



RESEARCH CENTER

FIELD

**Applied Mathematics, Computation
and Simulation**

Activity Report 2014

Section Popularization

Edition: 2015-03-26

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BACCHUS Team (section vide)

CAGIRE Team

9.3. Popularization

- Opération Forum des Métiers organisée par la Zone d'Activité Pédagogique d'Oloron Sainte Marie (64) , Salle Pierre Scohy, Oloron Sainte Marie (a stand was manned by [PB] during one day with the objective of explaining the activity of researcher to an audience of schoolboys/girls and high school students).

DEFI Project-Team

9.3. Popularization

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

ECUADOR Project-Team

9.3. Popularization

- Laurent Hascoët made a presentation on “Adjoint Automatic Differentiation for Data Assimilation” at the EGC 2014 conference in Rennes, January 28.
- Laurent Hascoët made a presentation on “Using Algorithmic Differentiation Tools to Compute Derivatives” at the ATOC Adjoint 2014 workshop organized by the British Antarctic Survey, Cambridge, July 1-2.
- Laurent Hascoët was invited to a seminar on adjoint methods <http://www.dagstuhl.de/program/calendar/partlist/?seminr=14371&SUOG> in Dagstuhl, Germany, september 7-12.

GAMMA3 Project-Team (section vide)

IPSO Project-Team (section vide)

MATERIALS Team (section vide)

MC2 Team

9.3. Popularization

- C. Poignard "Des décharges électriques contre le cancer" (Journée IREM Mai 2014).
- C. Poignard, A. Silve. Différence de potentiel induite par un champ électrique sur la membrane d'une cellule biologique . La Revue 3EI, N°75, Jan 2014.
- O. Saut participates to the "excellence interviews" (<http://www.lesentretiens.org>)
- Lisl Weynans and Michel Bergmann held a stand at the "Fete de la science".
- Lisl Weynans is "chargee de mission" from the IMB for relations with high schools and gave talks to students and teachers to introduce scientific calculus.

MEPHYSTO Team

9.3. Popularization

C. Calgaro is the organizer of the action "Mathématiques itinérantes" (<http://mathematiques.univ-lille1.fr/Ouvertures/Mathematiques-itinerantes/>), which promotes mathematics among young people (conferences in highschools, "journées de la science", etc.). Members of the team regularly participate in these actions.

MOKAPLAN Team (section vide)

NACHOS Project-Team (section vide)

NANO-D Project-Team (section vide)

OPALE Project-Team

8.3. Popularization

P. Goatin authored a short contribution to the book “*Brèves de Maths - Mathématiques de la planète Terre*”, Nouveau Monde ed., 2014.

J.-A. Désidéri is a consultant at ONERA (*The French Aerospace Lab*) and participates in the scientific activities of DSNA (Department of Numerical Simulation and Aeroacoustics, Châtillon) and DAAP (Department of Applied Aerodynamics, Meudon).

POEMS Project-Team

9.3. Popularization

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

APICS Project-Team

9.3. Popularization

- L. Baratchart was a speaker at “Café in” (Oct. 2014, Inria Sophia-Antipolis-Méditerranée).
- J. Leblond is a member of the Committee MASTIC. She was an invited speaker at the seminar associated with the lecture by G. Berry at the Collège de France (Jan. 2014).
- M. Olivi is president of the Committee MASTIC (Commission d’Animation et de Médiation Scientifique) <https://project.inria.fr/mastic/>. She is responsible for Scientific Mediation.

BIPOP Project-Team (section vide)

COMMANDS Project-Team

9.3. Popularization

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

CORIDA Team (section vide)

DISCO Project-Team

9.3. Popularization

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

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

GECO Project-Team (section vide)

I4S Project-Team

9.3. Popularization

Qinghua Zhang has published the following work:

Q. Zhang: Encyclopedia article '*Nonlinear system identification – an overview*', in Encyclopedia of Systems and Control, Springer, 2014, (<http://www.springerreference.com/docs/html/chapterdbid/364854.html>) [57].

Maxplus Project-Team

9.3. Popularization

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

MCTAO Project-Team (section vide)

NECS Project-Team

9.3. Popularization

- The team published a flyer entitled "City Labs for Intelligent Road Transportation Systems" in the report "Impact of Control Technology", <http://ieeecss.org/sites/ieeecss.org/files/CSSIoCT2Update/IoCT2-RC-CanudasdeWit-1.pdf>.
- The team has organized the Hycon2 Show day in May 2014 with technical presentations and posters on traffic modeling, estimation and control. We got more than 40 registered peoples from different universities and compagnies, <http://www.inria.fr/en/centre/grenoble/calendar/hycon2-show-day-traffic-modeling-estimation-and-control>.
- The team has organized the 1st technical SPEEDD meeting in May 2014 with a specific visit organized to the traffic center (DIR-CE, Grenoble).

NON-A Project-Team

9.3. Popularization

- Non-A team participated in Innorobo 2014 at Lyon, which is the only European event on robotics (<https://team.inria.fr/non-a/2014/12/15/innorobo-2014/>).
- The new platform for mobile robot demonstration in Euratechnologie Inria Lille in December 2014 is provided by using the result of ADT SLIM (<http://www.inria.fr/en/centre/lille/news/robots-superheroes-of-cooperation-and-surveillance>).
- The invited paper [84] is published in the journal ERCIM News. It presents the main goals and the results of the Inria team-project NON-A in the context of Cyber-Physical Systems.

QUANTIC Team

7.3. Popularization

The high profile publications in Nature and Science are popularizing the new field of quantum engineering.

A. Sarlette has been giving talks on "reservoir engineering" to the (non-quantum) control community during several seminars.

M. Mirrahimi was an invited plenary speaker at CANUM (Congrès National d'Analyse Numérique) 2014, where he gave a public presentation on quantum feedback and quantum reservoir engineering.

CLASSIC Project-Team (section vide)

DOLPHIN Project-Team

9.3. Popularization

- Bioinspired computing - talk in undergraduate and graduate schools
- Inaugural conference of Math en Jean - Bioinspired computing (see <http://lille1tv.univ-lille1.fr/videos/video.aspx?id=6b894d87-bcd3-4ee5-a69c-7af3a2b6446f>)
- Operational research - for 2nde during integration week (June 2015)
- E-learning in algorithmics http://ressources.unisciel.fr/progcartes/co/_web.html
- Optimisation des données, Interstice
- Invited GECCO'2013 tutorial on Evolutionary Multiobjective Optimization
- Invited tutorial on Evolutionary Multiobjective Optimization (Reseau Mexico meeting, November 2014 in La Rochelle, France)
- Invited talk at PGMO-COPI conference on Multiobjective CMA-ES (November 2014 in Palaiseau, France)

GEOSTAT Project-Team (section vide)

MISTIS Project-Team (section vide)

MODAL Project-Team

9.3. Popularization

- **Fête de la Science**

Participant: Vincent Kubicki

Fête de la Science is a series of presentations in high schools. The objective is to meet the students and expose them to the research environment and the applications of the work done by the team.

- **XPérium Lille 1**

Participants: Quentin Grimonprez, Vincent Kubicki, Samuel Blanck, Maxime Brunin, Christophe Biernacki, Serge Iovleff, Julien Jacques, Vincent Vandewalle

Vulgarization of MODAL's research to sensitize high school students and members of Lille 1 university: <https://modal.lille.inria.fr/xperium/>

REALOPT Project-Team (section vide)

SELECT Project-Team

9.3. Popularization

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

SEQUEL Project-Team

9.3. Popularization

- M. Valko gave an Interview on "Face Recognition" at Sciences et Avenir (July 2014)
- M. Valko gave an Interview on "Biometric applications will soon be part of our daily life" at ARTE Future (November 2014)
- Article on research of M. Valko's collaboration with INTEL - Ford and Intel Mobii project using Face Recognition, at engadget.com (June 2014) <http://www.engadget.com/2014/06/25/ford-and-intel-project-mobii-connected-car-cameras/>
- Article on research of M. Valko's collaboration with INTEL - Ford prototype using Face Recognition at intel.com (June 2014) <http://www.intel.com/content/www/us/en/automotive/ford-mobii-prototype-video.html>
- as part of the Inria mediation program, Ph. Preux met high schools pupils to explain what research is.

SIERRA Project-Team

8.3. Popularization

S. Lacoste-Julien, Lecture "Apprentissage statistique et big data", Colloque Algorithmique et Programmation, CIRM, Luminy, France, April.

S. Lacoste-Julien, General public talk to high school students having participated in the mathematics olympiad of académie de Versailles "Apprentissage statistique et big data" at Inria-Rocquencourt, Rocquencourt, France, June.

S. Lacoste-Julien, Demi-heure de la science "Apprentissage automatique et big data", at Inria-Rocquencourt, Rocquencourt, France, November.

S. Lacoste-Julien, July-Dec: helped Sydo for making a popularization video for Inria on the theme of "Simulation and machine learning".

TAO Project-Team

9.3. Popularization

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

ASPI Project-Team (section vide)

CQFD Project-Team

9.3. Popularization

M Chavent and J. Saracco are elected members of CNU 26.

B. de Saporta was an elected member of CNU 26 until sept. 2014.

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

MATHRISK Project-Team

9.3. Popularization

- A. Sulem, "Nouvelles directions de recherche en Mathématiques financières, Inria Alumni, jam session on Risk, November 25th, Inria, Paris.

REGULARITY Project-Team (section vide)

TOSCA Project-Team

9.3. Popularization

M. Bossy published in the *Brèves de maths* book [25].