



RESEARCH CENTER  
Grenoble - Rhône-Alpes

FIELD

Activity Report 2014

# Section Popularization

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## ARIC Project-Team

### 9.4. Popularization

- Sylvie Boldo (Proval project) and Jean-Michel Muller wrote a popular science paper *Des ordinateurs capables de calculer plus juste* in the journal *La Recherche* [36].
- Nicolas Brisebarre co-organizes scientific conferences, called «Éclats de sciences», at Maison du Livre, de l'Image et du Son in Villeurbanne. Around three conferences take place per year.
- Nathalie Revol gave talks for pupils at collèges and lycées, as an incentive to choose scientific careers: lycée Camille Vernet (Valence, Drôme), lycée Jérémie de la Ville (Charlieu, Loire), lycée Gabriel Fauré (Annecy, Haute-Savoie), collège Jean Renoir (Neuville-sur-Saône, Rhône). During the “Week of mathematics”, she gave a 2-hour talk at lycée de la Côtière (La Boisse, Ain). She gave the inaugural conference of the congress “Math en Jean’s” in Lyon and the conference for the scientific camp “Math C2+” in Montbonnot. She was present for the “Mondial des Métiers” (Eurexpo Lyon, Chassieu, Rhône). For the Science Fair, she gave 2 talks at MMI, ENS de Lyon. In 2014, she met over 1000 pupils.

## COMPSYS Project-Team

### 9.3. Popularization

- Alain Darté was invited to give a long keynote (1h30), as an introduction to polyhedral techniques (“Polyhedral optimizations? Not even scared!” [2]), to the Spanish Conference Jornadas Sarteco, the equivalent of the French COMPAS conference, see <http://www.jornadassarteco.org/transparencias-de-las-charlas-invitas/>.
- In Sep. 2014, together with ten other specialists in automatic parallelization, Paul Feautrier recorded a lecture on the “polyhedral model” for a video course on automatic parallelization to be published by the IEEE.
- Paul Feautrier’s 1988 “Array Expansion” seminal paper has been selected for the 25th Anniversary Volume of the ACM International Conference on Supercomputing, with 34 other papers, among 1800 papers published from 1987 to 2011. A short “reminescence” paper [13] has been written for the occasion. <http://dl.acm.org/citation.cfm?doid=2591635.2591641>.
- Alain Darté participated to the “Refresh” Inria Rhône-Alpes initiative, for improving the scientific life of the Inria regional center, as well as to the working group on “team management”.

## CONVECS Project-Team

### 9.3. Popularization

H. Garavel participates to the committee in charge of organizing the Aerospace Valley series of industrial conferences on formal methods. The third conference <sup>0</sup>, devoted to theorem proving, held on February 4 in Toulouse and retransmitted by video-conference in Grenoble, attracted over 100 participants from industry and academia.

The fourth conference <sup>0</sup>, devoted to model checking, held on October 16 in Toulouse and retransmitted by video-conference in Grenoble and Saclay, attracted over 120 participants from industry and academia. H. Garavel gave a talk entitled “*Présentation de l’outil CADP*”. A. Kriouile gave a talk entitled “*Application de CADP à la vérification de matériel*”. R. Mateescu gave a talk entitled “*Introduction au model checking*”.

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<sup>0</sup><http://www.inria.fr/centre/grenoble/agenda/forum-methodes-formelles2>

<sup>0</sup><http://projects.laas.fr/IFSE/FMF/J4/index.html>

## DICE Team

### 8.3. Popularization

- Stéphane Frénot and Stéphane Grumbach have been invited speakers to the BlendWebMix conference in Lyon end of October. This event of two days unites actors from different fields in the web domain, i.e. programmers, entrepreneurs, designers and scientists. Two contributions have been programmed for DICE to speak about digital and geographical territories, and about big data and intermediation platforms.
- The annual German-speaking conference DNP14 in Vienna (Austria) is a two-day event to discuss topics related to data, networks and politics and has taken place this year in September. Robert Riemann was giving a talk to introduce the concept of the C3PO project and illustrate its possibilities of application.
- Metroscope aims at being a leading Internet Observatory. It holds an annual workshop. Aurélien Faravelon presented DICE's works on intermediation at the 2014 edition.
- Séminaire Pint Of Science, Lyon, Google, Twitter, BitTorrent et BitCoin : les données, objets de toutes les convoitises <http://www.pintofscience.fr/#!lyon/ci18>, 21 Mai 2014
- Rencontres CNRS Journées citoyen CNRS, poitiers, invitation to a seminar at school about Big Data, 17-19 Oct 2014, <http://www.cnrs.fr/sciencesetcitoyens/>
- Panel Big Data, Open Data : enjeux démocratiques, colloque Le monde après Snowden, Assemblée nationale, Paris, 13-14 mars 2014
- La France dans le paysage mondial de l'intermédiation, Audition publique au Sénat, Mission commune d'information "Nouveau rôle et nouvelle stratégie pour l'Union européenne dans la gouvernance mondiale de l'Internet", Paris, 11 Febr 2014
- Les enjeux du numérique présentés aux députés, avec la délégation Inria, et le groupe d'études Internet et société numérique de l'Assemblée nationale, Paris, 21 janvier 2014



**GCG Team (section vide)**

## PRIVATICS Project-Team

### 8.3. Popularization

Interview of Mathieu Cunche on Radio Canada in the chronicle of Janic Tremblay, 3rd February 2014.

Interview of Mathieu Cunche on Radio France Inter in “Journal de 18h”, February 28th 2014.

Seminar of Mathieu Cunche “ Je sais tout sur vous grâce au Wi-Fi! ” Séminaire sur la Confiance Numérique at Clermont Ferrand, March 6th, 2014.

Interview of Mathieu Cunche on Radio France Info in “Tout comprendre” chronicle, March 18th, 2014.

Interview of Mathieu Cunche in Ouest-France news-paper, May 10th, 2014.

Participation of Mathieu Cunche to the TV show "Le Monde en Face" on France 5, June 17th, 2014.

Participation of Mathieu Cunche to the round table “ Numériquement vôtre ” at Futur en Seine, June 14h, 2014.

Seminar of Mathieu Cunche “ Internet: Vie privée, Surveillance et Censure ” at St-Génis Les Ollières, December 20th, 2014.

Seminar of Cédric Lauradoux “ Identifiants et guesswork ” Séminaire sur la Confiance Numérique at Clermont Ferrand, January 9th, 2014.

Seminar of Cédric Lauradoux “ Identifiants et guesswork ” Séminaire sur la Confiance Numérique at Clermont Ferrand, January 9th, 2014.

Seminar of Cédric Lauradoux “ Déni de Service Algorithmique ”, Journées Sécurité des Systèmes d’informations at Rouen, November 13th, 2014.

Seminar of Cédric Lauradoux “ L’Internet des Objets et l’Internet des identifiants ”, Colloque Sécurité de l’Internet des Objets (chaire de cyberdéfense et cybersécurité Saint-Cyr – Sogeti – Thalès) at Rouen, September 19th, 2014

Interview of Vincent Roca and Mathieu Cunche, “ Comment brouiller sa trace dans les réseaux ? ” Sciences et Avenir, issue 809, July 2014.

Interview of Vincent Roca, “ Spécial Grenoble : portrait de trois chercheurs ”, Le Point édition régionale, issue 2195, October 9th, 2014.

Editorial of Claude Castelluccia and Vincent Roca, “ Mobilitics Saison 2: les smartphones et leurs apps sous le microscope de la CNIL et d’Inria ”, La lettre Innovation et Prospective de la CNIL, issue 8, December 2014.

Seminar of Vincent Roca, “ Vie privée et Smartphone : le projet Mobilitics Inria/CNIL ”, DAFP-RAF Inria meeting, Paris, October 16th, 2014.

Seminar of Vincent Roca, “ Vie privée et Smartphone : le projet Mobilitics Inria/CNIL ”, organized by the Guilde des Utilisateurs d’Informatique Libre du Dauphiné (GUILDE), Grenoble, November 4th, 2014.

Short TV subject with Vincent Roca, “ Applications mobiles : de vrais espions ? ”, ARTE X:enius magazine, September 1st, 2014. [http://www.arte.tv/guide/fr/051090-010/x-enius?vid=051090-010\\_PLUS7-F](http://www.arte.tv/guide/fr/051090-010/x-enius?vid=051090-010_PLUS7-F)

Press conference, organized by CNIL in association with Inria, “ Vie privée et smartphones : les nouveaux résultats du projet Mobilitics Inria-CNIL ”, December 15th, 2014.

Seminar of Daniel Le Métayer, at the Cybersecurity Forum (ETH Zurich), 2014.

Participation of Daniel Le Métayer to a panel on privacy by design at the Annual Privacy Forum (APF 2014, Athens).

Participation of Daniel Le Métayer to Panel on at Computers Privacy and Data Protection (CPDP 2014 – Brussels).

Nomination of Daniel Le Métayer at the Commission of the French Parliament “Commission de réflexion et de propositions ad hoc sur le droit et les libertés à l’âge du numérique.”

Organization of a seminar on privacy for the COERLE (Inria) by Claude Castelluccia and Daniel Le Métayer, November 2014.

**SPADES Team (section vide)**

**BIPOP Project-Team (section vide)**

**MISTIS Project-Team (section vide)**

**NANO-D 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).

## **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).



**BAMBOO Project-Team (section vide)**

## **BEAGLE Project-Team**

### **7.3. Popularization**

- Guillaume Beslon published an interview on modeling in "la revue du progres".

## **DRACULA Project-Team**

### **9.3. Popularization**

- Fabien Crauste : Cycle "Mathématiques et médecine" de l'Université Ouverte "Grippe saisonnière, épidémie, pandémie : quel apport des mathématiques ?", 25 March 2014.
- Olivier Grandrillon : Participation in the café des sciences "La recherche en génétique, entre prouesses et promesses", in Lyon (Samedi 11 octobre)
- Samuel Bernard : Participation in Conférence à l'Université Ouverte "Garder le rythme, c'est garder la santé" and "L'âge de nos cellules par test nucléaire", in Lyon.
- Thomas Lepoutre : Cycle "Mathématiques et médecine" de l'Université Ouverte.
- Thomas Lepoutre is one of the organizer of Mathalyon (Mathematical exhibitions in highschool with 4 researchers, 20 days of intervention every year).
- Thomas Lepoutre : Intervention at Cité Scolaire Internationale (Highschool in Lyon) to explain what is a researcher's job.
- Laurent Pujo-Menjouet : Cycle "Mathématiques et médecine" de l'Université Ouverte "Le bonheur est dans le pré, les vaches folles aussi", 16 September, 2014.
- Laurent Pujo-Menjouet : supervising junior high school students for the "MathenJeans" program <http://www.mathenjeans.fr> (academic year 2014-2015).

**IBIS Project-Team (section vide)**

**KALIFFE Project-Team (section vide)**

## MOISE Project-Team

### 9.3. Popularization

- Since 2010, Ch. Kazantsev is the Director of the IREM of Grenoble <http://www-irem.ujf-grenoble.fr/irem/accueil/>. The Institute is under rapid development now, joining about 30 teachers of secondary schools of the Grenoble region and 15 university professors. They work together 16 times a year on the development of the teaching strategy for the educational community. In addition to this, IREM is the editor of two journals: "Grand N" destined to primary schools teachers and "Petit x" – to the secondary schools. As a director and as an animator of IREM, Ch. Kazantsev has participated at
  - the week of Mathematics, the 17 and 21 March 2014,
  - the festival "Remue-Méninges", Echirolles, 22-25 April 2014,
  - the internship MATHC2+ in June and in October 2014,
  - the "Journées Nationales de l'APMEP": presentation of two workshops with M. Gandit "Sky: between historical and simulated data",
  - the "Fête de la science" with workshops "28 nuances de sciences" and "Récréation mathématique pour tous".
- M. Nodet gave talks and made posters to explain how the "problem-based learning" (a special case of "active learning") approach was introduced in mathematics for Grenoble university undergraduates, see e.g. [75] and [61].
- M. Nodet (in collaboration with A. Rousseau and S. Minjeaud) wrote a chapter of an outreach book "Brèves de maths" [59].
- M. Nodet gave outreach talks about "mathematics for environmental modelling" in various occasions: for the Grenoble maths Olympiades awards, twice for the "Science Fair 2014" (one for undergraduate students, one for secondary school pupils), for a daily visit of highschool students at Valence university.
- M. Nodet supervises a maths club "Math en Jeans" for secondary school pupils at two schools around Grenoble, which consists in proposing open research subjects to the students and supervising them over the year, in collaboration with the teachers.
- E. Blayo gave several outreach talks, in particular for the inauguration of the Fédération Rhône-Alpes-Auvergne de Mathématiques (Lyon, February 28), for the ceremony of the Christian Le Provost prize of the French Academy of Science (Saint Briec, April 18), and for MathC2+ internships.

## **NUMED Project-Team**

### **8.3. Popularization**

V. Calvez is responsible of "Math à Lyon", a serie of conferences in high school.

E. Grenier gave a public conference in Nancy in november 2014 on "mathematics and drugs".

P. Vigneaux took part of a general book "Brèves de Maths - Mathématiques pour la planète Terre. Nouveau Monde" éditions. ISBN 9782365838962. Octobre 2014. 255p. Patronage de l'INSMI-CNRS, Inria, SMAI, SMF, SFdS

P. Vigneaux is a member of the board of "Images des Maths", a pedagogic website.

**STEPP Team (section vide)**



## **AVALON Project-Team**

### **9.3. Popularization**

Eddy Caron has been interview by New Screens Magazine (N°9) edited by Imaginove. "Pipeline de production pour l'animation: Optimisation des temps de calcul et parallélisme", June 2014.

Gilles Fedak is a member of the Maison des Mathématiques et de l'Informatique steering committee.

Laurent Lefevre has been interviewed by Atlantico Web News Magazine on "Gadget ou véritable promesse ? Comment Amazon compte se chauffer grâce à l'énergie dégagée par les datas centers", September 21, 2014

**CTRL-A Exploratory Action (section vide)**

## DANTE Team

### 9.3. Popularization

- Interview of E. Fleury for X:ENIUS on arte TV: *Big data : opportunity or curse ?* (<http://www.arte.tv/guide/fr/051094-020/x-enius>)
- Interview of M. Karsai for Campus Channel TV: *Master 2 program of Complex Networks* (<https://www.youtube.com/watch?v=k7I1m1NCbTU>)

## **MESCAL Project-Team**

### **9.3. Popularization**

- fête de la science: atelier sciences manuelles du numérique.
- MathC2+: sciences manuelles du numérique.
- Interventions dans des classes de seconde sur la simulation simcity.
- participation à l'IREM de Grenoble, groupe algorithmique.

**MOAIS Project-Team (section vide)**

**ROMA Team (section vide)**

**SOCRATE Project-Team (section vide)**

## **TYREX Project-Team**

### **8.3. Popularization**

M. Razafimahazo developed a mobile application for the pupils of the école de la paix, Grenoble. The application uses Augmented Reality for cultural heritage tour of Grenoble City with content produced by pupils.

M. Razafimahazo Animated a brainstorming during CitizenTIC around OpenStreetMap crowd-sourcing: “Les cartes changent la donne autour des parcours accessibles dans l’agglomération Grenobloise”.

N. Layaïda animated several workshops on Open Linked Data for Grenoble City and Grenoble Agglomeration (La métro).

We received two pupils from secondary school, Jeremy Andreoletti and Hugo Kersaudy, for a one week initiation to research. We hosted several pupils from the primary school for a one day for a presentation and demos.

#### **8.3.1. Institutional commitment:**

C. Roisin Board member of the University Pierre Mendes-France, University of Grenoble, in charge of IT systems and TICE.

C. Roisin is President of the disciplinary commission of the University Pierre Mendes-France, University of Grenoble.

N. Layaïda is member of the Scientific Board of Advanced Data-mining of the Parsyval Labex.

N. Layaïda is member of the experts pool (selection committee) of the minalogic competitive cluster.



## URBANET Team

### 9.3. Popularization

- Hervé Rivano gave a popularization talk for ISN teachers on smart cities and wireless networking issues in June 2014.
- Razvan Stanica gave an invited talk, titled *Data Collection and Analysis using Mobile Phone Sensors*, in the wireless sensor network training organized for industrial partners at the Ecole Polytechnique de Yaoundé in June 2014.
- Fabrice Valois gave an invited talk, titled *Introduction to Wireless Sensor Networks*, in the wireless sensor network training organized for industrial partners at the Ecole Polytechnique de Yaoundé in June 2014.

**E-MOTION Project-Team (section vide)**

## **EXMO Project-Team**

### **8.3. Popularization**

- Jérôme Euzenat gave a talk to the Canopé network conference cycle on “Communication et adaptation: la fabrique de la communication flexible (communication and adaptation: the making of flexible communication), CROP, Grenoble (FR), 2/04/2014.
- Jérôme Euzenat gave a talk to the 7es journées de l’interopérabilité des applications d’entreprise (JIAE) on “Aligner les ontologies pour communiquer (matching ontologies to communicate)”, Saint-Étienne (FR), 16/05/2014.
- Jérôme David participates to the working group “Créer et maintenir une interconnexion sémantique des grands référentiels culturels: le "Graphe Culture"” of the ministry of Culture. <http://cblog.culture.fr/projet/2013/11/07/groupe-de-travail-metadonnees-culturelles/>

## **IMAGINE Project-Team**

### **9.3. Popularization**

Damien Rohmer published an article on volume preserving deformation in Quadrature Journal [41]. This journal is accessible for University students and teachers.

## **LEAR Project-Team**

### **9.5. Popularization**

- Zaid Harchaoui and Martin Jaggi published in the Mathematical Optimization Society newsletter “Optima” an interview of Marguerite Frank, co-inventor of the Frank-Wolfe algorithm for constrained optimization, with a companion historical survey.
- Julien Mairal, Francis Bach, and Jean Ponce have published a monograph [24] “Sparse Modeling for Image and Vision Processing”, to appear in Foundations and Trends in Computer Graphics and Vision.
- Together with other students in LJK, Mattis Paulin did an interview of Emmanuel Candes for his award of the Prix Jean Kuntzmann in June 2014. The interview will soon be published in Journal du CNRS.

## **MAVERICK Project-Team**

### **7.3. Popularization**

Every year, “MobiNet” (see section 4.5 ) classes are conducted with high school pupils of the large Grenoble area to practice initiation and intuition on Computer Science, Maths and Physics. Depending on the year, we have 2 to 4 groups in the scope of INP-Grenoble “Engineering weeks”, and 0 to 2 groups in the scope of Math-C2+ operations.

## **MORPHEO Project-Team**

### **9.3. Popularization**

- Franck Hétroy-Wheeler gave a talk to high school math teachers entitled: “Digital geometry: from real to virtual worlds”. This talk has then been adapted and given to a 11th grade class.

**PERCEPTION Project-Team (section vide)**



## **PRIMA Project-Team**

### **8.3. Popularization**

- James Crowley participated in the Radio emission Science Publique presented by Michel Alberganti on Radio France Culture on Friday 21 February from 14h00 to 15h00. Theme of the program: "Should we fear intelligent robots?"
- Patrick Reignier was interviewed by a journalist of Science et Vie for a paper on Artificial Intelligence