Activity Report 2012

Section Dissemination

AOSTE Project-Team

9. Dissemination

9.1. Scientific Animation

Robert de Simone

Technical Program Committee: FDL2012, SIES2012, SSMBSE2012, MEMOCODE2012, ESLsyn2012.

Board of Administrators: CIM PACA Design Platform association

Scientific co-animator: DAS SE (Specific Action Domain on Embedded Systems), Aerospace Valley Competitiveness Cluster

Yves Sorel

Technical Program Committee: RTNS 2012, DASIP 2012.

Editorial Board: Traitement du Signal Journal

Steering Committee: OCDS/SYSTEM@TIC Paris-Region Cluster

Frédéric Mallet

Technical Program Committee: ESLsyn2012.

Laurent George

Technical Program Committee: ECRTS 2012, RTAS 2012, WFCS 2012.

Co-editor: special issue of Real-Time Systems Journal made of best papers from RTNS 2011 conference (with Alan Burns, Univ. of York, UK).

Scientific Co-chair: ACTRISS group, supported by GDR ASR (CNRS, France) (http://www.actriss.org/).

Julien Deantoni

Technical Program Committee: CIEL2012.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Julien Deantoni, Computer Environnement, 30 h, L2 level, Polytech engineering school of University Nice/Sophia-Antipolis (UNS EPU) France.

Master:Julien Deantoni, Model Driven Engineering, 22 h, M2, UNS EPU.

Master : Julien Deantoni, C++ and Object Oriented Programming, 54 h, M1, UNS EPU.

Master: Julien Deantoni, Embedded Software and systems, 7 h, M2, UNS EPU.

Master: Julien Deantoni, VHDL, 40 h, M1, UNS EPU.

Licence: Sid-Ahmed-Ali Touati, Assembleurs et jeux d'instructions, 52h, L3, UNS Licence info.

Licence: Sid-Ahmed-Ali Touati, Systèmes informatiques, 30h, L1, UNS Licence info.

Master: Sid-Ahmed-Ali Touati, Programmation efficaces pour programmes embarqués et hautes performances, 16h, M1 Master ISI.

Master: Sid-Ahmed-Ali Touati, Systèmes d'exploitation avancés, 39h, M1, UNS Master ISI.

Master: Sid-Ahmed-Ali Touati, Programmation efficace et Optimisation de code, 16h, M1, UNS Master ISI.

Master: Sid-Ahmed-Ali Touati, Architecture des Processeurs, 15h, M1, UNS EPU.

Licence : Frédéric Mallet, Introduction à la Programmation Objet, 45h, L1, UNS.

Licence: Frédéric Mallet, Architecture des ordinateurs, 45h, L3, UNS.

Master: Frédéric Mallet, Programmation Avancée et Design Patterns, 93h, M1, UNS.

Master: Frédéric Mallet, Java pour l'Informatique Industrielle, 24h, M1, UNS.

Master: Frédéric Mallet, Architectures des ordinateurs, 12h, M1, UNS.

Master: Frédéric Mallet, Formal Models for Network-On-Chips, 3h, M2, UNS.

Licence : Marie-Agnes Peraldi-Frati, Algorithms and programming 60h,L1, UNS Institute of technology.

Licence : Marie-Agnes Peraldi-Frati, System and Networks administration 80h, L2, UNS Institute of technology .

Licence :Marie-Agnes Peraldi-Frati, Web Programming 50 h , L2, UNS Institute of technology.

Master : Robert de Simone, Formal Models for Networks-on-Chip, 24h , M2, UNS.

Master : Robert de Simone, Semantics of Embedded and Distributed Systems, 24 h, M1, UNS.

Master: Yves Sorel, Optimization of distributed real-time embedded systems, 24H, M2, University Paris Sud.

Master: Yves Sorel, Distributed real-time systems, 26H, M2, University Paris Est

Master: Yves Sorel, Specification and formal models for embedded systems, 28H, M2, ENSTA Engineering School Paris

Master: Yves Sorel, Correct by construction design of reactive systems, 18H, M2, ESIEE Engineering School Noisy-Le-Grand

Master: Dumitru Potop, Programmation synchrone des systèmes temps-réel, 8h, M1, EPITA Engineering School Paris

Licence: Laurent George, Java and Shell programming 48h, L1, IUT RT UPEC

Master: Laurent George, Distributed Real-Time Systems, 24h, M2, UPEC

9.2.2. *Supervision*

PhD: Mohamed Marouf, *Ordonnancement temps réel dur multiprocesseur tolérant aux fautes appliqué à la robotique mobile*, Ecole des Mines de Paris, defended on June 1st 2012, supervised by Yves Sorel, co-supervised by Brigitte D'Andrea-Novel (Institut Mines-Telecom).

PhD in progress: Carlos Ernesto Gomez-Cardenas,*Environnement multi-vues pour la métamodélisation sémantique formelle de systèmes embarqués*, UNS, started September 2010, supervised by Frédéric Mallet.

PhD in progress: Matias Vara-Larsen, *Toward a formal and hierarchical timed model for concurrent heterogeneous model*, ANR/CNRS, started November 2012, supervised by Frédéric Mallet, co-supervised by Julien Deantoni.

PhD in progress: Ameni Khecharem, *High-Level modeling of hierarchical power management policies in SoCs*, UNS, started October 2012, supervised by Robert de Simone.

PhD in progress: Ying Lin, *Formal Analysis of polychronous models with MARTE/CCSL*, East China Normal University, started September 2011, supervised by Jing Liu (ECNU), co-supervised by Frédéric Mallet.

PhD in progress: Falou Ndoye, *Multiprocessor real-time scheduling taking into account preemption cost*, started January 2011, supervised by Yves Sorel.

PhD in progress: Manel Djemal, *Distributed real-time scheduling onto NoC architectures*, EDITE/UPMC, started Nov. 2010, co-supervised by Alix Munier (UPMC/Lip6) and D. Potop-Butucaru.

PhD in progress: Thomas Carle, *Real-time implementation of embedded control applications with conditional control onto time-triggered architectures*, EDITE/UPMC, started Sep. 2011, supervised by D. Potop-Butucaru.

PhD in progress: Pierre Courbin (ECE/UPEC), *Ordonnancement temps réel parallèle multiprocesseur*, started September 2009, supervised by Laurent George.

PhD in progress: Philippe Thierry (CIFRE Thales/UPEC), *Ordonnancement temps réel multiprocesseur sous contraintes de sécurité*, started April 2010, supervised by Laurent George.

PhD in progress: Vincent Sciandra, (CIFRE Veolia/UPEC), *Ordonnancement temps réel à criticité mixte dans les systèmes de transports intelligents (ITS)*, started Oct. 2010, supervised by Laurent George.

PhD in progress: Manar Qamhieh, (UPEMLV), *Ordonnancement temps réel de graphes de tâches parallèles à criticité mixte*, started Sept. 2010, co-supervised by Serge Midonnet (UPEMLV) and Laurent George.

PhD: Abdelhafid Mazouz, *An Empirical Study of Program Performance of OpenMP Applications on Multicore Platforms*, defended December 11 2012, UVSQ, supervised by Sid Touati (as part of his activities prior to joining Aoste), co-supervisd by D. Bartou (LABRI).

9.2.3. Juries

Robert de Simone

PhD reviewer: Sébastien Guillet (Université Bretagne-Sud), Cédric Auger (Université Orsay Paris-Sud),

HDR examiner: Ludovic Apvrille (Institut Mines-Telecom) (President of Jury).

Frédéric Mallet

PhD reviewer: Boutheina Bannour (Ecole Centrale Paris), Daniel Knorreck (Télécom ParisTech), Michel Lauer (INP Toulouse), Sabir Idrees (Télécom ParisTech)

PhD examiner: Cyril Faucher (Université de La Rochelle)

Sid Touati

PhD reviewer: Mohamed Benazouz (U. Paris 6), Jingyan Jourdan-Lu (ENS Lyon), Jean-Noël Quintin (INP Grenoble)

PhD examiner: Julien Jaegger (UVSQ)

Laurent George

PhD reviewer: Aurélien Monot (Université de Lorraine, Nancy)

Yves Sorel

PhD examiner: Mohamed Benazouz (University Pierre et Marie Curie)

Julien Deantoni

PhD examiner: Abderraouf Benyahia (Supelec)

GALAAD Project-Team

8. Dissemination

8.1. Scientific Animation

Laurent Busé

- was a member of the program committee of the 2012 ISSAC international conference,
- is a member of the committee of "agrégation de mathématiques".

Evelyne Hubert

- is an associate editor of the Journal of Symbolic Computation (http://www.journals.elsevier.com/journal-of-symbolic-computation),
- is part of the Advisory Board of the MEGA conference series and co-edited this year a special issue of the Journal of Symbolic Computation,
- is part of the local Inria Committee for Invited Professors and Postodoctoral Fellows and was elected to the new hiring committee at the mathematics department of the University of Nice (CPRH 25-26-60).

Bernard Mourrain

- is an associate editor of the Journal of Symbolic Computation (http://www.journals.elsevier.com/journal-of-symbolic-computation),
- is member of the Advisory Board of the MEGA conference series,
- is chair of the local Inria Committee for Courses and Conferences.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Laurent Busé teaching activities:

Master : *Courbes et Surfaces*, 42h ETD, first year of Master MAM4 of the EPU, University of Nice.

Master MDFI: *Elimination theory*, 13h, University of Luminy, Marseille.

Mathieu Collowald teaching activities:

L1 MASS : Statistics (Exercices), 20h, University of Nice-Sophia Antipolis.

L1 I : Algebra (Exercices), 44h, University of Nice-Sophia Antipolis.

André Galligo teaching activities:

Master : *Introduction to random polynomials and matrices*, University of Buenos Aires, Argentina, 20h.

Bernard Mourrain teaching activities:

Master 2: *Computational Algebra for Real Geometry* 30h ETD, Master 2 of Mathematics, Lab. J.A. Dieudonné.

Master MDFI: *Elimination theory*, 15h, University of Luminy, Marseille.

8.2.2. Supervision

8.2.2.1. Defended Habilitation thesis

Evelyne Hubert was awarded her habilitation in mathematics from the University of Nice in September 2012. The Jury consisted of Elizabeth Mansfield (University of Kent, UK), Michael Singer (North Carolina State University, USA), Emilio Musso (Politecnico de Turino, Italy), Pascal Chossat (University of Nice), Bruno Salvy (Inria Paris), Bernard Mourrain (Inria Méditerranée).

8.2.2.2. Ph.D. thesis in progress

Marta Abril Bucero, Moment matrices, real algebraic geometry and polynomial optimization. Advisor: Bernard Mourrain.

Mathieu Collowald, Integral representation of shapes for feature conservation or extraction. Advisors: Evelyne Hubert and Bernard Mourrain.

Abdallah Lachaal, Geometric computing with procedural models and applications. Advisor: Bernard Mourrain.

8.2.2.3. Internship

Valentin Michelet, *Intersection courbe/surface au moyen des représentations matricielles* , 3 months, Master1.

Baptiste Mourrain, *A dynamic web application*, 1 month, first year of engineer school.

Zora Abdoul Kaid, *Isoparametrisation of multi-patch surfaces*, 3 months, MAM4, Master1.

Rémy Abdeljalil, *Adaptative approximation of point sets by T-splines surfaces*, 3 months, MAM4, Master1.

8.2.3. Juries

Bernard Mourrain was member of the HDR of Evelyne Hubert, of the Ph.D. committee of R. Lebreton "Contribution à l'algorithmique détendue et à la résolution des systèmes polynomiaux", École Polytechnique (11/12/2012), of the PhD of C. Preusakarn "Reconstructing of Plant Architecture from 3D Laser Scanner Data", University of Montepellier 2, (19/12/2012).

André Galligo was a member of the PhD of Santiago Laplagne, "Algoritmos de Algebra Conmutativa en Anillos de Polinomios" University of Buenos Aires (Argentina), Avpil 2012, of the PhD of Nelly Villamizar, "Algebraic Geometry of Splines". University of Oslo (Norway), December 2012.

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GEOMETRICA Project-Team

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8. Dissemination

8.1. Animation of the scientific community

8.1.1. Editorial boards of scientific journals

P. Alliez is an associate editor of *ACM Transactions on Graphics* and *Graphical Models*.

J-D. Boissonnat is a member of the editorial board of the *Journal of the ACM*, *Discrete and Computational Geometry*, *Algorithmica*, the *International Journal of Computational Geometry and Applications* and the electronic *Journal of Computational Geometry*. He is also a member of the editorial advisory board of the Springer Verlag book series *Geometry and Computing*.

F. Chazal is an associate editor of *Graphical Models* and *SIAM journal on Imaging Science*.

S. Oudot is co-editor with T. Dey of the special issue of *Discrete and Computational Geometry* on SoCG 2012.

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*.

P. Alliez, M. Teillaud (review manager until April 30th), and M. Yvinec are members of the CGAL editorial board.

8.1.2. Conference program committees

Pierre Alliez was a program committee member of EUROGRAPHICS main conference, EUROGRAPHICS Symposium on Geometry Processing and International Workshop on Point Cloud Processing (a CVPR workshop).

Steve Oudot was a program committee member of SoCG 2012 (ACM Symposium on Computational Geometry).

Frédéric Chazal was a program committee member of ATMCS 2012 (5th conf. on Algebra and Topology: Methods, Computation and Science), SMAI-SIGMA 2012 conference, SMAI-MAIRCI workshop 2012, ICPRAM 2012 and 2013 (International Conference on Patern Recognition Applications and Methods).

Frédéric Chazal is a program committee member of SoCG 2013 (ACM Symposium on Computational Geometry).

David Cohen-Steiner was a program committee member of the EUROGRAPHICS Symposium on Geometry Processing.

J-D. Boissonnat was a program committee member of "Mathematical Methods for Curves and Surfaces", Geometric Modeling and processing (GMP 2012), EUROGRAPHICS Symposium on Geometry Processing (SGP 2012)

Florent Lafarge was program chair of IEEE CVPR workshop on Point Cloud Processing and a program committee member of EUROGRAPHICS short papers and ISPRS congress.

8.1.3. Steering committees

Monique Teillaud is a member of the Computational Geometry Steering Committee.

8.1.4. Ph.D. thesis and HDR committees

Pierre Alliez was a referee and member of the Ph.D. defense committee of Nicolas Mellado (Inria Bordeaux) and David Bommes (RWTH Aachen).

Steve Oudot was a member of the Ph.D. defense committee of Arijit Ghosh (Inria Sophia-Antipolis).

Jean-Daniel Boissonnat was a member of the HDR defense of Eric Colin de Verdière (ENS Ulm)

Olivier Devillers was a member of the Ph.D. defense committee of Daniela Maftuleac (Univ. Marseille)

8.1.5. Inria committees

F. Chazal is the chair of the "Commission scientifique" at Inria Saclay - île de France.

Monique Teillaud is a member of the Inria Evaluation Committee.

She coordinated the working group on life of software of the evaluation committee. She is a member of the working group on the Inria software database (BIL).

She was a member of the national Inria CR2 and DR2 recruitment committees, as well as a member of the Inria Starting and Advanced Research Positions committees.

She is also a member of both Inria Sophia CDT (Committee for Technologic Development) and Inria national CDT.

Florent Lafarge is a member of the comité de Suivi Doctoral (CSD) of Inria Sophia.

Pierre Alliez is a member of the comité de médiation scientifique of Inria Sophia Antipolis - Mediterranee.

8.1.6. Other committees

J.-D. Boissonnat is a member of the working groups GP1 (Modèles et calcul) and GP2 (Logiciels et systèmes informatiques) de l'Alliance des sciences et technologies du numérique (Allistène).

J.-D. Boissonnat is a member of the AERES Board (Evaluation Agency for Research and Higher Education).

J-D. Boissonnat chaired the Visiting Committee of the Geometric Modeling and Scientific Visualization Center of the King Abdullah University of Science and Technology (KAUST, Saudi Arabia, 2012).

J-D. Boissonnat chaired the recruitment committee of ENS Lyon (PU n°4037 / CS 27)

F. Chazal is a member of the Scientific Council of AMIES (Agence pour les Mathématiques en Interaction avec l'Industrie et la Société)

F. Chazal is a member of the "Comité de pilotage" of the MAIRCI and SIGMA (ex-AFA) groups of the SMAI.

F. Chazal is a member of the "Bureau du Comité des Projets" at Inria Saclay.

M. Glisse is a member of the experts group of AFNOR for the standardization of the C++ language within the ISO/WG21 working group.

M. Teillaud was a member of the LIAMA Visiting Committee.

8.1.7. Conference organization

J.-D. Boissonnat chairs the scientific committee of the Jacques Morgenstern Colloquium.

Monique Teillaud organized the *Minisymposium on publicly available geometric/topological software* (with Menelaos Karavelas), Chapel Hill, USA, June 17&19, 2012.

Monique Teillaud was a member of the scientific committee of the workshop SIGMA'2012: Signal, Image, Geometry, Modelling, Approximation, Marseille, November 19-23.

CGAL developers meeting, Inria, December 17-21.

8.1.8. Web site

M. Teillaud is maintaining the Computational Geometry Web Pages http://www.computational-geometry.org/, hosted by Inria. 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.

8.2. Teaching

We give here the details of courses. Web pages of the graduate courses can be found on the web site :
http://www.inria.fr/sophia/geometrica/

Traitement numérique de la géométrie, Lorsque nos maths s'incarnent dans les ordinateurs, Monique Teillaud, 3h, Centre de Formation d'Apprentis de l'Industrie, Avignon.

"à quoi sert un triangle ?", Monique Teillaud, 2x2h, Collège Le Prés des Roures, Le Rouret, in the framework of the national Week of Mathematics.

Master: Computational Geometry: from Theory to Applications, Steve Oudot, 20h ETD, M1, École Polytechnique.

Master: Géométrie algorithmique, Olivier Devillers, 13h ETD (2011-2012) 24h ETD (2012-2013), M1, Université de Nice.

Master: Algorithmes géométriques: théorie et pratique, Pierre Alliez, Olivier Devillers, and Monique Teillaud, 28h ETD, M2, Université de Nice.

Master: Computational Geometry Learning, J.-D. Boissonnat, F. Chazal and M. Yvinec, 25h, M2, MPRI (Paris).

Master: Computational Geometry: from Theory to Applications, S. Oudot, 20h, M1, école Polytechnique.

Master: Maillages 3D et applications, P. Alliez, 21h, Ecole des Ponts ParisTech (Paris).

Master: Mathématiques pour la géométrie, P. Alliez, 24h, EFREI (Ecole d'Ingénieur des Technologies de l'Information et de la Communication, Paris).

Doctorat: Geometric Inference, F. Chazal and D. Cohen-Steiner, 20h, Université Paris Sud (Orsay).

Master: Markov Random Fields, F. Lafarge, 9h, EPU Sophia Antipolis.

Master: Image segmentation, F. Lafarge, 11h, University of Nice Sophia Antipolis.

Doctorat: Introduction to Geometric Inference, F. Chazal, 3h, Neuchâtel University.

8.2.1. Ph.D. theses

Arijit Ghosh, Piecewise Linear Reconstruction and Meshing of Submanifolds of Euclidean Space, Université de Nice-Sophia Antipolis, May 30, 2012, J-D. Boissonnat.

Bertrand Pellenard, Generation of quadrangle meshes. Université de Nice-Sophia Antipolis, Dec 18, 2012, P. Alliez.

Claire Caillerie, Sélection de modèles pour l'inférence géométrique, Université Paris XI, started September 2008, Frédéric Chazal and Pascal Massart (in progress).

Alexandre Bos, Topological methods for geometric data classification, Université Paris XI, started September 2010, Frédéric Chazal and Steve Oudot (in progress).

Mikhail Bogdanov, Triangulations in non-Euclidean spaces, started October 1st 2010, Monique Teillaud (in progress).

Yannick Verdié, Urban scene analysis from unstructured point data, Université de Nice-Sophia Antipolis, started November 2010, Florent Lafarge (in progress).

Mickael Buchet, Topological and geometric inference from measures, Université Paris XI, started October 2011, Frédéric Chazal and Steve Oudot (in progress).

Ross Hemsley, Probabilistic methods for the efficiency of geometric structures and algorithms, started October 1st 2011, Olivier Devillers (in progress).

Clément Maria, Data structures for simplicial complexes, Université de Nice-Sophia Antipolis, started October 1, 2011, J-D. Boissonnat (in progress).

Simon Giraudot, Robust Shape Reconstruction, Université de Nice-Sophia Antipolis, started November 2011, Pierre Alliez (in progress).

Xavier Rolland-Névière, Robust watermarking of 3D Shape, Université de Nice-Sophia Antipolis, started November 2011, Pierre Alliez and Gwenael Doerr from Technicolor (in progress).

Sven Oesau, Reconstruction of indoor scenes, Université de Nice-Sophia Antipolis, started April 2012, Pierre Alliez and Florent Lafarge (in progress).

Manish Mandad, Robust Shape Approximation, Université de Nice-Sophia Antipolis, started November 2012, Pierre Alliez (in progress).

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

8.2.2. Internships

Internship proposals can be found on the web at http://www.inria.fr/sophia/geometrica/

Manish Mandad, Shape approximation with guarantees, Master CBB (France).

Mathier Schmitt, Meshing of the hyperbolic octagon, L3 ENS Lyon (Monique Teillaud).

Claudia Werner, Triangulations on the sphere, Hochschule für Technik Stuttgart (Monique Teillaud)

8.3. Participation to conferences, seminars, invitations

8.3.1. Invited Talks

Frédéric Chazal, "Topological Data Analysis using distance based functions", 4th International Workshop on computational Topology in Image context, Bertinoro, Italy, february 2012.

Olivier Devillers, "EuroCG-2012", Delaunay triangulation, theory vs practice, March 19th.

Pierre Alliez, "Robust Shape Reconstruction", Dive with an Expert Seminar, Schlumberger Montpellier Technology Center, May 2012.

J-D. Boissonnat, "Aspects algorithmiques de la triangulation des variétés", Colloque Mathématiques et Formation des Ingénieurs", Coetquidan, Juin 2012.

Frédéric Chazal, "Topological Data Analysis using distance based functions", Dynamics, Topology and Computations (DyToComp 2012 - satellite conference of 6th European Congress of Mathematics), Bedlewo Poland, June 2012.

Frédéric Chazal, "Detection and Approximation of Linear Structures in Metric Spaces" Workshop on Algorithms for Modern Massive Data Sets (MMDS 2012), Stanford USA, July 2012.

J-D. Boissonnat, "Delaunay-type structures for manifolds", Workshop on Applied and Computational Topology (ATMCS), Edinburgh July 2012.

Pierre Alliez, "Advances in Architectural Geometry", Paris, September.

Pierre Alliez, "MICCAI workshop on Mesh Processing in Medical Image Analysis", Nice, October.

Pierre Alliez, "3DIMPVT: 3D Imaging, Modeling, Processing, Visualization and Transmission", Zurich, October.

J-D. Boissonnat, "Provably good meshes", Dive with an Expert Seminar, Schlumberger Montpellier Technology Center, October 2012.

Frédéric Chazal, "Persistence Stability for Geometric complexes" , Workshop on Algebraic Topology and Machine Learning, NIPS 2012, Lake Tahoe USA, December 2012.

8.3.2. Seminars

Members of the project have presented their published articles at conferences. The reader can refer to the bibliography to obtain the corresponding list. We list below all other talks given in seminars, summer schools and other workshops.

Olivier Devillers, «Constructions incrémentielles randomisées», journées Présage, january 12-13.

Marc Glisse, «Complexité moyenne et Visibilité 3D», journées Présage, january 12-13.

Olivier Devillers, Olivier Devillers, «Delaunay triangulations, theory vs. practice», journées de géometrie algorithmique, april 2-6.

Clément Maria, "A Data Structure to Represent Simplicial Complexes", journées de géométrie algorithmique, april 2-6.

Ross Hemsley, "Pivot Walk - A Faster Walking Strategy for Point Location" , journées de géométrie algorithmique, april 2-6.

Ramsay Dyer, "Stability of Delaunay-type structures for manifolds", journées de géométrie algorithmique, april 2-6.

Frédéric Chazal, "Geometric Inference using distance-like functions", Minisymposium on Computational Geometric Learning, Exploring geometric structures in high dimensions, CG:APT, SoCG 2012.

Frédéric Chazal, "Persistence Stability for Geometric complexes", Workshop on Topological data analysis and machine learning theory, Banff Canada, October 2012.

Olivier Devillers, «Hypergraphes de régions vides I : point de vue de la géométrie algorithmique», journées Présage, october 18-19.

Marc Glisse, «Complexité moyenne en visibilité, sans les logs», journées Présage, october 18-19.

Frédéric Chazal, "Detection and Approximation of Linear Structures in Metric Spaces", SMAI-SIGMA Conference 2012, CIRM Luminy France, November 2012.

Ramsay Dyer, "Stability of Delaunay-type structures for manifolds", SMAI-SIGMA Conference 2012, CIRM

Clément Maria, "A space and time efficient implementation for computing persistent homology", Computational Geometric Learning Workshop, Berlin, december 2012.

Pierre Alliez, "The CGAL Library and Mesh Generation", Graduate school of the EUROGRAPHICS Symposium on Geometry Processing, July 2012.

8.3.3. *The Geometrica seminar*
The GEOMETRICA seminar featured presentations from the following visiting scientists:

Xianhai Meng (Beihang University, China): Mesh Generation and 3D Geological Modeling.

Thijs van Lankveld (University of Utrecht). Reconstructing urban geometry per surface from point samples. March 19.

Vincent Vidal (LIRIS, Lyon, France). Modèles graphiques pour segmenter et remailler les maillages surfaciques triangulaires. April 11.

Mark Blome (Konrad-Zuse-Zentrum für Informationstechnik, Berlin). Modeling of complex 3D nano-photonic devices using Computer Aided Design techniques. July 3.

Benjamin Burton (University of Queensland, Australia). Unknot recognition and the elusive polynomial time algorithm. October 3.

8.3.4. *Scientific visits*

Clément Maria visited Pr. Coutsias (University of New Mexico) for one week in september and Pr. Dey (Ohio State University) for one week.

Pierre Alliez, RWTH Aachen, October 10-12.

Olivier Devillers, EPI RAP, November 19-21.

Ross Hemsley, EPI RAP, November 19-21.

Florent Lafarge, University of Auckland, December 17- January 11.

<p align="center" style="color:red">MARELLE Project-Team</p>

7. Dissemination

7.1. Scientific Animation

- We organized the MAP spring school on the formalization of mathematics, March 12-16, 2012, at Inria Sophia Antipolis. This school had 65 attendants and 5 invited speakers: G. Gonthier (Microsoft Research, Prize the EADS foundation), T. Hales (University of Pittsburgh), J. Rubio (Universidad de la Rioja), B. Spitters (Radboud University), and V. Voevodsky (Institute for Advanced Study, Fields Medal). The local organization was supervised by Yves Bertot and included a strong investment by Nathalie Bellesso and Agnès Cortell, from Inria's service for scientific events. Yves Bertot, Laurence Rideau, and Laurent Théry also taught at this school.
- Yves Bertot participated as a lecturer in the asian-pacific summer school on formal methods, July 16-20, at East China Normal University in Shanghai. He gave 6 lectures and supervised laboratory sessions.
- Yves Bertot and Patrick Rambert released a multi-media course on the Coq system, consisting in more than 8 hours of recorded courses available at http://fuscia.inrialpes.fr/cours/coq/.
- members of the project participated in the program committees of PXTP (Proof Exchange for Theorem Proving), PAAR (Practical Aspects of Automated Reasoning), ITP (Interactive Theorem Proving).

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Licence : Laurence Rideau, introduction to programming in CAML, Classe préparatoire MP* (L2 level), Lycée Masséna, Nice

Master : Benjamin Grégoire, "Verification and Security", 18 ETD, M2, University of Nice, France

Master : Yves Bertot, "Verification of proofs and programs", 27 ETD, University of Nice, France

Master : Laurent Théry, "Introduction to Coq", 3 ETD, Ecole des Mines, Sophia Antipolis, France

Master : Laurent Théry, "Formalization of floating point arithmetic", Ecole Normale Supérieure de Lyon, France

Doctorate : Yves Bertot, "Introduction to formalized mathematics", 30ETD, Inria Sophia Antipolis, France

Doctorate : Laurence Rideau, "Introduction to formalized mathematics", 30ETD, Inria Sophia Antipolis, France

Doctorate : Laurent Théry, "Introduction to formalized mathematics", 30ETD, Inria Sophia Antipolis, France

Doctorate : Yves Bertot, "Formal verification with Coq", 50 ETD, East China Normal University, Shanghai, China.

7.2.2. Supervision

PhD & HdR :

PhD : Sylvain Heraud, "Verification Semi-automatique de primitives cryptographiques", University of Nice Sophia Antipolis, March 12, 2012 (thesis started in October 2008), supervisor : Benjamin Grégoire.

PhD in progress : Michaël Armand, "Application de la certification de résultats à l'automatisation de preuves interactives", started in October 2009, supervisors: Laurent Théry and Benjamin Grégoire.

PhD in progress : Guillaume Cano, "Une formalisation adaptable de l'algèbre linéaire", started in October 2010, supervised by Yves Bertot.

PhD in progress : Maxime Dénès, "Description formelle d'algèbre linéaire pour l'algorithmique rapide", started in September 2010, supervised by Yves Bertot.

7.2.3. Juries

+ Yves Bertot was a reviewer for the PhD theses of Celia Picard (U. Toulouse) and Erik Martin-Dorel (ENS Lyon) and an examiner for the thesis of Francesco Bongiovanni (U. Nice).

+ Laurent Théry was an examiner for the thesis of Thomas Braibant (U. Grenoble) and for the Licenciate degree of Anders Mörtberg (U. Göteborg, Sweden).

7.3. Popularization

- Laurence Rideau took part in a presentation of research topics for students from "classes préparatoires" at Inria Sophia Antipolis Méditerranée.

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APICS Project-Team

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9. Dissemination

9.1. Scientific Animation

L. Baratchart, S. Chevillard and J. Leblond gave communications at the Workshop on Inverse Magnetization Problems, Nashville, USA (Apr.).

L. Baratchart and J. Leblond gave communications at PICOF, Conference Problèmes Inverses, Contrôle et Optimisation de Formes, Palaiseau, France (Apr.).

L. Baratchart gave invited talks at the Workshop on Potential Theory and Applications, Szeged, Hungary (June), and at SIGMA 2012, CIRM-Luminy (Nov). He gave a talk at the Conférence en l'honneur de Gauthier Sallet, Saint Louis du Sénégal (Dec.). He was a colloquim speaker at the State University of New York, Albany, USA (October) and at the University of Oregon, USA (Oct.).

S. Chevillard gave a talk at the ERNSI 2012 conference in Maastricht (Netherlands). He reviewed an article for the Journal of Symbolic Computation.

J. Leblond was invited to give a talk at the following conferences: Conference Control & Inverse Problems for PDE (CIPPDE), Santiago, Chili (Jan.), Workshop Control of Fluid-Structure Systems & Inverse Problems, Toulouse, France (Jun.), International Conference on Constructive Complex Approximation, Lille, France (Jun.), Joint Congress of the French & Vietnamese Math. Soc. (VMS-SMF), Hué, Vietnam (Aug.), Congress on Numerical MEthods & MOdelisation (MEMO), Tunis, Tunisie (Dec.). She also gave communications at the seminars of the School of Mathematics, Univ. Leeds, U.K. (Feb.), of the Institut de Mathématiques de Bordeaux (IMB, Univ. Bordeaux, Mar.), of the Department of Math. & Geosciences, Univ. Trieste, Italy (Oct.), and at the 2nd Nice Physical Day ("Journées de la Physique de Nice"), Nice (Dec.).

M. Olivi was co-organizer (with B. Hanzon and R. Peeters) of an invited session "model reduction/approximation" at the 16th IFAC Symposium on System Identification, Brussels, July 2012.

D. Ponomarev presented a poster [27] at the 2nd PhD Event in Fusion Science and Engineering, Pont-a-Mousson (Oct.).

E. Pozzi gave several communications at seminars at Univ. of Besançon, Grenoble (Jan.), Bordeaux, Orléans (Mar.), Marseille, Lille (Apr.)

F. Seyfert was invited to give a talk at the European Microwave Week 2012, Workshop on Advances of N-port networks for Space Application, Amsterdam, Netherlands.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: E. Pozzi, Numerical algorithmics, 26h ETD (from Sep.), L3, Computer Sciences, Polytech'Nice, Univ. Nice Sopia Antipolis, France.

9.2.2. Supervision

PhD: A.-M. Nicu, Approximation et représentation des fonctions sur la sphère. Applications aux problèmes inverses de la géodésie et l'imagerie médicale [13]. Univ. Nice Sophia Antipolis, ED STIC, Feb. 2012 (advisor: J. Leblond).

PhD in progress: S. Chaabi, Boundary value problems for pseudo-holomorphic functions, since Nov. 2008 (advisors: L. Baratchart and A. Borichev).

PhD in progress: D. Ponomarev, Inverse problems for planar conductivity and Schrödinger PDEs, since Nov. 2012 (advisors: J. Leblond, L. Baratchart).

9.2.3. Juries

- J. Leblond (advisor) and M. Olivi (examinator) were members of the PhD jury of A.-M. Nicu (Univ. Nice Sophia Antipolis, Feb.) [13].
- J. Leblond was a member (reviewer) of the PhD jury of N. Chaulet (Ecole Polytechnique, Nov.).
- L. Baratchart was the head of the PhD jury of Matteo Santacesaria (Ecole Polytechnique, Dec.).

9.3. Popularization

- M. Olivi is co-president with I. Castellani of the Committee MASTIC (Commission d'Animation, de Médiation et d'Animation Scientifique) https://project.inria.fr/mastic/. She is responsible for Scientific Mediation.
- J. Leblond and E. Pozzi are members of this committee.
- E. Pozzi participated to the "Filles et mathématiques" day, Avignon, Nov.

9.4. Community services

L. Baratchart is a member of the Editorial Boards of *Constructive Methods and Function Theory* and *Complex Analysis and Operator Theory*. He is Inria's representative at the « conseil scientifique » of the Univ. Provence (Aix-Marseille).

S. Chevillard is representative at the « comité de centre » and at the « comité des projets » (Research Center Inria-Sophia).

J. Leblond is an elected member of the "Conseil Scientifique" of Inria. Together with C. Calvet from Human Resources, she is in charge of the mission "Conseil et soutien aux chercheurs" within the Research Centre, and she participated to the working group BEAT ("Bien Être Au Travail").

M. Olivi is a member of the CSD (Comité de Suivi Doctoral) of the Research Center. She is responsible for scientific mediation.

F. Seyfert is a member of CUMIR at InRIA Sophia-Antipolis-Méditerrannée.

CASTOR Team

7. Dissemination

7.1. Scientific Animation

B. Nkonga, H. Guillard and M. Bilanceri have participated to the CEMRACS 2012 "Numerical methods and algorithms for High performance". Two CEMRACS projects have been supervised during the research session of this edition of CEMRACS.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Master : Afeintou SANGAM, Fondamentals of Analysis, two weeks and half intensive courses, M1, Kwame NKrumah University Of Science and Technology (project leads by France Ambassy at Accra and Universities of GHANA in the framework of Mathematics Doctoral Sessions), GHANA

7.2.2. Supervision

PhD : Audrey Bonnement, Modélisation numérique bi-fluide du plasma de bord des tokamaks : application à ITER, University of Nice-Sophia Antipolis, 03-07-2012, H. Guillard and R. Pasquetti.

PhD : Gael Selig, Équilibre évolutif à frontière libre et diffusion résistive dans un plasma de tokamak, University of Nice-Sophia Antipolis, 20-12-2012, J. Blum.

PhD in progress : Marie Martin,Approximation des équations de la MHD réduite, Since december 1st 2009, B. Nkonga

PhD in progress : Cédric Lachat, Parallel Mesh distribution and Adaptation, Since october 1st 2009, H. Guillard and L. Hascoet

PhD in progress : Jeaniffer-Lissette Vides Higueros, Approximation des écoulements en géométrie toroidale, Since october 1st 2011, B. Nkonga and H. Guillard.

PhD in progress : José Costa, Approximation C^k, Since october 1st 2012, B. Nkonga

PhD in progress : Clément le Touze, Couplage entre modèles diphasiques à « phases séparées » et à « phase dispersée » pour la combustion cryotechnique, Since october 1st 2011, H. Guillard.

PhD in progress : Pierre Cargemel, Déraffinement adaptatif de maillages non-structurés. Since november 5 2012, H. Guillard.

7.2.3. Juries

B. Nkonga was president of the PhD juries of

- Joseph Charles, 26 Avril 2012, Sophia Antipolis/Univ. of Nice. Amélioration des performances de méthodes Galerkin discontinues d'ordre élevé pour la résolution numérique des équations de Maxwell instationnaires sur des maillages simplexes
- Julien Richard, 07 Décembre, CERFACS/Univ. Montpellier 2. Développement d'une chaine de calcul pour les interactions fluide-structure et application aux instabilités aéro-acoustiques d'un moteur à propergol solide.

acted as referee for the defense of

- Gregory Huber August 28 2012 , IUSTI/Aix-Marseille Univ. Modélisation et simulation numérique des interfaces perméables
- Mathias Malandain, January 15 2013, Univ. of Rouen, Simulation massivement parallèle des écoulements turbulents à faible nombre de Mach.

and was member of the jury of :

Elena Collado Morata, 29 Octobre, 2012, CERFACS/Univ. of Toulouse, Impact of the unsteady aerothermal environement on the turbine blades temperature.

H. Guillard acted as referee for the PhD defense of Arnaud Kurst, University of Bordeaux, October 31, 2012

<p align="center" style="color:red">COFFEE Project-Team</p>

8. Dissemination

8.1. Teaching - Supervision - Juries

8.1.1. Teaching

> Master : Th. Goudon, Scientific Computing, ENS Paris, France.
> Master : F. Berthelin, PDEs and kinetic equations (M2), Nice, France
> Master : F. Berthelin & M. Ribot, préparation to agrégation (M2), Nice, France.
> Master : Th. Goudon & R. Masson, Mathematical modeling and Scientific Computing for biology (M2), Nice, France.
> Master : S. Junca & S. Krell have their teaching duties at IUFM, being in charge of preparation of teachers.
> Agrégation : T. Goudon is member of the jury of agrégation, the national competition to hire teachers, in charge of the scientific computing exams.

8.1.2. Supervision

Master &PhD

> Master Nice, F. Berthelin, EDO for biological modeling.
> Master Nice, S. Junca, Regularizing effect for scalar conservation laws.
> Master EPU Nice, T. Goudon & C. Scheid, Simulation of 2D incompressible Euler equations in vortex simulation.
> Master ENS Paris, R. Masson & S. Krell, Finite volumes methods for elliptic PDEs
> PhD L'Aquila (Italy): M. Twarogowska, Numerical approximation and analysis of mathematical models arising in cells movement, advised by M. Ribot & R. Natalini (defended 02/14/2012).
> PhD in progress : Y. Zhang, Modeling and simulation of mass and heat exchanges in nuclear waste storage, starting Sept. 2012, advised by Th. Goudon and R. Masson

8.1.3. Juries

> S. Junca : PhD M. Hajjej, "Couches initiales et limites de relaxation aux systèmes d'Euler-Poisson et d'Euler-Maxwell", Clermont-Ferrand, Mars 2012.
> Th. Goudon : HDR of A. Gloria, "Propriétés qualitatives et quantitatives en homogénéisation périodique et stochastique", Lille fev. 2012.
> Th. Goudon : PhD of I. Guaraldo, "Some analytical results for hyperbolic chemotaxis model on networks", Roma, July 2012 (referee).
> Th. Goudon : HDR of R. Turpault, "Modélisation, analyse numérique et simulations de phénomènes complexes pour des systèmes hyperboliques de lois de conservation avec termes sources raides et en électrocardiologie", Nantes, Oct. 2012 (Pdt.)
> Th. Goudon : HDR of S. Mancini, "Modèles cinétiques. Applications en volcanologie et neuro-sciences", Orléans, Nov. 2012 (Pdt.).
> R, Masson, PhD of D. Chauveheid, "Ecoulements multi-matériaux et multi-physiques: solveur volumes finis eulérien co-localisé avec capture d'interfaces, analyse et simulations", CMLA.

8.2. Popularization

Th. Goudon is in charge for SMAI, the french society for applied and industrial mathematics, of the animation of "2013, Mathematics of Planet Earth", a event supported by UNESCO. In particular he is member of the Steering Committee of the operation "1 jour, 1 brève" which aims at publishing one text a day devoted to the topics of Mathematics of Planet Earth.

R. Masson is involved in the Atelier de Recherche Prospective MathsInTerre, led by D. Bresch: this network has been created in connection to the worldwide event "2013, Mathematics for the Planet Earth"; this project aims at bringing out several key subjects that deserve a specific attention for future researches.

8. Dissemination

8.1. Scientific Animation

Bernard Bonnard and Ludovic Rifford belong to the editorial board of Journal of Dynamical and Control Systems.

All members of the team are active reviewers in journals of the field.

The team organized two one-day seminars:
- June 19 in Sophia ANtipolis, invited speakers: Richard Epenoy (CNES, Toulouse) and Vincent Andrieu (LAGEP, Lyon),
- September 24, in Dijon http://nolot.perso.math.cnrs.fr/JourneesControleTransport.html.
To be continued in march, 2013 in dijon and in may, 2013 in Nice.

8.2. Community service within Inria

J.-B. Pomet is the president of the "Commission de Suivi Doctoral", and in charge of "formation par la recherche". This includes organising local visits for students, organising PhD candidates selection, managing PhD students working at Inria Sophia (that are from two different "écoles doctorales" from Université de Nice, not counting these in Montpellier).

8.3. Teaching - Supervision - Juries

8.3.1. Teaching

Licence: L. Rifford, "Analyse I" and "Option Maths", 60 hours (equiv TD), Univ. de Nice Sophia Antipolis

8.3.2. Supervision

PhD: Ahed Hindawi, *Transport Optimal en Théorie du Contrôle*, Université de Nice Sophia Antipolis, defended June 27, 2012, advisors: Ludovic Rifford and Jean-Baptiste Pomet, see [1].

PhD in progress: Alice Erlinger, subject: *Economics and Optimal Transport*, Université de Nice Sophia Antipolis, started october, 2012, advisor: Ludovic Rifford.

PhD in progress: Helen Heninger, subject: , Université de Nice Sophia Antipolis, started october, 2012, advisors: Bernard Bonnard and Jean-Baptiste Pomet.

PhD in progress: Ayadi Lazrag, subject: *Control methods in dynamical systems*, Université de Nice Sophia Antipolis, started october, 2011, advisor: Ludovic Rifford.

PhD in progress: Lionel Jassionnesse, subject: *Convexité du domaine d'injectivité tangent sur le surfaces et transport optimal*, Université de Bourgogne, started october, 2010, advisor: Bernard Bonnard.

PhD in progress: John Marriott, subject: *Optimal control and the contrast problem in RMN*, University of Hawaii, started october, 2010, advisors: Monique Chyba and Bernard Bonnard, provisional defense date: August 28, 2013.

MsC: Alice Erlinger, *Problèmes de régularité en théorie du Transport Optimal*, Université de Nice Sophia Antipolis, supervisor: Ludovic Rifford.

MsC: Hamza Agli, *Etude numérique du moyenné pour le transfert orbital plan*, ENSEEIHT, supervisors: Jean-Baptiste Pomet and Bernard Bonnard.

MsC, 1st year: Ciro Duran-Santilli, *Flatness in control systems*, Ecole Polytechnique, supervisor: Jean-Baptiste Pomet.

MsC, 1st year: Igor Pontes-Duff-Pereira, *Transfert optimal d'un Satellite - Moyennation pour le temps minimum*, Ecole Polytechnique, supervisors: Jean-Baptiste Pomet and Bernard Bonnard.

<p style="text-align:center;color:red;font-weight:bold;">NACHOS Project-Team</p>

9. Dissemination

9.1. Teaching - Supervision - Juries

9.1.1. Teaching

Victorita Dolean, *Scilab*, MAM3, 24 h, Polytech Nice.

Victorita Dolean, *Partial differential equations*, MAM4, 66 h, Polytech Nice.

Victorita Dolean, *Computational electromagnetics*, MAM5, 40 h, Polytech Nice.

Victorita Dolean, *Numerical analysis*, L2, 30 h, University of Nice-Sophia Antipolis.

Victorita Dolean, *Mathematics and statistics*, M1 Erasmus Mundus EuroAquae, 34 h, University of Nice-Sophia Antipolis.

Claire Scheid and Stéphane Lanteri, *Introduction to scientific computing*, M2 Erasmus Mundus MathMods, 30 h, University of Nice-Sophia Antipolis.

Claire Scheid, *Practical works on differential calculus*, 26 h, L2, University of Nice-Sophia Antipolis.

Claire Scheid, *Practical works on differential equations*, 36 h, L3, University of Nice-Sophia Antipolis.

Stéphane Descombes, *Analyse numérique et applications en finances*, M2, 30 h, University of Nice-Sophia Antipolis.

9.1.2. Supervision

PhD in progress : Mohamed El Bouajaji, *Optimized Schwarz algorithms for the time harmonic Maxwell equations discretized by discontinuous Galerkin methods*, University of Nice-Sophia Antipolis, January 2012, Victorita Dolean and Stéphane Lanteri.

PhD Joseph Charles, *Arbitrarily high-order discontinuous Galerkin methods on simplicial meshes for time domain electromagnetics*, University of Nice-Sophia Antipolis, April 2012, Stéphane Lanteri.

PhD in progress : Clément Durochat, *Discontinuous Galerkin methods on hybrid meshes for time domain electromagnetics*, University of Nice-Sophia Antipolis, October 2009, Stéphane Lanteri.

PhD in progress : Caroline Girard, *Numerical modeling of the electromagnetic susceptibility of innovative planar circuits*, October 2011, Stéphane Lanteri, Ronan Perrussel and Nathalie Raveu (Laplace Laboratory, INP/ENSEEIHT/UPS, Toulouse).

PhD in progress : Ludovic Moya, *Numerical modeling of electromagnetic wave propagation in biological tissues*, University of Nice-Sophia Antipolis, October 2010, Stéphane Descombes and Stéphane Lanteri.

PhD in progress : Fabien Peyrusse, *Numerical simulation of strong earthquakes by a discontinuous Galerkin method*, University of Nice-Sophia Antipolis, October 2010, Nathalie Glinsky and Stéphane Lanteri.

PhD in progress : Marie Bonnasse, *Numerical simulation of frequency domain elastic and viscoelastic wave propagation using discontinuous Galerkin methods*, University of Nice-Sophia Antipolis, October 2012, Julien Diaz (MAGIQUE3D project-team, Inria Bordeaux - Sud-Ouest) and Stéphane Lanteri.

PhD in progress : Jonathan Viquerat, *Discontinuous Galerkin time domain methods for nanophotonics*, October 2012, Stéphane Lanteri and Claire Scheid.

OPALE Project-Team

9. Dissemination

9.1. Scientific Animation

- P. Goatin is member of the Organizing Committee of the 14th International Conference on Hyperbolic Problems: Theory, Numerics and Applications (HYP2012). Padova (IT). June 2012. http://www.hyp2012.eu/

- T. Nguyen is member of the PRACE expert pool since November 2012 (Partnership for Advanced Computing in Europe)

- T. Nguyen is member of the Program Committee for the 9th Intl. Conf. in Cooperative Design, Visualization and Engineering (CDVE2012). Osaka (JP). September 2012.

- T. Nguyen is member of the Program Committee for the 8th Intl. Conf. on Networking, Grids and Virtualization (CLOUD COMPUTING2012). Nice (FR). July 2012. http://www.iaria.org/conferences2012/CLOUDCOMPUTING12.html

- T. Nguyen is Advisory Chair and member of the Program Committee for the 8th Intl. Conf. on Cloud Computing and Services (ICNS2012). Saint-Maarten (NL). March 2012. http://www.iaria.org/conferences2012/ICNS12.html

- T. Nguyen is member of the Program Committee for the 1st Intl. Conf. on Smart Grids and Green IT Systems (SMARTGREENS2012). Porto (PT). April 2012. http://www.smartgreens.org/CallForPapers.aspx

- T. Nguyen is member of the Program Committee for the 2nd International Conference on Cloud and Green Computing (CGC2012), Xiangtan (China), November 2012. http://kpnm.hnust.cn/confs/cgc2012

- T. Nguyen is member of the Program Committee of the 3rd Intl. Conf. on Parallel, Distributed, Grid and Cloud Computing for Engineering. Pécs, Hungary, March 2013. http://www.civil-comp.com/conf/pareng2013.htm

- T. Nguyen is member of the Editorial Board of the Intl. Journal on Advances in Intelligent Systems (IARIA Eds.)

- T. Nguyen is member of the Editorial Board of the Intl. Journal on Advances in Software (IARIA Eds.)

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Introduction to Numerical Analysis, 71,5 hrs, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (J.-A. Désidéri, A. Zerbinati).

Licence: Numerical Methods I, 19.5 hrs, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (J.-A. Désidéri).

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

Licence: Linear Systems, 39 hrs, L3, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (R. Duvigneau).

Licence: Partial Differential Equations, 36 hrs, L3, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (R. Duvigneau).

Master: Advanced Optimization, 40.5 hrs, M2, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (J.-A. Désidéri, R. Duvigneau).

Master: Multidisciplinary Optimization, 22.5 hrs, joint ISAE ("Complex Systems") and M2 (Mathematics), Toulouse (J.-A. Désidéri, R. Duvigneau).

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

9.2.2. *Supervision*

PhD & HdR :

PhD : Imane Ghazlane, *Optimisation aérodynamique et structurale de la voilure d'un avion de transport avec la méthode adjointe*, University of Nice Sophia Antipolis, December 2012, supervisors: J. A. Desideri and Gérald Carrier (ONERA/DAAP).

PhD : Samira El Moumen, *Portfolio Management in Finance*, Ecole Mohammadia d'Ingénieurs (EMI), Rabat, September 2012, supervisors: R. Aboulaich, R. Ellaia (Rabat) and A. Habbal.

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

PhD in progress : Aalae Benki, *Optimisation concurrente de forme de coque mince en régimes élastoplastique et de crash*, October 2010, supervisor: A. Habbal.

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

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

PhD in progress : Jérémie Labroquère, *Optimization of Flow Control Devices*, October 2010, Supervisors: Jean-Antoine Désidéri and Régis Duvigneau.'

PhD in progress : Matthias Mimault, *Crowd motion modeling by conservation laws*, October 2012, supervisor: P. Goatin

PhD in progress : Andrea Minelli, *Optimisation simultanée des performances aérodynamiques et du bang sonique d'un aéronef supersonique*, October 2010, Supervisors: Jean-Antoine Désidéri and Itham El Salah Dinh (ONERA/DAAP).

PhD in progress : Maxime Nguyen Dinh, *Qualification des simulations numériques par adaptation anisotropique de maillages*, October 2011, Supervisors: Jean-Antoine Désidéri and Jacques Peter (ONERA/DSNA).

PhD in progress : Fatima Zahra Oujebbour, *Modèles de jeux en optimisation de forme en emboutissage*, October 2010, Supervisors: A. Habbal.

PhD in progress : Enric Roca Leon, *Simulation aéromécanique pour l'optimisation de rotor d'hélicoptère en vol d'avancement*, October 2011, Supervisors: Jean-Antoine Désidéri and Arnaud Le Pape (ONERA/DAAP).

PhD in progress : Laurentiu Trifan, *Plateforme collaborative pour l'optimisation multidiscipline*, December 2009, Supervisors: Jean-Antoine Désidéri and Toan Nguyen.

PhD in progress : Adrien Zerbinati, *Optimisation multidisciplinaire robuste pour application à l'automobile*, January 2010, Supervisors: Jean-Antoine Désidéri and Régis Duvigneau.

9.2.3. Juries

- T. Nguyen was member of the PhD Defense Jury of Mr. Balaji Raghavan, Université de Technologie de Compiègne, December 2012.
- P. Goatin was referee and member of the PhD Defense Jury of Aude Hofleitner, Université Paris-Est, December 2012.

9.3. Popularization

J.-A. Désidéri has delivered the conference *"Modélisation et simulation : lorsque l'ingénierie devient numérique"* ("Modelling and simulation : when engineering becomes numerics") to engineering students in Avignon (May 2012).

P. Goatin has delivered the conference "Comment les mathématiques contribuent-elles à la gestion du trafic routier?" to the Université d'été de mathématique "Modèles mathématiques et réalité" organised by the Creteil Academy in Sourdun (August 2012).

<center>**SCIPORT Team**</center>

8. Dissemination

8.1. Scientific Animation

- Laurent Hascoët was on the program committee of the AD2012 conference, Fort Collins, Colorado, july 2012.

- Laurent Hascoët is on the organizing commitee of the EuroAD Workshops on Automatic Differentiation. No workshop was organized this year to avoid conflict with the AD2012 conference.

- Laurent Hascoët is a member of the internal "CDT" committee at Inria Sophia-Antipolis ("Comité Développement Technologique").

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence : Hubert Alcin, monitorat Analyse Numerique, 30 h, niveau L3, Université de Nice, France

Master : Laurent Hascoët, Optimisation avancée, 15 h, niveau M2, Université de Nice, France

8.2.2. Supervision

PhD : Hubert Alcin, "Résolution d'écoulements instationnaires et adjoints", Université de Nice, defended december 5th, 2012, advisors A. Dervieux and L. Hascoët

PhD in progress : Alexandre Carabias, "Adaptation de maillage pour calculs d'écoulements à l'ordre 3", started october 2011, advisor A. Dervieux

PhD in progress : Gauthier Brethes, "Multigrilles anisotropes adaptatives", started october 2012, advisor A. Dervieux

8.2.3. Juries

- Alain Dervieux was jury for the thesis of Olivier Rouch, Montrèal, and of Hubert Alcin, Nice.

8.3. Conferences and workshops

- Laurent Hascoët was invited to present Automatic Differentiation at NATIXIS, Paris, april 2012.

- Alexandre Carabias presented a seminar "Controle de la dispersion et de la dissipation pour un schema a reconstruction quadratique", during an ECINADS meeting, Inria Sophia Antipolis, april 2012.

- Alain Dervieux was invited to present "Goal-oriented anisotropic mesh adaptation based on a priori estimates" (F. Alauzet, A. Belme, A. Loseille, D. Guégan, A. Dervieux), at the Workshop on Adaptive Methods with Applications in Fluid Dynamics (ADAP-CFD12) (WIAS), Berlin, april 2012.

- Laurent Hascoët was invited to present advances in Automatic Differentiation at CERFACS, Toulouse, may 2012.

- Hubert Alcin presented "On 2-level Schwarz algorithms for LES compressible flows" (H. Alcin, O. Allain, B. Koobus and A. Dervieux), at ParCFD2012, Atlanta, may 2012.

- Alexandre Carabias presented a seminar "Schema QV6 et adaptation", with team Gamma3, Inria Rocquencourt, may 2012.

- Alexandre Carabias presented a seminar "Controle de la dispersion et de la dissipation pour un schema a reconstruction quadratique" at "Colloque des doctorants de 2eme année", Université de Nice, may 2012.

- Alain Dervieux gave a short course "Sensitivity analysis by adjoint Automatic Differentiation and Application" (A. Belme, M. Martinelli, L. Hascoët, V. Pascual, A. Dervieux), at the ERCOFTAC Course on Uncertainty Management and Quantification in Industrial Analysis and Design, EDF , PARIS, may 2012.

- Laurent Hascoët gave an introductory course on Automatic Differentiation [17] during the "Advanced data assimilation for geosciences" course (org. E. Blayo, M. Bocquet, and E. Cosme), Les Houches school of physics, june 2012.

- Laurent Hascoët presented at the two meetings of the JLPC Inria-Illinois joint laboratory: "Toward Adjoinable MPI", Rennes, june 2012, and "The Data-Dependence graph of Adjoint Codes", Argonne Nat. Lab., november 2012.

- Laurent Hascoët presented [18] "Using Automatic Differentiation to study the sensitivity of a crop model" at AD2012 conference, Fort Collins, Colorado, july 2012.

- Valérie Pascual presented [16] "Native handling of Message-Passing communication in Data-Flow analysis" at AD2012 conference, Fort Collins, Colorado, july 2012.

- Laurent Hascoët presented an overview of Automatic Differentiation at "Ecole d'été UFA" (org. A. Desideri), Sophia-Antipolis, september 2012.

- Alain Dervieux presented "Goal-Oriented mesh adaptation for vortex shedding flows" (H. Alcin, A. Belme, A. Loseille, F. Alauzet, S. Wornom , A. Dervieux), at ECCOMAS, Vienna, Austria, september 2012.

- Carine Moussaed presented "A Dynamic VMS-LES model and its Hybrid extension for bluff body flows" (C. Moussaed, S. Wornom, B. Koobus, M.-V. Salvetti, A. Dervieux), at ECCOMAS, Vienna, Austria, september 2012.

- Alexandre Carabias presented "Anisotropic Goal-oriented estimate for a third-order accurate Euler model" (A. Carabias, A. Belme, F. Alauzet, A. Dervieux, A. Loseille), at ECCOMAS, Vienna, Austria, september 2012.

- Hubert Alcin has presented "Goal-Oriented mesh adaptation and 2-level Schwarz Algorithms", at CERFACS seminar, Toulouse, october 2012.

- Laurent Hascoët, together with Andreas Griewank, served as evaluator for B. Pearlmutter team in NUI Maynooth, Ireland, november 2012.

- Laurent Hascoët spent two weeks at Argonne Nat. Lab. to work on an adjoinable MPI library with Jean Utke, november 2012.

- Alain Dervieux gave a short course "Indicateurs de raffinement et adaptation de maillage en simulation numérique pour la Mécanique des Fluides" (A. Dervieux, F. Alauzet), during the "Cours sur la Vérification des simulations numériques en Mécanique des Milieux Continus", Collège X, Paris, november 2012.

TOSCA Project-Team

9. Dissemination

9.1. Scientific Animation

- M. Bossy is a member of the Scientific Committee of the _École Doctorale "Sciences Fondamentales et Appliquées"_ of the Université de Nice – Sophia Antipolis.
- M. Bossy is a member of the _Collectif Andromede_ of the PACA Region council.
- M. Bossy is a elected member of the Inria Evaluation Board, a member of the NICE Committee of Inria Sophia Antipolis –Méditerranée.
- M. Deaconu is a member of the _COST-GTAI (Groupe de Travail Actions Incitatives)_ of Inria, of _Comité des Projets_ and _Bureau du Comité des Projets_ at Inria Nancy, Grand-Est.
- M. Deaconu is a member of the _Conseil de Laboratoire_ at Elie Cartan Institute in Nancy.
- M. Deaconu organized the session _Probabilités Numériques_ in the _11th Colloque Franco-Roumain de Mathématiques Appliquées_ held in Bucharest in August.
- A. Lejay is member of a editorial board of the collection _Séminaire de Probabilités_.
- A. Lejay is member of the scientific committee of the _Journées de Probabilités_.
- A. Lejay is general Secretary of Société des Mathématiques Appliquées et Industrielles (SMAI).
- A. Lejay is elected member of the Commission du Personnel of the Institut Élie Cartan.
- A. Lejay is member of the COMIPERS at Inria Nancy Grand-Est.
- D. Talay served as the Scientific Deputy of Inria Sophia Antipolis — Méditerrannée.
- D. Talay, jointly with F. Delarue (Université de Nice Sophia Antipolis) and G. Pagès (Paris 6 University), organized the workshop ERGONUM in Sophia Antipolis in June.
- D. Talay served as an Associate Editor of: _Stochastic Processes and their Applications_, _ESAIM Probability and Statistics_, _Stochastics and Dynamics_, _SIAM Journal on Numerical Analysis_, _SIAM Journal in Financial Mathematics_, _Journal of Scientific Computing_, _Monte Carlo Methods and Applications_, _Oxford IMA Journal of Numerical Analysis_, _Communications in Applied Mathematics and Computational Science_, _Éditions de l'École Polytechnique_. He also served as the Co-editor in chief of _MathematicS in Action_.
- D. Talay is serving as a member of the Advisory Board of the Centro de Mathematica da Universidade do Porto (Portugal).
- D. Talay participated to a junior position recruitment committee at Paris 6 University.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master : M. Bossy, _Continuous Probabilistic Models with Applications in Finance_, 45h, M2 IMAFA (_Informatique et Mathématiques Appliquées à la Finance et à l'Assurance_), _Ecole Polytechnique Universitaire_, Univ. Nice – Sophia Antipolis, France.

Master : M. Bossy, _Risk management on energetic financial markets_, 13.5h, Master _Ingénierie et Gestion de l'Energie_, École des Mines de Paris at Sophia-Antipolis, France.

Master : M. Bossy _Particle Methods_, 18 h, Master 2 _Probabilité et Applications_ at Université Paris 6, France.

Master: N. Champagnat, _Introduction to Quantitative Finance_, 13.5h, M1, Ecole des Mines de Nancy, France.

Master: N. Champagnat, *Introduction to Quantitative Finance*, 22.5h, M2, Ecole des Mines de Nancy, France.

Licence: P. Charton *Evaluation des méthodes d'analyse appliquées aux sciences de la vie et de la santé*, 27h, L1, Univ. de Lorraine, France.

Licence: P. Charton *Outils théoriques : probabilités statistiques*, 37h, L3, Univ. de lorraine, France.

Master: M. Deaconu, *Stochastic modeling*, 30h, M2, Université de Lorraine, France.

Master: M. Deaconu, *Simulation of random variables*, 9h, M1, Ecole des Mines de Nancy, France.

Master : A. Lejay, *Probabilistic Numerical methods for Mathematical Finance*, 28.5h, M2, Université de Lorraine (Metz), France.

Master : A. Lejay, *Numerical methods*, 22.5h, M2, Université de Lorraine (Nancy), France.

Master: D. Talay, *Stochastic Flows*, 12h, M2 *Probabilités et Applications* and M2 *Probabilités et Finance* at Université Paris 6, France.

Master: E. Tanré, *Advanced numerics for Computational Finance*, 30 h, M2, UNSA (Mathmodes Erasmus Mundus), France.

Master: E. Tanré, *Numerical Probability in Finance*, 12 h, M2, Ecole PolytechNice (IMAFA), France.

Master: E. Tanré, *Numerical Methods in Finance*, two sessions with 18 h, M2, ULB (University Certificates in Financial and Insurance Risk Modelling And Quantitative Methods in Finance), Belgium.

Licence : D. Villemonais, *Probabilités*, 21h, L3, École des Mines de Nancy, France.

Master: L. Violeau, *Continuous Probabilistic Models with Applications in Finance* (exercice classes), 20h, M2 IMAFA (*Informatique et Mathématiques Appliquées à la Finance et à l'Assurance*), Ecole Polytechnique Universitaire, Univ. Nice, France.

Licence: L. Violeau, *Probabilty and Statistics* (exercice classes), 20h, L3, Ecole Polytechnique Universitaire, Univ. Nice, France.

9.2.2. Supervision

- PhD in progress: Paul Charton, *Hedging strategies for wind energy prices*, September 2010, M. Deaconu and A. Lejay.

- PhD in progress: Julien Claisse, *Stochastic control of population dynamics*, September 2010, N. Champagnat, D. Talay.

- PhD in progress: Dalia Ibrahim, *Mathematical modelling for technical analysis techniques*, November 2009, D. Talay and E. Tanré.

- PhD in progress : Lionel Lenôtre, *Monte Carlo methods for discontinuous media*, Université Rennes 1, started in October 2012, Jocelyne Erhel (IRISA), Antoine Lejay and Géraldine Pichot (IRISA).

- PhD in progress : Geoffrey Nichil, *Provisionnement en assurance non-vie et optimisation du calcul du SCR*, 2011, S. Herrmann and P. Vallois.

- PhD in progress: Sebastian Niklitschek-Soto, *Discretized stochastic differential equations related to one-dimensional partial differential equations of parabolic type involving a discontinuous drift coefficient*, September 2010, D. Talay.

- PhD in progress: Nicolas Perrin, *Stochastic methods in molecular dynamics*, October 2009, M. Bossy, N. Champagnat, D. Talay.

- PhD in progress: Laurent Violeau, *Stochastic Lagrangian Models and Applications to Downscaling in Fluid Dynamics*, October 2010, M. Bossy and A. Rousseau.

9.2.3. Juries

- M. Bossy reported on the Ph.D. thesis of Lokman Abbas-Turki, Université Paris-Est.

- A. Lejay was an expert for the thesis of N. Marie (Université Paul Sabatier, Toulouse, France).
- D. Talay reported on the Habilitation à Diriger les Recherches of M. Benalaya (Université Paris 13), and on the Ph.D. thesis of N. Millot (Ecole Centrale) and N. Belaribi (University Paris 13). He also chaired the Committee for the Habilitation à Diriger les Recherches of A. Gloria (Université de Lille).

9.3. Popularization

- A. Lejay is a member of the organizing committee of the *Forum des lauréats des prix en informatique et mathématiques appliquées* (Inria & SMAI) held in Paris in December 2012.

9.4. Participation to congresses, conferences, invitations...

- M. Bossy gave invited talks at the *IMA Workshop Mathematics of the New Financial Systems University of Minnesota* in May and at the *Journees MAIRCI, Bull Grenoble* in September.
- M. Bossy gave talks at the *workshop MathAmSud* at Santiago, Chile in January and at the *Conference in Energy Finance at WPI* at Vienna, Austria in September.
- N. Champagnat gave a 4h lecture on *Modèles stochastiques individu-centrés en dynamique adaptative et étude du branchement évolutif* at the Summer School *Modélisation en dynamique des populations et Évolution: Probabilités et EDP* in September at La Londe les Maures.
- N. Champagnat gave talks at the MBI Workshop on *Evolution and Spread of Disease* in Columbus, Ohio, USA in March, at the Conference on *Probability, Population Genetics and Evolution* at the CIRM in Marseille in June, at the *6th European Congress of Mathematics (6ECM)* in Krakow in July and at the *XIème Colloque Franco-Roumain de Mathématiques Appliquées (CFR2012)* in Bucarest in August.
- N. Champagnat gave seminar talks at the SMILE Seminar on *Stochastic Models for the Inference of Life Evolution* at Collège de France, Paris, in March, at the *Rencontres de la Chaire MMB (Modélisation Mathématique et Biodiversité)* at Ecole Polytechnique, Palaiseau in June, at the workshop *Modèles stochastiques pour l'écologie et la biologie* of the Labex Numev in Montpellier in October, and at the *Séminaire de Probabilités de l'Institut de Mathématiques de Toulouse* in Toulouse in November.
- M. Deaconu gave invited talks at the *Workshop, Sequential Monte Carlo Methods and Efficient Simulation in Finance* at the Ecole Polytechnique in Paris in October, at the *Workshop, Perspective asupra cecetarii matematice in societatea bazata pe cunoastere*, organisé dans le cadre de la Conférence *Diaspora in Cercetarea Stiitifica si Invatamantul Superior in Romania*, in October, at the *Ecole Polytechnique Fédérale de Lausanne (EPFL)* in Lausanne in July.
- M. Deaconu gave a seminar talk at the *Séminaire de Probabilités et Statistiques de l'Institut de Mathématiques de Bourgogne*, in January.
- D. Ibrahim gave a talk at the *Chair of Quantitative Finance seminar* of Centrale Paris, in April.
- J. Inglis participated in the international colloquium *Random Models in Neuroscience* at the Université Pierre et Marie Curie (Paris) in July.
- A. Lejay gave a talk at the conference *Recent Developments in Stochastic Analysis* at Lausanne (Switzerland) in February and at the workshop *Rough Paths and PDEs* at Oberwolfach (Germany) in August.
- A. Lejay gave seminar talks at the probability seminars of Université du Maine (Le Mans), Université de Bourgogne, Université de Grenoble and Université de Rennes.
- D. Talay gave talks at the *workshop MathAmSud* at Santiago, Chile in January and at the XV Ecole Franco-Espagnole Jacques-Louis Lions at Malaga in September. He also gave several seminars at Ecole Polytechnique and a seminar at Columbia University in October.

- D. Talay gave a plenary conference at ICNAAM 2012 in Greece in September.

- D. Talay gave mini-courses at the Séminaire Bachelier (Institut H. Poncaré, Paris) in January and February, and at ICERM (Brown Univeristy) in October.

- E. Tanré gave one talk at the *MathAmSud Workshop* in Santiago, Chile in January and two talks at the *CLAPEM (Latin American Congress of Probability and Mathematical Statistics)* in March at Vina del Mar, Chile.

- E. Tanré gave an invited talk at the International Colloquium *Random Models in Neuroscience* at the Université Pierre et Marie Curie (Paris) in July.

- E. Tanré gave a seminar talk at the *Probability Seminar* of Univ. of Bourgogne (Dijon).

- D. Villemonais gave a 6h lecture on *Distributions quasi-stationnaires* at the *Université de Marseille* in June 2012.

- D. Villemonais gave talk at the *Inhomogeneous random systems* annual workshop at the Institut Henri Poincaré in Paris in January 2012.

- L. Violeau gave a talk at the *XIème Colloque Franco-Roumain de Mathématiques Appliquées (CFR2012)* in Bucarest in August.

ABS Project-Team

7. Dissemination

7.1. Scientific Animation

7.1.1. Conference Program Committees

– F. Cazals was member of the following PC:

- Symposium on Geometry Processing.
- Geometric Modeling and processing.
- ACM Symposium on Solid and Physical Modeling.
- IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology.
- International conference on Pattern Recognition in Bioinformatics.

7.1.2. Appointments

– F. Cazals is member of the scientific committee of *GDR Bio-informatique-Moléculaire*, in charge of activities related to computational structural biology.

7.1.3. Book

Having initiated and coordinated the Master of Science in Computational Biology, see http://cbb.unice.fr, F. Cazals and P. Kornprobst edited a book entitled *Modeling in Computational Biology and Medicine: A Multidisciplinary Endeavor* [17], with one chapter per class taught in this program.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

(Master) Ecole Centrale Paris, France, 3rd year of the engineering curriculum in applied mathematics. Course on *Geometric and topological modeling with applications in biophysics*, taught by F. Cazals (24h).

(Master) University of Nice Sophia Antipolis, France, Master of Science in Computational Biology (http://cbb.unice.fr). Course on *Algorithmic problems in computational structural biology*, taught by F. Cazals (24h).

(Winter school Algorithms in Structural Bio-informatics) Together with J. Cortès from LAAS / CNRS (Toulouse), F. Cazals is organizing the winter school *Algorithms in Structural Bio-informatics* [4]. The goal of this winter school is to present state-of-the-art concepts, algorithms and software tools meant to analyze and predict macro-molecular assemblies, with a focus on methodological developments. We have accepted 25 students from all over the world.

7.2.2. Supervision

PhD & HdR:

(PhD thesis, ongoing) C. Roth, *Modeling the flexibility of macro-molecules: theory and applications*, University of Nice Sophia Antipolis. Advisor: F. Cazals.

(PhD thesis, ongoing) A. Lheritier, *Scoring and discriminating in high-dimensional spaces: a geometric based approach of statistical tests*, University of Nice Sophia Antipolis. Advisor: F. Cazals.

(PhD thesis, ongoing) D. Agarwal, *Towards nano-molecular design: advanced algorithms for modeling large protein assemblies*, University of Nice Sophia Antipolis. Advisor: F. Cazals.

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[4]http://www-sop.inria.fr/manifestations/algoSB/

<p style="text-align:center">**ASCLEPIOS Project-Team**</p>

8. Dissemination

8.1. Animation of the scientific community

8.1.1. Journal editorial boards

N. Ayache   is the co-founder and the co-editor in Chief with J. Duncan (Professor at Yale) of *Medical Image Analysis*[6]. This scientific journal was created in 1996 and is published by Elsevier.

H. Delingette   is a member of the editorial board of the journal *Medical Image Analysis* (Elsevier).

I. Strobant   is editorial coordinator for *Medical Image Analysis*, Elsevier (since october 2001).

I. Strobant   is editorial assistant for *IEEE Transactions on Medical Image Analysis*, (since october 2001)

N. Ayache   is associated editor of *IEEE Transactions on Medical Imaging*[7].

N. Ayache   is a member of the editorial board of the following journals: new SIAM Journal on Imaging Sciences, *Medical Image Technology* (Japanese journal) and *Journal of Computer Assisted Surgery* (Wiley).

X. Pennec   is a member of the editorial board of the journal *Medical Image Analysis* (Elsevier), of the *International Journal on Computer Vision* (Springer) and of the SIAM Journal on Imaging Sciences (SIIMS).

8.1.2. Participation in the organization of conferences

The MICCAI 2012 conference   gathered a record number of more than 1200 participants in the Acropolis Center in Nice, from the 1st to the 5th of October 2012. It was chaired by Nicholas Ayache. 32 satellites events, coordinated by Xavier Pennec, were held on the 1st and the 5th of October, while the main conference, whose scientific program was under the responsability of Hervé Delingette, took place from teh 2nd to the 4th of October. Agnès Cortell was in charge of the local organisation, with the help of M. Barret, G. Malandain, M. Sermesant, I. Strobant and the MCI company. Inria services, especially O. Carron, M. Oricelli, along with the students helped in the organisation too.

N. Ayache   was the chair of the International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI 2012) in Nice.

H. Delingette   was the program chair and a member of the local organization committee of International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'12) which involved selecting 256 papers from 780 submissions, and organize the 7 oral sessions and the 18 poster sessions. He was also member of the program committees of the International Symposium on Biomedical Imaging (ISBI'12), the conference on Virtual Reality Interactions and Physical Simulation (VRIPHYS'12).

X. Pennec   was workshop/challenges and tutorial chair (and a member of the local organization committee) of the International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI 2012) in Nice. This involved in particular the coordination of 32 MICCAI satellite events with 140 organizers and 975 participants. He was also a member of the program committees of: Int. Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'2012); IEEE Workshop on Mathematical Methods in Biomedical Image Analysis (MMBIA 2012); Workshop on Biomedical Image Registration (WBIR 2012); Workshop on computational diffusion MRI (CDMRI'12).

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[6]http://www.elsevier.com/wps/find/journaleditorialboard.cws_home/620983/editorialboard
[7]http://www.ieee-tmi.org/

M. Sermesant was a member of the program committee of International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'12), and was a co-organisator of the MICCAI 2012 Workshop on Statistical Atlases and Computational Models of the Heart and the VPH Network of Excellence 2nd workshop on medical imaging software.

8.1.3. Scientific animation

Nicholas Ayache is member of the Aviesan national alliance on biosciences. He is also a member of the "Comité de la Recherche Biomédicale en Santé Publique (CRBSP)" of the Nice hospitals since 2008. He was invited in Fukuoka, Japan in February 2012 to evaluate a national program on "Computational Anatomy" funded by the MEXT.

Xavier Pennec is a member of the Doctoral follow-up Commitee (CSD) at Inria Sophia Antipolis since 2010. In 2012, he was elected member of the MICCAI Society boards of Directors for the period 2012-2016, and was an evaluator for the EU STREP PredictAD (neuroimaging in Alzheimer's disease), for the Netherlands Organisation for Scientific Research (NWO), for several project proposals submitted to the French research agency ANR.

H. Delingette is a member of the local committee in charge of the scientific selection of visiting scientists applications (Comité Nice). He was an evaluator for the integrated European project ARTREAT, for the Research Foundation Flanders (FWO), for several project proposals submitted to the French research agency ANR, to the Medicen Paris Innovative cluster.

M. Sermesant acted as an evaluator for the ANR, the CNRS and the Dutch and UK Research Councils. He is a member of the CUMIR (local committee representing the users of computer services) and of the CCC (local committee in charge of the selection of funding for courses and conferences organisation). He also participates in scientific animation in high schools, presenting research and medical imaging (2 times in 2012).

8.2. Teaching

Master 2 MVA and École Centrale de Paris. H. Delingette and X. Pennec are co-responsible of 2 modules on medical imaging (formation and analysis of medical images) (45 hours of lectures) at the the Master MVA of ENS Cachan "Mathematiques, Vision et Apprentissage". The second module is common to the 3rd year of Ecole Centrale Paris.

Master IFI - Computational Biology, Univ. Nice-Sophia-Antipolis. X. Pennec is responsible of a 21h module on Computational Anatomy and Physiology, with the participation of H. Delingette (9h)

Diplôme Inter Universitaire - Radiothérapie externe Haute Technicité, Univ. Nice-Sophia-Antipolis. X. Pennec gave a 3 h course.

8.3. PhD Theses and Internships

8.3.1. PhD defended in 2012

1. Hervé Lombaert, *Atlas Construction for Measuring the Variability of Complex Anatomical Structures*, Ecole Polytechnique de Montréal. June, 2012.

2. Marco Lorenzi, *Deformation-based morphometry of the brain for the development of surrogate markers in Alzheimer's disease*. University of Nice-Sophia Antipolis, December 2012. In collaboration with G.B. Frisoni, IRCCS Fatebenefratelli, Brescia, Italy.

3. Jatin Relan, *Planning of radiofrequency ablation of the heart using electromechanical models personnalized from cardiac images and electrophysiological signals*, Ecole des Mines de Paris. June, 2012.

4. Christof Seiler, *Trees on Geometrical Deformations to Model the Statistical Variability of Organs in Medical Images*. Joint PhD (co-tutelle) of University of Nice Sophia Antipolis and University of Bern. September 2012.

    5. Nicolas Toussaint, *In vivo cardiac DTI*, King's College London, London. July 2012.

8.3.2. Current PhDs

1. Chloé Audigier, *Modeling radio-frequency ablation for the planing of abdominal tumors resection*, Nice Sophia-Antipolis University. Started in April 2012.

2. Thomas Benseghir, *3D/2D Coronary Registration for Interventional Cardiology Guidance*, Nice Sophia-Antipolis University. Started in March 2012.

3. Marine Breuilly, *Tracking and quantification of tumour processes in rodents with SPECT imaging* , Nice Sophia-Antipolis University. Started in November 2009

4. Rocio Cabrera Lozoya, *Radio frequency ablation planning for cardiac arrhythmia treatment through biophysical modelling and machine learning approaches*, Nice Sophia-Antipolis University. Started in February 2012.

5. Nicolas Cordier, *Simulation and Analysis and Simulation of Brain Tumors Images*, University of Lille. Started in February 2012.

6. Ezequiel Geremia, *Multi-scale computational models of brain tumors for medical image analysis*, Nice Sophia-Antipolis University. Started in December 2008.

7. Vikash Gupta, *Diffusion tensor imaging of the brain: towards quantitative clinical tools*, Nice Sophia-Antipolis University. Started in November 2011.

8. Mehdi Hadj-Hamou, *Biophysical modeling of the anatomical evolution of the brain*, Nice Sophia-Antipolis University. Started in September 2012.

9. Bishesh Khanal, *Modeling the atrophy of the brain in Alzheimer's disease*, Nice Sophia-Antipolis University. Started in November 2012.

10. Arnaud Le Carvennec, *Registration and simulation of atrophy in Alzheimer's disease using MRI images*, University College London. Started in September 2011.

11. Loic Le Folgoc, *Biophysical Personalization of Cardiac Models based on Machine Learning*, Nice Sophia-Antipolis University. Started in June 2012.

12. Stéphanie Marchesseau, *Simulation of patient-specific cardiac models for therapy planning*, Ecole des Mines de Paris. Started in November 2009.

13. Jan Margeta, *Indexation of time-series 4D cardiac MR images*, Ecole des Mines de Paris. Started in March 2011.

14. Kristin Mc Leod, *Modeling of Cardiac Growth and Deformation from Medical Images*, Nice-Sophia Antipolis University. Started in Octobere 2010. .

15. Adityo Prakosa, *Analysis and Simulation of the heart function from multimodal cardiac images*, Nice-Sophia Antipolis University. Started in November 2008.

16. Erin Stretton, *Modelling and simulation of brain tumor growth from time-series of 3-D MR images to improve diagnosis and therapy*, Ecole des Mines de Paris. Started in June 2010.

17. Hugo Talbot, *Simulation of Radiofrequency ablation of cardiac cells*, University of Lille. Started in September 2010.

18. Anant Vemuri, *Augmented reality for image-guided surgery*, Nice-Sophia Antipolis University. Started in 2012.

8.3.3. Master Student

1. Sonia Durand, *Generation of personalized volumetric meshes of cardiac ventricles*, Ecole Centrale de Lyon. From April to September 2012

2. Bishesh Khanal, *Modeling the atrophy of the brain in Alzheimer's disease*, Master Computational Biology and Biomedicine, University Nice-Sophia Antipolis. From April to September 2012

3. Matthieu Lê, *Enhancement of a pathophysiological model of brain tumor growth to take into account anatomical and metabolic information coming from MR images. Application to the simulation of tumor growth for better planning of therapeutic intervention*, Ecole Centrale de Paris. From May to December 2012.

4. Andreas Mieritz, *Interaction Segmentation of Medical Images*, DTU, Denmark. Started in September 2012.

8.3.4. Internship of Medical Doctor Student

1. Nicolas Bronsard, *Study of the 3D variability of the lower spine*, University Hospital of Nice-Sophia Antipolis.

8.3.5. Participation to thesis committees

N. Ayache   participated as co-supervisor to the PhD thesis of Jatin Relan (École des Mines de Paris) and Marco Lorenzi (University of Nice-Sophia Antipolis).

Hervé Delingette   participated as co-supervisor to the PhD thesis of Jatin Relan (École des Mines de Paris), as reviewer to the PhD thesis committee of C. Casta (Lyon University), G. Bousquet (Grenoble University), C. Conte (Marseille University).

Xavier Pennec   participated as president to the PhD thesis committee of N. Duchateau (U. Pompeu Fabra, Barcelona, SP) and as co-supervisor to the PhD thesis of Christof Seiler (University of Nice Sophia Antipolis and University of Bern) and Marco Lorenzi (University of Nice-Sophia Antipolis).

Maxime Sermesant   participated as co-supervisor to the PhD thesis committee of Jatin Relan (École des Mines de Paris).

8.3.6. Invited Lectures

We only give here the invited participations. Please refer to general references for the regular participation to conferences with a submission process.

- **Nicholas Ayache** gave the following invited lectures:
    – at the *Moroccan Academy of Sciences*, Rabat, Morocco on February 15, 2012
    – at the *3rd International Symposium on Computational Anatomy*, Fukuoka, Japan on March 4, 2012
    – at the *Scientific Council of Inria* for the ERC MedYMA project, Inria, France, on March 23, 2012
    – at the *Annual Guest Lecture of the Oxford Biomedical Imaging Festival*, Oxford, UK on October 25, 2012
    – at *Microsoft Research Cambridge*, Cambridge, UK on November 7, 2012
    – at the *Let's Imagine the Future symposium*, Rennes, France on November 9, 2012
    – at the *Ecole Centrale de Paris*, France on November 13, 2012
    – at the *Surgery for life innovation conference*, IHU de Strasbourg, France on December 21, 2012
- **Hervé Delingette** gave an invited lecture at the CardioStim 2012 Modeling session in Nice.
- **Xavier Pennec** gave invited lectures:
    – at the Workshop on Geometry and Statistics in Bioimaging: Manifolds and Stratified Spaces, Sonderborg, DK, October 8-12, 2012;
    – at the MICCAI workshop and challenge on Statistical Atlases and Computational Models of the Heart: Imaging and Modelling Challenges (STACOM 2012), Nice, October 5, 2012;
    – at the Premières rencontres Technologies de l'Information et de la Communication pour la santé mentale, 21 et 22 octobre 2011, Nice et Monaco.
    – at the PENN Image Computing and Science Lab (PICSL), Philadelphia, May 23, 2012;
    – at the Minisymposium on 4D Medical Imaging, SIAM Imaging Science Conf., Philadelphia, May 20-22, 2012.
- **Maxime Sermesant** was invited to organise a cardiac modelling session at the Cardiostim 2012 clinical conference. He was also an invited lecturer at the ISCAT 2012 conference: 9th International Symposium on Catheter Ablation Techniques and the DD21 conference on Domain Decomposition.

8.3.7. Nominations and Prizes

- **Nicholas Ayache** was awarded an ERC grant in Oct 2011, to start in April 2012 with the collaboration of H. Delingette, X. Pennec and M. Sermesant.

- **Nicholas Ayache** was elected CSO (Chief Scientific Officer) of the IHU of Strasbourg (Institut Hospitalo Universitaire) on January 1, 2012. More informations on: http://www.ihu-strasbourg.eu/Bienvenue.html

- **Caroline Brun**, collaborator of X. Pennec during her PhD, won the Young Scientist Publication Impact Award 2012 of the MICCAI Society (Oct 2012) for the paper "A tensor-based morphometry study of genetic influences on brain structure using a new fluid registration method", published at MICCAI 2008 by C. Brun, N. Leporé, X. Pennec, Y.Y. Chou, A.D. Lee, M. Barysheva, G.I. de Zubicaray, M. Meredith, K. McMahon, M.J. Wright, A.W. Toga, and P.M. Thompson.

- **Hervé Lombaert** won the MCV 2012 best paper award at the MICCAI workshop on Medical Computer Vision (Oct. 2012) for the paper "Groupwise Spectral Log-Demons Framework for Atlas Construction" by H. Lombaert, L. Grady, X. Pennec, J.-M. Peyrat, N. Ayache, F. Cheriet.

- **Stéphanie Marchesseau** received the Young Investigator award at the MICCAI 2012 conference held in Nice (Oct. 2012) for her paper [42] .

- **Hervé Lombaert** has received a prize from the research fund of Québec FRQ (http://www.frq.gouv.qc.ca) as the "star research student" of the month January 2013 for his paper [] .

<p align="center" style="color:red">**ATHENA Project-Team**</p>

8. Dissemination

8.1. Scientific Animation

- R. Deriche is Adj. Director at the Doctoral School EDSTIC (http://edstic.i3s.unice.fr/index.html)

- R. Deriche is member of 4 Scientific Councils: University of Nice Sophia Antipolis, ITMO ITS (Institut des Technologies pour la Santé), Olea Medical Company (http://www.olea-medical.com/ and the GIS UNS-ENSL-CNRS-Inria.

- R. Deriche is member of the Administration Concil of AFRIF (Association Française pour la Reconnaissance et l'Interprétation des Formes) and of GRETSI (Groupe d'Etudes du Traitement du Signal et des Images).

- R. Deriche is Associate Editor of SIAM Journal on Imaging Sciences (SIIMS) and editorial board member at Springer for the book series entitled Computational Imaging and Vision.

- R. Deriche visited Athènes Univerity from May 20 to 27, 2012. This visit was performed within the framework of the exchange between Inria and Dept. Informatics, National University of Athens - (http://en.uoa.gr/ et http://www.di.uoa.gr/en/).

- R. Deriche gave a seminar (http://itmb.di.uoa.gr/research/res_seminEng.html) and a series of lectures on "Computational Brain Imaging" at University of Athens (http://en.uoa.gr) within the framework of the Master "Information Technologies in Medicine and Biology".

- R. Deriche gave an invited lecture at the "Biomedical Image Analysis Summer School" held in Paris from July 8 to 13, 2012.

- R. Deriche gave an invited talk at the Asilomar Conference on Signals, Systems, and Computers held November 4-7th, 2012.

- R. Deriche has served for many years as area-chair and/or as program committee member for International Conferences as ICCV, MICCAI, ECCV, CVPR, ISBI and national conferences as AFRIF-AFIA RFIA and serves several international journals and conferences (NeuroImage, IEEE Transactions on Medical Imaging, Magnetic Resonance in Medicine, JMIV, Medical Image Analysis Journal, ISBI, ISMRM, HBM..).

- R. Deriche has co-organised MICCAI 2012 Tutorial on Brain Connectivity Networks: Biology, Imaging and Beyond.

- R. Deriche has organised the "Computational diffusion MR imaging" session of the BASP: international biomedical and astronomical signal processing (BASP) Frontiers to be held in Villars-sur-Ollon (Jan. 27, Feb.1, 2013).

- M. Clerc serves on several local committees at Inria Sophia Antipolis: Bureau du Comité des Projets, MASTIC (diffusion) and Colloquium.

- M. Clerc is associated editor of Biomedical Engineering OnLine.

- M. Clerc serves on an evaluation committee for the ANR: "SIMI 3 - Matériels et logiciels pour les systèmes et les communications".

- M. Clerc was on the organizing committee of the 18th International Conference on Biomagnetism, held in Paris, August 2012 (Biomag 2012). She also organized the mini-symposium on "dMRI, MEG & EEG fusion" at Biomag 2012.

- M. Clerc is a reviewer for conferences and journals (Biomedical Engineering OnLine, Human Brain Mapping, NeuroImage, Inverse Problems, Physics in Medicine iand Biology, IEEE Transations on Computational Intelligence and AI in Games, Computational and Mathematical Methods in Medicine, Paladyn. Journal of Behavioral Robotics).

- M. Clerc was invited to give a talk in the workshop Mouv' organized by DEFISENS "mission interdisciplinarité du CNRS".

- T. Papadopoulo served as a referee for the international conferences MICCAI 2012 and ISBI 2013. He is also area chair for the national conference GRETSI 2013. He is also in the program committe of ICVS 2013. In 2012, he has been reviewer for the journals Physics in Medicine and Biology. Image and Vision Computing, International Journal of Computer Vision, Annals of Biomedical Engineering, Clinical EEG & Neuroscience and SIAM Journal on Imaging Sciences.

- T. Papadopoulo has reviewed several ANR proposal.

- T. Papadopoulo (since september 2011) is the coordinator of the Master of Science in Computational Biology and Biomedicine from University of Nice Sophia Antipolis (Website: http://cbb.unice.fr). The scientific goal of this program is to focus on the human being from different perspectives (understanding and modeling functional aspects or interpreting biomedical signals from various devices) and at different scales (from molecules to organs and the whole organism).

- T. Papadopoulo is a member of the local (Sophia Antipolis) committees for software development (CDT) and for Sustainable development. He is also member of the piloting committee for the platform dtk.

- T. Papadopoulo is the Athena contact for the ADT MedInria-NT and the ANR MULTIMODEL.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master: R. Deriche, *Variational approaches and Geometrical Flows for Brain Imaging*, 36 ETD, M2 "Computational Biology and Biomedicine", University of Nice Sophia Antipolis, France.

Master: R. Deriche, *Computational Vision and Image Processing* 18 ETD, 3rd year Engineering School, Institut TELECOM / TELECOM SudParis, Evry, France.

Master: R. Deriche, *Computational Brain Imaging* 15 ETD, M2 "Information Technologies in Medicine and Biology", University of Athens, Greece (http://en.uoa.gr).

Master: M. Clerc and T. Papadopoulo, *Inverse Problems in Brain Functional Imaging*, 36 ETD, M2 "Computational Biology and Biomedicine", University of Nice Sophia Antipolis, France.

Master: T. Papadopoulo, *3D Computer Vision*, 36 ETD, M2, SSTIM/VIM/MAM5 option at Polytechnic Engineering School, University of Nice Sophia Antipolis, France.

Master: T. Papadopoulo, *Inverse problems for brain functional imaging*, 24 ETD, M2, Mathématiques, Vision et Apprentissage, ENS Cachan, France.

Doctorat: M. Clerc *Inverse Problems in Brain Imaging*, 6 ETD, OIPE Doctoral Course, Ghent University, Belgium.

8.2.2. Supervision

PhD: Joan Fruitet, Interfaces Cerveau-Machines basées sur l'imagination de mouvements brefs: vers des boutons contrôlés par la pensée, University of Nice Sophia Antipolis, July 4th, 2012.

PhD: Emmanuel Caruyer, Q-Space Diffusion MRI, Acquisition and Signal Processing, University of Nice Sophia Antipolis, July 18th, 2012.

PhD: Jian Cheng, Estimation and Processing of Ensemble Average Propagator and Its Features in Diffusion MRI, University of Nice Sophia Antipolis, May 30th, 2012.

PhD in progress: Sylvain Merlet, Compressed Sensing & dMRI, September 2010, Advisor: Rachid Deriche.

PhD in progress: Anne-Charlotte Philippe, MEEG & dMRI, September 2010, Advisors: Maureen Clerc & Rachid Deriche

PhD in progress: Sebastian Hitziger, MEEG signal processing, November 2011, Advisors: Théodore Papadopoulo & Maureen Clerc

PhD in progress: Romain Trachel, Real Time analysis of Visual Attention, October 2010, Advisors: Thomas Brochier & Maureen Clerc

PhD in progress: Gabriel Girard, fMRI & dMRI, September 2012, Advisors: Rachid Deriche & Maxime Descoteaux (University of Sherbrooke, CA).

PhD in progress: Thinhinane Megherbi, HARDI & High Order Tensors, September 2011, Advisors: Rachid Deriche & L. Boumghar (USTHB, Algiers)

8.2.3. Internships

Diana Ibanescu, "Inverse source reconstruction combining different sources of information", Master CBB, , from April 2nd to September 30th (Théodore Papadopoulo).

Laura Serron, "Perturbation methods in PDE to model electric conductivity inhomogeneities", from June 18th to September 17th (Maureen Clerc).

J. Treilhard, "Constrained Diffusion Kurtosis Imaging Using Ternary Quartics and MLE", Queen's University, Kingston (CA), from May to August 2012.

8.2.4. Juries

- Rachid Deriche served in the following PhD Juries as President, reviewer or member (Xavier Desquenses, Greyc Lab., Caen; Perrine Bertrand, University Paul Sabatier, Toulouse, Z. Ikri, Polytechnic School, Algiers; M.K Rajagopa, Telecom SudParis, Evry, Catherine Herold, UMPC & Télécom ParisTech, Paris).

- Maureen Clerc served in the following PhD Juries as reviewer: Emilie Villaron, LATP Aix-Marseille University; Sandra Rousseau, University Joseph Fourier, Grenoble; Alexandre Barachant, University Joseph Fourier, Grenoble) and was in the PhD advisory committee of Margaux Perrin (Lyon University).

- T. Papadopoulo served in the following Ph.D. committees as reviewer (S. Sockeel,), or member (J. Cheng, University of Nice-Sophia Antipolis and Institute of Automation, China and J. Fruitet, University of Nice-Sophia Antipolis).

8.3. Popularization

Maureen Clerc gave an invited talk at the "Art Science Pensée" conference in Mouans Sartoux, September 2012.

Maureen Clerc organized and participated in an event at Lycée Masséna, Nice, to promote scientific careers, for the 40th anniversary of women's admission to Ecole Polytechnique (September 2012).

<p style="text-align:center;color:red;">BIOCORE Project-Team</p>

9. Dissemination

9.1. Scientific Animation

J.-L. Gouzé is a member of the scientific committees for the conferences "Stic et Environnement", BIOMATH and CIFA ; also for the conference for G. Sallet (Senegal 2012). He is in the Inria committee supervising the doctoral theses, and a member of the committee of Labex SIGNALIFE of the University of Nice-Sophia-Antipolis, and of COREBIO PACA. He is a member of the board of the SFBT (French Speaking Society for Theoretical Biology).

M. Chaves is the coordinator of the ANR project GEMCO. Since September 2011 she is also a member of the COST-GTRI (the Working Group on International Relations in Inria's Council for Scientific and Technological Orientation). The Group is in charge of evaluating the Inria's Associated Teams as well as some project proposals (EuroMed 3+3), and ERCIM post-docs.

O. Bernard is in the technical committee of the Computer Applied to Biotechnology (CAB) conferences. He is in the scientific committee of the French conference "Stic et Environnement". He is a member of the scientific committee of the competitivity pole "Trimatec". O. Bernard represents Inria at the ANCRE (Alliance Nationale de Coordination de la Recherche pour l'Energie), in the biomass committee. He is member of the ADT (Technological Development Actions) at Inria.

F. Grognard is a member of the NICE committee, which allocates post-doctoral grants and fundings for visiting scientists at Inria Sophia Antipolis.

P. Bernhard is a member of the scientific committees of the doctoral school "Sciences fondamentales et appliquées" at the University of Nice-Sophia Antipolis. On behalf of the Chairman of PERSAN, he is also in the scientific committee of the "Parc naturel régional des Alpes d'Azur".

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Jonathan Rault , (192h ETD over 2011-2012) "Mathematical analysis and probabilities", initial cycle of Polytech'Nice (eq. L1-L2), Université of Nice Sophia Antipolis, France.

J.-L. Gouzé (18h ETD), P. Hartmann (8h ETD), "Modeling biological networks", 4th year students, Génie Biologique, Polytech'Nice, University of Nice - Sophia Antipolis

O. Bernard (9h ETD), "Mathematical models in Biology". Master on biological oceanography in Villefranche-sur-Mer (M2), Université Pierre et Marie Curie, France.

O. Bernard (4.5 ETD), "Bioenergy from microalgae", Master International Energy Management : alternatives pour l'énergie du futur, Ecole Nationale Supérieure des Mines de Paris, France.

O. Bernard (18h ETD), "Modeling biotechnological processes", Ecole Centrale de Paris, France.

F. Grognard (45.5h ETD) and L. Mailleret (26h ETD), "Equations différentielles ordinaires et systèmes dynamiques", 1st year Engineering in Modeling and Applied Mathematics (eq. L3), Polytech'Nice, Université of Nice Sophia Antipolis, France.

F. Grognard (21h ETD) and L. Mailleret (21h ETD), "Bio-Mathématiques", 2nd year Engineering in Modeling and Applied Mathematics (eq. M1), Polytech'Nice, Université of Nice Sophia Antipolis, France.

F. Grognard (10h ETD) and L. Mailleret (10h ETD) supervised a four-student three-week project for students in 2nd year Engineering in Modeling and Applied Mathematics (eq. M1), Polytech'Nice, Université of Nice Sophia Antipolis, France.

M. Chaves (4.5h ETD), J.-L. Gouzé (9h ETD), "Discrete and continuous approaches to model gene regulatory networks", Master of Science in Computational Biology (M2), University of Nice - Sophia Antipolis.

M. Chaves and J.-L. Gouzé have prepared (jointly with other researchers) a book chapter entitled "Modeling and analysis of gene regulatory networks" on the topics taught in this last course, to appear in a Springer volume [54].

9.2.2. *Supervision*

PhD : J. Rault, "Modélisation mathématique structurée en taille du zooplancton, UNSA, defended December 11, 2012. Supervisors: J.-L. Gouzé and E. Benoit.

PhD in progress : M. Teixeira-Alves, "Modélisation de réseaux écologiques dans un cadre de protection des cultures: applications à la lutte biologique", since september 2009, UNSA. Supervisors: F. Grognard and L. Mailleret.

PhD in progress : P. Hartmann, "Developement of a model for microalgal photoadaptation", since september 2010, UNSA. Supervisor: O. Bernard.

PhD in progress : M. Castel "Modélisation des trajectoires évolutives des pathogènes de plantes dans les écosystèmes agricoles", since October 2010, University of Rennes. Supervisors : F. Hamelin and D. Andrivon (Agrocampus Ouest) and L. Mailleret.

PhD in progress : A. Carta, "Analysis and Control of models of biological regulatory systems. Application to growth control in *E. coli*", since december 2010, UNSA. Supervisors: J.-L. Gouzé and M. Chaves.

PhD in progress : C. Baroukh, "Modeling the coupling of microalgae with anaerobic digestion", since September 2011, University of Montpellier 2. Supervisors: J.-P. Steyer and O. Bernard.

PhD in progress : A. Lebon, "Modélisation couplée plantes-ravageurs-ennemis naturels dans un contexte de lutte biologique", since October 2011, University of Montpellier 2. Supervisors : Y. Dumont (CIRAD), F. Grognard and L. Mailleret.

PhD in progress : I. Belgacem "Controle de systèmes de régulation génétique", since November 2011, UNSA. Supervisor: J.-L. Gouzé.

PhD in progress : H. Bonnefond, "Experimental development of selection oriented photobioreactors", since september 2012, UPMC. Supervisors: A. Sciandra and O. Bernard

PhD in progress : C. Combe, "Response of microalgae to fluctuating light", since september 2012, UPMC. Supervisors: A. Sciandra and S. Rabouille.

PhD in progress : G. Grimaud, "Controlled competition for the selection of microalgal species of interest", since September 2012, UNSA. Supervisors: O. Bernard and S. Rabouille.

PhD in progress : T. Morel Journel, "Où, quand, combien? Stratégies d'introduction d'organismes dans un environnement spatialement structuré", since October 2012, UNSA. Supervisors: T. Guillemaud, E. Vercken and L. Mailleret.

PhD in progress : E. Rousseau, "Plant viruses adaptation to quantitative resistance: from the study of their impact on within-host viral evolutionary dynamics to their durable management in agroecosystems", since November 2012, UNSA. Supervisors: F. Grognard, L. Mailleret, B. Moury, and F. Fabre (INRA Avignon).

9.2.3. *Juries*

J.-L. Gouzé was referee for the thesis of Josephine Kagunda "Mathematical Analysis and Dynamical Systems Modeling of Highland Malaria in Western Kenya.", Université de Lorraine, November 23.

J.-L. Gouzé was in the jury for the thesis of Matthieu Sebbah, « Stabilité d'inégalités variationnelles et prox-régularité, équations de Kolmogorov périodiques contrôlées », University of Montpellier 2, July 2.

J.-L. Gouzé was referee for the thesis of Giovanna De Palo "Dynamics and adaptation in the olfactory and phototransduction pathways", SISSA - International School for Advanced Studies, Trieste (Italy), Octobre 29.

J.-L. Gouzé was in the jury for the thesis of Jonathan Rault "Modélisation mathématique structurée en taille du zooplancton," UNSA, December 11.

J.-L. Gouzé was referee for the thesis of Giovanni Iacono "Systems biology approaches to the analysis of large-scale biological networks", SISSA- International School for Advances Studies, Trieste (Italy), October 29.

M. Chaves was in the thesis jury of Sara Berthoumieux "Méthodes pour l'identification de modèles de réseaux biochimiques," University of Lyon 1 Claude Bernard and Inria GRA, June 13.

M. Chaves was in the thesis jury of Abibatou Mbodj, "Qualitative modeling of mesoderm differentiation in *Drosophila melanogaster*," University of Marseille and TAGC (INSERM U928), December 17.

O. Bernard was referee for the thesis of J. Mailier, "Contribution to mathematical modeling of bioprocesses with application to cultures of microalgae and anaerobic digestion.", Université de Mons (Belgium), May 25.

O. Bernard was president of the jury for the thesis of P. Collet, "Analyse de Cycle de Vie de la valorisation énergétique de la biomasse algale : prise en compte des aspects dynamiques dans l'étape d'inventaire", University of Montpellier, April 4.

O. Bernard was referee for the thesis of Y. Eynaud, "Contribution à la gestion de la complexité des modèles en sciences de l'environnement ", University of Aix-Marseille, December 6.

P. Bernhard was in the thesis jury of Lorenzo Maggi, "Markovian competitive and cooperative games with applications to communications", at Eurecom Sophia Antipolis, October 9.

J.-L. Gouzé is in the thesis committee of C. Baroukh (University of Montpellier).

M. Chaves is in the thesis committee of F. Fourré (University of Luxembourg).

O. Bernard is in the thesis committee of S. Bellini (University of Montpellier), and S. Mazeghrane (University of Montpellier).

9.3. Popularization and media

The activities related to biofuel and microalgae have generated many articles and broadcasts in the media: "Où en est-on des biocarburants de 2e et 3e générations?", Le Monde.fr, October 19; "De la flore et du phosphore", Libération, Novembre 18; "La filière microalgues reprend des couleurs en PACA", La Tribune, March 19; "Vive le pétrole sur nos côtes", Le Point.fr, May 3; "Mettez des microalgues dans votre moteur", Sciences et avenir N° 784 (June).

Aurélie Schmitt, "Ecole Nationale Supérieure de l'eau, l'énergie et l'environnement" student intern, has developed a *Java* applet using the AnyLogic software for the simulation of microalgae growth and biological pest control. The aim of the applet is for the general public to understand the goals and difficulties of controlling such systems [63].

Mélaine Gautier did a presentation at the Centre International de Valbonne for the "Fête de la Science" entitled "Petits jeux des mathématiques pour représenter la vie, la lutte biologique, la croissance des plantes", October 13.

P. Bernhard has given five conferences in high schools in the framework of the program "Sciences et culture au lycée":

31/01/2012	Lycée Léonard de Vinci, Sophia Antipolis.
13/03/2012	Lycée technique de la montagne, Valdeblore.
12/04/2012	Lycée technique de la montagne, Valdeblore.
20/11/2012	Lycée Aristide Briand, Gap (two conferences)

and one conference to visiting Bahrain students (July 12) at Fondation Sophia Antipolis. He helped several high school pupils with their TIPE and in hosting younger highshool interns. He gave a seminar in Inria's "C@fé-in" on Game theory (October 22).

9.4. Conferences, invited conferences

Conferences cited in the bibliography are not repeated here.

O. Bernard was invited to give a conference on microalgae at the Coriolis Conference (Ecole Polytechnique), Paris (February 6), and at Ecole Centrale de Paris ("Défi biotechnologie") "Use of microorganisms for biofuel production" (October 25).

O. Bernard was invited to make a presentation at JojoFest to celebrate Georges Bastin's emeritus. (University of Louvain, Belgium, October 9). J.-L. Gouzé and F. Grognard also attended the JojoFest workshop

Pierre Bernhard gave a seminar in Inria Lille-Nord Europe and ENSAM Lille (October 18)

M. Chaves was invited to make a presentation on mathematical methods in bioinformatics at the 2012 ECFS conference - New Frontiers in Basic Science of Cystic Fibrosis, Special group discussion: New Approaches for Exploring the CFTR Interactome, Sainte Maxime, France (March 31).

DEMAR Project-Team

9. Dissemination

9.1. Scientific Animation

+ D. Guiraud
    1. Associate editor for Journal of Neural Eng. and EMBC'12 conference
    2. Member of the steering committee of "Institut des Technologies pour la Santé"
    3. Chair of the Labex Numev "Aide à la personne malade et déficiente" specific action

+ C. Azevedo-Coste
    1. Board member of IFESS society (international functional electrical stimulation society)
    2. Associate Editor of Paladyn Behavioral Robotics Journal

+ D. Andreu
    1. Co-organizer of the french working group on Control Architectures of Robots of the french GdR Robotique
    2. assitant manager of the Robotic Department (LIRMM)

+ F. Soulier
    - Local coordinator of the Belem (BioElectronics for Medical Engineering) intensive programme for the University of Montpellier 2. Belem is funded by the European Community in the framework of the Erasmus programme.
    - Publication chair and the "parallel-session" supervisor at DCIS'12 (27th conference on Design of Circuits and Integrated Systems) that includes a session on biomedical application and a special session on biomedical systems and devices.
    - Organizing commitee of the workshop "Systèmes Embarqués pour la Santé" that takes place in Paris in December, the 6th and 7th 2012. The workshop is part of the CNRS's DEFI-SENS inter-disciplinary initiative on sensory deficiencies and personalized supplementation.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- **UE "medical robotics"** from Institut Telecom / Mines specialisation "Tic santé". David Guiraud teaches the basics of neurophysiology and neuroprosthetics about 10h per year.
- **UE "neuroprotheses"** master 1 & 2 "Tic et santé" and master 2 Human Movement Sciences. David Guiraud teaches muscle function, modeling and the basics for the control through FES and neuroprosthesis about 20h per year.
- **collège de France** june 2012 about neuroprosthesis during a dedicated day to "medical robotics" organized by Jean Paul Laumond.
- **Summer school Université d'Aalborg** "Fourth Annual Aalborg Symposium on The Advances in Neurophysiology and Neural Rehabilitation Engineering of Movement " 11-12 juin 2012, talk about neuroprotheses. https://smi.hst.aau.dk/events/anres2012.
- David Andreu, Associate Professor, 200h/y, Engineering school Polytech Montpellier and Master degree, Software engineering, real time OS, discrete event systems, networks, neuroprosthesis.
- Christine Azevedo-Coste, University of Montpellier, Master STIC pour la Sante, Neuroprotheses II, Neurophysiology, 6h/y.

- Christine Azevedo-Coste, University of Montpellier, Master STIC pour la Sante, Neuroprotheses I, Neurophysiology, 1,5h/y.
- Christine Azevedo-Coste, Institut Telecom, Neurophysiology, 1,5h/y.
- Mitsuhiro Hayashibe, University of Montpellier, Master STIC pour la Sante, NeuroprothesesII, EMG signal processing and its use for rehabilitation, 3h/y.
- Mitsuhiro Hayashibe, University of Montpellier, Master STIC pour la Sante, Modele et Regulation, Identification and Control in Biomechanics, 4.5h/y.
- Fabien Soulier, assistant professor at Polytech' Montpellier (ERII) teaching electronics and signal processing.

9.2.2. Thesis Defenses

1. Christine Azevedo-Coste, Philippe Fraisse and Charles Fattal supervise **Jovana Jovic**, *Vers une assistance fonctionnelle du transfert et de la posture chez le sujet paraplégique sous électrostimulation : de la simulation a l'expérimentation.* defended on 26th Oct. in Montpellier.

2. Guy Cathébras and Fabien Soulier supervise **Olivier Rossel**, *Dispositifs de mesure et d'interprétation de l'activité d'un nerf.* defended on 26th Nov. in Montpellier.

3. Jérôme Bourien (INM, Montpellier) and Christine Azevedo-Coste supervise **Christophe Michel**, *Modélisation de l'efférence latérale du système auditif périphérique.* defended on 13th Dec. in Montpellier.

9.2.3. Ongoing theses

1. Christine Azevedo-Coste and Bernard Espiau supervise **Maud Pasquier**, *Observation et contrôle de mouvements non cycliques des membres inférieurs et supérieurs en assistance fonctionnelle.*, ANM.

2. David Andreu and Karen Godary supervise **Hélène Leroux**, *Abstraction et composition pour la conception formelle de neuroprothèses*, Thesis ENS, 2011-2014.

3. David Guiraud and David Andreu supervise **Guillaume Coppey**, *Unité implantable de mesure répartie pour suppléance fonctionnelle en boucle fermée*, Thesis CIFRE MXM, 2011-2014.

4. Mitsuhiro Hayashibe and Philippe Fraisse supervise **Alejandro González**, *Closed-loop whole body posture control and stability analysis in FES.*, European Comission:CORDIS, 2011-2014.

5. Mitsuhiro Hayashibe, Benjamin Gilles and David Guiraud supervise **Yacine Berranen**, *Volumetric musculoskeletal modeling and simulation.*, CNRS Handicap, 2011-2014.

6. Mitsuhiro Hayashibe and David Guiraud supervise **Zhan Li**, *Computational rehabilitation and neuromuscular control based on reinforcement learning.*, China Scholarship Council (CSC), 2011-2014.

7. Philippe Fraisse supervises **Nahema Khadija Sylla**, *Contribution à l'assistance au geste au travail : Une approche ergonomique intégrée.*, Thesis CIFRE DEMAR/PSA, 2012-2015.

8. Guy Cathébras, Fabien Soulier and Serge Bernard supervise **Mariam Abdallah**, *Système d'acquisition de signaux bioélectriques multicanal, programmable et implantable.*, Thesis MENRT, 2012-2015.

9. P. Fraisse, C. Azevedo Coste, I. Laffont (CHRU Montpellier, M2H, Euromov, UM1), D. Mottet (M2H, Euromov, UM1) supervise **Nader Rouis**, *Étude et développement de méthodes de rééducation du membre supérieur assistées par stimulation électrique fonctionnelle.*, Thesis NUMEV UM2, 2012-2015.

9.2.4. PostDoc

- Christine Azevedo Coste, David Guiraud and David Andreu supervise Pawel Maciejasz, "Selective neural electo-stimulation" (TIME project).

- François Bonneblanc and Hugues Duffau supervise Pom Charras, "The validation on pre, post and intra-operative evaluations of patients during awake neurosurgeries of slow-growing tumors in the brain", contract Association pour la Recherche sur le Cancer (ARC-France) 'subvention-libre N°3184', post-doctoral fellowship.
- Benjamin Gilles and Mitsuhiro Hayashibe supervise Maxime Tournier, "Constraint-based simulation of the musculoskeletal system" (ANR SoHuSim project).

9.2.5. Internships

- David Guiraud and Pawel Maciejasz supervised Thomas Guiho on "Proposing and implementing the algorithm forautomated detection and classification of action potentials in nerve fiber based on multichannel recordings", Master student project and afterwards 3 month training, from Oct. 2011 to Jun. 2012.
- David Andreu supervised Ronald Reboul on "Prototypage d'un séquenceur embarqué au sein d'un implant de stimulation", Engineer final internship, from Apr. 2012 to Sep. 2012.
- David Andreu supervised Jean-François Happe on "Etude de stratégies d'économie d'énergie pour implant de stimulation", Engineer final internship, from Apr. 2012 to Sep. 2012.
- David Andreu supervised Quinchuan Mo on "Traduction automatique de Réseau de Petri en VHDL : optimisation du code en termes de consommation et de surface", Projet Industriel de Fin d'Etudes (engineer final year project), from Sep. 2012 to Feb. 2013.
- David Andreu supervised Yuchen He on "Conception et développement d'un logiciel d'exploitation d'une plateforme de mesure de consommation d'un implant médical", Projet Industriel de Fin d'Etudes (engineer final year project), from Sep. 2012 to Feb. 2013.
- David Andreu supervised Julien Serodes on "Etude de l'architecture numérique basée composants d'un implant médical et de son impact sur la consommation", Projet Industriel de Fin d'Etudes (engineer final year project), from Sep. 2012 to Feb. 2013.
- David Guiraud, Christine Azevedo, Charles Fattal supervised Tigra WAFA on "Implanted electrical stimulation of upper limb in tetraplegic patients", Projet Master 2 TIC SANTÉ, from Oct. 2012 to Jan. 2013.
- David Guiraud, Christine Azevedo, Luc Bauchet, Charles Fattal supervised Thomas GUIHO on "Epidural functional electrical stimulation", Projet Master 2 TIC SANTÉ, from Oct. 2012 to Jan. 2013.

9.2.6. Contract Engineers

- David Andreu supervises Grégory Angles. "Conception et réalisation d'un environnement logiciel, basé sur Eclipse, pour le prototypage rapide sur composants électroniques programmables (HILE-COP)". Computer Science Engineer, Babylone contract (3 years contract, Inria).
- David Andreu supervises Guillaume Magro. "Spécification et prototypage d'un contrôleur de SEF implantable". Industrial Informatics Engineer, Inria Expert Engineer contract (3 years contract, Inria).
- Guy Cathébras, Serge Bernard and Fabien Soulier co-supervise Jérémy Salles "Correction de la version 2 et développement de la version 3 de l'ASIC de stimulation 12 pôles" Microelectronics Design Engineer (1 year contract, NEUROCOM financial support).

MODEMIC Project-Team

9. Dissemination

9.1. Animation of the scientific community

- A. Rapaport is presently the head of the UMR INRA-SupAgro MISTEA (Mathematics, Informatics and STatistics for Environment and Agronomy) where the team is housed. A. Rapaport is: member of the piloting board of the "modelling" axis of the LabEx Numev (Digital and Hardware Solutions, Modelling for the Environment and Life Sciences)) at Montpellier; member of the scientific board of the "Ecotechnologies" department of IRSTEA; member of the scientific board of the "BIOS" department of CIRAD. A. Rapaport has been the president of the AERES visiting committee of the Research team "MOTIVE" of IRSTEA.

- F. Campillo is member of the NICE (long term invited scientists selection); deputy elected member of the Inria Scientific Council; member of the internal communication working group of Inria Sophia Antipolis. F. Campillo was member of the INRA selection board for the selection of junior scientists (statistics and modelling).

- J. Harmand is the responsible for the treasure-2 network (a 3+3 Euromed project) that has been accepted for funding for the next 4 years); member of the scientific council of the Environment and agronomic INRA department; member of the advisory board of the INRA metaprogram MEM (Meta-omic and Microbial Ecosystems); member of the INRA evaluation commission STEA ("Sciences de la Terre, de l'eau et de l'atmosphère"). J. Harmand is member of the steering committee of the MEM INRA metaprogram. J. Harmand is member of the scientific committee of the INRA Environment and Agronomy department.

- J. Harmand and A. Rapaport are responsible of the INRA network MODYM (MOdèles DYnamiques et Métabolites) sponsored by the Applied Mathematics and Informatics Departement (MIA) of INRA.

- B. Haegeman is Academic Editor for PLoS ONE.

9.2. Seminars and schools

The MODEMIC project-team animates several seminars:

- The MODEMIC seminar on mathematical modelling [http://www-sop.inria.fr/modemic/seminaire/].

- I3M and MODEMIC working group on stochastic models for ecology and biology [http://www-sop.inria.fr/modemic/personnel/campillo/GT-modelisation.html]; this working group is supported by the "laboratory of excellence" (LabEx) NUMEV (Digital and Hardware Solutions, Modelling for the Environment and Life Sciences).

- A new seminar SAMOCOD on Optimisation, Control and Dynamics bilocated at Montpellier and Avignon will be launched in January 2013 [http://ens.math.univ-montp2.fr/SPIP/sem.php3?a=programme&sem=61]. A. Rapaport is member of the organizing committee.

9.3. Teaching

- F. Campillo and M. Joannides have given a 20 hours lecture on "Stochastic modelling of ecosystems" at the Master 2 in Biostatistics in Université de Montpellier II.

- A. Rapaport has given a 25 hours lecture on differential equations with applications in the "Practical Mathematics" module for 1st year students in MSc in Mathematics at University Montpellier II.

- C. Casenave, F. Campillo, J. Harmand and A. Rapaport are in charge of two modules in the new MSc program "STIC - Environnement" at University Montpellier II:
  - Introduction to mathematical modelling, master I (50 hours)
  - Advanced mathematical modelling, master II (75 hours)

- C. Casenave, F. Campillo and A. Rapaport have delivered a 20 hours doctoral module at University Montpellier II, entitled "Modelling for biology and ecology – mathematical and computational methods".

- A. Rapaport and T. Bayen have given six lectures on mathematical modelling for 1st year students of SupAgro Montpellier.

- A. Rapaport has given two lectures on Modelling and numerical simulations at the "EcoSystèmes" Master at University of Montpellier II.

9.4. PhD's

Defended thesis:

- Boumediène Benyahia, "Modélisation et contrôle de bioréacteurs à membrane"; grant: Coadvise and Treasure; thesis in co-supervision Montpellier-Tlemcen (Algeria); started in October 2008; advisors: J. Harmand and B. Cherki (Tlemcen, Algeria).

Theses in progress:

- Mamadou Lamine Diagne, "Modélisation mathématique du Typha"; grant: AUF; thesis in co-supervision Mulhouse-Saint Louis (Senegal); started in October 2009; advisors: T. Sari and M.T Niane (Saint Louis, Senegal).

- Radhouene Fekih-Salem, "La compétition et la coexistence dans le Chemostat"; grant: Averroes; thesis in co-supervision Montpellier-Tunis; started in October 2010; advisors: A. Rapaport, T. Sari and N. Gmati (Tunis).

- Walid Bouhafs, "Commande optimale des réacteurs séquentiels discontinus"; grant: Université Tunis Carthage; thesis in co-supervision Montpellier-Tunis; started in October 2010; advisors: J. Harmand, F. Jean (ENSTA-ParisTech, Paris) and Nahla Abdellatif (Tunis, Tunisia).

- Amel Ghouali, "control en tamps minimal des réacteurs de digestion anaérobie"; grant: Averroes; thesis in co-supervision Montpellier-Tlemcen (Algeria); started in October 2011; advisors: J. Harmand and A. Moussaoui (Tlemcen, Algeria).

- Sonia Hassam, "Réduction de modèles de la digestion anaérobie"; grant: Univ. Tlemcen; started in October 2010; advisors: J. Harmand and B. Cherki (Tlemcen, Algeria).

- Angelo Raherinirina, "Modélisation markovienne de dynamique d'usage des sols"; grant: AUF, SCAC Madagascar, LIRIMA; started March 1st 2009; advisors: F. Campillo and R. Rakotozafy (Univ. Fianarantsoa Madagascar).

- Coralie Fritsch, "Simulation et analyse de modèles individu-centrés d'écosystèmes bactériens pour des procédés biotechnologiques", école doctorale I2S; grant: INRA Metaprogram MEM and Univ. Montpellier II; started October 1st 2011; advisors: F. Campillo, J. Harmand.

- Guilherme Pimentel, "Modelling and control of bioreactors with membrane"; grant: Univ. Mons (Belgium) and INRA; thesis in co-supervision Montpellier-Mons; started October 2011; advisors: A. Rapaport, J. Harmand and A. VandeWouver (Univ. Mons).

- Amine Charfi, "Modélisation du colmatage dans les réacteurs à membranes" grant: Coadvise and University of Tunis; started October 2009; advisors: J. Harmand and Nihel Benamar.

9.5. Participation to thesis committees

- F. Campillo (referee): M. Jean-Louis Marchand, "Conditionnement de processus markoviens", Univ. de Rennes 1.

- F. Campillo (referee): M. Quentin Molto, "Estimation de biomasse en forêt tropicale humide Propagation des incertitudes dans la modélisation de la distribution spatiale de la biomasse en Guyane française", Univ. des Antilles et de la Guyane.

- J. Harmand (referee): M. Thomas Guélon, "Déterminer l'influence de la distribution spatiale des bactéries sur les propriétés microscopiques de biofilms bactériens par des techniques d'homogénéisation", Univ. Blaise Pascal, Clermont II.

- J. Harmand, T. Sari, C. Lobry (president of the committee): M. Boumediene, "Modélisation et observation des bioprocédés à membranes : application à la digestion anaérobie", Univ. Montpellier 2 and Univ. Tlemcen, Algérie.

- A. Rapaport (president of the committee): M. Sebbah, "Stabilité d'inégalités variationnelles et prox-régularité, équations de Kolmogorov périodiques contrôlées" , Univ. Montpellier II.

- A. Rapaport (referee and president of the committee): Léontine Nkague Nkamba, "Robustesse des seuils en épidémiologie et stabilité asymptotique d'un modèle à infectivité et susceptibilité différentielle", Univ. Metz and Univ. St-Louis du Sénégal.

- C. Lobry (president of the committee): Jonathan Rault "Modélisation structurée en taille du zoo-plancton" UNSA.

MORPHEME Team

8. Dissemination

8.1. Scientific Animation

- Florence Besse was reviewer for UPMC, AFM, DFG (grant agencies).

- Laure Blanc-Féraud was reviewer for IEEE Trans on Signal processing, Inverse Problems, Signal Image and Video processing (Eurasip) and the conferences IEEE ISBI, IEEE ICIP, IEEE ICASSP. She is associate editor for "Revue Traitement du Signal". She was co-organisor of the workshop on New Computational Methods in Inverse Problems - NCMIP 2012 (NCMIP) and was associate editor for the conferences : RFIA 2012, Workshop MIA 2012, Workshop NCMIP 2012, International conference IEEE ISBI 2013. She is member of the IEEE BISP (Biomedical Imaging Signal Processing) Technical Committee, member of the evaluation committee of the ANR, program blanc SIMI3, member of the scientific council of Institute INS2I of CNRS, member of bureau du comité des projets Inria SAM and supplant member of CNECA (Comité National des Enseignants Chercheurs en Agriculture). She is director of GdR ISIS of CNRS

- Xavier Descombes was reviewer for the conference ISBI 2012 and the journals IEEE TMI, IEEE IP ⋯ He associated editor of DSP (Digital Signal Processing), expert for the DRRT Provence Alpes Côte d'AZur and DRRT Paris Ile de France. He is member of the Scientific Committee of the competitivness pole Optitech and associate member of IEEE BISP (Biomedical Imaging Signal Processing) Technical Committee.

- Saima Ben Hadj was reviewer for Signal Image and Video Processing.

- Eric Debreuve was member of the Program Committee of Advanced Concepts for Intelligent Vision Systems (ACIVS) 2012 and member of the Technical Program Committee of European Signal Processing Conference (EUSIPCO) 2012. He was reviewer for *IEEE* Transactions on Image Processing, *Springer* Machine Vision and Applications, *Springer* Multimedia Tools and Applications, *Lavoisier* Revue Traitement du Signal.

- Grégoire Malandain was a member of the Local Organizing Committee of the International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'12) in Nice. He was also a member of the review committee of International Conference on Pattern Recognition (ICPR'12) and the International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'12). He is member of the Scientific Committee of the MIA department of INRA.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

License : Alejandro Mottini, Informatique générale, 24 heures équivalent TD , niveau L1, UNS, France

License : Alejandro Mottini, Introduction au web, 16 heures équivalent TD , niveau L1, UNS, France

Master : Mikael Carlavan, Traitement Numérique des Images, 10 heures équivalent TD , niveau M2, UNS, France

Master : Alejandro Mottini, Outils Mathematiques pour l'Image, 2 heures équivalent TD , niveau M2, UNS, France

Master : Xavier Descombes, Analyse d'image, 12 heures équivalent TD , niveau M2, UNS EPU, France

Master : Xavier Descombes, Traitement d'images, 6,25 heures équivalent TD , niveau M2, ISAE, France

Master : Xavier Descombes, Reconnaissance de formes et analyse de données, 6,25 heures équivalent TD , niveau M2, ISAE, France

Master : Xavier Descombes, Techniques avancées en signal et image, 5 heures équivalent TD , niveau M2, ISAE, France

Master : Xavier Descombes, Imagerie numérique, 16 heures équivalent TD , niveau M2, UNS, France

Master : Laure Blanc-Féraud, Deconvolution and denoising for confocal microscopy, 18heqTD, niveau M2, université de Nice Sophia Antipolis, France.

Master : Laure Blanc-Féraud, Traitement numérique des images, 12eqTD, niveau M2, université de Nice Sophia Antipolis, France.

Master : Laure Blanc-Féraud, Imagerie numérique, 12eqTD, niveau M2, université de Nice Sophia Antipolis, France.

Master : Eric Debreuve, Introduction to Inverse Problems in Image Processing, 28.5 Eq. TD, Niveau M2, Université de Nice-Sophia Antipolis, France.

Master: Eric Debreuve, Basics of Image Processing, 17.5 Eq. TD, Niveau M2, Université de Nice-Sophia Antipolis, France.

Master: Alexis Zubiolo, Digital Image Processing, 10h Eq. TD, Université de Nice-Sophia Antipolis, France.

Licence: Alexis Zubiolo, Computer Science, Introduction to Computer Science, 19h Eq. TD, Université de Nice-Sophia Antipolis, France.

8.2.2. Supervision

HdR : Florence Besse, Régulation des ARNms et Morphogenèse axonale chez la drosophile, soutenue le 19 octobre 2012.

PhD : Sylvain Prigent, Apport de l'imagerie multi et hyperspectrale pour l'évaluation de la pigmentation de la peau, UNS, soutenue le 11 novembre 2012, Xavier Descombes (advisor), Josiane Zeruria, Inria CRI-SAM (co-advisor)

PhD in progress : Alejandro Mottini, Métriques de graphes pour la caractérisation des axones, depuis octobre 2011, Xavier Descombes (advisor), Florence Besse (co-supervisor).

PhD in progress : Mikale Carlavan, Optimization of the compression-restoration chain for satellite images, Laure Blanc-Féraud (advisor) M. Antonini, I3S (co-advisor).

PhD in progress, Saima Ben Hadj, Blind restoration of space variant 3D confocal microscopic images, Laure Blanc-Féraud (advisor).

PhD in progress, Roberto Cavicchioli, fast gradient method for hyperparameter estimation in wavelet regularization inverse problems in imaging, Laure Blanc-Féraud (co-advisor during 3 months).

PhD in progress, Alexis Zubiolo, Statistical Machine Learning for Automatic Cell Classification, Eric Debreuve (advisor).

8.2.3. Juries

HDR : Florence Besse, referee of a Habilitation committee at Univ. Paris 11

PhD : Florence Besse, referee of a PhD committee committee at UMPMC, Villefranche sur mer

PhD : Xavier Descombes, referee of the PhD thesis committee of Sylvain Prigent, UNS

PhD : Xavier Descombes, reviewer of the PhD thesis committee of Marcello Pereyra, ENSEEIHT

PhD : Xavier Descombes, reviewer of the PhD thesis committee of Pauline Julian, ENSEEIHT

PhD : Xavier Descombes, reviewer of the PhD thesis committee of Guillaume Zinck, Univ. Bordeaux 1

PhD : Laure Blanc-Féraud, referee of the PhD committee of Raphaël Soulard, XLIM.

HDR : Laure Blanc-Féraud, reviewer of the Habilitation of Thomas Rodet, University Paris Sud.

HDR : Laure Blanc-Féraud, reviewer of the Habilitation of Jérôme Gilles, ENS Cachan.

PhD : Grégoire Malandain, reviewer of the PhD thesis committee of V. Bismuth (Paris-Est University)

PhD : Grégoire Malandain, reviewer of the PhD thesis committee of P. Chassignet (École Polytechnique)

PhD : Grégoire Malandain, reviewer of the PhD thesis committee of C. Person (Lorraine University),

PhD : Grégoire Malandain, reviewer of the PhD thesis committee of G. Pizaine (Telecom ParisTech),

HDR : Grégoire Malandain, reviewer of the Habilitation committee of J. Debayle (Saint-Étienne University),

PhD : Grégoire Malandain, referee of the medicine thesis of M. Laffon (Nice University).

8.3. Popularization

Xavier Descombes has given a conference at lycée René Char (Avignon) within the program "Science au Lycée"

Xavier Descombes has given a seminar at "journée Traitement d'images" organized by Optitec at LSI Luminy (Marseille)

Xavier Descombes has given a seminar at "Matinale des Pôles" organized by the foundation of Sophia Antipolis

NEUROMATHCOMP Project-Team

7. Dissemination

7.1. Scientific Animation

Bruno Cessac was a member of the program committee of the conference Neurocomp-KEOPS 2012. He is a reviewer for the CONYCIT (Chile) and COFECUB (Brasil) program and for the journals Physica D, Nonlinearity, Chaos, Journal of Statistical Physics, IEEE Transaction in Neural Networks, Journal of Mathematical Biology, Journal of Computational Neuroscience. He is in charge of internships organisation in the Master of Computational Biology, Nice.

Pascal Chossat is deputy scientific director of INSMI, the newly created mathematics institute of CNRS, in charge of the international relations of CNRS in this field. He is the coordinator of a geographic EraNet (EC program) named New Indigo for the development of scientific networks between European member states and India.

Olivier Faugeras is a member of the French Academy of Sciences and the French Academy of Technology. He is on the Editorial board of the International Journal of Computer Vision (IJCV). He is the co-editor in chief of the Journal of Mathematical neuroscience, Springer: Website: http://www.mathematical-neuroscience.com/ He is a member of the Institut Thématique Multi-organismes Neurosciences, Sciences cognitives, Neurologie, Psychiatrie. He is a member of the ERC PE1 panel. He co-organized a thematic semester at CIRM, Luminy, France, October-December 2011, on "Theoretical, Mathematical and Computational Neuroscience" which featured four one-week workshops and six one-week courses. For more information see Website: http://www-sop.inria.fr/manifestations/SemesterCirm/.

Pierre Kornprobst was a member of the program committee of the conference ICPR 2012. He co-organised with Olivier Faugeras the Workshop on Biological and Computer Vision Interface which was selected as a satellite event of ECCV 2012 (Website: http://www-sop.inria.fr/manifestations/wbcvi2012). He co-edited with Frédéric Cazals the book entitled "*Modeling in Computational Biology and Medicine: A Multidisciplinary Endeavor*" [56], which illustrates the program taught in the Master of Science in Computational Biology (Website: http://cbb.unice.fr) that they launched in 2009.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Licence 1 : Grégory Faye, *Mathematics for Biology*, 50h, L1, Université Nice Sophia Antipolis, France.

Licence 1 : Massimiliano Muratori, TP de physique, 45 h, L1, Ecole d'ingénieurs Polytech.

Licence 2 : Rodrigo Cofre, Traitement du signal, 50h, L2, Université Nice Sophia Antipolis, France.

Licence 2, Massimiliano Muratori, TD d'électromagnetisme , 18h, L2, Ecole d'ingénieurs Polytech.

Licence 3 : Hassan Nasser, Electronique numérique, 36h, L3, Université Nice Sophia Antipolis, France

License 3 : Hassan Nasser, Microprocesseurs, 28h, L3, Université Nice Sophia Antipolis, France

Master 2: Bruno Cessac, *Neuronal dynamics*, 36 hours, Master of Computational Biology and Biomedicine, Université Nice Sophia Antipolis, France.

Master 2: Olivier Faugeras, *Mathematical Methods for Neuroscience*, 27h, M2, ENS Paris, France.

7.2.2. Supervision

PhD & HdR

PhD : Grégory Faye, "Symmetry breaking and pattern formation in neural field equations", 2012, supervised by Pascal Chossat and Olivier Faugeras.

PhD in progress: Diego Fasoli, "Mean-field theory of realistic spiking neurons", Université Nice Sophia Antipolis, defence planned in 2013, supervised by Olivier Faugeras.

PhD: Geoffroy Hermann, "Some mean field equations in neuroscience", 2012, supervised by Olivier Faugeras and Jonathan Touboul.

PhD : Khaled Masmoudi, Retina-inspired image coding schemes, Université Nice Sophia Antipolis, October 15, 2012, supervised by Marc Antonini (I3S, CNRS) and Pierre Kornprobst.

Phd in progress: Javier Baladron, "Parallel implementations of mean field and neural field equations", Université Nice Sophia Antipolis, defence planned in 2013, supervised by Olivier Faugeras.

PhD in progress: Hassan Nasser, « Reproducing and anticipating retinal responses», defence planned in 2013, supervised by Bruno Cessac .

PhD in progress: Rodrigo Cofre-Torres, «Statistics of spike trains and neuronals structures», defense planned in 2014, supervised by Bruno Cessac.

PhD in progress: Massimiliano Muratori, « Mean field equations for neural networks and synaptic correlations», defence planned in 2015, supervised by Bruno Cessac .

7.2.3. Juries

Bruno Cessac. Reviewer of Damien Landon's Thesis, "Perturbation et excitabilité dans des modèles de propagation de l'influx nerveux", Orléans, 28-06-12.

[1]

<p style="text-align:center; color:red; font-weight:bold;">VIRTUAL PLANTS Project-Team</p>

7. Dissemination

7.1. Scientific Animation

- Christophe Godin has rendered the following services in 2012:
  - he is a member of the College de Direction of UMR AGAP
  - he is a member of the management board of IBC (Institut de Biologie Computationnelle de Montpellier)
  - he is a member of the scientific committee of the Environnement-Agromomy department at INRA
  - he is a member of the editorial board of the journal Frontiers in Plant Sciences
  - he is the scientific coordinator of action d'envergure Morphogenetics
  - he is the scientific coordinator of axis 4 on imaging and modeling (together with Patrick Lemaire)
  - he was a member of the expert committee for the selection of an assistant professor at Labri, University of Bordeaux.
  - he was a member of a Jury for the habilitation of high-school teachers in computer science (Jan 2012) in the context of the introduction of computer science as a new discipline at high school.
  - he participated to a commission of experts that wrote a report on the organization of research on complex systems for the University of Montpellier 2.
  - he participated to the PhD committee of Jonathan Legrand.
  - he is co-chair of the 7th international conference on functional-structural models of plants (FSPM 2013) that will be held in Finland in June 2013.
  - he gave 6 invited talks (4 abroad)
  - he was referee for papers submitted at journals: Development, Journal of mathematical biology, Journal of theoretical biology and at conferences: SIGGRAPH, SIGGRAPH Asia, Eurographics.
- Yann Guédon has rendered the following services in 2012:
  - he is a member of the editorial board of Annals of Botany and a member of the ERCIM working group "Computing & Statistics".
  - he was a member of a jury for recruiting research engineers at INRA.
  - he was a referee for papers submitted to Forest Ecology and Management and Journal of Statistical Planning and Inference.
- Frédéric Boudon was referee for papers submitted to SIGGRAPH, SIGGRAPH Asia, IEEE Transaction On Visualisation and Computer Graphics and Computers and Electronics in Agriculture.
- Etienne Farcot served as a referee for papers submitted to Physica D, Chaos, Plant Physiology, Mathematical Modeling of Natural Phenomena, Nonlinear Analysis Series B: Real World Applications, Journal of Mathematical Biology, PLoS One.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Master Biostatistics. Jointly with Montpellier 1, Montpellier 2 Universities and Agro-Montpellier. Yann Guédon teaches the stochastic modeling course (http://www.agro-montpellier.fr/um2/um1/masterbiostatistique). This involves 21h of M2 classes.

Christophe Godin was responsible for a class of Master 2 on 'Plant modeling' with participation of Yann Guédon, Christophe Pradal, Frédéric Boudon and Christian Fournier in Montpellier SupAgro (M2 - 25h).

Christophe Godin gave a class of Master 2 on 'Tree comparison algorithm' in the Master of Bioinformatique (M2 - 4h).

Christophe Godin gave a class of Master 2 on 'Plant Modeling' in the module plant and animal Morphogenesis of the Master in biology at ENS-Paris (M2 - 4h).

Etienne Farcot, Christophe Godin and Yann Guédon participated to the module iPlant in the Master of bioinformatic and biomathematics (University Cheikh Anta Diop, Dakar, Sénégal) (M2 - 12h).

Yann Guédon gave a 8h lecture about plant architecture analysis at the state University of Londrina (Parana, Brazil)

Christophe Pradal and Christian Fournier taught the Master class "Impact de l'architecture sur la propagation des maladies foliaires" in the module 'Démarches de modélisation' in Montpellier SupAgro (15h).

Master Computer Science. University Montpellier 2.
Frederic Boudon, Christophe Godin and Christophe Fiorio from LIRMM teach a course of 30h on plant modeling and computational geometry.

Christophe Godin and Frédéric Boudon gave a 2 days training session on L-Py and plant modeling for a group of students in Ecole Préparatoire aux Erandes Ecoles.

7.2.2. Supervision

PhD : Preuksakarn Chakkrit, Reconstructing Plant Architecture from 3D Laser Scanner Data, Université de Montpellier 2, 19 december 2012, F. Boudon and C. Godin.

PhD in progress : Anaëlle Dambreville, *"Determinants and modeling of mango phenology: interactions between structural and temporal components in a branching structure and temperature effect"*, Montpellier 2 University, F. Normand, P.E. Lauri, Y. Guedon.

PhD in progress : Jonathan Legrand, *"Hormon signaling and control of morphogenesis during flower development"*, ENS Lyon, P. Das, Y. Guedon.

PhD in progress : Pierre Fernique, *"Hidden transition models for the phenotyping of plant architecture in relation to environmental and genetic factors"*, Montpellier 2 University. Y. Guédon, J.-B. Durand.

PhD in progress : Jean Peyhardi, *"Markov and semi-Markov switching generalized linear mixed models applied to the analysis of plant architecture in relation to environmental and genetic factors"*, Montpellier 2 University. C. Trottier, Y. Guédon.

PhD in progress : Maryline Lièvre, *"Analysis and multiscale modeling of foliar growh in Arabidopsis thaliana in response to environmental stresses. Implication of the floral transition in the foliar expansion"*, Montpellier 2 University, C. Granier, Y. Guédon.

PhD in progress : Mathilde Balduzzi, *"Geometric modeling of plant canopy from 3D scanner images: Combined use of 3D information and reflected intensity for meshing"*, Montpellier 2 University, C. Godin, F. Tardieu.

PhD in progress : Léo Guignard, *"Segmentation, visualization and mechanical modeling of embryonic development in the ascidian"*, Montpellier 2 University, C. Godin, P. Lemaire.

PhD in progress : Guillaume Garin, *"Développement d'un cadre générique de modélisation du couple plante – agent pathogène dans OpenAlea et d'une méthodologie de transfert vers un Outil d'Aide à la Décision"*, Montpellier 2 University, B. Andrieu, C. Pradal, C. Fournier.

PhD in progress : Jean-Philippe Bernard, *"Adaptive mechanical model of early flower development based on 4D imaging"*, Montpellier 2 University, C. Godin, B. Gilles.

7.2.3. *Juries*

Christophe Godin participated was a referee of the theses of Romain Barillot and Wojtek Palubicki and participated to the defenses of these theses. Christophe Godin and Frédéric Boudon, co-supervising Chakkrit Preuksakarn thesis, were also part of the jury of his defense.

7.3. Popularization

Christophe Godin gave 2 conferences for high-school pupils respectively on plants and fractals and on meristem modeling in the context of MathC2+ and fête de la science (6h).

FOCUS Project-Team

8. Dissemination

8.1. Scientific Animation

M. Bravetti: Program Committee member of the following conferences: ESOCC 2012: European Conference on Service-Oriented and Cloud Computing; SITIS 2012 (IBCS): The 8th International Conference On Signal-Image Technology and Internet-Based Systems, Track on Internet-Based Computing and Systems; WS-FMDS 12: 2nd Workshop on Formal Methods in the Development of Software; CLOUD 2012: 5th IEEE International Conference on Cloud Computing; ICST 2012: 5th IEEE International Conference on Software Testing, Verification, and Validation; IADIS: International Conference on Applied Computing 2012; PLACES 2012: 5th Int. Workshop on Programming Language Approaches to Concurrency and Communication-cEntric Software; WS-FM 2012: 9th International Workshop on Web Services and Formal Methods.

Member of the editorial board of the journal J.UCS Journal of Universal Computer Science.

M. Dalla Preda: Program Committee member of the following conferences: 5th IEEE international conference Malware 2012; Software Security and Protection Workshop 2012; Workshop on Program Protection and Reverse Engineering 2012.

U. Dal Lago: Program Committee member of the following conferences: 39th International Colloquium on Automata, Languages and Programming (ICALP 2012); Third International Workshop on Developments in Implicit Complexity (DICE 2012).

Invited speaker at Second International Workshop on Linearity, Tallin, Estonia, 1 April, 2012. Guest Editors of a special number of Theoretical Computer Science devoted to DICE 2012.

Member of the organising committee of the "Logic and interactions 2012" weeks, Marseille 30 January – 2 March 2012.

M. Gaboardi: Program Committee member for the Third Workshop on Developments in Implicit Computational Complexity

Invited speaker at the ASL meeting special session on Structural Proof Theory and Computing April 2-3, 2012, Madison, USA.

I. Lanese: Program Committee member of the following conferences: 9th International Workshop on Web Services and Formal Methods (WS-FM 2012); 5th Interaction and Concurrency Experience (ICE 2012).

Co-chair of the Service Oriented Architectures and Programming track of the 27th Annual ACM Symposium on Applied Computing (SAC 2012). Workshop Co-Chair of ESOCC 2012, the European Conference on Service-Oriented and Cloud Computing 19-21 September 2012, Bertinoro, Italy.

Member of the organising committee of the 5th Interaction and Concurrency Experience (ICE 2012).

C. Laneve: Program Committee member of the following conferences: 23rd International Conference on Concurrency Theory (CONCUR); 22nd European Symposium on Programming (ESOP).

Invited speaker at 7th International Symposium on Trustworthy Global Computing Newcastle upon Tyne, UK, 7-8 September 2012.

M.Gabbrielli: Member of the editorial board of the Int'l Journal Theory and Practice of Logic Programming. Member of the program committee of the 9th International Workshop on Constraint Handling Rules; Fifteenth International Symposium on Practical Aspects of Declarative Languages (PADL'13).

Expert Committee member for 2012 EAPLS Best Ph.D. Dissertation award.

Organizer of the 2012 Bertinoro school for Ph.D. students in computer science (BISS 2012).

S. Martini: Program Committee member of the Second International Workshop on Linearity (FOPARA), Tallinn, Estonia.

Invited speaker at Pisa Summer Workshop on Proof Theory, Pisa, Italy.

D. Sangiorgi: Member of the editorial board of the journals: Logical Methods in Computer Science, Acta Informatica, and Distributed Computing, Foundations and Trends in Programming Languages.

Program Committee member of the conferences: 38th International Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM); Twenty-Seventh Annual ACM/IEEE Symposium on Logic in Computer Science (LICS 2012); 39th International Colloquium on Automata, Languages and Programming (ICALP 2012),

Invited speaker at the Milner Symposium, 15-18 April 2012, Edimburgh UK, 2012 Microsoft Summer School on Concurrency, August 22-29 2012, St. Petersburg, Russia.

Co-director of the International School HATS-FMCO on Formal Models for Components and Objects, 24-28 September 2012 University Residential Center of Bertinoro, Italy.

G. Zavattaro: Program Committee member of the following conferences: 6th International Workshop on Reachability Problems; 9th International Symposium on Formal Aspects of Component Software (FACS); 4th Fourth International Conferences on Advanced Service Computing (SERVICE COMPUTATION 2012); 6th IEEE International Symposium on Theoretical Aspects of Software Engineering (TASE); 5th IEEE International Conference on Cloud Computing (CLOUD 2012).

Invited speaker at 3rd International Workshop on Interactions between Computer Science and Biology (CS2Bio'12), 16 June 2012, Stockholm, Sweden.

Member of the Editorial Board of the Journal of Software (JSW), Academy Publisher.

General Chair of ESOCC 2012, the European Conference on Service-Oriented and Cloud Computing 19-21 September 2012, Bertinoro, Italy.

8.2. Popularization

Simone Martini has carried out extended work of scientific divulgation:

- member of the technical committee of Olimpiadi del Problem Solving (at Italian Ministry of Education);
- consultant of the Minister of Education on admission tests for high school professorship admission;
- the talks "Quello che i calcolatori possono e non possono fare", MassaScienza, Massa Carrara; Lingua universalis: Calcolo, informatica e linguaggio, workshop T4T, Turin; Alan Turing pioniere dell'era digitale, ScienzaGiovane, Bologna; Calcolo e simboli: la scienza digitale, Accademia delle Scienze di Bologna and Accademia di Agricoltura Scienze e Lettere di Verona;
- the paper [21].

Ugo Dal Lago and Simone Martini have given short presentations at "Scienzagiovane", a forum of science popularisation in Bologna mainly targeting high-school students.

8.3. Teaching - Supervision

8.3.1. Teaching

Below are the teaching activities of the Focus members during 2011.

- Mario Bravetti

  Undergraduate: "Tecnologie Web", 46 hours, 3rd year, University of Bologna, Italy.

  Master: "Tecnologie Web Avanzate", 46 hours, 1st or 2nd year, University of Bologna, Italy.

- Ugo Dal Lago

    Undergraduate: "Introduction to Programming in Python", 20 hours, 1st year, University of Bologna, Italy.

    Undergraduate: "Optimization", 36 hours, 2nd year, University of Bologna, Italy.

- Maurizio Gabbrielli

    Undergraduate: "Programming languages", 40 hours, 2nd year, University of Bologna, Italy.

    Master: "Artificial Intelligence", 60 hours, 2nd year, University of Bologna, Italy.

- Marco Gaboardi

    Master: "Advanced Programming", 40 hours. 1st or 2nd year. University of Pennsylvania, USA.

- Ivan Lanese

    Undergraduate: "Programmazione", 40 hours, 1st year, University of Bologna, Italy.

- Cosimo Laneve

    Undergraduate: "Programmazione", 90 hours, 1st year, University of Bologna, Italy.

    Master: "Analisi di Programmi", 42 hours, 1st year, University of Bologna, Italy.

- Simone Martini

    Undergraduate: "Introduction to programming in Python", 58 hours, 1st year, University of Bologna, Italy.

    Undergraduate: "Computer abilities for biologists", 8 hours, 1st year, University of Bologna, Italy.

    Master: "Types and programming languages", 40 hours, 1st year, University of Bologna, Italy.

    Master: "Basic Computability", 12 hours, 1st year and 2nd year, University of Bologna, Italy.

    Master: "Logical foundations of computer science", 40 hours, 1st year, University of Bologna, Italy.

- Davide Sangiorgi

    Undergraduate: "Operating Systems", 110 hours, 2nd year, University of Bologna, Italy.

    Master: "Models for concurrency", 15 hours, 2nd year, University of Bologna, Italy.

- Gianluigi Zavattaro

    Master: "Informatica Teorica", 72 hours, 1st year, University of Bologna, Italy.

    Master: "Linguaggi di Programmazione", 48 hours, 2nd year, University of Bologna, Italy.

- Jacopo Mauro

    Undergraduate: "Algoritmi e strutture dati", 20 hours, 1st year, University of Bologna, Italy.

- Giulio Pellitta

    Undergraduate: "Laboratorio di Operating Systems", 40 hours, 2nd year, University of Bologna, Italy.

    Undergraduate: "Attivita' di supporto alla didattica universitaria di Informatica nell'ambito della Piattaforma di e-learning A3", 130 hours, 1st year, University of Bologna, Italy.

    Undergraduate: "Laboratorio Informatica 1", 60 hours, 1st year, University of Bologna, Italy.

- Elena Giachino

    Undergraduate: "Programmazione", 40 hours, 1st year, University of Bologna, Italy.

8.3.2. Supervision

Completed Phd thesis:

- Jacopo Mauro, "Constraints meet concurrency". Dottorato di Ricerca in Informatica, University of Bologna, April 2012 Supervisors: M. Gabbrielli. [10]
- Claudio Mezzina, "Réversibilité dans le pi calcul d'ordre supérieur", April 2012, University of Grenoble and University of Bologna, Supervisors: Jean-Bernard Stefani and Davide Sangiorgi. [11]

Below are the details on the PhD students in Focus: starting date, topic or provisional title of the thesis, supervisor(s). These are all PhDs in progress.

- Ornela Dardha, january 2011, Types for processes, D. Sangiorgi.
- Ferdinanda Camporesi, january 2009, Analysis of system biology, R. Cousot (Ecole Normale, Paris) and M. Gabbrielli
- Tudor Alexandru Lascu, january 2011, Formal methods for modelling and analyzing concurrent systems, C. Laneve and G. Zavattaro
- Jean-Marie Madiot, september 2011, Types, proofs and proof techniques for process calculi, D. Hirschkoff and D. Sangiorgi.
- Giulio Pellitta, january 2011, Implementations of geometry of interaction, S. Martini.
- Paolo Parisen Toldin, january 2010, Implicit computational complexity for probabilistic classes, S. Martini.
- Michele Alberti, december 20111; Separation results in the algebraic lambda-calculus; L. Regnier (Marseille) and S. Martini
- Marco Solieri, december 20111; Complexity of reduction in sharing graphs, S. Guerrini (Paris Nord) and S. Martini.

A few other PhD students are (co)-supervised by members of Focus, but currently are not in the Focus team (some of them might be added in 2013):

- Sara Zuppiroli (Bologna), january 2010; models for quantum computing; U. Dal Lago.
- Roberto Amadini (Bologna), january 2012, Constraint Programming, M. Gabbrielli.
- Alessandro Rioli (Bologna), january 2012; bisimulation equivalence in quantum lambda calculi; U. Dal Lago.

8.3.3. Juries

D. Sangiorgi has been rapporteur and member of the evaluation committee of the "Habilitation a Diriger des Recherche" (HDR) of Ludovic Henrio, Université de Nice, and Daniele Varacca, Université Paris 7.

U. Dal Lago has been rapporteur and member of the PhD jury for Antoine Madet, Université Paris 7.

INDES Project-Team

9. Dissemination

9.1. Seminars and conferences

- **Pejman Attar** gave a talk about "Safe and Secure Concurrency" at Paris 6 University. In November 2012, he presented the work "A CPS definition of Esterel" by B. Serpette at the workshop Synchron'12 at Le Croisic.

- **Gérard Berry** gave an invited talk in April 2012, at Edinburgh, "Reconciling Semantics and Implementation", for the Milner Symposium. He gave the talk "Informatique et art, quel avenir?" at the Villa Medicis, Rome, in February. He gave an invited conference at IRCAM "Parler du temps, mais de manière formelle", in Paris in June, and "Turing et ses contemporains: machines, langages, logiques" a talk at ENS Lyon in July.

- **Ilaria Castellani** participated in the workshop CoTiCo (Contracts and Behavioural Types), in Lucca, Italy, where she presented her current work on session types for security. In October 2012, she participated in the kick-off management committee meeting of the BETTY european Action, in Brussels.

- **Cyprien Nicolas** gave a talk about Hop at a Free and Open Source Software event named *Journées Méditerranéennes du Logiciel Libre* (JM2L). JM2L are a small local event, proposing around 30 conferences over two days, and targetting general public. It welcomed around 250 participants.

- **José Santos** gave a talk about his work on information flow in the CREST Open Workshop on Interference and Dependence organized by the Department of Computer Science of the University College of London in May 2012. In June 2012, he presented the article [12] in the Programming Languages and Analysis for Security (PLAS) Workshop in Beijing, China.

- **Tamara Rezk**, presented the work on the Mashic compiler in the Computer Security Foundations conference in Harvard, Boston, June 2012. In June 2012, she chaired the PLAS workshop, Beijing. In October 2012, she was invited to the Dagstuhl Seminar *Web Application Security* where she also participated to the *JavaScript sessions*.

- **Manuel Serrano** participated in a one-week seminar in Dagstuhl on Dynamic Languages, where he gave a talk on HipHop. He also participated in a one-week IFIP seminar which took place in Austin, Texas. He gave a talk on diffuse computing.

9.2. Animation

- **Gérard Berry** is a member of the *Académie des sciences*, of the *Académie des technologies*, and the *Academia Europaea*. He is member of the steering committee of the *ANR*.

- **Ilaria Castellani** is member of the editorial board of *Technique et Science Informatiques*. She was a member of the programme committee of EXPRESS'12.

- **Tamara Rezk** was a member of the programme committees of Bytecode, PLAS (co-chair with Sergio Maffeis), ARES, and LatinCrypt. She is is a member of the programme committee of JAIIO'13. She was a reviewer for CSF'12, Crypto'12, CCS'12, and the QIF journal.

- **Manuel Serrano** is the coordinator of the ANR DEFIS project PWD. He served on the program committees of the following conferences:
  - TFP'12, Symposium on Trends in Functional Programming.
  - COORDINATION'12, 7th International Federated Conferences on Distributed Computing Techniques.

9.3. Teaching - Supervision - Juries

9.3.1. Teaching

Licence: **Johan Grande**, *Structures de données et programmation*, 6 ETD, L1, University of Nice. **Vincent Prunet**, *Algorithms and Data Structures*, 42 ETD, L2, Lycée International de Valbonne (24 hours in 2012), (Inria action to promote early CS courses in all scientific curricula).

Master: **Ilaria Castellani**, *Programmation et sécurité des applications du web*, 13.5 ETD, M2, University of Nice Sophia Antipolis. **Tamara Rezk**, *Programmation et sécurité des applications du web*, M2, University of Nice. *Programming the Diffuse Web*, 13.5 ETD, M2, University Paris 6 (UPMC), France. **Manuel Serrano**, *Programming the Diffuse Web*, 13.5 ETD, M2, University Paris 6 (UPMC), France.

PhD: **Pejman Attar** gave a 3 hour open course for PhD students on "Multi- core Languages and their problems" at the University of Eindhoven, Netherlands.

9.3.2. Supervision

PhD in progress: **Pejman Attar**, *Safe and secure reactive programming for multicore architectures*, University of Nice, 1/10/2010, **Frédéric Boussinot** and **Ilaria Castellani**.

PhD in progress: **Cyprien Nicolas**, *Orchestrating multi-tier programming languages*, University of Nice, 1/09/2010, **Gérard Berry** and **Manuel Serrano**.

PhD in progress: **Johan Grande**, *Conception et implantation d'un langage de programmation concurrente modulaire*, University of Nice, 1/10/2010, **Gérard Boudol** and **Manuel Serrano**.

PhD in progress: **Yoann Couillec**, *Langages de programmation et données ouvertes*, University of Nice, 1/10/2012, **Manuel Serrano** and **Patrick Valduriez**.

PhD in progress: **José Santos**, *Language based approach for information flow analysis in distributed mobile code*, University of Nice, 1/12/2010, **Gérard Boudol** and **Tamara Rezk**.

9.3.3. Juries

Manuel Serrano was a member of the jury of the PhD Thesis of Luca Saiu (Universities Paris 13). He was a member of the selection committee of PPS (Paris 6).

9.4. Popularization

The Web is becoming the richest platform on which to create computer applications. Its power comes from three elements: modern Web browsers enable highly sophisticated graphical user interfaces (GUIs) with 3D, multimedia, fancy typesetting, among others; calling existing services through Web APIs makes it possible to develop sophisticated applications from independently available components; and open-data availability allows access to a wide set of information that was unreachable or that simply did not exist before. The combination of these three elements has already given birth to revolutionary applications such as GoogleMaps, radio podcasts, and social networks.

The next step is likely to be incorporating the physical environment into the Web. Recent electronic devices are equipped with various sensors (GPS, cameras, microphones, metal detectors, speech commands, thermometers, motion detection, and so on) and communication means (IP stack, telephony, SMS, Bluetooth), which enable applications to interact with the real world. Web browsers integrate these features one after the other, making the Web runtime environment richer every day. The future is appealing, but one difficulty remains: current programming methods and languages are not ideally suited for implementing rich Web applications. This is not surprising as most have been invented in the 20th century, before the Web became what it is now.

Traditional programming languages have trouble dealing with the asymmetric client-server architecture of Web applications. Ensuring the semantic coherence of distributed client-server execution is challenging, and traditional languages have no transparent support for physical distribution. Thus, programmers need to master a complex gymnastics for handling distributed applications, most often using different languages for clients and servers. JavaScript is the dominant Web language but was conceived as a browser only client language. Servers are usually programmed with quite different languages such as Java, PHP, Ruby, etc. Recent experiments such as Node.js propose using JavaScript on the server, which makes the development more coherent; however, harmonious composition of independent components is still not ensured.

In 2006, three different projects, namely, GWT from Google, Links from the University of Edinburgh, and HOP from Inria (`http://www.inria.fr`) [4], offered alternative methods for programming Web applications. They all proposed that a Web application should be programmed as a single code for the server and client, written in a single unified language. This principle is known as multitier programming.

Links is an experimental languages in which the server holds no state and functions can be symmetrically called from both sides, allowing them to be declared on either the server or the client. These features are definitely interesting for exploring new programming ideas, but they are difficult to implement efficiently, making the platform difficult to use for realistic applications.

GWT is more pragmatic. It maps traditional Java programming into the Web. A GWT program looks like a traditional Java/Swing program compiled to Java bytecode for the server side and to JavaScript for the client side. Java cannot be considered as the unique language of GWT, however. Calling external APIs relies on Javascipt inclusion in Java extensions. GUIs are based on static components declared in external HTML files and on dynamic parts generated by the client-side execution. Thus, at least Java, Javascript, and HTML are directly involved.

The HOP language takes another path relying on a different idea: incorporating all the required Web-related features into a single language with a single homogeneous development and execution platform, thus uniformly covering all the aspects of a Web application: client-side, server-side, communication, and access to third-party resources. HOP embodies and generalizes both HTML and JavaScript functionalities in a Scheme-based platform that also provides the user with a fully general algorithmic language. Web services and APIs can be used as easily as standard library functions, whether on the server side or client side.

In order to popularize HOP, we have written a paper for targeting engineers which presents on overview of the HOP language and its development environment. It has been simultaneously published in ACM Queue and Communications of the ACM [16]. We have also given several demonstrations of the system. In particular, Cyprien Nicolas has co-developed application software for an educational cable robot (Coprin) presented at the Fête de la Science, in November. The demo consisted in a Cable bot built by a Coprin student and piloted by Hop, the software being written by a Indes student. The demo took place in front of four classes of High School students.

9.5. Transfer

9.5.1. *Diffuse Robotics*

Dissemination of the HOP technology has become a priority for the team now that HOP is actually used to develop large projects. In 2012, a further step was taken with the allocation of dedicated resources missioned to develop and transfer the application portfolio to the industry. The team has focused on bringing web awareness to personal assistance robots developed by the Coprin team, also at Inria CRISAM, in line with one of the top strategic orientations of Inria. Using web protocols as a native framework greatly simplifies the integration of the robot as a web entity, and the use of remote web services to manage, monitor or extend the features of the robot. The behavior of a HOP robot is specified in HOP and orchestrated within diffuse HOP run time agents embedded within the robot elements, in charge of handling communication and control between platforms and with remote web services. The project, code-named *Diffuse Robotics*, builds on the experience gained in using HOP for home automation over the recent years, adding in 2012 the support of versatile robotic computing platforms and associated mechanics and sensor hardware and a state of the art plug and play framework for

automatic device and service discovery. Among the direct benefits of relying on a web framework are the ability to use any web enabled device such as a smartphone or tablet to drive the robot. Also, it is much simpler to put in place remote diagnostic and monitoring services by leveraging on existing robot sensors and the HOP framework.

<div align="center">

LOGNET Team

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8. Dissemination

8.1. Scientific Animation

Members of the LogNet team commonly participate in the reviewing of conference and journal papers.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master : Luigi Liquori, Peer-to-peer 1, 31.5hTD, M2, Université of Nice Sophia-Antipolis;

8.2.2. Supervision

PhD: Petar Maksimovic, "Development and Verification of Probability Logics and Logical Frameworks", Faculty of Technical Sciences, University of Novi Sad, Serbia and the University of Nice Sophia Antipolis, end of June 2012, Silvia Ghilezan and Luigi Liquori

PhD: Vincenzo Ciancaglini, "Extending the reach of overlay networks through distributed gateways: design, modeling and applications", Université de Nice-Sophia Antipolis, Juin 2013, Luigi Liquori, Jean-Christophe Pazzaglia (SAP).

PhD in progress: Thao Nguyen, "Trust and reputation management in online marketplaces", Université de Nice-Sophia Antipolis, November 2010, Luigi Liquori and Bruno Martin (UNICE).

PhD in progress: Riccardo Loti, "Modeling and evaluation of protocols for Delay Tolerant Networks exploiting DHT, Content driven routing, and rateless codes", Université de Nice-Sophia Antipolis and University of Turin Italy, January 2011, Luigi Liquori and Rossano Gaeta (UNITO).

PhD in progress: Giang Ngo, "Inter-heterogeneous overlay co-operation", Université de Nice-Sophia Antipolis and HUST, Hanoi Institute of Science and Technology, Vietnam, October 2011, Luigi Liquori and Nguyen Chan Hung (HUST).

8.2.3. Juries

- Referee of the Claudia Tavares Ph.d., "Un système de types pour la programmation par réécriture embarquée", Loria, 2012.

8.3. Popularization

The LogNet team has conducted a dozen circa of sessions of popularization of the myMed software (typically an "atelier de formation au réseau social myMed"). Public are typically students, administration people of many town or institutions (CG06, Mairies, Hospital, etc.).

<p align="center" style="color:red">**MAESTRO Project-Team**</p>

8. Dissemination

8.1. Scientific Animation

8.1.1. Editorial activities

MAESTRO members are

Editor-in-Chief of

– *Performance Evaluation* (PEVA) (**P. Nain** since January 1st, 2008);

Associate Editors of (in alphabetical order)

– *Computer Communications* (COMCOM) (**E. Altman** since 2010);
– *Dynamic Games and Applications* (DGAA) (**E. Altman** since 2011);
– *Journal of Economic Dynamics and Control* (JEDC) (**E. Altman** since 2001);
– *Performance Evaluation* (PEVA) (**K. Avrachenkov** since 2008);

Guest editor of Special Issues of

– *IEEE Journal of Selected Areas in Communications* (JSAC) on "The economics of communication networks and systems" [77] (**E. Altman**).

8.1.2. Conferences, meetings and tutorial organization

MAESTRO members were

in the Steering Committee of

– 10th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2012, Paderborn, Germany) (**E. Altman** as chair);
– 6th Intl. Conference on Performance Evaluation Methodologies and Tools (VALUE-TOOLS, Cargèse, France) (**E. Altman** as co-chair);
– 6th Intl. Conference on Network Games, Control and Optimization (NETGCOOP 2012, Avignon, France) (**E. Altman**);
– Workshop on Telecom Economics, Engineering and Policy (co-located with ITC 2012, Kraków, Poland) (**E. Altman**);

TPC co-chair of

– 6th Intl. Conference on Performance Evaluation Methodologies and Tools (VALUE-TOOLS 2012, Cargèse, France) (**A. Jean-Marie**);
– Workshop "Networking games & resource allocation" (Petrozavodsk, Russia) (**E. Altman**).

8.1.3. Participation in technical program committees (TPC)

MAESTRO members were in the TPC of

1. ACM 3rd Intl. Workshop on Mobile Opportunistic Networks (MobiOpp 2012, Zurich, Switzerland) (**G. Neglia**);
2. ACM SIGMETRICS/Performance 2012 (London, UK) (**A. Jean-Marie**);
3. 8th Advanced International Conference on Telecommunications (AICT 2012, Stuttgart, Germany) (**K. Avrachenkov**);
4. IADIS Multi Conference on Computer Science and Information Systems (MCCSIS 2012, Lisbon, Portugal) (**M. Haddad**);
5. 32nd IEEE Intl. Conference on Computer Communications (IEEE INFOCOM 2013, Turin, Italy) (**G. Neglia**);
6. IEEE 77th Vehicular Technology Conference (VTC2013-Spring, Dresden, Germany) (**S. Alouf**, **D. Ciullo**);
7. 3rd Intl. Conference on Access Networks (ACCESS 2012, Venice, Italy) (**K. Avrachenkov**);
8. 19th Intl. Conference on Analytical and Stochastic Modelling Techniques and Applications (ASMTA 2012, Grenoble, France) (**K. Avrachenkov**);
9. Intl. Conference on Computer Communication Networks (ICCCN 2012, Munich, Germany) Network Science and Social Networks Track (**G. Neglia**);
10. 6th Intl. Conference on Game Theory and Management (GTM 2012, St. Petersburg, Russia) (**E. Altman**);
11. 3rd Intl. Conference on Game Theory for Networks (Gamenets 2012, Vancouver, Canada) (**E. Altman**);
12. 6th Intl. Conference on Network Games, Control and Optimization (NETGCOOP 2012, Avignon, France) (**K. Avrachenkov**);
13. 11th Intl. Conference on Next Generation Wired/Wireless Networking (NEW2AN 2012, St. Petersburg, Russia) (**K. Avrachenkov**);
14. 6th Intl. Conference on Performance Evaluation Methodologies and Tools (VALUETOOLS 2012, Cargèse, France) (**S. Alouf**, **K. Avrachenkov**, **A. Jean-Marie**, **P. Nain**, **G. Neglia**);
15. 2nd Intl. Conference on Smart Grids and Green IT Systems (SMARTGREENS 2013, Aachen, Germany) (**D. Ciullo**);
16. 3rd Intl. Conference on Smart Grids, Green Communications and IT Energy-aware Technologies (Energy 2013, Lisbon, Portugal) (**D. Ciullo**);
17. 27th Intl. Symposium on Computer and Information Sciences (ISCIS 2012, Paris, France) (**A. Jean-Marie**);
18. 14th Intl. Symposium on Dynamic Games and Applications (ISDGA 2012, Byšice, Czech Republic) (**E. Altman**);
19. 10th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2012, Paderborn, Germany) (**S. Alouf**);
20. 24th Intl. Teletraffic Conference (ITC 2012, Kraków, Poland) (**S. Alouf**);
21. 5th Intl. Workshop on Multiple Access Communications (MACOM 2012, Dublin, Ireland) (**K. Avrachenkov**);
22. Intl. Workshop "Networking Games and Management" (Petrozavodsk, Russia) (**K. Avrachenkov**);
23. 14èmes Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (AlgoTel 2012, La Grande Motte, France) (**A. Jean-Marie**);
24. 8th Spain, Italy and Netherlands Meeting on Game Theory (SING 8, Budapest, Hungary) (**E. Altman**);
25. 9th Workshop on Algorithms and Models for the Web Graph (WAW 2012, Halifax, Nova Scotia, Canada) (**K. Avrachenkov**);
26. 14th Workshop on Mathematical Performance Modeling and Analysis (MAMA 2011, London, UK) (**A. Jean-Marie**, **P. Nain**);
27. First Workshop on Pricing and Incentives in Networks (W-PIN 2012, London, UK) (**E. Altman**).

8.1.4. Leadership within the scientific community

- E. Altman was one of the two recipients of the France Telecom Prize delivered by the Académie des Sciences.
- E. Altman is a fellow member of IEEE (Class of 2010).
- E. Altman, A. Jean-Marie and P. Nain are (elected) members of IFIP WG7.3 on "Computer System Modeling".
- P. Nain is the vice-Chair of the IFIP WG7.3 working group on "Computer System Modeling" (since June 30, 2007).

8.1.5. Research administration

E. Altman   is co-responsible of one of the five themes of the SFR (Structure Fédérative de Recherche) AGORANTIC (in which INRIA is a founding member) entitled "Digital Culture and Virtual Societies."

K. Avrachenkov   (together with A. Legout and F. Gandon) is co-responsible of the multi-disciplinary research theme (Action Transversale) "Semantic and Complex Networks" at INRIA Sophia Antipolis - Méditerranée.

A. Jean-Marie

- is the scientific coordinator of INRIA activities in Montpellier (since 2008);
- is member of the managing sub-committee of the Project-Team Committee of the INRIA Sophia Antipolis - Méditerranée research center (since July 2010);
- is a member of the Steering Committee of the GDR RO, a national research initiative on Operations Research sponsored by the CNRS;
- was a member of the Recruiting Committee of INRIA engineers and technicians (IT) at Inria Sophia Antipolis - Méditerranée;
- was a member of the Selection Committee of the 2012 Robert Faure prize of the French Society for Operations Research and Decision Support (ROADEF).

P. Nain

- is Chairman of INRIA's Evaluation Committee since September 1st, 2012 (http://www.inria.fr/en/institute/organisation/committees/evaluation-committee);
- is Head of project-team MAESTRO;
- is a member of the INRIA steering group (13 people including 6 researchers) in charge of producing of the INRIA 2013-2017 strategic plan;
- has represented INRIA/ at the Scientific Council of the Univ. of Nice-Sophia Antipolis from July 2011 to June 2012.

MAESTRO members are in the following committees of INRIA Sophia Antipolis - Méditerranée

- CC: General Information Commission (**N. Choungmo Fofack** as PhD Student Representative, since 2011);
- ComRes: Commission Restauration (**N. Choungmo Fofack** as PhD Student Representative, since 2011);
- CSD: Doctoral Committee (**S. Alouf**, since February 2006);
- MASTIC: a commission in charge of internal and regional scientific animation and popularization (**S. Alouf**, since November 2011);
- NICE: Invited Researchers Committee (**K. Avrachenkov**, since 2010);

and in charge of the following tasks

- Validation of Teams yearly activity reports (**K. Avrachenkov**, since 2010);
- Accounting for the monthly Project-Team Committee meetings (**S. Alouf**);
- Organizing MAESTRO internal meetings (**N. Choungmo Fofack**).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence : S. Alouf, "Probability and Statistics", 36H ETD, 1st year Water Engineering degree (L3), Univ. of Nice Sophia Antipolis (UNS), France.

Licence : N. Choungmo Fofack, "Stochastic processes for Signal Processing", 64H ETD, 1st year Electronic Engineering degree (L3), Univ. of Nice Sophia Antipolis (UNS), France.

Licence : M. El Chamie, "Database", 20H ETD, Computer Science Program (L2), Univ. of Nice Sophia Antipolis (UNS), France.

Master : S. Alouf, "Performance Evaluation of Networks", 32.5H ETD, M2 IFI Ubinet, Univ. of Nice Sophia Antipolis (UNS), France.

Master : K. Avrachenkov, "Probability and Statistics", 27H ETD, M1 EuroAquae, Univ. of Nice Sophia Antipolis (UNS), France.

Master : A. Jean-Marie, "Metrology and Quality of Service for Networks", 18H ETD, M2, Univ. of Montpellier 2, France.

Master : G. Neglia, "Performance Evaluation of Networks", 22.5H ETD, M2 IFI Ubinet, Univ. of Nice Sophia Antipolis (UNS), France.

Doctorat : E. Altman, "Competition for popularity in social networks", 4H ETD, 2nd Intl. Summer School on Cognitive Wireless Communications (COST Action IC0902), France.

Doctorat : A. Jean-Marie, "Advanced Markov Modeling", 18H ETD, Univ. of Montpellier 2, France.

Doctorat : G. Neglia, "Complex Networks", 4.5H ETD, Univ. of Palermo, Italy.

Doctorat : G. Neglia, "Perron Frobenius Theory", 20H ETD, Univ. of Nice Sophia Antipolis (UNS), France.

8.2.2. Supervision

PhD: Lorenzo Maggi, "Markovian Competitive and Cooperative Games with applications to Communications," Univ. of Nice Sophia Antipolis, October 9 2012, advisors: Konstantin Avrachenkov and Laura Cottatellucci (INSTITUT EURECOM).

PhD in progress: Ilaria Brunetti, "Cooperative and competitive content dissemination in social networks," October 1 2012, advisor: Eitan Altman.

PhD in progress: Nicaise Choungmo Fofack, "Performance Evaluation of TTL-based resource networks," October 1 2010, advisors: Sara Alouf and Philippe Nain.

PhD in progress: Richard Combes, "Self-organizing functionalities in radio networks," October 1 2009, advisors: Eitan Altman and Zwi Altman (France Telecom) and Sylvain Sorin (Univ. Pierre and Marie Curie).

PhD in progress: Eugenio Della Vecchia, "Contribution to the solution of problems in stochastic control and games", October 1 2008, advisors: Silvia Di Marco (National Univ. of Rosario, Argentina) and Alain Jean-Marie.

PhD in progress: Mahmoud El Chamie, "Belief propagation in complex networks," October 1 2011, advisors: Konstantin Avrachenkov and Giovanni Neglia.

PhD in progress: Julien Gaillard, "Creation, simulation and multidiscipline evaluation of dynamic mobility models in complex systems," October 1 2011, advisors: Eitan Altman, Marc El-Bèze (Univ. of Avignon) and Emmanuel Ethis (Univ. of Avignon).

PhD in progress: Manjesh Kumar Hanawal, "Resource allocation and learning algorithms in small cells wireless networks," January 1 2010, advisors: Eitan Altman and Rachid El-Azouzi (Univ. of Avignon).

PhD in progress: Cengis Hasan, "Optimization of resource allocation for small cells networks," January 1 2010, advisors: Eitan Altman and Jean-Marie Gorce (INRIA project-team SWING).

PhD in progress: Alexandre Reiffers, "Modelling competition and cooperation in telecommunication networks," October 15 2012, advisor: Eitan Altman.

PhD in progress: Marina Sokol, "Clustering and learning tecnhiques for traffic/user classification," October 1 2009, advisors: Paulo Gonçalves (INRIA project-team RESO) and Philippe Nain.

8.2.3. *Juries*

MAESTRO members participated in the Habilitation (HDR) thesis committees of (in alphabetical order):

- Olivier Brun: February 6, 2012, LAAS-CNRS (**K. Avrachenkov** as jury member);

and in the PhD thesis committees of (in alphabetical order):

- Ali Arshad: November 12, 2012, Telecom SudParis (**K. Avrachenkov** as reviewer, **E. Altman** as jury member);
- Olivier Fercoq: September 17, 2012, Ecole Polytechnique (**K. Avrachenkov** as reviewer);
- Oussama Habachi: September 28, 2012, Univ. of Avignon (UAPV) (**E. Altman** as jury member);
- Lorenzo Maggi: October 9, 2012, INSTITUT EURECOM (**K. Avrachenkov** as co-advisor);
- Marco Rosa: March 6, 2012, Univ. of Milano, Italy (**K. Avrachenkov** as reviewer);
- Cristiano Tapparello: March 14, 2012, Univ. of Padua, Italy (**G. Neglia** as reviewer);
- Cheng Wan: September 26, 2012, Univ. Pierre et Marie Curie (Paris 6) (**E. Altman** as reviewer).

8.3. Popularization

Activities are presented in chronological order:

- M. El Chamie presented the topic "Belief propagation and classification in complex networks" at the *Salon du Numérique*, Inria stand, held in parallel with the World Wide Web 2012 (www2012) conference, April 16–20, 2012, Lyon, France.
- A. Reiffers delivered a conference titled "Competition over popularity in social networks" organized by the association "Les petits débrouillards" in Carpentras on October 16, 2012.
- S. Alouf delivered two conferences titled "Comment marche le Web ?" at the Henri Matisse High School of Vence (December 6, 2012), and at the Aix-Valabre High School at Gardanne (December 13, 2012).
- An article portraying N. Choungmo Fofack has appeared in *LISA* (December 7, 2012), available here: https://lisa.sophia.inria.fr/nicaise-choungmo-fofack-doctorant-dans-lequipe-maestro-797.html).
- E. Altman made a presentation on "Des points de rencontre entre la technologie de l'information et les sciences humaines et sociales" in the *Café-in* series of popular content at the INRIA Sophia Antipolis - Méditerrannée Center on December 17, 2012.
- An article titled "Internet" has appeared in *Savoirs Jeunes* (December 17, 2012) (interview of S. Alouf by E. Kuntzelmann, available here: http://juniors.savoirs.essonne.fr/questions-a).

8.4. Participation in scientific events

8.4.1. *Keynotes, tutorials and invited talks*

MAESTRO members gave the following keynote lectures (in alphabetical order):

- *The mathematics of file dissemination*, at the 6th Young European Queueing Theorist (YEQT-VI) workshop on "Analytic Methods in Queueing Systems", November 1–3, 2012, Eindhoven, The Netherland (**P. Nain**);

the following tutorials (in alphabetical order):

- *Competition over popularity of content in social networks*, at the 6th Intl. Conference on Performance Evaluation Methodologies and Tools (VALUETOOLS), October 8, 2012, Cargèse, France (**E. Altman**);
- *Game theoretic modeling of competition over popularity in social networks*, at the 6th Intl. Conference on Network Games, Control and Optimization (NetGCoop), November 28, 2012, Avignon, France (**E. Altman**);
- *Socio-economic and legal Issues in the Internet: game theoretical models*, at the 6th Intl. Conference on Performance Evaluation Methodologies and Tools (VALUETOOLS), October 8, 2012, Cargèse, France (**E. Altman**, **M. K. Hanawal**);

and the following invited talks (in alphabetical order):

- *Analysis of power saving in cellular networks with continuous connectivity*, at the Basque Center for Applied Mathematics (BCAM), June 20, 2012, Bilbao, Spain (**S. Alouf**);
- *Competition over popularity in social networks*, at Imperial college, December 7, 2012, London, UK, and at the Institut Supérieur d'Informatique et des Techniques de Communication, December 15, 2012, Hammam Sousse, Tunisia, (**E. Altman**);
- *Distributed weight selection in consensus protocols by Schatten norm minimization*, at Fordham university, November 20, 2012, Rose Hill Campus Bronx, NY 10458 (**G. Neglia**);
- *Optimal control of carbon sequestration: the case of leaky reservoirs*, at the Univ. of Valladolid, Dept. Applied Maths, February 29, 2012, Valladolid, Spain (**A. Jean-Marie**);
- *Quick detection of large degree nodes in complex networks*, at the Univ. of Liverpool, May 17, 2012, Liverpool, UK (**K. Avrachenkov**).

8.4.2. Conferences and workshops

MAESTRO members gave presentations at the following scientific events (in alphabetical order):

- 31st IEEE Intl. Conference on Computer Communications (IEEE INFOCOM 2012), March 25–30, Orlando, Florida, USA (**J. Gaillard**);
- 6th Intl. Conference on Network Games, Control and Optimization (NetGCoop 2012), November 28–30, 2012, Avignon, France (**E. Altman**, **K. Avrachenkov**);
- 6th Intl. Conference on Performance Evaluation Methodologies and Tools (VALUETOOLS 2012), October 9–12, Cargèse, France (**E. Altman**, **N. Choungmo Fofack**, **M. Haddad**);
- 10th Intl. Symposium on Modeling and Optimization in Mobile, Ad hoc and Wireless Networks (WiOpt), May 14–18, Padeborn, Germany (**E. Altman**);
- 3rd Intl. Workshop on Traffic Analysis and Classification (TRAC 2012), August 27–31, Limassol, Cyprus (**K. Avrachenkov**);
- Optimization Days 2012, May 7–9, Montreal, Canada (**A. Jean-Marie**);
- 12th Viennese Workshop on Optimal Control, Dynamic Games and Nonlinear Dynamics, May 30 - June 2, Vienna, Austria (**A. Jean-Marie**);
- Workshop on Network Science in Electrical Engineering and Computer Science, January 09–13, 2012, Bangalore, India (**E. Altman**);
- BiCi Workshop: Sinergic Investigations in Network Science (SINS), October 14–19, 2012, Bertinoro, Italy (**K. Avrachenkov**).

8.4.3. Technical program committee meetings

MAESTRO members have participated in the following TPC meetings:

- 32nd IEEE Intl. Conference on Computer Communications (IEEE INFOCOM 2013), November 10, 2012, Phoenix, Arizona, USA (**G. Neglia**);
- 24th Intl. Teletraffic Conference (ITC 2012), May 11, 2012, Paris, France (**S. Alouf**).

8.4.4. Schools and students workshops

MAESTRO members have attended the following courses:

- Course in "Scaling methods for stochastic networks" (10H) at the Basque Center for Applied Mathematics (BCAM), January 16–20, 2012, Bilbao, Spain (**N. Choungmo Fofack**);

- Euro-NF PhD Course in "Information Centric Networking" (30H) at Athens Univ. of Economics and Business (AUEB), May 14–18, 2012, Athens, Greece (**N. Choungmo Fofack**);

- Tutorials on "Performance Evaluation Methodologies and Tools" (20H) at VALUETOOLS 2012 Conference, October 9–12, 2012, Cargèse, France (**I. Brunetti**, **M. El Chamie**, **J. Gaillard**, **O. Habachi**, **A. Reiffers**).

9. Dissemination

9.1. Scientific Animation

9.1.1. Participation in Committees

J.-C. Bermond: Expert for DRTT, and various projects outside France (Canada, Italy,...); Member of the Ph.D. committee of the University of Marseille;

D. Coudert: Member of the *comité du suivi doctoral* of Inria Sophia Antipolis (since January 2009); Member of *comité de sélection 27e section* of UJF, Grenoble, 2012; Member of the scientific board of the GIS ENSL-UNS (CNRS, ENSL, Inria, UNS) since 2011; Expert for the National Sciences and Engineering Research Council of Canada (NSERC), the Future and Emerging Technologies Open Scheme (FET-Open) European program, and the ANR;

J. Moulierac: Member of the *comité de sélection 27e section* of University of Versailles St-Quentin; Member of the CDL (Commission for software development) at Inria Sophia Antipolis since 2009; Member of the *Conseil de Département* (Department Committee) of IUT Nice since 2007;

M. Syska: Member of the commission ad-hoc ATER 27 UNS, IUT PAST 27 and ATER 11; Member of *Comité Permanent de Ressources Humaines (CPRH) UNS 27e*; Member of the *Conseil de Département* (Department Committee) of IUT Nice; Expert for DRTT PACA.

9.1.2. Editorial Boards

J.-C. Bermond: Combinatorics Probability and Computing, Computer Science Reviews, Discrete Mathematics, Discrete Applied Mathematics, Journal of Graph Theory, Journal of Interconnection Networks (Advisory Board), Mathématiques et Sciences Humaines, Networks, Parallel Processing Letters, SIAM book series on Discrete Mathematics, Transactions on Network Optimization and Control, Discrete Mathematics, Algorithms and Applications;

D. Coudert   Discrete Applied Mathematics (Elsevier); Networks (Wiley);

F. Havet: Discrete Mathematics and Theoretical Computer Science.

9.1.3. Steering Committees

D. Coudert: Pôle ResCom du GDR ASR du CNRS (since 2005); Rencontres francophones sur les aspects algorithmiques des télécommunications (AlgoTel);

F. Havet: Journées Graphes et Algorithmes (JGA); Journées Combinatoires et Algorithmes du Littoral Méditerranéen (JCALM).

9.1.4. Conference Organization

JCALM: 11èmes Journées Combinatoire et Algorithmes du Littoral Méditerranéen, Sophia Antipolis, France (February 16-17, 2012). Organizers: J. Araujo, F. Havet, A. Kodjo, A. Lancin, L. Sampaio;

ResCom: 10th Journées du Pôle ResCom du GDR ASR, Paris, France (November 28-29, 2012). Organizer: C. Caillouet (co-chair).

9.1.5. Workshop Organization

GOC 12:   Workshop Franco-brésilien de Graphes et Optimisation Combinatoire, Redonda, Brasil, April 16-20, 2012. Organizers: F. Havet (co-chair), J. Araujo, A.-K. Maia, L. Sampaio and R. Soares.

9.1.6. Participation in Program Committees

J.-C. Bermond: 6th International Conference on FUN with Algorithms, Venice, Italy (June 4-6, 2012);

D. Coudert: 11th International Symposium on Experimental Algorithms (SEA'12), Bordeaux, France (June 7-9, 2012); IEEE GLOBECOM – Track on Green Communication Systems and Networks, Anaheim, CA, USA (December 3-7, 2012);

F. Havet: 14emes Journées Graphes et Algorithmes (JGA 2012);

J. Moulierac: 14e Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (Algotel'12), La Grande Motte, France, May 29- June 1st, 2012.

9.2. Participation in Conferences and Workshops

9.2.1. Invited Talks

D. Coudert Presentation on *Energy efficiency in backbone and backhaul networks* at Journées du pôle Systèmes de Communications Sécurisées, Sophia Antipolis, January 24, 2012;

F. Giroire: Workshop Franco-brésilien de Graphes et Optimisation Combinatoire, Redonda, Brazil (April 16-20, 2012);

F.Havet: Birmingham workshop on Probabilistic methods in Graph theory, Birmingham, U. K. (March 25-29, 2012); Workshop Franco-brésilien de Graphes et Optimisation Combinatoire, Redonda, Brazil (April 16-20); SIAM Discrete Mathematics Conference, Halifax, Canada (June 18-21, 2012); Bordeaux Graph Workshop, Bordeaux, France (November 21-24, 2012) (Plenary Speaker);

N. Nisse: GRASTA'12, Banff, Canada (October 8-12, 2012); IMSA seminar, Univ. Adolfo Ibanez, Santiago, Chile (August 10th, 2012).

9.2.2. Participation in Scientific Meetings

COA: first meeting of GT Complexité et Algorithmes, Paris (November 21-22, 2012). Attended by N. Nisse and S. Pérennes;

EULER: First year review meeting, Bruxelles, Belgium (January 13, 2012). Attended by A. Lancin, D.Coudert; WP2 technical meeting, Bordeaux, France (March 8-9, 2012). Attended by A. Lancin, B. Li, N. Nisse; Plenary meeting and Technical Advisory Board meeting, Ghent, Belgium (June 5-8, 2012). Attended by D. Coudert, A. Lancin, and N. Nisse; 2nd year review meeting, Sophia Antipolis, France (October 19, 2012). Attended by D. Coudert, A. Lancin, and N. Nisse; Plenary meeting and Technical Advisory Board meeting, Louvain-la-Neuve, Belgium (December 10-12, 2012). Attended by A. Lancin and N. Nisse;

Evaluation seminar: Evaluation of the Mascotte project-team at the evaluation seminar of the research theme Networks and Telecommunications of Inria, Paris, France (March 21-23, 2012). Attended by most of the MASCOTTE permanent members (speakers: D. Coudert, F. Havet, J. Moulierac, N. Nisse);

FET: Meeting to prepare a FET2012 "Mobilizing the Cloud: Enabling Multi-User Mobile Outsourcing in the Cloud", Geneva, Switzerland (Januay 12-13, 2012). Attended by J.-C. Bermond and S. Pérennes;

GRATEL: ANR Gratel meeting, Bordeaux, France (November 20, 2012). Attended by J. Araujo (speaker), A. K. Maia and F. Havet (speaker);

Lip6: Networks Optimization Days, Paris, France (November 30, 2012). Attended by A. Kodjo;

Mascotte Days: Mascotte project annual seminar, Lac de Sainte-Croix, France (May 10-11, 2012). Attended by most of the Mascotte members;

ResCom: 10th Journées du Pôle ResCom du GDR ASR, Paris, France (November 28-29, 2012). Attended by D. Coudert, A. Kodjo, A. Lancin (speaker), F. Z. Moataz (speaker) and I. Tahiri (speaker);

SPREAD End of project assessment meeting, Paris, France (July 12, 2012). Attended by S. Pérennes;

TREND: TREND Network of Excellence meeting, Volos, Greece (October 1-5, 2012). Attended by L. Chiaraviglio and F. Giroire.

9.2.3. Participation in Conferences

Alan Turing's Heritage: Special event on How Turing's machine changed the world, Lyon, France, July 2-4, 2012. Attended by D. Coudert;

AlgoTel: 14th Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications, La grande Motte, France (May 29th - June 1st, 2012). Attended by C. Caillouet, D. Coudert, A. Lancin, N. Nisse (speaker);

BGW: Bordeaux Graph Workshop, Bordeaux, France (November 21-24, 2012). Attended by J. Araujo (speaker), F. Havet (invited speaker), A. K. Maia and R. P. Soares (speaker);

CoNEXT-SW: 8th ACM International Conference on emerging Networking Experiments and Technologies (ACM CoNEXT) Student Workshop, Nice, France (December 10-13, 2012). Attended by F. Z. Moataz (speaker) and T. K. Phan (speaker);

ECT: ECT Workshop spectral properties of complex networks, Trento, Italy (July 23-27, 2012). Attended by J. Galtier and M. Toko Worou (speaker);

EULER: Workshop at Fire, Aalborg, Denmark (May 9, 2012). Attended by A. Lancin;

FUN: 6th International Conference on FUN with Algorithms, Venice, Italy (June 4-6, 2012). Attended by J.-C. Bermond and F. Giroire (speaker);

GOC: Workshop Franco-brésilien de Graphes et Optimisation Combinatoire, Plage Redonda, Ceará, Brésil (April 16-20 2012). Attended by J. Araujo, F. Giroire (speaker), F. Havet (speaker), A.K. Maia, N. Nisse, R. Pardo Soares and L. Sampaio Rocha;

GRASTA: 5th Workshop on GRAph Searching, Theory and Applications, Banff, Canada (October 8-12, 2012); Attended by N. Nisse (speaker) and R. Pardo Soares;

ICALP: 39th International Colloquium Automata, Languages and Programming, University of Warwick, UK (July 9-12, 2012). Attended by B. Li (speaker);

JDG: Journée Thématique "Dynamique des Graphes", Paris, France (July 10th, 2012). Attended by J. Araujo and M. Toko Worou;

JGA: 14èmes Journées des Graphes et Algorithmes, Clemont-Ferrand, France (November 14-16, 2012). Attended by J. Araujo (speaker), B. Li (speaker), A. K. Maia (speaker), F. Z. Moataz and R. P. Soares (speaker);

LIRMM en fête pour ses 20 ans: Scientific event for celebrating the 20 years of the LIRMM, Montpellier, France, July 12. Attended by D. Coudert;

Networking: IFIP TC6 Networking, Prague, Czech Republic (May 21-25, 2012). Attended by T. K. Phan (speaker);

PADS: 26th ACM/IEEE/SCS Workshop on Principles of Advanced and Distributed Simulation, Zhangjiajie, China (July 15-19, 2012). Attended by A. Lancin (speaker).

9.2.4. Participation in Schools

11ème JCALM: 11èmes Journées Combinatoire et Algorithmes du Littoral Méditerranéen, Sophia Antipolis, France (February 16th - 17th, 2012). Attended by most of the Mascotte members (speakers: J. Araujo, F. Havet, A. Kodjo, A. Lancin, L. Sampaio);

12ème JCALM: 12èmes Journées Combinatoire et Algorithmes du Littoral Méditerranéen, Montpellier, France (October 11th - 12th, 2012). Attended by J. Araujo and A. K. Maia;

Ecole management Inria   Paris, France (March 28-30 and June 13-14, 2012). Attended by D. Coudert;

EPIT: L'Ecole de Printemps d'Informatique Théorique, Ile de Ré, France (Mars 26-30, 2012). Attended by A. Lancin, R. Modrzejewski, L. Sampaio and I. Tahiri;

NASSSO: Numerical Analysis Summer School 2012 Stochastic Optimization, Cadarache, France (June 25th- July 6th, 2012). Attended by B. Li.

SSMS: Summer School on Social Media Modeling and Search, Fira, Santorini, Greece (September 10- 14, 2012). Attended by M. Toko Worou;

9.3. Teaching - Supervision - Juries

9.3.1. Teaching

Licence:

J. Araujo, Algorithmique et Programmation, 30h ETD, Cycle Initial Polytechnique 2, École Poly-tech'Nice, UNS;

C. Caillouet, Introduction to Operating Systems, 30h ETD, Level L1, IT Tools, 31h, Level L1, Database and advanced information system, 98h, Level L2, IUT Nice Côte d'Azur, UNS;

A. Kodjo, Algorithme-Programmation Objet-Python, 40h ETD, Level L2, UNS;

J. Moulierac and A. Lancin, ASR5 - Networks, 130h ETD, Level L1, IUT Nice Côte d'Azur, UNS;

N. Nisse, informatique, 60h ETD, 1re année classes préparatoires (L1), Lycée International de Valbonne;

M. Syska, Introduction to Operating Systems, 40h ETD, Level L1, Operating Systems : Advanced Programming, 63h ETD, Level L2, Bash Scripting, 15h ETD, Level L3, Introduction to Algorithms, 36h ETD, Level L3, Linux Systems Administration, 24h ETD, Level L3, IUT Nice Côte d'Azur, UNS.

Master:

D. Coudert, Algorithm for Telecom 2, 32h ETD, M2 Ubinet/PENSUNS, UNS;

F. Giroire and N. Nisse, Combinatoire des graphes, 31h ETD, master MDFI, Univ. d'Aix-Marseille, France;

F. Giroire, 16h ETD, Introduction to Probabilities and Statistics, International track of the Master 1 IFI, UNS;

F. Giroire and N. Nisse, Algorithms for Telecommunications, 31h ETD, parcours Ubinet master 2 IFI, UNS.

F. Giroire, F. Havet and N. Nisse, Programmation linéaire et combinatoire, school at ENS Lyon (January 23-27, 2012).

9.3.1.1. Administration

Collaboration Inria-Lycée International de Valbonne: N. Nisse is co-responsible of the Computer Science course of MPSI;

IUT Nice Côte d'Azur: M. Syska is responsible of the Computer Science Department of IUT since september 2011;

Ubinet, Master IFI: J.-C. Bermond is member of the scientific committee;
F. Giroire is responsible of the Internships within international stream Ubinet, Master IFI (http://ubinet.unice.fr), since October 2011;

International Master 1:   J.-C. Bermond is member of the scientific committee of the international track of the M1 (http://computerscience.unice.fr/master1).

9.3.2. Supervision

PhD:

J. Araújo, *Coloration et convexité dans les graphes*, September 13, 2012, J.-C. Bermond, C. Linhares Sales and F. Giroire.

L. Sampaio, *Aspects algorithmiques d'heuristiques de coloration de graphes*, November 19, 2012, F. Havet.

M. Toko Worou, *Outils algorithmiques pour la détection des communautés dans les réseaux*, December 7, 2012, J.-C. Bermond and J. Galtier.

PhD in progress:

4th year:

I. Tahiri, *Optimisation dans les réseaux de collecte IP sans fils*, since November 2009, D. Coudert.

3rd year:

S. Félix, *Smart transports : optimisation du trafic dans les villes*, since January 2011, J.-C. Bermond and J. Galtier.

A. Lancin, *Study of network properties for efficient routing algorithms*, since January 2011, D. Coudert.

R. Modrzejewski, *Systèmes pair-à-pair de partage de données*, since November 2010, S. Pérennes and F. Giroire.

R. Pardo Soares, *Routing reconfiguration in WDM networks*, since November 2010, D. Coudert and N. Nisse.

2nd year:

T. Al Fares, *Trees in digraphs*, since September 2011, F. Havet and A. El Sahili (Lebanese University, Beyruth, Lebanon).

M. A. Bergach, *GPGPU Graphics Processing Units for signal processing*, since September 2011, M. Syska.

A. Kodjo, *Design and optimization of multi-operators wireless backhaul networks*, since October 2011, D. Coudert.

B. Li, *Study of Internet model and its properties for efficient routing algorithms*, since October 2011, D. Coudert and N. Nisse.

A. K. Maia, *Partitions of directed graphs*, since September 2011, F. Havet.

T. K. Phan, *Design and Management of networks with low-power Consumption*, since October 2011, D. Coudert and J. Moulierac.

1st year:

F. Z. Moataz, *Conception et optimisation de réseaux robustes aux pannes et variations de capacités*, since October 2012, D. Coudert.

9.3.2.1. Internships

J. Araujo, J.-C. Bermond and N. Nisse: supervised the internship of Guillain Potron (ENS Paris) on sorting algorithms and hull number, June-July 2012 (2 months);

J.-C. Bermond and D. Coudert: supervised the internship of Fatima Zahra Moataz (M2 Ubinet, Sophia Antipolis) on the diverse routing problem with SRLGs, March-August 2012 (6 months);

D. Coudert and N. Nisse: supervised the internship of Thomas Bellitto (L3 ENS Cachan - antenne de Bretagne) on linear orderings and graphs decompositions, June-July 2012 (2 months);

F. Giroire: supervision of the TIPE of Simon Dorgueil Simon and Yves Barrault on the Analysis of P2P storage system;

N. Nisse: supervised the internship of Mélanie Ducoffe (Univ. Nice-Sophia ANtipolis) on cops and robber games in directed graphs, July-August 2012 (2 months).

9.3.3. Juries

J.-C. Bermond: member of the PhD jury of Julio Araújo (September 13, 2012) and Mikaila Toko Worou (December 7, 2012), University Nice-Sophia Antipolis;

D. Coudert: member of the PhD jury of Ahmed Frikha, Université de Rennes (September 28, 2012); member of the PhD jury of Leornardo Sampaio Rocha, University of Nice Sophia Antipolis (November 19, 2012);

F. Havet: external referee of the PhD of Petru Valicov, University of Bordeaux 1 (July 10, 2012); external referee of the PhD of Petr Skoda, Simon Fraser University, Burnaby, BC, Canada (September 13, 2012); external referee of the PhD of Lino Demasi, Simon Fraser University, Burnaby, BC, Canada (October 2, 2012);

S. Perennes: Referee and member of the PhD jury of Patricia Maatouk-Kaiser, Supelec Université Libanaise (December 21, 2012).

9.4. Popularization

Accueil d'une classe de MPSI: D. Coudert, F. Giroire and N. Nisse participated to the event at Inria (http://www.inria.fr/centre/sophia/actualites/accueil-d-une-classe-de-mpsi-retour-en-images);

Attention grands travaux: Several members of Mascotte participated to the documentary "Attention grands travaux : Sophia Antipolis - L'utopie High Tech" for the Public-Sénat channel (watch it online);

Attractiveness: J.-C. Bermond is in charge of the attractiveness of the center Inria Sophia Antipolis Méditerannée. He organized Inria days with Athens (February 14-15, and May 21-22, 2012);

Fête de la Science: F. Giroire presented the stand "Magie et jeux mathématiques" at Sophia Antipolis, France (October 10, 2012);

Ils débarquent sur votre téléphone: D. Coudert and C. Castro co-signed an article entitle "Ils débarquent sur votre téléphone : 4G, NFC et Li-Fi ?" on Inriality. Originaly prepared for the series « Le saviez-vous » posted on Inria.fr and twitter;

Internet and Smartphones: J.-C. Bermond gave a talk at the evening "Internet et Smartphones" organized at Nice (CUM) on April 10 by SEE Cote d'Azur and la Mairie de Nice Organisation (February 14-15, 2012);

Internet and Graph theory: J.-C. Bermond and J.Moulierac wrote an article on Internet and Graph theory for CDC (a journal destined to teachers and students in high schools) [79];

Plaisirs des Sciences: F. Havet gave the conference "La hasard fait-il bien les choses ? : une gentille introduction au probabilités" at Rians, France (February 14, 2012);

Scientific mediation: J.-C. Bermond supervised a brainstorming on scientific mediation with Inria staff members.

OASIS Project-Team

8. Dissemination

8.1. Scientific Animation

- Eric Madelaine is member of the steering committees of the FACS and FMCO symposia, and has acted as a program committee of FACS'12, FMCO'12, and of the Sciance of Computer Programming (SCP) journal.

- Françoise Baude is member of the editorial board of the Techniques et Sciences Informatique French journal from Feb. 2011, was program committee member of ISPA 2012, of RenPar'21 to be held in January 2013. She is University of Nice official representative within the KIC EIT ICT Labs, including the Master school, from 2012.

- Ludovic Henrio: program committee member of FESCA'12, FOCLASA'12, FESCA'13 and reviewer for the journal SCP (Science of Computer Programming) and MSCS.

- Fabien Hermenier: program committee member of VTDC 2012 and PDP 2012 (energy efficiency track) and reviewer for IEEE Transactions on Network and Service Management and the Journal of System Architecture. He also presented `btrPlace` during the OW2Con, the OW2 Annual Conference.

- Fabrice Huet : program committee member of HPDC 2012, AP2PS 2012, reviewer for Transactions on Services Computing, Concurrency and Computation: Practice and Experience.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence : Olivier Dalle, Introduction à la Programmation Objet, 15 H eqTD, niveau L1, Département Informatique, UNS, France

Licence : Olivier Dalle, Introduction à la Programmation Objet, 15 H eqTD, niveau L1, Département Informatique, UNS, France

Licence : Fabrice Huet, Informatique Générale, 48 H eqTD, niveau L1, Département Informatique, UNS, France

Licence : Françoise Baude, Algorithmique et Programmation en Java, 70 H eqTD, niveau L2, Polytech'Nice Sophia, UNS, France

Licence : Fabien Hermenier, Introduction à Internet, 103 H eqTD, niveau L2, Polytech'Nice Sophia, UNS, France

Licence : Olivier Dalle, Algorithmes et Structures de Données, 36 H eqTD, niveau L3, Département Informatique, UNS, France

Licence : Olivier Dalle, Harmonisation Informatique, 36 H eqTD, niveau L3, IUP Miage, UNS, France

Licence : Fabien Hermenier, Outils pour le Génie Logiciel, 26 H eqTD, niveau L3, Polytech'Nice Sophia, UNS, France

Licence : Fabrice Huet, Outils de Génie Logiciel, 24 H eqTD, niveau L3, IUT, UNS, France

Licence : Fabrice Huet, Programmation de Jeux Réseau, 18 H eqTD, niveau L3, IUT, UNS, France

Master : Françoise Baude, Applications Réparties, 45 H eqTD, niveau M1, Polytech'Nice Sophia, UNS, France

Master : Olivier Dalle, Ingénierie des Protocoles, 21 H eqTD, niveau M1, Département Informatique, UNS, France

Master : Fabrice Huet, Distribution et parallélisme, 49H eqTD, niveau M1, Département Informatique, UNS, France

Master : Fabrice Huet, Syst èmes Distribués, 42H eqTD, niveau M1, IUP Miage, UNS, France

Master : Françoise Baude et Ludovic Henrio, Distributed systems: an Algorithmic approach, 17 H + 17 h eqTD, niveau M2, Polytech'Nice Sophia/UFR Sciences, UNS, France

Master: Ludovic Henrio, Sémantique des Systèmes Distribués et Embarqués, 11 H eqTD, niveau M1, Département Informatique, UNS, France

8.2.2. Supervision

PhD in progress : Laurent Pellegrino "Pushing dynamic and ubiquitous event-based interaction in the Internet of services: a middleware for event clouds", since Sept 2010, advisor Françoise Baude.

PhD in progress : Nuno Gaspar "Integrated, Autonomic, and Reliable Deployment and Management for SaaS composite applications", since Nov 2011, advisor: Eric Madeleine

PhD in progress : Michaël Benguigui, "Modèles de programmation pour l'analyse de données sur machines multi-cœurs, grilles et clouds", since Dec 2011, advisor Françoise Baude.

PhD in progress : Yanwen Chen, "Formal model and Scheduling for cyberphysical systems", since Dec 2011, advisors Eric Madelaine and Yixiang Chen (ECNU Shanghai)

PhD in progress : Alexandra Savu, "Design, specification, and verification of parameterized topologies of distributed components", since Oct. 2012, advisor Eric Madelaine

PhD in progress : Maeva Antoine, "Plateforme élastique pour le stockage et la notification d'Evènements", since Oct. 2012, advisors Eric Madelaine, Fabrice Huet

8.2.3. Juries

Françoise Baude participated in PhD evaluations as

- jury supervisor for the PhD of Marcela Rivera held on December 15th 2011, UNS; PhD of Imen Ben Lhamar, on November 15th 2012, at Telecom Sud-Paris / Univ. Evry Val d'Essone
- PhD reviewer and jury member for the PhD of Gabriel Hermosilio on 5th June 2012, University of Lille (ADAM EPI); PhD of Xavier Etchevers on December 12th 2012, at LIG / FranceTelecom R&D (SARDES EPI)

She participated in the recruitment committees for

- Maitre assistant position at Ecole des Mines Albi-Carnaux, in January 2012
- Professor at Univ. of Henri Poincaré, Ecole Supérieure d'Informatique et Applications de Lorraine, in May 2012

Fabrice Huet participated to the mid-term evaluation jury of Giuseppe Reina (April 2012) and Mario Pastorelli (October 2012), Eurecom PhD students.

8.3. Popularization

Françoise Baude is in charge since September 2011 of the set up and animation of an educational program *Cordées de la Réussite*. She leads as Polytech'Nice Sophia member, and in connection with MASTIC activities at Sophia-Antipolis, two *Cordées pour la Science à Sophia* groups (one with Lycée Vinci Antibes, the other with Lycée Tocqueville Grasse).

Fabrice Huet gave a seminar to high school students about the inner working of computers. He also leads the ISN *Informatiques et Sciences du Numérique* courses for the academia of Nice. These courses were given to high school teachers who voluntereed to offer a Computer Science option to their students.

<div align="center" style="color:red">**PLANETE Project-Team**</div>

9. Dissemination

9.1. Scientific Animation

Walid Dabbous   served in the programme committees of NOMEN'2012, ICC'12 NGN and NoF'12. He is co-editor or a special issue of the PPNA journal on Experimental Evaluation of Peer-to-Peer Applications ([30]). He is member of the scientific council of the Inria Bell-Labs laboratory on Self Organizing Networks.

Claude Castelluccia   served in the program committees of the following international conferences: ACM CCS 2012, ACM Wisec2012 and SESOC2012. He is the co-founder of the ACM WiSec (Wireless Security) conference.

Thierry Turletti   Senior ACM and IEEE member, served in 2012 in the program committees of the following international conferences: 19th International Packet Video Workshop and 5th ACM Workshop on mobile Video Delivery (Movid). He is member of the Editorial Boards of the Journal of Mobile Communication, Computation and Information (WINET) published by Springer Science and of the Advances in Multimedia Journal published by Hindawi Publishing Corporation.

Chadi Barakat   was the General Co-Chair of the ACM CoNEXT 2012 conference on emerging Networking EXperiments and Technologies that was held in Nice on Dec 10-13, 2012. In 2012, he served on the Technical Program Committee for the TMA 2013 workshop (Turin), the PAM 2013 conference (Hong-Kong), and the CNSM 2012 conference (Las Vegas). He is on the editorial board of the Elsevier Computer Networks journal. He is currently the scientific referee for international affairs at Inria Sophia Antipolis, and member of the Conseil d'Orientation Scientifique et Technologique (COST) at Inria within the working group of international affairs (COST-GTRI).

Vincent Roca   is strongly involved at IETF and served as co-chair of the MSEC (Multicast Security) working group in 2010-2011. He is also member of the SecDir group (security directory) of the IETF. He was also member of the program committees of CFIP'09, SPACOMM'09, SPACOMM'10, the Cyber and Physical Security and Privacy symposium at IEEE SmartGridComm'11, CFIP'11, SPACOMM'11, SPACOMM'12.

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

Mohamed Ali Kaafar   In 2012, he has been the program committee chair of ACM SIGMETRICS PADE workshop, and served in the program committees of the following international conferences: Internet Science 2013, Internet, ACM Sigcomm HotPlanet 2013, Interdisciplinarity & Innovation (In3 2013), Eurosys MPM 2013, IWAP2PT-2013, Colloque Jacques Cartier : Security, Inforensics and Cyber Criminality 2013, Eurosys MPM 2012, Sigmetrics PADE 2012, GridCom-2012, ICCSEA 2012, International Workshop on Trust and Privacy in Cyberspace (CyberTrust' 12), IWTMP2PS 2012. He is also member of the Editorial Board of the International Journal of peer-to-peer networks (IJP2P) and IEEE Transactions on Parallel and Distributed Systems TPDS and reviewer in SIGCOMM CCR, Computer Communications, IEEE letters of communications, Computer Networks. He was a panelist in IEEE CCW 2012 and an invited speaker in University of Concordia, UNSW and Polytechnic University of New York seminars.

Daniel Le Le Métayer   served in the program committees of CPDP 2012, APF12, RISE12, FLACOS 2012 and APVP 2012. He organized a panel on privacy for location based services at CPDP 2012 and gave invited talks at the university of Chalmers, at the BDA Summer School, at IRILL (Paris), at CRIDS (Namur), at the ANR Privacy by Design Conference and at the conference organized by CNIL on "Privacy and Data Protection 2020".

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

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

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

Undergraduate course on Networks and Telecommunications, by Mohamed Ali Kaafar (40h), Ensimag Engineering school, France.

Undergraduate course at Polytech' Grenoble, on Wireless Communications, by Vincent Roca (12h).

Undergraduate course at IUT, Nice-Sophia Antipolis University, Local Aarea Networks by Chadi Barakat (28h), France.

Undergraduate course at IUP GMI Avignon on Peer-to-peer networks, by Arnaud Legout (38h), France.

Master Crypto and Security: course on Wireless Security by Claude Castelluccia (20h), Ensimag/University of Grenoble, France.

Master MOSIG: course on Wireless Security by Claude Castelluccia (15h), Ensimag/INPG, France.

Master FST : course on P2P networks: performance and security challenges by Mohamed Ali Kaafar (21h), Tunisia.

Master Phelma: course on Computer Networks by Mohamed Ali Kaafar (12h), INPG , France.

Master Ubinet: course on Evolving Internet - architectural challenges by Walid Dabbous and Chadi Barakat 42 hours, University of Nice-Sophia Antipolis, France.

Master CAR: course on Internet monitoring by Chadi Barakat, 3h, Telecom Paris Tech, France.

Master TSM: course on Voice over IP by Chadi Barakat, (7h),University of Nice-Sophia Antipolis, France.

Master Ubinet: course on Peer-to-peer networks, by Arnaud Legout (21), University of Nice-Sophia Antipolis.

Master SAFE: organization of a Teaching Unit on legal issues of security and privacy (30h) Daniel Le Le Métayer, University of Grenoble, France.

9.2.2. Supervision

PhD : Eduardo Mazza defended his PhD titled "A formal framework for specifying and analyzing liabilities using log as digital evidence" on June 30th, at Grenoble University. His thesis was co-supervised by Daniel Le Le Métayer.

PhD : Amir Krifa defended his PhD titled "Towards better content dissemination applications for Disruption Tolerant Networks" on April 23rd 2012. His thesis was supervised by Chadi Barakat.

PhD: Shafqat Ur-Rehman defended his PhD titled "Benchmarking in Wireless Networks" on January 30th, 2012. His thesis was co-supervised by Thierry Turletti and Walid Dabbous.

PhD: Sana Ben Hamida defended her PhD on "Embedded System Security" on February 27th 2012. Her thesis was supervised by Claude Castelluccia.

PhD in progress : Lukasz Olejnik works on "Internet Tracking and Profiling" since 2011. His thesis is supervised by Claude Castelluccia.

PhD in progress : Min-Dung Tran works on "Privacy-Preserving Ad systems" since 2011. His thesis is co-supervised by Claude Castelluccia and Mohamed Ali Kaafar.

PhD in progress : Abdelberri Chaabane works on "Online Privacy in heterogeneous networks" since September 2010. His thesis is supervised by Mohamed Ali Kaafar.

PhD in progress : Thibaud Antignac works on "A formal framework for privacy by design" since September 2011. His thesis is supervised by Daniel Le Le Métayer.

PhD in progress: Riccardo Ravaioli works on "Active and Passive Inference of Network Neutrality" since October 2012. His thesis is co-supervised by Chadi Barakat.

PhD in progress : Dong Wang works on "Modeling social media and its impact on new digital ecnomy" since September 2011. His thesis is supervised by Mohamed Ali Kaafar.

PhD in progress: Xuan Nam Nguyen works on "Software Defined Networking in challenged environments", since October 2012. His thesis is co-supervised by Thierry Turletti and Walid Dabbous.

PhD in progress: Alina Quereilhac works on "Unified Evaluation environment of Networking Protocols for Simulators and Testbeds", since 2011. Her thesis is co-supervised by Walid Dabbous and Thierry Turletti.

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

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

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

PhD in progress: Maksym Gabielkov works on "Propagation of data in social networks" since 2012. His work is supervised by Arnaud Legout.

PhD in progress: Wunan Gong works on "Security in content centric networks" since 2012. His work is supervised by Arnaud Legout.

PhD stopped: Anshuman Kalla stopped his PhD "Efficient transmission mechanisms for Information Centric Network Architectures" in june 2012 for personal reasons. His thesis was co-supervised by Thierry Turletti and Walid Dabbous.

AXIS Project-Team

7. Dissemination

7.1. Animation of the Scientific Community

7.1.1. General Audience

- **B. Senach' talk at WUD 2012 [68]:** "Experience is a back hooked lantern that shed light on the travelled path". Current and future research topics are better understood when envisioned within the global framework of societal demands and in relation with historical evolution. For the 2012 World Usability Day event, an overview of the last 40 years research topics in SHS-STIC has been proposed. This presentation showed first how current scientific studies of user experience are linked to a paradigm shift in the 90s' concerning the initially too simplistic relationship between SHS and STIC. From this conceptual crisis emerged in each field (SHS and STIC) specific research tracks and an enlarged model of Human behavior including, among others, social relationships, shared activities, emotions, etc. As expertise in user interface design and evaluation improved in relation with technical development, new societal challenge araised with new methodological requirements.

  First the European community turn towards knowledge economy put stress on open innovation and living lab methodology as a way to accelerate new products and services adoption. Ethno methodology nowadays is more and more used and the field of Service Design has emerged as a domain integrating most of tools and methods previously used for user interface and user experience design.

  In addition, the European Community orientation towards sustainable development brought other requirements concerning deep change of the way of living in occidental society. As it is necessary to adopt eco behavior for resources consumption, mobility and others daily activities, the focus is now on levers helping people to change their behavior. Persuasive interface are a promising research aera. The B. Senach'video presentation at WUD2012 is also available on line on dailymotion.

- **TIC TAC:** co-organisation of the final event (may, large audience) related to the PREDIT Tic Tac at ADEME (Sophia Antipolis) in order to report the results of the project and announce the five citizen, winners of the experiment. Around 40 people participated to this event.

- **ECOFAMILIES:** co-organisation of the final event (large audience) at CSTB (Sophia Antipolis) related to the PACALABS ECOFAMILIES project (cf. section 6.1.4 and the final report [61]. A documentary film has been produced during the project by Natacha Cyrulnik (I3M) and the « Compagnie des Embruns »: this movie offers a testimonial of the participatory design process and shows the families implication all along the project. This project was also the subject of 19-20 journal at France 3 on October 17th. An article on the ECOFAMILIES project - how to promote energy-aware behaviors at home was published on BuildUP and is shared in various social networks (linkedIn, twitter, facebook).An executive summary of the project (english version) was put on the ICT Usage Lab Web site.

- **ECOFFICES:**
  – B. Trousse gave a talk on *Ecoffices: the usages aspect* (April 19th, Brignoles) in the context of the working group Smart grid in PACA (common to two clusters, SCS and Cap Energies clusters).
  – Co-redaction of a flyer (english version) related to the PACALABS ECOFFICES project for the experts of IGSAN during the conferences in Nice distributed by "Chambre de Commerce et industrie" (Enterprise/Environment/Energy Department) ISGAN - CCI.

7.1.2. Editorial Boards and Reviewing

Axis members participate in the **editorial boards** of various journals:

Brigitte Trousse
- Journal of Symbolic Data Analysis
- IJDST - International Journal of Design Sciences & Technology)
- Co-Design Journal

Yves Lechevallier
- MODULAD (electronic journal), http://www.modulad.fr/ as co-editor
- Journal of Symbolic Data Analysis

Dominique Scapin
- BIT (Behaviour & Information Technology) as Associate Editor
- UAIS -International Journal of Universal Access in the Information Society)
- IJHCS - International Journal of Human-Computer Studies
- IWC - Interacting with Computers
- IJPOP - International Journal of People-Oriented Programming
- International Journal On Advances in Intelligent Systems
- JMUI - Journal of Mutimodal User Interfaces
- JIPS - Journal d'Interaction Personne-Système

AxIS members are very regularly **reviewers** for various major journals: ADAC "Advances in Data Analysis and Classification", BIT, ADAC "Advances in Data Analysis and Classification", IJHCS (International Journal of Human-Computer Studies), JMUI (Journal of Multimodal User Interfaces), Le Travail Humain, UAIS, IwC in 2012.

Thierry Despeyroux was reviewer for a book: Advances in Knowledge Discovery and Management Vol. 4 to be published.

D.L. Scapin participated to the content setting and wrote a "Foreword" for the compilation of ergonomic standards by AFNOR: Ergonomie des Logiciels. Recueil de Normes Ergonomie des postes et lieux de travail, AFNOR November 2012.

7.1.3. Conferences/Workshops Scientific Program Committees

Y. Lechevallier and B. Trousse are members of the **supervising committee** of the association EGC (http://www.egc.asso.fr/)

Yves Lechevallier was scientific chair of EGC 2012 [39], Bordeaux, France, January 31 - February 3, 2012

AxIS permanent members are involved in the following program committees of conferences and workshops:

Brigitte Trousse
- CSCWD 2012, the 2012 16th IEEE International Conference on Computer Supported Cooperative Work in Desig, Wuhan, China , 23-25 may, (sponsored by IEEE SMC Society)
- EGC 2012, Bordeaux, France, January 31 - February 3, 2012
- RàPC 2012, 20th French Workshop on Case-based Reasoning, 25 june, Paris.

Yves Lechevallier
- EGC 2012, Bordeaux, France, January 31 - February 3, 2012

Dominique Scapin
- ACHI 2012, Valencia, Spain, January 30 - February 4, 2012
- ICMI 2012, Santa Monica, California. Oct. 22-26th, 2012
- Workshop "Supportive User Interfaces", Copenhagen, Denmark - June 25, 2012, in conjunction with the EICS 2012 conference
- CENTRIC 2012, Lisbon, Portugal, November 18-23, 2012
- SETIT 2012, Sousse, Tunisia, March 21-24, 2012
- ErgoIHM 2012, Biarritz, France, October 17-19,2012

7.1.4. Organization of Workshops and Conferences

- **Yves Lechevallier** was scientific chair of **EGC** 2012, Bordeaux, France, January 31 - February 3 [39].

- **B. Trousse** (as Inria and ICT Usage Lab representative) participated in the *ICC* 2012 program committee in charge of the invited talks. Our two propsoed speakers were selected for the final program (June 7th): Michael Nilsson coordinator of the FIreball project (CDT, Luleå University of Technology) and Khaldoun El Agha (University Paris 8 and ICT labs).

7.1.5. Participation in PhD Thesis Committees

AxIS researchers were members of the following Ph.D. committees in 2012:

- **Julie Seguela**, Ph.D.: Fouille de données textuelles et systèmes de recommandation appliqués aux offres d'emploi diffusées sur le web. CNAM, école doctorale EDITE, May 3, 2012: Y. Lechevallier (Examinateur).

- **Jean-Baptiste Masson**, Ph.D.: SIGFRIED 2 : Modèles de mélange censurés et autres méthodes statistiques pour la construction d'indicateurs spatialisables de la qualité de l'air intérieur dans les logements français. Université de Technologie de Compiègne, May 30, 2012: Y. Lechevallier (Rapporteur).

- **Annette Casagrande**, Ph.D.: Proposition d'une mesure de voisinage entre textes: Application à la veille stratégique. Université de Grenoble, école doctorale MSTII, July 3, 2012: Y. Lechevallier (Examinateur).

- **Thomas Villaren**, Ph.D.: « Modèles et mécanismes d'adaptation d'Interaction Homme-Machine aux changements de contexte », Université de Bretagne, Département : Logique des Usages, Sciences Sociales et de l'Information (LUSSI), spécialité « STIC », November 30, 2012: D. L. Scapin (Rapporteur).

- **Jacques-Henri Sublemontier** , Ph.D.: Classification non supervisée : de la multiplicité des données à la multiplicité des analyses. Université d'Orléans, December 7, 2012: Y. Lechevallier (Rapporteur).

- **Djamal Adboul Nasser Seck**, Ph.D.: Arbres de décision symboliques, outils de validation et d'aide à l'interprétation. Université Paris-IX Dauphine, December 20, 2012: Y. Lechevallier (Rapporteur).

7.2. Teaching and Supervision

7.2.1. Teaching Activities

Y. Lechevallier

Master 2 Recherche *Systemes intelligents* (resp: S. Pinson), University at Paris IX-Dauphine, France. Course on "Du data mining au knowledge mining" (12h).

Master 2 Pro *Ingénierie de la Statistique* (resp: G. Saporta) at CNAM (Conservatoire national des arts et métiers), France. Course on "Méthodes neuronales" (12h).

Ecole Nationale des Sciences Géographiques (ENSG): Course on Clustering (12h).

7.2.2. PhD Thesis Supervision

AxIS is an associated team of the STIC Doctoral school of Nice-Sophia Antipolis University (UNS). Our PhD students come from the University of Paris Dauphine, the University of Nice Sophia Antipolis, the Université Catholique de Louvain, the University of Recife (Brazil) and from various Universities of Morocco and of Tunisia.

B. Trousse is involved in the supervision committee of E.L. Moukhtar Zemmouri, PhD student in Morocco.

AYIN Team

9. Dissemination

9.1. Scientific Animation

- Ikhlef Bechar and Yuliya Tarabalka presented on June 15, 2012 their work for visiting students from SupCom-Tunis to Inria.

- Ikhlef Bechar presented his work at Astrium/EADS in Toulouse in January and at "ENVOL de la Recherche" day organized by the EADS foundation in March in Paris.

- Vladimir Krylov presented a paper at the conference IEEE ICIP in September in Orlando, USA. He was a reviewer for the journals IEEE TIP, IEEE TGRS, IEEE GRSL, IEEE JSATRS, DSP and PRL.

- Yuliya Tarabalka presented 2 papers at the conference IEEE IGARSS'2012 and a paper at the conference UkrObraz'2012. She also presented a poster at the Journées CNES Jeunes Chercheurs in Toulouse in October. She gave 4 seminars at Inria-SAM, CESBIO in Toulouse, University of Orleans and Télécom ParisTech in Paris (France). She was a reviewer for the journals IEEE TIP, IEEE TGRS, IEEE GRSL, Remote Sensing, IEEE JSTARS, and for the conferences ISPRS'2012, IEEE IGARSS'2012 and ICPRAM'2012. She was a part of the program committee for the conferences ISPRS'2012 and ICPRAM'2012. She chaired a session at the conference IEEE IGARSS'2012.

- Yannick Verdie presented a paper at the conference ECCV'12 in Florence, Italy in October. He also presented his work at the National Institute of Informatics (Nii) in Tokyo, Japan.

- Aurélie Voisin presented 2 papers at the conferences IS&T/SPIE Electronic Imaging'12 in San Francisco (USA) in January, and EUSIPCO'12 in Bucharest (Romania) in August. She presented a poster at Pleiades days organized by CNES in Toulouse in January. She was also invited to present her work by the Centre de Recherche en Automatique de Nancy (France) in June.

- Josiane Zerubia chaired a session at IEEE ICIP in September in Orlando, USA, and attended the IVMSP-TC meeting there. She was a reviewer for TS (Traitement du Signal) and SFPT (Revue Française de Photogrammétrie et de Télédétection). She also was a reviewer and/or a program committee member for ICASSP'12, ISBI'12 and ICIP'12, as member of the IEEE BISP TC and IEEE IVMSP TC, and for SPIE-ISPRS'12 ('Image and Signal Processing for Remote Sensing') and ICPRAM'12. She is an IEEE Fellow. She was a member of the Biological Image and Signal Processing (BISP) Technical Committee till April 2012 and is a member of the Image, Video and Multidimensional Signal Processing (IVMSP) Technical Committee of the IEEE Signal Processing Society. She is an Associate Editor of the collection 'Foundation and Trends in Signal Processing' [http://www.nowpublishers.com/]. She is a member of the Editorial Boards of IJCV, the Revue Française de Photogrammétrie et de Télédétection of SFPT and the journal 'Traitement du Signal'. She is an Associate Editor of the electronic journal Earthzine [http://www.earthzine.org/]. Josiane Zerubia visited Astrium EADS Toulouse in January. She also participated in the CNES Pleiades days and CNES Research and Technology day both in Toulouse in January. In March, she presented Inria-SAM activities and the research work of AYIN at BASF-France Headquarters at Levallois Perret, attended the IGN Research days in St Mande and participated to the Editorial Board meeting of SFPT at CNES in Paris. In April she visited ACRI ST in Sophia Antipolis. In June she attended the KAL'Haiti day at CNES in Paris. She participated to the LIRA Consortium workshop at Inria-SAM in September and to a LIRA meeting with Philips R&D in December. As a PI, she regularly organized and attended meetings with Galderma in Sophia-Antipolis. As a Co-PI, she also organized and participated to several meetings with IRD at UMR AMAP in Montpellier and at Inria-SAM. She is a deputy of Frederic Alexandre at the Executive Committee of LIRA Consortium (Philips, CWI, Fraunhofer, Inria), and a Co-PI of an Inria/DITEN/ISA project. She is a member of the ORFEO group (CNES). She is a consultant for Galderma R&D in Sophia-Antipolis. Finally, she is a member of the program committee of Master 2 in Computational Biology and Biomedicine (CBB) at the University of Nice Sophia Antipolis in charge of sponsoring.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: Yuliya Tarabalka, Digital imaging, 15h eq. TD (2h of lectures + 12h of TD), M2 SVS ISAB, Université de Nice Sophia-Antipolis, France

Master et PhD: Yuliya Tarabalka, Computer vision, 8h of lectures = 12h eq. TD, M1 and M2, Ternopil Ivan Pul'uj National Technical University, Ukraine

Licence: Yuliya Tarabalka, Techniques for statistical data analysis, 39h eq. TD, L1, École Polytechnique de l'Université de Nice Sophia-Antipolis, France

Master: Josiane Zerubia, Deconvolution and denoising in confocal microscopy, 18h eq. TD (12h of lectures), M2 IFI BCC, Université de Nice Sophia-Antipolis, France. Furthermore she is also director of this course (total: 24h of lectures).

Master: Josiane Zerubia, Advanced techniques in signal and image processing, 30h eq. TD (20h of lectures), ISAE/SUPAERO, France. Furthermore she is also director of this course (total: 30h of lectures and 12.5h of TD). This course has been given to the third-year students of ISAE/SUPAERO and was also validated by Master 2 of Applied Mathematics of University Paul Sabatier of Toulouse.

Master: Josiane Zerubia, Introduction to image processing, 4.5h eq. TD (3h of lectures), M2 SVS ISAB, Université de Nice Sophia-Antipolis, France. Furthermore she is also director of the course "Digital imaging" at UNS, Master2 SVS ISAB, UE3 (total: 25h of lectures and 25h of TD).

Licence: Jia Zhou, Mathematics, 60h eq. TD, L2, IUT Montpellier, France.

9.2.2. Supervision

9.2.2.1. Ph.D. theses

PhD: Aurélie Voisin, Supervised classification of high-resolution remote sensing images including urban areas by using Markovian models, University of Nice-Sophia Antipolis, Defended on October 17th, 2012, Josiane Zerubia.

PhD: Sylvain Prigent, Contribution of multi and hyperspectral imaging to skin pigmentation evaluation, University of Nice-Sophia Antipolis, Defended on November 30th, 2012, Xavier Descombes and Josiane Zerubia.

PhD: Jia Zhou, Object identification on remote sensing images of tropical forest canopies - applications to the study of Eucalyptus plantation and mangrove forest, University of Montpellier 2, Defended on November 16th, 2012, Pierre Couteron and Josiane Zerubia.

PhD in progress: Yannick Verdié, Urban scene analysis from unstructured point data, University of Nice-Sophia Antipolis, started in November 2010, Florent Lafarge and Josiane Zerubia.

PhD in progress: Seong-Gyun Jeong, New image processing methods for skin condition evaluation, University of Nice-Sophia Antipolis, started in December 2012, Josiane Zerubia and Yuliya Tarabalka.

PhD in progress: Paula Craciun, Automatic object tracking on a sequence of images taken from a geostationary satellite, University of Nice-Sophia Antipolis, started in December 2012, Josiane Zerubia and Pierre Del Moral.

9.2.3. Juries

- Josiane Zerubia was a reviewer of one HdR and of one PhD thesis, and member of 3 PhD committees.

9.3. Popularization

- Josiane Zerubia attended a meeting at ICIP'12 in Orlando organized by IEEE women in engineering (http://www.ieee.org/membership_services/membership/women/women_about.html). She met several female PhD students, postdocs and junior researchers to exchange views on women scientific careers in the world.

COPRIN Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. International activities

We will not detail the reviewing process done in the project but it can estimated that over 20 journal papers and 50 conference papers were reviewed by the team this year.

- Julien Alexandre dit Sandretto was invited in the Department of Mechanical Engineering in the University of Melbourne where he mainly worked on the muscle parameter identification using the analogy between muscles and cables with a novel workspace satisfaction method.
- D. Daney has organized and has been a member program committee of IROS 2012 workshop on Assistance and Service Robotics in a Human Environment and an associate editor of ICRA 2013. He has presented the activity of the large scale initiative action PAL to the university of Athens, Athens, Greece, and to the National Taiwan University, Taipei, Taiwan.
- J-P. Merlet is a member of the scientific committee of the European Conference on Mechanism Science (EUCOMES), chairman of the scientific Committee of the Computational Kinematics workshop, a member of the steering Committee of IROS and board member of the Journal of Behavorial Robotics. He is also a board member of the european robotics network EURON which has joined with the industrial robotics network EUROP to constitute the PPP Eurobotics aisbl, of which he is a board member. He is a member of the IFToMM (International Federation for the Promotion of Mechanism and Machine Science) Technical Committees on History and on Computational Kinematics and is one of the 10 members of IFToMM Executive Council, the board of this federation.
- Y. Papegay is a permanent member of the International Steering Committee of the International Mathematica Symposium conferences serie.

9.1.2. National activities

- D. Daney is a member of the scientific committee of the CNR SDA (Centre National de Référence Santé à Domicile et Autonomie) and of the evaluation committee of the ANR TecSan. He has presented the large scale initiative action PAL to the "Centre National de Référence, Santé à Domicile + Autonomie", Paris, the "Pôle service à la personne" PACA, Marseille, the Centre Expertise National Habitat et Logement, Troyes.
- J-P. Merlet is a member of the scientific committee of the CNRS GDR robotique

9.1.2.1. Inria activities

- D. Daney is coordinator of the Large Scale Initiative Personally Assisting Living (PAL)
- J-P. Merlet is a member of the "Bureau du Comité des Projets" of the Sophia-Antipolis Inria center.
- O. Pourtallier is a member of the CSD (doctoral students monitoring), and is responsible of the NICE committee (long term invited scientists and post-doctoral student selection).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

D. Daney gave a lecture on industrial control systems (L3), ITII, Polytech Nice (48h ETP).

D. Daney gave a lecture on medical robotics, Master of Bio-Medical (M2), Univ. Nice Sophia Antipolis (22h ETP).

T. Gayral gave practicals on mechanics (kinematics, dynamics and energy), Polytech'Nice (64h ETP).

J-P. Merlet gave a 8h lecture during the Summer School on Models and Methods in Kinematics and Robotics 2012 (01 July – 08 July 2012) at the Technical University of Cluj-Napoca, Romania.

J-P. Merlet gave a 3h lecture at the Collége de France during the colloque Robotique et Santé on May 2.

O. Pourtallier lectured 30 hours on mathematical tools for engineer for undergraduate students (L1) at university of Nice.

O. Pourtallier lectured 6 hours on game theory to Master OSE (M2), at École des Mines de Paris, Sophia Antipolis

9.2.2. Supervision

HdR: Y. Papegay, De la modélisation littérale à la simulation certifiée, Université de Nice Sophia-Antipolis, June 2012

PhD: S. Bennour, Contribution au Développement d'une Plateforme Robotisée pour la Rééducation Fonctionnelle, Ecole Nationale d'Ingénieurs de Monastir, February 2012

Phd: M. Harshe, Analyse et conception d'un système de rééducation de membres inférieurs reposant sur un robot parallèle à câbles, Université de Nice, December 2012

PhD in progress : J. Alexandre dit Sandretto, Calibration of large parallel robots, 2010-2013, supervisors: D. Daney, G. Trombettoni

PhD in progress :K. Bakal, Indices biomécaniques globaux de capacité de génération de forces, supervisor: P. Gorce (Handibio), J-P. Merlet

PhD in progress :L. Blanchet, Design of large scale wire-driven parallel robots, 2012-2016, supervisor: J-P. Merlet supervisors: D. Daney, J-P. Merlet

PhD in progress :T. Gayral, Calibration of parallel telescope, 2010-2013, supervisors: D. Daney, J-P. Merlet

PhD in progress : H. Qu, Optimization of parallel robots, 2009-2012, supervisor: J-P. Merlet

PhD in progress : R. Ramadour, Manipulation for assistance, 2011-2014, supervisors: F. Chaumette, J-P. Merlet

9.2.3. Juries

- J-P. Merlet has been the member of the jury of 2 PhD defense and of one HdR

9.3. Popularization

- Julien Alexandre dit Sandretto has completed the construction of two small cable-driven robots in order to propose demonstration and lecture for students. The largest robot was presented during the french event "Fête de la science", during October, to four classes (second grade and first grade of high school). The subject of this speech was the High school Mathematics in the robotics. He gave a lecture on fundamental robotics in the Pobot club, and achieved the construction of a Delta parallel manipulator

- J-P. Merlet has completed the construction of one pedagogic wire-driven parallel robot. This robot, together with the robots developed by Julien Alexandre dit Sandretto, are tools that are intended to demonstrate basic concepts of several scientific domains (mathematics, networks, robotics, mechanics, ...) by researchers (not only roboticists) for a large variety of audience

- 180 visitors have attended this year a demonstration by the project team. This has led, for example, to articles in the newspapers Le Monde, Le Figaro, Les Echos, Le Quotidien du Médecin and interviews on RFI, France Culture and France Inter.

GRAPHIK Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Organization of Conferences/Workshops

ECAI 2012 (European Conference on Artificial Intelligence), held in August 2012 in Montpellier, gathered more than 750 participants. This major conference in artificial intelligence was locally organized by the LIRMM, mainly by the teams Coconut and GraphIK. http://www2.lirmm.fr/ecai2012/

GKR@IJCAI 2013 (International workshop on graph structures for knowledge representation and reasoning) will be held for the third time in conjunction with IJCAI. This workshop was initiated by Madalina Croitoru in 2009. The GKR post proceedings of 2011 were published in a Springer volume [43].

MPREF'13 (Multidisciplinary Workshop on Advances in Preference Handling): will be held in conjunction with IJCAI'13 and will be co-organized by Souhila Kaci. This workshop promotes the broadened scope of preference handling and continues a series of events on preference handling at AAAI-02, Dagstuhl in 2004, IJCAI-05, ECAI-06, VLDB-07, AAAI-08, ADT-09, ECAI-2010 and ECAI-2012. Since 2008, this series of workshops is organized by the multidisciplinary working group on Advances in Preference Handling, which is affiliated to the Association of European Operational Research Societies EURO.

Souhila Kaci will also co-organize the "Uncertain Reasoning" Track at FLAIRS'13.

9.1.2. Editorial Boards

ICCS (International Conference on Conceptual Structures)
RIA (Revue Francophone d'Intelligence Artificielle)

9.1.3. Program Committees

International: IJCAI 2013 (senior PC and PC), KR 2012 (Principles of Knowledge Representation and Reasoning), RR 2012-2013 (Reasoning the Web), ECAI 2012 (European Conference on Artificial Intelligence), Datalog 2.0 2012, SGAI 2012-2013 (SGAI International Conference on Artificial Intelligence), FUZZ-IEEE 2012 (International Conference on Fuzzy Systems), Effost 2012 (European Federation of Food Science and Technology), MPREF'12 (Multidisciplinary Workshop on Advances in Preference Handling, in conjunction with ECAI), WL4AI'12 (Weighted Logics for AI, in conjunction with ECAI), FLAIRS'12 (Florida Artificial Intelligence Research Society), ICAART 2012-2013 (International Conference on Agents and Artificial Intelligence), Web Science 2012-2013

National: JIAF 2012 (Journées d'Intelligence Artificielle Fondamentale), RFIA 2012 (Reconnaissance des Formes et Intelligence Artificielle), IC 2012-2013 (Ingénierie des Connaissances), LFA 2012 (rencontres francophones sur la Logique Floue et ses Applications).

9.1.4. Invited Talks

Keynote Talks at International Conferences

- RuleML: Ontology-Based Query Answering with Existential Rules, Marie-Laure Mugnier, Montpellier, August 2012. http://dbis.informatik.tu-cottbus.de/ruleml2012/
- Effost 2012: Food science and knowledge engineering: a challenging encounter, Patrice Buche, November 2012. http://www.effostconference.com/index.html

Invited Talks at International Workshops

- Workshop Datalog 2.0: Existential Rules: A Graph-based View, Marie-Laure Mugnier, Vienne, September 2012. http://www.dbai.tuwien.ac.at/datalog2.0/
- MPREF'12: What do we prefer? From philosophical stimulus to Artificial Intelligence solutions, Souhila Kaci, Montpellier, August 2012.

Invited Seminars

- Jean-François Baget and Marie-Laure Mugnier. Existential Rules: Decidability and Algorithms, Department of Computer Science, University of Oxford, December 2012.
- Madalina Croitoru and Jérôme Fortin. Graph based Knowledge Representation and Reasoning, Department of Computer Science, University of Aberdeen, January 2012.

9.1.5. Scientific Advisory Boards

- ABES (National Bibliographic Agency for Universities) Scientific Advisory Board, Michel Chein (since its creation in 2010)
- Advisory Board of the Center of Excellence in Semantic Technologies (MIMOS, Malaysia), Marie-Laure Mugnier (since its creation in 2008)
- Scientific board of INRA-CEPIA department (Caractérisation et Elaboration des Produits Issus de l'Agriculture – Agricultural Products Engineering), Marie-Laure Mugnier (since Septembre 2011)

9.1.6. Expertise Tasks:

Experts for ANR, INRA and Inria (project proposal reviewing); reviewers for Artificial Intelligence Journal, JAIR (Journal of Artificial Intelligence Research), IEEE Transactions on Fuzzy Systems, Journal of Visual Languages & Computing, European Journal of Operational Research, ...

9.1.7. Local Collective Tasks:

LIRMM Scientific Council (Jean-François Baget), Vice-chair of "Expert Pool" section 27–Computer Science (Michel Leclère), member of Expert Pool Section 27 (Marie-laure Mugnier), LIRMM Laboratory Concil (Marie-Laure Mugnier until Oct. 2012, Souhila Kaci from Oct. 2012).

9.1.8. Participation to the W3C RDF Working Group

(Jean-François Baget) The mission of the RDF Working Group, part of the Semantic Web Activity, is to update the 2004 version of the Resource Description Framework (RDF) Recommendation. The scope of work is to extend RDF to include some of the features that the community has identified as both desirable and important for interoperability based on experience with the 2004 version of the standard, but without having a negative effect on existing deployment efforts. http://www.w3.org/2011/01/rdf-wg-charter

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

The next table details the number of lecture hours as well as the number of module responsibilities for each team member.

Name	Position	2011/12	Cursus (*)	Module Resp. (per year)
J.-F. Baget	Research Scientist	40	M (UM2)	1
M. Croitoru	Assistant Prof.	96	L (IUT) and M	2
M. Chein	Emeritus Prof.	0		
J. Fortin	Assistant Prof	192	Polytech	2
S. Kaci	Professor	198	L and M(UM2)	3
M. Leclère	Assistant Prof.	96	L and M (UM2)	1
M. -L. Mugnier	Professor	192	L and M (UM2)	4
R. Thomopoulos	Research Scientist	0		no
L. Guizol	PhD	64	L	no
M. König	PhD	64	L	no
B. Paiva Lima	PhD	64	L (UM2)	no
M. Thomazo	PhD	64	L and M1 (UM2)	no

(*) L =Licence, M = Master (M1 = first year, M2 = second year), UM2 = Univ. Montpellier 2 (Sciences), IUT = Institute of Technology of UM2 (Licence Cursus), Polytech = Engineering School of UM2, UM3 = Univ. Montpellier 3 (Art and Humanities)

Globally, the team ensures the courses in logics (propositional logic and first-order logic in L, logics for Artificial Intelligence in M2) at the Montpellier 2 University, as well as the Master courses in Artificial Intelligence, Decision Support, Knowledge Representation and Knowledge Engineering. We are also responsible of modules in Web Technologies (Professional L at IUT) and Databases (L). Michel LeclÃ¨re, on sabbatical leave since Feb. 2012, and Madalina Croitoru, on Inria delegation, ensured each a half-service.

We have some specific responsibilities in the Computer Science Master:

- Michel LeclÃ¨re is co-responsible of the master speciality DECOL (about 20 students) started in September 2011.
- Marie-Laure Mugnier is co-responsible of the Computer Science Master started in September 2011 (about 240 students), which gathers six specialties.

9.2.2. Supervision

9.2.2.1. PhDs

No PhD was defended in 2012.

PhD in progress : MichaÃ«l Thomazo, Querying knowledge bases: decidability, complexity and algorithms, Sept. 2010, Marie-Laure Mugnier and Jean-FranÃ§ois Baget

PhD in progress : Bruno Paiva Lima da Silva, Comparing Storage Systems for Large knowledge bases, Oct. 2010, Jean-FranÃ§ois Baget and Madalina Croitoru

PhD in progress : Tjitze Rienstra, Dynamic argumentation systems, Oct. 2010, Souhila Kaci and Leon van der Torre (University of Luxembourg)

PhD in progress : MÃ©lanie KÃ¶nig, Algorithms for querying large knowledge bases, Oct. 2011, Michel LeclÃ¨re and Marie-Laure Mugnier

PhD in progress : LÃ©a Guizol, Entity identification in metadata bases, Oct. 2011, Michel LeclÃ¨re and Madalina Croitoru

PhD in Progress: Akila Ghersedine, Creating and enriching lists of authorities from heterogeneous resources, Apr. 2012, Michel LeclÃ¨re and Marie-Laure Mugnier

9.2.2.2. Internships

- Joris Lamare (ENS Cachan, 6 weeks)
- Swan Rocher (Master 1 UM2, 2 months + 3 months TER)
- ClÃ©ment Sipieter (Master 1 UM2, 2 months)
- Patricio Mosse (Master 2, 6 months)
- Awa Diattara (Master 2, 6 months)

9.2.3. Juries

- Patrice Buche
  - Reviewer (PhD): Interrogation personnalisÃ©e des systÃ¨mes d'information dÃ©diÃ©s au transport : une approche bipolaire floue, Nouredine Tamani, IRISA, ENSSAT Lannion, April 2012
  - Reviewer (PhD): Approches hybrides pour la recherche sémantique de l'information : Intgration des bases de connaissances et des ressources semi-structurées. Yassine Mrabet, University of Paris-Sud, July 2012
- Madalina Croitoru
  - Reviewer (PhD): Decision Support Systems for Brain Tumor Diagnosis: Classification and Evaluation Approaches, Javier Vicente Robledo, University of Valencia, October 2012

- Marie-Laure Mugnier
    - President of jury (PhD): Structuration de débats en ligne à l'aide d'annotations socio-sémantiques, Antoine Seilles, University of Montpellier 2, April 2012
    - Reviewer (PhD): Extraction de motifs de graphes pour caractériser des sources de données RDF, Adrien Basse, University of Nice, December 2012
    - President of jury (PhD): Enhancing Ontology Matching by Using Machine Learning, Graph Matching and Information Retrieval Techniques, DuyHoa Ngo, University of Montpellier 2, December 2012.
    - Jury member(PhD): Static analysis of semantic web queries, Melisachew Wudage Chekol, University of Grenoble, December 2012.
- Michel Chein
    - Jury Member (HDR): Knowledge Representation meets DataBases for the sake of ontology-based data management, François Goasdoué, University Paris-Sud, June 2012.

9.3. Popularization

- Jérôme Fortin gave a talk about argumentation during the CIAG (Carrefours de l'Innovation Agronomique) in Clermont-Ferrand http://www.inra.fr/ciag/colloques_alimentation/cereales. This presentation led to an article published in *Innovations Agronomiques* [19].
- Patrice Buche gave a talk about argumentation to JTIC (Congress on Cereals) http://www.jtic.eu/, http://www4.inra.fr/cepia/Restez-informes/Evenements/Les-videos-et-diaporamas-des-conferences-passees/JTIC-2012 in Reims. [38].

LAGADIC Project-Team

9. Dissemination

9.1. Scientific Animation

- *Editorial boards of journals*
    - Eric Marchand and Paolo Robuffo Giordano are Associate Editors of the IEEE Trans. on Robotics.
    - François Chaumette is in the Editorial Board of the Int. Journal of Robotics Research. He has also been Associate Editor of the Int. Journal of Optomechatronics from its creation in 2007 till September 2012.
- *Technical program committees of conferences*
    - François Chaumette: ICRA'12, RSS'12, ISPRS'12, IROS'12, SYROCO'12, ISOT'12, WRV'13, ICRA'13
    - Eric Marchand: RFIA'12, Coresa'12, ICRA'12, RSS'12, ICRA'13
    - Patrick Rives: ICRA'12, RFIA'12, Innorobo'12, Vicomor'12
- *Selection committees*
    - François Chaumette was in the selection committee for a Professor position at the "Université de Strasbourg" and at the "Université Paul Sabatier" in Toulouse.
    - Alexandre Krupa was in the selection committee for an Assistant Professor position at the "Université de Strasbourg" and at the "Université de Franche-Comté".
    - Eric Marchand was in the selection committee for an Assistant Professor position at the "Université de Strasbourg" and at "Ensicaen" in Caen. He was in the selection committee for a Professor position at the "Université de Rennes 1".
    - Patrick Rives was in the selection committee of Starting and Advanced Research positions at Inria.
- *Participation in seminars, invitation*
    - François Chaumette has been invited to give a talk at the 4th Cimat Robotics Workshop in Guanajuato, Mexico [21] and to the 3rd French-Sino Symposium on Virtual Reality in Qingdao, China [22].
    - Eric Marchand has been invited to give a talk at the Workshop on Fundamental and Applied 3D Computer Vision in honor of Richard Hartley in Clermont Ferrand [23].
    - Patrick Rives has been invited to give a talk at the RFIA Atelier Monument 3D (Lyon, France, January 2012) [24], Innorobo Conference on Service Robotics (Lyon, France, March 2012) [25], and IROS Workshop Vicomor (Vilamoura, Portugal, October 2012) [26].
- *Animation at the international level*
    - François Chaumette has been elevated to IEEE Fellow in November 2012. He served as expert for the ERC Starting Grants and has been appointed to be a panel member of the ERC Consolidator Grants. He was in the 2012 and 2013 IEEE RAS chapter of the year award nomination committee.
- *Animation at the national level*
    - François Chaumette and Patrick Rives are members of the scientific council of the "GdR Robotique" and JNRR.

- – François Chaumette served for the ANR Contint monitoring committee.
    - – Patrick Rives is an expert for Oseo (Agence Nationale pour la Valorisation), Agence Nationale de la Recherche (ANR) and the Swiss National Science Foundation.
    - – Patrick Rives is a member of the Inria evaluation committee.
    - – Alexandre Krupa is a member of the Inria Cost-GTAI in charge of the evaluation of the ADTs ("Actions de développments technologiques").
    - – François Chaumette is a member of the animation committee of Inria's thematic domain "Perception, cognition, interaction".
- *Animation at the regional and local levels*
    - – Eric Marchand is in the board of the "Images et réseaux" competitivity cluster.
    - – Eric Marchand is a member of the scientific council of the École supérieure d'ingénieurs de Rennes (ESIR).
    - – François Chaumette is the president of the committee in charge of all the temporary recruitments ("Commission Personnel") at Inria Rennes Bretagne Atlantique and Irisa. He is a member of the Head team of Inria Rennes Bretagne Atlantique.
    - – Eric Marchand is a member of the committee in charge of all the temporary recruitments ("Commission Personnel") at Inria Rennes Bretagne Atlantique and Irisa. He is particularly in charge of Irisa Ph.D. students.
    - – Marie Babel and Fabien Spindler are members of the "Comité de centre" of Inria Rennes Bretagne Atlantique.
    - – Fabien Spindler is a member of the "Commission développement durable" of Inria Rennes Bretagne Atlantique.
    - – Alexandre Krupa is a member of the CUMIR ("Commission des Utilisateurs des Moyens Informatiques") of Inria Rennes Bretagne Atlantique.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Marie Babel:

Master INSA3: "Statistical Signal Processing", 24 hours, M2, Institut National des Sciences Appliquées de Rennes

Master INSA1: "Assembler", 30 hours, L3, Institut National des Sciences Appliquées de Rennes

Master INSA2: "Computer science project", 30 hours, M1, Institut National des Sciences Appliquées de Rennes

Master INSA2: "Image analysis", 18 hours, M1, Institut National des Sciences Appliquées de Rennes

Master INSA1: "Remedial math courses", 24 hours, L3, Institut National des Sciences Appliquées de Rennes

Master INSA1: "Risk Management for Information Systems", 8 hours, L3, Institut National des Sciences Appliquées de Rennes

François Chaumette:

Master ESIR3: "Visual servoing", 12 hours, M2, Ecole supérieure d'ingénieurs de Rennes

Ph.D.: IEEE RAS Summer School on Robot Vision and Applications: "Visual servoing", 4.5 hours, Universidad de Chile, Santiago.

Alexandre Krupa:

> Master SIBM (Signals and Images in Biology and Medicine): "Medical robotics guided from images", 4.5 hours, M2, Université de Rennes 1, Brest and Angers

Eric Marchand:

> Master ESIR2: "Colorimetry", 24 hours, M1, Ecole supérieure d'ingénieurs de Rennes

> Master ESIR2: "Computer vision", 24 hours, M1, Ecole supérieure d'ingénieurs de Rennes

> Master ESIR3: "Special effects", 24 hours, M2, Ecole supérieure d'ingénieurs de Rennes

> Master ESIR3: "Computer vision: tracking and recognition", 24 hours, M2, Ecole supérieure d'ingénieurs de Rennes

> Master MRI: "Computer vision: geometry", 24 hours, M2, Université de Rennes 1.

9.2.2. Supervision

> HdR: Marie Babel, "From image coding and representation to robotic vision", Université de Rennes 1, defense in June 2012 [10]

> HdR: Alexandre Krupa, "Contributions à l'asservissement visuel échographique", Université de Rennes 1, defense in December 2012 [13]

> Ph.D.: Maxime Meilland, "Cartographie RGB-D dense pour la localisation visuelle temps-réel et la navigation autonome", Ecole des Mines de Paris, defense in March 2012, supervised by Patrick Rives and Andrew Comport (I3S/CNRS) [14]

> Ph.D.: Alexandre Chapoulie, "Contributions aux méthodes de détection visuelle de fermeture de boucle et de segmentation topologique de l'environnement", Université de Nice-Sophia Antipolis, defense in December 2012, supervised by Patrick Rives and David Filliat (ENSTA) [11]

> Ph.D.: Laurent Coutard, "Appontage automatique d'avions par asservissement visuel", Université de Rennes 1, defense in December 2012, supervised by François Chaumette [12]

> Ph.D. in progress: Tao Li, "Commande d'un robot de télé-échographie par asservissement visuel échographique", started in October 2009, supervised by Alexandre Krupa

> Ph.D. in progress: Pierre Martin, "Augmented reality on smartphones", started in February 2010, supervised by Eric Marchand

> Ph.D. in progress: Rafik Sekkal, "Features extraction and robust tracking of objects for video representation", started in October 2010, supervised by Marie Babel

> Ph.D. in progress: Antoine Petit, "3D model-based tracking of complex objects in a spatial context", started in December 2010, supervised by Eric Marchand

> Ph.D. in progress: Manikandan Bakthavatchalam, "Utilisation des moments photométriques en asservissement visuel", started in October 2011, supervised by François Chaumette

> Ph.D. in progress: Bertrand Delabarre, "An information theoretic approach for navigation in robotics", started in October 2011, supervised by Eric Marchand

> Ph.D. in progress: Tawsif Gokhool, "Représentations valides à long terme pour la navigation et l'apprentissage des modèles 3D", started in February 2012, supervised by Patrick Rives

> Ph.D. in progress: Romain Drouilly, "Représentation hybride métrique, topologique et sémantique d'environnement 3D pour la localisation temps réel", started in May 2012, supervised by Patrick Rives

> Ph.D. in progress: Le Cui, "Nano-manipulation par asservissement visuel", started in October 2012, supervised by Eric Marchand

> Ph.D. in progress: Riccardo Spica, "Autonomous vision-based two-hand manipulation strategies for humanoid robots", started in December 2012, supervised by Paolo Robuffo Giordano and François Chaumette

9.2.3. *Juries*

- François Chaumette: Pierre Lebraly (Ph.D., president, Institut Pascal, Clermont-Ferrand), Adrien Durand Petiteville (Ph.D., reviewer, Laas, Toulouse), Pierre Rouanet (Ph.D., president, Inria Bordeaux), Moslem Kazemi (Ph.D., reviewer, Simon-Fraser University, Vancouver), Baptiste Charmette (Ph.D., reviewer, Institut Pascal, Clermont-Ferrand)

- Eric Marchand: Maxime Meilland (Ph.D., reviewer, Inria Sophia Antipolis), Pauline Merveilleux (Ph.D., reviewer, Mis, Amiens), Cédric Demonceaux (HDR, reviewer, Université de Bourgogne, Le Creusot)

- Patrick Rives: Mohamed Marouf (Ph.D., Ecole des Mines de Paris), Alessandro Victorino (HdR, Heudiasyc, Compiègne), Pauline Merveilleux (Ph.D., reviewer, Mis, Amiens), Cédric Demonceaux (HdR, reviewer, Université de Bourgogne, Le Creusot), Baptiste Charmette (Ph.D., reviewer, Institut Pascal, Clermont-Ferrand)

9.3. Popularization

- Due to the visibility of our experimental platforms, the team is often asked to present its research activities to students, researchers or industry. Our panel of demonstrations allows us to highlight recent results concerning the positioning of an ultrasound probe by visual servoing, the construction of a tower by combining 3D model-based visual tracking and visual servoing techniques to pick up cubes that are assembled, the navigation of a mobile robot in urban environments, and vision-based detection and tracking for space navigation in a rendezvous context.

- Fabien Spindler is a member of the editorial board of "Ouest Inria", the internal journal at Inria Rennes Bretagne Atlantique.

- Eric Marchand was co-author of an article entitled "FlyVIZ : un casque qui permet de voir dans toutes les directions" in Interstice, which is an online French popularization magazine for research in computer science.

<p style="text-align:center; color:red;">**REVES Project-Team**</p>

8. Dissemination

8.1. Scientific Animation

8.1.1. Program Committees

G. Drettakis served on the ACM SIGGRAPH program committee. G. Drettakis and A. Bousseau served on the Eurographics Symposium on Rendering program committee. A. Bousseau served on the NPAR program committee.

8.1.2. Community service

G. Drettakis chairs the Eurographics (EG) Awards Committee and the EG Working group on Rendering and is part of the EG conference steering committee and the Advisory Board for Eurographics 2013. He is an associate editor-in-chief for IEEE Transactions on Computer Graphics and Visualization. G. Drettakis heads the steering committee of the Gouraud-Phong Immersive Space at Sophia-Antipolis.

8.1.3. Conference Presentations and Attendance

At SIGGRAPH 2012 in Los Angeles, G. Drettakis presented the paper [15] together with Bruno Galerne, A. Bousseau presented the paper [20] (August), and P-Y. Laffont presented a poster and a short talk on his work [22]. G. Chaurasia also attended the SIGGRAPH conference.

P-Y. Laffont presented his paper [19] at SIGGRAPH Asia 2012 in Singapore (December).

G. Drettakis attended EUROGRAPHICS 2012.

C. Verron presented the paper [23] at the AES Convention in San Francisco.

J. Lopez-Moreno, A. Bousseau and S. Duchêne attended the Eurographics Symposium on Rendering in Paris.

G. Chaurasia attended the *Human Activity and Vision Summer School* organized by Inria Sophia Antipolis from Oct 1-5, 2012.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence: E. Chapoulie teaches in the L1 module on Analogical electronics (32h), at University Nice Sophia Antipolis EPU. P-Y. Laffont taught "Introduction to Object-Oriented Programming" (64h, L3), in the Computer Science and MUNDUS departments at Polytech'Nice.

Masters: G. Drettakis organizes and teaches Computer Graphics at the ECP (Paris) (9h), A. Bousseau teaches 3h at the same course. G. Drettakis teaches 6h in the MAPI M1 Module (Jeux Video), A. Bousseau teaches 3h in this program. A. Bousseau organizes and teaches the Computer Graphics module in the Master 1 International in Computer Science of University Nice Sophia Antipolis (10h), G. Drettakis teaches 8h in this program.

8.2.2. Supervision

PhD : Pierre-Yves Laffont, Intrinsic Image Decomposition from Multiple Photographs [11], Université Nice Sophia Antipolis, defended in October 12th 2012, Advisor: George Drettakis, Co-advisor: Adrien Bousseau

PhD in progress : Emmanuelle Chapoulie, titre (provisoire) du mémoire, since October 2010, Advisor: George Drettakis

PhD in progress : Gaurav Chaurasia, titre (provisoire) du mémoire, since October 2010, Advisor: George Drettakis

PhD in progress : Sylvain Duchêne, titre (provisoire) du mémoire, since October 2011, Advisor: George Drettakis

PhD in progress : Emmanuel Iarussi, Computer-Assisted Drawing, since October 2012, Advisor: George Drettakis, Co-advisor: Adrien Bousseau

Internship : Laurent Lefebvre (EPITECH), Interactive Global Illumination, June-August 2012, Advisor: George Drettakis

Internship : Loic Sevecque (UNSA, MAPI), Modeling and Animation, June-August 2012, Advisor: George Drettakis

8.2.2.1. Thesis Committees

A. Bousseau was an examinateur for the PhD committee of Jiazhou Chen (MANAO project team, Inria Bordeaux - Sud Ouest). G. Drettakis was rapporteur for the HDR committee of I. Ihrke (MANAO project team, Inria Bordeaux - Sud Ouest), and on the PhD committee of Anthony Pajot (IRIT-CNRS/Université Paul Sabatier Toulouse).

8.3. Popularization

8.3.1. Invited Talks

A. Bousseau gave an invited talk at Adobe and at the "Cafés de l'Innovation du Centre d'Accueil d'Entreprises Innovantes (CAEI)" in Nice. He also gave a talk at the InSitu project team, Inria Saclay - Ile de France.

Pierre-Yves Laffont was invited to present his PhD work at University of Washington (USA), Paris ACM Siggraph (France) and KAIST (South Korea).

8.3.2. Demonstrations

Participants: Emmanuelle Chapoulie, Rachid Guerchouche, George Drettakis, Adrien Bousseau.

We performed many demonstrations this year, mostly in the Immersive Space but also of our various research results. Specifically, we performed demos to the companies Toyota, Novartis, to representatives of the Pole de Competitive Pegase, Chambre de Commerce et d'Industrie Nice Cote D'Azur, ERCIM and NII Tokyo. We also presented internal demonstrations to C. Kirchner and A. Petit of the Inria national management.

8. Dissemination

8.1. Scientific Animation

8.1.1. Conference Organization

- In the framework of VANAHEIM project, Stars has organized a summer school which was held at Inria in October 2012, entitled "Human Activity and Vision Summer School"[4]. This summer school addressed the human activity or behaviour recognition, focusing dominantly on the video and audio modalities. In this context, the topics addressed ranged from low-level feature extraction (background subtraction, space-time interest points, tracklets) to active learning, as well as object detection (human, body), tracking (multi-object, multi-camera, audio-visual), behaviour cue extraction (body or head pose), crowd monitoring and supervised behaviour recognition (statistical and symbolic approaches). The summer school counted 26 outside participants, 19 Inria participants and 21 invited speakers. Most of the participants were PhD students, but master students and postdoctoral researchers were also registered.

8.1.2. Journals

- G. Charpiat reviewed for the journals TIP (Transactions on Image Processing), SIIMS (SIAM Journal on Imaging Sciences), RIA (Revue d'Intelligence Artificielle)
- Jean-Paul Rigault reviewed for the SoSym (Software and System Modeling) journal (Springer)
- M. Thonnat reviewed for Image and Vision Computing Journal
- F. Bremond was reviewer for the International Journal of Neural Systems and for the IEEE Pervasive Computing

8.1.3. Conferences

- G. Charpiat reviewed for the conferences CVPR (Computer Vision and Pattern Recognition) and SIGPRO (Signal Processing).
- Jean-Paul Rigault is a member of AITO (Association Internationale pour les Technologies Objets), the steering committee of several international conferences including ECOOP.
- M. Thonnat reviewed for ICPR Conference
- The conference paper entitled "Alzheimer's patient activity assessment using different sensors" by C. Crispim et all has received the Best Paper Award in ISG*ISARC 2012 conference in Eindhoven, Netherlands in June 2012.
- F. Bremond was Session chair and chairman of discussion panels at AVSS'12 conference
- F. Bremond was reviewer for the conferences CVPR'12-13, ICPR'12, ECCV'12, AVSS'12, PETS'12-13, Visage'12, IROS'12 Workshop, ICRA'13
- F. Bremond was program committee member of the CVPR 3nd Intl. Workshop on Socially Intelligent Surveillance and Monitoring (SISM 2012)
- F. Bremond was program committee member of the 2 ECCV 2012 workshops, International Workshop on Re-Identification (Re-Id 2012) and ARTEMIS 2012
- F. Bremond was program committee member of the IEEE Workshop on Applications of Computer Vision (WACV 2013)
- F. Bremond was program committee member of the Workshop Interdisciplinaire sur la Sécurité Globale (WISG 2013)

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[4] http://www.multitel.be/events/human-activity-and-vision-summer-school/home.php

8.1.4. Invited Talk

- F. Bremond was invited at the Gerontological Workshop organized by Universitas Tarumanagara in Jakarta on the 28-29 September 2012.
- F. Bremond was invited at the French American Biotech Symposium FABS 2012, invited by EUROBIOMED and French Embassy in US, Nice on the 25-26 October 2012,
- F. Bremond was invited at the IA (Innovation Alzheimer) Workshop 2012: Intersection between ICT & Health – defining guidelines on October 30th in Monaco, France.
- F. Bremond was invited at the International Workshop on Human Behavior Understanding (HBU'2012) held in conjunction with IROS'2012 in Algarve, Portugal, October 2012.

8.1.5. Advisory Board

- M. Thonnat is Scientific Advisory Board member 2010 -2013 European project Fish4Knowledge. on Intelligent Information Management Challenge 4: Digital Libraries and Content (http://www. fish4knowledge.eu).
- M. Thonnat is Scientific Board member of the National Reference Center "Santé", Dependance et Autonomie since 2010.
- M. Thonnat is Scientific Board member of Ecole Nationale des Ponts since 2008
- F. Bremond is Scientific Board member of Fondation Médéric Alzheimer: European Dementia Biomedical Outlook, April and October 2012.
- F. Bremond is Scientific Board member of Workshop Interdisciplinaire sur la Sécurité Globale (WISG)
- F. Bremond is Member of the advisory Boards of the "Éthique, technologie et maladie d'Alzheimer ou apparentée" EREMA

8.1.6. Expertise

- M. Thonnat participated to the evaluation of ANR Tecsan proposals, award committee member for the best scientific project at Ecole Polytechnique Paris

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master : François Brémond, Video Understanding Techniques at the Human Activity and Vision Summer school, Sophia-Antipolis, 3h., Oct 2012, FR;

Master : Annie Ressouche, Critical Systems and Vérification. Application to WComp Platform, 10h, M2, Polytechnic School of Nice Sophia Antipolis University, FR;

Jean-Paul Rigault is Full Professor of Computer Science at Polytech'Nice (University of Nice): courses on C++ (beginners and advanced), C, System Programming, Software Modeling.

8.2.2. Supervision

PhD & HdR

PhD : Slawomir Bak, People Detection in Temporal Video Sequences by Defining a Generic Visual Signature of Individuals, Nice Sophia Antipolis University, 5th July 2012, François Brémond [28]

PhD : Duc Phu Chau, Object Tracking for Activity Recognition, Nice Sophia Antipolis University, 30th March 2012 , François Brémond and Monique Thonnat [29];

PhD : Guido-Tomas Pusiol, Learning Techniques for Video Understanding, Nice Sophia Antipolis University, 31st May 2012, François Brémond [30];

PhD in progress: Julien Badie, People tracking and video understanding, October 2011, François Brémond;

PhD in progress : Piotr Bilinski, Gesture Recognition in Videos, March 2010, François Brémond;

PhD in progress : Carolina Garate, Video Understanding for Group Behaviour Analysis, August 2011, François Brémond;

PhD in progress : Ratnesh Kumar, Fiber-based segmentation of videos for activity recognition, January 2011, Guillaume Charpiat and Monique Thonnat;

PhD in progress : Rim Romdhame, Event Recognition in Video Scenes with Uncertain Knowledge, March 2009, François Brémond and Monique Thonnat;

PhD in progress : Malik Souded : Suivi d'Individu à travers un Réseau de Caméras Vidéo, February 2010, François Brémond ;

8.2.3. *Juries*

- G. Charpiat reviewed applications to a Cordi S PhD grant as well as a proposal to the project call Digiteo.

- M.Thonnat was jury member for the PhD defence of Edouard Auvinet, Montreal University, the 14th June 2012.

- A. Ressouche was jury member for the PhD defence of Salma Zouaoui-Elloumi, Mines Paris Tech, in July 2012.

- F. Bremond was jury member for the PhD defence of Cyrille Migniot, GIPSA Lab, Univ. P. Mendes-France, Grenoble, 17 January 2012.

- F. Bremond was jury member for the PhD defence of Carmelo Velardo, EURECOM, 23rd April 2012.

- F. Bremond was jury member for the Mid-term PhD defence of Usman Farrokh Niaz, EURECOM, 2nd May 2012.

- F. Bremond was jury member for the Mid-term PhD defence of Claudiu Tanase, Mid-term defense, EURECOM, 2nd May 2012.

- F. Bremond was jury member for the Mid-term PhD defence of Alban Meffre, Mid-term defense, Télécom Physique Strasbourg (ex ENSPS) - LSIIT CNRS, June 5 2012.

- F. Bremond was jury member for the Mid-term PhD defence of Hajer Fradi, Mid-term defense, EURECOM, 29th October 2012.

- F. Bremond was jury member for the PhD defence of Sun Lin, Université Pierre & Marie Curie (UPMC) - TELECOM SudParis, 12th Dec 2012.

- F. Bremond was jury member for the HDR defence of Christian Wolf, Université de Lyon, INSA-Lyon, LIRIS CNRS, Team Imagine and M2Disco, 10th December 2012.

8.3. Popularization

- G. Charpiat takes part in Mastic, a local scientific animation committee (Médiation et Animation Scientifique dans les MAthémathiques et dans les Sciences et Techniques Informatiques et des Communications) and attended a media training.

8.3.1. *Press Release*

- F. Bremond has a Press interview on Assisted Living in February 2012 with Le Monde, Le Figaro, Les Echos, Notre Temps, Le Quotidien du Médecin, RFI, France Culture, La Croix, France Inter.

- Stars article in Le Monde on the 10th of March on "Vidéosurveillance : Trop de caméras pas assez d'yeux ?",

- F. Bremond has an Interview on Assisted Living on the 21st of March 2012 with France Inter,

- F. Bremond has an Interview on CobTek for the ITV Inria Web Site (by TEchnoscope company) in April 2012.

- Dem@Care has been mentioned in the EU eHealth Newsletters, firstly in March 2012 to announce the launch of the project, secondly in August 2012 to announce the IA (Innovation Alzheimer) Workshop 2012.

<p style="text-align: center; color: red;">**WIMMICS Team**</p>

9. Dissemination

9.1. Scientific Animation

Zeina Azmeh

Reviewer for the 9th international conference on Concept Lattices and their Applications (CLA 2012), and Program Committee member of the 3rd international conference on Cloud Computing and Services Science (CLOSER 2013).

Michel Buffa Program Committee member of WWW Demo track, WWW Workshop on Semantic Web Collaborative Spaces (SWCS).

Elena Cabrio

Program Committee member of the *1st Joint Conference on Lexical and Computational Semantics (*SEM 2012)*, and of *Semantic Relations-II. Enhancing Resources and Applications workshop*, at LREC 2012 (Language Resources and Evaluation Conference). Moreover, she was part of the Evaluation Committee assigning the Best PhD Dissertation Award of ATALA 2012 (French computational linguistics member association).

Olivier Corby

Program committee member of EKAW, IC, CNRIA, IIIS, CWC ECAI Workshop, IJMSO, More-BI, SOS DLWD, WWW demo track.

With Catherine Faron-Zucker and Johan Montagnat (I3S, Modalis), organization of a three days workshop for the CrEDIBLE Mastodons CNRS Research Program (15 to 17 october) [26].

He is member of W3C SPARQL 1.1 WG.

Catherine Faron-Zucker

Reviewer, Program Committee member of:

IJHCS, KEOD, AKDM, Special Track on Peer Reviewing (PR) of the Int. Conf. on Knowledge Generation, Communication and Management (KGCM), KSE, IC, EGC Maghreb, JEESI, CNRIA.

Reviewer for ANR, Crédit Impôt Recherche DRRT Ile-de-France, "Bonus Qualité Recherche" (BQR) for scientific council of university Paris 13.

Fabien Gandon

Reviewer:

Journals: Advances in Knowledge Discovery and Management, Semantic Web Journal special issue on Linked Datasets Descriptions.

Conferences: AINA, EGC, ESWC, FutureTech, Hypertext, IC, ISWC, RFIA, SAC, SemWeb.Pro, TOTh, WebS, WebScience, WI.

He was general co-chair of WWW at Lyon.

Workshops:

AImWD, LDOW, MARAMI, MSM, SocialComNet, SOS, SPIM, SSNAD, SWCS.

Alain Giboin

Member of the program committee of COOP, DeViNT, IC, I-SEMANTICS.

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[26]https://credible.i3s.unice.fr/doku.php?id=atelier_15-17_octobre

Reviewer for the International Journal of Human-Machine Studies.

Reviewer for the ANR CONTINT program.

Member of the the steering committee of the COOP conference series (International Conferences on the Design of Cooperative Systems).

Co-organizer – with Pascal Salembier (Université de Technologie de Troyes, France), Carla Simone (Universita Milano Bicocca, Italy), and Cyril Bossard (UFR STAPS de Brest, France) – of the Workshop *Do We Really Need to Share to Cooperate?*, in conjunction with COOP'2012, The 10th International Conference on the Design of Cooperative Systems, Marseille, France, May 29th.

Nhan Le Thanh

Program committee member of the 2nd International Conference on Model & Data Engineering (MEDI2012) and the 4th International Conference on Knowledge and Systems Engineering (KSE 2012).

Isabelle Mirbel

Member of the editorial board of the journal *Ingénierie des Systèmes d'Information* (Hermès).

Co editor of a special issue of the *International Journal of Information System Modeling and Design* (IGI Global) Volume 4, 2012.

PC member 24th International Conference on Advanced Information Systems Engineering (CAISE 2012).

PC member for the workshop *Ontologies et Jeux de Données pour évaluer le web sémantique (OJD)* in conjonction with 23ièmes journées francophones d'ingénierie des connaissances.

Reviewer for the *Requirements Engineering Journal* (Springer).

Reviewer for ODBase 2012.

PC member Doctoral Consortium of INFORSID 2012.

Co-chair of the doctoral consortium of *24th International Conference on Advanced Information Systems Engineering*.

Andrea Tettamanzi

Program co-chair of the "EvoFin" track of the EvoApplications 2013 conference and as the chair of Evo-Transfer, a technology-transfer event, now in its 2nd edition, in the framework of Evo* 2013. Referee for the Information Sciences journal, the Computational Intelligence journal, and the Journal of Data Semantics. Program committee member of the IAT 2012 and PPSN 2012 conferences.

Serena Villata

Co-organizer and co-chair of the first workshop on "Artificial intelligence meets the Web of Data (AImWD)" which was co-located with the European Conference on Artificial Intelligence (ECAI-2012).

Program committee member of international journals, conferences and workshops in computer science. In particular, among others: Journal of Logic and Computation, Synthese, Journal of Approximate Reasoning, AAMAS-2012, AImWD-2012.

She is part of the W3C Working Group on the Linked Data Platform which has the aim to develop the specifications for HTTP interaction with Linked Data.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

> **Semantic Web**: 36h. L2, IUT Nice UNS, France.
> Participants: Olivier Corby, Catherine Faron-Zucker.

> **Semantic Web**: 45h. Master 2, IFI KIS PolyTech Nice, UNS, France.
> Participants: Olivier Corby, Catherine Faron-Zucker, Fabien Gandon.

Knowledge Engineering: 20h. Master 2, IFI KIS PolyTech Nice, UNS, France.
Participants: Catherine Faron-Zucker, Fabien Gandon, Andrea Tettamanzi.

Semantic Web: 2h. Ecole Centrale Paris.
Participant: Fabien Gandon.

Semantic Web: 3h. ENS Cachan.
Participant: Fabien Gandon.

Semantic Web: 3h. Miage UNS
Participant: Fabien Gandon.

Semantic Web: 8h. URFIST Rennes.
Participant: Fabien Gandon.

Human-Computer-Interaction (HCI) Design and Evaluation: 35h. Master 2, PolyTech Nice, UNS.
Participant: Alain Giboin

Post WIMP interaction paradigms and interface evolution: 4h. Master 2 Polytech UNS.
Participant: Alain Giboin.

Task and Activity Analysis for HCI design and evaluation: 6h, Master 2 *Sociology and Ergonomics of Digital Technologies*, UNS
Participant: Alain Giboin

Place of Ergonomics in Agile Projects: 2h. Licence Pro IDSE, IUT, UNS.
Participant: Alain Giboin.

Web Services: 36h. MASTER MIAGE 2, UNS.
Participant: Serena Villata

Web Services: 42h. MASTER MIAGE 2, UNS.
Participant: Zeina Azmeh.

Object Oriented Design: UML & OCL: 36h. L3 MIAGE, UNS.
Participant: Maxime Lefrançois.

Object Oriented Programming: Java: 18h. L3 MIAGE, UNS.
Participant: Maxime Lefrançois.

Enterprise Components Architecture: Java EE 6, EJB 3.1, JSF 2.0: 13h. M2 MIAGE UNS
Participant: Maxime Lefrançois.

XML Technologies: 36h. Master 1 MIAGE, UNS.
Participant: Elena Cabrio.

Web Programing: 30h. DUT Info S1 et S2 at IUT, UNS.
Participant: Nhan Le Thanh.

Design tools and Programming with relational DBMS: 105h. DUT S3 Info at IUT, UNS.
Participant: Nhan Le Thanh.

Theoretical basis of Computation: 45h. DUT S4 Info at IUT, UNS.
Participant: Nhan Le Thanh.

Logical Data Models and languages: 24h. Licence Pro Info LP3 at UNS.
Participant: Nhan Le Thanh.

Design and Development of DBMS services: 24h. Licence Pro Info LP3 at UNS.
Participant: Nhan Le Thanh.

Architecture of Software Engineering: 12h. Licence Pro Info LP3 at UNS.
Participant: Nhan Le Thanh.

Introduction to the Web: 37h. Licence 1, UFR Sciences UNS.
Participant: Andrea Tettamanzi.

Algorithmics, Object Oriented Programming, Python: 50h. Licence 2, UFR Sciences UNS.
Participant: Andrea Tettamanzi.

Distributed Systems: 18h. Master MIAGE 1, UFR Sciences UNS.
Participant: Andrea Tettamanzi.

Web 2.0, Web Services, HTML5: 40h. Master 2 UNS.
Participant: Michel Buffa.

Distributed Web Development: 40h. Master 2 UNS.
Participant: Michel Buffa.

Web Technologies: 40h. Master 1 UNS.
Participant: Michel Buffa.

Java Certification: 25h. Master 2 UNS.
Participant: Michel Buffa.

Plasticity of User Interfaces, HTML5: 8h. Master 2 Polytech UNS.
Participant: Michel Buffa.

New Interaction Means, HTML5: 8h. Master 2 Polytech UNS.
Participant: Michel Buffa.

Linux shell: 66h. IUT UNS.
Participant: Franck Berthelon.

Linux: 24h. IUT UNS.
Participant: Khalil Bouzidi.

DBMS and J2EE: 22h. IUT UNS.
Participant: Khalil Bouzidi.

Langages for documents : XML, XSD et XSL: 32H. Master 2 UNS.
Participant: Catherine Faron-Zucker.

Network Programming: 12h. Master 1 UNS.
Participant: Catherine Faron-Zucker.

Object Oriented Programming and Algorithmics: 130h. Licence 3 UNS.
Participant: Catherine Faron-Zucker.

Statistical Data Analysis: 39h. Licence 3 UNS.
Participant: Catherine Faron-Zucker.

HTML5 : W3C Online Course, delivers a W3C certification.
Participant: Michel Buffa.

HTML5 : Tutorial at WWW Conference, April 2012, Lyon, France.
Participant: Michel Buffa.

Argumentation for Agent Societies: Summer School at EASSS 2012.
Participant: Serena Villata.

9.2.2. Supervision

PhD:

Adrien Basse, *Extracting Graph Patterns to Characterize RDF Data Sources*, University Gaston Berger, Saint-Louis, Sénégal, december 10th, Fabien Gandon;

PhD in progress :

> **Pavel Arapov**, *Semantic Application Wiki*, UNS, Michel Buffa, Nhan Le Thanh ;
>
> **Franck Berthelon**, *Emotional State Detection from Electroencephalogram Data for "Serious Games"*, UNS, Peter Sander ;
>
> **Khalil Bouzidi**, *Semantic Web Approach to Support the Creation of Technical Regulatory Documents in Building Industry*, UNS, CSTB, Nhan Le Thanh, Catherine Faron-Zucker, Bruno Fies.
>
> **Luca Costabello**, *Mobile Access to the Web of Data* Inria, UNS, Fabien Gandon, Ivan Herman;
>
> **Papa Fary Diallo**, *Co-Construction of Community Ontologies and Corpus in a Limited Technological Environ- ment.* Inria, UGB, Isabelle Mirbel, Olivier Corby, Moussa Lo;
>
> **Corentin Follenfant**, *Usage semantics of analytics and Business Intelligence tools*, UNS, SAP, Fabien Gandon, Olivier Corby, David Trastour;
>
> **Rakebul Hasan**, *Explanations for Social Semantic Web*, UNS, Fabien Gandon;
>
> **Maxime Lefrançois**, *Collaborative multilingual management of interlingual knowledge bases*, Inria, UNS, Fabien Gandon, Christian Boitet;
>
> **Nicolas Marie**, *Pervasive sociality through social objects*, Alcatel Lucent Bell Labs, Fabien Gandon, Myriam Ribière;
>
> **Oumy Seye**, *Rules for the Web of Data*, University Gaston Berger, Saint-Louis, Sénégal, Olivier Corby, Catherine Faron-Zucker, Moussa Lo;
>
> **Imen Tayari**, *Representation, Annotation and Detection of Emotions in Multimodal Signals* , Sfax, UNS, Nhan Le Thanh and Chokri Ben Amar;
>
> **Nguyen Thi Hoa Hue**, *Semantic Mappings with a Dataflow-based scientific worflow : an approach to develop dataflow applications using knowledge-based systems*, Vietnam, Nhan Le Thanh;

9.2.3. Juries

Fabien Gandon was jury member of

HdR:

Talel Abdessalem, *Complex data management: spatio-temporal data, XML and the Web*, Télécom ParisTech, January 4th, (Reviewer).

PhD Thesis:

Antoine Seilles, *Structuration de débats en ligne à l'aide d'Annotations socio-sémantiques. Vers une analyse de réseaux sociaux centrés sur l'interaction*, January 25th, LIRMM, (Reviewer).

Benoit Mathern, *Découverte interactive de connaissances à partir de traces d'activité : Synthèse d'automates pour l'analyse et la modélisation de l'activité de conduite automobile*, March 12th, LIRIS, (Reviewer).

David Rouquet, *Multilinguïsation d'ontologies dans le cadre de la recherche d'information translingue dans des collections d'images accompagnées de textes spontanés*, IMAG, April 6th, (Examiner).

Damien Leprovost, *Découverte et analyse des communautés implicites par une approche sémantique en ligne : l'outil WebTribe*, LE2I Université de Bourgogne, November 30th , (Examiner).

Milan Stankovic, *Web Social Sémantique: Applications dans l'innovation sur le Web*, December 7th, university Paris-Sorbonne (Reviewer).

Alice Hermann, *Création et mise à jour guidée d'objets dans une base de connaissances*, December 17th, IRISA INSA Rennes, (Examiner).

9.2.4. Invited Talks

Michel Buffa:

HTML5 for audio applications, invited talk for the "Le Web des fonctions" conference, organized by the "Centre de Création Musicale" GRAME, Lyon, France, June 27th.

Social Network Analysis and Semantic Web, invited talk at the Summer School about "Knowledge Dynamics, Industry Evolution, Economic Development", organized by GREDEG (UNS and CNRS), July 9-13th, Nice.

Elena Cabrio & Serena Villata

Natural Language Arguments: A Combined Approach, invited talk at the 12th International Workshop On Computational Models of Natural Argument (CMNA 12), co-located with ECAI 2012, Montpellier, France, August.

Natural Language Arguments: Results and Challenges, invited talk at University of Liverpool - Department of Computer Science, December 12th,

Olivier Corby:

Invited Speaker at RISE Workshop (Recherche d'Information Sémantique) held at EGC, Bordeaux, January 31st: *Un peu de (Web) sémantique pour la recherche d'information*.

Invited Speaker at Xerox Research Center, Grenoble, May 29th: *Corese Semantic Web Factory*.

Fabien Gandon:

Conference SIIE [27], *Semantic and Social Intraweb for Corporate Intelligence and Watch*. February 18th.

Séminaire D'Alembert [28], *Web sémantique et social : nouvelles pratiques de recherche et circulation des savoirs sur le Web 3.0*, March 14th.

SophiaConf [29], *DataLift: Un catalyseur pour le Web de données*, July 4th.

Ercim ABCDE, *Wimmics research presentation*, October 25th.

Journées de la Recherche IGN, *Web sémantique et Web social: deux étapes vers les données liées d'un Web ubiquitaire*, March 9th.

IST Seminar [30], *L'avenir du Web au prisme de la ressource*, September 30th-October 5th.

Alain Giboin:

The culture of sharing in social medias (networks): How do computer scientists and usage analysts reconcile their views to design user-adapted social medias? - Interdisciplinary seminar *Culture, numérique & culture numérique*, CERI, Avignon, April 5.

This seminar included another invited talk - *Le numérique et l'humain* - given by Claude Kirchner, Délégué général à la recherche et au transfert pour l'innovation (Inria).

9.3. Popularization

Fabien Gandon

ENS Lyon Visit, Wimmics researchs presentation, November 8th.

Inria Industrie Finance meeting [31], April 3rd.

Scientific mediation séminaire (SMS), January 23rd.

Textes et documents pour la classe (TDC 1042 "Internet"), *Web : tout est lié*.

Lycée Audiberti, Antibes, *Les quatre aveugles et l'éléphant Web*, May 10th.

Aniversary SAER, *Les labyrinthes du Web*, June 12th.

Michel Buffa & Maxime Lefrançois

Participation to *Fête de la science*, October 10th-14th.

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[27]http://siie2012.loria.fr
[28]http://www.centre-dalembert.u-psud.fr/#S4
[29]http://www.sophiaconf.fr
[30]http://www.inria.fr/ist2012
[31] http://www.inria.fr/centre/saclay/innovation/rii-finance/programme

<p align="center" style="color:red">ZENITH Project-Team</p>

9. Dissemination

9.1. Scientific Animation

Participation in the editorial board of scientific journals:

- VLDB Journal: P. Valduriez.
- Proceedings of the VLDB Endowment (PVLDB): E. Pacitti.
- Distributed and Parallel Databases, Kluwer Academic Publishers: P. Valduriez.
- Internet and Databases: Web Information Systems, Kluwer Academic Publishers: P. Valduriez.
- Journal of Information and Data Management, Brazilian Computer Society Special Interest Group on Databases: P. Valduriez.
- Book series "Data Centric Systems and Applications" (Springer-Verlag): P. Valduriez.
- Ingénierie des Systèmes d'Information, Hermès : P. Valduriez.

Participation in conference program committees :

- Int. Conf. on VLDB 2012: E. Pacitti
- Int. Conf. on Extending DataBase Technologies (EDBT): Z. Bellahsène, E. Pacitti, 2012, 2013
- Int. Conf. on Information and Knowledge Management (CIKM) 2012: E. Pacitti
- IEEE Int. Conf. on Data Engineering (ICDE) 2012: Z. Bellahsène
- Int. Conf. on Middleware 2012: E. Pacitti
- Journées Bases de Données Avancées (BDA), 2012: R. Akbarinia, Z. Bellahsène
- Int. Workshop on Open Data, 2012: P. Valduriez
- ACM Int. Conf. on Multimedia Retrieval 2012: Alexis Joly
- CLEF-labs 2012, 2013: Alexis Joly
- Int. Conf. on Multimedia Modeling 2013: Alexis Joly
- Int. Conf. on Cooperative Information systems (CoopIS): Z. Bellahsène, 2012
- Int. Conf. on Advanced Information Systems Engineering (CAiSE) : Z. Bellahsène, 2012, 2013
- European Semantic Web Conference (ESWC) 2012: Z. Bellahsène
- ACM Symposium On Applied Computing (ACM SAC, data stream track), 2012: F. Masseglia
- Int. Conf. on Advances in Databases, Knowledge, and Data Applications (DBKDA), 2012: F. Masseglia
- Conférence Internationale Francophone sur l'Extraction et la Gestion de Connaissance (EGC), 2012: F. Masseglia
- IEEE Int. Conf. on Data Mining (ICDM), 2012: F. Masseglia
- Int. Conf. on Artificial Intelligence in Medicine (LEMEDS@AIME), 2011: F. Masseglia
- Int. Workshop on Multimedia Data Mining (MDM@KDD), 2011: F. Masseglia
- Int. Pacific-Asia Conf. on Knowledge Discovery and Data Mining (PAKDD), 2012: F. Masseglia
- IEEE Int. Conf. on Advanced Information Networking and Applications (AINA) 2012: H. Bouziane
- Rencontres Francophones sur les Aspects Algorithmiques de Telecommunications (AlgoTel), 2012: H. Bouziane
- IEEE Int. Parallel and Distributed Processing Symposium (IPDPS) 2013: H. Bouziane

Other activities (national):

- The members of Zenith have always been strongly involved in organizing the French database research community, in the context of the I3 GDR and the BDA conference.
- Esther Pacitti organized a workshop on bigdata and life sciencce in the context of the Mastodons project in Montpellier (http://www.lirmm.fr/~pacitti/Mastodons.html).
- Patrick Valduriez gave a talk on "Open Data Integration with WebSmatch" at SophiaConf2012, organized by Telecom Valley in Sophia-Antipolis. He also chaired the ModSiCS2020 workshop on Data, Models and Theories for Complex Systems: new challenges and opportunities, organized by UM2 in march.

Other activities (international):

- Since 2011, Alexis Joly organizes a system-oriented evaluation initiative dedicated to plant's identification in the context of the CLEF evaluation forum http://clef2012.org/. This initiative is the first one dealing with the evaluation of content-based technologies in the context of ecological data. Finally, he chaired a panel on "Scientific Multimedia Data'" at the 10th international workshop on Content-Based Multimedia Indexing (CBMI2012). He also chaired a session on "Search in Large-Scale Multimedia Data" at the International Workshop on Search Computing (sponsored by the EU commission).
- Patrick Valduriez chaired a panel on "Big Data: Scientific and Societal Challenges" at the Berkeley Inria Stanford (BIS2012) workshop in June.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

> Licence : Enseignant, titre du cours, nombre d'heures en équivalent TD, niveau (L1, L2, L3), université, pays
>
> Master : Enseignant, titre du cours, nombre d'heures en équivalent TD, niveau (M1, M2), université, pays
>
> Doctorat : Enseignant, titre du cours, nombre d'heures en équivalent TD, université, pays

Most permanent members of Zenith teach at the Licence and Master degree levels at UM2.

Reza Akbarinia:

> Master Research: Data sharing in P2P, 9h, level M2, Faculty of Science, UM2
>
> Master : Distributed Data Management, 9h, level M1, Faculty of Science, UM2
>
> Licence Pro: JavaScript/jQuery, 10h, level L3, IUT, UM2
>
> Licence: Computer Tools, 36h, level L2, Faculty of Science, UM2

Zohra Bellahsène:

> IUT 1: Relational Databases , 100h, level L1, IUT, UM2
>
> IUT 2: Object-relational Databases, 60h, Level L2, IUT, UM2
>
> Master Computer Science : Data Integration, 15h, level M2, Faculty of Science, UM2

Hinde Bouziane:

> Licence: Networks, 36h, level L3, Faculty of Science, UM2
>
> Master DECOL: Networks and communication, 90h, level M1, Faculty of Science, UM2
>
> Master DECOL: Distributed Data Management, 6h, level M1, Faculty of Science, UM2
>
> Master IPS: Introduction to operating systems and networks, 36h, level M1, Faculty of Science, UM2
>
> Master Research DECOL: Data sharing in P2P, 15h, level M2, Faculty of Science, UM2

Esther Pacitti:

> IG3: Database design, physical organization, 54h, level L3, Polytech'Montpellier, UM2
>
> IG4: Networks, 42h, level M1, Polytech' Montpellier, UM2
>
> IG4: Object-relational databases, 32h, level M1, Polytech' Montpellier, UM2
>
> IG5: Distributed systems, virtualization, 27h, level M2, Polytech' Montpellier, UM2
>
> Master Research: Data sharing in P2P, 4,5h, level M2, Faculty of Science, UM2

Didier Parigot:

> Master Research: Data sharing in P2P, 9h, level M2, Faculty of Science, UM2

Patrick Valduriez:

> Master Research: Data sharing in P2P, 13h, level M2, Faculty of Science, UM2
>
> Professional: Distributed Information Systems, 55h, level M2, Capgemini Institut
>
> Professional: XML, 40h, level M2, Orsys Formation

9.2.2. *Supervision*

- PhD: Vincenzo Gulisano, StreamCloud: An Elastic Parallel-Distributed Stream Processing Engine, 20 dec. 2012, Univ. Madrid, Advisors: Ricardo Jiménez Peris, Patrick Valduriez

- PhD: Ayoub Ait-lahcen, Developing component-based applications with a data-centric approach and within a service-oriented P2P architecture: specification, analysis and middleware, 15 dec. 2012, Univ. Mohammed V Rabat and Univ. Nice, Advisors: Driss Aboutajdine and Didier Parigot

- PhD: Duy Hoa Ngo, A generic approach to ontology matching, 14 dec. 2012, UM2, Advisor: Zohra Bellahsène, co-advisor: Rémi Coletta

- PhD: Imen Mami, Une approche déclarative pour la modélisation et la résolution du problème de la sélection de vues à matérialiser, 15 nov. 2012, UM2, Advisor: Zohra Bellahsène, co-advisor: Rémi Coletta

- PhD: Toufik Sarni, Real-time support for software transactional memory in multicore systems, 16 oct. 2012, Univ. Nantes, Advisor: Patrick Valduriez, co-advisor: Audrey Queudet

- PhD in progress: Yoann Couillec, Langages de programmation et données ouvertes, started oct. 2012, Univ. Nice Sophia-Antipolis, Advisors: Manuel Serrano and Patrick Valduriez

- PhD in progress: Jonas Dias, Interactive Workflows for Data-Centric Experiments, started nov. 2011, Universidade Federal de Rio de Janerio, Brazil, Advisors: Marta Mattoso and Patrick Valduriez

- PhD in progress : Pierre Letessier, Frequent Visual Objects Discovery in Multimedia Collections, started nov. 2009, Telecom ParisTech, Advisor: Nozha Boujemaa, co-advisors: Olivier Buisson and Alexis Joly

- PhD in progress : Miguel Liroz, Massive Data Management for Scientific Applications, started oct. 2010, UM2, Advisors: Esther Pacitti and Patrick Valduriez, co-advisor: Reza Akbarinia

- PhD in progress : Saber Salah, Optimizing a Cloud for Data Mining Primitives, started nov. 2012, UM2, Advisors: Florent Masseglia, co-advisor: Reza Akbarinia

- PhD in progress : Maximilien Servajean, Decentralized and Personalized Recommendation Protocols for Content Sharing: application to phenotyping, started oct. 2011, UM2, Advisor: Esther Pacitti, co-advisor: Pascal Neveu

- PhD in progress : Naser Ayat, Uncertain Data Integration, started sept. 2010, University of Amsterdam, Netherlands, Advisors: Hamideh Afsarmanesh and Patrick Valduriez, co-advisor: Reza Akbarinia

9.2.3. *Juries*

Members of the team participated to the following Ph.D. committees: R. Akbarinia: Asma Souihli (TELECOM ParisTech); Z. Bellahsène: Imen Mami (UM2), Duy Hoa Ngo (UM2); F. Masseglia: Pierre-Nicolas Mougel (Univ. Lyon); E. Pacitti: Fady Draidi (UM2), Hien Truong (Univ. Nancy); D. Parigot: Ayoub Ait Lahcen (Univ. Rabat, Univ. Nice); P. Valduriez: Fady Draidi (UM2), Toufiq Sarni (Univ. Nantes), Vincenzo Gulisano (Univ. Madrid).

E. Pacitti participated to the PES (Prime d'Excellence Scientifique) committee of the CNU (Conseil National des Universités).

9.3. Popularization

ZENITH has animated Inria's boot during 3 days at WWW 2012 conference in Lyon through demos of Pl@ntNet tools http://www.inria.fr/actualite/actualites-inria/inria-a-www2012.

Several movies were realized in collaboration with INA in order to disseminate the results of the French ANR project OTMedia http://www.inria.fr/actualite/actualites-inria/inria-a-www2012. One of the movie was used as a visual support for an oral presentation of Alexis Joly at ACM Multimedia 2012 in the context of our participation to the Multimedia Grand Challenge http://www.acmmm12.org/.