



RESEARCH CENTER
Bordeaux - Sud-Ouest

FIELD

Activity Report 2017

Section Dissemination

Edition: 2018-02-19

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LFANT Project-Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. General Chair, Scientific Chair

- B. Allombert and K. Belabas organized a workshop PARI/GP in Lyon on 09-13 January 2017.
- B. Allombert and K. Belabas organized a workshop “Elliptic curves, modular forms and L -functions in the PARI/GP system” in Clermont-Ferrand on 19-23 June 2017.
- B. Allombert and A. Page organized a mini-workshop PARI/GP in Oujda, Morocco on 22-23 November 2017.

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 editor for the Springer book series *Algorithms and Computations in Mathematics (ACM)*.
- J.-M. Couveignes is a member of the editorial board (scientific committee) of the *Publications mathématiques de Besançon* since 2010.
- A. Enge is an editor of *Designs, Codes and Cryptography* since 2004.

8.1.3. 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.
- K. Belabas is a member of the 'conseil scientifique' of the Société Mathématique de France

8.1.4. Research Administration

Since January 2017, A. Enge is “délégué scientifique” of the Inria research centre Bordeaux-Sud-Ouest. As such, he is also a designated member of the “commission d’évaluation” 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 Universités” (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). He is head of the Scientific Committee of the Albatros (Alliance Bordeaux universities And Thales Research in AviOnicS) long term cooperation between Inria, Bordeaux-INP, Université de Bordeaux and CNRS.

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;
 Master : K. Belabas, *Computer Algebra*, 91h, M2, University of Bordeaux, France;
 Licence : Jean-Paul Cerri, Arithmétique et Cryptologie, 24h TD, L3, Université de Bordeaux, France
 Licence : Jean-Paul Cerri, Algèbre bilinéaire et géométrie, 35h TD, L3, Université de Bordeaux, France
 Licence : Jean-Paul Cerri, Structures algébriques 2, 35h TD, L3, Université de Bordeaux, France
 Master : Jean-Paul Cerri, Cryptologie, 24h TD, M1, Université de Bordeaux, France
 Master : Jean-Paul Cerri, Arithmétique, 60h TD, M1, Université de Bordeaux, France

8.2.2. Supervision

PhD in progress : Ida Tucker, *Design of new advanced cryptosystems from homomorphic building blocks*, since October 2017, supervised by Guilhem Castagnos and Fabien Laguillaumie
 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: Jared Asuncion, *Class fields of complex multiplication fields*, since September 2017, supervised by A. Enge and Marco Streng (Universiteit Leiden).
 PhD in progress: Chloë Martindale, *Isogeny graphs*, since 2013, supervised by A. Enge and Marco Streng (Universiteit Leiden).
 PhD in progress: Emmanouil Tzortzakis *Algorithms for \mathbb{Q} -curves*, supervised by K. Belabas, P. Bruin and B. Edixhoven.
 PhD in progress: Pavel Solomatin *Topics on L-functions*, supervised by B. de Smit and K. Belabas.
 PhD in progress: Antonin Riffaut *Calcul effectif de points spéciaux*, supervised by Y. Bilu and K. Belabas.
 Master 2: Margarita Pierricka, *Supersingular isogeny key-exchange*, supervised by D. Robert.

8.2.3. Juries

- A. Enge has written a report for the doctoral dissertation by Alexandre Le Meur, Université de Rennes, sur *Formules de Thomae généralisées à des courbes galoisiennes résolubles sur la droite projective*.
- A. Enge has written a report for the doctoral dissertation by Alexandre Gélin, Université Pierre et Marie Curie, *Class Group Computations in Number Fields and Applications to Cryptology*. K. Belabas was a member of the defense committee.
- K. Belabas has written a report for the doctoral dissertation of Thomas Camus, Université Grenoble-Alpes, *Méthodes algorithmiques pour les réseaux algébriques*.
- K. Belabas was a member of the defense committee of José Villanueva-Gutierez, Université de Bordeaux, *Sur quelques questions en théorie d'Iwasawa*.
- K. Belabas was a member of the defense committee of Philippe Moustrou, Université de Bordeaux, *Geometric distance graphs, lattices and polytopes*.
- J-M. Couveignes was a member of the defense committee of Carine Jaber (advisor Christian Klein), Université de Dijon, *Approche algorithmique au domaine fondamental de Siegel* the 28 June 2017.

- J-M. Couveignes was the president of the defense committee of Matthieu Rambaud (advisor Hugues Randriambololona), Telecom-ParisTech, *Shimura curves and bilinear multiplication algorithms in finite fields* the 2 September 2017.
- D. Robert is a member of the jury of Aggregations de Mathématiques. He is also the codirector with Alain Couvreur of the option “calcul formel” of the Modelisation part of the oral examination.

8.3. Popularization

The book Guide to Pairing-Based Cryptography [26] has been published by CHAPMAN and HALL/CRC. D. Robert wrote with Sorina Ionica the chapter “Pairings” of this book. 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).

A. Page gave a popularization talk “À la découverte de la cryptologie : la science du secret” during the Fête de la Science event. Two groups of high school students and one group of Inria agents participated in this activity. Following this talk, three high school students decided to work on the RSA cryptosystem for their TPE essay and came back to the IMB to meet A. Page and talk about this topic in greater detail.

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]
- ASME 2018 Fluids Engineering Division Summer Meeting (FEDSM) [RM]

10.1.2.2. Reviewer

This year, the team members have reviewed (3) contributions for the following conferences:

- ASME-GT Turbo Expo 2018 (Oslo, Norway) (1) [PB]
- FVCA 2017 (Lille, France) (1) [JJ]
- REEE 2017 (Fez, Marocco) (1) [PB]

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Visualization of Mechanical Processes [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 2017, the team members reviewed (13) papers for the following journals:

- Combustion and Flame (3) [PB]
- Compte Rendu Mécanique (1) [PB]
- Energy and Buildings (1) [PB]
- International Journal of Fluid Mechanics Research (1) [PB]
- International Journal of Heat and Fluid Flow (2) [RM]
- Journal of Petroleum Science and Engineering (1) [PB]
- Mathematics and Computers in Simulation (1) [RM]
- Nuclear Eng Design (2) [RM]
- Physics of fluids (1) [RM]

10.1.4. Research Administration

- Co-responsible of seventh day of welcoming new recruits at Institut Henri Poincaré on January [JJ]
- Co-responsible of the organisation of the LMAP seminar⁰ [JJ]
- Member of the LMAP council [PB]
- Member of the IPRA scientific council [RM]

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Master : "Maths 2: Data analysis", 68h25, M1 - Génie Pétrolier, Université de Pau et des Pays de l'Adour, Pau, France. [JJ]

Master : "Finite volume for hyperbolic systems and compressible fluid mechanics", 26h25, M2 - MMS, Université de Pau et des Pays de l'Adour, Pau, France. [JJ]

Master : "Finite volume 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 in progress: Gaetan Mangeon, "Modélisation avancée des transferts thermiques pour les configurations industrielles avec et sans prise en compte de la paroi solide", 2017 Supervisor: [RM].

PhD in progress: Saad Jamel, "Modélisation de la turbulence en régimes de convection mixte et naturelle dans un contexte automobile", 2017, Supervisor: [RM].

PhD,in progress: Al Hassan Afailal, "Simulation numérique tridimensionnelle de l'aérodynamique interne non réactive des moteurs à allumage commandé par une méthode hybride RANS/LES", 2017 Supervisor: [RM].

PhD, in progress: Vladimir Duffal, "Hybrid RANS/LES modelling for unsteady loadings in turbulent flows", 2017, Supervisor [RM]

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: Océane Lambert «Solutions architecturées par fabrication additive pour le refroidissement de parois de chambres de combustion» Communauté Université Grenoble Alpes, France, 17 October 2017. Supervisors: R. Dendeviel - C. Davoine. [PB, referee]

10.3. Popularization

- «Forum des Métiers» organized by "Collège Pierre Emmanuel", Pau (64), France, 18 May 2017. A stand was manned during one day with the objective of explaining the activity of researcher to an audience of middle school students. [PB]

⁰<http://lma-umr5142.univ-pau.fr/fr/activites-scientifiques/seminaires/seminaires-math-et-applications.html>

CARDAMOM Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- M. Colin: Modélisation et Analyse des phénomènes dispersifs, conférence en l'honneur de Jean-Claude Saut, 'ENSEIRB MATMECA, 21-27 November 2017, Bordeaux (<https://jc70.sciencesconf.org>)
- M. Colin : special session "Stability properties for nonlinear dispersive equations" at The Tenth IMACS International Conference, March 2017. (<http://waves2017.uga.edu/index.shtml>)
- M. Ricchiuto: HYWEC17 workshop, April 2017, Bilbao (<http://www.bcamath.org/en/workshops/hywec2017>)

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

Mathieu Colin is a member of the scientific committee of The Tenth IMACS International Conference and of the JEF day's.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Mathieu Colin is a member of the board of the journal Applications and Applied Mathematics: An International Journal (AAM)
- P.M. Congedo is Editor of Mathematics and Computers in Simulation, MATCOM (Elsevier)
- 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

10.1.3.2. 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.

10.1.4. Invited Talks

- Luc Mieussens has been invited to give a talk [35] in the SIAM Conference on Analysis of Partial Differential Equations, Dec 2017, Baltimore, United States.
- M. Ricchiuto has been plenary speaker at the conferences NUMHYP17 in Switzerland (<http://www.math.uzh.ch/nmhp17/index.php?id=speakers>), and at the conference Numerical Methods for Shallow Water Equations and Related Models, held in Shenzhen in December 2017 (<http://math.sustc.edu.cn/event/10593.html?lang=en>).
- P.M. Congedo has been plenary speaker at the conference SimHydro, in June 2017, Nice.

10.1.5. Research Administration

Luc Mieussens is the new director of the "Mesocentre de Calcul Intensif en Aquitaine", started in September, and he has been scientific Advisor for the French Atomic Energy Agency (CEA) for the third year.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Doctorat: P.M. Congedo, Introduction to Uncertainty Quantification, 26h, Doctorate School of Politecnico di Milano, Italie.

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

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

Master : Héloïse Beaugendre, Calcul parallèle (MPI), 39h, M2, ENSEIRB-MATMÉCA, France

Master : Héloïse Beaugendre, Encadrement de projets de la filière Calcul Haute Performance, 10h, M2, ENSEIRB-MATMÉCA, France

Master : Héloïse Beaugendre, Encadrement de projets sur la modélisation de la pyrolyse, 20h, M1, 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 : 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 : Mathieu Colin : projet professionnel and internship responsibility : 15 h, ENSEIRB-MATMÉCA, FRANCE

Master : Mathieu Colin : Encadrement de projets TER, 20h, ENSEIRB-MATMÉCA, FRANCE

Master : Cécile Dobrzynski, Encadrement de projets TER, 20h, ENSEIRB-MATMÉCA, FRANCE

10.2.2. Supervision

PhD : Arpaia Luca, Continuous mesh deformation and coupling with uncertainty quantification for coastal inundation problems, defended in September 2017.

PhD: Peluchon Simon, Approximation numérique et modélisation de l'ablation différentielle de deux matériaux: application à l'ablation liquide. Advisor: Luc Mieussens. PhD hosted in CEA-CESTA. Defended in November 2017.

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: 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.

PhD in progress: Mickael Rivier, Optimization under uncertainties of complex systems, started in May 2017.

10.2.3. Juries

- Luc Mieussens has been referee and member of a jury for the PhD of M. Abdelmalik, defended in TU Eindhoven (Nederlands) in May 2017;
- Héloïse Beagendre has been referee and member of a jury for the PhD of E. Itam (Montpellier University in November 2017), and referee and member of a jury for the PhD of C. Bayeux (ONERA Toulouse, in December 2017);
- Mathieu Colin has been referee and member of a jury for the PhD of Tianxiang Gou, defended in Université de Franche-Comté in October 2017;
- Mario Ricchiuto has been referee and member of the jury of the HDR of J. Harris (U. Paris-Est, November 2017), member of the PhD jury of M. Legal (Paris-Est, February 2017), and president of the juries of J. Deborde (U. de Bordeaux, June 2017), and S. Pelouchon (U. de Bordeaux, November 2017);

CQFD Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

P. Legrand was co-organizer of EA 2017.

F. Dufour has been a member of the Organizing Committee of the SIAM Conference on Control and Its Applications (CT17) in Pittsburgh, USA, 2017.

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

P. Legrand was chair for EA 2017.

10.1.2.2. Member of the Conference Program Committees

J. Anselmi has been a member of the TPC of the following international conferences: VALUETOOLS-2017, ASMTA-2017 and IFIP Performance 2017.

P. Legrand has been a member of the PC of the following international conferences: EA 2017.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

P. Del Moral is an associate editor for the journal Stochastic Analysis and Applications since 2001.

P. Del Moral is an associate editor for the journal Revista de Matematica: Teoria y aplicaciones since 2009.

P. Del Moral is an associate editor for the journal Applied Mathematics and Optimization since 2009.

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

F. Dufour is the representative of the SIAM activity group in control and system theory for the journal SIAM News since 2014.

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

10.1.3.2. Reviewer - Reviewing Activities

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

10.1.4. Invited Talks

Pierrick Legrand was invited to give a talk on IA in Thales center in october.

Pierre del Moral gave several invited talks listed at the following address: <http://people.bordeaux.inria.fr/pierre.delmoral/conf.html>

10.1.5. Leadership within the Scientific Community

P. Legrand was the scientific leader of the programs HUMO 3 (with UBX and IMS) and MICRO-DOPPLER (with Thales and IMS) in the context of the GIS ALBATROS.

10.1.6. Scientific Expertise

Pierrick Legrand has been reviewer for the ANR generics projects in 2017.

J. Saracco is elected member of the council of the *Société Française de Statistique* (SFdS, French Statistical Society).

J. Saracco was vice president of SFdS from 2014 to 2016.

10.1.7. Research Administration

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 committee of Inria.

M. Chavent and Pierrick Legrand are members of the council of the Institut de Mathématique de Bordeaux.

Pierrick Legrand was the director of the Ressources Center Victoire of the UF Mathematics and interactions until may 2017.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

- Licence : J. Anselmi, Probabilités et statistiques, 20 heures, L3, Institut Polytechnique de Bordeaux, école ENSEIRB-MATMECA, filière Télécommunications, France.
- Licence : J. Anselmi, Probabilités et statistiques, 16 heures, L3, Institut Polytechnique de Bordeaux, école ENSEIRB-MATMECA, filière Electronique, France.
- Licence : J. Anselmi, Probabilités et statistiques, 48 heures, niveau L3, Institut Polytechnique de Bordeaux, école ENSEIRB-MATMECA, filière Mathématique et Mécanique, 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, 70h, first year of école ENSEIRB-MATMECA, Institut Polytechnique de Bordeaux, France.
- Master : F. Dufour, Méthodes numériques pour la fiabilité, 36h, third year of école ENSEIRB-MATMECA, Institut Polytechnique de Bordeaux, France.
- P. Legrand, Algèbre (responsable de l'UE), Licence 1 SCIMS (108 heures)
- P. Legrand, Informatique pour les mathématiques (responsable de l'UE), Licence 1 et Licence 2 (36 heures)
- P. Legrand, Espaces Euclidiens. (responsable de l'UE), Licence 2 SCIMS (54 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 : 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 in June 2017).
- PhD in progress : Ines Jlassi, Contributions à la régression inverse par tranches et à l'estimation non paramétrique 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.
- PhD in progress : Tiffany Cherchi, “Automated optimal fleet management policy for airborne equipment”, Montpellier University, since 2017, supervised by B. De Saporta and F. Dufour.
- PhD in progress : Chloé Pasin, “Modélisation et optimisation de la réponse vaccinale. Application au VIH et Ebola”, Bordeaux University, since 2015, supervised by F. Dufour and R. Thiebaut.
- PhD in progress : Maud Joubaud, “Branching piecewise deterministic Markov processes, applications to cell biology”, Montpellier University, since 2016, supervised by B. De Saporta and B. Cloez.
- PhD completed : Emigdio Z. Flores, Human mental states classification using EEG by means of Genetic Programming, ITT Tijuana, supervised by L. Trujillo and P. Legrand (defense in July 2017).

10.2.3. Juries

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

GEOSTAT Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- H. Yahia with S. Bontemps (Bordeaux Astrophysics Laboratory) and N. Schneider (Cologne University): GENESIS/MOBS kick-off meeting 28. and 29.9.2017 in Bordeaux, <https://hera.ph1.uni-koeln.de/~nschneid/genesis-meeting-sep2017.html>.

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

H. Yahia is a review editor of *Frontiers in Fractal Physiology*.

10.1.2.2. Reviewer - Reviewing Activities

H. Yahia: *Frontiers in Physiology*.

10.1.3. Invited Talks

- N. Brodu: Presentation given to the 8th *École Interdisciplinaire sur les Systèmes Complexes* : « Extraction de données et information: applications à l'imagerie, à l'environnement et à la physique ». 11-13 october 2016, Rennes.
- K. Daoudi has been invited to the Wolrd Voice Consortium 2017 to present the project on differential diagnosis in Parkinsonism.
- H. Yahia: presentation given to the Laboratoire d'Astrophysique de Bordeaux on March 8, 2017.
- H. Yahia is invited to the TOSCA (<http://www.tosca2017.fr/>) group in march 2017.
- A. Tamim is invited in June 2017 for the reception of his PHC Hubert Curien PhD gold medal.
- K. Minaoui is invited in GEOSTAT in July 2017.
- Visit of D. Singh in GEOSTAT in August 2017 on the co-supervision of G. Singh PhD thesis.
- Invitation of H. Badri in the framework of I2S kickoff meeting, on Inria funding.

10.1.4. Research Administration

- H. Yahia participated in the first scientific meeting of "Centre d'Excellence sur les Maladies Neurodégénératives", projet « Bordeaux Initiative for Neurodegenerative Disorders », May 11 2017, Bordeaux (NEUROCAMPUS auditorium building).
- Participation of H. Yahia, H. Badri, K. Daoudi and N. Brodu to the I2S-GEOSTAT kickoff meeting in September 2017.
- Participation of K. Daoudi to the SABOR project organization.

10.2. Teaching - Supervision - Juries

10.2.1. Supervision

PhD in progress : B. Das, supervised of H. Yahia in the framework of the Toubkal project (starts 01/01/18).

PhD in progress : A. El Aouni, co-supervised by K. Daoudi, H. Yahia and K. Minaoui in the framework of the Toubkal project.

PhD in progress : G. Singh, co-supervised by N. Brodu in the framework of OPTIC asscoiated team anf IFCAM collaboration.

PhD in progress : C. Artana, co-supervised by H. Yahia in a collaboration with LOCEAN team (Univ. Paris 6).

10.3. Popularization

Diffusion of the GENESIS project in the magazine Inria PLUGIN (published beginnig 2018) and in the Inria website (national and INRIS BSO), see <https://www.inria.fr/centre/bordeaux/actualites/lancement-du-projet-genesis>.

MEMPHIS 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

Michel Bergman has co-organized the international conference "Interaction fluide-Structure: Analyse et contrôle", October 2017 (<https://indico.math.cnrs.fr/event/1366/overview>)

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 conferences are [10], [8], [13], [14], [9], [11], [15], [7].

10.1.4. Scientific Expertise

Angelo Iollo is reviewer for national and international programs such as H2020 (EU), ANR (France), PRIN (Italy).

2016-2017: Angelo Iollo is expert for the Italian Ministry of Research: quality evaluation of research products. Michel Bergmann: member of the Inria Young Researchers Commission, which allocates PhD and Postdoc grants.

Afaf Bouharguane has participated to the recruitment committee for Associate Professor position in Besançon, May 2017

Angelo Iollo was expert in the Young Investigator Rita Levi Montalcini program, Italy

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 : Claire Morel, Modélisation aerodynamique 3D d une turbine eolienne, 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 : Luis Henrique Benetti Ramo, Aeroelastic instabilities, Bergmann M. and Iollo A.

PhD in progress : Guillaume Ravel, Simulation numérique et modélisation de la nage du poisson zèbre pour l'étude de maladies humaines d'origine génétique et toxicologique, 01/10/2017, Bouharaguane A. and Babin P. (MRGM)

PhD in progress : Sébastien Riffaud, Reduced Order Models, classification and data geometry, 01/10/2017, Iollo A.

2013-2017: Meriem Jedoua, Introduction d'une méthode efficace de capture d'intérface 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.

2014-2017 : Alice Raeli, Numerical Modelling for Phase Changing Materials, 12/06/2014, Azaiez M., Bergmann M., Iollo A.

10.2.3. Juries

Michel Bergmann has participated to the PhD defense of Pierre Costini, Centrale Marseille, 19/05/2017

Michel Bergmann has participated to the PhD defense of Lei Cheng, DELF (pays-bas), 15/12/2017

Angelo Iollo has been reviewer of the PhD defense *Applicabilité de la réduction de modèles à la conception aérothermique collaborative des systèmes d'air secondaires des turbomachines*, Pierre Costini, Ecole Doctorale des Sciences pour l'Ingénieur, Aix-Marseille, May 2017.

Angelo Iollo has participated to the PhD defense of Manon Deville, *Modélisation de l'électroporation et de la transfection de gènes à l'échelle du tissu. Aspects théorique et numérique.*" Institut de Mathématiques de Bordeaux, université de Bordeaux, novembre 2017.

Angelo Iollo has participated as president to the PhD defense of Agathe Peretti *Quantification de la hétérogénéité tumorale à partir de l'imagerie médicale. Application à la classification de tumeurs rénales.* Institut de Mathématiques de Bordeaux, université de Bordeaux, décembre 2017.

10.3. Popularization

Lisl Weynans has co-organized the *Journée Filles et Maths, une équation lumineuse*, April 2017.

Afaf Bouharguane and Lisl Weynans have co-organized the *Journée Emploi Maths de l'Unité de Formation Mathématiques et Interaction*, November 2017.

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

- Arnaud Pêcher, François Clautiaux and Pierre Pesneau have organized "Journées Graphes et Algorithmes", Bordeaux, Novembre 15-17, 2017

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Olivier Beaumont is the Chair of the Algorithm Track of Super Computing 2017 (November, Denver, USA); “The International Conference for High Performance Computing, Networking, Storage and Analysis” <https://sc17.supercomputing.org>
- Olivier Beaumont is the Chair of the Algorithm Track of HIPC 2017 (December, Jaipur, India); “24th Ieee International Conference On High Performance Computing, Data, And Analytics” <http://hipc.org>
- 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

10.1.2.2. Member of the Conference Program Committees

The team members are members of the following program committees:

- Francois Clautiaux, Arnaud Pecher, and Francois Vanderbeck: ROADEF 2017: French Operational Research Society Conference.
- Lionel Eyraud-Dubois and Olivier Beaumont: HiPC 2017: 24th IEEE International Conference on High Performance Computing, Data, and Analytics
- Lionel Eyraud-Dubois: REPPAR 2017: 4th International Workshop on Reproducibility in Parallel Computing
- Olivier Beaumont: Primary PC Member, IPDPS 2017, 31st IEEE International Parallel & Distributed Processing Symposium May 29 – June 2, 2017, Orlando, Florida USA <http://www.ipdps.org/ipdps2017/index.html>
- Olivier Beaumont: HeteroPar 2017 (a EuroPar workshop), Fifteenth International Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms, August 28th, 2017, Santiago de Compostela, Spain <https://web.fe.up.pt/~heteropar2017/index.php?pane=home>
- Olivier Beaumont: IPDPSW 2017, IPDPS 2017, 31st IEEE International Parallel & Distributed Processing Symposium May 29 – June 2, 2017, Orlando, Florida USA, PC member http://www.ipdps.org/ipdps2017/2017_call_for_workshops.html

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)
- Francois Vanderbeck is Associate Editor for the EURO Journal on Computational Optimization
- Francois 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: *Lovasz's theta function and perfect graphs*, “The beauty of discrete mathematics” workshop , Montréal, Canada, October 2017.

François Vanderbeck: *Revisiting Benders Decomposition*, Combinatorial Optimization and Applications Workshop, Edinburgh, Scotland, February 2017.

10.1.5. Leadership within the Scientific Community

Our group is actively preparing the triennal symposium of the international mathematical optimization society. We organize it in Bordeaux in July 2018. 2000 attendees are expected.

10.1.6. 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

10.1.7. Research Administration

- Olivier Beaumont is the scientific deputy of Inria Bordeaux Sud-Ouest and a member of the Evaluation Committee of Inria **Verify it!!**.
- François Vanderbeck is taking care of the team OptimAI (“Optimisation Mathématique Modèle Aléatoire et Statistique”) at the Mathematics Institute of Bordeaux.
- Arnaud Pêcher is the head of the Computer Science Department, IUT 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

Licence : Licence : P. Pesneau, Optimisation, 37h, L2, Université de Bordeaux, France

Licence : Licence : P. Pesneau, Programmation pour le calcul scientifique, 24h, L2, Université de Bordeaux, France

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

Licence : Master : P. Pesneau, Algorithmique et Programmation 1, 28h, M1, Université de Bordeaux, France

Licence : Master : P. Pesneau, Programmation linéaire, 29h, M1, Université de Bordeaux, France

- Licence : 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
- Licence : B. Detienne, Initiation à l'ingénierie en optimisation, 12h, L1, Université de Bordeaux, France
- Licence : B. Detienne, Modèles et Méthodes d'Optimisation, 21h, L2, Université de Bordeaux, France
- Licence : B. Detienne, Groupe de travail applicatif, 12h, L3, Université de Bordeaux, France
- Master : B. Detienne, Optimisation continue, 43h, M1, Université de Bordeaux, France
- Master : B. Detienne, Problèmes combinatoires et routage, 14h, M1, Université de Bordeaux, France
- Master : B. Detienne, Problèmes combinatoires et routage, 14h, M1, Institut National Polytechnique de Bordeaux, France
- Master : B. Detienne, Optimisation dans l'incertain, 58h, M2, Université de Bordeaux, France
- Master : R. Sadykov, Introduction à la Programmation par Contraintes, 30h, M1, Université de Bordeaux, France
- Master : I. Tahiri, Recherche Opérationnelle, 16h, M1, Institut National Polytechnique 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 : Suraj Kumar, Scheduling of Dense Linear Algebra Kernels on Heterogeneous Resources [10], Université de Bordeaux, 12/04/2017, Olivier Beaumont (dir) and Lionel Eyraud-Dubois (co-dir)
- PhD: Thomas Lambert, Placement de tâches et réplication de fichiers sur plates-formes parallèles [11], Université de Bordeaux, 8/09/2017, Olivier Beaumont (dir) and Lionel Eyraud-Dubois (co-dir)
- PhD in progress : Jérémie Guillot, Optimisation de problèmes de partitionnement, from September 2014, François Clautiaux (dir) and Pierre Pesneau (dir).
- PhD in progress : Quentin Viaud, Méthodes de programmation mathématiques pour des problèmes complexes de découpe, from January 2015, François Clautiaux (dir), Ruslan Sadykov (dir), and François Vanderbeck (co-dir)).
- PhD in progress : Rodolphe Griset, Robust planning in Electricity production, from November 2015, Boris Detienne (dir) and François Vanderbeck (dir).
- PhD in progress : Imen Ben Mohamed, Location routing problems, from October 2015, Walid Klibi (dir) and François Vanderbeck (dir).
- PhD in progress : Thomas Bellitto, Infinite graphs, from September 2015, Arnaud Pécher (dir) and Christine Bachoc (dir).
- PhD in progress : Guillaume Marques, Planification de tournées de véhicules avec transbordement en logistique urbaine : approches basées sur les méthodes exactes de l'optimisation mathématique, from September 2017, François Vanderbeck (dir) and Ruslan Sadykov (co-dir).
- PhD in progress : Gaël Guillot, Aggregation and disaggregation methods for hard combinatorial problems, from November 2017, François Clautiaux (dir) and Boris Detienne (dir).

10.2.3. Juries

- Lionel Eyraud-Dubois participated in the jury of Raphaël Bleuse, who defended on October 11, 2017, at Université de Grenoble Alpes.
- Olivier Beaumont: Evaluation (rapporteur) and President of the PhD thesis committee of Aymen Jlassi (University of Tours, France)
- Olivier Beaumont: Evaluation (rapporteur) of the PhD thesis committee of Orcun Yildiz (Ecole Normale Supérieure de Rennes, France)
- Olivier Beaumont: Member of the PhD thesis committee of Alexandre Perrot (University of Bordeaux, France)
- Olivier Beaumont: Member of the PhD thesis committee of Noel Gillet (University of Bordeaux, France)
- Francois Vanderbeck: Member of the PhD thesis committee of Nicolas HUIN (Inria Sophia)

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.
- Olivier Beaumont participated to “Unithé ou Café” (May 19, 2017), a local event dedicated to popular science on the topic of online algorithms.
- Olivier Beaumont participated to “La Fête de la Science” (October 3 and 4, 2017) on the computation of PageRank.

CARMEN Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. General Chair, Scientific Chair

Y. Coudière co-organised the Workshop on Mathematical Methods in Cardiac Electrophysiology, November 4–6, 2017, at the University of Ottawa in Canada. Approximately 30 scientists from the US, Canada, and several European countries participated in this workshop.

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

Y. Coudière was a program committee member for the Functional Imaging and Modeling of the Heart (FIMH) meeting 2017 in Toronto, Canada.

M. Potse is a track chair for the International Congress of Cardiology 2018 in Chiba, Japan.

9.1.2.2. Reviewer

Y. Coudière and M. Potse reviewed abstracts for the Computing in Cardiology meeting in Rennes, September 2017.

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

L. Weynans: *Computers and Fluids, Multiscale Modeling and Simulation*

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, Mathematical Modelling of Natural phenomena*.

9.1.4. Invited Talks

N. Zemzemi: Problèmes directs et inverses en électrophysiologie cardiaque. Séminaire du Laboratoire de mathématiques à Université de Technologie de Compiègne. November 14th 2017.

P.-E. Bécue: A Three-Dimensional Computational Model of Action Potential Propagation Through a Network of Individual Cells. *Workshop on Mathematical Methods in Cardiac Electrophysiology*. University of Ottawa, Ottawa, Canada, November 2017. <http://www.fields.utoronto.ca/activities/17-18/electrophysiology>

A. Davidovic: Modified bidomain model addressing structural heterogeneities. Application to the rat heart ventricles using HR MRI. *Workshop on Mathematical Methods in Cardiac Electrophysiology*. University of Ottawa, Ottawa, Canada, November 2017.

A. Gérard: Data assimilation applied to electroanatomical mapping in a bilayer atrial model. *Workshop on Mathematical Methods in Cardiac Electrophysiology*. University of Ottawa, Ottawa, Canada, November 2017.

M. Potse: Chaos, order, and numerical errors in a large-scale atrial fibrillation model. *Workshop on Mathematical Methods in Cardiac Electrophysiology*. University of Ottawa, Ottawa, Canada, November 2017.

M. Potse: Patient-specific modeling to understand cardiac disease. *BCAM Workshop Quantitative Biomedicine for Health and Disease*. Basque Center for Applied Mathematics, Bilbao, Spain, 21 February 2017.

Y. Coudière: Modélisation d'hétérogénéités de la structure myocardique. GRD Mamovi. Lyon, 27 September 2017.

Y. Coudière: High-order finite volume scheme for cardiac electrophysiology, invited talk for the workshop *Schémas volumes finis*, Nice, 30-31 March 2017, <http://math.unice.fr/~krell/Colloque/index.php>

9.1.5. Leadership within the Scientific Community

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

9.1.6. Research Administration

L. Weynans: member of the “Conseil du département Sciences et Technologies” of Bordeaux University.

Y. Coudière:

- Scientific responsibility of the IMB (CNRS UMR 5251) team “Calcul Scientifique et Modélisation,” ~ 60 persons.
- Responsible for the scientific communication (*Charge de mission à l'animation scientifique*) of the IMB.
- N. Zemzemi: Administration of the Inria associated team Epicard.

M. Leguèbe: co-organization of team “Calcul Scientifique et Modélisation” seminar.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Y. Coudière, Groupe de Travail Applicatif, 33h, L2, Université de Bordeaux, France

Master : Y. Coudière, Méthodes d’éléments finis pour la mécanique des fluides incompressibles, 33h, M2, Université de Bordeaux, France.

Licence : Y. Coudière, Projet multidisciplinaire Matmeca, 33h, L2, Université de Bordeaux, France.

Licence : M. Bendahmane, Mathématiques générales, 36h, L1, Université de Bordeaux, France

Licence : M. Bendahmane, Algèbre Linéaire, 46h, L2, Université de Bordeaux, France

Licence : M. Bendahmane, Fonctions de plusieurs variables et optimisation, 33h, L2, Université de Bordeaux, France

Licence : M. Bendahmane, Analyse appliquée, 33h, L1, Université de Bordeaux, France

Licence : M. Bendahmane, Séries et intégrales multiples, 33h, L1, Université de Bordeaux, France

Master : M. Bendahmane, Analyse appliquée, 33h, M2, Université de Bordeaux, France

Licence : L. Weynans, Fortran MMk, 20h, L1, Université de Bordeaux, France

Master : L. Weynans, Fortran MMk, 28h, M1, Université de Bordeaux, France

Licence : L. Weynans, Introduction Analyse Numérique, 24h, L3, Université de Bordeaux, France

Licence : L. Weynans, Cours Programmation avancée pour le calcul scientifique, 24h, L3, Université de Bordeaux, France

Licence : L. Weynans, TP Programmation avancée pour le calcul scientifique, 34h, L3, Université de Bordeaux, France

Licence : L. Weynans, encadrement de projets 1ère année Matmeca, 25h, L1, Université de Bordeaux, France

Y. Coudière is responsible for the program “Ingénierie mathématique” in the Mathematics Bachelor, and responsible for the program “Modélisation Numérique et Calcul Haute Performance” in the Master program Applied Mathematics and Statistics, at the Université de Bordeaux.

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: 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: 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: A. Gérard, “Modèles numériques personnalisés de la fibrillation auriculaire,” started 1 September 2015, supervised by Y. Coudière.

PhD in progress: B. Lambert, “Modélisation et simulation numérique de suspensions de particules dans un fluide,” started 1 October 2015, supervised by M. Bergmann and L. Weynans.

PhD : N. Fikal, “Quantification d’incertitudes en électrocardiographie par la méthode éléments finis stochastique,” Université de Mohamed V au Maroc, 21 July 2017, supervised by R. Aboulaich and N. Zemzemi.

PhD : W. Mbarki, “Modélisation et analyse d’un problème d’interaction en biomathématiques : couplage en électrophysiologie cardiaque,” Université de Tunis El Manar, 28 July 2017, supervised by S. Aouadi and N. Zemzemi.

PhD in progress : Y. Abidi, “Etude théorique et numérique de problème d’identification de paramètres en électrophysiologie cardiaque”. Université de Tunis El Manar, started in October 2015, supervised by M. Bellassoued and M. Mahjoub in Tunis and N. Zemzemi in Bordeaux.

9.2.3. Juries

L. Weynans: PhD committee of Isabelle Lagrange (Onera, Toulouse), “comité de sélection” at Pau University

Y. Coudière: reviewer for the HDR Thesis of C. Le Potier (Construction et développement de nouveaux schémas pour des problèmes elliptiques et paraboliques), defended 15 november 2017.

Y. Coudière: reviewer for the HDR Thesis of E. Vigmond, defended January 10, 2017.

Y. Coudière: jury member for the PhD defense of Rémi Tesson, Université Marseille-Provence, defended December 12th, 2017.

9.3. Popularization

L. Weynans:

- Responsible for the communication (*Chargé de communication*) of the IMB
- Organization of the day “Filles et Maths, une équation lumineuse”
- Several presentations for high-school students about scientific computing

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, Julien Diaz and Sébastien Tordeux organized the conference in honor of Abderrahmane Bendali in Pau, December 12th-14th, 2017, <https://project.inria.fr/bendali/>
- Julien Diaz co-organized the conference in honor of Patrick Joly in Saclay, August 28th-30th 2017, in Saclay <https://wavesjoly60.inria.fr/>

9.1.1.2. Member of the Conference Program Committees

- Hélène Barucq and Julien Diaz were members of the scientific committee of Waves 2017 <https://ccevents.umn.edu/waves-2017>

9.1.2. Journal

9.1.2.1. Reviewer - Reviewing Activities

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

- Applied Numerical Mathematics
- Mathematics and Computers in Simulation
- International Journal for Numerical Methods in Engineering
- Geophysical Journal International
- IMA Journal of Numerical Analysis
- SIAM Journal on Scientific Computing
- Computers and Mathematics with Applications
- Journal of Mathematical Analysis and Applications
- Journal of Computational Physics
- Journal of the Acoustical Society of America

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 has been part of a working group dealing with the new strategic plan of Inria. In January 2017, she has been appointed chairwoman of the committee created by the regional council of Nouvelle Aquitaine. She is in charge of the scientific evaluation of research projects in Mathematics, Informatics, Electronics, Optics. She is the scientific head of the project DIP since its creation in 2009.
- Juliette Chabassier is member of the Inria BSO Young Researcher Committee and of the Inria BSO Center Committee. She 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 and 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

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

Licence : Justine Labat, Algèbre 1, 19,5h Eq. TD, L1, UPPA, France

Licence : Justine Labat, Algèbre linéaire, 19,5h Eq. TD, L1, UPPA, France

Licence : Justine Labat, Introduction aux Probabilités, 19,5h Eq. TD, L2, UPPA, France

Licence : Victor Péron, Analyse 2, 39 Eq. TD, L1, UPPA, France

Licence : Victor Péron, Mathématiques appliquées, 15 Eq. TD, L1, UPPA, France

Licence : Victor Péron, Courbes et calcul intégral, 19.5 Eq. TD, L2, UPPA, France

Licence : Victor Péron, Analyse numérique des systèmes lin., 48.75 Eq. TD, L3, UPPA, France

Master : Victor Péron et Sébastien Tordeux, Analyse num. des EDP 1: différences finies, 75 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

Master : Victor Péron et Sébastien Tordeux, Méthodes asymptotiques, 35 eq. TD, Master 2, UPPA, FRANCE

9.2.2. Supervision

HDR : Victor Péron, Asymptotic models for acoustic, elastic and electromagnetic media. Corner and edge asymptotics for elliptic systems, Université de Pau et des Pays de l'Adour, December 6th, 2017 [12].

PhD : Vincent Darrigrand, Etude d'erreur pour des problèmes d'Helmholtz approchés par des techniques de Petrov-Galerkin , September 1st 2017, Hélène Barucq and David Pardo.

PhD : Florian Faucher, Méthodes d'inversion sismique dans le domaine fréquentiel , November 29th 2017, Hélène Barucq.

PhD : Mamadou N'Diaye, Analyse et développement de schémas temporels hybrides pour les équations hyperboliques du premier ordre, December 8th 2017, Hélène Barucq and Marc Duruflé.

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 : 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 : Justine Labat, Diffraction of an electromagnetic wave by small obstacles, Université de Pau et des Pays de l'Adour, October 2016, Victor Péron and Sébastien Tordeux

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 : Pierre Jacquet, ,October 2015, Hélène Barucq and Julien Diaz.

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.

PhD in progress : Alexandre Gras, Hybrid resonance for sensing applications, IOGS, October 2017, Encadrement : Philippe Lalanne(IOGS), Marc Duruflé, Hélène Barucq (Magique 3D)

Master 1 internship : Kevin Lagnoux, Détermination des paramètres physiques et de forme d'un objet dans un milieu élasto-acoustique, Université Toulouse III, Sept. 2017.

Master 1 internship : Fatima Ezzahra, Formulation de modèles de dissipation dans les milieux poreux en géophysique, École des Mines de Saint-Étienne, Sept. 2017.

9.2.3. Juries

- Hélène Barucq : Laure Pesudo (Université Paris Saclay) "Une méthode hybride couplant la méthode des équations intégrales et la méthode des rayons en vue d'applications au contrôle non destructif ultrasonore", PhD thesis, October 8th 2017
- Hélène Barucq : Victor Péron (Université de Pau et des Pays de l'Adour) "Analyse asymptotique et calcul scientifique pour des applications en physique", HDR, December 6th 2017
- Hélène Barucq (reviewer): Sébastien Pernet (Université Paul Sabatier, Toulouse) "Quelques méthodes performantes pour la simulation des phénomènes de propagation et de diffraction d'ondes", HDR, December 11th 2017
- Hélène Barucq (reviewer): Marius Albrand (Université Paul Sabatier, Toulouse) "Etude d'une solution d'évaluation des constantes diélectriques du béton d'ouvrages à risque par une approche problème inverse en électromagnétisme", PhD thesis, December 18th 2017
- Julien Diaz (reviewer): Mohamed Lakhal (Université Paris Saclay) "Méthodes d'inversion pour la reconstruction de mines enfouies à partir de mesures d'antennes radar.", PhD thesis, June 22nd 2017
- Julien Diaz : Vincent Darrigrand (University of Basque Country/Université de Pau et des Pays de l'Adour) "Goal-oriented adaptivity using unconventional error representations", PhD thesis, September 1st 2017
- Julien Diaz : Octavio Castillo Reyes (UPC Universitat Politecnica de Catalunya) "Edge-Elements Formulation of 3D CSEM in Geophysics: A Parallel Approach.", PhD thesis, October 23th 2017
- Julien Diaz : Mamadou N'Diaye (Université de Pau et des Pays de l'Adour) "Étude et développement de méthodes numériques d'ordre élevé pour la résolution des équations différentielles ordinaires (EDO), applications à la résolution des équations d'ondes acoustiques et électromagnétiques.", PhD thesis, December 8th 2017
- Juliette Chabassier : Jin Jack Tan (Université Paris Saclay) "Piano acoustics: string's double polarisation and piano source identification", PhD thesis, November 15th 2017.

9.3. Popularization

- Juliette Chabassier shared her experience as a scientist in the collège de Lussac in March 2017.
- Juliette Chabassier participated in scientific "speed datings" during the "Filles et Maths" day in April 2017.
- Juliette Chabassier shared her experience as a scientist during "Printemps de la Mixité" in May 2017.
- Juliette Chabassier presented a talk around mathematics in music in Pau in April 2017.
- Juliette Chabassier co-organized a series of three conferences around the theme of women in informatics in 2017.
- Juliette Chabassier gave a talk about mathematics in music in Bordeaux during the "découvreuses anonymes" exposition in November 2017.
- Juliette Chabassier presented a workshop around mathematics in music in November 2017.
- Juliette Chabassier gave a pitch of science during the national event "50 ans Inria" in November 2017.

MNEMOSYNE Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. General Chair, Scientific Chair

Nicolas Rougier: co-chair for the organization of the 7th Symposium on the Biology of Decision Making, Bordeaux, France (<http://sbdm2017.isir.upmc.fr/>).

10.1.1.2. Member of the Organizing Committees

F. Alexandre: organization of the Latin-American Summer School on Computational Neuroscience (Laconeú, 9-27 january 2017, Valparaiso, Chile).

X. Hinaut: organisation of the 2nd Workshop on Machine Learning Methods for High-Level Cognitive Capabilities in Robotics (ML-HLCR), IROS, 28 September 2017, Vancouver, Canada.

10.1.2. Scientific Events Selection

10.1.2.1. Member of the Conference Program Committees

Nicolas Rougier: Scipy 2017, EuroScipy 2017, WSOM 2017

10.1.2.2. Reviewer

- F. Alexandre: NER'17; ICDL-EPIROB 2017;
- Nicolas Rougier: Frontiers in Computational Neuroscience, Complexity, JOSS, ReScience;
- X. Hinaut: CogSci'17, ICDL-EPIROB 2017, ESANN 2018;

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, Academic editor for PeerJ, review editor for Frontiers in Neurorobotics.

10.1.3.2. Reviewer - Reviewing Activities

- F. Alexandre: Frontiers in Neuroscience; PLoS ONE; Cognitive Computation; Nature Scientific Reports; eLife;
- André Garenne: Journal of Integrative Neuroscience
- Xavier Hinaut: Neural Networks, Frontiers in Neurorobotics, IEEE Transactions on Cognitive and Developmental Systems (TCDS), Applied Sciences;

10.1.4. Invited Talks

F. Alexandre:

- Workshop on Computational Neuroscience: New trends and challenges for 2030; January 18, Valparaiso, Chile.
- 2017 meeting of the GDR Neurosciences of memory NeuroMem, May, 16.
- Seminar “Modeling Cognitive Processes” of the laboratory LEAD, Dijon (Nov. 24).
- Annual meeting of the AMAF medical association (“Modeling Cognitive Functions and Artificial Intelligence”, Nov. 25, Creteil).

Nicolas Rougier:

- Lex Robotica, Paris, France
- 7th Symposium on the Biology of Decision Making, Bordeaux, France.
- Open Science, Bordeaux, France
- Scientific Python, La Rochelle, France
- Reproduction is not replication, Reading, UK

X. Hinaut:

- Workshop "The role of the basal ganglia in the interaction between language and other cognitive functions", DEC, ENS Ulm, October 12-13, Paris, France.

10.1.5. Leadership within the Scientific Community

X. Hinaut:

- President of the association MindLaBDX: "open citizen lab" in Cognitive Sciences and Artificial Intelligence in Bordeaux.
- Organization of "Hack'1 Cerveau !": the first CogSci and AI hackathon in Bordeaux, at 127° (the fablab of Cap Sciences), 8-10 December 2017. Cf <https://mindlabdx.github.io/hack1cerveau> and also <https://lascienceenpassant.wordpress.com/2017/12/11/hackaton-hack1-cerveau> and <http://penseeartificielle.fr/hack1-cerveau-2017-cerveau-cap-science>.
- member of the Administration Committee of Fresco association (French Federation of students in Cognitive Science)

Nicolas Rougier: Editor in chief for ReScience

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. In 2017, he participated to the CHIST ERA Evaluation Panel, May 18-19 and acted as an expert for the ANR.

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 of the <http://classcode.fr> project and in charge, for Inria, of the creation of a Master SmartEdTech at UCA within the scope of his mission for the Inria Sophia Antipolis - Méditerranée direction.

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

F. Alexandre: teaching at the Laconeum summer school 9-27 january 2017, Valparaiso, Chile. Teaching Ethics for Inria PhD students (Sept. 25 and Oct. 6).

André Garenne (in collaboration with Xavier Nogues) created a new teaching unit for bachelor students in biology at the final stage of their graduation. This unit will be half dedicated to the learning of programming basics using Python and its scientific libraries and half dedicated to the learning of statistical data analysis methods relying mainly on machine learning approaches and the R language.

Nicolas Rougier organized a python scientific course (24h) for the doctoral students in mathematics and computer science.

Thierry Viéville is since 2009 in charge of formations of high-school teachers in popular computer science and teached computational neuroscience in the Master of Cognitive Science and Ergonomics.

In addition, 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.

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 biosciences with whom sharing profound ideas in computer science is mandatory for a real collaboration.

- Thierry Viéville is for 50% of his time involved in popularization actions, mainly computer science large audience education, and has been promoted Officer of the Order of Academic Palms for the collective contribution of the Inria Science Outreach mission.
- F. Alexandre organized a conference about artificial intelligence with high-school children (Sept. 28, Lormont)
- I. Chraibi Kaadoud participated to the regional challenge: “My PhD in 180 seconds”
- X. Hinaut organized the 1st hackathon of Bordeaux in Cognitive Sciences and Artificial Intelligence, 8-10 December, Cap Sciences, Bordeaux. (<https://mindlabdx.github.io/hack1cerveau/>); Organization of a workshop on cellular automaton at Le Node, Bordeaux; Meeting groups of high-school students for their projects on Artificial Intelligence topics.
- The team participated to “La semaine du cerveau” on the Bordeaux Neurocampus (March 13-17) (<http://www.bordeaux-neurocampus.fr/fr/manifestations-scientifiques/seminaires-2017/semaine-cerveau-2017.html>); to the “fête de la science” on the Bordeaux Neurocampus (<http://circuit-scientifique-bordelais.cnrs.fr/modules/show/261>, Oct. 7-9); to the Declics program for high-schools (<http://www.cerclefser.org/fr/declics/>, Dec. 12)

MONC Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Selection

9.1.1.1. Member of the Conference Program Committees

- Sébastien Benzekry: Membre du comité scientifique des *Mathematical Biology Modeling days of Besançon, MB²* (<http://mb2.univ-fcomte.fr/index.html>).
- Clair Poignard: Inria at Silicon Valley BIS'2017 at Berkeley. Session on level-set methods, parallel computing and uncertainty quantifications. (Chairs: C. Poignard F. Gibou).
- Clair Poignard: Organisation of the Theoretical Physics Day at the University of Bordeaux.

9.1.2. Journal

9.1.2.1. Member of the Editorial Boards

- Sébastien Benzekry: Invited editor of a special issue of the journal Complexity : "Mathematical Oncology: Unveiling Biological Complexity Using Mathematical Methods"
- Clair Poignard: Member of the editorial committee of DCDS-S.

9.1.2.2. Reviewer - Reviewing Activities

- Sébastien Benzekry: Bull Math Biol, Computational and Applied Mathematics.
- Clair Poignard: Radiology, Bioelectrochemistry, Math. Medi Biol, J. Sci Comp., M2AN, JMPA, ESAIM Proc.
- Olivier Saut : PLOS One, Nature Comm, Medical Image Analysis.

9.1.3. Invited Talks

- Sébastien Benzekry: December 2017, Seminar at the Rappaport Faculty of Medicine of the Technion Israel Institute of Technology (invitation by Yuval Shaked). Contributions in Mathematical Oncology: When Theory Meets Reality. Haifa, Israel. <http://www.rappaport.org.il/Rappaport/Templates>ShowPage.asp?DBID=&TMID=10000&FID=78>
- Sébastien Benzekry: December 2017, Mathematical methods and modeling of biophysical phenomena. Mathematical modeling and prediction of metastasis. Rio de Janeiro, Brazil. <https://impa.br/eventos-do-impa/eventos-2017/mathematical-methods-and-modeling-of-biophysical-phenomena/>
- Sébastien Benzekry: September 2017, Première session du GDR MAMOVI. Mathematical Modeling and Prediction of Clinical Brain Metastases in Non-Small Cell Lung Cancer. Lyon, France <http://gdr-mamovi.math.cnrs.fr/spip/spip.php?article12>
- Sébastien Benzekry: June 2017, XXV Congreso de ecuaciones diferenciales y aplicaciones / XV congreso de matemática aplicada, Optimization of the timing of sequential administration of bevacizumab plus cytotoxics in non-small cell lung cancer by a mathematical model. Cartagena, Spain. <http://www.cedya2017.org/>
- Sébastien Benzekry: May 2017, Laboratoire d'Analyse Topologie et Probabilités, Institut de Mathématiques de Marseille. Mathematical Oncology: Theory Meets Reality. Marseille, France.
- Clair Poignard: Conference in honor of the 60th Birthday of Y. Maday. Electroporation modeling, from cell to tissue.
- Olibier Galinato: Sept. 2017, Journées Françaises de Radiologie, Numerical Workflow for Clinical IRE Ablation, Paris, France.

9.1.4. Scientific Expertise

- Sébastien Benzekry: Reviewer for the Foundation for Polish Science (TEAM programme), European funds Smart Growth
- Clair Poignard: Member of the evaluation committee of the call of the Plan Cancer «Physique pour le Cancer »
- Olivier Saut: O. Saut is an expert for the French Ministry of Research (for various programs including PHC and EGIDE programs).
- Olivier Saut: reviewer for IDEX Université Grenoble Alpes projects.

9.1.5. Research Administration

- Clair Poignard: Member of the Inria evaluation committee.
- Clair Poignard: PI of the Plan Cancer projects NUMEP (2016–2019), and DYNAMO (2015–2018).
- Olivier Saut: member of the steering committee of Labex TRAIL (Translational Imaging) <http://trail.labex.u-bordeaux.fr>.
- Olivier Saut: member of the steering committee of ITMO consortium HTE (on tumor heterogeneity) and coordinator of work package Model and Data.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: S. Benzekry, Analyse numérique, 24h ETD, L3, Bordeaux INP, France

Licence : A. Collin, TD EDO, 48h, niveau L3, INP Bordeaux, France.

Master : A. Collin, TP C++, 96h, niveau M1, INP Bordeaux, France.

Master : A. Collin, Cours de maillage, 36h, niveau M2, INP Bordeaux, France.

Master : A. Collin, Encadrement de projets, 30h, niveaux M1, M2, INP Bordeaux, France.

Licence : C. Poignard, Undergraduate teaching in Numerical and Applied Mathematics (L3, M1) 80heqTD: IPB, ENSAM.

9.2.2. Supervision

- HdR: S. Benzekry, *Contributions in Mathematical Oncology: When Theory Meets Reality*, Université de Bordeaux, 13 Novembre 2017.
- PhD: Manon Deville, *Mathematical Modeling of enhanced drug delivery by mean of Electroporation or Enzymatic treatment*, University of Bordeaux (cotutelle with R. Natalini, University of Rome Tor Vergata), 22 Novembre 2017, Clair Poignard.
- PhD: Agathe Peretti, *Quantification de l'hétérogénéité tumorale à partir de l'imagerie médicale. Application à la classification de tumeurs rénales*, Université de Bordeaux, 20 décembre 2017, Thierry Colin, Olivier Saut.
- PhD in progress: C. Nicolò, *Mathematical modeling of systemic aspects of cancer and cancer therapy*, 12/2016, S. Benzekry and O. Saut.
- PhD in progress: T. Kritter, *Primary tumors modeling with a view to the gliomas and adenocarcinomas study*, Sep 2015, C. Poignard and O. Saut
- PhD in progress: S. Corridore, *Mathematical Model for Electroporation*, A. Collin, C. Poignard.
- PhD in progress: C. Perier, 2016-2019, B. Denis de Senneville and O. Saut, *Combining texture analysis and modeling for evaluation therapies and clinical outcome*.
- PhD in progress: A. Crombé, 2017-2020, O. Saut, *Beyond radiomics for soft-tissue sarcoma*.

- PhD in progress: C. Vaghi, *Improving intra-tumor drug distribution of anti-cancer nanoparticles by data-informed mathematical modeling* (beginning November 1st 2017), S. Benzekry, R. Facciullino and C. Poignard.

9.2.3. Juries

- Sébastien Benzekry: Committee member of the PhD thesis of K. El Alaoui Lasmaili, Université de Lorraine (mention Sciences de la Vie et de la Santé), 4 Avril 2017.
- Clair Poignard: reviewer of the PhD thesis of A. Barlukova (Université Aix-Marseille),
- Clair Poignard: reviewer of the PhD thesis of K. Van Nguyen (Ecole Polytechnique X)
- Clair Poignard: Committee member of the PhD thesis of T. Wintz: Super-resolution in wave imaging. (ENS Paris)
- Clair Poignard: Committee member of the PhD thesis of Z. Wenlong: Forward and Inverse Problems Under Uncertainty (ENS Paris).
- Olivier Saut: reviewer of the PhD thesis of Guila Fabrini. (Paris VI - Univ. Genova, Italy).
- Olivier Saut: reviewer of the PhD thesis of Clément Chesseboeuf. (Univ. Poitiers).

9.3. Popularization

- Sébastien Benzekry: Interview pour le journal « Sciences et Avenir ».
- A. Collin : Printemps de la mixité (une présentation sur le calcul scientifique devant 2 classes de première), Institut Mathématiques de Bordeaux, 04/04/17, <https://www.u-bordeaux.fr/Actualites/De-l-universite/Le-Printemps-de-la-mixite>.
- A. Collin: Filles & Maths (table ronde avec des lycéennes autour des études mathématiques et des applications des mathématiques), Université de Bordeaux, 05/06/2017, <https://math-interactions.u-bordeaux.fr/Centres-de-ressources/IREM/Actions/Journee-Filles-et-Maths>.
- A. Collin: Fête de la Science, Inria Bordeaux, 10/10/2017.
- A. Collin: Nuit des chercheurs, Cap Sciences, Bordeaux.
- A. Collin: Cinéma Sciences (discussion avec le public sur les mathématiques après la projection du film "Les figures de l'ombre"), Cinéma de Mérignac 18/05/2017.
- O. Saut: Les Entretiens de l'Excellence 2017 <http://www.lesentretiens.org/>.
- O. Saut: Table ronde "Comment l'innovation transforme les métiers de la santé", Journées Nationales de l'Innovation en Santé, 27-29 janvier 2017, cité des Sciences et de l'Industrie / webradio Cnrs.

PLEIADE Team

8. Dissemination

8.1. Promoting Scientific Activities

8.1.1. Scientific Events Organisation

8.1.1.1. General Chair, Scientific Chair

Alain Franc organized on September 25-29, 2017 an ANF (Action Nationale de Formation) of CNRS on “Data analysis for massive data”. There were about 20 participants, from Astronomy to Bioinformatics, over Fluid Mechanics.

8.1.2. Journal

8.1.2.1. Member of Editorial Boards

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

Pascal Durrens is a member of the editorial board of the journal ISRN Computational Biology.

8.2. Teaching - Supervision - Juries

8.2.1. Juries

David Sherman was a thesis reviewer for Julie Laniau (University of Nantes) and member of her defense jury, October 23, 2017. The title of the dissertation was “Structure de réseaux biologiques : rôle des noeuds internes vis-à-vis de la production de composés” and concerned the methodological analysis of metabolite essentiality in metabolic modeling, applied to algae.

Alain Franc was a thesis reviewer for Cyril Noël (University of Pau and the Pays d’Adour) and member of his defense jury, 2017. The title of the dissertation was “Réseaux microbiens de dégradation des hydrocarbures aux interfaces oxygénées des sédiments marins côtiers” and concerned metabarcoding, metagenomics and functional metagenomics of some Bacteria and Archea.

Alain Franc was president of the jury for PhD defense of Pierre Blanchard (University of Bordeaux and Inria project-team HiePACS) on February 16, 2017. The title of the dissertation was “Fast hierarchical algorithms for the low-rank approximation of matrices with applications to materials physics, geostatistics and data analysis”

8.3. Popularization

David Sherman of PLEIADE coached two teams in Thymio R2T2 Challenges⁰, organized by the Mobsya association and the EPFL in Spring and in Summer 2017. An R2T2 challenge brings together 16 teams (for the Mars mission, 4 teams for the Lunar mission) of children who must cooperate to remotely program Thymio robots. The Lunar mission in July was a public demonstration during the Scratch 2017 conference in Bordeaux.

David Sherman contributes open-source software development to the Aseba platform for educational robotics⁰, deployed in Thymio II robots used by children as well as in the simulator used by Class’Code⁰ to train teachers.

⁰Remote Rescue Thymio II <https://www.thymio.org/en:thymio-r2t2>

⁰<http://aseba.io/>

⁰<https://pixees.fr/classcode-la-formation-associee-a-pixees/>

SISTM Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

Daniel Commenges co-organised a SFB (French Region of the International Biometric Society) and GdR "Statistique et Santé" conference in Bordeaux (<http://gdr-stat-sante.math.cnrs.fr/spip/spip.php?rubrique20>),

Daniel Commenges organised a session of the French Region at the "Journées de Statistiques" (Avignon),

Robin Genuer Co-organises a reading group called Smiling in Bordeaux

Boris Hejblum organizes the Biostatistics Seminar Series at the Bordeaux Public Health Inserm Research Center

Mélanie Prague organized the "Déjeuners scientifiques" at the "Journées de la statistique française" 2017 and 2018.

Rodolphe Thiébaut organised a summer school course « Statistical analysis of big data in immunology », 14 participants from The Netherlands, Germany, UK and France. All the team members helped in the ground organisation and were involved in teaching. (<http://bss-publichealth.u-bordeaux.fr/en/Teaching-team/Course-n-1-Statistical-analysis-of-big-data-linked-to-immunology-systems/r745.html>)

10.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

Daniel Commenges was a member of the scientific committee of the SFB (French Region of the International Biometric Society) and GdR "Statistique et Santé" conference in Bordeaux (<http://gdr-stat-sante.math.cnrs.fr/spip/spip.php?rubrique20>),

10.1.2.2. Member of the Conference Program Committees

Daniel Commenges is a member of the scientific committee of the International Biometric Conference Barcelona, July 2018 (<http://2018.biometricconference.org>),

Mélanie Prague is a member of the scientific committee of CIMI conference “Statistics in Health - personalised medicine” (<http://www.cimi.univ-toulouse.fr/mib/en/conference-statistics-and-health>), Toulouse 2018, 10-12 January

Mélanie Prague is a member of the scientific committee of the "Déjeuners scientifiques" at the "Journées de la statistique française" 2017 and 2018.

Rodolphe Thiébaut was a member of the scientific committee of the national conference on clinical research (EPICLIN)

Rodolphe Thiébaut was a member of the scientific committee of the IWHOD International Workshop on HIV Observational Databases since 2013 (<http://newsite.iwhod.org/Committee>)

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

Lifetime Data Analysis (Daniel Commenges)

Statistics Surveys (Daniel Commenges)

2017 IMIA Yearb Med Inform, section editor (Rodolphe Thiébaut)

10.1.3.2. Reviewer - Reviewing Activities

AIDS (Rodolphe Thiébaut)
 Annals of Applied Statistics (Boris Hejblum)
 Annals of Statistics (Robin Genuer)
 Am J Epidemiol (Marta Avalos)
 Am J Public Health (Mélanie Prague)
 BioData Mining (Boris Hejblum)
 Biostatistics (Laura Richert)
 Biometrics (Mélanie Prague)
 IMIA Yearb Med Inform (Marta Avalos)
 International Journal of Epidemiology (Daniel Commenges)
 Journal of the Royal Statistical Society: Interaction (Mélanie Prague)
 Machine Learning (Robin Genuer)
 Neural Information Processing Systems (Robin Genuer)
 Pattern Recognition Letters (Robin Genuer)
 JRSS-B (Mélanie Prague)
 Scientific Reports (Laura Richert)
 Society of clinical trial (Mélanie Prague)
 Statistical Methods in Medical Research (Robin Genuer, Mélanie Prague)
 Statistical science (Mélanie Prague)
 Statistics in Medicine (Marta Avalos)

10.1.4. Invited Talks

Rodolphe Thiébaut gave 3 invited talks. He gave an invited talk intitled “Objets connectés et Big Data” at the conference “10 ANS DE L’IRESP : Journées de la recherche en santé publique”

Daniel Commenges gave 2 invited talks: Evidence based Medicine (Canterbury) and Biopharmaceutic group of the French Statistical Society (Paris)

Mélanie Prague gave 3 invited talks (Philadelphia Upenn, Boston Harvard school of public health, Inria Bordeaux) and had an invited session in Society for clinical trials, Liverpool, UK (11-14 Mai 2017) on "Integrate approaches for analysis of cluster randomised trials. New development in analysis “.

Robin Genuer was invited to the "Recent advances in tree-based methods (EO380)" session of ERCIM2017, by Ruoqing Zhu (University of Illinois Urbana-Champaign).

Boris Hejblum gave 2 invited talks on Dirichlet process mixtures of multivariate skew t-distributions for unsupervised clustering of cell populations from flow-cytometry data at The Biostatistics Unit at the Cambridge University (UK)

Marta Avalos gave 2 invited talks at the National Centre for Epidemiology & Population Health at the Australian National University, Canberra (Australia), April 2017 and at CSIRO’s Data61, Canberra (Australia), February 2017

Chloé Pasin gave an invited talk at the Probability-Statistics seminar of the Institute MontPELLIÉRAIN Alexander Grothendieck, Montpellier

10.1.5. Leadership within the Scientific Community

Rodolphe Thiébaut and Chloé Pasin are elected members of the “collège des écoles doctorales”, University of Bordeaux

Daniel Commenges is President of the French Region of the International Biometric Society

Mélanie Prague is an elected member of the “Young statistician group” of SFdS (French Society of Statistics)

Mélanie Prague and Boris Hejblum are part of the group responsible for the communication of the SFdS - in charge of organising the sponsoring of the society by public and private companies.

Laura Richert is a member of F-CRIN Steering Committee

10.1.6. Scientific Expertise

- Rodolphe Thiébaut is an expert for INCA (Institut National du Cancer) for the PHRC (Programme hospitalier de recherche Clinique en cancérologie) and for the PRME (Programme de recherche médico-économique en cancérologie).
- Rodolphe Thiébaut is a member of the Membre du CNU 46.04 (Biostatistiques, informatique médicale et technologies de communication).
- Rodolphe Thiébaut is a member of the Scientific Council of INSERM.
- Rodolphe Thiébaut is a member of the committee “Biologie des Systèmes et Cancer (Plan Cancer)”, a member of the Scientific Advisory Board of the “Institut Pierre Louis d’Epidémiologie et de Santé Publique” (UPMC, Dir : Dominique Costagliola), a member of the independent committee of international trials ODYSSEY and SMILE, a member of the scientific council of Muraz’s Center (Bobo-Dioulasso, Burkina Faso)
- Mélanie Prague is an expert for ANRS (France Recherche Nord&Sud Sida-HIV Hépatites) in the CSS 3 (Recherches cliniques et physiopathologiques dans l’infection à VIH).
- Laura Richert is an expert for the PHRC (Programme hospitalier de recherche Clinique).
- Marta Avalos is an expert for L’ASNM (Agence nationale de sécurité du médicament et des produits de santé)

10.1.7. Research Administration

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

Rodolphe Thiébaut is an elected member of the research committee (health sector) in University of Bordeaux and a member of the INSERM Scientific Council

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

In class teaching

Master : Robin Genuer, teaches in the two years of the Master of Public Health (M1 Santé publique, M2 Biostatistique) and 2nd year of the "Modélisation Stochastique et Statistique" Master, University of Bordeaux.

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

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 Master of Public Health at ISPED, Univ. Bordeaux, France (M2 Biostatistiques, M2 Eidémiologie).

Master : Mélanie Prague teaches in the Master of Public Health at ISPED, Univ. Bordeaux, France (M2 Biostatistiques).

Master : Marta Avalos teaches in the two years of the Master of Public Health (M1 Santé publique, M2 Biostatistique) at ISPED, Univ. Bordeaux and the 2nd year of the Biostatistics Master, University of Valencia (Spain).

Master : Chloe Pasin, Laura Villain, Hadrien Lorenzo and Louis Capitaine are teaching assistants for the two years.

Edouard Lhomme teaches in the Master of Public Health at ISPED, Univ. Bordeaux (M2 Épidémiologie) and in the Master of Vaccinology from basic immunology to social sciences of health (University Paris-Est Créteil, UPEC)

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

Edouard Lhomme teaches in PACES and DFASM1-3 for Medical degree at Univ. Bordeaux

Bachelor : Mélanie Prague and Boris Hejblum teach in the third year ingenious school ENSAI, Rennes.

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".

Boris Hejblum teaches in the Diplôme universitaire "Méthodes statistiques en santé".

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

Robin Genuer participated to the IdEx Bordeaux University "Défi numérique" project "BeginR" (<http://beginr.moutault.net/>).

10.2.2. Supervision

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

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 : Wenjia Wang "Modèle de Rasch", co-directed by Daniel Commenges with Mickael Guedj CIFRE Pharnext, from Oct 2015.

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

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, Cédric Galera and Marta Avalos.

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

PhD in progress : Louis Capitaine, *Random forests for high dimensional longitudinal data*, from Oct 2017, co-directed by Robin Genuer and Rodolphe Thiébaut.

PhD in progress : Madelyn Rojas *Self-management of injury risk and decision support systems based on predictive computer modelling. Development, implementation and evaluation in the MAVIE cohort study*, from Oct 2017, co-directed by Emmanuel Lagarde, David Conesa and Marta Avalos.

Master internship : Nicolas Lafosse "Déterminants de la réponse cellulaire T mesurée par Elispot après vaccination avec différentes stratégies vaccinales "prime-boost" préventives contre le VIH", directed by Laura Richert (1/03/2017 - 1/08/2017)

Master internship : Louis Capitaine, *Random forests for high dimensional longitudinal data*, directed by Robin Genuer (27/02/2017 - 31/08/2017)

Master internship : Paul Tauzia, *Utilisation de la déconvolution cellulaire pour détecter des différences d'expression génique*, directed by Mélanie Prague and Boris Hejblum (01/03/2017 - 31/08/2017)

Master internship : Augusta Alphonse, *Proof of concept for an automated gating tool applied to flow cytometry data from a HIV therapeutic vaccine trial*, directed by Mélanie Prague and Boris Hejblum (01/02/2017 - 31/07/2017)

Master internship : Marie Alexandre, *Correlation between cellular and antibodies response in Ebola vaccine*, directed by Mélanie Prague (01/06/2017 - 31/08/2017)

10.2.3. Juries

Daniel Commenges was involved in the PhD defences jury of Mr Adjakossa (Paris).

Robin Genuer was a PhD thesis examinator of Wei FENG thesis, defended the 07/19, "Investigation of training data issues in ensemble classification based on margin concept. Application to land cover mapping".

Mélanie Prague is a member of the follow-up dissertation comity of Nicolo Chiara (working on "Mathematical modeling of systemic aspects of cancer and cancer therapy"), Sébastien Benzckry's PhD student (Inria Bordeaux Sud-ouest, MONC team) and Thiebaut Larivière (working on "Population Kalman estimation in Partial differential equations"), Annabelle Colin's PhD student (Inria Bordeaux Sud-ouest, MONC team).

Marta Avalos was a member of the follow-up dissertation comity of her PhD students Perrine Soret and Mélanie Née.

Rodolphe Thiébaut took part in the HDR committee of Patricia Thebault, Benoit Lepage, Simon Cauchemez, Sébastien Benzckry and Romulus Breban.

Rodolphe Thiébaut was involved in the PhD defences jury of Nicky De La Mata and Edouard Ollier.

Mélanie Prague took part in the recruitment commission MCF CNU 26 (CNAM).

Laura Richert, Rodolphe Thiébaut, Robin Genuer, Boris Hejblum and Marta Avalos participated to the juries of Master in Public Health (Biostatistics, Epidemiology)

Edouard Lhomme participated to the juries of two medical thesis defense, Medical School of Bordeaux University

10.3. Popularization

Participation to the Inria magazines "Plug-in" and "So news" (Mélanie Prague).

Participation in "The ou café" in Inria Bordeaux (Mélanie Prague).

Lightning talk to present the NIMROD software in Dev Days at Inria (Mélanie Prague).

Edouard Lhomme, as President of AquitHealth, a non profit organisation for the development of e-Health in south west France organized the When Doctors Meet Hackers (WDMH) Congress 2017. The WDMH Congress is a 3 day event with one day of conference on the futur of health and 50 hours of hackathon. The Hackathon is a human adventure where healthcare professionals, patients, developers, designers and entrepreneurs collaborate over a weekend to develop prototypes of eHealth solutions.Six WDMH meetups were also organised each month from January to June 2017 in Bordeaux to discuss about several e-heath topics (telemedecine, data protection, simulation, ...)

HIEPACS Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Member of the Conference Program Committees

SC'17 (E. Agullo, A. Guermouche), ICPP'17 (A. Guermouche), HiPC'17 (A. Guermouche), IEEE PDP'17 (J. Roman), PDSEC'17 (O. Coulaud, L. Giraud).

10.1.2. Journal

10.1.2.1. Member of the Editorial Boards

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

10.1.2.2. Reviewer - Reviewing Activities

ACM Trans. on Mathematical Software, Advances in Computational Mathematics, 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.

10.1.3. Scientific Expertise

- Emmanuel 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.
- Luc Giraud is member of the board on Modelisation, Simulation and data analysis of the **Competitiveness Cluster for Aeronautics, Space and Embedded Systems**.
- Pierre 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.

10.1.4. Research Administration

- Emmanuel Agullo and Luc Giraud are the scientific correspondents of the European and International partnership for Inria Bordeaux Sud-Ouest.
- Olivier Coulaud is the coordinator of the **PLAFRIM** platform for Inria Bordeaux Sud-Ouest.
- 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 24h 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 master 2 internship for the Computer Science department 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 Europe.

10.2.2. Supervision

HdR : Abdou Guermouche, Towards efficient sparse direct solvers for modern high-performance architectures, Université de Bordeaux, 27 novembre 2017.

HdR : Pierre Ramet, Hierarchical matrices, Hybrid methods, Heterogeneous architectures in sparse linear solvers, Université de Bordeaux, 27 novembre 2017.

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

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 : Grégoire Pichon; Utilisation de techniques de compression \mathcal{H} -matrices pour solveur direct creux parallèle dans le cadre des applications FEM; M. Faverge, P. Ramet.

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

10.2.3. Juries

- Vanessa C. Vargas Vallejo, "Approche logicielle pour améliorer la fiabilité d'applications parallèles implémentées sur des processeurs multi cœur et many cœur", referee: L. Giraud, O. Romain, Université Joseph-Fourier de Grenoble, spécialité: nano électronique et nano technologie, 28 April 2018.
- Roberto Molina, "Hybridation of FETI methods", referee: L. Giraud, D. J. Rixen; Université Pierre et Marie Curie, spécialité: mathématiques appliquées, 19 Décembre 2017.
- Krishna Kant Singh, "Algorithms for Adaptively Restrained Molecular Dynamics", referee: O. Coulaud, K. Hinsen. Université Joseph-Fourier de Grenoble, spécialité: informatique , 8 Novembre 2017.

PHOENIX Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

Hélène Sauzéon & Bernard N'Kaoua, in cooperation with E. Morales & B. JMcFadyen, co-organized the Summer school 2017 of Alliance Bordeaux-Laval: "Mobility in urban environment: a systemic approach centered on the person and his/her environment", 3-5 july 2017 at University of Laval (Québec, Canada).

9.1.2. Scientific Events Selection

9.1.2.1. Member of the Conference Program Committees

Charles Consel was member of the following Program Committees:

- ICSE 2018 SEIS Track (Software Engineering in Society)
- 3rd IEEE International Conference on Collaboration and Internet Computing
- International Workshop on Pervasive Systems Integration (PerSysT 2018)
- 2018 IEEE International Conference on Cloud Computing (CLOUD 2018)

9.1.2.2. Reviewer

Hélène Sauzéon served as a reviewer for the ACM CHI Conference on Human Factors in Computing Systems 2018.

9.1.3. Journal

9.1.3.1. Reviewer - Reviewing Activities

Hélène Sauzéon served as a reviewer for the following journals: British Journal of Psychology , Gerontology, Journal of Cognitive Psychology, PlosOne, Memory & Cognition, Aging, Neuropsychology & Cognition.

9.1.4. Invited Talks

Charles Consel was invited to give talks in the following contexts:

- University of Reading
- University of Toronto
- University of Illinois at Urbana-Champaign
- University of Indiana
- Digital Silver Forum on November 28 in Helsinki.

9.1.5. Scientific Expertise

Hélène Sauzéon participated as a scientific expert for:

- National call for proposals: IRSEP call "Autism and Technology", 2017
- Recruiting committees for:
 - Lecturer on Psychology et Ergonomics, Toulouse 2 University, 2017
 - Young researchers, Inria Bordeaux, since 2015
- The scientific committee of "Expertise center Calyxis for domestic risks" (Niort, France), working on R&D of technologies for preventing everyday accidents, thru collaboration programs between public labs and private companies.

9.1.6. Research Administration

Hélène Sauzéon has been a member of the Committee launching a new institute of advanced studies at the University of Bordeaux since 2016. In this context she participated at the design of this institute, leveraging his expertise in cognitive sciences and interdisciplinary research at Inria Bordeaux. Indeed, the aim of the institute is fostering interdisciplinary research, innovation, and creativity, by providing adequate financial support, educative and participative resources to researchers on the Bordeaux campus.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Master (M2) : Charles Consel, “Advanced topics — Technology surveys”, 17h, Bordeaux INP, France
- Licence (L2): Hélène Sauzéon, “Modeling cognitive functions”, 24h, University of Bordeaux, France.
- Licence (L3): Hélène Sauzéon, “Handicap, Executive functions, Cognitive neuropsychology”, 12h, University of Bordeaux, France.
- Master (M1): Hélène Sauzéon, “Cognitive psychology, Aging, Human factors”, 30h, University of Bordeaux, France.
- Master (M2): Hélène Sauzéon, “Handicap and assistive technology, Human factors and reliability of complex systems”, 30h, University of Bordeaux, France.
- Master (M2): Hélène Sauzéon, “Neuropsychology: Evaluation, Language-related models and syndromes, Executive functions and syndromes”, 30h, University of Bordeaux, France.
- Master (M2): Hélène Sauzéon, “Neuropsychology: Language-related models, Aging”, 9h, University of Bordeaux, France.
- Master (M2) : Nic Volanschi, “Advanced topics — Technology surveys”, 17h, Bordeaux INP, France
- Licence (L3) : Nic Volanschi, “Introduction to imperative programming”, 24h, Bordeaux INP, France
- Master (M2) : Antoine Riché, “Software Engineering for Smart Spaces”, 8h, Bordeaux INP, France
- Licence (L3) : Cécile Mazon, “Outils pour les enfants avec troubles cognitifs et apports de la psychologie cognitive”, 6h, École d’Ergothérapie, CHU Bordeaux, France
- Licence (L3) : Cécile Mazon, “École inclusive et Technologies Numériques : Quels solutions pour les enfants avec troubles cognitifs ?”, 8h, École d’Ergothérapie, CHU Bordeaux, France
- Licence (L2) : Cécile Mazon, “Handicap cognitif et Technologies d’assistance à la vie quotidienne”, 8h, École d’Ergothérapie, CHU Bordeaux, France
- Licence (L2) : Bernard Serpette, “Functional Programming”, 35h, Université de Bordeaux, France.

E-learning

MOOC: Hélène Sauzéon and Pascal Guittot, “Digital Accessibility”, open for unrestricted attendance, on the FUN national platform, supported by the Inria Learning Lab:

- 1st session in november 2016: about 3800 registered students from 60 different countries
- 2nd session in june 2017: about 1900 registered students

The MOOC contents is still currently available on “Canal U”.

9.2.2. Supervision

PhD : Adrien Carteron, “An event-based approach to the development of home assistance services for various stakeholders”, University of Bordeaux, defended on December 22nd, 2017, co-directed by Charles Consel and Nic Volanschi.

PhD in progress : 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.

PhD in progress: Antoine Riché, “Architectures of assistive services based on software sensors”, started in October 2016, directed by Charles Consel.

PhD in progress: Rafik Belloum, “A methodology for developing assistive services”, started in 2016, directed by Charles Consel.

PhD in progress: Audrey Landuran, “Design, adaptation and validation of digital tools for people with intellectual disabilities”, started in 2016, directed by Bernard N’Kaoua.

PhD in progress: P.A. Cinquin, “Conception et validation d’un lecteur accessible aux personnes avec troubles cognitifs pour un système d’enseignement numérique”, started in 2016, co-directed by Hélène Sauzéon and Pascal Guitton.

PhD in progress: A. Delmas, “Conception et validation d’un site internet interactif sur l’asthme à visée éducative pour les enfants avec asthme”, started in 2015, co-directed by Hélène Sauzéon and Pierre-Yves Oudeyer.

9.2.3. Juries

Charles Consel was member of the thesis committee for Tizneem Jiancaro, for her thesis entitled “Technology, Design and Dementia: Design approaches, implications and considerations for an emerging field”. Supervisor: Alex Mihailidis, Ph.D P.Eng. Scientific Director AGE-WELL Network of Centres of Excellence, University of Toronto.

Hélène Sauzéon was member of the thesis committee for Castor Naomie, who performed her PhD in the Lab CHART-LUTIN (Paris 8 University).

Charles Consel and Nic Volanschi were members of the thesis committee for Adrien Carteron (as co-supervisors), for his thesis in Computer Science called “An event-based approach to the development of home assistance services for various stakeholders”, University of Bordeaux, on December 22nd 2017.

9.3. Popularization

Nic Volanschi participated on October 12th to the “Science fest” at Inria Bordeaux, where he gave 3 workshop sessions on “Manual digital sciences” for children aged 11 to 15. These workshop sessions were aimed to communicate basic notions of computer science to young students by using puzzles and games.

Antoine Riché and Nic Volanschi presented, to a professional audience coming from various digital-related industries, some of the technologies developed in the team, at the Inria-Industry Meeting on October 17th-18th in Paris centered on “Data and their applications”.

Cécile Mazon participated to the following popularization events:

- “1er Salon du livre et du numérique pour les dys”, on 3rd may 2017. Representing the research center jointly with P.-A. Cinquin (Potioc team); presenting and demonstrating the Collège+ app for iPad.
- “PubHD Bordeaux”, on 24th october 2017. Event consisting in presenting her PhD work “Technologies pour la scolarisation des collégiens avec TSA” without slides nor scientific jargon.
- Guest of the radio show "Que cherchent-ils", on RCF Bordeaux. 25 minutes for presenting her PhD work around autism and technologies. The show was recorded in december 2017 and will be broadcast in february – march 2018.
- Largely open congress “ITASD”, in july 2017, Valencia, Spain. “Effectiveness and Usability of Technology-based interventions for children and adolescents with ASD: A systematic review of reliability, consistency, durability and generalization related to the effects of interventions”. The abstract is available within the conference proceedings.

STORM Project-Team

9. Dissemination

9.1. Promoting Scientific Activities

9.1.1. Scientific Events Organisation

9.1.1.1. Member of the Organizing Committees

- Samuel Thibault has organized a workshop panel at HCW'17

9.1.2. Scientific Events Selection

9.1.2.1. Chair of Conference Program Committees

- Denis Barthou has been Chair of EuroPar 2017

9.1.2.2. Member of the Conference Program Committees

- Denis Barthou has been Program Committee member of Europar 2017, UCHPC'17, HPCS'17, PACT'17
- Olivier Aumage has been Program Committee member of the Cluster 2017 conference.
- Samuel Thibault has been Program Committee member of P3MA'17, HCW'17, EuroPar 2017, ComPAS'2017.
- Raymond Namyst has been Program Committee member of PPAM'17, SC'17 and EuroMPI/USA'17.

9.1.2.3. Reviewer

STORM members have conducted wide reviewing activities for the following conferences and workshops: CCGRID, Cluster, EuroMPI, P3MA, PDSEC, HCW, Compas.

9.1.3. Journal

9.1.3.1. Reviewer - Reviewing Activities

STORM members have conducted reviewing activities for the following journals: IEEE TPDS, GPAA IJPEDS, PARCO, Scientific Programming, JPDC

9.1.4. Invited Talks

- Denis Barthou has been invited at the PASC conference mini-symposium titled "From linear algebra to High performance code", 26/06/2017 Lugano
- Denis Barthou has been invited at a Bird of Feather session at SC conference, 2017-11.
- Olivier Aumage has been invited at the special day event 'Runtimes' organized by Group 'Calcul' from CNRS (2017/01/20, PARIS).
- Samuel Thibault has been invited at the "Journées Scientifiques Inria 2017".
- Samuel Thibault has been invited at the HPC Workshop at Total (2017-06-29, Pau).
- Samuel Thibault has been invited at the JLESC workshop (2017-07-20, Urbana-Champaign, US).
- Samuel Thibault has been invited at the "École thématique GPU" (2017-11-09, Grenoble).
- Raymond Namyst has been invited to the Dagstuhl Seminar on Performance Portability in Extreme Scale Computing: Metrics, Challenges, Solutions (2017-10, Schloss Dagstuhl, Germany).

9.1.5. Scientific Expertise

- Olivier Aumage represents Inria at the OpenMP ARB consortium of standardization for the OpenMP language.

- Samuel Thibault participates to the HiHAT working group.
- Raymond Namyst is member of the Khronos OpenCL advisory panel.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

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

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

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

Licence: Samuel Thibault, Networking, 80HeTD, L3, University of Bordeaux.

Licence: Samuel Thibault, Tutored project, 5HeTD, L3, University of Bordeaux.

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.

Master MIAGE: Marie-Christine Counilh, Object oriented programming in Java, 30HeTD, M1, University of Bordeaux.

Master: Marie-Christine Counilh, Internship supervision, 4HeTD, M2, University ob Bordeaux.

Engineering School: Emmanuelle Saillard, Structures arborescentes, 16HeTD, L3, ENSEIRB-MATMECA.

Engineering School: Pierre Huchant, Projet d'algorithmique et de programmation, 30HeTD, L3, ENSEIRB-MATMECA.

Engineering School: Pierre Huchant, Programmation Systeme, 18HeTD, M1, ENSEIRB-MATMECA.

Engineering School: Pierre Huchant, Compilation, 14HeTD, M1, ENSEIRB-MATMECA.

Engineering School: Pierre Huchant, Projet de Compilation, 4HeTD, M1, ENSEIRB-MATMECA.

Engineering School: Olivier Aumage, High Performance Communication Libraries, 20HeTD, M2, ENSEIRB-MATMECA.

Engineering School: Olivier Aumage, Languages and Supports for Parallelism, 14HeTD, M2, ENSEIRB-MATMECA.

Engineering School: Denis Barthou, Parallel architectures, 24HeTD, M2, ENSEIRB-MATMECA,

Engineering School: Denis Barthou, 3D synthesis in real time, 35HeTD, M2, ENSEIRB-MATMECA,

Engineering School: Denis Barthou, Architecture, 50HeTD, L3, ENSEIRB-MATMECA,

Engineering School: Denis Barthou, Tutored project, 25HeTD, M1, ENSEIRB-MATMECA,

Engineering School: Denis Barthou, Compilation, 28HeTD, M1, ENSEIRB-MATMECA,

Engineering School: Denis Barthou, Compilation, 28HeTD, M1, ENSEIRB-MATMECA,

Engineering School: Denis Barthou, C project, 30HeTD, L3, ENSEIRB-MATMECA,

Engineering School: Denis Barthou was responsible till Sept 2017 of a 3rd year specialization in cybersecurity, system and network (M2) at ENSEIRB-MATMECA, certified by the ANSSI. From Sept 2017, he is responsible of the computer science teaching departement of ENSEIRB-MATMECA.

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

Licence: Pierre-André Wacrenier, System programming, 32HeTD, L3, University of Bordeaux

Master: Pierre-André Wacrenier, Parallel programming, 48HeTD, M1, University of Bordeaux

Master: Pierre-André Wacrenier is responsible for the Master's Degree with specialization in HPC, M2, University of Bordeaux

University of Bordeaux: Raymond Namyst is vice-chair of the computer science training department

Licence: Raymond Namyst, UNIX programming, 54HeTD, L3, University of Bordeaux

Master: Raymond Namyst, Operating Systems, 60HeTD, M1, University of Bordeaux

Master: Raymond Namyst, Parallel programming, 33HeTD, M1, University of Bordeaux

Engineering School: Raymond Namyst, Microprocessors, 24HeTD, L3, ENSEIRB-MATMECA

Engineering School: Raymond Namyst, Parallel programming, 33HeTD, M1, ENSEIRB-MATMECA

9.2.2. Supervision

PhD in progress : Pierre Huchant, October 2015, M.-C. Counilh, D. Barthou and R. Namyst

PhD in progress : Adrien Cassagne, October 2017, O. Aumage, D. Barthou, C. Jego and C. Leroux

PhD in progress : Léo Villeveygoux, October 2017, R. Namyst

PhD in progress : Terry Cojean, October 2014, P.-A. Wacrenier and R. Namyst

PhD in progress : Hugo Brunie, October 2015, J. Jaeger, P. Carribault and D. Barthou

PhD in progress : Raphael Prat, October 2017, R. Namyst

PhD in progress : Arthur Loussert, October 2015, J. Jaeger, P. Carribault and R. Namyst

PhD: Christopher Haine, January 2014-June 2017, O. Aumage and D. Barthou

PhD: Marc Sergent, Passage à l'échelle d'un support d'exécution à base de tâches pour l'algèbre linéaire dense, October 2014-January 2017, O. Aumage, S. Thibault and R. Namyst

PhD: Suraj Kumar, Scheduling of Dense Linear Algebra Kernels on Heterogeneous Resources, Université de Bordeaux, April 2017, E. Agullo, O. Beaumont, L. Eyraud, S. Thibault

9.2.3. Juries

Denis Barthou has participated to the following PhD/HDR juries

Nabil Hallou, PhD, U.Rennes, dec. 2017 (reviewer)

Abdou Guermouche, HDR, U. Bordeaux, dec. 2017 (member)

Raymond Namyst has participated to the following PhD/HDR committees:

- Sébastien Gougeaud, PhD, U. Versailles Saint-Quentin, may 2017 (reviewer)
- Yunsong Wang, PhD, Ecole Polytechnique, dec. 2017 (reviewer)
- Pierre Ramet, HDR, U. Bordeaux, dec. 2017 (member)

9.3. Popularization

- Séminaire Inria Bordeaux Sud-Ouest, Unithé ou Café, septembre 2017 sur la programmation parallèle (D. Barthou)
- Fête de la Science à l'Inria Bordeaux Sud-Ouest, ateliers Datagramme et Digit'elles, octobre 2017 (E. Saillard)
- Fête de la Science, ateliers Datagramme et Sciences Manuelles du Numérique, octobre 2017 (Y. Khorsi et C. Salingue)
- Printemps de la Mixité, atelier Datagramme, avril 2017 (C. Salingue)
- J'ai un bug, qu'est-ce que je peux faire ?, Mars 2017 (S. Thibault)
- Mon code en 180 secondes: StarPU+KStar, Journées SED Bordeaux, October 2017 (O. Aumage)

TADaM Project-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 Parallel and Distributed algorithm area co-chair of ICA3PP'17.
- Guillaume AUPY is the chair of the Workshop committee of SC'18.

10.1.2.2. Member of the Conference Program Committees

- Brice GOGLIN was a member of the program committee of EuroMPI/USA 2017, HotInterconnect 25, CARLA 2017, and of the Exacomm ISC workshop and COLOC Euro-Par workshop.
- Guillaume AUPY was a member of the program committee of ICPP'17, SC'17, FTS'17.
- Alexandre DENIS was a member of the program committee of CCGrid 2017, HiPC 2017, Com-Pas'2017, CCGrid 2018.
- Guillaume AUPY was the Parallel and Distributed algorithm area co-chair of ICA3PP'17.
- Emmanuel JEANNOT was the Open workshop on data locality workshop co-chair in conjunction with Euro-Par 2017.
- Emmanuel JEANNOT was the Heterogeneity in Computing Workshop (HCW) chair in conjunction with IPDPS 2017.

10.1.2.3. Member of the Conference Program Committees

- Brice GOGLIN was a member of the program committee of EuroMPI/USA 2017, HotInterconnect 25, CARLA 2017, and of the Exacomm ISC workshop and COLOC Euro-Par workshop.
- Guillaume AUPY was a member of the program committee of ICPP'17, SC'17, FTS'17.
- Alexandre DENIS was a member of the program committee of CCGrid 2017, HiPC 2017, Com-Pas'2017, CCGrid 2018.
- Emmanuel JEANNOT was member of the program committee of SBAC-PAD 2017, HiPC 2017, ICPP 2017, Heteropar 2017, IPDPS 2018,
- Guillaume AUPY was the Parallel and Distributed algorithm area co-chair of ICA3PP'17.

10.1.2.4. Member of the Conference Program Committees

- Brice GOGLIN was a member of the program committee of EuroMPI/USA 2017, HotInterconnect 25, CARLA 2017, and of the Exacomm ISC workshop and COLOC Euro-Par workshop.
- Guillaume AUPY was a member of the program committee of ICPP'17, SC'17, FTS'17.
- Alexandre DENIS was a member of the program committee of CCGrid 2017, HiPC 2017, Com-Pas'2017, CCGrid 2018.

- Guillaume MERCIER was a member of the program committee of EuroMPI/USA 2017, HPCS 2017 and CCGrid 2018.

10.1.2.5. Reviewer

- Alexandre DENIS was a reviewer for Cluster 2017.

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Guillaume AUPY was an invited editor for the Special Issue of *Concurrency and Computation: Practice and Experience* on data structures and algorithms.
- Emmanuel JEANNOT is associate editor of the International Journal of Parallel, Emergent & Distributed Systems (IJPEDS).

10.1.3.2. Reviewer - Reviewing Activities

- Alexandre DENIS was a reviewer for TPDS and JPDC.
- Guillaume AUPY was a reviewer for TPDS and Optimization Methods and Software.
- Emmanuel JEANNOT was reviewer for TPDS, IJHPCA.

10.1.4. Invited Talks

- Brice GOGLIN gave a talk about the structural modeling of next-generation memory architectures at the Fourth Workshop on Programming Abstractions for Data Locality (PADAL'17).
- Guillaume AUPY was invited to talk about I/O scheduling in Argonne National Laboratory.

10.1.5. Leadership within the Scientific Community

- Emmanuel JEANNOT, Brice GOGLIN and Pete BECKMAN organized a Birds-of-a-Feather session about *Cross-Layer Allocation and Management of Hardware Resources in Shared Memory Node*. It gathered about 30 people working on various runtime systems, operating systems and applications in the HPC to discuss how to have all these software components collaborate when spawning jobs on hardware resources.
- Guillaume MERCIER is the chairman of the Hardware Topologies Management Working Group of the MPI Forum. This working group was created officially in December by Inria's impulse and has been rallied since by many institutions taking part in the MPI Forum. The goal of this working group is to standardize hardware topologies management mechanisms and abstractions in the MPI standard.
- Cédric LACHAT organized the first “PaMPA day” meeting ⁰, at Inria Bordeaux, gathering authors of prominent remeshing software.

10.1.6. Scientific Expertise

- Emmanuel JEANNOT is member of the hiring committee for the junior chair of the I-Site E2S of the university of Pau.
- François PELLEGRINI is member of the foresight committee on scientific and technological information (IST) of Institut national de recherche agronomique (INRA).
- François PELLEGRINI is member of the pedagogical committee of the Alienor lawyer's school in Bordeaux.
- François PELLEGRINI was invited by *Organisation Internationale de la Francophonie*, as an international expert on software law and economics, to participate in training sessions for the members of the parliaments of Bénin and Cameroon, regarding the impact of digital technologies on digital sovereignty and national legal systems.

⁰<https://project.inria.fr/pampa/pampa-day/>

- François PELLEGRINI was heard by the Conseil national du numérique (CNNum), on the European directive on free flow of data.
- François PELLEGRINI was heard by the Conseil régional de Nouvelle-Aquitaine, in the context of the definition of their digital roadmap.
- François PELLEGRINI was invited to the thematic seminar on the *social responsibility of algorithms*, organized by the scientific council of *Institut des sciences de l'information et de leurs interactions* (INS2I) of CNRS.

10.1.7. Standardization Activities

TADAAM attended the MPI Forum meetings on behalf of Inria (where the MPI standard for communication in parallel applications is developed and maintained). TADAAM also proposed the creation of a new working group in the MPI Forum, dedicated to hardware topologies management and currently leads this working group. The HSPLIT proposal is currently under early discussions for submission to the forum and eventual inclusion in the MPI standard.

10.1.8. Research Administration

Emmanuel JEANNOT is member of the scientific committee of the Labex IRMIA (Université 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, introduction to algorithmics and C programming to advanced topics such as probabilities and statistics, computer architecture, operating systems, parallel programming and high-performance runtime systems, as well as software law and personal data.

Brice GOGLIN participated in the building of the section about fundamentals of computer science in the MOOC *Informatique et Création Numérique* which focuses at bringing basics about computer science to high-school teachers.

10.2.2. Supervision

PhD : Jonathan Keller, *La notion d'auteur dans le monde des logiciels*, defended on 21 Jun 2017, Université Paris Nanterre. Co-advisors: Sylvia Preuss-Laussinotte and François Pellegrini.

PhD : Remi Barat, *Équilibrage de charge pour des simulations multi-physiques par partitionnement multi-critères de graphes* (*Load balancing of multi-physics simulations by multi-criteria graph partitioning*), defended on 18 Dec 2017. 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 started: Valentin Honoré, Partitioning Strategies for high throughput Applications, started in November 2017. Advisor: Guillaume Aupy and Brice Goglin.

10.2.3. Juries

Guillaume MERCIER was a member of the Ph.D defense jury of Fernando Mendonca (supervisor: Denis Trystram, Professor at Grenoble Institute of Technology).

Emmanuel JEANNOT was member of the Ph.D defense jury of:

- Christopher Haine (University of Bordeaux, President)
- Pedro De Souza Bento Da Silva (University of Lyon, ENS Lyon, Reviewer)

Emmanuel JEANNOT was reviewer of the habilitation thesis of Luiz-Angelo Steffenel (University of Reims)

François PELLEGRINI was reviewer and member of the Ph.D defense jury of Thomas Gonçalves (University of Grenoble-Alpes / CEA. Supervisors: Frédéric Desprez, Jean-François Méhaut and Marc Perache).

10.3. Popularization

10.3.1. Duties

Guillaume AUPY was in charge of hosting the undergraduate students (L3) from ENS Lyon and later ENS Cachan at Inria Bordeaux-Sud Ouest.

Brice GOGLIN is in charge of the diffusion of the scientific culture for the Inria Research Centre of Bordeaux. He organized several popularization activities involving colleagues.

Brice GOGLIN was a member of the *CGenial* contest for science projects in high schools.

François PELLEGRINI is vice-president of université de Bordeaux, in charge of digital issues.

10.3.2. Online Content

François PELLEGRINI wrote a tribune in the Binaire blog run by Inria staff and hosted by Le Monde, on the “loyalty of data processing”. See: <http://binaire.blog.lemonde.fr/2017/03/27/les-algos-ni-loyaux-ni-ethiques/>.

10.3.3. Teaching and Education

- Brice GOGLIN was involved in the MOOC *Informatique et Création Numérique* which focuses at bringing basics about computer science to high-school teachers. After recording videos, he answered numerous questions on the forum, and during a live hangout about computer architectures and networks. More than 12 000 people registered to the course, and more than 1 200 successfully finished it.
- Brice GOGLIN presented tools for teaching basics of computer science in classes at the teachers' forum at Cap Sciences.
- François PELLEGRINI participated in the creation of video contents for the MOOC *Innov+*, on the economics of innovation, published on the FUN platform. His contribution concerns the software economy and law. See: <https://www.fun-mooc.fr/courses/course-v1:ubordeaux+28002+session01/about> .
- François PELLEGRINI was offered the chair on digital issues at *Université populaire de Bordeaux*, and gave four lectures on: “The digital revolution”, “Liberties in the digital age”, “Personal data and big data”, “Software law and libre software”. See: <http://www.upbordeaux.fr/Le-numerique> .

10.3.4. Talks and Hands-on

- Guillaume AUPY presented problems revolving around High-Performance Computing to High-School students during *Fête de la Science*.
- Guillaume AUPY gave a talk at the seminar *Convergence des Droits et du Numérique* about differences and common grounds between mathematical logics and juridic logics.

- Brice GOGLIN gave several talks about computer architecture, high performance computing, and research careers to general public audience, school students. He also gave several hands-on sessions about basics of algorithmics and computer science.
- François PELLEGRINI gave many talks on liberties in the digital world, digital sovereignty, software law and economy, artificial intelligence for legal practice, etc., in front of various audiences: Cap Sciences, ESI Brussels, Lycée Borda in Pau, FACTS festival on arts & sciences in Bordeaux, Cinéma Utopia, CURIE congress in Marseille, Observatoire de Nice, the Defense Security Cyber summer school in Bordeaux, the Réseau Cepage of CNRS Aquitaine, etc.

10.3.5. Popularizing inside Inria

Guillaume AUPY presented problems revolving around High-Performance Computing during the seminar *Unithé ou Café*.

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 has been general co-chair of the "Designing for curiosity" workshop at CHI 2017, Denver, Colorado, US;
- PY. Oudeyer has co-organized the 3rd International Symposium on Intrinsically Motivated Open-Ended Learning, Rome, Italy;
- PY. Oudeyer has co-organized the IEEE IJCNN 2017 Special Session on COGNITION AND DEVELOPMENT;
- D. Roy was general chair for the conference "Robotique et Education", Bordeaux, France.

10.1.1.2. Member of the Organizing Committees

- 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

- PY. Oudeyer has been in the conference program committee of IEEE ICDL-Epirob conference.

10.1.2.2. Reviewer

- David Filliat was reviewer for the IROS, ECMR, ICDL, HRI, ICRA conferences.
- Sébastien Forestier was reviewer for IEEE ICDL-Epirob, ICRA
- Natalia Díaz Rodríguez was reviewer for JAIR 2017 (Journal of AI Research) and Area Chair (meta-reviewer) for WIML 2017 (Women in Machine Learning Workshops at NIPS 2017).

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- PY. Oudeyer was associate editor of IEEE Transactions on CDS and Frontiers in Neurorobotics.

10.1.3.2. Reviewer - Reviewing Activities

- David Filliat was reviewer for IEEE Transaction on Robotics, IEEE Transactions on Cognitive and Developmental Systems, Robotics and Automation Letters.
- O. Sigaud has been a reviewer for the Autonomous Robots journal and for the ICLR and the NIPS conferences
- PY. Oudeyer has been a reviewer for the journals IEEE Transactions on CDS and Child and Development Perspectives.

10.1.4. Invited Talks

- David Filliat gave an invited presentation “Autonomous Learning and AI for interactive Robotics” during the 50 years of Inria event on november 8th.
- O. Sigaud gave an invited presentation “Deep Learning for Robotics: Promises and Issues” at the Journées Nationales de la Recherche en Robotique on november 16th.
- O. Sigaud gave an invited presentation “Towards developmental discovery of objects in dynamical scenes” at the workshop on Intrinsically Motivated Open-Ended Learning, Rome, Italy, 9th october

- PY. Oudeyer gave an invited presentation "Intrinsically Motivated Goal Exploration Processes" at the workshop on Intrinsically Motivated Open-Ended Learning, Rome, Italy, 9th october;
- PY. Oudeyer gave an invited presentation "Computational Models of Human Cognitive Development" at the 29th Eleanor Gibson lecture, Cornell Univ., US, April,
- PY. Oudeyer gave an invited presentation "Models of curiosity-driven learning" at Univ. Rochester, US, April.
- PY. Oudeyer gave an invited presentation "Curiosity-driven learning and language acquisition" at the workshop on language acquisition at IEEE ICDL-Epirob, Lisbon, Portugal, Sept.;
- PY. Oudeyer gave an invited presentation "Robotique Pédagogique" at the Journées Nationales de la Recherche en Robotique on november 16th.
- PY. Oudeyer gave an invited presentation "Intrinsically motivated learning and curiosity in humans and robots" at the "Designing for curiosity" workshop at CHI 2017, Denver, US;

10.1.5. Leadership within the Scientific Community

- Natalia Díaz Rodríguez attended and organized a workshop within the Heidelberg Laureate Forum Sept. 2017 on Machine learning and Human-Computer Interaction.
- PY. Oudeyer co-organized the "Designing for curiosity" workshop at CHI 2017 (Denver, US), the IMOL 2017 workshop (Rome, Italy), and was co-editor of the special issue on "Modeling play in early infant development" in Frontiers in Psychology.
- PY. Oudeyer has been editor of the IEEE CIS Newsletter on Cognitive and Developmental systems, organizing two interdisciplinary dialogs, see <https://openlab-flowers.inria.fr/t/ieee-cis-newsletter-on-cognitive-and-developmental-systems/129>.

10.1.6. Scientific Expertise

- PY. Oudeyer has been a reviewer for the European Commission (FET program).

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

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)
 Master: Perception pour les systemes autonomes (ROB313), 7.50 h. Natalia Díaz Rodríguez
 Master: Projet Informatique (IN104), 18.25h. Natalia Díaz Rodríguez.
 Master: Cours de robotique développementale, option robot, ENSEIRB (2h), PY. Oudeyer

10.2.2. Supervision

PhD in progress: Cédric Colas, Algorithms for intrinsically motivated goal exploration (superv. P-Y. Oudeyer)
 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: 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 a team of computer and pedagogical engineers and researchers for the project Poppy Education (Didier Roy, Stéphanie Noirpoudre, Théo Segonds, Damien Caselli)

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

PhD: Thibaut Munzer, Learning from Instruction, defended (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: Yuxin Chen, Interactive learning of objects and names on a humanoid robot, defended 02/2017 (superv. David Filliat).

PhD: Celine Craye, Curiosity and visual attention for the guidance of an exploration robot, defended 04/2017 (superv. David Filliat).

PhD: Joris Guery, Robust visual recognition by artificial neural networks in robotic exploration scenarios, defended 11/2017 (superv. David Filliat and Bertrand Le Saulx (ONERA))

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: Timothée Lesort, Incremental Deep Learning for Detection and Classification in a Robotic Context. started june 2017 (superv. David Filliat and Jean-Francois Goudou (THALES)).

PhD in progress: Vyshakh Palli Thazha, Data fusion for autonomous vehicles. started sept 2017 (superv. David Filliat and Hervé Illy (Renault)).

10.2.3. Juries

David Filliat was in the jury of Houssem Nouira (20/04/2017, Examinateur) : Affinement de relevés laser mobiles issus de Lidars multi-couches

David Filliat was in the jury of Quan Nguyen (06/10/2017, Rapporteur) : Mapping of a sound environment by a mobile robot

David Filliat was in the jury of Vijaya kumar Ghorpade (20/12/2017, Examinateur) : 3D Semantic mapping for indoor navigation

PY. Oudeyer was in the PhD juries of Céline Craye (ENSTA), Gabriel Sulem (ENS), Arthur Prat-Carrabin (ENS), Miquel Cornudella (ENS)

PY. Oudeyer was in the HdR jury of Alexandre Pitti (Univ. Cergy Pontoise)

10.3. Popularization

10.3.1. Duties

D. Roy is member of the Class'code team (Inria is member of the consortium of this project) <https://pixees.fr/classcode/accueil/>. Class'code is a blended formation for teachers and animators who aim to initiate young people to computer science and robotics. D. Roy has in charge the robotics module of the project.

D. Roy is adviser of the organization of computer science exhibition in "Palais de la découverte" which will begin on 2018 March. He helps for robotics part.

D. Roy is member of the team "Education en Scène" which organize educational activities with robotics in Bordeaux Digital City.

D. Roy is member of the scientific committee of "Didapro Didastic" Conference which will be held in Lausanne (Switzerland) on 2018 February.

D. Roy is member of the Robocup Junior French committee, an international robotics challenge <http://rcj.robocup.org/>.

D. Roy is member of the scientific committee of "Ludovia CH" Conference which will be held in Yverdon (Switzerland) on 2018 March.

D. Roy is project leader of Thymio Simulator for Classcode project. Specifications and coordination of work.

D. Roy is project leader of Thymio Scratch and Thymio Snap! development, with D. Sherman. Inria, EPFL and Mobsya collaboration.

PY. Oudeyer continued to be the PI of the Poppy Education project.

10.3.2. Online content

Stephanie Noirpoudre. Atelier Poppy Ergo Jr au CERN. Description and feedback of a workshop on the construction and programming of the robotic arm Poppy Ergo Jr as part of the Coding Pi Science Event. [83]

Stephanie Noirpoudre. Robotic workshop at CERN. Description and feedback of a workshop on the construction and programming of the robotic arm Poppy Ergo Jr as part of the Coding Pi Science Event. [84]

Stephanie Noirpoudre, Kelian Schindowsky. Poppy Education présent à la journée EIDOS 64 : Le forum des pratiques numériques pour l'éducation. Description and feedback of the 9th edition of the EIDOS64 day (the digital practice forum for education). [85]

Sylvain Soulard, Kelian Schindowsky. Description of activity "Modeling of the Port of Rotterdam" using the robot arm Poppy Ergo Jr and created by Sylvain Soulard, middle school teacher in technology. He started the problem: how to optimize and secure the transport of containers in a commercial port? [88]

Kelian Schindowsky. Un projet étudiant : des mains pour Poppy Torso ! Utilisation de la plateforme Poppy pour un projet étudiant. A use of the Poppy platform for a student project: 4 Poppy Torso robots modified by the students of the Bordeaux-Talence campus clashed in the large amphitheater. A competition of a new kind including free figures and imposed figures. [87]

Kelian Schindowsky. Des roues pour le robot Poppy Torso : New Bachelor of Technology students from ENSAM (Talence) worked on the Poppy Torso robot, the goal this time was to equip it with a mobile platform. [86]

10.3.3. Teaching and Education

10.3.3.1. Poppy Education

January 2017, meeting with partner teachers

March 2017, meeting with partner teachers

March 2017, training day with new teachers partners - Building and programming the robot Poppy Ergo Jr

May 2017, meeting with partner teachers

September 2017, meeting with partner teachers

June 2017, training day with workers from Cap'Metier and Cultures électroniques (for scientific mediation purpose) to initiate to robotic - Building and programming the robot Poppy Ergo Jr

10.3.3.2. Inirobot

May 2017, Plan national de formation organised by La main à la pâte (Paris): D. ROY - Train future trainers to initobot curriculum

April 2017, Training days organized by Main à la pâte for National Education (CEA Saclay): T. Desprez, S. Noirpoudre, D. Roy, Théo Segonds - Train a group of teachers to inirobot

10.3.4. Talks and Hands-on

10.3.4.1. KidBreath

Ma Thèse en 180 secondes, March 2017, Bordeaux, France, A. Delmas (oral presentation), La nuit européenne des chercheurs, September 2017, Bordeaux, France, A. Delmas (oral presentation).

10.3.4.2. Poppy Education

January 2017, Eidos64 event - Le forum des pratiques numériques pour l'éducation (Lons): S. Noirpoudre, K. Schindowsky - Talk to present Poppy Education

Janvier 2017, Visit organized by Le Conseil Départemental des Jeunes (Inria Bordeaux Sud-Ouest): S. Noirpoudre - Programming workshops (for middle school students) to initiate in programmation with Poppy Ergo Jr robot

January 2017, Robotics training day organised by Maison pour la Science (Inria Bordeaux Sud-Ouest): S. Noirpoudre, T. Desprez - Programming workshop (for futur trainers) to initiatie in programmation with Poppy Ergo Jr robot

January 2017, R2T2 AmeriCarabeen (island of Martinique) : D. Roy - Co-organization with EPFL and ESPE of Martinique - International event (Mexico, Quebec, Guyane, Sainte Lucie) about robotics for education <http://www.reseau-espe.fr/actualites/espe-de-martinique-le-defi-r2t2-americaraibe-ete-releve>

March 2017, Education exhibition Eduspot (Paris): S. Noirpoudre - Exhibition stand to present the robotic platform Poppy and the use in Education

March 2017, Le printemps de la mixité event (Inria Bordeaux Sud-Ouest): S. Noirpoudre - Robotics workshops (for high school students) to initiate in programmation with Poppy Ergo Jr robot

April 2017, Training days organized by Main à la pâte for National Education (CEA Saclay): T. Desprez, S. Noirpoudre, D. Roy, Théo Segonds - Train a group of teachers to robotics and programmation with Poppy Ergo Jr robot

May 2017, Plan national de formation organised by La main à la pâte (Paris): S. Noirpoudre - Talk to present Poppy Education project and Poppy Ergo Jr

May 2017, Innorobo (Paris): S. Noirpoudre, K. Schindowsky, T. Segonds, D. Roy: Exhibition stand to present the robotics platform Poppy and the use in Education

May 2017, Innorobo Robotics and Education Forum (Paris): S. Noirpoudre - Talk to present Poppy Education and the robot Poppy Ergo Jr

May 2017, Robot makers'day (Talence): K. Schindowsky - Exhibition stand to present Poppy Education and Poppy robots

May 2017, RII Santiago (Santiago de Chile, Chile): T. Segonds - Exhibition stand to present Poppy Education and Poppy robots - Event organized by Inria Chile

May 2017, Bordeaux Geek Festival (Bordeaux): K. Schindowsky - Workshops to initiate in programming

May 2017, PY. Oudeyer gave an invited presentation on "Robotics and cognitive sciences" at Festival Filosofia, St. Emilion, France

June 2017, Internships: observation Sequence for Grade 3 Students (Inria Bordeaux Sud-Ouest - Welcomed two students from middle-school during a week to discover the working environment and to introduce them to robotics

June 2017, Robotics workshop for a primary class (Inria Bordeaux Sud-Ouest): S. Noirpoudre, T. Desprez - Poppy Education and inirobot workshops

June 2017, EIAH : Environnements informatiques pour l'apprentissage humain (Strasbourg): S. Noirpoudre, T. Desprez - Talk to present the article "Poppy Education : un dispositif robotique open source pour l'enseignement de l'informatique et de la robotique"

June 2017, EIAH : Environnements informatiques pour l'apprentissage humain (Strasbourg): T. Desprez, S. Noirpoudre - Exhibition stand to present the robotics platform Poppy and the use in Education

June 2017, Rencontre avenir numérique alsace (strasbourg): S. Noirpoudre - Talk in videoconference to present Poppy Education and the robot Poppy Ergo Jr

June 2017, Playback of "Poppy entre dans la danse" project (Le Cuvier, Artigues-près-Bordeaux): T. Deprez, T. Segonds - Technical assistance of a secondary school performance melting danse and robotics

July 2017, Symposium Education and Robotics (Bordeaux): D. Roy (coordinator) and Flowers Team Members - Organization of the colloquium

July 2017, Symposium Education and Robotics (Bordeaux): S. Noirpoudre - Talk to present Poppy Education project

July 2017, Symposium Education and Robotics (Bordeaux): PY. Oudeyer - Talk to present Flowers educational robotics projects

July 2017, Symposium Education and Robotics (Bordeaux): S. Noirpoudre - Exhibition stand to present the robotics platform Poppy and the use in Education

July 2017, 10th International Scratch conference (Bordeaux): D. Roy - Member of the Scratch organizing committee, member of the scientific committee - the conference organization begun on december 2017

July 2017, 10th International Scratch conference (Bordeaux): T. Segonds - Talk to present Poppy Education project

July 2017, 10th International Scratch conference (Bordeaux): S. Noirpoudre - Exhibition stand to present the robotics platform Poppy and the use in Education

August 2017, Fab13 Fabricating Society Conference (Santiago de Chile, Chile): T. Segonds - Talk on Poppy Education - Two days workshop on using and modifying Poppy robots

August 2017, Ludovia Conference (Ax-Les-Thermes): D. Roy - Partnership with Region Nouvelle Aquitaine and Académie of Bordeaux for an exhibition stand with Poppy Education - Exhibitions, demos, talks

October 2017, Coding Pi Science Days (CERN and Hepia engineering school at Geneva): T. Segonds, T. Desprez - Talk to present the robotics platform Poppy and the use in Education - Three days robotics workshops on building and programming a Poppy Ergo Jr robot

October 2017, Fête de la science (Inria Bordeaux Sud-Ouest): D. Roy - special event with a robotics workshop and several demos at Inria Center, with members of staff of Bordeaux Metropole and political actors

October 2017, Fête de la science (Inria Bordeaux Sud-Ouest): T. Segonds, T. Desprez - 8 programming workshop in 2 days (with middle school students) using Snap! and the robot Poppy Ergo Jr

November 2017, JNRR (National Days of Robotics Research, Biarritz): D. Roy (moderator), P.-Y. Oudeyer (speaker) - Talk on Educational Robotics -

December 2017, Digital Tech Rennes (Rennes): T. Segonds, B. Busch - Talk on Poppy Education - Poppy Ergo Jr programming workshop

December 2017, Aperobot Bordeaux (Bordeaux): T. Segonds - Poppy Ergo Jr programming workshop

December 2017, Internships: observation Sequence for Grade 3 Students (Inria Bordeaux Sud-Ouest) - Welcomed three students from middle-school during a week to discover the working environment and to introduce them to robotics

10.3.4.3. Other

Members of the Flowers team participated to many interviews and documentaries for the press, the radio and television.

10.3.5. Popularizing inside Inria

- March 2017, training day with Inria workers from scientific mediation - Building and programming the robot Poppy Ergo Jr
- October 2017, DevDays (Inria Bordeaux Sud-Ouest): D. Caselli - Presentation of the hotspot tool used in Poppy Ergo Jr robot
- December 2017, Séminaire de la médiation Inria (CNAM, Paris): T. Segonds, S. Noirpoudre, D. Roy - Poppy Ergo Jr programming workshop for people involving in scientific outreach of Inria

10.3.6. Creation of Material for Popularization

As part of the Poppy Education project, thanks the robotic platform Poppy we created pedagogical kits open-source and low cost for teaching computer science and robotics. It is designed to help young people to take ownership with concepts and technologies of the digital world.

The Pedagogical kits includes robots and pedagogical resources. They have been co-created directly with users (mainly high schools teachers) and evaluated in real life by experiments in classrooms [81].

The activities were designed with the visual programming language Snap! (Scratch like) and Python, but some are in Java / Processing (thanks the robot API you can use the language of your choice).

Most activities are using the robot Poppy Ergo Jr, but some use Poppy Torso (mostly in higher school because of its cost) and Poppy Humanoid (in kinder-garden for dance projects) :

- The Poppy Ergo Jr robot is a small and low cost 6-degree-of-freedom robot arm. It consists of simple shapes which can be easily 3D printed. It has several 3D printed tools extending its capabilities (there are currently the lampshade, the gripper and a pen holder but you can design new ones). They are assembled via rivets which can be removed and added very quickly with the OLLO tool. Each motor has LEDs on (8 different color can be activated). The electronic card (raspberry Pi) is visible next to the robot, that allow to manipulate, and plug extra sensors.
- The Poppy Torso robot is an open-source humanoid robot torso which can be installed easily on tabletops. More affordable than the robot Poppy Humanoid, it is an ideal medium to learn science, technology, engineering and mathematics.

We continued to improve the robots functionalities and you can see below the resources we created :

- A website have been created to present the project and to share all resources and activities.
<https://www.poppy-education.org/>
- To complete the pedagogical booklet [48] that provides guided activities and small challenges to become familiar with Poppy Ergo Jr robot and the Programming language Snap! (<https://drive.google.com/file/d/0B2jV8VX-lQHwTUxXZjF3OGxHVGM/view>) we provided a list of Education projects. Educational projects have been written for each activity carried out and tested in class. So each projects have its own web page including resources allowing any other teacher to carry out the activity (description, pedagogical sheet, photos / videos, pupil's sheet, teacher's sheet with correction etc.). Their is now 32 activities documented available on Poppy Education website.

You can see the activities on this links (in french):

- Introduction to Ergo Jr and Snap! :
<https://www.poppy-education.org/activites/initiation-ergo-jr-et-snap>
- Ergo Jr and Python tutorials :
<https://www.poppy-education.org/activites/tuto-python-robot-ergojr>
- High-school levels :
www.poppy-education.org/activites/activites-lycee
- Middle-school level :
www.poppy-education.org/activites/activites-college
- Primary Schools level :
www.poppy-education.org/activites/activites-primaire

<https://www.poppy-education.org/activites/activites-primaire/>

- Demonstrations (just videos to show the possibilities) :
<https://www.poppy-education.org/activites/demos/>

- We continued to improve the documentation of the robotic platform Poppy (<https://docs.poppy-project.org/en/>) and the documentation has been translated into French (<https://docs.poppy-project.org/fr/>).
- A FAQ have been written with the most frequents questions to help users: <https://www.poppy-education.org/aide/>

10.3.7. Innovation and transfer

- Since 1 september 2017 until february 2019, PerPoppy and Poppy Station Projects : D. Roy, P.-Y. Oudeyer. These projects aim to perpetuate the Poppy robot ecosystem by creating an external structure from outside Inria, with various partners. After the Poppy Robot Project, the Poppy Education Project is ending and Inria doesn't

Many exchanges have already taken place with potential partners such as the EPFL, the ENSAM network, the «Ligue de l'Enseignement», Génération Robots, the French Institute of Education, several academies, the direction of digital education of the Ministry of Education, ... PerPoppy is the project which is building the new structure, and Poppy Station is the name of the new structure. Poppy Station, which will include Poppy robot ecosystem (hardware, software, community) from the beginning, will be a place of excellence to build future educational robots and to design pedagogical activities to teach computer science, robotics and Artificial Intelligence.

MANAO Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Chair of Conference Program Committees

Eurographics 2017 Posters chair

10.1.1.2. Member of the Conference Program Committees

Expressive 2017 (NPAR-SBIM-CAe), Eurographics 2017 and 2018, Eurographics Symposium on Rendering 2017 (EGSR), Eurographics Workshop on Graphics and Cultural Heritage 2017 (GCH), Symposium on Geometry Processing 2017 (SGP), Geometric Modeling and Processing 2017 (GMP), SIBGRAPI 2017, Web3D 2017

10.1.1.3. Reviewer

ACM Siggraph 2017, ACM Siggraph Asia 2017, Eurographics 2017, Graphics Interface 2017, Computer Graphics International 2017, CHI 2018, Vision meets Graphics 2017

10.1.2. Journal

10.1.2.1. Reviewer - Reviewing Activities

ACM Transactions on Graphics (TOG), IEEE Transactions on Visualization and Computer Graphics (TVCG), Computer Graphics Forum (CGF), Journal of Vision (JoV), i-Perception, Computers & Graphics

10.1.3. Scientific Expertise

Horizon 2020 Program

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 & Antoine Lucat, 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 : Gaël Guennebaud, Thibaud Lambert, Parallel Programming, 19 HETD, M1, 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, 3D Worlds, 60 HETD, M1, Univ. Bdx and IOGS, France.

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

Master : Patrick Reuter, Graphical user interfaces and Spatial augmented reality seminars, M2, ESTIA, France.

Master : Pierre Bénard, Image Synthesis and 3D modeling, 20 HETD, M2, ENSEIRB, France.

Licence : Patrick Reuter, Digital Imaging, 30 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

HdR : Pascal Barla, Toward a Perceptually-relevant Theory of Appearance, Inria & Univ. Bordeaux, 9 October 2017

PhD : Arthur Dufay, Adaptive high-quality of virtual environments with complex photometry, Technicolor & Univ. Bordeaux, 10 October 2017, J.-E. Marvie R. Pacanowski & X. Granier

PhD : Thibaud Lambert, Real-time rendering of highly detailed 3D models, Inria & Univ. Bordeaux, 18 December 2017, G. Guennebaud & P. Bénard

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

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

PhD in progress : David Murray, Expressive Rendering of Volumetric Data, Thermo Fisher Scientific & Univ. Bordeaux, J. Baril & X. Granier

PhD in progress : Thomas Crespel, Autostereoscopic 3D display, Inria & Univ. Bordeaux, P. Reuter & X. Granier

PhD in progress : Charlotte Herzog, 3 dimensions X-rays imaging for medical applications, Imaging Optics, IOGS & Univ. Bordeaux, X. Granier

PhD in progress : Camille Brunel, Real-Time Animation and Deformation of 3D Characters, Inria & Univ. Bordeaux, P. Barla, G. Guennebaud & P. Bénard

10.3. Popularization

We took part in "FACTS", the art and science festival of Université de Bordeaux, and more precisely in the exhibition "Open Lab", which took place from November 14 to 21 at Espace 29. In collaboration with the artist Maud Mulliez, we presented our ongoing work, "L'empreinte du Geste", which aims at analyzing the connection between the gesture of the artist and the mark that the brush or pen produces on the final art piece. An installation combining videos and projection was allowing the audience to discover our preliminary results.

Pierre Bénard gave a talk titled *L'art et la science des films d'animation 3D* during the internal Inria BSO seminar "Unithé ou café" in January 2017 (45 minutes + questions) and in front of secondary students (120 split into 5 groups) during "la Fête de la Science" (30 minutes) in September 2017. This talk presents the main steps and ingredients required to create a 3D animated film (3D modeling, animation, lighting, rendering) and, for each of them, it shows the subtle but indispensable mix of physical and mathematical models, computer algorithms and artistic talent that it implies. It also highlights how the work of manao contributes to this field.

POTIOC Project-Team

10. Dissemination

10.1. Promoting Scientific Activities

10.1.1. Scientific Events Organisation

10.1.1.1. Member of the Organizing Committees

- EduIHM, Workshop at IHM 2017, Martin Hachet
- “Kick-off conference of CORTICO, the French BCI association”, Paris, France, January 2017, Fabien Lotte
- “2nd National congress onNeurofeedback: NeXT Steps”, Paris, France, January 2017, Fabien Lotte

10.1.1.2. Scientific Events Selection

10.1.2.1. Chair of Conference Program Committees

- Program Chair IHM 2017, Martin Hachet

10.1.2.2. Member of the Conference Program Committees

- ACM CHI Conference, 2018, Anke Brock
- ACM ASSETS Conference, 2017, Anke Brock
- Late Breaking Work Committee ACM CHI Conference, 2017, Anke Brock
- Augmented Human Conference (AH), 2018, Fabien Lotte
- Eurographics STA,R 2017, Martin Hachet
- IEEE VR, 2017, Martin Hachet
- 7th International Brain-Computer Interface Conference, 2017, Fabien Lotte
- Neuroadaptive Technology conference (NAT), 2017, Fabien Lotte
- Symbiotic, 2017, Fabien Lotte

10.1.2.3. Reviewer

- ACM CHI 2018, Pascal Guitton, Fabien Lotte, Joan Sol Roo
- ACM ISS 2017, Joan Sol Roo
- ACM CHI-Play 2017, Joan Sol Roo
- ACM UIST 2017, Fabien Lotte
- Augmented Human Conference (AH), 2018, Fabien Lotte, Jelena Mladenovic
- Haptics Symposium 2018, Anke Brock
- ICASSP 2018, Fabien Lotte
- IEEE VR 2018, Joan Sol Roo
- 7th International Brain-Computer Interface Conference, 2017, Fabien Lotte
- JJ-ICON 2017, Fabien Lotte
- MobileHCI 2017, Anke Brock
- Symbiotic 2017, Fabien Lotte

10.1.3. Journal

10.1.3.1. Member of the Editorial Boards

- Special Issue Chair TACCESS ACM ASSETS Conference, 2017, Anke Brock

- Member of the Editorial board of Journal of Neural Engineering, Fabien Lotte
- Member of the Editorial Board (Associate Editor) of the Brain-Computer Interface journal, Fabien Lotte
- Review Editor for the Frontiers in Human-Media Interaction journal, Fabien Lotte
- Review Editor for the Frontiers in Neuroprosthetics journal, Fabien Lotte
- Guest Editor, Frontiers in Neurosciences on “Detection and Estimation of Working Memory States and Cognitive Functions Based on Neurophysiological Measures”, 2017, Fabien Lotte

10.1.3.2. Reviewer - Reviewing Activities

- ACM Transactions on Computer-Humans Interactions (TOCHI), Fabien Lotte
- BioMed Research International, Fabien Lotte
- Frontiers in Human Neurosciences, Fabien Lotte
- IEEE Access, Fabien Lotte
- IEEE Transactions on Biomedical Engineering, Fabien Lotte
- IEEE Transactions on Human-Machine Systems, Fabien Lotte
- International Journal of Human-Computer Studies, Fabien Lotte
- Journal of Accessibility and Design for All (JACCESS), Anke Brock
- Journal of Neural Engineering, Fabien Lotte
- Nature Scientific Reports, Fabien Lotte
- PLOS One, Fabien Lotte
- Transactions on Haptics, Anke Brock

10.1.4. Invited Talks

- Which feedback should be given to maximize Brain-Computer Interface training, 2nd National Day about Neurofeedback at ESPCI school in Paris, France, Jan. 2017, Léa Pillette
- The impact of flow on BCI neurofeedback training, 2nd National Day about Neurofeedback at ESPCI school in Paris, France, Jan. 2017, Jelena Mladenovic
- Engagement des publics et genre, Séminaire Projet RRI-Practice, CEA Saclay, Feb. 2017, Pascal Guitton
- Comment apprendre à contrôler un ordinateur avec son activité cérébrale ? Le projet BrainConquest, Journée 10 ans ERC - 50 ans Inria, Paris, March 2017, Fabien Lotte
- Art and Sciences at Potioc, Ministry of Culture, Paris, March 2017, Martin Hachet
- Multisensory Maps for Visually Impaired People, Robotics, Brain and Cognitive Sciences dept, Italian Institute of Technology, Genova, Italy, April 2017, Anke Brock
- Designing for Accessibility, University Bordeaux, OpenCare Project Meeting (H2020), June 2017, Anke Brock
- L'éthique en Sciences du numérique, Ecole du Management Inria, Paris, June 2017, Pascal Guitton
- Creating, learning, and meditating; a trip in tangible hybrid spaces, ETIS, Luxembourg, June 2017, Martin Hachet
- Augmented reality & tangible interaction for accessibility, University Stuttgart, HCI Lab, July 2017, Anke Brock
- Understanding and improving BCI user training to boost brain-computer communications, International Graz Brain-Computer Interfaces Conference, opening Keynote, Graz, Austria, Sep. 2017, Fabien Lotte
- Brain-Computer Interfaces technologies for the benefit of all: Neuroergonomics and Neuroeducation, Tokyo University of Agriculture and Technology (TUAT), Tokyo, Japan, Oct. 2017, Fabien Lotte

- Brain-Computer Interfaces: design, user training and new applications, Japanese French Laboratory for Informatics (JFLI), Tokyo University, Tokyo, Japan, Oct. 2017, Fabien Lotte
- L'accessibilité des systèmes numériques d'enseignement, GT Handicap, FCS Paris-Saclay, Nov. 2017, Pascal Guitton
- Interactive projection and 3D gestures for Artistic performances, OARA, Bordeaux, Nov. 2017, Martin Hachet
- Combining machine learning and psychology to design usable Brain-Computer Interfaces, RIKEN Advanced Intelligence Project, Tokyo, Japan, Dec. 2017, Fabien Lotte

10.1.5. Scientific Expertise

- Reviewer for the Millennium Science Initiative 2017, Chile, Fabien Lotte
- Membre du comité ANR CE33 (Interaction, Robotics) 2017, Fabien Lotte
- Member of Inria Cellule de veille et de prospective, Pascal Guitton
- Reviews of projects : ANR, DFG, Crédit Impot Recherche ()Ministère de la recherche), Anke Brock, Martin Hachet
- Member of COSAE, scientific board of SCRIME, Martin Hachet
- Member of the scientific board of ULLO, Martin Hachet, Fabien Lotte

10.1.6. Research Administration

- Representative of Inria at NEM (New European Media), Fabien Lotte
- Member of Commission de recrutement des Inspecteurs Généraux de l'Education Nationale (IGEN), Pascal Guitton
- Member of Comité de Pilotage de Software Heritage, Pascal Guitton
- Femmes & Sciences Deputy Board Member, Anke Brock
- Member of Inria Ethical Committee (COERLE), Pascal Guitton
- Member of Inria Comité Parité et Egalité, Anke Brock & Pascal Guitton
- Responsable of Inria RA2020 Committee (new annual Activity Report), Pascal Guitton
- Member of Inria International Chairs Committee, Pascal Guitton
- Member of Comité de sélection Professeur d'informatique, Université de Rennes, Pascal Guitton
- Jury member for the competitive selection - Young graduate scientist (Chargé de Recherche 2) at Inria Bordeaux (2017), Anke Brock
- Jury member for an Assistant Professorship ()MCF section CNU 63, "Photonics and digital sciences") at Institut Optique / Université Paris-Sud, Anke Brock
- Jury member for the competitive selection Research scientist (CR 2) at Inria Bordeaux, Anke Brock
- Member of Bureau du comité des projets, Inria Bordeaux Sud-Ouest, Martin Hachet
- Member of Comité de Développement Technologique (CDT), Inria Bordeaux Sud-Ouest, Fabien Lotte
- Member of Comité Jeunes Chercheurs at Inria Bordeaux Sud-Ouest, Anke Brock
- Member of Comité de Pilotage Responsabilité Sociétale de l'Université, Université de Bordeaux, Pascal Guitton

10.2. Teaching - Supervision - Juries

10.2.1. Teaching

Licence Pierre-Antoine Cinquin, Assistive technologies for cognition, CM, 3h, 2nd year Institut de formation en ergothérapie, 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: Pascal Guitton, Assistive technologies, CM, 30h 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: Martin Hachet, Interaction and Ergonomics, CM-TD, 8h eqtd, 3rd year (M2), Enseirb, Bordeaux, France

Master: Fabien Lotte, Brain-Computer Interfaces, CM, 2h, M2 Neuroergonomics & Human Factors International Master, ISAE, Toulouse, France

Master: Léa Pillette, Virtual Reality and 3D Interaction, CM, 5h eqtd, M2 Cognitive Science, University of Bordeaux, France

Master: Léa Pillette, Knowledge and Representations, TD, 54h, 1ère année, Ecole Nationale Supérieure de Cognitique, INP, Bordeaux, France

E-learning

MOOC : Pascal Guitton & Hélène Sauzéon, Accessibilité numérique, 5 semaines, Plate-forme France Université Numérique (FUN), Inria, 2ème session (1900 inscrits)

10.2.2. Supervision

PhD: Lorraine Perronet, Combining EEG and fMRI for Neurofeedback, Université de Rennes, Sep. 2017, Anatole Lécuyer, Christian Barillot, Maureen Clerc & Fabien Lotte

PhD: Damien Clergeaud, Collaborative interaction for aerospace scenarios, Oct. 2017, Pascal Guitton

PhD: Joan Sol Roo, One Reaity, Augmenting the Human Experience through the Combination of Physical and Digital Worlds, Dec. 2017, Martin Hachet

PhD in progress: Stephanie Lees, Ulster University, UK, Assessing and Optimising Human-Machine Symbiosis through Neural signals for Big Data Analytics, since Feb. 2014, Damien Coyle, Fabien Lotte, Paul McCullagh and Liam Maguire

PhD in progress: Jelena Mladenovic, BCI user modelling for adaptive BCI training and operation, since Jan. 2016, Fabien Lotte & with Jérémie Mattout

PhD in progress: Pierre-Antoine Cinquin, Design and Experimental Validation of Accessible E-learning systems for people with cognitive disabilities, since Sept. 2016, Pascal Guitton & Hélène Sauzéon

PhD in progress: Léa Pillette, Redefining Formative Feedback in Brain-Computer Interface User Training, since Oct. 2016, Fabien Lotte & Bernard N'Kaoua

PhD in progress: Aurélien Appriou, Estimating learning-related mental states from EEG signals, since Oct. 2017, Fabien Lotte

PhD in progress: Philippe Giraudeau, One Reality, Augmented Reality and Tangible Interaction to support Collaborative Learning, since Oct. 2017, Martin Hachet

PhD in progress: Stephanie Rey, Design and evaluation of a tool for personalized museum visits, Bourse CIFRE with Berger-Levrault, joint supervision by Anke Brock & Nadine Couture

PhD in progress: Rajkumar Darbar, Actuated Tangible User Interfaces, since Dec. 2017, Martin Hachet

10.2.3. Juries

- PhD (Reviewer): Paul Issartel, Université Paris Sud, Saclay, 2017 April 3rd, Martin Hachet
- PhD (Reviewer): Mariacarla Memeo, University of Genova and Italian Institute of Technology, April 2017, Anke Brock
- PhD (Reviewer): Jean-Baptiste Barreau, INSA Rennes, 2017 July 10th, Pascal Guitton
- PhD (Reviewer): Kireth Dhindsa, McMaster University, Canada, 2017 Aug., Fabien Lotte
- PhD (Reviewer): Lonni Besançon, Université Paris Sud, Saclay, 2017 Dec. 14th, Martin Hachet
- PhD (Jury member): Cecilia Lindig-Leon, University of Lorraine, France, Jan. 2017, Fabien Lotte
- PhD (Jury member): Philippe Roussille, Université Toulouse 3 (IRIT), Jan. 2017, Anke Brock
- PhD (Jury member): Sarah Buchanan, University of Central Florida, USA, April 7th, Martin Hachet
- PhD (comité de suivi): Fanny Grosselin, UPMC / ICM / MyBrain technologies, France, 2017, Fabien Lotte

10.3. Popularization

Duties

- Member of the Editorial board of Blog Binaire - Le Monde, Pascal Guitton

Teaching and Education

- Participation à la création du MOOC Informatique et Création Numérique, Plate-forme FUN, Anke Brock & Pascal Guitton, <https://www.fun-mooc.fr/courses/inria/41014/session01/about>

Talks and Hands-on

- Collaborer avec la réalité virtuelle, Pint of Sciences, Bordeaux, May 14th, Damien Clergeaud
- Demonstration of VISTE project at Colloque Robotique et Éducation 2017, Bordeaux, July 2017, Anke Brock & Jérémie Albouys
- Demonstration and presentation of VISTE project at Fête de la science, Oct 2017, Jérémie Albouys
- Demonstration and presentation of VISTE project at Nuits des chercheurs at Cap Sciences, Oct. 2017, Jérémie Albouys
- Collaborative Interaction in Virtual Reality, Airbus PhD's Days, Saint Médard en Jalles, Nov. 8th, Damien Clergeaud
- La Table de Shanghai, Open Lab FACTS Festival, Nov. 14-25th
- Organization of an Hackathon on Cognitive Science and Artificial Intelligence at Bordeaux, Dec 9-10th, Philippe Giraudeau
- Interview, Martin Hachet, Inriality, <https://www.inriality.fr/culture-loisirs/se-divertir-en-2067/>
- Interview, Martin Hachet, RFI - autour de la question, <http://www.rfi.fr/emission/20171113-comment-imaginer-notre-futur>
- Interview, Martin Hachet, Libération, http://next.liberation.fr/musique/2017/01/27/un-nouveau-chant-de-vision_1544507

Popularizing inside Inria

- Comment favoriser l'accessibilité numérique, Unithé ou Café, Bordeaux, April 6th, Pascal Guitton
- Teegi, 50th anniversary Inria, Nov 7-8, Paris, Philippe Giraudeau, Martin Hachet

Written, Oral or Video Content

- “Fabien Lotte about his goal to improve BCI usability”, g.tec medical engineering blog, <http://blog.gtec.at/interview-fabien-lotte/>, 2017
- Interview about VISTE project for LUDOVIAMAGAZINE : <https://www.youtube.com/watch?v=Hdw5O0myifY>, Anke Brock