paul Gastin and Benedikt Bollig
- Hernán Ponce de León, *Testing Concurrent Systems Through Event Structures* [13], ENS Cachan, Defence on November 7, 2014; Supervisor: Stefan Haar, Co-supervisor: Delphine Longuet (U Paris SUD)

PhD in progress :

- Simon Theissing, *Supervision for Multi-Modal Transport Systems*, since September 2013, Supervisor Stefan Haar
- Salim Perchy (Ecole Polytechnique), *D-spaces*, since November 2013, Supervisor Stefan Haar, Co-Supervisor Franck Valencia (Note : S. Perchy belongs to the COMETE team, not MEXICO).

9.2.3. Juries

- Paul Gastin was the president of the PhD examination board of Vincent Carnino, U. Paris-Est, december 5, 2014.
- Stefan Haar was a reviewer of the theses of Sébastien CHEDOR at University of Rennes 1 and of Kari KÄHKÖNEN at Aalto University, Finland.
- Serge Haddad was a reviewer of the thesis of Ariane Piel defended in October 2014 at U. Paris-Nord (Villetaneuse), and of the thesis of Mouhamadou Tafsir Sakho at U. Orléans in December 2014. He also was a member of the PhD juries of Thomas Husja (UPMC, october 2014).
- Stefan Schwoon was a reviewer for the theses of Stanislav Böhm (University of Ostrava, Czechia) and Ala Eddine Ben Salem (Université Paris 6).

9.3. Popularization

- Stefan Haar gave a talk entitled "Revèle tes défauts" on fault diagnosis in the popularization series "Unithé ou café" of Inria Saclay-Idf, on February 7, 2014.

OAK Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific events organisation

8.1.1.1. General chair, Scientific chair

- I. Manolescu has been a co-chair of the 2nd International Workshop on Benchmarking RDF Systems (BeRSyS), in conjunction with VLDB 2014.

8.1.1.2. Member of the organizing committee

- N. Bidoit has been co-organiser of the summer school Ecole Thématique Bases de Données, June 2014, Oléron, whose focus was on Massive and Distributed Data Management.

8.1.2. Scientific events selection

8.1.2.1. Responsible of the conference program committee

- I. Manolescu has been a group leader (track chair) of the “Text Databases, XML and Keyword Search” track of the ACM SIGMOD Conference 2014.

8.1.2.2. Member of the conference program committee

- I. Manolescu: Extending Database Technologies Conference (EDBT), IEEE International Conference on Data Engineering (ICDE), SIGMOD/PODS PhD Symposium, Data4U workshop (in conjunction with VLDB 2014). She has also participated in the program committee of Bases de Données Avancées (BDA) 2014.
- Bogdan Cautis served as program committee member for the international conferences EDBT 2014, SIGMOD 2014, and CIKM 2014, as well as the workshops UnCrowd 2014 and BUDA 2014 (with ACM SIGMOD). He also participated in the program committee of Bases de Données Avancées (BDA) 2014.

8.1.2.3. Reviewer

- Bogdan Cautis served as reviewer for IEEE Transactions on Knowledge and Data Engineering.

8.1.3. Journal

8.1.3.1. Member of the editorial board

- I. Manolescu has been the Editor in Chief of the ACM SIGMOD Record until June 2014; she is an associate editor of the ACM Transaction on Internet Technology, and a member of the review board of PVLDB 2014.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master: Bogdan Cautis, Masses de Données, M2R IAC, 18 ETD, M2, UNIV. PARIS-SUD

Licence: Bogdan Cautis, Introduction au Bases de Données, 44 ETD, L1, IUT Orsay

Licence: Bogdan Cautis, Programmation et Administration des Bases de Données, 94 ETD, L1, IUT Orsay

Master: Benoît Groz, Bases de données dimensionnelles et OLAP, M2 Miage et M2 CA, 33 ETD, M2, UNIV. PARIS-SUD

Master: Benoît Groz, Principe d'utilisation des SGBD, M1 Miage et M1, 56 ETD, M1, UNIV. PARIS-SUD

Master: Ioana Manolescu, Masses de Données, M2R IAC, 26 ETD, M2, UNIV. PARIS-SUD

8.2.2. Supervision

Raphael Bonaque: "Structured, Social and Semantic Search", since October 2013, Bogdan Cautis, François Goasdoué, and Ioana Manolescu.

Damien Bursztyn: "Scalable Techniques for Web Data Management", since January 2014, François Goasdoué and Ioana Manolescu

Jesús Camacho-Rodríguez : "Cloud-based Web Data Management", defended in September 2014, Dario Colazzo and Ioana Manolescu.

Alexandra Roatiş: "Scalable Database Techniques for the Semantic Web", defended in September 2014, Dario Colazzo, François Goasdoué, and Ioana Manolescu.

Aikaterini Tzompanaki: Foundations and Algorithms to Compute the Provenance of Missing Data, since November 2012, Melanie Herschel and Nicole Bidoit.

Stamatis Zampetakis: "Massively Parallel Algorithms for Semantic Web Data", since October 2012, François Goasdoué and Ioana Manolescu.

Ioana Ileana: "Extracting and Archiving Web Data: a holistic approach", defended in October 2014, Bogdan Cautis.

Paul Lagrée: "Adaptive Learning for Intelligent Crowdsourcing and Information Access", since October 2014, Bogdan Cautis.

8.2.3. Juries

Bogdan Cautis has been a member of the PhD committee of Ryadh Dahimene (December 2014), CNAM, France.

Ioana Manolescu has reported on the PhD thesis of Laurent Pellegrino (Avril 2014), Université de Nice, France.

She has been a member of the PhD committees of Alexandra Roatis (September 2014, UNIV. PARIS-SUD), Jesús Camacho Rodríguez (September 2014, UNIV. PARIS-SUD) and Ioana Ileana (October 2014, Telecom ParisTech).

She has also been a member of the HDR committee of Fabian Suchanek (October 2014, Telecom ParisTech).

8.3. Popularization

At the International Conference on Database Systems for Advanced Applications (DASFAA 2014), B. Cautis gave a lecture for the local Indonesian students, on "Searching the Social Web".

PARIETAL Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. Member of the organizing committee

- Gaël Varoquaux: PRNI, Euroscipy
- Philippe Ciuciu: ISBI

9.1.2. Scientific events selection

9.1.2.1. Member of the conference program committee

P.Ciuciu: ICASSP 2014, Associate Editor of the BISP (Bio Imaging Signal Processing) section

9.1.2.2. Reviewer

- Bertrand Thirion: IEEE ISBI, IPMI, MICCAI, IEEE PRNI, MLINI, NIPS
- Gaël Varoquaux: IPMI, MICCAI, IEEE PRNI, MLINI
- Philippe Ciuciu: MICCAI, IEEE ICASSP, IEEE ISBI, EUSIPCO, IEEE EMBC, IEEE PRNI

9.1.3. Journal

9.1.3.1. Member of the editorial board

- Bertrand Thirion: Frontiers in Neuroscience, Brain Imaging Methods
- Gaël Varoquaux: NeuroImage, Frontiers in NeuroInformatics and Frontiers in Brain Imaging methods
- Philippe Ciuciu: Frontiers in Neuroscience, Brain Imaging Methods

9.1.3.2. Reviewer

- Bertrand Thirion: Medical Image Analysis, IEEE Transactions on Medical Imaging, NeuroImage, Human Brain Mapping, PNAS, Nature Neuroscience.
- Gaël Varoquaux: HBM, MedIA, TMI, Frontiers in NeuroInformatics, Frontiers in Brain Imaging methods, Trends in cognitive science
- Philippe Ciuciu: SIAM Journal on Imaging Science, IEEE Trans Image Processing, IEEE Trans Medical Imaging, Proceedings of the IEEE, Signal Processing, NeuroImage, Journal of Neuroscience Methods, Plos One, MAGMA, Human Brain Mapping, Journal of Neural Systems, Journal of Neuroscience.

9.1.4. Scientific workshop

Bertrand Thirion took part to the CCC Brain workshop, Washington DC, Dec. 3-5.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Gael Varoquaux

- Stat Course cogmaster (3 × 3H)
- Python course Inria Rocquencourt et Rennes: 8Hrs each time
- Optimization tutorial at Euroscipy: 2H
- Scikit-learn tutorial at Scipy: 4H
- Functional connectivity course at OHBM: 30mn
- MSR TechDays 2014 : Scikit-Learn: Machine Learning en Python (2H)

Bertrand Thirion

- Master MVA, Imagerie fonctionnelle cérébrale et interface cerveau machine, 12h + 3h, M2, ENS Cachan, France.
- Functional connectivity course at ISMRM: 30mn
- Machine learning course, cortical mapping course at OHBM: 2 × 30 mn.

Philippe Ciuciu

- Master 2 Biomedical Engineering Université Paris V & Télécom Paris-Tech
- Master 2 Imagerie Médicale Université Paris-Sud

9.2.2. Supervision

PhD defense:

- Viviana Siless: July 8th, *Multi-modal registration of T1 brain image and geometric descriptors of white matter tracts.*
- Nicolas Zilber: March 10th, *ERF and scale-free analyses of source-reconstructed MEG brain signals during a multisensory learning paradigm.*
- Hao Xu: March 31st, *Probabilistic atlas statistical estimation with multimodal datasets and its application to atlas based segmentation.*

9.2.3. Juries

Bertrand Thirion was reviewer in the following PhD thesis committees:

- Mathieu Ruiz
- Ben Cassidy, university of South Wales, Australia
- Kasper Winther Andersen, April 22nd, DTU, Denmark

He was Examiner in the following PhD thesis committee:

- Hugo Raguét, Sept 22nd, Université Paris Dauphine.

9.3. Popularization

- Bertrand Thirion has taken part to the *Autour de la question* broadcast program on Feb. 24th.
- Bertrand Thirion co-authored the popularization paper : "Le décodage cérébral : exemple de la vision" in *Clefs CEA*, issue 62.
- Gaël Varoquaux gave a tutorial on scikit learn at the Microsoft Tech Days (February).

PARSIFAL Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific events organisation

8.1.1.1. General chair, scientific chair

K. Chaudhuri and L. Straßburger co-chaired the 3rd International Workshop on Structures and Deduction (SD), which was associated with the Federated Logic Colloquium (FLoC) and part of the Vienna Summer of Logic (VSL 2014), Vienna, Austria.

D. Miller was a PC chair for the Joint Meeting of the 23rd EACSL Annual Conference on Computer Science Logic (CSL14) and the 29th ACM/IEEE Symposium on Logic in Computer Science (LICS14), 14-18 July, Vienna.

8.1.1.2. Member of the organizing committee

K. Chaudhuri was Publicity co-chair for CSL-LICS 2014.

8.1.2. Scientific events selection

8.1.2.1. Member of the conference program committee

K. Chaudhuri was on the Program Committees of:

30th International Conference on Logic Programming (ICLP)

4th ACM-SIGPLAN Conference on Certified Programs and Proofs (CPP)

9th International Workshop on Logical Frameworks and Meta-languages: Theory and Practice (LFMTP)

3rd International Workshop on Linearity

D. Ilik was on the Program Committee of the 16th International Symposium on Principles and Practice of Declarative Programming (PPDP 2014), Canterbury, United Kingdom.

D. Miller was on the Program Committee of WoLLIC 2014: Workshop on Logic, Language, Information and Computation, Valparaiso Chile, 1-4 September.

L. Straßburger was the Program Committee of the 18th International Conference on Foundations of Software Science and Computation Structures (FoSSaCS).

8.1.2.2. Reviewer

S. Graham-Lengrand was a reviewer for the following conferences:

International Joint Conference on Automated Reasoning (IJCAR 2014)

Conferences on Intelligent Computer Mathematics (CICM 2014).

L. Straßburger was reviewer for the following conferences:

7th International Joint Conference on Automated Reasoning (IJCAR 2014)

41st International Colloquium on Automata, Languages and Programming (ICALP 2014)

Joint meeting of the 23rd EACSL Annual Conference on Computer Science Logic and the 29th Annual ACM/IEEE Symposium on Logic in Computer Science (CSL-LICS 2014)

F. Lamarche was a reviewer for the following conferences:

Joint International Conferences, Rewriting Techniques and Applications, Typed Lambda Calculus and Applications (RTA - TLCA 2014)

18th International Conference on Foundations of Software Science and Computation Structures (FoSSaCS).

D. Ilik was a reviewer for the following conferences:

16th International Symposium on Principles and Practice of Declarative Programming (PPDP 2014), Canterbury, United Kingdom

18th International Conference on Foundations of Software Science and Computation Structures (FoSSaCS 2015)

20th Conference "Types for Proofs and Programs" (TYPES 2014)

24th European Symposium on Programming (ESOP 2015)

Joint International Conferences, Rewriting Techniques and Applications, Typed Lambda Calculus and Applications (RTA - TLCA 2014)

8.1.3. Journal

8.1.3.1. Editor-in-chief

D. Miller was Editor-in-Chief of the ACM Transactions on Computational Logic.

8.1.3.2. Member of the editorial board

S. Graham-Lengrand was guest editor for the special issue on computational logic in honour of Roy Dyckhoff, in the *Journal of Logic and Computation* (2014) [29]

D. Miller is on the editorial board of the following journals: *ACM Transactions on Computational Logic*, *Journal of Automated Reasoning* (Springer), *Theory and Practice of Logic Programming* (Cambridge University Press), and *Journal of Applied Logic* (Elsevier).

8.1.3.3. reviewer

S. Graham-Lengrand was a reviewer for the following journals:

Logic Journal of the IGPL (OUP)

Information and Computation (Elsevier)

Acta Informatica (Springer)

Theoretical Computer Science (Elsevier).

L. Straßburger was reviewer for the following journals:

Archive for Mathematical Logic (Springer)

ACM Transactions on Computational Logic (ACM-ToCL)

F. Lamarche was reviewer for the following journal:

Annals of Pure and Applied Logic (Elsevier).

D. Ilik was reviewer for the following journals:

Logic Journal of the IGPL (OUP)

Mathematical Reviews (MathSciNet)

Theoretical Computer Science (Elsevier)

Zentralblatt MATH

D. Miller was reviewer for the *Studia Logica* journal.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence: K. Chaudhuri, “INF 321 : Les principes des langages de programmation”, 40 hours eq. TD, L3, Ecole polytechnique, France

Licence: S. Graham-Lengrand, “*INF431: Algorithmique et programmation*”, 50 hours eq. TD, L3, Ecole Polytechnique, France.

Licence: S. Graham-Lengrand, “*INF412: Les bases de la programmation et de l’algorithmique*”, 32 hours eq. TD, L3, Ecole Polytechnique, France.

Master: S. Graham-Lengrand, “*INF551: Computer-aided reasoning*”, 36 hours eq. TD, M1, Ecole Polytechnique, France.

Master: S. Graham-Lengrand, “*Curry-howard correspondence for classical logic*”, 12 hours eq. TD, M2, Master Parisien de Recherche en Informatique, France.

Master: D. Miller, “*MPRI 2-1: Logique linéaire et paradigmes logiques du calcul*”, 12 hours, M2, Master Parisien de Recherche en Informatique, France.

8.2.2. Supervision

PhD: Hernán Vanzetto, “*Automatisation des preuves et synthèse des types pour la théorie des ensembles dans le contexte de TLA⁺*”, Université de Lorraine, 4 Dec 2014; supervised by Stephan Merz (Inria Lorraine) and K. Chaudhuri

PhD in progress: Sonia Marin, 1 Nov 2014, supervised by L. Straßburger and D. Miller

PhD in progress: Roberto Blanco, Zakaria Chihani, and Quentin Heath, supervised by D. Miller

8.2.3. Juries

L. Straßburger was external reviewer and jury member for the PhD of Roman Krenický, University of Manchester, UK. Defence date: April 28, 2014.

S. Graham-Lengrand was a jury member for the PhD of Luis Pino Duque, École Polytechnique, France. Defence date: September 25, 2014.

D. Miller was a reporter for the following two PhD theses: Taus Brock-Nannestad (IT University of Copenhagen, 12 September 2014) and Thanos Tsouanas (ENS Lyon, 2 July 2014).

POEMS Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Advisory and management activities

- A. S. Bonnet-Ben Dhia was the chair of the scientific council of the CNRS Institute for Engineering and Systems Sciences (INSIS) until September 2014.
- P. Joly is a member of the scientific committee of CEA-DAM.
- E. Lunéville is the Head of UMA (Unité de Mathématiques Appliquées) at ENSTA ParisTech.

9.1.2. Scientific events organisation and selection

- M. Bonnet was a member of the program committee of the 5th International Workshop on New Computational Methods for Inverse Problems(ENS Cachan, May 2014).
- E. Bécache, A. S. Bonnet-Ben Dhia, M. Bonnet, C. Hazard, P. Joly and E. Lunéville are members of the scientific committee for the 12th international conference on mathematical and numerical aspects of wave propagation, which will be held in Karlsruhe in July 2015.
- A. S. Bonnet-Ben Dhia is a member of the organizing committee of the workshop Waveguides: Asymptotic Methods and Numerical Analysis which will be held in Napoli in May 2015.

9.1.3. Journal

- A. S. Bonnet-Ben Dhia is associate editor of SINUM (SIAM Journal of Numerical Analysis).
- M. Bonnet is associate editor of Engineering Analyses with Boundary Elements
- M. Bonnet is in the editorial board of Inverse Problems.
- M. Bonnet is in the editorial board of Computational Mechanics.
- M. Bonnet is in the editorial board of Journal of Optimization Theory and Application.
- P. Ciarlet is an editor of DEA (Differential Equations and Applications)
- P. Ciarlet is an editor of CAMWA (Computers & Mathematics with Applications).
- P. Ciarlet is an editor of ESAIM:M2AN (Mathematical Modeling and Numerical Analysis).
- P. Joly is an editor of ESAIM:M2AN (Mathematical Modeling and Numerical Analysis).
- P. Joly is a member of the editorial board of AAMM (Advances in Applied Mathematics and Mechanics).
- P. Joly is a member of the Book Series Scientific Computing of Springer Verlag.
- The team members regularly review papers for many international journals.

9.2. Teaching - Supervision

9.2.1. Teaching

Eliane Bécache

- *Méthode des éléments finis*, ENSTA ParisTech (2nd year)
- *Compléments sur la méthode des éléments finis*, ENSTA ParisTech, (2nd year)

Marc Bonnet

- *Problèmes inverses*, Master DSMSC (Centrale Paris)
- *Méthodes intégrales*, Master TACS (ENS Cachan)

- *Equations intégrales et multipôles rapides*, Ecole doctorale MODES (Univ. Paris Est, Marne la Vallée)
- *Outils élémentaires d'analyse pour les équations aux dérivées partielles*, ENSTA Paris-Tech (1st year)

Anne-Sophie Bonnet-Ben Dhia

- *Outils élémentaires d'analyse pour les équations aux dérivées partielles*, ENSTA Paris-Tech (1st year).
- *Propagation dans les guides d'ondes*, ENSTA ParisTech (3rd year) and Master "Modeling and Simulation" (M2)
- *Etude mathématique de quelques problèmes de transmission avec coefficients changeant de signe*, ENSTA ParisTech (3rd year) and Master "Modeling and Simulation" (M2)
- *Théorie spectrale des opérateurs autoadjoints et applications aux guides optiques*, ENSTA ParisTech (2nd year).
- *Propagation d'ondes*, Ecole Centrale de Paris (3rd year) and master DSMSC.

Laurent Bourgeois

- *Outils élémentaires pour l'analyse des équations aux dérivées partielles*, ENSTA Paris-Tech (1st year)
- *Inverse problems: mathematical analysis and numerical algorithms*, (Master AN& EDP, Paris 6 and Ecole Polytechnique)

Stéphanie Chaillat

- *Introduction à la discrétisation des équations aux dérivées partielles*, ENSTA ParisTech (1st year)
- *Fonctions d'une variable complexe*, ENSTA ParisTech (2nd year)

Colin Chambeyron

- *Analyse réelle: optimisation libre et sous contraintes*, Dauphine University (1st year)
- *Outils mathématiques*, Dauphine University (1st year)
- *Algèbre linéaire*, Dauphine University (2nd year)

Patrick Ciarlet

- *Compléments sur la méthode des éléments finis*, ENSTA ParisTech (2nd year)
- *Theory and algorithms for distributed computing*, ENSTA ParisTech (3rd year), and Master "Modeling and Simulation" (M2)
- *Maxwell's equations and their discretization*, ENSTA ParisTech (3rd year) and Master "Modeling and Simulation" (M2)
- *Etude mathématique de quelques problèmes de transmission avec coefficients changeant de signe*, ENSTA ParisTech (3rd year) and Master "Modeling and Simulation" (M2)

Gary Cohen

- Gary Cohen is writing a book entitled "High Order Finite Element Methods for Wave Equations" in collaboration with Sébastien Pernet (DTIM-ONERA). This book addresses construction and analysis of a large class of finite element methods and discontinuous Galerkin methods for wave equations and should be published by Springer-Verlag in Sept. 2015.

Sonia Fliss

- *Méthode des éléments finis*, ENSTA ParisTech (2nd year)
- *Programmation scientifique et simulation numérique*, ENSTA ParisTech (2nd year)

- *Introduction à la discrétisation des équations aux dérivées partielles*, ENSTA ParisTech (1st year).
- *Propagation des ondes dans les milieux périodiques*, ENSTA ParisTech (3rd year) and Master "Modeling and Simulation" (M2)

Christophe Hazard

- *Outils élémentaires d'analyse pour les équations aux dérivées partielles*, ENSTA ParisTech (1st year)
- *Théorie spectrale des opérateurs autoadjoints et applications aux guides optiques*, ENSTA ParisTech (2nd year)

Patrick Joly

- *Introduction à la discrétisation des équations aux dérivées partielles*, ENSTA ParisTech (1st year)
- *Outils élémentaires d'analyse pour les équations aux dérivées partielles*, ENSTA ParisTech (1st year)
- *Propagation des ondes dans les milieux périodiques*, ENSTA ParisTech (3rd year) and Master "Modeling and Simulation" (M2)

Nicolas Kielbasiewicz

- *Programmation scientifique et simulation numérique*, ENSTA ParisTech (2nd year)
- *Parallélisme et calcul réparti*, ENSTA ParisTech (Master 2)

Marc Lenoir

- *Fonctions d'une variable complexe*, ENSTA ParisTech (2nd year)
- *Equations intégrales*, ENSTA ParisTech (3rd year) and Master "Modeling and Simulation" (M2)
- *Méthodes asymptotiques hautes fréquences pour les équations d'ondes - course notes*, ENSTA ParisTech (3rd year) and Master "Modeling and Simulation" (M2)

Eric Lunéville

- *Introduction au Calcul Scientifique*, ENSTA ParisTech (2nd year).
- *SIMNUM : Simulation numérique*, ENSTA ParisTech (2nd year).
- *Propagation dans les guides d'ondes*, ENSTA ParisTech (3rd year) and Master "Modeling and Simulation" (M2)

Jean-François Mercier

- *Outils élémentaires d'analyse pour les équations aux dérivées partielles*, ENSTA ParisTech (1st year)
- *Fonctions d'une variable complexe*, ENSTA ParisTech, ENSTA ParisTech (2nd year)
- *Théorie spectrale des opérateurs autoadjoints et application aux guides optiques*, ENSTA ParisTech (2nd year)

9.2.2. Supervision

PhD : Aliénor Burel, " Contributions à la simulation numérique en élastodynamique : découplage des ondes P et S, modèles asymptotiques pour la traversée de couches minces", July 2014, Patrick Joly and Marc Bonnet

PhD : Maxence Cassier, "Etude de deux problèmes de propagation d'ondes transitoires : 1) Focalisation spatio-temporelle en acoustique ; 2) Transmission entre un diélectrique et un métamatériau", Juin 2014, Christophe Hazard and Patrick Joly

PhD : Audrey Vigneron, "Formulations intégrales pour la simulation du contrôle non destructif par courants de Foucault", January 2015, Marc Bonnet

PhD in progress : Zouhair Adnani , "Modélisation numérique tridimensionnelle des effets de site en interaction sol-structure par une méthode adaptée aux problèmes sismiques de très grande taille", October 2014, Marc Bonnet and Stéphanie Chaillat

PhD in progress : Marc Bakry, "Estimateurs a posteriori pour la résolution des problèmes de diffraction par équations intégrales", October 2013, Marc Lenoir and Sébastien Pernet.

PhD in progress : Geoffrey Beck, "Modélisation de la propagation d'ondes électromagnétiques dans des câbles co-axiaux", October 2012, Patrick Joly

PhD in progress : Antoine Bensalah, "Une approche nouvelle de la modélisation mathématique et numérique en aéroacoustique par les équations de Goldstein et applications en aéronautique", October 2014, Patrick Joly and Jean-François Mercier

PhD in progress : Camille Carvalho, "Étude théorique et numérique de guides d'ondes plasmoniques", October 2012, Anne-Sophie Bonnet-Ben Dhia and Patrick Ciarlet

PhD in progress : Matthieu Chamaillard, "Conditions aux limites effectives pour des revêtements minces périodiques", October 2011, Patrick Joly and Housseem Haddar

PhD in progress : Rémi Cornaggia, "Asymptotique petit-défaut de fonctions-coût et son application en identification: justifications théorique et expérimentale, extensions", October 2012, Marc Bonnet and Bojan Guzina

PhD in progress : Luca Desiderio, "Efficient visco-elastic wave propagation in 3D for high contrast media", October 2013, Stéphanie Chaillat and Patrick Ciarlet

PhD in progress : Léandre Giret, "Development of a domain decomposition method on non-conforming meshes: application to the modeling of a Reactivity-Initiated Accident (RIA) in a Pressurized Water Reactor (PWR)", October 2014, Patrick Ciarlet

PhD in progress : Matthieu Lecouvez, "Méthodes de décomposition de domaine optimisées pour la propagation d'ondes en régime harmonique", March 2012, Patrick Joly

PhD in progress : Simon Marmorat, "Etude d'un modèle asymptotique et de son couplage avec une approche par éléments finis pour simuler la propagation d'ondes ultrasonores dans un milieu complexe perturbé par de petites inclusions", Mars 2012, Patrick Joly

PhD in progress : Laure Pesudo , "Modélisation de la réponse ultrasonore de défauts de type fissure par méthode BEM et couplage à un modèle de propagation - Application à la simulation des contrôle non destructifs", October 2014, Marc Bonnet and Stéphanie Chaillat

PhD in progress : Arnaud Recocquilly, "Identification de défauts dans un guide d'ondes en régime temporel", October 2014, Laurent Bourgeois

PhD in progress : Antoine Tonnoir, "Simulation numérique de la diffraction d'ondes ultrasonores par un défaut localisé dans une plaque élastique anisotrope", October 2011, Anne-Sophie Bonnet-Ben Dhia and Sonia Fliss

PhD in progress : Elizaveta Vasilevskaia, "Modes localisés dans les guides d'onde quantiques", November 2012, Patrick Joly

PhD in progress : Valentin Vinales, "Analyse asymptotique des équations de Maxwell en présence de métamatériaux", October 2012, Sonia Fliss and Patrick Joly

PhD in progress : Emmanuel Zerbib , "Eléments finis spectraux sur maillages décalés en électromagnétisme pour la simulation de grands modèles", October 2014, Gary Cohen

9.3. Popularization

- Publication in the journal *Interstices of Inria*: *Le piano rêvé des mathématiciens* Juliette Chabassier, Antoine Chaigne, Marc Duruflé and Patrick Joly.
- Conference of Patrick Joly to high school teachers: *Modélisation d'instruments de musique par ordinateur*, Journées ISN pour l'académie de Versailles, Inria Rocquencourt, April 2014.
- Conference of Patrick Joly to high school students during the TFJM (Tournoi Français des Jeunes Mathématiciens et Mathématiciennes) at ENSTA, June 2014.

POPIX Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Journal

9.1.1.1. Member of the editorial board

Bertrand Maury is Associate Editor of *M2AN*

9.1.1.2. Reviewer

POPIX members reviewed articles for *Bioinformatics*, *Journal of Statistical Software*, *Computational Biology and Chemistry*, *European Journal of Clinical Pharmacology*, *Ecological Modelling*, *Scientia Iranica*, *Computers in Biology and Medicine*, *Communications in Mathematical Sciences*, *SIAM journal of Scientific Computing*, *Computational Statistics and Data Analysis*, *Statistical Sciences*.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Masters: Astrid Decoene, Elements finis et optimisation sous contraintes, Master EDPCS, Paris-Sud University.

Licence: Astrid Decoene, Licence Sciences Technologie Santé, mention mathématiques, Paris-Sud University.

Masters: Marie-Anne Poursat, Coordinator of the Mathematical Engineering course, Paris-Sud University

Masters: Marc Lavielle, Modèles Mixtes et Approche de Population, 24 hours, Paris-Sud University.

Masters: Bertrand Maury, Finite element method and optimization, modeling of the respiratory system, Paris-Sud University.

Masters: Bertrand Maury, Computational Fluid Dynamics, Numerical Analysis and Optimization, Ecole Polytechnique.

Miscellaneous: Marc Lavielle, Population approach and Mixed effects models: PAGE meeting 2014 (Alicante, Spain); University of Manchester (UK); University of Buffalo (USA).

9.2.2. Supervision

- Célia Barthélémy, was a PhD student working under the supervision of Marc Lavielle. She decided to stop her PhD in September 2014.
- Bertrand Maury co-supervises several PhD students: J. Fouchet-Incaux, A. Preux, G. Le Poutier, L. Lacouture, C. Etchegarai.
- Astrid Decoene co-supervises the PhD thesis of L. Lacouture.

9.2.3. Juries

- Marc Lavielle was referee for the HDR of Nicolas Savy (Toulouse 3) and the PhD of Charlotte Baey (ECP)
- Marc Lavielle was member of the jury for the HdR of Rémi Choquet (Montpellier 2) and for the PhD of Claire Christophe (Toulouse 3) and Nicklas Hartung (Marseille).

9.3. Popularization

- Marc Lavielle was invited to give a talk for the "Olympiades des Mathématiques" in Cachan
- Marc Lavielle was invited to participate to the "Nuit des Sciences" at ENS and give a talk about statistics and GMO.

POSTALE Team

8. Dissemination

8.1. Promoting Scientific Activities

Marc Baboulin Member of Steering Committee of ACM High Performance Computing Symposium (HPC'14), Tampa, Florida, April 13-16, 2014.

Marc Baboulin organizer of the workshop "Linear least squares and applications", 19th International Linear Algebra Society Conference (ILAS 2014), Seoul, South Korea, Aug. 06-09, 2014.

Marc Baboulin organizer of the minisymposium "Randomized algorithms in parallel matrix computations" at the SIAM Conference on Parallel Processing for Scientific Computing, Portland (OR), USA, Feb. 18-21, 2014.

Christine Eisenbeis IJPP (International Journal on Parallel Programming) editorial board.

Christine Eisenbeis comité d'organisation du colloque "Recherche et démocratie", 21-22 mai 2014, Orsay, (<http://www.centre-dalembert.u-psud.fr/archives-colloques/2014-recherche-scientifique-et-democratie/>).

Christine Eisenbeis 5th Workshop on applications for multi-core architectures, October 22-23, 2014, University Pierre et Marie Curie, Paris, France

Joël Falcou Membre du comité français de normalisation des langages C et C++ (JTC1/SC22/WG21) auprès de l'AFNOR depuis janvier 2011

Joël Falcou Co-chair of the C++NOW conference on C++ <http://cppnow.org/>

Joël Falcou Organizer and co-chair of the 2014 Workshop on Programming Models for SIMD/Vector Processing <https://sites.google.com/site/wpmvp2014/home>

Joël Falcou Membre fondateur du *User Group C++ francophone* (<http://www.meetup.com/User-Group-Cpp-Francophone/>)

Lionel Lacassagne reviewer for JRTIP and Eurasip Signal journals

Lionel Lacassagne co-chairman of the "Visual Scene Analysis on Hybrid Multicore" special session at DASIP 2014.

Lionel Lacassagne Program Committee member of DASIP 2014.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master : Christine Eisenbeis, coordinatrice du module "Optimisations et compilation" du M2 recherche NSI ("Nouveaux systèmes informatiques") de l'université Paris-Sud 11. 3 heures de cours.

Master: M. Baboulin and J. Falcou teach in "Calcul Haute Performance" of M2 recherche NSI of University Paris Sud 11.

Lionel Lacassagne: Master 2 Research "Nouveau Systemes Informatique" (NSI) and Master 2 "Systemes Embarqués et Traitement de l'Information" (SETI). Computer Architecture: optimisations for multicore and SIMD processors.

Polytech 5th year: M. Baboulin and J. Falcou teach the "Parallel Computing" class.

8.2.2. Supervision

PhD in progress: Ian Masliah, Automatic code generation in high-performance computing numerical libraries, University Paris Sud 11, Supervisors: M. Baboulin and J. Falcou

PhD in progress: Antoine Tran Tan, Automatic task-based code generation by C++ meta-programming, University Paris-Sud 11, Supervisor: Joël Falcou

PhD in progress: Adrien Rémy, Solving dense linear systems on accelerated multicore architectures, University Paris Sud 11, Supervisors: M. Baboulin and B. Rozoy

PhD in progress: Yushan Wang, Numerical simulations of incompressible fluid flows on heterogeneous parallel architectures, University Paris Sud 11, Supervisors: M. Baboulin and O. Le Maître

PhD in progress: Lénaïc Bagnères, université Paris-Sud 11, supervisors: Cédric Bastoul and Christine Eisenbeis

PhD defended, december 2014: Alessandro Leite, université Paris-Sud 11, supervisors: Alba de Melo (university of Brazilia), Claude Tadonki (CRI, école des Mines de Paris), Christine Eisenbeis

PhD defended, september 2014, Michael Kruse, Polytopic memory layout optimization, université Paris-Sud 11, supervisor: Christine Eisenbeis

PhD in progress: Jason Lambert, Interactive Non-Destructive Testing algorithm on SIMD multicore processors and GPU. CEA List/Disc funding, université Paris-Sud 11, supervisor: Lionel Lacassagne

8.2.3. *Juries*

- Marc Baboulin, Thèse de Viviana Siless (08/07/2014). Fonction exercée: président du jury
- Marc Baboulin, HDR de Christophe Denis (04/07/2014). Fonction exercée: rapporteur
- Marc Baboulin, Thèse de Jesus Camacho Rodriguez (25/09/2014). Fonction exercée: président du jury
- Marc Baboulin, HDR de Sylvie Boldo (06/10/2014). Fonction exercée: président du jury
- Marc Baboulin, Thèse de Philippe Théveny (31/10/2014). Fonction exercée: président du jury
- Marc Baboulin, Thèse de Vincent Reverdy (12/11/2014). Fonction exercée: examinateur
- Christine Eisenbeis, membre du jury de la thèse de Michael Kruse, "Lattice QCD Optimization and Polytopic Representations of Distributed Memory", vendredi 26 septembre 2014, université Paris-Sud
- Christine Eisenbeis, membre du jury de la thèse de Alessandro Ferreira Leite, "A User-Centered and Autonomic Multi-Cloud Architecture for High Performance Computing Applications", mardi 2 décembre 2014, université Paris-Sud
- Lionel Lacassagne, membre du jury de la thèse de Haixiong Ye, "Impact of High Level Transforms on High Level Synthesis: application to signal and image processing", ST Microelectronics funding, 20 mai 2014, université Paris-Sud

8.3. Popularization

Christine Eisenbeis est membre du conseil scientifique des programmes du centre d'Alembert, Centre Interdisciplinaire d'Étude de l'Évolution des Idées, des Sciences et des Techniques (CIEEIST), de l'université Paris-Sud. À ce titre, elle a fait partie du comité d'organisation du colloque "Recherche et démocratie", 21-22 mai 2014, Orsay, (<http://www.centre-dalembert.u-psud.fr/archives-colloques/2014-recherche-scientifique-et-democratie/>). Lors de l'animation "Livres au marché" de Malakoff, le 23 novembre 2014, elle a présenté, avec Jean-Pierre Archambault, le livre d'enseignement en terminale de l'ISN (Informatique et Sciences du Numérique) (principal auteur Gilles Dowek).

REGULARITY Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. General chair, scientific chair

Regularity has organized and hosted a conference in honour of Pr. K. Falconer's 60th birthday in May 2014.

9.1.2. Journal

9.1.2.1. Member of the editorial board

Jacques Lévy Véhel is associate editor of the journal *Fractals*.

9.1.2.2. Reviewer

Xiequan Fan is a reviewer for Mathematical Reviews (AMS). Jacques Lévy Véhel reviewed papers for many journals and conferences.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: Jacques Lévy Véhel, Wavelets and Fractals, M2, 8h, Ecole Centrale Nantes.

Master: Jacques Lévy Véhel, Wavelets and Fractals, M2, 18h, ESIEA.

9.2.2. Supervision

PhD : Benjamin Arras, Around some selfsimilar processes with stationary increments, Ecole Centrale Paris, December 2014, advisor : J. Lévy Véhel

PhD : Alexandre Richard, Local regularity of some fractional Brownian fields, Ecole Centrale Paris, September 2014, advisor : E. Merzbach

9.2.3. Juries

J. Lévy Véhel has been a member of the juries for recruiting two AER, one AS and one AF at Inria Saclay.

9.3. Institutional commitment

J. Lévy Véhel is a member of the Bureau du Comité des Projets, of the Commission Scientifique, and of the Comité de Centre at Inria Saclay. He is the animator of the Commission de Suivi Doctoral also at Inria Saclay. Finally, he was the head of the jury for the 2014 CR2 positions contest for Inria Saclay.

SELECT Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

Gilles Celeux is one of the co-organizers of the international Working Group on Model-Based Clustering. This year this workshop took place in Dublin (Ireland).

Jean-Michel Poggi was Guest Editor (with R. Kenett, A. Pasanisi) of the special issue on Special Issue on Graphical causality models: Trees, Bayesian Networks and Big Data, in *Quality Technology and Quantitative Management (QTQM)*.

Jean-Michel Poggi was Editor (with A. Antoniadis, X. Brossat) of a *Lecture Notes in Statistics: Modeling and Stochastic Learning for Forecasting in High Dimension*, Springer.

Jean-Michel Poggi was Organizer and President of the Scientific committee (with R. Kenett, A. Pasanisi) of the ENBIS-SFdS 2014 Spring Meeting on Graphical causality models: Trees, Bayesian Networks and Big Data, IHP, Paris, 9-11 April 2014.

Jean-Michel Poggi was Organizer of the meeting *Horizons de la Statistique*, Paris, IHP, 21 January 2014.

Jean-Michel Poggi was organizer of the ERCIM 2014 Session *ElectricityLoad Forecasting*, Pisa, 6-8 December 2014.

Yves Rozenholc was the scientific coordinator and organizer of the third edition of the school “*Tumoral Genome Analysis*”, 12-19 Mai 2014.

9.1.2. Journal

9.1.2.1. Member of the editorial board

Gilles Celeux is Editor-in-Chief of *Journal de la SFdS*. He is Associate Editor of *Statistics and Computing*, *CSBIGS*.

Pascal Massart is Associate Editor of *Annals of Statistics*, *Confluentes Mathematici*, and *Foundations and Trends in Machine Learning*.

Jean-Michel Poggi is Associate Editor of *Journal of Statistical Software*, *Journal de la SFdS* and *CSBIGS*.

9.1.2.2. Reviewer

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

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

All the SELECT members are teaching in various courses of different universities and in particular in the Master 2 “*Modélisation stochastique et statistique*” of University Paris-Sud.

9.2.2. Supervision

PhD: Vincent Brault, Estimation et sélection de modèle pour le modèle des blocs latents, Université Paris-Sud, September 2014, Gilles Celeux and Christine Keribin

PhD: Rémi Fouchereau, Modélisation probabiliste des courbes S-N, Université Paris-Sud, March 2014, Gilles Celeux and Patrick Pamphile

PhD: Lucie Montuelle, Inégalités d'oracle et mélanges, Université Paris-Sud, December 2014, Erwan Le Pennec

PhD: Clément Levrard, Quantification vectorielle en grande dimension : vitesses de convergence et sélection de variables, Université Paris-Sud, September 2014, Pascal Massart and Gérard Biau (UPMC)

PhD in progress: Émilie Devivjer, 2012, Pascal Massart and Jean-Michel Poggi

PhD in progress: Jana Kalawoun, 2012, Gilles Celeux et Patrick Pamphile

PhD in progress: Nelo Molter Magalães, 2011, Pascal Massart

PhD in progress: Solenne Thivin, 2012, Erwan Le Pennec

PhD in progress: Valérie Robert, 2013, Gilles Celeux et Christine Keribin

PhD in progress: Yann Vasseur, 2013, Gilles Celeux et Marie-Laure Martin-Magniette (URGV)

PhD in progress: Neska El Haouij, 2014, Jean-Michel Poggi and Meriem Jaïdane, Raja Ghozi (ENIT Tunisie) and Sylvie Sevestre-Ghalila (CEA LinkLab), Thesis ENITUPS

PhD in progress: Vincent Thouvenot, 2012, Jean-Michel Poggi and Anestis Antoniadis (Univ. Joseph Fourier, Grenoble)

9.3. Popularization

Gilles Celeux and Valérie Robert have written an article on statistics in basket-ball to appear in the Journal of the SFdS, special issue 'sport and statistics'.

SPECFUN Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. member of the organizing committee

- A. Bostan has served in the organizing committee of the JNCF 2014, the annual meeting of the French computer algebra community.

9.1.2. Scientific events selection

9.1.2.1. member of the conference program committee

- A. Bostan has served in the program committee of the SYNASC 2014 international conference.
- A. Bostan is part of the Scientific advisory board of the MEGA conference series.
- A. Mahboubi has served in the program committee of the ITP 2014 and CICM/Calculemus 2014 international conferences.

9.1.2.2. reviewer

- A. Bostan has served as reviewer for the ISSAC 2014 and SYNASC 2014 conferences.
- F. Chyzak has served as reviewer for the conference Calculemus 2014.
- A. Mahboubi has served as reviewer for the NFM 15 and CPP 15 international conference, and for the JFLA 2015 national conference.
- C. Tankink has served as reviewer for the ITP 2014 international conference.

9.1.3. Journal

9.1.3.1. reviewer

- A. Bostan has served as reviewer for the Journal of Symbolic Computation and for the American Mathematical Monthly.
- F. Chyzak has served as reviewer for the Journal of Algebra.
- A. Mahboubi has served as reviewer for the Journal of Automated Reasoning.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Master : A. Bostan, *Algorithmes efficaces en calcul formel*, 12h, M2, MPRI, France
- Master : F. Chyzak, *Algorithmes efficaces en calcul formel*, 12h, M2, MPRI, France
- Master : A. Mahboubi, *Assistants de preuves*, 6h, M2, MPRI, France
- Doctorat : A. Mahboubi, Lecturer at the *Summer School Méthodes Algorithmiques et Applications en Géométrie Algébrique Réelle et Théorie des Nombres*, 4.5h, a CIMPA School at AIMS (M'Bour, Sénégal)
- Doctorat : A. Mahboubi, Lecturer, 12h at the *NII Shonan School on Coq*, at Shonan (Japan)
- Research School : A. Mahboubi, Lecturer, 6h, at the *Introductory school to the IHP special semester on semantics of formal proofs and certified mathematics*, CIRM (Marseille, France)

9.2.2. Supervision

- HdR: F. Chyzak, *The ABC of Creative Telescoping: Algorithms, Bounds, Complexity*, University Paris-Sud 11, April 14, 2014 [1]
- PhD: P. Lairez, *Périodes d'intégrales rationnelles : algorithmes et applications*, École Polytechnique, November 12, 2014, supervised by A. Bostan and B. Salvy [2]
- PhD in progress: A. Barillec, *Asymptotique automatique certifiée des fonctions spéciales*, École Polytechnique, started in September 2013, supervised by F. Chyzak and A. Mahboubi
- PhD in progress: L. Dumont, *Algorithmique efficace pour les diagonales, applications en combinatoire, physique et théorie des nombres*, École Polytechnique, started in September 2013, supervised by A. Bostan and B. Salvy
- PhD in progress: Th. Sibut-Pinote, *Calcul numérique et démonstrations mathématiques : de la rigueur à la preuve formelle*, started in September 2014, supervised by A. Mahboubi
- Master : A. Mahboubi has supervised the Master 2 internship of Thomas Sibut-Pinote (ÉNS Lyon).

9.2.3. Juries

- A. Bostan has served as a jury member of the French *Agrégation de Mathématiques – épreuve de modélisation, option C*.

9.3. Keynote talks

- A. Mahboubi has given an invited lecture at the joint CSL-LICS conference, part of the Vienna Summer of Logic 2014.
- A. Mahboubi has given an invited lecture at the “Leçons de Mathématiques et d’Informatique d’Aujourd’hui” colloquium in Bordeaux.

9.4. Popularization

- A. Mahboubi has written an article [16] for the popular science website “Images de Mathématiques”, in the context of a partnership of this website with the Bourbaki seminar.
- A. Mahboubi has given a talk at the popular science event “Nuit des Sciences, Ébullitions” <http://www.nuit-sciences.ens.fr/> at École Normale Supérieure, on June 6th 2014.
- A. Mahboubi has been interviewed by Ph. Pajot in the magazine *La Recherche*, November 2014.
- A. Mahboubi has given a “Science Break” talk, at Supélec, on December 10th 2014, an event organized by La Diagonale Paris-Saclay, part of la Fondation de Coopération Scientifique Campus-Paris-Saclay.

TAO Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Management positions in scientific organisations

9.1.1.1. international

- THRaSH, Theory of Randomized Search Heuristics workshop: Anne Auger, member of Steering Committee
- ACM SIGEVO (Special Interest Group on Evolutionary Computation), Marc Schoenauer, member of Executive Board since 2000, officer (Secretary) since 2012; member of Business Committee (2011-2013). Anne Auger, member of Executive Board since 2011.
- Parallel Problem Solving from Nature: Marc Schoenauer, Member of Steering Committee, (since 1998).
- PASCAL NoE (Pattern Analysis, Statistical modelling, Computational Learning), Michèle Sebag, member of the Steering Committee (PASCAL 2004-2008; PASCAL2, 2009-2013).
- European Machine Learning and Knowledge Discovery from Databases Steering Committee, Michèle Sebag, member since 2010;
- ECCAI Fellow, Michèle Sebag, since 2011;
- LION (Learning and Intelligent Optimization), Marc Schoenauer, member of the Steering Committee since 2012,
- Marc Schoenauer, Honorary Adjunct Professor, School of Computer Science, University of Adelaide, Australia (2009-2015).

9.1.1.2. national

- Michèle Sebag, member of the CoNRS; Senior Advisory Board CHIST-ERA; member of the CSFRS (Conseil Supérieur de la Formation et Recherche Stratégique);
- EA – Association Evolution Artificielle: Marc Schoenauer, founding president, now member of Advisory Committee. Anne Auger, member of Executive Committee since 2008.

9.1.1.3. Université Paris-Sud

- Jamal Atif, “Directeur d’études” at Computer Science department of IUT d’Orsay ; membre de la CCSU 27 (membre du Bureau) since 2012; membre élu au conseil d’Institut, IUT d’Orsay ; membre du Bureau du département Informatique de l’IUT d’Orsay since 2011.
- Anne Auger, membre du Conseil du Laboratoire de Recherche en Informatique since 2012;
- Philippe Caillou, membre élu du Conseil Scientifique et au Conseil Académique de l’université since 2013, directeur des études à l’IUT de Sceaux since 2009
- Cécile Germain-Renaud, elected member of the Scientific Council and of its board. University officer for scientific computing. Deputy head of the computer science department, in charge of research.
- Michèle Sebag, membre élu du Conseil du Laboratoire de Recherche en Informatique et membre de la CCSU 27 since 2004.

9.1.1.4. Université Paris-Saclay

- Michèle Sebag, member of the Senate at Université Paris-Saclay; Member of the Executive committee and responsible for the DataSense axis, DigiCosme Labex;

- Marc Schoenauer, Member of the Executive committee and chair of the Research Committee, DigiCosme Labex;

9.1.1.5. Inria Saclay

- Anne Auger, membre de la Commission de Suivi Doctoral ; représentante du centre de Saclay à la Commission des Jeunes Chercheurs.
- Marc Schoenauer, *Délégué Scientifique* (VP for Research).

9.1.2. Scientific events organisation

9.1.2.1. general chair, scientific chair

- Anne Auger: ES/EP GECCO 2014 track chair

9.1.2.2. Member of the organizing committee

- HEPML workshop at NIPS 2014: Cecile Germain-Renaud and Balázs Kégl.
- Michèle Sebag, Senior Program Committee, ECAI 2014; Area Chair, IJCAI 2015.

9.1.2.3. Others

- Anne Auger: Organization of an invited mini-symposium on Function-Value-Free Optimization, SIAM Conference on Optimization, San Diego, USA.
- Anne Auger: Organization of invited session on Recent Advances on Continuous Randomized black-box optimization, PGMO-COPI'14 conference, Paris.
- Anne Auger, Nikolaus Hansen: Organization of workshops BBOB, IEEE Conference on Evolutionary Computation 2015, Sendai, Japan and GECCO 2015 Conference Madrid, Spain.
- Anne Auger: Women@GECCO workshop 2014, Vancouver Canada

9.1.3. Scientific events selection

9.1.3.1. Member of the conference Program Committee

All TAO members are reviewers for the main conferences in Machine Learning (IJCAI, ICML, ECAI, ECML-PKDD, ...) and Evolutionary Computation (ACM GECCO, PPSN, IEEE CEC, EvoStar, ...).

9.1.4. Journal

9.1.4.1. Member of the Editorial Board

- Anne Auger: Evolutionary Computation, MIT Press.
- Nikolaus Hansen: Evolutionary Computation, MIT Press.
- Marc Schoenauer: Evolutionary Computation, MIT Press, Advisory Board; Kluwer Genetic Programming and Evolvable Machines, Editorial Board; JMLR, Area Editor.
- Michèle Sebag: Machine Learning, Springer Verlag.

9.1.4.2. Reviewer

Similarly, all TAO members do occasional reviews for the main journals in ML and EC.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Licence: Jamal Atif, Computer Science, approx. 192h, L1, IUT Orsay, Univ. Paris-Sud.
- Licence: Anne Auger, Stochastic Optimization, 20h, L1-3, Ecole Centrale Paris.
- Licence: Philippe Caillou, Computer science for Managers, approx. 192h, L1, IUT Sceaux, Univ. Paris-Sud.
- Licence: Aurélien Decelle, Computer Architecture, 30h, L3, Univ. Paris-Sud
- Licence: Aurélien Decelle, Machine Learning and Artificial Life, 41h, L2, Univ. Paris-Sud
- Licence: Cécile Germain-Renaud, Computer Architecture (head of Licence), approx. 120h, L2-L3, Polytech, Univ. Paris-Sud.
- Licence: Michèle Sebag, Artificial Life, 10h, L2, Univ Paris-Sud.
- Licence: Michèle Sebag, Introduction to Machine Learning, approx. 24h, L3, ENS-Cachan.
- Master : Cécile Germain-Renaud, Parallelisme, approx. 50h, M1, U. Paris-Sud.
- Master : Michèle Sebag, Machine Learning, 25h, M1, MPRI.
- Master : Anne Auger, Optimisation, 12h, M2 Recherche, U. Paris-sud.
- Master : Michèle Sebag, Machine Learning, 24h, M2 Recherche, U. Paris-sud.
- Master : Michèle Sebag, Evolutionary Robotics, 15h, M2 Recherche, U. Paris-sud.
- Master : Philippe Caillou, Multi-Agents Systems, 27h, M2 Recherche, U. Paris-sud.
- Master : Philippe Caillou, Multi-Agent Based Simulation, 3h, M2 Recherche, U. Paris-Dauphine.
- Master : Yann Ollivier, Deep learning, 4h, M2 Recherche, Telecom/Polytech.

9.2.2. Supervision

- PhD: Dawei Feng, *Efficient End-to-End Monitoring for Fault Management in Distributed Systems*, 27/03/2014, Germain-Renaud [3].
- PhD: Weijia Wang, *Multi-objective sequential decision making*, 11/07/2014, Michèle Sebag [5].
- PhD: Gaetan Marceau Caron, *Optimization and Uncertainty Handling in Air Traffic Management*, 22/09/2014, Marc Schoenauer [4].
- PhD: Jérémie Decock, *Hybridization of dynamic optimization methodologies*, 26/11/2014, Olivier Teytaud [2].
- PhD: Riad Akrou, *Robust Preference-based Reinforcement Learning*, 30/09/2014, Marc Schoenauer and Michèle Sebag [1].
- PhD in progress: Ouassim Ait Elhara, *Stochastic Black-Box Optimization and Benchmarking in Large Dimension*, 1/10/2012, Anne Auger and Nikolaus Hansen
- Sandra Cecilia Astete Morales, *Random Processes for Optimization with Risk*, 1/9/2013, Olivier Teytaud
- PhD in progress: Asma Atamna, *Analysis, Improvement and Benchmarking of Constraint Handling for Stochastic Blackbox Continuous Optimization*, 1/11/2013, Anne Auger and Nikolaus Hansen
- PhD in progress: Jérémy Bensadon, *Information theory for learning and optimization*, 1/10/2012, Yann Ollivier
- PhD in progress: Vincent Berthier, *Large-scale black-box optimization*, 1/10/2013, Olivier Teytaud
- PhD in progress: Marie-Liesse Cauwet, *Noisy Optimization for Artificial Intelligence*, 1/9/2013, Olivier Teytaud
- PhD in progress: Alexandre Chotard, *Enhancement and Analysis of Evolution Strategies*, 01.10.2011, Anne Auger and Nikolaus Hansen

PhD in progress: Nicolas Galichet, *Risk-Aware Reinforcement Learning*, 1/10/2011, Michèle Sebag

PhD in progress: Yoann Isaac, *Une approche non-supervisée pour la passage à l'échelle des interfaces cerveau-machine*, 1/10/2011, Jamal Atif and Michèle Sebag

PhD in progress: Jialin Liu, *Portfolios of Noisy Optimization Algorithms*, 14/03/2013, Marc Schoenauer and Olivier Teytaud

PhD in progress: Pierre-Yves Massé, *Gradient methods in statistical learning*, 1/10/2014, Yann Ollivier

PhD in progress: Guohua Zhang, *Curiosity-Driven Navigation in Evolutionary Robotics*, 1/9/2011, Michèle Sebag

PhD in progress: Nacim Belkhir, *Ajustement automatique de paramètres pour les métaheuristiques*, 1/05/2014, Marc Schoenauer

Basile Mayeur, *Direct Value Learning*, 1/10/2014, Michèle Sebag

Antoine Bureau, *Programming by Feedback*, 1/10/2014, Michèle Sebag and Marc Schoenauer

Thomas Schmitt, *A Collaborative Filtering Approach to Matching Job Openings and Job Seekers*, 1/11/2014, Michèle Sebag

Sourava Mishra, *AutoML: an empirical approach to Machine Learning*, 1/10/2014, Balázs Kégl and Michèle Sebag

François Gonard, *Sélection d'algorithmes pour la conception de structures*, 1/11/2014, Marc Schoenauer

9.2.3. Tutorials and Summer Schools

- Anne Auger and Nikolaus Hansen: *Evolution Strategies and CMA-ES* at the ACM GECCO, July 2014.
- Nikolaus Hansen: *Introduction to Information Geometry: Stochastic Optimization* at the **Information Geometry in Learning and Optimization** summer school, September 2014, Copenhagen.

9.2.4. Juries

- Marc Schoenauer, Reviewer for Adrien Goeffron's HDR, Université d'Angers, Oct. 2014 ; Richard Alligier's PhD, Institut National Polytechnique de Toulouse, Oct. 2014 ; Salwa Belaqziz, Université de Marrakech, May 2014. Jury member for Steve Oudot's HDR, Université Paris-Sud, ; Jérémie Garcia's PhD, Université Paris-Sud, June 2014 (pdt of the jury) ; Mickael Buchet's PhD, Université Paris-Sud, Nov. 2014 (pdt of the jury).
- Michele Sebag, Reviewer for Jonathan Grizou, U. Bordeaux; Gwenael Bothorel, U. Toulouse. Jury member for Bilal Piot, U. Lorraine (pdt of the jury).
- Olivier Teytaud, Reviewer for Manel Tagorti's ph.D. (to be defended early 2015, Loria) and Sothea Hong (Irstea Montpellier).

9.3. Popularization

Yann Ollivier, co-organizes the European Union Contest for Young Scientists (science fair for high school students from 30+ countries organized by the European Commission).

TOCCATA Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific events organisation

9.1.1.1. General chair, scientific chair

- J.-C. Filliâtre chaired the fifth meeting of the IFIP Working Group 1.9/2.15 (Verified Software) in Vienna, Austria, July 2014.

9.1.1.2. Member of the organizing committee

- S. Boldo and G. Melquiond are members of the organizing committee for the 22nd IEEE Symposium on Computer Arithmetic (ARITH 2015), held in Lyon in June 2015.
- J.-C. Filliâtre organized the sixth meeting of the IFIP Working Group 1.9/2.15 (Verified Software) in Paris, France, December 2014.
- C. Paulin co-organized with Z. Shao (Harvard University) the *Workshop on certification of high-level and low-level programs*, July 7-11, 2014. This workshop was part of the IHP thematic trimester *Semantics of proofs and certified mathematics*, which took place in Paris from April to July.

9.1.2. Scientific events selection

9.1.2.1. Member of the conference program committee

- S. Boldo is a member of the program committee of the 7th International Workshop on Numerical Software Verification (NSV-7). For 2015, she will be in the program committees of the 26th Journées Francophones des Langages Applicatifs (JFLA 2015), of the 8th International Workshop on Numerical Software Verification (NSV-8) and of the 22nd IEEE Symposium on Computer Arithmetic (ARITH 2015).
- A. Charguéraud served on the external review committee for POPL 2015.
- É. Contejean is a member of the program committee of the ACM SIGPLAN 2014 Workshop on Partial Evaluation and Program Manipulation, (PEPM 2014) affiliated with the POPL 2014 conference.
- J.-C. Filliâtre is a member of the program committees of the Symposium on Languages, Applications and Technologies (SLATE 2014) and the Journées Francophones des Langages Applicatifs (JFLA 2014).
- C. Marché, member of program committee of the first international workshop Formal-IDE (F-IDE), held as a satellite workshop of ETAPS 2014 <http://perso.ensta-paristech.fr/~etaps/>, and of the next workshop F-IDE 2015.
- C. Paulin is a member of the program committees of the conference Interactive Theorem Proving (ITP 2014) and the Coq Workshop 2014. For 2015, she will be in the program committees of the following conferences: Certified Programs and Proofs (CPP 2015), Mathematics of Program Construction (MPC 2015) and Types for Proofs and Programs (TYPES 2015).
- A. Paskevich is a member of the program committee of the 11th International Workshop on User Interfaces for Theorem Provers (UITP 2014) affiliated with the FLoC 2014 conference.

9.1.2.2. Reviewer

The members of the Toccata team have reviewed papers for numerous international conferences, including: ARITH, CICM, CPP, ESOP, NFM, POPL, SLATE.

9.1.3. Journal

9.1.3.1. Member of the editorial board

- S. Boldo is member of the editorial committee of the popular science web site “i()”: <http://interstices.info/>.
- S. Boldo is member of the editorial board of Binaire <http://binaire.blog.lemonde.fr>, the blog of the French Computer Science Society.
- J.-C. Filliâtre is member of the editorial board of the *Journal of Functional Programming*.
- C. Paulin is member of the editorial board of the *Journal of Formalized Reasoning*.

9.1.3.2. Reviewer

The members of the Toccata team reviewed numerous papers for numerous international journals, including: Journal of Automated Reasoning (JAR), Transactions in Computational Sciences (TCS), Theory of Computing Systems (TCS), IEEE Transactions on Computers (TC), Journal of Scientific Programming, Journal of Field Robotics (JFR), Mathematical Structures in Computer Science (MSCS), Journal of Automated Software Engineering.

9.1.4. Invited Talks

- S. Boldo was invited speaker at the 16th GAMM-IMACS International Symposium on Scientific Computing, Computer Arithmetic and Validated Numerics conference (SCAN 2014) [25] about her methodology for the formal verification of floating-point programs.
- S. Boldo and G. Melquiond were invited speakers at an international workshop in Lyon, France called Mathematical Structures of Computation during the week 4: Formal Proof, Symbolic Computation and Computer Arithmetic. <http://smc2014.univ-lyon1.fr/doku.php?id=week4>.
- C. Lelay was invited speaker at the 25th JFLA (Journées Francophones des Langages Applicatifs), Fréjus, France, Jan 10th, 2014 about “Coq passe le bac”: she tried the 2013 mathematics test of the scientific Baccalaureate in Coq at the same time as the students.
- C. Marché, “Calcul de plus faible précondition, revisité en Why3”, 25th JFLA, special session on selected representative papers of past editions, joint work with A. Tafat, Fréjus, France, Jan 11th, 2014.
- C. Marché, “Beyond SPARK2014: the ProofInUse project”, IFIP WG1.9/2.15, Vienna, Austria, Jul 15th, 2014.
- G. Melquiond was invited speaker at the 12th International Workshop on Satisfiability Modulo Theories (SMT 2014).
- C. Paulin was invited speaker at the 25th JFLA (Journées Francophones des Langages Applicatifs), Fréjus, France, Jan 10th, 2014 to give a tutorial presentation of the ALEA library. She also gave an invited talk during the GDR-GPL “Journées Nationales”.
- C. Paulin was invited speaker at the workshop “All about Proofs, Proofs for All” (APPA) as part of the Vienna Summer of Logic. She presented an introduction to the Calculus of Inductive Constructions. She wrote a chapter in the post-conference book [115] to appear next year.

9.1.5. Collective Responsibilities

- S. Boldo, elected member of the Inria Evaluation Committee until August 2014. She was in the committee in charge of selecting the Inria permanent researchers (CR2) in Bordeaux and Nancy and in the national committee for first-class Inria permanent researchers (CR1).
- S. Boldo, member of the national Inria admission committee.
- S. Boldo, C. Marché, and G. Melquiond, members of committees in charge of recruiting assistant professors at Université Paris-Sud.
- S. Boldo, member of the CLFP, *comité local de formation permanente*.

- S. Boldo, scientific head for Saclay for the MECSI group for networking about computer science popularization inside Inria.
- S. Boldo, member of the national popularization committee, *comité de médiation scientifique*, of Inria.
- A. Charguéraud is vice-president of *France-ioi*, a non-profit organization in charge of the selection and the training of the French team to the International Olympiads in Informatics (IOI). France-ioi also provides online exercises in programming and algorithmics—in average, over 70,000 such exercises are solved every month on the website.
- A. Charguéraud is a board member of the non-profit organization *Animath*, which aims at developing interest in mathematics among young students.
- A. Charguéraud and G. Melquiond are members of the committee for the monitoring of PhD students (*commission de suivi des doctorants*).
- S. Conchon and A. Paskevich, members of the *commission consultative de spécialistes de l'université*, Section 27, University Paris-Sud since December 2014.
- É. Contejean, leader of the VALS team since February 2014.
- É. Contejean, nominated member of the *conseil du laboratoire* of LRI since April 2010 till June 2014.
- É. Contejean, elected member of the *section 6 du Comité National de la Recherche Scientifique* since September 2012.
- É. Contejean, member of the committee of experts for the AERES evaluation of the Verimag laboratory (2014).
- É. Contejean, reviewer for the ANR (2014).
- É. Contejean, reviewer for the START program of the Austrian Science Fund (FWF) (2014).
- S. Dumbrava, elected member of the *conseil du laboratoire* of LRI since June 2014.
- J.-C. Filliâtre is *correcteur au concours d'entrée à l'École Polytechnique* (computer science examiner for the entrance exam at École Polytechnique) since 2008.
- C. Lelay, elected member of the *conseil du laboratoire* of LRI from November 2011 to June 2014.
- C. Marché and S. Boldo, members of the *jury de l'agrégation externe de mathématiques* as experts in computer science, since 2012.
- C. Marché (since April 2007) and C. Paulin (since September 2010), members of the program committee of Digiteo Labs, the world-class research park in *Île-de-France* region dedicated to information and communication science and technology, <http://www.digiteo.fr/>. C. Marché, president of this committee since July 2013.
- C. Marché, member of the executive team of the LRI (as “chargé de mission”), since July 2014.
- C. Marché, president of the hiring committee of one associate professor position (Maître de Conférences), Université Paris-Sud, April-June 2014. Member of another such committee.
- C. Marché, director of the ProofInUse Joint Laboratory between Inria and AdaCore, <http://www.spark-2014.org/proofinuse>
- G. Melquiond and C. Paulin, members of the *commission consultative de spécialistes de l'université*, Section 27, University Paris-Sud since April 2010. C. Paulin is the president of this committee since December 2014.
- G. Melquiond, elected officer of the IEEE-1788 standardization committee on interval arithmetic since 2008.
- C. Paulin, scientific leader of Labex DigiCosme <http://labex-digicosme.fr> (Digital Worlds: distributed data, programs and architectures), a project launched by the French Ministry of research and higher education as part of the program “Investissements d'avenir”, it involves the 14 research units in computer science and communications from the “Paris-Saclay” cluster.

- C. Paulin, president of the Computer Science Department of the University Paris-Sud <https://www.dep-informatique.u-psud.fr/>, since February 2012.
- C. Paulin, president of the assembly of directors of graduate schools at the Université Paris-Sud since September 2012.
- C. Paulin, chaired the hiring committee for a professor position in computer science at Université Paris-Sud.
- In 2014, C. Paulin was elected member of the Informatics Section of Academia Europaea <http://www.ae-info.org/>.
- A. Paskevich was in charge (together with C. Bastoul in 2012–2013 and B. Cautis in 2013–2014) of Licence professionnelle PER (L3) at IUT d’Orsay, Paris-Sud University since September 2012 till August 2014.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master Parisien de Recherche en Informatique (MPRI) <https://wikimpri.dptinfo.ens-cachan.fr/doku.php>: “Proofs of Programs” <http://www.lri.fr/~marche/MPRI-2-36-1/> (M2), C. Marché (12h), A. Charguéraud (12h), Université Paris 7, France.

Licence: “Programmation Fonctionnelle avancée” (L3), M. Clochard (10h), Université Paris-Sud, France.

Master: “Projet de programmation (compilation)” (M1), M. Clochard (50h), Université Paris-Sud, France.

Licence: “Programmation fonctionnelle avancée” (L3), S. Conchon (30h), Université Paris-Sud, France.

Master: “Compilation” (M1), S. Conchon (33h), Université Paris-Sud, France.

DUT (Diplôme Universitaire de Technologie): “Systèmes” (S3), D. Declerck, IUT d’Orsay, Université Paris-Sud, France.

DUT (Diplôme Universitaire de Technologie): “Programmation et administration des bases de données” (S2), S. Dumbrava (62h), IUT d’Orsay, Université Paris-Sud, France.

DUT (Diplôme Universitaire de Technologie): “Bases de données avancées” (S3), S. Dumbrava (36h), IUT d’Orsay, Université Paris-Sud, France.

Licence: “Langages de programmation et compilation” (L3), J.-C. Filliâtre (36h), École Normale Supérieure, France.

Licence: “INF411: Les bases de l’algorithmique et de la programmation” (L3), J.-C. Filliâtre (16h), École Polytechnique, France.

Licence: “Mathématiques pour l’informatique” (L2), L. Gondelman (30h), Université Paris-Sud, France.

Master: “Compilation” (M1), L. Gondelman (28h), Université Paris-Sud, France.

DUT (Diplôme Universitaire de Technologie): “Programmation système” (S4), A. Paskevich (48h), IUT d’Orsay, Université Paris-Sud, France.

9.2.2. Internships

- Y. Chatelain, a L3 student from Université Paris-Sud, did a 2-month internship under the supervision of J.-C. Filliâtre and A. Paskevich, on the implementation of a new criterion of termination of recursive functions in a pure functional language.
- J.-P. Deplaix, a third-year student of Epitech, did a 4-month internship, supervised by J.-C. Filliâtre and A. Paskevich, on the compilation of *Why3* programs to C.

- J. Grangier, a M1 student from ENSIEE, did a 10-week internship under the supervision of A. Charguéraud, on the verification of the functional correctness and the asymptotic complexity of a dynamic array data structure.
- X. Onfroy, a L3 student from ENS-Lyon, did a 6-week internship, supervised by G. Melquiond, on the formalization of the gauge integral in the setting of the Coquelicot library.

9.2.3. Supervision

HDR: É. Contejean, “Facettes de la preuve, Jeux de reflets entre démonstration automatique et preuve assistée” [13], Université Paris-Sud, June 13th, 2014.

HDR: S. Boldo, “Deductive Formal Verification: How To Make Your Floating-Point Programs Behave” [12], Université Paris-Sud, October 6th, 2014.

PhD: C. Dross, “Theories and Techniques for Automated Proof of programs” [14], Université Paris-Sud, Apr. 1st, 2014, supervised by C. Marché, A. Paskevich, and with industrial supervisors Y. Moy and J. Kanig (AdaCore company).

PhD: A. Mebsout, “SMT-based Model-Checking” [15], Université Paris-Sud, Sep. 29th, 2014, supervised by F. Zaïdi (LRI) and S. Conchon.

PhD in progress: C. Lelay, “Real numbers for the Coq proof assistant”, since Oct. 2011, supervised by S. Boldo and G. Melquiond.

PhD in progress: S. Dumbrava, “Towards data certification”, since Oct. 2012, supervised by V. Benzaken (LRI) and É. Contejean.

PhD in progress: L. Gondelmans, “Obtention de programmes corrects par raffinement dans un langage de haut niveau”, since Oct. 2013, supervised by J.-C. Filliâtre and A. Paskevich.

PhD in progress: M. Clochard, “A unique language for developing programs and prove them at the same time”, since Oct. 2013, supervised by C. Marché and A. Paskevich.

PhD in progress: J. C. Mbiada Djanda, “Augmented Semantics for the Non-interference of critical C Code”, since Nov. 2013, supervised by C. Marché and J. Signoles (CEA LIST).

PhD in progress: D. Declerck, “Vérification par des techniques de test et model checking de programmes C11”, since Sep. 2014, supervised by F. Zaïdi (LRI) and S. Conchon.

9.2.4. Juries

S. Boldo: examiner, PhD committee of Mohamed Amine Najahi, “Synthesis of certified programs in fixed-point arithmetic, and its application to linear algebra basic blocks”, Perpignan, France, December 2014.

J.-C. Filliâtre: examiner, PhD committee of Jonathan Protzenko, “Mezzo: the language of the future”, Université Paris Diderot, September 2014.

C. Marché: reviewer, PhD committee of T. Borner “Advancing Deductive Program-Level Verification for Real-World Application”, Karlsruhe Institute of Technology, Karlsruhe, Germany, October 2014.

C. Marché: examiner, HDR committee of S. Boldo, “Deductive Formal Verification: How To Make Your Floating-Point Programs Behave”, Université Paris-Sud, October 2014.

C. Paulin: examiner, PhD committee of Guillaume Cano, “Interaction entre algèbre linéaire et analyse en formalisation des mathématiques”, University of Nice-Sophia Antipolis, March 2014.

C. Paulin: examiner, HDR committee of Évelyne Contejean, “Facettes de la preuve, Jeux de reflets entre démonstration automatique et preuve assistée”, Université Paris-Sud, June 2014.

C. Paulin: president of the PhD committee of Peva Blanchard “Synchronization and Fault-tolerance in Distributed Algorithms”, Université Paris-Sud, September 2014.

C. Paulin: examiner, HDR committee of Stéphane Graham-Lengrand “Polarities & Focussing: a Journey from Realisability to Automated Reasoning”, Université Paris-Sud, December 2014.

9.3. Popularization

- S. Boldo presented the *Concours Castor informatique* to computer sciences teachers (ISN) in Nancy on April 17th, 2014. A video of the talk is available at <http://videos.univ-lorraine.fr/index.php?act=view&id=1369>.
- S. Boldo gave a 2-hour course entitled *Les nombres et l'ordinateur* at the École Normale Supérieure de Cachan, France, on September 9th.
- S. Boldo gave a 2-hour course *Pourquoi mon ordinateur calcule faux?* to a general audience at the Université Inter-Âge in Versailles, France, on March 4th.
- S. Boldo gave a talk for computer sciences teachers (ISN) in Créteil on March 24th
- S. Boldo gave a talk for teenagers at the lycée Maximilien Perretin Alfortville on May 22nd.
- S. Boldo wrote an article with Jean-Michel Muller (ARIC) in the popularization journal *La Recherche* [42].
- S. Boldo wrote in 2013 an article for the French blog celebrating 2013 as the “Mathematics of Planet Earth” year: <http://mpt2013.fr/meme-les-ordinateurs-font-des-erreurs/>. This article was selected to be published in a book published in 2014 [41].
- S. Boldo is member of the editorial committee of the popular science Interstices web site, since April 2008. <http://interstices.info/>.
- S. Boldo is member of the editorial board of *Binaire* <http://binaire.blog.lemonde.fr>, the blog of the French Computer Science Society.
- S. Boldo, G. Melquiond, A. Paskevich, and C. Paulin animated two stands at the *Fête de la science*.
- A. Charguéraud and S. Boldo contributed to the preparation of the exercises of the *Concours Castor informatique* <http://castor-informatique.fr/>. A. Charguéraud is also one of the three organizers of this contest. The purpose of the *Concours Castor* is to introduce pupils (from *6ème* to *terminale*) to computer sciences. More than 228,000 teenagers played with the interactive exercises in November 2014.
- S. Conchon and J.-C. Filliâtre published a book “*Apprendre à programmer avec OCaml*” for undergraduate students learning computer programming [39] (Eyrolles, September 2014).