RESEARCH CENTER
Bordeaux - Sud-Ouest

FIELD

Activity Report 2016

Section Dissemination

Edition: 2017-08-25

LFANT Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Selection

8.1.1.1. Member of the Conference Program Committees

A. Enge: 20th Workshop on Elliptic Curve Cryptography ECC 2016, İzmir

D. Robert was a member of the scientific committee for the Ecole Mathematique Africaine organised by Emmanuel Fouotsa at Bamenda.

F. Johansson organized the session: High-precision arithmetic, effective analysis and special functions. ICMS 2016, The 5th International Congress on Mathematical Software, ZIB Berlin.

8.1.2. Journal

8.1.2.1. Member of the Editorial Boards

K. Belabas acts on the editorial board of *Journal de Théorie des Nombres de Bordeaux* since 2005 and of *Archiv der Mathematik* since 2006.

H. Cohen is an editorial board member of *Journal de Théorie des Nombres de Bordeaux*; he is an editor for the Springer book series *Algorithms and Computations in Mathematics (ACM)*.

J.-M. Couveignes is a member of the editorial board of the *Publications mathématiques de Besançon* since 2010.

A. Enge is an editor of *Designs, Codes and Cryptography* since 2004.

8.1.2.2. Reviewer - Reviewing Activities

F. Johansson reviewed for IEEE Transactions on Circuits and Systems I, IEEE Transactions on Computers, and ACM Transactions on Mathematical Software.

8.1.3. Invited Talks

- A. Enge: Mathematical Structures for Cryptography, Leiden: Short addition sequences for theta functions
- F. Johansson: talk at RAIM 2016, Banyuls-sur-mer on "Fast reversion of formal power series" and at FastRelax meeting, LAAS-CNRS, Toulouse on "Hypergeometric functions in Arb".

8.1.4. Scientific Expertise

J.-M. Couveignes is a member of the scientific council of the labex "Fondation Sciences Mathématiques de Paris", FSMP, Paris.

J.-M. Couveignes is a member of the 'conseil d'orientation' of the labex "Institut de Recherche en Mathématiques, Interactions et Applications", IRMIA, Strasbourg.

8.1.5. Research Administration

A. Enge: Head of COST-GTRI, responsible for the scientific evaluation of all international cooperations of Inria

Since January 2015, K. Belabas is vice-head of the Math Institute (IMB). He also leads the computer science support service ("cellule informatique") of IMB and coordinates the participation of the institute in the regional computation cluster PlaFRIM.

He is an elected member of "commission de la recherche" in the academic senate of Bordeaux University.

He is a member of the "Conseil National des Université" (25th section, pure mathematics).

J.-P. Cerri is an elected member of the scientific council of the Mathematics Institute of Bordeaux (IMB) and responsible for the bachelor programme in mathematics and informatics.

Since January 2015, J.-M. Couveignes is the head of the Math Institute (IMB).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master : G. Castagnos, *Cryptanalyse*, 60h, M2, University of Bordeaux, France;

Master : G. Castagnos, *Cryptologie avancée*, 30h, M2, University of Bordeaux, France;

Master : G. Castagnos, *Courbes elliptiques*, 60h, M2, University of Bordeaux, France;

Master : D. Robert, *Courbes elliptiques*, 60h, M2, University of Bordeaux, France;

8.2.2. Supervision

Pinar Kiliçer: The class number one problem for genus-2 curves, Universities of Bordeaux and Leiden, supervised by A. Enge, M. Streng and P. Stevenhagen.

Iuliana Ciocanea-Teodorescu, Algorithms for finite rings, Universities of Bordeaux and Leiden, supervised by K. Belabas and H. Lenstra.

PhD in progress: Abdoulaye Maiga, *Computing canonical lift of genus 2 hyperelliptic curves*, University Dakar, supervised by Djiby Sow, Abdoul Aziz Ciss and D. Robert.

PhD in progress: Emmanouil Tzortzakis *Algorithms for $\mathbb{Q}$-curves*, supervised by K. Belabas and P. Bruin

PhD in progress: Pavel Solomatin *Topics on L-functions*, supervised by B. de Smit and K. Belabas

Liu Zhengying: Height of class polynomials. Ecole Polytechnique third year internship, supervised by D. Robert.

8.2.3. Juries

- PhD report by A. Enge on Loubna Ghammam: Utilisation des couplages en cryptographie asymétrique pour la micro-électronique, University of Rennes
- PhD report and jury by D. Robert on Alina Dudeanu: Computational Aspects of Jacobians of Hyperelliptic Curves, EPFL.
- D. Robert is a member of the jury of Agregations de Mathematiques. He is also the codirector with Alain Couvreur of the option "calcul formel" of the Modelisation part of the oral examination.

8.3. Popularization

D. Robert wrote with Sorina Ionica the chapter "Pairings" of the book Guide to Pairing-Based Cryptography [16] which will be published by CHAPMAN and HALL/CRC. This book aims to help Engineers understand and implement pairing based cryptography. In the Chapter Pairings D. Robert give a self contained definition and proof of the Weil and Tate pairing; including how to handle divisors with non disjoint support (this is often skipped in scientific papers but is important for practical implementations).

H. Cohen wrote a vulgarisation article [17] on Fermat's last theorem. This article explain (through the example of congruent numbers) the role of elliptic curves and algebraic number theory in the solution of Fermat's last theorem.

During the last PARIatelier four talks [19], [18], [20], [21] have been filmed and are available under a creative common licence. This will allow people from all the world to get started faster with PARI. The first two talks focus on setting up personal computers for the atelier and the new features of PARI. The next two are more technical and explain the new L-functions and modular forms features.

POSET Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- D. Janin, General Chair of ACM Workshop on Functional Art, Music, Modeling and Design (FARM), Nara (Japan), associated with ICFP,

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- D. Janin, PC Chair of Journées d'Informatique Musicale (JIM 2015), Albi (France),

10.1.2.2. Member of the Conference Program Committees

- M. Desainte-Catherine, PC member of Journées d'Informatique Musicale (JIM 2015), Albi (France),

10.1.2.3. Reviewer

Members of the project are yearly reviewers for a number of international conferences including LICS, ICALP, STACS, MFCS, FST&TCS, in theoretical computer science, and ICMC, SMC, NIME, FARM, TENOR, JIM in computer music.

10.1.3. Journal

10.1.3.1. Member of the editorial boards

- S. Salvati is editor of the Journal of Logic Language and Information (JoLLI); since the end of 2015, he has been promoted as Editor in Chief,
- M. Desainte-Catherine is editor of the Revue francophone d'informatique musicale (RFIM).

10.1.3.2. Reviewer - Reviewing activities

Members of the project are regular reviewers for a number of international journal including ACM Computers In Entertainment (CIE), Journal of New Music Research (JNMR), Journal of Logic Language and Information (JoLLI), Revue francophone d'informatique musicale (RFIM), Discrete Mathematics &Theoretical Computer Science (DMTCS), International Journal of Foundations of Computer Science (IJFCS), Information & Computation (I&C) ...

10.1.4. Leadership within the Scientific Community

- M. Desainte-Catherine is president of the Association Française d'Informatique Musicale (AFIM)
- S. Salvati is the secretary of the Foundation for Logic Language and Information (FoLLI).

10.1.5. Research Administration

- M. Desainte-Catherine, directrice adjointe du LaBRI,
- M. Desainte-Catherine, directrice scientifique et administrative du SCRIME,
- M. Desainte-Catherine, responsable du thème SI de l'équipe image et son du LaBRI,
- D. Janin, membre commission recherche Bordeaux INP/ENSEIRB-MATMECA.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence: Myriam Desainte-Catherine, *Programmation fonctionnelle*, 44 h, L3, Software Engineering department, Bordeaux INP, France,
Licence: Myriam Desainte-Catherine, *Projet d'algorithmique et de programmation*, 25 h, L3, Software Engineering department, Bordeaux INP, France,
Licence: Anne Dicky, *Algorithmique des graphes*, 30 h, L3, Computer Science Departement, Paris VI University, Vietnam,
Licence: Anne Dicky, *Probabilités et combinatoire*, 75 h, L3, Computer Science Departement, Bordeaux University, France,
Licence: Anne Dicky, *Algorithmique et structures de données*, 50h, L2, Computer Science Departement, Bordeaux University, France,
Licence: Anne Dicky, *Fondamentaux pour les mathématiques et l'informatique*, 35 h, L1, Computer Science Departement, Bordeaux University, France,
Master: Sylvain Salvati, *Logique*, 12h, M1, Computer Science Departement, Bordeaux University, France,
Licence: David Janin, *Projet d'algorithmique et de programmation*, 25 h, L3, Software Engineering department, Bordeaux INP, France,
Licence: Sylvain Salvati, *Analyse syntaxique et projet de programmation 3*, 37,5 h, niveau L3, Computer Science Departement, Bordeaux University, France,
Master: Myriam Desainte-Catherine, *Compilation*, 14 h, M1, Software Engineering department, Bordeaux INP, France,
Master: Myriam Desainte-Catherine, *Projet de Génie Logiciel*, 25 h, M1, Software Engineering department, Bordeaux INP, France,
Master: Myriam Desainte-Catherine, *Informatique musicale contrôle et composition*, 25 h, M2, Software Engineering department, Bordeaux INP, France,
Master: Anne Dicky, *Recherche operationelle*, 70 h, M1, Computer Science Departement, Bordeaux University, France,
Master: David Janin, *Projet de Génie Logiciel*, 25 h, M1, Software Engineering department, Bordeaux INP, France,
Master: David Janin, *Compilation*, 20 h, M1, Network and System Engineering department (RSI), Bordeaux INP, France,
Master: David Janin, *Tutorat*, 15 h, M1, M2, Network and System Engineering department (RSI), Bordeaux INP, France,
Doctorat: Sylvain Salvati, *Initiation à CoQ*, 12 h, Ecole Doctorale Mathématique et Informatique, Bordeaux University, France.

10.2.2. Supervision

PhD : Etienne Dubourg, "Contribution à la théorie des langages de tuiles", defended in July 2016, supervised by D. Janin
PhD in progress : Pauline Mouawad, "Analyse et modélisation de l'émotion musicale"', started in september 2012, supervised by M. Desainte-Catherine,
PhD in progress : Jean-Michaël Célérier, "Outils d'écriture spatiale pour les partitions interactives", started in january 2015, supervised by M. Desainte-Catherine,
PhD in progress : Simon Archipoff, "Modélisation et programmation tuilée réactive", started in september 2015, supervised by D. Janin,

10.2.3. Juries

- D. Janin, member of the PhD jury of Clément Poncelet, "Model-Based Testing Real-Time and Interactive Music Systems", Université Paris VI / IRCAM, November 2016,

10.3. Popularization

The development of the T-calculus has eventually led us to a piano & computer performance that is going to be performed on stage in February 2017 with the pianist Edwin Bugger, associate member of the PoSET project.

CAGIRE Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

Member [RM] of the steering committee of the Special Interest Group “Turbulence Modelling” (SIG-15) of ERCOFTAC (European Research COmmittee for Flow, Turbulence and Combustion) that organizes a series of international workshops dedicated to cross-comparisons of the results of turbulence models and experimental/DNS databases.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- *Intl Symp. Turbulence, Heat and Mass Transfer* [RM]
- *Intl. Symp. Engineering Turbulence Modelling and Measurement* [RM]

10.1.2.2. Reviewer

This year, the team members have reviewed (6) contributions to the following conferences:

- ASME-GT Turbo Expo 2016 (Séoul, South Korea) (2) [PB]
- 6th Int. Symp. Hybrid RANS-LES models, 2016 (Strasbourg, France) (2) [RM]
- 36th IAHR World Congress, 2016 (The Hague, the Netherlands) (2) [RM]

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- International Journal of Aerospace Engineering: co-guest editor of the special issue "The Use of Multiperforated Liners in Gas Turbine and Aeroengine Combustion Systems" [0] ...[PB]
- Advisory Board of *International Journal of Heat and Fluid Flow* [RM]
- Advisory Board of *Flow, Turbulence and Combustion* [RM]

10.1.3.2. Reviewer - Reviewing Activities

During 2016, the team members reviewed (22) papers for the following journals:

- Aerospace Science and Technology (1) [PB]
- AIAA Journal (2) [RM]
- Compte Rendus Mécanique (1) [PB]
- Computers and Fluids (3) [PB] [VP]
- Energy and Buildings (1) [PB]
- Experiments in Fluids (1) [RM]
- Flow, Turbulence and Combustion (3) [RM]
- International Journal of Heat and Fluid Flow (2) [RM]
- Journal of Aerospace Lab (1) [PB]
- Journal of Computational Physics (1) [VP]
- Journal of Fluid Mechanics (1) [RM]
- Journal of Petroleum Science and Engineering (1) [PB]
- Nuclear Engineering and Design (2) [RM]
- Parallel Computing (1) [VP]
- Physics of Fluids (1) [RM]

[0] https://www.hindawi.com/journals/ijae/osi/

10.1.4. Invited Talks

- Manceau, R., Progress in Hybrid Temporal LES (plenary lecture), Proc. 6th Symp. Hybrid RANS-LES Methods, Strasbourg, France, 2016

10.1.5. Research Administration

- Co-responsible for the organisation of the LMAP seminar [0] [JJ]
- Member of the LMAP council [PB]
- Member of the IPRA research federation council [RM]

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master : "Maths 2: Data analysis", 39h, M1 - Génie Pétrolier, Université de Pau et des Pays de l'Adour, Pau, France. [JJ]

Licence : "Stochastic simulations", 36h, L3 - MIASHS, Université de Pau et des Pays de l'Adour, Pau, France.[JJ]

Licence : "Linear regression and invariance analysis", 19h30, L3 - MIASHS, Université de Pau et des Pays de l'Adour, Pau, France.[JJ]

Master : "Finite volumes for hyperbolic systems and compressible fluid mechanics", 24h75, M2 - MMS, Université de Pau et des Pays de l'Adour, Pau, France. [VP]

Master : "Turbulence modelling" (in English), 27h30, M2 - International Master program Turbulence, Université de Poitiers/Ecole centrale de Lille, France. [RM]

Eng. 3 : "Industrial codes for CFD" (in English), 12h30, 3rd year of engineering school (M2), ENSMA, Poitiers, France. [RM]

Eng. 3 : "Advanced physics–Turbulence modelling for CFD", 16h, 3rd year of engineering school (M2), ENSGTI, France. [RM]

10.2.2. Supervision

PhD Jean-François Wald, Adaptive wall treatment for a second moment closure in the industrial context , Université de Pau et des Pays de l'Adour, France, defended 10 May 2016, Supervisor: [RM].

PhD in progress : Nurtoleu Shakhan, Modelling and simulation of supersonic jet in crossflow, University of Al Faraby (Almaty, Kazakhstan), started October 2013 (the thesis subject has been modified mid-2014)), Supervisor: A. Naïmanova and Co-Supervisor :[PB].

Young Engineer: Benjamin Lux, Implementation of h-p multigrid in Aerosol, Supervisor: [VP]

10.2.3. Juries

The participation in the following thesis juries is noted ("referee" in a French doctoral thesis jury is more or less equivalent to an external opponent in an Anglo-Saxon like PhD jury):

- PhD: F. Laurendeau, "Analyse expérimentale et modélisation numérique d'un actionneur plasma de type jet synthétique", University of Toulouse, France, 18 October 2016. Supervisors: G. Casalis and F. Chedevergne. [RM, referee]
- PhD: G. Arroyo-Callejo « Modélisation thermique avancée d'une paroi multi-perforée de chambre de combustion aéronautique avec dilution giratoire » University of Toulouse, France, 3 May 2016. Supervisor: P. Millan. [PB, referee]

[0] http://lma-umr5142.univ-pau.fr/live/seminaires

- PhD: M. Nini, “Analysis of a novel hybrid RANS/LES technique based on Reynolds stress tensor reconstruction”, Politecnico di Milano, Italy, 3 March 2016. Supervisors: Antonella Abba and Massimo Germano. [RM, referee]
- PhD: L. Labarrère “Étude théorique et numérique de la combustion à volume constant appliquée à la propulsion », University of Toulouse, France, 21 March 2016. Supervisor and co-supervisor: T. Poinsot et A. Dauptain. [PB]
- PhD: V. Popie « Modélisation asymptotique de la réponse acoustique de plaques perforées dans un cadre linéaire avec étude des effets visqueux », University of Toulouse, France, 14 January 2016. Supervisor and co-supervisor: S. Tordeux et E. Piot. [PB]

10.3. Popularization

- Unithé ou café, "Modelling and approximation in fluid mechanics", 21 June 2016, Inria BSO Center. [JJ]

CARDAMOM Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

H. Beaugendre: Numerical workshop for the STORM European project, Inria Bordeaux, France, November 2016

M. Colin: Congress JEF, dedicated to young researchers in PDE analysis and applications, Bordeaux, France, March 2016

M. Ricchiuto : International workshop B'WAVES 2016, Bergen, Norway, June 2016 (https://project.inria.fr/tsunamischool2016/)

M. Ricchiuto : TANDEM and Defis Littoral Tsunami School, Bordeaux, France, April 2016 (http://www.uib.no/en/bwaves2016)

M. Ricchiuto : Verification, Validation et Quantification des incertitudes en simulation numerique (VVUQ), Aristote seminar cycles, Ecole Polytechnique, France, November 2016 (http://www.association-aristote.fr/doku.php/association-aristote.fr_doku.php_simulation)

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

P.M. Congedo : NICFD 2016 Conference, Varenna, Italy, October 2016.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

Mathieu Colin is a member of the board of the journal Applications and Applied Mathematics: An International Journal (AAM)

Mario Ricchiuto is member of the editorial board of *Computers & Fluids (Elsevier)*, and of *GEM - International Journal on Geomathematics (Springer)*

A special issue of the European Journal of Mechanics / B Fluids will be dedicated to the 2 editions of the international workshop B'Waves on wave breaking, held in 2014 in Bordeaux (M. Colin and M. Ricchiuto as co-organizers), and in 2016 in Bergen (M. Ricchiuto as co-organizer). M. Colin and M. Ricchiuto will be guest editors of this issue

9.1.3.2. Reviewer - Reviewing Activities

We reviewed papers for top international journals in the main scientific themes of the team : journal of Computational Physics, Computer Methods in Applied Mechanics and Engineering, Optimization and Engineering, International Journal of Numerical Methods in Fluids, Physics of Fluids, Journal of Marine Science and Technology, Engineering Applications of Computational Fluid Mechanics, Computers and Fluids, International Journal of Modelling and Simulation in Engineering Aircraft Engineering and Aerospace Technology, International Journal of Computational Fluid Dynamics, Applications and applied mathematics : An international journal, Discrete and Continuous Dynamical Systems - Series A, Electronic Journal of Differential Equations, Calculus of Variations and Partial Differential Equations, Nonlinear Analysis: Modelling and Control, Advanced Nonlinear Studies, Communications on Pure and Applied Analysis, Communications in Computational Physics, Nonlinearity, Applications and Applied Mathematics: An International Journal, Journal of Differential Equations, Analysis and Mathematical Physics.

9.1.4. Invited Talks

- P.M. Congedo, Presentation at Journees Scientifiques Inria, June 2016, Rennes
- P.M. Congedo, "General introduction to Uncertainty Quantification", CNES, March 2016, Toulouse
- M. Kazolea, "Wave breaking in Boussinesq free sruface models", International Workshop B'Waves2016, Bergen (Norway)
- M. Ricchiuto, "Numerical issues in tsunami simulation: dispersion and diffusion ?scales?, what order of accuracy ?", TANDEM and Defis Littoral 2016 Tsunami school, Bordeaux

9.1.5. Leadership within the Scientific Community

P.M. Congedo has been appointed as the Co-Director of the Inria International Lab Inria-CWI.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Cécile Dobrzynski, Langages en Fortran 90, 54h, L3, ENSEIRB-MATMÉCA, FRANCE

Master : Héloïse Beaugendre, TP langage C++, 48h, M1, ENSEIRB-MATMÉCA, FRANCE

Master : Héloïse Beaugendre, Calcul Haute Performance (OpenMP-MPI), 40h, M1, ENSEIRB-MATMÉCA et Université de Bordeaux, France

Master : Héloïse Beaugendre, Initiation librairie MPI, 12h, M2, Ecole de Technologie Superieure, Université du Québec, Montréal, Canada

Master : Héloïse Beaugendre, Responsable de filière de 3ème année, 15h, M2, ENSEIRB-MATMÉCA, France

Master : Héloïse Beaugendre, Calcul parallèle (MPI), 78h, M2, ENSEIRB-MATMÉCA, France

Master : Héloïse Beaugendre, Encadrement de projets de la filière Calcul Haute Performance, 11h, M2, ENSEIRB-MATMÉCA, France

Master : Héloïse Beaugendre , Projet fin d'études, 4h, M2, ENSEIRB-MATMÉCA, FRANCE

Master : Mathieu Colin : Integration, M1, 54h, ENSEIRB-MATMÉCA, FRANCE

Master : Mathieu Colin : PDE, M2, 30h, ENSEIRB-MATMÉCA, FRANCE

Master : Mathieu Colin : Fortran 90, M1, 44h, ENSEIRB-MATMÉCA, FRANCE

Master : Mathieu Colin : PDE, M1, 28h, University of Bordeaux, FRANCE

Master : Mathieu Colin : Analysis, L1, 47h, ENSEIRB-MATMÉCA, FRANCE

Master: Luc Mieussens, Transport de particules : modèles, simulation, et applications, 24h, M2, ENSEIRB-MATMECA, France

Master : Luc Mieussens, Projet fin d'études, 4h, M2, ENSEIRB-MATMÉCA, FRANCE

Doctorat : P.M. Congedo, Uncertainty quantification, theory and application to algorithms, CFD and global change, Apr 2015, CERFACS, Toulouse, France, 4h.

Master : Mario Ricchiuto : Fluid Dynamics II, 20h, ENSEIRB-MATMÉCA, FRANCE

Master : Mario Ricchiuto, Encadrement de projets TER, 10h, ENSEIRB-MATMÉCA, FRANCE

9.2.2. Supervision

HdR : Héloise Beaugendre, Contributions à la simulation numérique des écoulements fluides : exemples en milieu poreux et en aéronautique , Bordeaux University, 18 March 2016.

PhD : Fusi Francesca, Stochastic robust optimization of a helicopter rotor airfoil, March 2016.

PhD : Bellec Stevan, Discrete asymptotic modelling of free surface flows, 5 October 2016.

PhD : Viville Quentin, Construction d'une méthode hp-adaptative pour les schémas aux Résidus Distribués, Bordeaux University, 22 November 2016.

PhD: Filippini Andrea, Nonlinear finite element Boussinesq modelling of non-hydrostatic free surface flows, 14 December 2016.

PhD: Nouveau Léo, Adaptative Residual Based Schemes for Solving the Penalized Navier-Stokes Equations with Moving Bodies - Application to Ice Shedding Trajectories, Bordeaux University, 16 December 2016.

PhD in progress : Arpaia Luca, Continuous mesh deformation and coupling with uncertainty quantification for coastal inundation problems, started in March 2014.

PhD in progress : Bosi, Umberto, ALE spectral element Boussinesq modelling of wave energy converters, started in November 2015

PhD in progress : Cortesi Andrea, Predictive numerical simulation for rebuilding freestream conditions in atmospheric entry flows, started in October 2014.

PhD in progress: Lin Xi, Asymptotic modelling of incompressible reactive flows in self-healing composites, started in October 2014.

PhD in progress: Perrot Gregory, Physico-chemical modelling of self-healing ceramic composites, started in October 2011.

PhD in progress : Peluchon Simon, Approximation numérique et modélisation de l'ablation différentielle de deux matériaux: application à l'ablation liquide. Started in December 2014. Advisor: Luc Mieussens. PhD hosted in CEA-CESTA.

PhD in progress: Aurore Fallourd, Modeling and Simulation of inflight de-icing systems, Started in October 2016.

PhD in progress: Guillaume Jeanmasson, Explicit methods with local time stepping for the simulation of unsteady turbulent flows. Started in October 2016. Advisor: Luc Mieussens. Hosted in ONERA Châtillon.

PhD in progress: Francois Sanson, Uncertainty propagation in a system of codes, started in February 2016.

PhD in progress: Nassim Razaaly, Robust optimization of ORC systems, started in February 2016.

9.2.3. Juries

P.M. Congedo : Rapporteur de thèse de Elio Bufi, ENSAM Paris Tech, December 2016.

CQFD Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Member of the Conference Program Committees

J. Anselmi has been a member of the TPC of the international conferences: VALUETOOLS-2016, ASMTA-2016 and ECQT-2016.

F. Dufour is a member of the organizing committee of the international SIAM conference on Control & its Application, SIAM CT17.

M. Chavent has been vice-president of the program committee of the 5èmes Rencontres R in Toulouse in 2016.

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

F. Dufour is associate editor of the journal: SIAM Journal of Control and Optimization since 2009.

J. Saracco is an associate editor of the journal Case Studies in Business, Industry and Government Statistics (CSBIGS) since 2006.

10.1.2.2. Reviewer - Reviewing Activities

All the members of CQFD are regular reviewers for several international journals and conferences in applied probability, statistics and operations research.

10.1.3. Invited Talks

F. Dufour gave the following invited talks:

- *Unconstrained and Constrained Optimal Control of Piecewise Deterministic Markov Processes*, Workshop on switching dynamics & verification, Institut Henri Poincaré, Paris, France, January 28-29, 2016.
- *Stability of piecewise deterministic Markov processes*, Department of Statistics, Oxford University, United Kingdom, October 11, 2016.
- *Numerical Approximations for*
  Average Cost Markov Decision Processes, Inria Team TAO Seminar, February 9, 2016.

P. del Moral gave the following invited lectures:

- *An introduction to Feynman-Kac integration and genealogical tree based particle models*, Thematic Cycle on Monte-Carlo techniques, Labex Louis Bachelier, Institut Henri Poincaré, January 15, 22, 29, and February 12, 2016.
- *Mean Field Particle Samplers In Statistical Learning and Rare Event Analysis*, CFM-Imperial Distinguished Lecture Series, Imperial College, United Kingdom, October 18, 25, and November 1, 8, 2016.

A. Genadot gave the following talks:

- *Moyennisation à la mode de T. G. Kurtz pour des processus déterministes par morceaux*, Université de Lorraine, Nancy, January 14, 2016.
- *Averaging for some simple constrained Markov process*, Journées MAS, université Grenoble-Alpes, August 29, 30 and 31, 2016.

J. Saracco gave the following talks:

- *Analyse de la variance : une vision de type modèlle linŕaire gaussien ou comment expliquer une variable quantitative par un ou plusieurs facteurs qualitatifs*, University of Monastir (Tunisia), April 2016
- *Un exemple de régression semiparamétrique : l'approche SIR (sliced inverse regression)*, University of Monastir (Tunisia), April 2016
- *La régression par quantile non-paramétrique et semi-paramétrique*, "Les jeudis de Santé Publique", Paris, November 2016

J. Saracco was an invited professor at University of Monastir (Tunisia) in november 2016 and gave a course on Multidimensional Statistics.

Marie Chavent gave the following invited lecture :

- *Multivariate analysis of mixed data: The PCAmixdata R package,*, CMStatistics, Seville, December 2016.

10.1.4. Research Administration

F. Dufour is member of the *Bureau du comité des projets*, Inria Bordeaux Sud-Ouest.

J. Saracco is deputy director of IMB (Institut de Mathématiques de Bordeaux, UMR CNRS 5251) since 2015.

M. Chavent is member of the national evaluation commitee of Inria.

M. Chavent is member of the council of the Institut de Mathématique de Bordeaux.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- Licence : J. Anselmi, Probabilités et statistiques, 13 heures, Institut Polytechnique de Bordeaux, école ENSEIRB-MATMECA, filiere telecom, France.
- Licence : J. Anselmi, Probabilités et statistiques, 13 heures, Institut Polytechnique de Bordeaux, école ENSEIRB-MATMECA, filiere electronique, France.
- Licence: M. Chavent, Analyse des données, 15 ETD, L3, Bordeaux university, France
- License: M. Chavent, Modélisation statistique, 15 ETD, niveau L3, Bordeaux university, France
- Master : M. Chavent, Apprentissage automatique, 50 ETD, niveau M2, Bordeaux university, France
- Licence : F. Dufour, Probabilités et statistiques, 16 heures, niveau L3, Institut Polytechnique de Bordeaux, école ENSEIRB-MATMECA, France.
- Master : F. Dufour, Méthodes numériques pour la fiabilité, 24 heures, niveau M1, Institut Polytechnique de Bordeaux, école ENSEIRB-MATMECA, France.
- Master : F. Dufour, Probabilités, 20 heures, niveau M1, Institut Polytechnique de Bordeaux, école ENSEIRB-MATMECA, France.
- P. Legrand, Algèbre (responsable de l'UE), Licence 1 SCIMS (108 heures)
- P. Legrand, Informatique pour les mathÃ©matiques (responsable de l'UE), Licence 1 et Licence 2 (36 heures)
- P. Legrand, Espaces Euclidiens. (responsable de l'UE), Licence 2 SCIMS (54 heures)
- P. Legrand, Formation Matlab pour le personnel CNRS (responsable de l'UE), (24 heures)
- Licence: J. Saracco, Probability and Descriptive statistics, 27h, L3, First year of ENSC - Bordeaux INP, France
- Licence: J. Saracco, Mathematical statistics, 20h, L3, First year of ENSC - Bordeaux INP, France

- Licence: J. Saracco, Data analysis (multidimensional statistics), 20h, L3, First year of ENSC - Bordeaux INP, France
- Master: J. Saracco, Statistical modeling, 27h, M1, Second year of ENSC - Bordeaux INP, France
- Master: J. Saracco, Applied probability and Statistics, 40h, M1, Second year of ENSCBP - Bordeaux INP, France
- Master: J. Saracco, Probability and Statistics, 12h, M2, Science Po Bordeaux, France
- A. Genadot, Probabilités de bases (18h), Licence MIASHS première année, Université de Bordeaux.
- A. Genadot, Statistiques de bases (18h), Licence MIASHS première année, Université de Bordeaux.
- A. Genadot, Probabilités (36h), Licence MIASHS deuxième année, Université de Bordeaux.
- A. Genadot, Processus (18h), Licence MIASHS troisième année, Université de Bordeaux.
- A. Genadot, Modélisation statistique (18h), Licence MIASHS troisième année, Université de Bordeaux.
- A. Genadot, Martingales (25h), Master MIMSE première année, Université de Bordeaux.
- A. Genadot, Probabilités (20h), Master MEEF première année, Université de Bordeaux.

10.2.2. Supervision

- PhD completed: Adrien Todeschini, Elaboration et validation d'un système de recommandation bayésien, supervised by F. Caron and M. Chavent.
- PhD completed: Christophe Nivot, Optimisation de la chaîne de montage du futur lanceur européen, May 2016, B. supervised by B. de Saporta and F. Dufour.
- PhD in progress : Alizé Geeraert, Contrôle optimal des processus Markoviens déterministes par morceaux et application à la maintenance, University of Bordeaux, supervised by B. de Saporta and F. Dufour (defense scheduled in June 2017).
- PhD in progress : Ines Jlassi, Contributions à la régression inverse par tranches et à l'estimation non para métrique des quantiles conditionnels, University of Monastir (Tunisia), September 2013, supervised by J. Saracco and L. Ben Abdelghani Bouraoui.
- PhD in progress : Hadrien Lorenzo, Analyses de données longitudinales de grandes dimensions appliquées aux essais vaccinaux contre le VIH et Ebola, University of Bordeaux, September 2016, supervised by J. Saracco and R. Thiebaut.

10.2.3. Juries

J. Saracco is vice president of the french statistical society (SFdS).

GEOSTAT Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

H. Yahia: organization of the conference *Signals & Physics* in October 2016, Inria Paris.

9.1.1.2. Member of the Organizing Committees

H. Yahia: organization of the conference *Signals & Physics* in October 2016, Inria Paris.

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

H. Yahia, N. Brodu and K. Daoudi are members of the advisory board committee of the IEEE *11th International Conference on Industrial and Information Systems* (ICIIS 2016), 3-4 December 2016, IIT Roorkee, India, http://www.iciis2016.org/commitee.html.

9.1.2.2. Member of the Conference Program Committees

N. Brodu is co-organizing an EGU session (European Geophysical Union) and has presented 2 papers in the session.

9.1.2.3. Reviewer

H. Yahia and N. Brodu have reviewed papers for the ICIIS 2016 conference.

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

- G. Attuel is a member of the editorial board of CMSIM journal (from CHAOS Conference), sections plama and biophysics.
- H. Yahia: Frontiers in Fractal Physiology.

9.1.3.2. Reviewer - Reviewing Activities

- N. Brodu: PRL (physical review letters), PRE, Remote Sensing.
- K. Doudi: reviewer for IEEE Transactions on Audio, Speech and Language Processing.
- H. Badri: ICIP Conference.

9.1.4. Invited Talks

- H. Badri is invited to give on oral presentation at the conference RFIA 2016 for the reception of his AFRIF 2015 Best PhD award. Title of the presentation: *Sparse and Scale-invariant methods in image processing*.
- H. Yahia was an invited keynote speaker at the 11th International Conference on Industrial and Information Systems (ICIIS 2016), 3-4 December 2016, IIT Roorkee, India. Title: *Non-convex sparsity. Applications in Image processing*.
- N. Brodu was an invited keynote speaker on the subject of super-resolution at the 11th International Conference on Industrial and Information Systems (ICIIS 2016), 3-4 December 2016, IIT Roorkee, India. Title: *Super-resolving multiresolution images with band-independent geometry of multispectral pixels* .

9.1.5. Leadership within the Scientific Community

- N. Brodu has given a presentation at the RISC-E school held at Rennes in October 2016. The presentation corresponds to 2 master UE.
- N. Brodu has given a presentation in february 2016 at the LaBRI/IMS/IMB lab: *Super-resolution of multispectral images* (part 1) and *Stochastic image analysis* (part 2).

9.1.6. Scientific Expertise

- H. Yahia and K. Daoudi have proposed scientific expertise for the I2S company, with an industrial collaboration prepared and submitted for 2017.
- H. Yahia and N. Brodu have proposed scientific expertise for the LECTRA company.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Doctorat: H. Yahia, *Advancement in Signal Processing, Application to Earth Observation*, 30 hours, IIT Roorkee, GIAN courses, India.

Master : K. Daoudi, *financial mathematics*, 20 hours, Master2 MIAGE, University of Lorraine.

Master: N. Brodu, *Analyse de données massives par apprentissage automatique*, 2 days, EDMI Bordeaux.

Licence : A. El Aouni, *Programmation web (PHP, javascript, CSS)*, 24 hours, L3, Rabat University, Morroco.

9.2.2. Juries

- H. Yahia: member of the HDR jury of S. Jacquir (Bourgogne University, Laboratoire LE2I UMR CNRS 6306).
- N. Brodu: 1st year PhD jury.

9.3. Popularization

N. Brodu has given a presentation at Inria's *Unithé ou café* : (April 1st): Title: « Des images satellites aux messages sur les sites »

MEMPHIS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Selection

10.1.1.1. Reviewer

Charles-Henri Bruneau has reviewed several papers for the 9th International Conference on Computational Fluid Dynamics, july 10th-15th, Istanbul.

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

Angelo Iollo is in the advisory board of Acta Mechanica.

10.1.2.2. Reviewer - Reviewing Activities

Journal of Computational Physics, International Journal of CFD, Journal of Non-linear Analysis B, ASME Journal of Computational and Nonlinear Dynamics, Journal of Fluid Mechanics, Acta Mechanica, AIAA Journal, International Journal Numerical Methods in Fluids, Computers & Fluids, Journal of Engineering Mathematics, European Journal of Mechanics / B Fluids, Journal Européen de Systèmes Automatisés, Applied Mathematics and Computation. Nuclear Science and Engineering, Computer Methods in Applied Mechanics and Engineering, Journal of Theoretical Biology, Computational Optimization and Applications. Applied science, Meccanica.

10.1.3. Invited Talks

The invited talks are [15], [16], [17], [18].

10.1.4. Leadership within the Scientific Community

Angelo Iollo is responsible of the scientific policy of the scientific computing departement of the LabEx CPU. This department gathers 60 researchers of the math lab IMB, of the computer science lab LaBRI, of the mechanics lab I2M and of the CEA.

10.1.5. Scientific Expertise

Michel Bergmann: reviewer of the PhD defense *Apprentissage d'estimateurs sans modèle avec peu de mesures - Application à la mécanique des fluides* de Kévin Kasper, Ecole normale supérieure de Cachan, 12/10/2016.

Michel Bergmann: member of the Inria Young Researchers Commission, which allocates PhD and Postdoc grants.

Lisl Weynans has participated to the *Comités de sélection* Cnam and Paris 5 Descarte, may 2016.

Angelo Iollo: Président du jury d'HDR de Heloise Beaugendre, Institut de Mathématiques de Bordeaux, université de Bordeaux, mars 2016.

Angelo Iollo: Membre Jury HDR de Laurent Cordier, Institut P', université de Poitiers, novembre 2016.

Angelo Iollo: Membre du Jury de thèse de Loic Lacouture « Modélisation et simulations de mouvement de structures fines » département de mathématiques, juin 2016, Université Paris Sud.

Angelo Iollo: Président du jury de thèse de Olivier Gallinato, « Modélisation du processus cancéreux et méthodes superconvergentes de résolution de problèmes d'interface sur maillage cartésien », Institut de Mathématiques de Bordeaux, université de Bordeaux, novembre 2016.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Four members of the team are Professors or Assistant Professors at Bordeaux University and have a teaching duty, which consists in courses and practical exercises in numerical analysis and scientific computing. Michel Bergmann (CR) also teaches around 64 hours per year (practical exercises in programmation for scientific computing).

10.2.2. Supervision

PhD in progress : Alice Raeli, Numerical Modelling for Phase Changing Materials, 12/06/2014, Azaiez M., Bergmann M., Iollo A.

PhD in progress : Claire Morel, Modélisation aérodynamique 3D d'une turbine éolienne, 01/01/2015, M., Bergmann M., Iollo A.

PhD in progress : Federico Tesser, Identification of dense suspensions rheology, 01/11/2014, Bergmann M., Iollo A.

PhD in progress : Baptiste Lambert, modélisation et simulations numériques des contacts dans des écoulements chargés en particules, 01/10/2015, Bergmann M., Weynans L.,

PhD in progress : Emanuela Abbate, Méthodes numériques pour problèmes stiff en mécanique des fluides et élasticité, 01/11/2015, Iollo, A.

PhD in progress : Mathias Braun, Modèles réduits et problèmes inverses pour l'étude de la résilience des réseaux d'eau potable, 01/10/2015, Iollo A. and Mortazavi I.

PhD in progress : Meriem Jedoua, Introduction d'une méthode efficace de capture d'interface permettant la localisation d'un grand nombre d'objets immergés dans un fluide. Applications à des solides rigides et des vésicules (membranes élastiques) immergés dans un fluide incompressible, 01/10/2013, Bruneau C.-H. and Maitre E.

2012-2016. Dr. Hervé Ung. Ancien ENSEIRB-MATMECA. Problèmes inverses dans les réseaux d'eau potable. Angelo Iollo, Iraj Mortazavi, Bourse Irstea.

10.2.3. Juries

Michel Bergmann has been reviewer of the PhD defense *Apprentissage d'estimateurs sans modèle avec peu de mesures - Application à la mécanique des fluides* de Kévin Kasper, Ecole normale supérieure de Cachan, 12/10/2016.

Lisl Weynans has participated to the PhD defense of Andrea Filippini, Inria Bordeaux, 14/12/2016.

Angelo Iollo: Président du jury d'HDR de Heloise Beaugendre, Institut de Mathématiques de Bordeaux, université de Bordeaux, mars 2016.

Angelo Iollo: Membre Jury HDR de Laurent Cordier, Institut P', université de Poitiers, novembre 2016.

Angelo Iollo: Membre du Jury de thèse de Loic Lacouture « Modélisation et simulations de mouvement de structures fines » département de mathématiques, juin 2016, Université Paris Sud.

Angelo Iollo: Président du jury de thèse de Olivier Gallinato, « Modélisation du processus cancéreux et méthodes super-convergentes de résolution de problèmes d'interface sur maillage cartésien », Institut de Mathématiques de Bordeaux, université de Bordeaux, novembre 2016,

10.3. Popularization

Lisl Weynans has co-organized the Journée "Filles et Maths, une équation lumineuse": may 11t 2016

Lisl Weynans has co-organized Journée Emploi Maths de l'Unité de Formation "Mathématiques et Interaction"

REALOPT Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- Pierre Pesneau has organized the workshop "Polyhedral Approaches for Combinatorial Optimization", December 8-9 2016, Paris
- Arnaud Pêcher has organized the workshop "Bordeaux Graph Workshop", Novembre 7-10 2016, Bordeaux.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Lionel Eyraud-Dubois is Chair of the "Cloud Computing and Data Center Management" track of I-SPAN 2017: the 14th International Symposium on Pervasive Systems, Algorithms, and Networks
- Olivier Beaumont is Co-Chair of the Algorithms track of ICPP 2016: 2016 International Conference on Parallel Processing

10.1.2.2. Member of the Conference Program Committees

The team members are members of the following program committees:

- François Clautiaux: ROADEF 2016: French Operational Research Society Conference.
- Lionel Eyraud-Dubois: ICPP 2016: 2016 International Conference on Parallel Processing
- Lionel Eyraud-Dubois and Olivier Beaumont: HiPC 2016: 23rd IEEE International Conference on High Performance Computing, Data, and Analytics
- Olivier Beaumont: IPDPS 2016, 30th IEEE International Parallel & Distributed Processing Symposium
- Olivier Beaumont: Euro-EDUPAR 2016, Parallel and Distributed Computing Education for Undergraduate Students, a EuroPar workshop
- Olivier Beaumont: HeteroPar 2016: Algorithms, Models, and Tools for Parallel Computing on Heterogeneous Platforms, a EuroPar Workshop

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Olivier Beaumont is editor for IEEE Transactions on Parallel and Distributed Systems (TPDS)
- François Vanderbeck is Associate Editor for the EURO Journal on Computational Optimization
- François Clautiaux is Associate Editor for Mathematical Programming and Exact Methods in the journal ISTE "Recherche Opérationnelle"

10.1.3.2. Reviewer - Reviewing Activities

The team members are regular referees for the best journals of the field.

10.1.4. Invited Talks

Arnaud Pêcher: *On sets avoiding distance 1*, 2016 International Conference on Graph Theory, Jinhua, Chine, 2016

10.1.5. Scientific Expertise

- Olivier Beaumont is a member of the INCITE (math-comp track) panel
- Olivier Beaumont is an expert for the H2020-FET-OPEN-2016 projects

10.1.6. Research Administration

- Olivier Beaumont is the scientific deputy of Inria Bordeaux Sud-Ouest and a member of the Evaluation Committee of Inria.
- François Vanderbeck is taking care of the team OptimAl ("Optimisation Mathématique Modèle Aléatoire et Statistique") at the Mathematics Institute of Bordeaux.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence : A. Pêcher, Programmation Impérative, 10h, DUT, Université de Bordeaux, France

Licence : A. Pêcher, Conception Objet, 42h, DUT, Université de Bordeaux, France

Licence : A. Pêcher, Programmation objet en Java, 44h, DUT, Université de Bordeaux, France

Licence : A. Pêcher, Algorithmique Avancée, 32h, DUT, Université de Bordeaux, France

Licence : A. Pêcher, Assembleur, 24h, DUT, Université de Bordeaux, France

Licence : A. Pêcher, Programmation Mobile, 24h, DUT, Université de Bordeaux, France

Master : F. Clautiaux, Gestion des Opérations et Planification de la Production, 20h, M2, Université de Bordeaux, France

Master : F. Clautiaux, Flot et Combinatoire, 10h, M2, Institut Polytechniques de Bordeaux, France

Master : F. Clautiaux, Introduction à la Programmation en Variables Entières, 20h, M1, Université de Bordeaux, France

Master : F. Clautiaux, Projet d'optimisation pour l'insertion professionnelle, M2, Université de Bordeaux, France

Master : L. Eyraud-Dubois, Optimisation en Cloud Computing et Big Data, 15h, M2, Université de Bordeaux, France

Master : L. Eyraud-Dubois, Algorithmique et Programmation, 30h, M1, Université de Bordeaux, France

Master : L. Eyraud-Dubois, Introduction à la Programmation en Variables Entières, 15h, M1, Université de Bordeaux, France

Licence : P. Pesneau, Modèles et Méthodes d'Optimisation, 30h, L2, Université de Bordeaux, France

Licence : P. Pesneau, Système et programmation en Fortran 90, 24h, L2, Université de Bordeaux, France

Licence : P. Pesneau, Recherche Opérationnelle, 24h, DUT, Université de Bordeaux, France

Master : P. Pesneau, Algorithmique et Programmation 1, 60h, M1, Université de Bordeaux, France

Master : P. Pesneau, Algorithmique et Programmation 2, 30h, M1, Université de Bordeaux, France

Master : P. Pesneau, Programmation linéaire, 15h, M1, Université de Bordeaux, France

Master : P. Pesneau, Optimisation dans les graphes (partie flots), 15h, M1, Université de Bordeaux, France

Master : O. Beaumont, Approximation et Big Data, 15h, M2, Université de Bordeaux, France

Master : O. Beaumont, Distributed Computing and Data Mining, 4h, M2, Institut National Polytechnique de Bordeaux, France

Master : B. Detienne, Optimisation continue, 29h, M1, Université de Bordeaux, France

Master : B. Detienne, Recherche Opérationnelle, 16h, M1, Institut National Polytechnique de Bordeaux, France

Master : B. Detienne, Introduction à la Programmation en Variables Entières, 14h, M1, Université de Bordeaux, France

Master : B. Detienne, Gestion des Opérations et Planification de la Production, 28h, M2, Université de Bordeaux, France

Master : B. Detienne, Optimisation dans l'incertain, 58h, M2, Université de Bordeaux, France

Master : B. Detienne, Problèmes combinatoires et routage, 14h, M1, Université de Bordeaux, France

Master : I. Tahiri, Outils et Logiciels pour l'Optimisation, 30h, M1, Université de Bordeaux, France

Master : F. Vanderbeck, Recherche Opérationnelle, 15h, M1, Institut National Polytechnique de Bordeaux, France

Master : F. Vanderbeck, Programmation Entière, 58h, M2, Université de Bordeaux, France

10.2.2. Supervision

PhD in progress : Jérémy Guillot, Optimisation de problèmes de partionnement, September 2014, François Clautiaux (dir) and Pierre Pesneau (dir).

PhD in progress : Quentin Viaud, Méthodes de programmation mathématiques pour des problèmes complexes de découpe, January 2015, François Clautiaux (dir), Ruslan Sadykov (dir), and François Vanderbeck (co-dir)).

PhD in progress : Martin Bué, Gestion du revenu dans le cadre du voyage professionnel, September 2012, François Clautiaux (dir), Luce Brotcorne (dir).

PhD in progress : Rodolphe Griset, Robust planning in Electricity production, November 2015, Boris Detienne (dir) and François Vanderbeck (dir).

PhD in progress : Imen Ben Mohamed, Location routing problems, October 2015, Walid Klibi (dir) and François Vanderbeck (dir).

PhD in progress : Thomas Bellitto, Infinite graphs, September 2015, Arnaud Pêcher (dir) and Christine Bachoc (dir).

PhD in progress : Philippe Moustrou, Codes, September 2014, Arnaud Pêcher (dir) and Christine Bachoc (dir).

PhD in progress : Thomas Lambert, September 2014, Placement de tâches et réplication de fichiers sur plates-formes parallèles, Olivier Beaumont (dir) and Lionel Eyraud-Dubois (co-dir)

PhD in progress : Suraj Kumar, December 2013, Scheduling of Dense Linear Algebra Kernels on Heterogeneous Resources, Olivier Beaumont (dir) and Lionel Eyraud-Dubois (co-dir)

10.2.3. Juries

- François Clautiaux: Evaluation (rapporteur) of the PhD thesis of Charly Lersteau (University Bretagne Sud)
- Ruslan Sadykov: Evaluation (examinateur) of the PhD thesis of Rian Gabriel Santos Pinheiro (University Federal Fluminense, Niteroi, Brazil), March 1st, 2016.

10.3. Popularization

François Clautiaux is a member of the board of AMIES, the French Agency for Interaction in Mathematics with Business and Society. AMIES is a national organization that aims to develop relations between academic research teams in mathematics and business, especially SMEs.

CARMEN Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- 6th international conference on "Computational Surgery," Bordeaux, May 2016 (Y. Coudière).
- The annual workshop of IHU Liryc, Bordeaux, October 2016 (Y. Coudière).

N. Zemzemi organized a mini-symposium intitled "Imaging and inverse modeling" in PICOF 2016, from 01/06/2016 to 03/06/2016. Autrans, France.

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

- 6th international conference on "Computational Surgery," Bordeaux, May 2016 (Y. Coudière).
- CARI 2016 (N. Zemzemi)

9.1.3. Journal

9.1.3.1. Member of the Editorial Boards

M. Potse: associate editor of Frontiers in Cardiac Electrophysiology.

9.1.3.2. Reviewer - Reviewing activities

M. Potse: Heart Rhythm, IEEE Transactions on Biomedical Engineering, Medical & Biological Engineering & Computing, Journal of Electrocardiology.

Y. Coudière: Journal of computational and applied mathematics, PLOS ONE, SMAI Journal of Computational Mathematics

N. Zemzemi: Inverse Problems, Europace, Inverse Problems in Science and Engineering

9.1.4. Invited Talks

M. Bendahmane: Université Qadi Ayyad, IST d'Essaouira (Morocco), April 2016

M. Bendahmane: University of Oslo (Norway), October 2016.

Y. Coudière: University of Ottawa (Canada), February 2016.

N. Zemzemi gave a course in the CIMPA research school: "Modelling and simulating the electrical activity of the heart Direct and Inverse problems". From 04/10 to 10/10 2016. Tunis, Tunisia.

N. Zemzemi: Course on the electrophysiology modelling: Forward and Inverse problems.Ecole doctorale de mathématique. Faculté des sciences de Tunis. From 10/01/2016 to 15/01/2016. Tunis, Tunisia.

M. Potse gave an invited presentation titled "Visualization of 3D Lead Fields" at the 43rd International Congress on Electrocardiology.

9.1.5. Leadership within the Scientific Community

M. Potse is council member of the International Society of Electrocardiology.

9.1.6. Scientific Expertise

Y. Coudière:

- ATER committee for Université de Bordeaux
- Reviewer PhD Thesis of P.-L. Colin, Université Lille 1, 27/06/2016
- Reviewer HDR Thesis of M. Sermesant, Université de Nice Sophia-Antipolis, 09/06/2016
- SNF (Swiss National Science foundation)

9.1.7. Research Administration

Y. Coudière:

- Scientific responsability of the IMB (CNRS UMR 5251) team "Calcul Scientifique et Modélisation," 60 persons.
- Responsible for the scientific communication (*Chargé de mission à l'animation scientifique*) of the IMB

N. Zemzemi: Administration of the Inria associated team Epicard (section 8.4.1.1).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

DUT : P. E. Bécue, Introduction to modelling and Principal Component Analysis, 43 hours, level N/A, IUT Orsay, France

DUT : P. E. Bécue, Object Oriented Programming with java, 9 hours, level N/A, IUT Orsay, France

9.2.2. Supervision

PhD : A. Davidović, "Multiscale Mathematical Modeling of Structural Heterogeneities in Cardiac Electrophysiology," Université de Bordeaux, 9 December 2016, supervised by Y. Coudière.

PhD in progress: P. E. Bécue, "Modélisation et simulation numérique de l'électrophysiologie cardiaque à l'échelle microscopique," started 1 October 2014, supervised by F. Caro, M. Potse, and Y. Coudière.

PhD in progress: C. Douanla Lontsi, "Schémas d'ordre élevé pour des simulations réalistes en électrophysiologie cardiaque," started 1 November 2014, supervised by Y. Coudière.

PhD in progress: A. Gérard, "Modèles numériques personnalisés de la fibrillation auriculaire," started 1 September 2015, supervised by Y. Coudière.

9.2.3. Juries

M. Bendahmane was a jury member (*rapporteur*) for the PhD thesis of Jamila Lassoued (*Université de Tunis*).

9.3. Popularization

The Carmen team has responded to a call of Cap'Maths in 2014 on dissemination and popularization of mathematics destined for young pupils, the general public, and (future) mathematical professionals. For this project, G. Ravon and Y. Coudière developed a *serious game* called Heart Attack. The game is destined for middle and high school students as an introduction to mathematical modeling. The principal goal of the game is to illustrate the notion of numerical modeling in medical research, and in particular in cardiac rhythmology. The player takes the role of a scientist having developed a numerical model for the electrical activity of the heart and tries to learn how to prevent an arrhythmia. A secondary goal is to teach about the electrical activation mechanism of the heart.

Integrating scientific simulations in an interactive website is challenging because of the constraints imposed by a web-based framework. As a result of this project we have learned a great deal about such developement and about the collaboration with professional web developers.

MAGIQUE-3D Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

- Hélène Barucq organized the Fourth Workshop of Strategic Action DIP in Houston, October 10-11, 2016, http://dip.inria.fr/workshops/fourth-workshop-of-the-strategic-action-dip/ and JOSO 2016 (Wave days in South-West) in Pau, March 9-11 https://team.inria.fr/magique3d/conference-and-workshops/joso-2016-wave-days-in-south-west/

9.1.1.2. Member of the Conference Program Committees

Victor Péron was member of the Program Committee of the Conference JOSO 2016 (Wave days in South-West) in Pau, March 9-11 https://team.inria.fr/magique3d/conference-and-workshops/joso-2016-wave-days-in-south-west/

9.1.2. Journal

9.1.2.1. Reviewer - Reviewing Activities

Members of Magique 3D have been reviewers for the following journals:

- Annales de l'Institut Henri Poincare / Analyse non linéaire
- Applied Mathematics and Computation
- ESAIM : Mathematical Modelling and Numerical Analysis
- Geophysical Journal International
- IMA Journal of Numerical Analysis
- International Journal for Numerical Methods in Engineering
- Journal of Computational Physics
- Journal of Scientific Computing
- Journal of Sound and Vibration
- Journal of the Acoustical Society of America
- Siam Journal on Scientific Computing
- Zeitschrift fuer Angewandte Mathematik und Physik

9.1.3. Scientific Expertise

- Julien Diaz was expert for the evaluation of Millennium Science Initiative project for the government of Chile.

9.1.4. Research Administration

- Hélène Barucq has been the chairwoman of the local jury of Inria competitive selection for Young Graduate Scientists (CR2) in Bordeaux. She participated to the selection committee for an Assistant Professor position at the University of Nantes and Paris 13. She was also part of the hiring commity for a Professor position at the University of Rennes 1. She is member of the local bureau of Inria Bordeaux Sud-Ouest focusing on scientific questions arising from research teams and of the Center Committee dealing with general questions related to the whole Research Center. She is the scientific head of the project DIP since its creation in 2009.

- Juliette Chabassier is member of the Workgroup for sustainable development at Inria Bordeaux Sud-Ouest.
- Julien Diaz is elected member of the Inria Technical Committee and of the Inria Administrative ans Scientific Boards. He is appointed member of the CDT (Commission de Développement Technologique)
- Mamadou N'Diaye is member of the Center Committee of Inria Bordeaux Sud-Ouest.
- Victor Péron is appointed member of the CJC (Commission Jeunes Chercheurs) of Inria Bordeaux Sud-Ouest.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Izar Azpiroz, Fonctions et intégrales, 19.5 heures, MATH L1, UPPA, France

Master : Julien Diaz, Transformées, 24h Eq. TD, M1, EISTIA, France

Master : Marc Duruflé, Calcul scientifique en C++, 96h Eq. TD, M1, Bordeaux INP, France

Licence : Marc Duruflé, Equations Différentielles, 20h Eq. TD, L3, Bordeaux INP, France

Licence : Marc Duruflé, Calcul scientifique en Fortran 90, 20h Eq. TD, L3, Bordeaux INP, France

Licence : Marc Duruflé, Algorithmique numérique, 30h Eq. TD, L3, Bordeaux INP, France

Licence : Mamadou N'Diaye, Compléments d'algèbre, 19,5h Eq. TD, L1, UPPA, France

Licence : Mamadou N'Diaye, Fonction de la variable réelle, 19,5h Eq. TD, L1, UPPA, France

Licence : Mamadou N'Diaye, Développements limités - suites et séries, 19,5h Eq. TD, L2, UPPA, France

Licence : Mamadou N'Diaye, Analyse 3A et Analyse 3B, 19,5h Eq. TD, L2, UPPA, France

Master : Victor Péron, Analyse des EDP, 9 Eq. TD, M1, EISTI, France

Master : Victor Péron, Analyse numérique fondamentale, 70 Eq. TD, M1, UPPA, France

Master : Victor Péron, Analyse, 23 Eq. TD, M1, UPPA, France

Master : Victor Péron et Sébastien Tordeux, Analyse Numérique 1: différences finies, 87 eq. TD, Master1, UPPA, FRANCE

Master : Victor Péron et Sébastien Tordeux, Introduction aux phénomènes de propagation d'ondes, 38 eq. TD, Master 2, UPPA, FRANCE

Licence : Sébastien Tordeux, Statistique descriptive, 55 eq. TD, L1, UPPA, FRANCE

Licence : Sébastien Tordeux, Analyse complexe , 20 eq. TD, niveau (M1, M2), L3, UPPA, France

9.2.2. Supervision

HDR : Julien Diaz, Modelling and advanced simulation of wave propagation phenomena in 3D geophysical media, Université de Pau et des Pays de l'Adour, April 7th, 2016 [9].

PhD : Aralar Erdozain, Fast inversion of 3D Borehole Resistivity Measurements using Model Reduction Techniques based on 1D Semi-Analytical Solutions, Université de Pau et des Pays de l'Adour, December 15th 2016, Hélène Barucq, David Pardo (BCAM) and Victor Péron. [10].

PhD : Vincent Popie, Modélisation asymptotique de la réponse acoustique de plaques perforées dans un cadre linéaire avec étude des effets visqueux, ISAE, January 14th 2016 , Estelle Piot (ONERA) and Sébastien Tordeux. [11].

PhD in progress : Izar Azpiroz Iragorri, Approximation des problèmes d'Helmholtz couplés sur maillages virtuels , October 2014, Hélène Barucq, Julien Diaz and Rabia Djellouli (CSUN).

PhD in progress : Vincent Darrigrand, Etude d'erreur pour des problèmes d'Helmholtz approchés par des techniques de Petrov-Galerkin , October 2013, Hélène Barucq and David Pardo.

PhD in progress : Aurélien Citrain, Déformation 3D de maillages en imagerie sismique, Méthodes d'inversion sismique dans le domaine fréquentiel , October 2016, Hélène Barucq and Christian Gout.
PhD in progress : Florian Faucher, Méthodes d'inversion sismique dans le domaine fréquentiel , October 2014, Hélène Barucq.
PhD in progress : Hamza Alaoui Hafidi, Imagerie ultrasonore tridimensionnelle dans les milieux hétérogènes complexes, October 2015, Encadrement : Marc Deschamps, Michel Castaings, Eric Ducasse, Samuel Rodriguez (I2M), Hélène Barucq, Marc Duruflé, Juliette Chabassier (Magique 3D).
PhD in progress : Justine Labat, Diffraction d'une onde par des petits obstacles dans des milieux complexes, October 2016, Victor Péron and Sébastien Tordeux.
PhD in progress : Mamadou N'Diaye, Analyse et développement de schémas temporels hybrides pour les équations hyperboliques du premier ordre, January 2015, Hélène Barucq and Marc Duruflé.
PhD in progress : Chengyi Shen, Approches expérimentale et numérique de la propagation d'ondes sismiques dans les roches carbonatées, October 2016, Julien Diaz and Daniel Brito (LFC).
PhD in progress : Elvira Shishenina, Approximations hybrides par éléments finis et éléments virtuels discontinus pour l'élasto-acoustique, October 2015, Hélène Barucq and Julien Diaz.
Master thesis : Aurélien Citrain, 2D hybrid meshes for a DG code, Insa de Rouen, Sept. 2016.
Master thesis : Alain Ha, High order time discretization for dissipative wave equations, Université de Rennes, Sept. 2016.
Master thesis : Justine Labat, Diffraction of an electromagnetic wave by small obstacles, Université de Pau et des Pays de l'Adour, Sept. 2016.
Master 1 internship : Baptiste Olivier, Modeling wave propagation in musical instruments, MatMeca, Sept. 2016.

9.2.3. Juries

- Hélène Barucq : Julien Diaz (Université de Pau et des Pays de l'Adour) " Modelling and advanced simulation of wave propagation phenomena in 3D geophysical media", HDR, April 7th 2016
- Hélène Barucq : Vincent Deymier (ONERA Toulouse) "Etude d'une méthode d'éléments finis d'ordre élevé et de son hybridation avec d'autres méthodes numériques pour la simulation électromagnétique instationnaire dans un contexte industriel", PhD thesis, December 8th 2016
- Hélène Barucq : Asma Toumi (Université Paul Sabatier Toulouse III) "Méthodes numériques asynchrone pour la modélisation de phénomènes multi-échelles", PhD thesis, September 21th 2016
- Hélène Barucq : Romain Brossier (Université de Grenoble) "Contributions to developments and applications of Full Waveform Modeling and Inversion", HDR, November 18th 2016
- Julien Diaz : Azba Riaz (Université de Cergy Pontoise) "A new discontinuous Galerkin formulation for time dependent Maxwell's equations: a priori and a posteriori error estimation", PhD thesis, April 4th 2016
- Julien Diaz : Valentin Vinoles (Université de Paris Saclay) " Problèmes d'interface en présence de métamatériaux : modélisation, analyse et simulations", PhD thesis, September 8th 2016
- Julien Diaz (reviewer): Asma Toumi (Université Paul Sabatier Toulouse III) "Méthodes numériques asynchrone pour la modélisation de phénomènes multi-échelles", PhD thesis, September 21th 2016

9.3. Popularization

- Juliette Chabassier took part in a round table around science professions in the high school of Valence d'Agen in March 2016.
- Juliette Chabassier shared her experience as a scientist during "Printemps de la Mixité" in May 2016.
- Juliette Chabassier participated in scientific "speed datings" during the "Filles et Maths" day in May 2016.
- Juliette Chabassier was co-responsible for a workshop around "Women in science" during Inria "Fête de la science" in October 2016.

MNEMOSYNE Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

X. Hinaut : Co-organiser of the 2nd Automn Day of the Working Group (GT8) "Robotique et Neurosciences" of Groupe de Recherche (GDR) Robotique (CNRS), at LaBRI, 17th November 2016.

10.1.1.2. Member of the Organizing Committees

Projections, Interactions, Emotions - Journées PsyPhINe, 2016 (http://poincare.univ-lorraine.fr/fr/manifestations/psyphine-2016, N. Rougier)

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

F. Alexandre: SAB 2016

10.1.2.2. Reviewer

F. Alexandre reviewer for AMINA 2016; X. Hinaut for CogSci 2016.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Frédéric Alexandre: Review Editor for Frontiers in Neurorobotics;
- Nicolas Rougier: Editor in chief for ReScience, review editor for Frontiers in Neurorobotics.

10.1.3.2. Reviewer - Reviewing Activities

- F. Alexandre: Frontiers in Human Neuroscience; npj Science of Learning; European Journal of Neuroscience; PLoS ONE;
- A. Garenne: Journal of Integrative Neuroscience
- X. Hinaut: PLoS ONE, Neural Networks, Intellectica, Frontiers in Neurorobotics, ReScience, Cognitive Computation.

10.1.4. Invited Talks

F. Alexandre: invited talk at the conference: “Modeling: success and limitations” (http://www.cnrs.fr/insmi/spip.php?article1876), Dec 6th and interview for the journal of the CNRS (https://lejournal.cnrs.fr/articles/modeliser-plus-pour-simuler-moins).

X. Hinaut: “Reservoir Computing for Robot Language Acquisition”, at IROS Workshop on Machine Learning Methods for High-Level Cognitive Capabilities in Robotics. Daejon, South Korea, October 2016 [9].

N. Rougier:

- Open Science, AdaWeek, November 2016, Paris
- ReScience, "La loi numérique, et après ?", November 2016, Meudon
- "One actor, two critics", Robotiques et Neurosciences, November 2016, Bordeaux
- "Advanced Scientific Programming in Python", July 2016, Austin, USA.
- "Computational Neuroscience", International School of Bioelectromagnetics, Erice, April 2016, Italy.

10.1.5. Leadership within the Scientific Community

X. Hinaut:

- member of the Administration Committee of Fresco association (French Federation of students in Cognitive Science)
- member of "open citizen labs" : MindLaBdx (Bordeaux), IA*lab and CogLab (La Paillasse, Paris).

10.1.6. Scientific Expertise

F. Alexandre is the french expert for Mathematics and Computer Science of the PHC (Hubert Curien Program) Utique for scientific cooperation between France and Tunisia.

10.1.7. Research Administration

- F. Alexandre is member of the Inria Evaluation Committee; Deputy Scientific Delegate and Vice-head of the Project Committee of Inria Bordeaux Sud-Ouest; Corresponding scientist for Bordeaux Sud-Ouest of the Inria COERLE ethical committee; Member of the national Inria committee for international chairs; Member of the local Inria committee for young researchers hiring; Member of the steering committee of the regional Cluster on Information Technology and Health; of the regional Cluster on Robotics; Expert of the ITMO 'Neurosciences, Sciences Cognitive, Neurologie, Psychiatrie'
- N. Rougier is vice-head of the Mnemosyne team-project; elected member of the Inria Evaluation Committee; Responsible of the local Inria committee for invited professors; Member of the steering committee for the BioComp CNRS consortium; Editor in chief and co-founder of ReScience.
- Thierry Viéville is in charge, at the Inria national level till October 2016, of the institute science outreach actions and depends on the Direction Générale Déléguée à la Science for this part of his work. He is, for Inria, in charge of the http://classcode.fr project.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Advanced scientific python summer school, University of Reading, September 2016 (N. Rougier).

F. Alexandre: Teaching at the IBRO Advanced School in Neuroscience "Basal Ganglia, Parkinson's disease And Related Disorders", May 9-21, 2016, Faculty of Sciences, Rabat (Morocco)

Many courses are given in french universities and schools of engineers at different levels (LMD) by most team members, in computer science, in applied mathematics, in neuroscience and in cognitive science.

Thierry Viéville is since 2009 in charge of formations of high-school teachers in popular computer science.

10.2.2. Juries

We participate to many juries each year.

10.3. Popularization

For a multi-disciplinary team as Mnemosyne, science popularization is not only a nice and useful contribution to the dissemination of scientific knowledge but also a necessity since we work with colleagues from bio-sciences with whom sharing profound ideas in computer science is mandatory for a real collaboration.

- Thierry Viéville is for 80% of his time involved in popularization actions.
- Frédéric Alexandre: Article in the journal La Tribune in January 2016 about robots and emotions; Article in tribute to Marvin Minsky (Blog Binaire http://binaire.blog.lemonde.fr/2016/01/29/lintelligence-artificielle-debraillee/; Bulletin of the French Society of Computer Science http://www.societe-informatique-de-france.fr/bulletin/1024-numero-8/); Article about learning in the magazine of the University of Bordeaux (http://www.u-bordeaux.fr/Universite/U-magazine)

- Xavier Hinaut: “Apprentissage de la grammaire par un cerveau positronique”. CogTalk organised by the association Ascoergo, Bordeaux, March 2016.
- Nicolas Rougier: "Le Grand Remue-Méninges", Octobrer 2016, Bordeaux; "Les neurosciences au coeur des innovations", May 2016, Lyon; Interview for the "Verge of Discovery" March 2016; Intervention for the "Artificial Intelligence forum", Bordeaux.
- For all the team: participation to the “Fête de la Science” in an exhibition in the Scientific Museum Cap Sciences: http://www.bordeaux-neurocampus.fr/fr/divers/toutes-les-communications/com-2016/fete-de-la-science.html

MONC Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

Thierry Colin was in the organizing committee of the *6th International Conference in Computational Surgery and Dual Training* in Bordeaux. The whole team (particularly A. Collin and C. Poignard) was involved in the organization of this event.

9.1.2. Journal

9.1.2.1. Reviewer - Reviewing Activities

- S. Benzekry - biomathematical modeling journals: Journal of Theoretical Biology, Mathematical Biosciences, Bulletin of Mathematical Biology, Theoretical Biology and Medical Modeling, Mathematical Biosciences and Engineering, Journal of Biological Informatics, Journal of Biological Systems, ESAIM:Proc, Mathematics and Computers in Simulation; and medical/biological journals about cancer: Clinical Pharmacokinetics, BMC Cancer
- A. Collin - Computer Methods in Applied Mechanics and Engineering.
- T. Colin - Too much to list...
- C. Poignard - SIAM Journal on Mathematical Analysis, IEEE Trans on Mag, J. Math. Biology, J. Theoretical Biology
- O. Saut - IEEE Trans. Med. Imaging, PLOS Computational Biology, PLOS One, Medical Image Analysis, Nature Comm.

9.1.3. Invited Talks

- Sébastien Benzekry:
  - Integrated Mathematical Oncology Department, Moffitt Cancer Center, Tampa, Florida, USA.
  - Department of Genetics, Roswell Park Cancer Institute, Buffalo, NY, USA.
  - Mathematics Department Colloquium, Ryerson University, Toronto, Canada.
  - Metronomics @ Mumbai, Mumbai, India.
- Thierry Colin:
  - Second French-Korean congress, July 2016, Bordeaux.
  - Treatment optimization for glioblastomas, Ocotber 2016, Cuenca, Spain.
  - Keio University Hospital, Japan,
  - Tokyo University of Science, Japan,
  - Osaka University, Japan.
- Olivier Saut: ALGORITMY 2016, Conference on Scientific Computing, Podbanske, Slovakia (http://www.math.sk/alg2016).

9.1.4. Leadership within the Scientific Community

- O. Saut is the head of the CNRS GDR 3471 Metice (http://metice.math.cnrs.fr).

9.1.5. Scientific Expertise

- S. Benzekry was a reviewer for research projects of the CETIC (Centre d'Excellence Africain en Technologies de l'Information et de la Communication) and for the Erwin Schroedinger-Fellowship of the Austrian Science Fund (FWF).
- O. Saut is an expert for the French Ministry of Research (for various programs including PHC and EGIDE programs).
- O. Saut was a reviewer for Research Career Development Fellowship program of Dublin City University.
- O. Saut is a reviewer for project proposals in IGSSE (International Graduate School of Science and Engineering), Technical University of Munich.

9.1.6. Research Administration

- C. Poignard is elected member of the Inria evaluation committee.
- O. Saut is a member of the Steering Committee of Labex TRAIL (http://trail.labex.u-bordeaux.fr).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: S. Benzekry, Equations différentielles ordinaires, 20h, ENSEIRB-Matmeca, France.

Master: T. Colin, Last year of Engineering school Enseirb-Matmeca: multiphysics modelling

Licence: T. Colin, First Year of the Engineering school of chemestry of Bordeaux, specilization in structures and composite material: basic mathematics.

Licence and Master: A. Collin did a full service as MdC at the Engineering school ENSEIRB-Matmeca.

Licence: Clair Poignard, Engineering school ENSCPB. L3 undergraduate course on numerical analysis (50h).

Licence: Clair Poignard, Engineering school ENSEIRB-Matmeca: undergraduate lecture on numerical analysis (18h).

Master : Olivier Saut, Outils Numériques pour la Mécanique, 20h, M1, ENSEIRB-Matmeca, France.

9.2.2. Supervision

- PhD : P. Berment, Mathematical modelling evaluating radiotherapy outcome for colorectal tumor with Pet Scan, Univ. Bordeaux, July 2016, Thierry Colin and Olivier Saut.
- PhD : E. Baratchart, Quantitative study of the dynamics and spatial aspects of metastatic development using mathematical models, Univ. Bordeaux, February 2016, S. Benzekry, Th. Colin and O. Saut.
- PhD in progress : M. Deville, Modeling of electroporation and gene transfection across tissue. Theoretical and numerical aspects., Sep 2014, C. Poignard and R. Natalini (IAC, CNR Roma).
- PhD : O. Gallinato, Invasive process modeling of the tumor metastatic cells, Univ. Bordeaux, C. Poignard and T. Suzuki (Osaka University). (PhD defended November 22, 2016)
- PhD in progress : T. Kritter, Primary tumors modelling with a view to the gliomas and adenocarcinomas study, Sep 2015, C. Poignard and O. Saut
- PhD : T. Michel, Analysis of mathematical growth tumor models, Univ. Bordeaux, C. Poignard and Th. Colin. (PhD defended November 18, 2016)
- PhD in progress : A. Perreti, Anti-angiogenic traitements modeling using medical imaging, Oct 2014, Th. Colin and O. Saut.
- PhD in progress : S. Corridore, 2016-2019, A. Collin and C. Poignard.
- PhD in progress : C. Perier, 2016-2019, B. Denis de Senneville and O. Saut.

- PhD in progress: C. Nicolò, Mathematical modeling of systemic aspects of cancer and cancer therapy, Oct 2016, S. Benzekry and O. Saut.

9.2.3. Juries

- O. Saut was a reviewer of the PhD of Matthieu Lê "Modélisation de la croissance de tumeurs cérébrales, application à la radiothérapie", Univ. Nice, Inria Sophia Antipolis, July 2016.

9.3. Popularization

- Popularization article in a special edition of the journal "Tangente" devoted to mathematics in medicine. (S. Benzekry).
- S. Benzekry was interviewed by the journal "Sciences et Avenir".
- A. Collin is an active member of "Femmes et Sciences" and gave several talks in this context (Printemps de la Mixité, talks in high schools...).
- O. Saut is a regular speaker at Entretien de l'Excellence (http://www.lesentretiens.org).
- O. Saut was a speaker at the "Forum des Métiers" in Collège Montaigne, Lormont.

PLEIADE Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Journal

9.1.1.1. Member of the Editorial Boards

Alain Franc is member of the editorial board of BMC Evolutionary Biology.

9.1.1.2. Reviewer - Reviewing Activities

Alain Franc has been reviewing in 2016 manuscripts for BMC Evultionary Biology, Nature reports, Methods in Ecology and Evolution, Research in Microbiology, Molecular Ecology.

9.2. Teaching - Supervision - Juries

9.2.1. Juries

A. Franc has been supervisor of PhD Thesis of François Keck, UMR Carrtel, Thonon, Grenoble University, with Agnès Bouchez and Frédéric Rimet as co-supervisors. The PhD has been defended on April, 26, 2016. Reference: https://www.theses.fr/196768691. The topic is the use of phylogenetic signal for improving the assessment of water quality from inventories of diatoms. Three papers have been published by François Keck [7], [8], [9].

A. Franc has been

- member of the committee of the PhD of Cyril Noël at IPREM, University of Pau and Pays de l'Adour (PhD advisor: Cristiana Cravo-Laureau)
- reviewer of the HdR of Jean-Daniel Bontemps on large scale forest growth models, University of Nancy
- reviewer of the HdR of Benoit de Thoisy, University of Cayenne, on "from Pleistocene to likely to the dawn of the sixth extinction crisis: the tormented history of Amazonian mammals".
- member of the jury for PhD defense of Arielle Salmier, University of Cayenne, on the response of chiroptera to changing environment: viral diversity and adaptation, at Cayenne on December, 13, 2016.

D. Sherman was president of the jury for Claire Capdevieille in the Unversity of Bordeaux on Novembre 3, 2016.

D. Sherman was president of a first-year jury for the Mathematics and Computer Science Doctoral School at the University of Bordeaux.

9.2.2. Internships

Rémi Pellerin of the ENS Lyon was an intern in PLEIADE during June–July 2016, and contributed to Declic, a software package written in Python by A. Franc that provides several tools for data analysis, in the domains of multivariate data analysis, machine learning, and graph based methods. It permits users to study in depth the accuracy of the dictionary between molecular based and morphological based taxonomy.

Adrien Lopez of the Collège Henri Brisson in Talence spent a week in PLEIADE for his "stage du troisième".

9.3. Popularization

David Sherman participated in popularization activities based on Thymio-II mobile robots for education, coordinated by the Mobsya association and EPFL (Switzerland). He helped organize a team in the R2T2 event (http://r2t2.org) on November 2, 2016. He contributed code to the Aseba project for piloting Thymio-IIs from the Scratch programming language, and with Thibault Lainé of Inria Bordeaux Sud-Ouest helped improve a photo-realistic simulator for multiple robots.

SISTM Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

Daniel Commenges organised a SFB (Société Française de Biometrie) in Montpellier (3 Juin 2016),

Daniel Commenges Co-organised the "Journées GDR-SFB" in Lyon (27-28 Juin)

Robin Genuer Co-organised a reading group called Smiling in Bordeaux (http://www.math.u-bordeaux.fr/~machaven/smiling)

Rodolphe Thiébaut organized the scientific program of the Bordeaux Modelling Workshop (1 et 2 Juin 2016)

Rodolphe Thiébaut organised a 10 hours seminar on "Bayesian filters and particule methods" at Inria Bordeaux (Nov. and Dec. 2016)

10.1.2. General Chair, Scientific Chair

Rodolphe Thiébaut is a member of the scientific committee of the Muraz Center (Bobo-Dioulasso, Burkina Faso), since 2016

Rodolphe Thiébaut is a member of the Scientific Advisory Board de l'Institut Pierre Louis d'Epidémiologie et de Santé Publique (UPMC, Dir : Dominique Costagliola), since 2015

Daniel Commenges is a member of the scientific committee of de "Journée de la SFdS (Société Francaise de Statistiques)" (Montpellier, 30 Mai-3 Juin)

10.1.3. Member of the Organizing Committees

All the team members helped in the ground organisation of the Bordeaux Modelling Workshop

10.1.4. Member of the Journal Editorial Boards

Lifetime Data Analysis (Daniel Commenges)

Statistics Surveys (Daniel Commenges)

Journal de la Société Francaise de Statistique (Daniel Commenges)

Daniel Commenges DC Principales revues de Statistique (Biometrics, JASA, JRSS, Stat Med, LIDA,...)

10.1.5. Reviewer - Reviewing Activities

AIDS (Rodolphe Thiébaut)

Annals of Applied Statistics (Boris Hejblum)

BioData Mining (Boris Hejblum)

Biometrics (Daniel Commenges, Mélanie Prague)

International Journal of Biostatistics (Robin Genuer)

International Journal of Epidemiology (Daniel Commenges)

Journal of Applied Statistics (Marta Avalos)

Journal of the Royal Statistical Society: Interaction (Mélanie Prague)

Machine Learning (Robin Genuer)

Neural Information Processing Systems (Robin Genuer)

Pattern Recognition Letters (Robin Genuer)

Statistics and Computing (Robin Genuer)

Statistical Methods and Applications (Marta Avalos)

Statistics in Medicine (Daniel Commenges, Rodolphe Thiébaut, Mélanie Prague)

Statistics Surveys (Daniel Commenges)

10.1.6. Invited Talks

Daniel Commenges gave 3 invited talks in Vienne (19 Mai), Vigo (26 Ocotbre) and Berlin (25 Novembre).

Laura Richert gave 2 invited talks in Webinar about "big data in epidemiology" (20 juin) and in Paris for the Colloquium "One Health" about "Signature transcriptomique post-vaccinale chez l'Homme" (3 Novembre).

Rodolphe Thiébaut gave 3 invited talks

Mélanie Prague gave 2 invited talks one in Nancy (20 fev.) and one un Summer Sim (26 july).

10.1.7. Leadership within the Scientific Community

Daniel Commenges is the president of the SFB (Société Française de Biométrie) which is the French satellite for the IBS (International Biometrics society).

10.1.8. Research Administration

Daniel Commenges is the director of the Biostat-Info axis in the Inserm BPH (Bordeaux Public Health) institute.

Rodolphe Thiébaut is a member of the department of life science in University of Bordeaux

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

In class teaching

Master : Marta Avalos teaches in the two years of the Master of Public Health at ISPED, Univ. Bordeaux, France.

Master : Robin Genuer, teaches in the two years of the Master of Public Health (M1 Santé publique, M2 Biostatistique, M2 Informatique médicale, M2 Santé internationale, M2 épidémiologie).

Master : Boris Hejblum, teaches in the two years of the Master of Public Health (M1 Santé publique, M2 Biostatistique, M2 Informatique médicale, M2 Santé internationale, M2 épidémiologie).

Master : Robin Genuer, MSS du collège ST, intervention dans le cours de Statistique en grande dimension.

Master : Rodolphe Thiébaut, teaches in the two years of the Master of Public Health, and he is head of the Epidemiology specialty of the second year of the Master of Public Health.

Master : Laura Richert teaches in the two years of the Master of Public Health at ISPED, Univ. Bordeaux, France (M2 Biostatistiques).

Master : Laura Richert teaches in the Master of Vaccinology at UPEC (University Paris-Est-Créteil), France.

Master : Chloe Pasin is a teaching assistant for the two years of the Master of Public Health at ISPED, Univ. Bordeaux, France.

Master : Laura Villain is a teaching assistant for the two years of the Master of Public Health at ISPED, Univ. Bordeaux, France

Bachelor : Laura Richert teaches in PACES and DFASM1-3 for Medical degree at Univ. Bordeaux, France

Summer School: All the SISTM team member teach in the ISPED Summer school.

E-learning

Marta Avalos is head of the first year of the e-learning program of the Master of Public Health, and teaches in it.

Mélanie Prague teaches in the Diplôme universitaire "Méthodes statistiques de régression en épidémiologie".

Laura Richert teaches in the Diplôme universitaire "Recherche Clinique".

Rodolphe Thiébaut is head of the Epidemiology specialty of the second year of the e-learning program of the Master of Public Health, and teaches in it.

Robin Genuer and Perrine Soret participate to the IdEx Bordeaux University "Défi numérique" project "BeginR" (http://beginr.moutault.net/).

10.2.2. Supervision

PhD in progress : Wenjia Wang "Modèle de Rasch" (CIFRE, co-direction avec Mickael Guedj Pharnext), from Oct 2015, directed by Daniel Commenges.

PhD in progress : Laura Villain "Modélisation de l'effet du traitement par injection IL7" (CIFRE, co-direction avec Rodolphe Thiébaut), from Oct 2015, directed by Daniel Commenges.

PhD in progress : Perrine Soret, *Modélisation de données longitudinales en grande dimension*, from Oct 2014, directed by Marta Avalos.

PhD in progress : Mélanie Née *Recherche et caractérisation de profils attentionnels : mieux comprendre la place de l'attention dans la survenue des accidents de la vie courante*, from Oct 2015, co-directed by Emmanuel Lagarde (60%), Cédric Galera (20%), Marta Avalos (20%)

PhD in progress : Chloé Pasin, *Modelling the immune response to HIV vaccine*, from Sep 2015, co-directed by Rodolphe Thiébaut and Francois Dufour

PhD in progress : Edouard Lhomme, *Analyse des déterminants de la réponse immunitaire post-vaccination dans des stratégies vaccinales expérimentales*, from Oct 2016, directed by Laura Richert.

PhD in progress : Hadrien Lorenzo, *Analyses de données longitudinales de grandes dimensions appliquées aux essais vaccinaux contre le VIH et Ebola*, from Oct 2016, co-directed by Rodolphe Thiébaut and Jérôme Saracco.

Master internship : Hao Ren "Contribution au développement d'un outil statistique d'aide à la décision en sport de haut niveau", directed by Marta Avalos and Perrine Soret (01/03/2016-12/08/2016)

Master internship : Madelyn Rojas "Practices for the provision of prior information in Bayesian Logistic Regression: Application in MAVIE project", directed by Marta Avalos and David Conesa (11/07/2016-09/09/2016)

Master internship : Thomas Blondel "Application of Bayesian linear models to sports science data", directed by David Conesa and Marta Avalos (05/04/2016 - 04/06/2016)

Master internship : Julie Havas "Application of Bayesian Logistic Regression to the mavie study of home and leaisure injury", directed by David Conesa and Marta Avalos (05/04/2016 - 04/06/2016)

Master internship : Thomas Esnaud "Etude de la méthode de clustering par forêts aléatoires, applications à la reconnaissance automatique de populations cellulaires.", directed by Robin Genuer (14/03/2016 - 31/08/2016)

Master internship : Lise Mandigny "Revue systématique et Méta-analyse des essais cliniques publiés de développement de vaccins contre le virus Ebola", directed by Rodolphe Thiébaut (1/04/2016 - 31/09/2016)

Master internship : Stella Huang "Modélisation de l'infection à pseudomonas aeruginosa dans les services de réanimation ? étude DYNAPYO", directed by Rodolphe Thiébaut (11/02/2016 - 15/08/2016)

Master project : B Dufoyer, A Chevalier, H Aassif, A Labchri, projet de programmation du Master 1 Informatique, Univ Bordeaux. Titre : " Développement d'un outil de prévention des accidents de la vie courante à partir de méthodes de machine learning : site web et bases de données ", directed by Marta Avalos and L Orriols, M Travanca, L Divert, INSERM U1219. (11/01/2016-12/04/2016)

Master project : N Craeye, C Elassaoui, F Elouazi, B Faltrept, projet de programmation du Master 1 Informatique, Univ Bordeaux. Titre : " Développement d'un outil de mesure de l'attention via internet ", directed by Marta Avalos and M Née, L Divert, E Lagarde, INSERM U1219. (11/01/2016-12/04/2016)

10.2.3. Juries

Daniel Commenges was involved in two PhD defences as president of the jury: Leila Azarang (Vigo), Anais Rouanet (Bordeaux).

Robin Genuer was in charge of the reports of the PhD of Havelund Welling, entitled "Characterization of absorption enhancers for orally administered therapeutic peptides in tablet formulations", defended on 30/09/2016 in Department of Applied Mathematics and Computer Science, Technical University of Denmark, Kongens Lyngby

Mélanie Prague is a member of the follow-up dissertation comity of Sébastien Benzkcry's PhD student (Inria Bor- deaux Sud-ouest, MONC team). Nicolo Chiara is working on "Mathematical modeling of systemic aspects of cancer and cancer therapy".

Rodolphe Thiébaut took part in the HDR committee of Vivian Viallon (2016) and Francesco Salvo (2016)

Robin Genuer took part in the recruitment commission MCF CNU 26 (Toulouse 2016)

Rodolphe Thiébaut took part in the recruitment commissions PU CNU 26 (Paris Descartes 2016), MCF CNU 26 (Bordeaux 2016), MCF CNU 85 (Bordeaux 2016).

10.3. Popularization

Marta Avalos, Marius Kwémou and Perrine Soret animated "Mais qui est le coupable ? (Ou comment les maths contribuent à conduire une enquête épidémiologique)" for high school students through the "Fête de la Science" organized at Inria, Oct 2016.

Laura Richert participated to "Nuit Européenne des Chercheurs" with speed dating and a radio interview, Cap Sciences, Bordeaux, September 2016.

HIEPACS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

PMAA'16 The 9th International Workshop on Parallel Matrix Algorithms and Applications (PMAA16) was held in Bordeaux (France) and run from July 6 to 8, 2016.

10.1.1.2. Member of the Organizing Committees

The members of HIEPACS were involved in the PMAA'16 organizing committees.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

IEEE PDP'16 (J. Roman), IPDPS'16 (L. Giraud), HiPC'16 (A. Guermouche), PDCN'16 (L. Giraud), PDSEC'16 (O. Coulaud, L. Giraud), SC'16 (E. Agullo, L. Giraud).

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

L. Giraud is member of the editorial board of the SIAM Journal on Matrix Analysis and Applications (SIMAX).

10.1.3.2. Reviewer - Reviewing Activities

ACM Trans. on Mathematical Software, Advances in Computational Mathemtics, Computing and Fluid, IEEE Trans. on Parallel and Distributed Systems, International Journal of High Performance Computing Applications, Journal of Computational Physics, Journal of Scientific Computing, Linear algebra with applications, Mathematics and Computers in Simulation, Parallel Computing, SIAM J. Matrix Analysis and Applications, SIAM J. Scientific Computing, Theory of Computing Systems.

10.1.4. Invited Talks

L. Giraud, "Hard faults and soft-errors: possible numerical remedies in linear algenra solvers", VecPar'16, Porto.

10.1.5. Scientific Expertise

- E. Agullo: US Department of Energy's (DOE's) Exascale Computing Project (ECP) reviewing for research and development in Software Technology, specifically in the area of Math Libraries.
- P. Ramet is "Scientific Expert" at the CEA-DAM CESTA since oct. 2015.
- Jean Roman is member of the "Scientific Board" of the CEA-DAM. As representative of Inria, he is member of the board of ETP4HPC (European Technology Platform for High Performance Computing), of the French Information Group for PRACE, of the Technical Group of GENCI and of the Scientific Advisory Board of the Maison de la Simulation.

10.1.6. Research Administration

Jean Roman is a member of the Direction for Science at Inria : he is the Deputy Scientific Director of the Inria research domain entitled *Applied Mathematics, Computation and Simulation* and is in charge at the national level of the Inria activities concerning High Performance Computing.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

We indicate below the number of hours spent in teaching activities on a yearly basis for each scientific staff member involved.

Undergraduate level/Licence

- A. Esnard: System programming 36h, Computer architecture 40h, Network 23h at Bordeaux University.
- M. Faverge: Programming environment 26h, Numerical algorithmic 30h, C projects 20h at Bordeaux INP (ENSEIRB-MatMeca).
- P. Ramet: System programming 24h, Databases 32h, Object programming 48h, Distributed programming 32h, Cryptography 32h at Bordeaux University.

Post graduate level/Master

- E. Agullo: Operating systems 24h at Bordeaux University ; Dense linear algebra kernels 8h, Numerical algorithms 30h at Bordeaux INP (ENSEIRB-MatMeca).
- O. Coulaud: Paradigms for parallel computing 24h, Hierarchical methods 8h at Bordeaux INP (ENSEIRB-MatMeca).
- A. Esnard: Network management 27h, Network security 27h at Bordeaux University; Programming distributed applications 35h at Bordeaux INP (ENSEIRB-MatMeca).
- M. Faverge: System programming 74h, Load balancing and scheduling 13h at Bordeaux INP (ENSEIRB-MatMeca).
  He is also in charge of the second year of Embedded Electronic Systems option at Bordeaux INP (ENSEIRB-MatMeca).
- L. Giraud: Introduction to intensive computing and related programming tools 20h, INSA Toulouse; Introduction to high performance computing and applications 20h, ISAE; On mathematical tools for numerical simulations 10h, ENSEEIHT Toulouse; Parallel sparse linear algebra 11h at Bordeaux INP (ENSEIRB-MatMeca).
- A. Guermouche: Network management 92h, Network security 64h, Operating system 24h at Bordeaux University.
- P. Ramet: Load balancing and scheduling 13h, Numerical algorithms 30h at Bordeaux INP (ENSEIRB-MatMeca). He also gives classes on Cryptography 30h, Ho Chi Minh City in Vietnam.
- J. Roman: Parallel sparse linear algebra 10h, Algorithmic and parallel algorithms 22h at Bordeaux INP (ENSEIRB-MatMeca).
  He is also in charge of the last year “Parallel and Distributed Computing” option at ENSEIRB-MatMeca which is specialized in HPC (methodologies and applications). This is a common training curriculum between Computer Science and MatMeca departments at Bordeaux INP and with Bordeaux University in the context of Computer Science Research Master. It provides a lot of well-trained internship students for Inria projects working on HPC and simulation.

Summer School: on an annual basis, we run a three day advanced training (lecture and hands on) on parallel linear algebra in the framework of the European PRACE PATC (PRACE Advanced Training Centres) initiative. This training has been organized in many places in France and will be held next year in Ostrava - Czech Republic.

10.2.2. Supervision

PhD in progress : Pierre Blanchard; Fast hierarchical algorithms for the low-rank approximation of dense matrices and applications ; O. Coulaud, E. Darve.

PhD in progress : Nicolas Bouzat; Fine grain algorithms and deployment methods for exascale plasma physic applications ; M.Mehrenberger, J.Roman, G. Latu (CEA Cadarache).

PhD : Jean-Marie Couteyen Carpaye; Contributions to the parallelization and the scalability of the FLUSEPA code; defended on September 19th; P. Brenner, J. Roman.

PhD in progress : Arnaud Durocher; High performance Dislocation Dynamics simulations on heterogeneous computing platforms for the study of creep deformation mechanisms for nuclear applications; O. Coulaud, L. Dupuy (CEA).

PhD in progress : Aurélien Falco; Data sparse calculation in FEM/BEM solution; E. Agullo, L. Giraud, G. Sylvand.

PhD in progress : Cyril Fournier; Task based programming for unstructured mesh calculations; L. Giraud, G. Stafelbach.

PhD in progress : Grégoire Pichon; Utilisation de techniques de compression $\mathcal{H}$-matrices pour solveur direct creux parallèle dans le cadre des applications FEM; L. Giraud, P. Ramet.

PhD in progress : Louis Poirel; Algebraic coarse space correction for parallel hybrid solvers; E. Agullo, L. Giraud.

PhD : Maria Predari; Load balancing for parallel coupled simulations; defended on December 9th; A. Esnard, J. Roman.

10.2.3. Juries

- Okba Hamitou, “Efficient preconditioning method for the CARP-CG iterative solver for the solution of the frequency- domain visco-elastic wave equation”, referee: Jan S. Hesthaven, Luc Giraud; Université de Grenoble, spécialité: mathématiques appliquées, 22 Décembre 2016.
- Jean-Charles Papin, "A Scheduling and Partitioning Model for Stencil-based Applications on Many-Core Devices", referee Jean-François Méhaut, Olivier Coulaud; Université Paris-Saclay pré´parée à l’École Normale Supérieure de Cachan spécialité: mathématiques appliquées, 8 Septembre 2016.

PHOENIX Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

Hélène Sauzéon was member of the organizing committee of the workshop "Journées d'étude du vieillissement cognitif", Bordeaux, 2016.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

Charles Consel was member in the PC of the IEEE 2nd International Conference on Collaboration and Internet Computing (CIC 2016).

Hélène Sauzéon was member in the PC of the workshop "Journées d'étude du vieillissement cognitif", Bordeaux, 2016.

10.1.3. Journal

10.1.3.1. Reviewer - Reviewing Activities

Hélène Sauzéon was solicited as a reviewer for the Journal of Cognitive Psychology and the British Journal of Psychology.

10.1.4. Invited Talks

Charles Consel gave the following invited talks:

- Invited talk on HomeAssist at ORCATECH, Oregon Health and Science University, Portland, USA. August 2016.
- Invited talk on "DiaSwarm – Orchestration of Masses of Sensors at the International Conference on Software & Systems Engineering and their Applications", Paris, France. May 2016.
- Invited talk on "DiaSwarm – Orchestration of Masses of Sensors" at Northeastern University, Boston, USA. May 2016.
- Invited talk on "DiaSwarm – Orchestration of Masses of Sensors" at Galois Inc., Portland, USA. August 2016.
- Invited talk on HomeAssist at "Journées Inria Industries" entitled "Interaction avec les objets et services numériques", Tourcoing, France. Nov 2016.

Hélène Sauzéon gave the following invited talks:

- "Assistance numérique pour la cognition sociale pour favoriser l'inclusion scolaire d'enfants avec troubles du développement" at 43èmes Entretiens de Médecine Physique et de Réadaptation (EMPR), held on March 25th 2015 in Montpellier, France.
- "La cognition sociale au-delà du cerveau : une cognition inclusive" at 43èmes Entretiens de Médecine Physique et de Réadaptation (EMPR), held on March 25th 2015 in Montpellier, France.
- "HomeAssist : An Assisted Living Platform for Aging in Place Based on an Interdisciplinary Approach", at WORRKSHOP ACCEPT16- Deuxièmes rencontres interdisciplinaires autour des aides techniques, du handicap cognitif et de la perte d'autonomie, held on October 6-7, in Nîmes, France.
- "Everyday cognition, Aging and Cognitive disorders: insights and opportunities provided by Information and Communication Technologies", at Scientific seminar of Dpt. of Psychology, University of Waterloo, on 18th Jul., 2016, Waterloo, Canada.

10.1.5. Research Administration

Hélène Sauzéon is associate director of the lab "Activité, handicap, cognition et système nerveux", since 2015, where she leads the Cognitive Handicap research axis.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence: Hélène Sauzéon, "General Cognitive Psychology", 18h, L2/L3, University of Bordeaux, France

Licence: Hélène Sauzéon, "Cognitive Neuropsychology", 7h, DU, University of Bordeaux, France

Master: Hélène Sauzéon, "Cognitive Fonctions in Context", "Technologies for Handicap and Autonomy", "Virtual Reality and Health Applications", 60h, M1/M2, University of Bordeaux, France

Master: Charles Consel, "Telephony Over IP", 43h, M2, Bordeaux INP, France.

Master: Charles Consel, "Software Engineering for Smart Spaces", 10h, M2, Bordeaux INP, France.

Master: Charles Consel, "Ubiquitous Computing", 10h, M2, Bordeaux INP, France.

10.2.2. Supervision

Charles FAGES, "Design and Experimental Validation of a Technological Assistant for School Inclusion of Children with Autism Spectrum Disorders in Mainstream Classrooms", University of Bordeaux, defended on May 30th 2016, co-directed by Hélène Sauzéon and Charles Consel.

Lucile DUPUY, "Design and validation of a home-based digital assistant for seniors with slight autonomy decline" , University of Bordeaux, defended on November 30th 2016, co-directed by Hélène Sauzéon and Charles Consel.

Cécile MAZON, "Personalization and evaluation of a digital assistant for school inclusion of college students with autism and/or intellectual disability", University of Bordeaux, started in September 2016, co-directed by Hélène Sauzéon and Charles Consel.

P.A. CINQUIN, "Design and validation of a reader accessible to persons with cognitive troubles for a e-learning system", University of Bordeaux, started in September 2016, co-directed by Hélène Sauzéon and Pascal Guitton.

10.2.3. Juries

Hélène Sauzéon was member of the thesis committee for:

- Lucile Burger, for her thesis in Psychology called "Effect of training executive functions on appropriate usage of memory strategies during ageing : a behavioural and electrophysiological study", University of Tours, on December 9 2016.
- Caroline Pigeon, for her thesis in Neuropsychology called "Mobilisation attentionnelle des piétons aveugles : Effets de l'âge, de l'antériorité de la cécité et de l'aide à la mobilité utilisée", University of Lyon 2, on December 6th 2016.

Nic Volanschi was member of the thesis committee for Milan Kabac for his thesis in Computer Science called "A Design-Driven Methodology for the Development of Large-Scale Orchestrating Applications", University of Bordeaux, on September 26th 2016.

10.3. Popularization

Hélène Sauzéon gave talks to the following events for professional or general audiences:

- "Handicaps et technologies d'assistance pour les personnes avec déficiences cognitives" at "Les outils numériques au service des personnes avec autisme", on October 7th, at Hôpital de Niort, France.
- "Présentation de la solution DomAssist et ses effets sur le fonctionnement quotidien de la personne et ses aidant professionnel" at "Territoire et solidarité entre les âges : accompagnement du bien vieillir", organised by Union Régionale des Fédérations des Centres Sociaux d'Aquitaine, on November 14th, in Lormont, France.
- "Collège + : un nouvel outil d'apprentissage", at Semaine de la mémoire, organised by Observatoire B2V, on September 21st, at Musée CapScience, Bordeaux, France.

Nic Volanschi participated on October 13th to the "Science fest" at Inria Bordeaux, where he gave 4 workshop sessions on "Manual digital sciences" for children aged 11 to 15. These workshop sessions are aimed to communicate basic notions of computer science to young students by using manual games.

STORM Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Selection

9.1.1.1. Chair of Conference Program Committees

- Samuel Thibault was a Program Committee chair for EuroPar'16.

9.1.1.2. Member of the Conference Program Committees

- Samuel Thibault was a member of the Program Committee for Compas'16, HCW'16, MuCoCos'16, P^3MA'16
- Olivier Aumage was a member of the Program Committee for HUCAA 16'
- Raymond Namyst was a member of the Program Committees for Cluster'16, EuroPar'16 and SAC/MUSEPAT'16
- Denis Barthou was a Program Committee chair for UCHPC'16

9.1.1.3. Reviewer

The members of the team reviewed numerous papers for various international conferences such as IPDPS, Super-Computing, Euro-Par, ICPP.

9.1.2. Journal

The members of the team review papers from many high-level journals such as TPDS, CCPE, TACO, JPDC.

9.1.3. Invited Talks

- Samuel Thibault was invited to present StarPU advances at the "Scalable Task-based Programming Models" workshop of SIAM-PP 2016
- Samuel Thibault was invited to participate to the "What Do You Need to Know About Task-Based Programming for Future Systems?" panel of SIAM-PP 2016
- Samuel Thibault was invited to make a talk on StarPU at an meeting for the H2020 NLAFET project
- Samuel Thibault was then invited to make a talk at the CCDSC-2016 workshop
- Samuel Thibault was invited to make a talk at Jussieu for a APR seminar
- Terry Cojean was invited to present his work at the "Task-based Scientific, High Performance Computing on Top of Runtime Systems" workshop of SIAM-PP 2016
- Terry Cojean was invited to present his work by the research group of Prof. Benkner at the University of Vienna.
- Terry Cojean was invited to give a talk on StarPU at the RESPA workshop of Super-Computing 2016, details available in [2]
- Luka Stanisic was invited to present an effective methodology for reproducible research on dynamic task-based runtime systems at the "Task-based Scientific, High Performance Computing on Top of Runtime Systems" workshop of SIAM-PP 2016
- Luka Stanisic was invited to present advanced usage of Git at the "Reproducible Research" webinars
- Olivier Aumage was invited to present StarPU at the Parallel Programming Frameworks: Technologies, Performance and Applications track of SIAM-PP 2016 in Paris.
- Olivier Aumage was invited to present StarPU at CERFACS in Toulouse.

- Olivier Aumage was invited to present StarPU at the workshop Building a European/American Community for the Development of Dynamic Runtimes in Extreme-Scale Systems, as part of ISC'2016 in Frankfurt.
- Olivier Aumage and Samuel Thibault presented a tutorial session on runtime systems and StarPU as part of the Prace Advanced Training Center (PATC) program in Paris, in partnership with La Maison de la simulation.
- Olivier Aumage was invited to present StarPU by the research group of Prof. Benkner at the university of Vienna.
- Olivier Aumage was invited to give a training session on advanced parallel programming models for HPC platforms as part of the EoCoE European Center of Excellence face-to-face meeting in Rome
- Raymond Namyst was invited to give a talk about Heterogeneous Programming at the RoMoL Workshop, Barcelona, March 2016
- Raymond Namyst was invited to give a talk about StarPU at the CEA 2016 HPC Worshop, Cargèse

9.2. Teaching - Supervision - Juries

9.2.1. Teaching administration

Samuel Thibault is responsible for the computer science topic of the first university semester.

Samuel Thibault is responsible for the creation of the new Licence Pro ADSILLH (Administrateur et Développeur de Systèmes Informatiques sous Licences Libres et Hybrides)

Denis Barthou is responsible for the cyber-security, systems and networks 3rd year of the ENSEIRB-MATMECA engineering school.

Raymond Namyst is Vice-chair of the Computer Science Training Department of University of Bordeaux

9.2.2. Teaching

Licence : Marie-Christine Counilh, Introduction to Computer Science, 64HeTD, L1, University of Bordeaux

Licence : Marie-Christine Counilh, Introduction to C Programming, 52HeTD, L1, University of Bordeaux

Licence : Samuel Thibault, Introduction to Computer Science, 32HeTD, L1, University of Bordeaux

Licence : Samuel Thibault, Networking, 51HeTD, L3, University of Bordeaux

Licence : Samuel Thibault, Computer Architecture, 77HeTD, L2, University of Bordeaux

Licence : Samuel Thibault, Tutored project, 10HeTD, L3, University of Bordeaux

Licence : Pierre-André Wacrenier, Introduction to Computer Science, 64HeTD, L1, University of Bordeaux

Licence : Terry Cojean, Networking, 40HeTD, L1, IUT Bordeaux

Licence : Terry Cojean, Object Oriented Programming, 24HeTD, L3, IUT Bordeaux

Master : Luka Stanisic, Operating Systems, 22HeTD, M1, University of Bordeaux

Master : Samuel Thibault, Operating Systems, 22HeTD, M1, University of Bordeaux

Master : Marie-Christine Counilh, Object Oriented Programming, 30HeTD, M1, University of Bordeaux

Master : Raymond Namyst, Operating Systems, M1, University of Bordeaux

Master : Pierre-André Wacrenier and Raymond Namyst, Parallel Programming, M1, University of Bordeaux

Engineering School: Samuel Thibault, Information System Security, 13HeTD, M1, ENSEIRB-MATMECA/IPB

Engineering School: Olivier Aumage, Languages and Supports for Parallelism, 14HeTD, M2, ENSEIRB-MATMECA/IPB joint with University of Bordeaux

Engineering School: Olivier Aumage, High Performance Communication Libraries, 20HeTD, M2, ENSEIRB-MATMECA/IPB joint with University of Bordeaux

Engineering School: Denis Barthou, Compilation, Architecture, Architecture for HPC, real-time 3D at ENSEIRB-MATMECA (around 200HeTD), from L3 to M2.

9.2.3. Supervision

- PhD: Gregory Vaumourin, Hybrid Memory Hierarchy and Dynamic Data Handling in Embedded Parallel Architectures, University of Bordeaux, defended in Nov 2016, advisors: Denis Barthou, Alexandre Guerre (CEA), Thomas Dombek (CEA)
- PhD: Marc Sergent, Passage à l'échelle d'un support d'exécution à base de tâches pour l'algèbre linéaire dense, University of Bordeaux, defended in Dec 2016, advisors: Raymond Namyst, Olivier Aumage, Samuel Thibault, David Goudin (CEA)
- PhD in progress: Suraj Kumar, Task-based programming paradigms and scheduling, 2013/12, Emmanuel Agullo, Olivier Beaumont, Samuel Thibault
- PhD in progress: Terry cojean, Programming heterogeneous machines using moldable tasks, 2014/09, Pierre-André Wacrenier, Abdou Guermouche, Raymond Namyst
- PhD in progress: Christopher Haine, Estimating efficiency and automatic restructuration of data layout, 2014/01, Olivier Aumage, Denis Barthou
- PhD in progress: Arthur Loussert, Ressource (co)Allocation in HPC systems, 2016/10, Raymond Namyst, Marc Perache (CEA), Benoît Welterlen (ATOS)
- PhD in progress: Raphaël Prat, Load Balancing in Molecular Dynamics, 2016/10, Raymond Namyst, Laurent Colombet (CEA)

9.2.4. Juries

Denis Barthou has participated to the following PhD juries

- Abdul Wahid MEMON, U. Versailles St Quentin, Jun 2016 (reviewer)
- Abderrahmane Nassim HALLI, U. of Grenoble, Sep 2016 (reviewer)
- Milan KABAC, U. Bordeaux, Oct 2016 (president)
- Nans ODRY, U. Aix Marseille, Oct 2016 (reviewer)

Raymond Namyst has participated to the following PhD juries

- David Beniamine, U. Grenoble, Dec 2016 (reviewer)
- Alban Rousset, U. Besançon, Oct 2016 (reviewer)
- Naweiluo Zhou, U. Grenoble, Oct 2016 (reviewer)
- Béranger Bramas, U. Bordeaux, Feb 2016 (president)
- Oleg Iegorov, U. Grenoble, Apr 2016 (president)

9.3. Popularization

- Samuel Thibault made a Inria talk about « Building Debian/Ubuntu packages to make it easy for users to install your software »

TADAAM Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Guillaume AUPY was the Technical Program vice-chair of SC'17.

10.1.1.2. Member of the steering committee

Emmanuel JEANNOT is member of the steering committee of Euro-Par and the Cluster international conference.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

Guillaume AUPY was the co-chair of the Parallel and Distributed Algorithms track of ICA3PP'17.

Emmanuel JEANNOT was the Program chair of the Heterogeneity in Computing Workshop (HCW'17).

Emmanuel JEANNOT was the Program chair of the track parallelism of COMPAS 2016.

10.1.2.2. Member of the Conference Program Committees

Alexandre DENIS was a member of the program committee of Compas'16 and CCGrid 2017.

Brice GOGLIN was a member of the program committee of CCGrid 2016, Cluster 2016, EuroMPI 2017, HotInterconnect 24 and of the Exacomm workshop.

Emmanuel JEANNOT was a member of the program committee of IPDPS 2017, CCGRID 2017,

Guillaume MERCIER was a member of the program committee of EuroMPI 2016 and EuroMPI 2017.

10.1.2.3. Reviewer

Cyril BORDAGE was reviewer for Cluster 2016.

Alexandre DENIS was a reviewer for Cluster 2016.

Brice GOGLIN was a reviewer for IEEE Micro.

Farouk MANSOURI was a reviewer for Cluster 2016.

Guillaume MERCIER was a reviewer for IPDPS 2017.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Emmanuel JEANNOT is associate editor of the International Journal of Parallel, Emergent & Distibuted Systems (IJPEDS).

Guillaume MERCIER is editor of the EuroMPI 2016 Special issue of the Journal of High Performance Computing Applications (IJHPCA).

10.1.3.2. Reviewer - Reviewing Activities

Guillaume AUPY was a reviewer for EURASIP Journal of Embedded Systems, Cluster Computing and Transactions on Parallel and Distributed Systems (TPDS).

Alexandre DENIS was a reviewer for the Journal of Parallel and Distributed Computing (JPDC).

Emmanuel JEANNOT was reviewer of IEEE TPDS.

Guillaume MERCIER was a reviewer for the EuroMPI 2016 Special Issue of the Parallel Computing journal.

François PELLEGRINI was a reviewer for SIAM Journal on Scientific Computing (SISC).

10.1.4. Invited Talks

Brice GOGLIN gave a talk about managing hardware locality in HPC during an AMD Tech Talk at AMD Research (Austin, TX).

Emmanuel JEANNOT gave a talk about topology-aware data management at the Workshop on Clusters, Clouds, and Data for Scientific Computing (CCDSC 2016).

Emmanuel JEANNOT gave a talk about metrics and models for process placement at the Third Workshop on Programming Abstractions for Data Locality (PADAL'16).

François PELLEGRINI delivered a keynote speech on freedom in the digital age, during the annual congress of *Société informatique de France*, Strasbourg.

François PELLEGRINI gave a talk on software law at Université de Nice Sophia-Antipolis.

François PELLEGRINI participated in a round-table on *Big data, compliance and personal data* during the JInov meeting, Paris.

François PELLEGRINI gave a talk on *Free software, a tool for sustainable development in countries of the Souths* law at the *Colloque international sur le logiciel libre dans les pays du Sud*, organized by Université Moulay Ismaïl & École nationale supérieure d'arts et métiers de Meknès.

François PELLEGRINI delivered a talk on freedom in the digital age, during the Defense Security Cyber summer school organized by Université de Bordeaux.

François PELLEGRINI delivered a talk on freedom and the ethics of informatics during the summer school for young researchers on the ethics of informatics, organized by CERNA and Allistene in Arcachon.

François PELLEGRINI participated in a round-table on the legal crtieria for software originality in the colloquium on protection and infringement of software : the notion of digital common pool, organized by AFDIT at Conseil national des barreaux, Paris.

François PELLEGRINI delivered a talk on the issues of rights on immaterial goods for digital development, during the international seminal of training for trainers on internet and information systems governance, organised by ITICC with the support of Organisation Internationale de la Francophonie and ARCEP-BF, in Ouagadougou.

François PELLEGRINI delivered the opening conference on the legal and economic bases the digital economy, for a training seminar for Members of the Parliament of Benin on the issues of laws on digital matters, organized by Organisation Internationale de la Francophonie at Grand-Popo.

François PELLEGRINI gave a talk on the operational solutions to digital security issues, during the 4th NGO forum organized by the French embassy in Moscow.

François PELLEGRINI delivered a keynote speech on the governance of open and free innovation, at the invitation of the French ministry of Foreign affairs, during the workshop on open innovation which took place within the French-German inter-governmental conference on digital issues, in Berlin.

Adèle VILLIERMET has been invited to give a talk at the summer school of GDR RO.

10.1.5. Scientific Expertise

Emmanuel JEANNOT was member of the hiring committee for an assistant professor position in informatics at Université de Bordeaux.

Brice GOGLIN was also a member of the hiring committee for Inria Bordeaux - Sud-Ouest research scientists.

François PELLEGRINI was a member of the hiring committee for a full professor position in informatics at Université de Nice Sophia-Antipolis (PR27-327). He also reviewed a PR1 promotion file at Université de Bordeaux.

10.1.6. Standardization Activities

TADAAM attends the MPI Forum meetings on behalf of Inria (where the MPI standard for communication in parallel applications is developed and maintained).

A proposal in currently under early discussion for submission to the forum 7.15 .

10.1.7. Tutorials

Brice GOGLIN gave a tutorial about managing hardware affinities on hierarchical platforms with HWLOC during a PRACE Advanced Training Center session.

François PELLEGRINI gave a "hands-on" tutorial on SCOTCH during a meeting of the European projet COLOC.

10.1.8. Research Administration

Emmanuel JEANNOT is member of the scientific committee of the Labex IRMIA (Universite´ de Strasbourg).

Emmanuel JEANNOT is the head of the young researcher commission of Inria Bordeaux Sud-Ouest in charge of supervising the hiring of the PhDs and post-doc of the center.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Members of the TADAAM project gave hundreds of hours of teaching at Université de Bordeaux and the Bordeaux INP engineering school, covering a wide range of topics from basic use of computers and C programming to advanced topics such as computer architecture, operating systems, parallel programming and high-performance runtime systems, as well as software law.

10.2.2. Supervision

PhD in progress: Remi Barat, multi-criteria graph partitioning, started in 2014. Advisor: François Pellegrini.

PhD in progress: Raphaël Blanchard, parallelization and data distribution of discontinuous Galerkin methods for complex flow simulations, started in 2013. Advisor: François Pellegrini.

PhD in progress: Nicolas Denoyelle, advanced memory hierarchies and new topologies, started in 2015. Advisor: Brice Goglin and Emmanuel Jeannot.

PhD in progress: Benjamin Lorendeau, new programming models and optimization of Code Saturn, started in 2015. Advisor: Yvan Fournier and Emmanuel Jeannot.

PhD in progress: Hugo Taboada, communication progression in runtime systems, started in 2015. Advisor: Alexandre Denis and Emmanuel Jeannot.

PhD in progress: Adèle Villiermet, topology-aware resource management, started in 2014. Advisor: Emmanuel Jeannot and Guillaume Mercier.

PhD stopped: Romain Prou, communication management based on remote memory access, student resigned in october 2016. Advisor: Alexandre Denis and Emmanuel Jeannot.

10.2.3. Juries

Brice GOGLIN was member of the PhD defense committee of:

- Mohamed Lamine Karaoui (Université Pierre et Marie Curie, Reviewer).

Emmanuel JEANNOT was member of the PhD defense committee of:

- Loïc Thiébault (Université de Versailles Saint-Quentin, Reviewer).

François PELLEGRINI was member of the PhD defense committee of:

- Karl-Eduard Berger (Université de Versailles Saint-Quentin);
- Alessandro Fanfarillo (Università degli Studi di Roma Tor Vergata, Reviewer);
- Thomas Hume, Université de Bordeaux;
- Sébastien Morais (Université Évry Val d'Essonne, Reviewer).

10.3. Popularization

Brice GOGLIN is in charge of the diffusion of the scientific culture for the Inria Research Center of Bordeaux. He organized several popularization activities in the center. He also gave several talks about computer architecture, high performance computing, and research careers to general public audience, school students, teachers, or even to non-expert Inria colleagues.

Brice GOGLIN was involved in the design of the section about fondamentals of computer science in the 2017 massive open online course that will help teachers of the new ICN section in schools (*Informatique et Création Numérique*). It was filmed for 10 video sequences (about an hour in total).

François PELLEGRINI was filmed during a 3-hour conference on author's rights, in the context of the MAPI'Days, to serve as an on-line training for personnel and students of Université de Bordeaux (https://fad.u-bordeaux.fr/course/view.php?id=740).

François PELLEGRINI is the author of an opinion piece on digital sovereignty in newspaper Le Monde (http://www.lemonde.fr/idees/article/2016/06/24/la-souverainete-numerique-passe-par-le-logiciel-libre_4957781_3232.html).

François PELLEGRINI is the co-author of a booklet on free/libre software licenses edited by Pôle Systematic Paris Région & Pôle Aquinetic, which is now in its second edition (http://systematic-paris-region.org/sites/default/files/content/page/attachments/LivretBleu_Juridique_GT-LogicielLibre_Systematic_Mai2016_web.pdf).

In the context of the decree authorizing the TES (*Titres Électroniques Sécurisés*) file, François PELLEGRINI published a set of three blog posts (starting with http://www.pellegrini.cc/2016/11/la-biometrie-des-honnetes-gens/), which have been cited and linked by several French newspapers (Libération, Mediapart, NextInpact). He also participated in a debate on the same subject, organised by the Ligue des droits de l'Homme de Gironde (http://ldh-gironde.org/jeudi-15-decembre-2016-a-18h30-rencontre-debat-autour-du-mega-fichier-tes/).

François PELLEGRINI delivered a talk on *Freedom and the ethics of informatics* during a seminar on *Technologies, ethics and cognition* organized by the bouddhist group Dhagpo Bordeaux, in partnership with Cap Sciences and Université de Bordeaux (http://www.dhagpo-bordeaux.org/seminaire-technologies-ethique-cognition/).

François PELLEGRINI was filmed, during an interview on *Innovation and free/libre licenses*, for the *ULab Innov+* MOOC.

FLOWERS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

- PY. Oudeyer and M. Lopes have been general co-chair of Second Interdisciplinary Symposium on Information Seeking, Curiosity and Attention (Neurocuriosity 2016), London, UK (150 participants). https://goo.gl/BYL0h4
- D. Roy has been general chair of the colloquium "Robotique et Education" in Bordeaux, june 2016, http://dm1r.fr/colloque-robotique-education/.

10.1.1.2. Member of the Organizing Committees

- Manuel Lopes co-organized the R:SS 2016 workshop on Bootstrapping Manipulation Skills 06.2016 http://www.bootstrapping-manipulation.com/
- Alexander Gepperth co-organized a special session ("Incremental learning algorithms and application") on ESANN 2016, together with Barbara Hammer of Bielefled university (Germany).
- PY. Oudeyer has been member of the steering committee of the IEEE ICDL-Epirob conference.
- PY. Oudeyer has been member of the steering committee of the fOSSa conference.
- PY. Oudeyer has been "Robotics Liaison" of IJCNN 2017, Anchorage, Alaska.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

- David Filliat was Associate Editor for IROS.
- PY. Oudeyer has been member of the PC committee of IEEE ICDL-Epirob 2016.
- Alexander Gepperth was member of the program committe for IJCNN 2016, ECAI 2016 and ESANN 2016.

10.1.2.2. Reviewer

- David Filliat was reviewer for the IFAC, IV, RFIA, ICRA conferences.
- Sébastien Forestier was reviewer for IEEE ICDL-Epirob
- Manuel Lopes was reviewer for IEEE IROS, IEEE ICDL-EPIROB, IEEE ICRA, IJCAI, NIPS
- Thibaut Munzer was reviewer for IEEE IJCAI.
- Baptiste Busch reviewer for IEEE RO-MAN.
- PY. Oudeyer has been a reviewer for the conferences IEEE ICDL-Epirob and Humanoids 2016.
- Alexander Gepperth was reviewer for ESANN 2016, IJCNN2016, IEEE Symposium on Intelligent Vehicles (IV) and ECAI 2016

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- PY. Oudeyer has been editor of IEEE CIS Newsletter on Cognitive and Developmental Systems: https://openlab-flowers.inria.fr/t/ieee-cis-newsletter-on-cognitive-and-developmental-systems/129
- PY. Oudeyer has been associate editor of IEEE Transactions on Cognitive and Developmental Systems

- PY Oudeyer has been associate editor of Robotics and Automation Letters (RA-L).
- PY. Oudeyer has been associate editor of Frontiers in Neurorobotics and Frontiers in Humanoid Robotics.
- PY. Oudeyer has been Associate editor of International Journal of Social Robotics (Springer).

10.1.3.2. Reviewer - Reviewing Activities

- David Filliat was reviewer for Journal of Intelligent Service Robotics.
- Alexander Gepperth was reviewer IEEE Transactions on Intelligent Transportation Systems
- Anna-Lisa Vollmer was reviewer for Frontiers in Robotics and AI and IEEE Transactions on Cognitive and Developmental Systems.
- PY. Oudeyer has been a reviewer for the Robotics and Automation Magazine, the Journal of Language Evolution.

10.1.4. Invited Talks

- David Filliat gave an invited presentation “Apprentissage pour les vehicules intelligents et la robotique developpementale” during the workshop “Intelligence Artificielle et Véhicule à Conduite Deleguee” organized by VEDECOM on september 28th.
- PY. Oudeyer, "Open-source art/science with Poppy Project", 15th january, Journée ECARTS, Univ. Bordeaux.
- PY. Oudeyer, "Mondes Mosaiques", Librairie Mollat, 2 février, Bordeaux.
- PY. Oudeyer, "Self-organization and active learning of language", 21 mars, Lattice, ENS Paris.
- PY. Oudeyer, "Intelligence artificielle et robotique", 21 mars, Grand Palais, Paris.
- PY. Oudeyer, "Intelligene artificielle et philosophie", 20 mai, Bordeaux.
- PY Oudeyer, "How robotic modelling can help us understand complex dynamics in development", 22 may, Views by Two keynote, International Conference on Infant Studies, New-Orleans.
- PY. Oudeyer, "Robotique éducative: les projets de l’équipe Flowers", Colloque Robotique et Education, Bordeaux.
- PY. Oudeyer, "Curiosity, exploration and learning in humans and machines", 9 july, ISSAS Summer School, Geneva, Switzerland.
- PY. Oudeyer, "How robotic modelling can help us understand complex dynamics in language and sensorimotor development", 9th september, Creativity and Evolution Summer School, Como, Italy.
- PY Oudeyer, "Comment la modélisation robotique aide à comprendre la dynamique du développement de l’enfant", 18 septembre, Colloque Biologie et Information, Cerisy, France.
- PY. Oudeyer, "Active exploration for lifelong developmental learning in humans and machines: intrinsic motivation, maturation and social guidance", 5th october, Google Deepmind seminar, London, UK.
- PY. Oudeyer, "Diverstiy of forms and developmental functions of curiosity-driven exploration", 8th october, London UK.
- PY. Oudeyer, "Intelligence artificielle et humain", Entretiens de la Cité, 5th november, Lyon, France.
- PY. Oudeyer, "Artificial intelligence and robotics: scientific, technological and societal challanges", 8th november, Académie des Technologies, Paris, France.
- PY. Oudeyer, "From fundamental research in models of human learning to educational applications", 16th november, Journée Learning Lab, Paris, France.
- PY. Oudeyer, "Diverstiy of forms and developmental functions of curiosity-driven exploration", 17th november, Journée GdR Robotique et Neuroscience, Bordeaux.
- PY. Oudeyer, "Machine learning and robotics", 5th december, Technion ConnectedWorld conference, Paris.

10.1.5. Leadership within the Scientific Community

PY. Oudeyer has been chair of IEEE Computational Intelligence Society technical committee on cognitive and developmental systems (10 task forces, 65 members); The activities of the TC are described at: https://openlab-flowers.inria.fr/t/ieee-cis-tc-on-cognitive-and-developmental-systems/41

10.1.6. Scientific Expertise

- M Lopes was expert for the EU Commission scientific programme.
- PY. Oudeyer has been an expert for the European Commission, the Polish National Research Agency, and the Swedish National Research Agency.
- PY. Oudeyer has been expert for Main à la Pâte for the textbook project “1, 2, 3: Codez!” to teach computer science in primary schools.
- PY. Oudeyer has been expert for Académie des Technologies and OPECST on artificial intelligence and its interaction with society.

10.1.7. Research Administration

PY. Oudeyer has been scientific responsible of Inria-Ensta-ParisTech EPC.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master: Robotique Developmental et Cognitive, 35 heures, Nantes, (Manuel Lopes et PY Oudeyer)

Master: Robotique Developmental et Cognitive, 35 heures, Universite de Bordeux, (Manuel Lopes et PY Oudeyer)

License: Inteligencia Artificial, 90 heures, Instituto Superior Tecnico, Lisboa, (Manuel Lopes)

License: Introduction to Matlab, 21 heures. L3, ENSTA - ParisTech (David Filliat).

Master: Robotique Mobile, 21 heures. M2, ENSTA - ParisTech (David Filliat).

Master: Perception pour la Robotique, 6 heures. M2, ENSTA - ParisTech (David Filliat).

Master: Perception pour la robotique, 12 heures. M2 Systemes Avances et Robotique, University Pierre et Marie Curie (David Filliat)

Master: Perception pour la Robotique Développementale, 3 hours, CogMaster (David Filliat)

Licence Informatique, 64h Bordeaux University (Sébastien Forestier)

PY. Oudeyer taught a course on "Robotic modelling of cognitive development" at ENS Rennes, 12 h

PY. Oudeyer taught a course on "Robotic modelling of cognitive development" at Enseirb, 2 h

PY. Oudeyer taught a course on "Robotic modelling of cognitive development" at CogMaster, Paris, 3 h

PY. Oudeyer taught a course on "Developmental and cognitive robotics" at Univ. Mons, Belgium, 3h

PY. Oudeyer coordinated the project Poppy Education, which has developped several educational robotics kits for computer science education in high-schools

Continuing education: Robotics for education, 30 h, EPFL (Didier Roy)

10.2.2. Supervision

PhD in progress: Sébastien Forestier, Models of curiosity-driven learning of tool use and speech development, started in sept. 2015 (superv. P-Y. Oudeyer)

PhD in progress: William Schueller, Study of the impact of active learning and teaching in naming games dynamics, started in sept. 2015 (superv. P-Y. Oudeyer)

PhD in progress: Alvaro Ovalle-Castaneda, Computational models of intrinsically motivated learning and exploraiton, started in oct. 2016 (superv. P-Y. Oudeyer)

PhD in progress: Thibault Desprez, Design and study of the impact of educational robotic kits in computer science education, started in dec. 2016 (superv. P-Y. Oudeyer)

PY. Oudeyer supervised three master thesis internship: Thibault Desprez (M2, educational robotics), Marie Demangeat (M2, educational robotics), Sébastien Mick (M2, design and study of robotic prosthesis)

PY. Oudeyer supervised a team of computer and pedagogical engineers and researchers for the project Poppy Education (Didier Roy, Stéphanie Noirpoudre, Théo Segonds, Damien Caselli, Nicolas Rabault, Matthieu Lapeure)

PhD in progress: Thomas Hecht, Bio-inspired sensor fusion, started November 2013 (superv. Alexander Gepperth).

PhD : Egor Sattarov, Multimodal vehicle perception architecture, Université Paris-Saclay, 9/12/2016 (co-superv. Alexander Gepperth).

PhD : Thomas Kopinski, Machine Learning for human-machine interaction, Université Paris-Saclay, ENSTA ParisTech, 12/02/2016 (superv. Alexander Gepperth).

PhD in progress: Benjamin Clement, Intelligent Tutoring Systems, started oct 2015 (superv. Manuel Lopes and Pierre-Yves Oudeyer).

PhD in progress: Thibaut Munzer, Learning from Instruction, started oct 2013 (superv. Manuel Lopes).

PhD in progress: Baptiste Busch, Interactive Learning, started oct 2014 (superv. Manuel Lopes).

PhD in progress: Alexandra Delmas, Auto-Apprentissage Auto-Adaptable pour la compliance au traitement, started oct 2014 (superv. Manuel Lopes).

PhD : Alexandre Armand, Situation Understanding and Risk Assessment Framework for Preventive Driver Assistance, Université Paris-Saclay, ENSTA ParisTech, 31/05/2016, superv. David Filliat, Javier Ibanez-Guzmann

PhD in progress: Yuxin Chen, Interactive learning of objects and names on a humanoid robot, started oct. 2013 (superv. David Filliat).

PhD in progress: Celine Craye, Curiosity and visual attention for the guidance of an exploration robot, started apr. 2014 (superv. David Filliat).

PhD in progress: Adrien Matricon : Task dependent visual feature selection for optimising and generalizing robotics skills (superv. David Filliat, Pierre-Yves Oudeyer).

PhD in progress: José Magno Mendes Filho, Planning and control of an autonomous AGV in environment shared with humans, started Oct. 2015 (superv. David Filliat and Eric Lucet (CEA))

PhD in progress: Joris Guery, Domain adaptation for visual object recognition, started Oct. 2014 (superv. David Filliat and Bertrand Le Saulx (ONERA))

HdR :Alexander Gepperth, New learning paradigms for real-world environment perception, université Pièrre et Marie Curie, 27/6/2016

10.2.3. Juries

Manuel Lopes was in the jury of Ben-Manson Toussaint (2016), Modeling Perceptual-Gestural Knowledge for Intelligent Tutoring Systems, supervised by Vanda Luengo, University of Grenoble, France

David Filliat was in the jury of Isabelle Leang (15/12/2016, Rapporteur) : Fusion en ligne d'algorithmes de suivi visuel d'objet

David Filliat was in the jury of Egor Sattarov (09/12/2016, Examinateur) : Etude et quantification de la contribution des systèmes de perception multimodale assistés par des informations de contexte pour la détection et le suivi d'objets dynamiques

Alexander Gepperth was in the jury of Egor Sattarov (09/12/2016, Examinateur) : Etude et quantification de la contribution des systèmes de perception multimodale assistés par des informations de contexte pour la détection et le suivi d'objets dynamiques

Alexander Gepperth was in the jury of Thomas Kopinski (12/2/2016, Examinateur) : Machine learning method for human-machine interaction

David Filliat was in the jury of Fabrice Mayran de Chamiso (18/11/2016, Examinateur) : Navigation exploratoire au long de la vie une approche intégrant planification, navigation, cartographie et localisation pour des robots mobiles disposant de ressources finies

David Filliat was in the jury of Chunlei Yu (15/09/2016, Examinateur) : Contribution to evidential models for perception grids Application to intelligent vehicle navigation

David Filliat was in the jury of Hendry Ferreira Chame (10/01/2016, Rapporteur) : Egocentric Representations for Autonomous Navigation of Humanoid Robots

PY. Oudeyer was a member of the PhD juries of Maxime Carrere (Combiner les apprentissages motivés et associatifs, Univ. Bordeaux), Remi Fresnoy (Modélisation de l'activité gestuelle et sélection automatique de feedback pour des environnements interactifs d'apprentissage : application à la calligraphie, UTC Compiègne), Raphaël Rose-Andrieux (Modèle probabiliste hiérarchique de la locomotion bipède).

PY. Oudeyer was a member of the HdR of Alexander Gepperth, "New learning paradigms for real-world environment perception", Ensta ParisTech, Paris.

PY. Oudeyer was a member of the jury for selecting ENS Rennes (France) PhD grants.

10.3. Popularization

10.3.1. Poppy Education

10.3.1.1. Events participation

January 2016, Observation Sequence for students from middle-school (Inria Bordeaux Sud-Ouest): S. Noirpoudre, T. Desprez, M. Demangeat, T. Laine) - We welcomed 5 students from middle-school (14 years old) during a week to discover the working environment and to introduce them to robotics

January 2016, Robot makers'day (Talence): S. Noirpoudre, D. Caselli, T. Desprez - Exhibition stand to show the projet Poppy Education and Poppy robots

January 2016, Training day at Espe de Bordeaux (Ecole supérieure du professorat et de l'éducation): D. Roy, S. Noirpoudre, T. Desprez, M. Demangeat) - Train a group of teachers initiate in programmation with the language visual Snap! and to robotics with Poppy Ergo Jr)

January 2016, Robots day (Multimedia library of Talence): P. Rouanet, T. Segonds - Programming workshop with Poppy torso robot

January 2016, Robots day (Multimedia library of Talence): P. Rouanet - A talk to present the platform robotics Poppy through science, art and education.

January 2016, Symposium Didastic-Didapro (Namur): D. Roy - Talk to present Poppy Education

January 2016, Eidos 2016 event (Dax): S. Noirpoudre - A talk to present Poppy Education

March 2016, Education exhibition Educatice-Educatec (Paris) : S. Noirpoudre, D. Roy - Exhinibition stand to present the robotics platforme Poppy and the use in Education (Poppy Education)

March 2016, Training day at Espe de Bordeaux (Ecole supérieure du professorat et de l'éducation): T. Desprez - Train a group of teachers in Snap!

March 2016, SNCEEL (organisation professionnelle de chefs d'établissement d'enseignement libre), Journées Collèges event (Paris), T. Desprez - Talk to present Poppy project and the pedagogical activities

April 2016, Connect thouars event (Talence): T. Desprez, S. Noirpoudre, M. Demangeat - Exhibition stand to present the project Poppy Education and workshop animation for kids (programming of Ergo in Snap!)

April 2016, Rob'o d'Evian: D. Roy (Evian) - Talk to present Poppy Education

May 2016, Robotics and Education days (ENS Lyon): D. Roy, S. Noirpoudre - Talk to present Poppy project and the pedagogical activities

May 2016, Bordeaux Geek Festival (Bordeaux): M. Demangeat, T. Desprez - Exhibition stand to show/present the robotics platform Poppy

May 2016, Forum des Nouvelles Initiatives de Médiation Scientifique (Bordeaux): D. Roy - Talk to present the project Poppy Education

May 2016, Forum des Nouvelles Initiatives de Médiation Scientifique (Bordeaux): T. Desprez, S. Noirpoudre - Exhibition stand to present the project Poppy Education and show the robots (real demonstrations) and pedagogical activities

May 2016, Visit of teachers of Espe Aquitaine (Inria - Bordeaux Surd-Ouest): S. Noirpoudre, D. Roy - Visit of the research center and presentation of Poppy Education project and to the robotic kits (25 teachers)

June 2016, Symposium Education and Robotics (Talence): D. Roy, T. Desprez - Talk to present Poppy Education project (purpose, pedagogical activities and the results)

June 2016, Symposium Education and Robotics (Talence): S. Noirpoudre - Exhibition stand to show Poppy Education project (demonstrations)

August 2016, Université d'été Ludovia (Ax-les-Thermes): P. Rouanet, M. Demangeat - Exhibition stand Poppy Education during 3 days in partnership with l'Académie de Bordeaux

August 2016, Université d'été Ludovia (Ax-les-Thermes): D. Roy, P. Rouanet, M. Demangeat - Workshop / presentation / demonstration of Poppy Education as part of the ExplorCamps.

October 2016, Coding Pi Science Day (CERN close to Geneva): S. Noirpoudre, T. Segonds - Conference to present the pedagogical robotic kit Poppy Ergo Jr

October 2016, Coding Pi Science Day (CERN close to Geneva): S. Noirpoudre, T. Segonds - Robotics workshop, one day to build and program a robot (30 participants)

October 2016, Fête de la science (Inria Bordeaux Sud-Ouest): S. Noirpoudre - 8 programming workshop in 2 days (with middle school students) using Snap! and the robot Poppy Ergo Jr

November 2016, Erasmus project "ICT WORLD : Imaging, Coding, Transforming and Modeling the World" (Inria Bordeaux Sud-Ouest): S. Noirpoudre, programming workshop using Snap! and the robot Poppy Ergo Jr (35 students and 14 teachers)

Novembre 2016, Inria Learning Lab (Paris): D. Roy - Presentation of Poppy Education

December 2016, Observation Sequence for Grade 3 Students (Inria Bordeaux Sud-Ouest): S. Noirpoudre, T. Desprez) - We welcomed 2 students from middle-school during a week to discover the working environment and to introduce them to robotics

10.3.1.2. Training and meeting

- January 2016, Meeting with teachers partners of the Poppy Education: Poppy Education project team - Talking about pedagogical activities and robots availabilities
- March 2016, Meeting with teachers partners of Poppy Education, Poppy Education project Team - Feedback and presentations on pedagogical activities and the use of robots in the classroom
- May 2016, Meeting with teachers partners of Poppy Education, Poppy Education project team - Feedback on pedagogical activities and the use of robots in the classroom
- May 2016, Train Inria workers (from scientific mediation), S. Noirpoudre - Learn how to present the Poppy project
- June 2016, Train Canope 33 workers, S. Noirpoudre - Programming the robot Ergo Jr using Snap!
- October 2016, Meeting with teachers partners of the Poppy Education project: Poppy Education project team - Presentation of the progress of the year and presentations of pedagogical activities

- November 2016, Train new teachers partners of Poppy Education: S. Noirpoudre - Building and programming the robot Poppy Ergo Jr

10.3.2. Inirobot

10.3.2.1. Events participation

January 2016, Training day at Espe de Bordeaux (Ecole supérieure du professorat et de l'éducation): D. Roy, S. Noirpoudre, T. Desprez, M. Demangeat) - Train a group of teachers initiate in programmation with the Inirobot kit.

January 2016, Symposium Didastic-Didapro (Namur): D. Roy - Talk to present Inirobot kit.

March 2016, Education exhibition Educatice-Educatec (Paris) : S. Noirpoudre, D. Roy - Exhinibition stand to present the robotics kit Inirobot.

March 2016, SNCEEL (organisation professionnelle de chefs d'établissement d'enseignement libre), Journées Collèges event (Paris), T. Desprez - Talk to present Inirobot kit.

April 2016, Rob'o d'Evian: D. Roy (Evian) - Talk to present Inirobot kit.

May 2016, Robotics and Education days (ENS Lyon): D. Roy, S. Noirpoudre - Talk to present Inirobot kit.

May 2016, Forum des Nouvelles Initiatives de Médiation Scientifique (Bordeaux): D. Roy - Talk to present inirobot kit.

June 2016, Symposium Education and Robotics (Talence): D. Roy - Talk to present Inirobot kit.

August 2016, Université d'été Ludovia (Ax-les-Thermes): P. Rouanet, M. Demangeat - Exhibition stand Inirobot during 3 days in partnership with l'Académie de Bordeaux

August 2016, Université d'été Ludovia (Ax-les-Thermes): D. Roy, P. Rouanet - Workshop / presentation / demonstration of Inirobot kit as part of the ExplorCamps.

August 2016, Université d'été Ludovia (Ax-les-Thermes): D. Roy wins Ludovia Prize. http://ludovia.org/2016/coups-de-coeur-de-ludovia/

September 2016, Colloque sur les contenus périscolaires (Artigues-près-Bordeaux): D. Roy - inirobot (organized by Senator Françoise Cartron)

October 2016, Journées APMEP (Lyon): J. Rivet, G. Lassus, members of Poppy Education teachers team - workshops on Inirobot and Poppy Education, organized by D. Roy

October 2016, Journées APMEP (Lyon): D. Roy wins Hoquenghem Prize. https://www.inria.fr/centre/bordeaux/actualites/didier-roy-recoit-le-prix-serge-hocquenghem

Novembre 2016, Inria Learning Lab (Paris): D. Roy - Presentation of Inirobot kit.

10.3.2.2. Training and meeting

- Février 2016, French Senat (Paris), audition by Senator Françoise Cartron for educational activities : D. Roy - presentation / demonstration of Inirobot kit .
- October 2016, Robotics for education Training week "Graines de sciences": D. Roy (Fondation "La Main à la Pâte", Marseille CIRM)

10.3.3. KidBreath

February 11th 2016, 2nd Meeting for Aquitaine and Euskadi companies in Biology and Health: A. Delmas - Poster presentation of KidBreath project.

September 16th to 18th 2016, Hackathon of innovation in pulmonary diseases Respirhacktion: A. Delmas - Oral presentation and project development in hackathon.

October 5th to 7th 2016, 5th Conference in Health Ergonomics and Patient Safety: A. Delmas - Poster presentation of KidBreath project [102],

November 16th 2016, Learning Lab day: A. Delmas, B. Clément, P-Y. Oudeyer, D. Roy - Oral presentation of Flowers projects linked to Education.

December 2nd to 3rd 2016, 5th edition of Serious Games in Medicine Conference: A. Delmas - Oral presentation of KidBreath project

10.3.4. Other

PY Oudeyer wrote popular science articles about computer science, artificial intelligence and robotics, and gave several interviews in the general press and at radio and TV programs: see http://www.pyoudeyer.com/popular-science/ and http://www.pyoudeyer.com/press/ and has been maintaining a youtube channel showing popular science videos https://www.youtube.com/channel/UC7QuDF8AaE6mqEM9W_S30RA/featured

D. Roy is co-organiser of R2T2 International Mission with EPFL and ESPE Martinique: Remote Robotics programming with children. https://www.thymio.org/en:thymio-r2t2

MANAO Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

Expressive 2016 (NPAR-SBIM-CAe), Workshop on NanoAppearance

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

ACM Siggraph 2016, ACM Siggraph Asia 2016, Symposium on Geometry Processing (SGP) 2016, Geometric Modeling and Processing (GMP) 2016, SIBGRAPI (Conference on Graphics, Patterns and Images) 2016

10.1.2.2. Reviewer

Eurographics 2016, Pacific Graphics 2016, High Performance Graphics 2016

10.1.3. Journal

10.1.3.1. Reviewer - Reviewing Activities

ACM Transactions on Graphics (TOG), IEEE Transactions on Visualization and Computer Graphics (TVCG), Computer Graphics Forum (CGF),

10.1.4. Invited Talks

Implicit Skinning : une méthode d'animation de personnages interactive avec contacts et étirements de la peau. Rencontres Animation Développement Innovation (RADI).

10.1.5. Research Administration

Inria Evaluation Committee

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

The members of our team are involved in teaching computer science at University of Bordeaux, ENSEIRB Engineering School, and Institut d'Optique Graduate School (IOGS). General computer science is concerned, as well as the following graphics related topics:

Master : Pierre Bénard, Gaël Guennebaud, Romain Pacanowski, Advanced Image Synthesis, 60 HETD, M2, Univ. Bdx, France.

Master : Gaël Guennebaud, Numerical Techniques, 45 HETD, M1, IOGS, France

Master : Xavier Granier, Image Synthesis, 14 HETD, M2, IOGS, France

Master : Gaël Guennebaud, Geometric Modeling, 22 HETD, M2, IOGS, France

Master : Romain Pacanowski, Thibaud Lambert, Antoine Lucat & Brett Ridel, Algorithmic and Object Programming, 60 HETD, M1, IOGS, France

Master : Xavier Granier, Romain Pacanowski, Colorimetry and Appearance Modeling, 20 HETD, M1, IOGS, France.

Master : Gaël Guennebaud and Pierre Bénard, High-performance 3D Graphics, 60 HETD, M1, Univ. Bdx and IOGS, France.

Master : Pierre Bénard, Virtual Reality, 24 HETD, M2, Univ. Bdx, France.

Master : Ivo Ihrke, Advanced Display Technology, 12 HETD, M1, IOGS, France

Master : Pierre Bénard, Image Synthesis and 3D modeling, 60 HETD, M2, ENSEIRB, France

Licence : Patrick Reuter, Digital Imaging, 36 HETD, L3, Univ. Bdx, France.

Some members are also in charge of some fields of study:

Master : Xavier Granier, M2, IOGS (Bordeaux), France.

License : Patrick Reuter, Science and Modeling, L2, Univ. Bdx, France.

10.2.2. Supervision

PhD : Boris Raymond, Rendering and manipulation of anisotropic materials, Univ. Bordeaux, P. Barla & G. Guennebaud & X. Granier

PhD : John Restrepo, Plenoptic Imaging and Computational Image Quality Metrics, Inria & Univ. Bordeaux, I. Ihrke

PhD : Brett Ridel, Interactive spatial augmented reality, Inria & Univ. Bordeaux, P. Reuter & X. Granier

PhD : Carlos Zubiaga Pena, Image-space editing of appearance, Inria & Univ. Bordeaux, P. Barla & X. Granier

PhD : Florian Canezin, Implicit Modeling, Univ. Toulouse III, G. Guennebaud & Loïc Barthe

PhD : Arthur Dufay, Adaptive high-quality of virtual environments with complex photometry, Technicolor & Univ. Bordeaux, J.-E. Marvie R. Pacanowski & X. Granier

PhD : Thibaud Lambert, Real-time rendering of highly detailed 3D models, Inria & Univ. Bordeaux, G. Guennebaud & P. Bénard

PhD : Loïs Mignard-Debize, Plenoptic function and its application to spatial augmented reality, Inria & Univ. Bordeaux, P. Reuter & I. Ihrke

PhD : Antoine Lucat, Appearance Acquisition and Rendering, IOGS & Univ. Bordeaux, R. Pacanowski & X. Granier

PhD : David Murray, Expressive Rendering of Volumetric Data, FEI & Univ. Bordeaux, J. Baril & X. Granier

POTIOC Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

"2nd International OpenViBE workshop", International BCI meeting 2016, Asilomar, CA, USA,2016 (Fabien Lotte)

10.1.1.2. Member of the Organizing Committees

"IHM et Education", workshop at IHM conference, Fribourg, Switzerland, Nov. 2016 (Martin Hachet, Anke Brock)

"2nd InternationalOpenViBE workshop", International BCI meeting 2016, Asilomar, CA, USA,2016 (Fabien Lotte, Camille Jeunet, Jérémy Frey)

"What's wrong with us? Roadblocks and pitfalls in designing BCI applications", International BCI meeting, Asilomar, CA, USA, 2016 (Fabien Lotte)

Special session "Human Factors and performance metrics for BMI Training and Operation",IEEE SMC 2016, Budapest, Hungary, (Fabien Lotte, Camille Jeunet)

Diversity Co-Chair at the ACM CHI'16 conference, San José, USA, 05/2016 (Anke Brock)

Microsoft Student Research Competition at the ACM ASSETS'16 conference, Reno,USA, 10/2016 (Anke Brock)

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

IEEE VR 2017 (Martin Hachet)

Eurographics STAR 2017 (Martin Hachet)

IHM 2016 (Martin Hachet)

Mobile and Ubiquitous Multimedia MUM 2016 (Anke Brock)

Mobile and Ubiquitous Multimedia MUM 2016 Poster Committee (David Furió, Anke Brock)

1st International Neuroadaptive Technology Conference 2017 (Fabien Lotte)

7th International Brain-Computer Interface Conference, 2017 (Fabien Lotte)

International Conference on Systems, Man and Cybernetics, Brain-MachineInterface Workshop (IEEE SMC) 2016 (Fabien Lotte, Camille Jeunet)

International workshop on Pattern Recognition in NeuroImaging (PRNI) 2016 (Fabien Lotte)

International Brain-Computer Interface Meeting 2016 (publicity committee+ review committee) (Fabien Lotte)

7th Augmented Human International Conference, 2016 (Fabien Lotte)

8th Augmented Human International Conference, 2017 (Fabien Lotte)

ACM ASSETS 2016 (Anke Brock)

Computer Applications and Quantitive Methods in Archaeology 2016 (CAA) (Pascal Guitton)

8th Augmented Human International Conference, 2017 (Fabien Lotte)

7th International Brain-Computer Interface Conference, 2017 (Camille Jeunet)

10.1.2.2. Reviewer

ACM SIGGRAPH 2016 (Martin Hachet)

IEEE 3DUI 2017 (Martin Hachet)

ACM ISS 2016 (Joan Sol Roo)

ACM CHI 2016 (Fabien Lotte, Anke Brock, Camille Jeunet, Jérémy Frey)

ACM CHI 2017 (Fabien Lotte, Camille Jeunet, Anke Brock, David Furió, Camille Jeunet, Jérémy Frey)

Augmented Humans 2016 (Fabien Lotte)

International BCI Meeting 2016 (Fabien Lotte)

EICS 2016 (Fabien Lotte)

IJCNN 2016 (Fabien Lotte)

PRNI 2016 (Fabien Lotte)

IEEE SMC 2016 (Fabien Lotte, Camille Jeunet)

Eurohaptics 2016 (Anke Brock)

Handicap 2016 (Anke Brock)

HapticsSymposium 2016 (Anke Brock)

ACM IHM 2016 (Anke Brock)

ACM MobileHCI 2016 (Anke Brock)

ACM NordiCHI 2016 (Anke Brock)

ACM TEI 2016 (Anke Brock)

ACM Ubicomp 2016 (Anke Brock)

ACM UIST 2016 (Anke Brock)

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Associate Editor in Brain Computer Interfaces (Fabien Lotte)

Associate Editor in Journal of Neural Engineering (Fabien Lotte)

Review Editor for Frontiers in Robotics and AI (Martin Hachet)

Review Editor for Frontiers in Neuroprosthetics (Fabien Lotte)

Review Editor for Frontiers in Human-Media Interaction (Fabien Lotte)

Guest Associate Editor, Frontiers in Robotics and AI, with D. Friedman, on “Brain-Computer Interfaces Technologies forRobotics and Virtual Reality”, 2016 (Fabien Lotte)

TACCESS Special Issue for ASSETS’17 conference (Anke Brock)

10.1.3.2. Reviewer - Reviewing Activities

Computer and Graphics (Martin Hachet)

Computers and Education (David Furió)

Computational Intelligence and Neurosciences (Fabien Lotte)

Journal of Neural Engineering (Fabien Lotte)

Frontiers in Neurosciences / Frontiers in ICT (Fabien Lotte)

IEEE Transactions on Biomedical Engineering (Fabien Lotte)

IEEE Transactions on Neural Systems and Rehabilitation Engineering (Fabien Lotte)

Le Travail Humain (Fabien Lotte)

ACM TOCHI (Fabien Lotte)

Nature Scientific Reports (Fabien Lotte)

ACM TACCESS (Anke Brock)

Journal of Psychophysiology (Camille Jeunet)

PLOS One (Camille Jeunet)

Progress in Brain Research (Camille Jeunet)

Transaction in Human Machine Systems (Camille Jeunet)

Brain Science (Camille Jeunet)

10.1.4. Invited Talks

”Tangible Interaction and Spatial Augmented Reality for Education”, University of Sussex, Jan. 2016 (Martin Hachet).

"Vers des interfaces cerveau-ordinateur populaires", Conférence What’s Up In Your Mind, Paris, Jun 2016 (Jérémy Frey)

”Interaction Homme-Machine pour l’Education : au-delà de la souris et de l’écran”, Colloque Robotique et Education, Bordeaux, Juin 2016 (Martin Hachet).

"Human Learning and Alternative Applications Towards Usable Electroencephalography-based Brain-Computer Interfaces", Max Planck Institute, Tuebingen, Germany, December 2016 (Fabien Lotte)

"The birth and scope of the BrainConquest ERC starting grant project", European Research Day 2016, Tokyo, Japan, November 2016 (Fabien Lotte)

"Towards Usable EEG-based Brain-Computer Interfaces", Tokyo University of Agriculture and Technology, Tokyo, Japan, November 2016 (Fabien Lotte)

“Principles and promises of EEG-based Brain-Computer Interface technologies”, 1st Iranian IBRO/APRC School of Cognitive Neuroscience, Tehran, Iran, September 2016 (Fabien Lotte)

“When Brain-Computer Interaction meets Educational Sciences”, LaBRI general assembly, Bordeaux,France, July 2016 (Fabien Lotte)

“Toward Usable Mental Imagery-based Brain-Computer Interfaces”, Brain and Spine Institute, Paris, France, July 2016 (Fabien Lotte)

« From Neurofeedback to Brain-Computer Interfaces », Neurofeedback workshop in Bordeaux, France, July 2016 (Fabien Lotte)

“Brain-Computer Interaction and Spatial Augmented Reality Research in Potioc team”, Concordia University, Montreal, Canada, June 2016 (Fabien Lotte, Camille Jeunet)

“Latest research results in Brain-Computer Interfaces and Augmented Reality”, Brain and Computers Digital Media Conference, Center for Digital Media, Vancouver, Canada, June 2016 (Fabien Lotte)

« Educational Science Principles for Brain-Computer Interface Design”, Inserm Lyon, France, April 2016 (Fabien Lotte)

"Considering User Training and Alternative Applications to Design Usable EEG-based BCI Technologies”, EPFL, Center for Neuroprosthetics, Geneva, Switzerland, March 2016 (Fabien Lotte)

"Traitement des signaux cérébraux et classification des états mentaux", Journée scientifique de l’IFRATH "Interfaces Cerveau-Ordinateur", Paris, France, February 2016 (Fabien Lotte)

"Reciprocal learning between machines and humans for neurofeedback and BCI", Première Journée Nationale sur le Neurofeedback, Paris, France, January 2016 (Fabien Lotte)

“Interacting with spatial information” , Stanford HCI Group,Stanford University, USA, May 2016 (Anke Brock)

“Interacting with spatial information” , HERE, Berkeley, USA , May 2016 (Anke Brock)

"Interaction avec des cartes géographiques pour tous", Immersion, Bordeaux, France, April 2016 (Anke Brock, Julia Chatain)

"Interacting with spatial information" , University of Sussex, UK, February 2016 (Anke Brock)

Animation table ronde, Journée URFIST « Vers de nouveaux paradigmes pour l'édition scientifique », Bordeaux, March 2016 (Pascal Guitton)

"L'éthique en Sciences du numérique", Ecole du Management Inria, Paris, September 2016 (Pascal Guitton)

"Physiological computing and spatial augmented reality: reflecting on inner state", Paris Open Source Summit, Paris, November 2016 (Jérémy Frey)

"Transparence algorithmique et éthique", Journée nouveaux arrivants Inria, Saclay, December 2016 (Pascal Guitton)

"Interfaces cerveau-ordinateur : quoi, pourquoi et comment ?", ENSCBP - Media Sciences, Bordeaux, Février 2016 (Camille Jeunet)

"How Cognitive Sciences Can Contribute to Research in Brain-Computer Interaction", National Cognitive Science Conference 2016, San Diego (Camille Jeunet)

"Understanding and Improving Mental-Imagery based Brain-Computer Interface User Training: Towards Efficient, Reliable and Accessible BCIs", University of Oldenburg, October 2016 (Camille Jeunet)

"Understanding and Improving MI-BCI User-Training", University of Freiburg, Germany, November 2016 (Camille Jeunet)

10.1.5. Leadership within the Scientific Community

IEEE 3DUI Steering committe - Leader (Martin Hachet)

10.1.6. Scientific Expertise

Member of Jury for recruitment of Researcher (CR2-CR1) Inria Bordeaux (Martin Hachet)

Expert for the Millennium Science Initiative research group evaluation, Chile (Fabien Lotte)

Expert for the « Sapienza »,University of Rome, research projects, Italy (Fabien Lotte)

Expert for the Partenariats Hubert-Curien (PHC) Germaine deStaël, France-Switzerland research projects (Fabien Lotte)

Etude "Panorama du cyberespace dans 3 à 5 ans" - Workshop "Evolutions technologiques", CEIS, CREC (Fabien Lotte)

Member of Inria Cellule de veille et de prospective (Pascal Guitton)

Expert for Credit Impot Recherche (Martin Hachet)

Member of the scientific committee of SCRIME (Martin Hachet)

10.1.7. Research Administration

Member of Inria Bordeaux Sustainable Development Committee (Martin Hachet)

Member of Inria Ethical Committee (COERLE) (Pascal Guitton)

Member of Inria International Chairs Committee (Pascal Guitton)

Responsable of Inria RA2020 Committee (new annual Activity Report) (Pascal Guitton)

Member of Comité de Pilotage de Software Heritage (Pascal Guitton)

Member of Comité de Pilotage Responsabilité Sociétale de l'Université, Université de Bordeaux (Pascal Guitton)

Member of Conseil d'administration Institut d'Optique Graduate School (Pascal Guitton)

Member of Commission de recrutement des Inspecteurs Généraux de l'Education Nationale (IGEN) (Pascal Guitton)

Member of Inria Bordeaux Committee for Technological Developement (Fabien Lotte)

Member of Inria Bordeaux Young Researchers Committe (Anke Brock)

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence : Jérémy Frey, Unix and Programming, CM-TD, 74.67h eqtd, L1 Computer Science, University of Bordeaux, France

Licence : Damien Clergeaud, Algorithme et Programmation, TD et TP, 32h eqtd, L1 Computer Science, University of Bordeaux, France

Licence : Damien Clergeaud, Algorithmique des structures de données, TD et TP, 32h eqtd, L2 Computer Science, University of Bordeaux, France

Licence : Camille Jeunet, Sciences humaines et méthodes, CM-TD, 18h eqtd, Licence MIASHS, University of Bordeaux, Franc

Master : Jérémy Frey, Programming projects, TD, 18h eqtd, M1 Computer Science, University of Bordeaux, France

Master : Pascal Guitton, Virtual and Augmented Realities, CM, 36h eqtd, M2 Computer Science, University of Bordeaux, France

Master : Pascal Guitton, Digital accessibility, CM, 12h eqtd, M1 Cognitive Science, University of Bordeaux, France

Master : Jérémy Frey, Programming projects, TD, 10h eqtd, M2 Computer Science, University of Bordeaux, France

Master : Pascal Guitton, Assistive technologies, CM, 30h eqtd, M2 Cognitive Science, University of Bordeaux, France

Master : Anke Brock, Virtual Reality and 3D Interaction, CM-TD, 7,5h eqtd, M2 Cognitive Science, University of Bordeaux, France

Master : Martin Hachet, Virtual Reality and 3D Interaction, CM, 12h eqtd, M2 Cognitive Science, University of Bordeaux, France

Master : Fabien Lotte, Virtual Reality and 3D Interaction, CM, 4h eqtd, M2 Cognitive Science, University of Bordeaux, France

Master : Anke Brock, Interaction and Ergonomics, CM-TD, 10h eqtd, 3rd year (M2), Enseirb, Bordeaux, France

Master : Martin Hachet, Interaction and Ergonomics, CM-TD, 8h eqtd, 3rd year (M2), Enseirb, Bordeaux, France

Master: Fabien Lotte, Virtual Reality, Accesibility and Brain-Computer Interfaces, 4h eqtd, 3rd year (M2), ENSSAT, Lannion, France

Master: Fabien Lotte, Brain Computer Interfaces, 6h eqtd, 3rd year (M2), ESIEA, Laval, France

Master : Anke Brock, Human-Computer Interaction, CM-TD, 12h eqtd, M2 SRI, Upsitech Toulouse, France

Master: Fabien Lotte, Human-Computer Interactions, CM-TD, 7.5 eqtd, M1 Cognitive Sciences and Ergonomy, University of Bordeaux, France

Master : Anke Brock, Accessibility of interactive systems, CM-TD, 6h eqtd, M2 IHM, ENAC and University Toulouse, France

Master : Anke Brock, Accessibility of interactive systems, CM-TD, 6h eqtd, M2 Systèmes Mobiles Autonomes Communicants / Internet des Objets (Mobiles), University Bordeaux, France

Master : Camille Jeunet, HCI and Human factors, CM-TD, 18h eqtd, M1 Sciences Cognitives and Ergonomie, University of Bordeaux, France

MOOC : Pascal Guitton and Hélène Sauzéon, "Comment favoriser l'accessibilité numérique", 5 weeks, Plate-forme France Université Numérique (FUN), large audience, initial and continuous training, about 4000 registered people.

10.2.2. Supervision

PhD: Camille Jeunet, "Improving User training approaches for Brain-Computer Interface", University of Bordeaux, Defense on December 2nd, 2016 (Martin Hachet, Fabien Lotte, co-supervision with Bernard N'Kaoua, and Sriram Subramanian)

PhD in progress: Julia Chatain, "Design and evaluation of augmented geographic maps", University of Bordeaux, since September 2015 (Anke Brock and Martin Hachet)

PhD in progress: Damien Clergeaud, "Collaborative interaction for aerospace scenarios", University of Bordeaux, since November 2014 (Pascal Guitton)

PhD in progress: Joan Sol Roo, "Interaction with Spatial Augmented Reality", University of Bordeaux, since December 2014 (Martin Hachet)

PhD in progress: Jelena Mladenovic,"User Modeling for Adaptive BCI training and operation", University of Bordeaux, since December 2015 (Fabien Lotte, co-supervised with Jérémie Mattout)

PhD in progress: Pierre-Antoine Cinquin,"Design and Experimental Validation of Accessible E-learning systems for people with cognitive disabilities", University of Bordeaux, since September 2016 (Hélène Sauzéon, Pascal Guitton)

PhD in progress: Léa Pillette, "Redefining Formative Feedback in Brain-Computer Interface User Training", University of Bordeaux, since September 2016 (Fabien Lotte, Bernard N'Kaoua)

PhD in progress: Lorraine Perronnet, "Neurofeedback and Brain Rehabilitation based on EEG and fMRI", Rennes University, since January 2014 (Fabien Lotte, co-supervision with Anatole Lécuyer, Christian Barillot, Inria Rennes and Maureen Clerc, Inria Sophia Antipolis)

PhD in progress: Stephanie Lees, "Assessing and Optimising Human-Machine Symbiosis through Neural signals for Big Data Analytics", Ulster University, since February 2014 (Fabien Lotte, co-supervision with Damien Coyle, Paul McCullagh and Liam Maguire, Ulster University)

10.2.3. Juries

PhD (Rapporteur): Elizabeth Rousset, INP Grenoble, February 2016 (Pascal Guitton)

PhD (Rapporteur): Sareh Saeedi, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland, March 2016 (Fabien Lotte)

PhD (Rapporteur): Hind Gacem, Telecom ParisTech, April 2016 (Martin Hachet)

PhD (Rapporteur): Honyun Cho, Gwangju Institute of Science and Technology, South Korea, June 2016 (Fabien Lotte)

PhD (Rapporteur): Sebastien Pelurson, Université Grenoble Alpes, August 2016 (Martin Hachet)

PhD (Président): Brett Ridel, Université de Bordeaux, October 2016 (Pascal Guitton)

PhD (Président): Carlos Zubiaga, Université de Bordeaux, November 2016 (Pascal Guitton)

PhD (Examinateur): Emeric Baldisser, Université de Bordeaux, March 2016 (Pascal Guitton)

PhD (Examinateur): Guillaume Claude, INSA Rennes, July 2016 (Pascal Guitton)

PhD (Examinateur): Benoit Bossavit, Universidad de Navarra, Nov. 2016 (Martin Hachet)

PhD (Examinateur): Liming Yang, Ecole Centrale de Nantes, December 2016 (Pascal Guitton)

Thesis Advisory Committee: Lonni Besançon, Université Paris Saclay, June 2016 (Martin Hachet)

Thesis Advisory Committee: Sarah Buchanan, University Central Florida, July 2016 (Martin Hachet)

10.3. Popularization

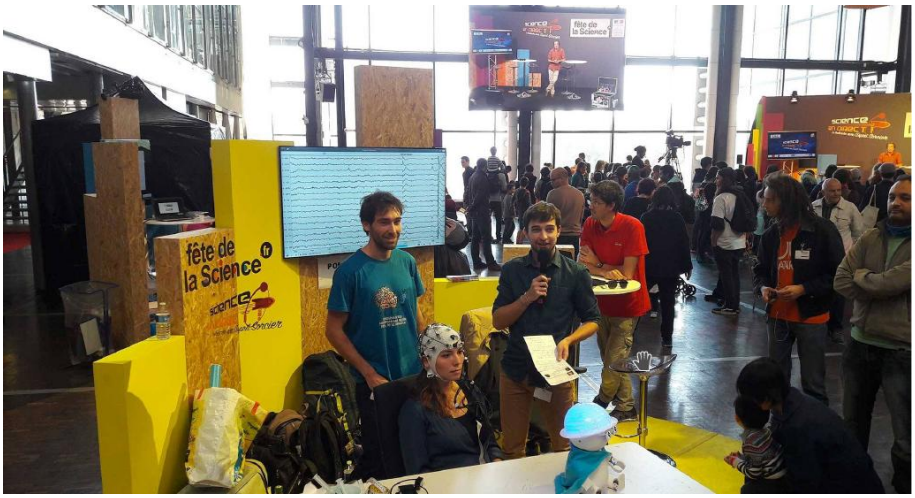

Figure 19. Teegi was demonstrated during several public events over the year, including "Fête de la Science" in La Cité des Sciences in Paris.

10.3.1. Science Festivals

Science Agora, Miraikan, Tokyo, Japan, November 2016 (Fabien Lotte)

Cartopartie, Fête de la Science, Bordeaux, October 2016 (Anke Brock)

Démonsration de Teegi, Cité des Sciences, Paris, retransmission en direct sur l'Esprit Sorcier, October 2016 (Jérémy Frey, Jelena Mladenovic, Thibault Lainé)

"Contrôler par la pensée: Apprenez comment fonctionne une interface cerveau-ordinateur en jouant à Tux Race et découvrez Teegi", Cap science, October 2016 (Jelena Mladenovic, Jérémy Frey, Thibault Lainé)

10.3.2. Popularization Talks

"Les Interfaces Cerveau-Ordinateur", CogTalk, Bordeaux, October 2016 (Fabien Lotte)

TEDx UTC (Compiegne, France, 01/2016): "Toucher et entendre les cartes géographiques" https://www.youtube.com/watch?v=sr2l8PQg_2E&feature=youtu.be, (Anke Brock)

"Comment le numérique nous aide à changer", Séminaire Science et développement durable, Bordeaux, June 2016 (Pascal Guitton)

"Réalité virtuelle et réalité augmentée : quelles réalités et quels futurs ?", Séminaire Photonique et réalité virtuelle, Bordeaux, November 2016 (Pascal Guitton)

"Le numérique et ses sciences dans le réel", Séminaire national « Enseigner l'option Informatique et création numérique au cycle terminal », ISENESR (Futuroscope), November 2016 (Pascal Guitton)

Pint of Science, "Interfaces cerveau-ordinateur : Entre mythes et réalité", Bordeaux, May 2016 (Camille Jeunet)

10.3.3. Popularization Articles

"Mythes et réalités sur l'interaction cerveau-ordinateur", Livre "5 jeunes chercheurs d'avenir" (Prix de Thèse le Monde), Editions Le Pommier (Fabien Lotte)

10.3.4. Demonstrations

Inner Garden, Bordeaux Geek Festival (BGF), May 2016 (Joan Sol Roo, Julia Chatain).

Augmented Michelson Interferometer, Bordeaux Geek Festival (BGF), May 2016 (Benoit Coulais, David Furio)

Augmented Michelson Interferometer, Hall of ALPC region, June 2016 (David Furio)

Demonstration of Teegi, Colloque Robotique et Education, Bordeaux, Juin 2016 (Jérémy Frey, Thibault Lainé).

Demonstration of Teegi,, Bordeaux Geek Festival (BGF), May 2016 (Thibault Lainé)

10.3.5. Women In Science

Femmes et Sciences Deputy Board Member (« suppléante au conseil d'administration »), since 2016 (Anke Brock)

Intervention in a high school in Valence d'Agen to present our research projects and career paths , March 2016 (Anke Brock with fellow members of Femmes et Sciences Aquitaine).

"Digit'elles -témoignages de femmes scientifiques" , Fête de la Science, Bordeaux, October 2016 (Anke Brock with fellow members of Femmes et Sciences Aquitaine)

Django girls, Django workshops for young participants, April and June 2016 (Julia Chatain)

Filles et Maths, Speed meeting with female highschool students ti speak about careers in mathematics, May 2016 (Julia Chatain)

Member of Inria Comité Parité et Egalité (Pascal Guitton)

10.3.6. Other

Conference on Brain-Computer Interfaces and how to become a research scientist, in a High School in Tulles, December 2016 (Fabien Lotte)

Radio interview on BCI for "L'oeuf ou la poule", on CHOQ, a Montréal Radio from UQAM (Université du Québec à Montréal), Montreal, Canada, June 2016 (Fabien Lotte, Camille Jeunet)

Radio interview on BCI and VR on Radio Canada, in Vancouver, Canada, June 2016 (Fabien Lotte)

Radio interview about BCI and the Brain and Computers Digital Media Conference on the Vancouver-based Round House Radio, June 2016 (Fabien Lotte)

Nuit des Chercheurs, Cap Sciences, Bordeaux, Septembre 2016 (Camille Jeunet)