



RESEARCH CENTER
Paris

FIELD

Activity Report 2016

Section Popularization

Edition: 2017-08-25

ALGORITHMICS, PROGRAMMING, SOFTWARE AND ARCHITECTURE

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ANTIQUE Project-Team (section vide)

AOSTE Project-Team

9.3. Popularization

Liliana Cucu-Grosjean has supervised the video production of a popularization video regarding the outcomes of the PROXIMA project. The video has been made available on Inria channels and all PROXIMA partners.

CASCADE Project-Team (section vide)

GALLIUM Project-Team

10.3. Popularization

Xavier Leroy gave a popularization talk on formal methods at the plenary days of Inria's DGD-T (may 2016) and another on critical avionics software for first-year students at École Polytechnique (june 2016).

MUTANT Project-Team (section vide)

PARKAS Project-Team (section vide)

PL.R2 Project-Team

7.3. Popularization

Yann Régis-Gianas co-organised the “Journée Francilienne de Programmation”, a programming contest between undergraduate students of three universities of Paris (UPD, UPMC, UPS). Yann Régis-Gianas organised, and Étienne Miquey took part in the animation of the (computer science part of the) “Fête de la Science” event at the University Paris 7. Yann Régis-Gianas gave several presentations about “What is programming?” in primary and high schools of Paris and its region.

POLSYS Project-Team

9.3. Popularization

J.-C. Faugère and L. Perret wrote a paper “Le grand défi du post-quantique” for MISC (HS 13, April 2016).

PROSECCO Project-Team

9.3. Popularization

9.3.1. Seminars

- Karthikeyan Bhargavan: invited talks at SSTIC, EUROCRYPT, OAuth Workshop
- Bruno Blanchet: invited talks at John Mitchell's 60th birthday workshop, Stanford University, CA (May 2016), Facebook, Menlo Park, CA (May 2016), and at University of Oslo (Dec 2016).
- Catalin Hritcu: invited talks at CEA List, MSR Redmond, Inria Gallium, Secure Compilation Meeting, ERC, Inria Prosecco, MPI-SWS
- Harry Halpin: invited talks at NetFutures 2016 (April 2016), Trust in the Digital World (June 2016), Strategic Research Challenges in Privacy-Enhancing Technologies (July 2016), European Dialogue on Internet Governance (September 2016), Internet Governance Forum Tunis (October 2016), Keynote at International Workshop on Semantic Web, and Cryptodesign (November 2016).

SECRET Project-Team

10.3. Popularization

- Nicolas Sendrier and Jean-Pierre Tillich, *Code-Based Cryptography: New Security Solutions Against a Quantum Adversary*, ERCIM News [67].
- Anne Canteaut gave a talk at the *dotSecurity 2016* conference for developers, at Théâtre des Variétés, Paris, April 2016 <http://www.thedotpost.com/2016/05/anne-canteaut-the-struggle-for-secure-cryptography>.
- Anne Canteaut gave a talk at *Séminaire général du département d'informatique de l'ENS* for Master students in computer science at ENS Paris, April 13, 2016 <http://savoirs.ens.fr/expose.php?id=2516>.
- André Chailloux gave a talk entitled *L'ordinateur quantique*, at Journées Art, Cerveau, Futur; Mouans-Sartoux, France, September 2016;
- Anne Canteaut gave a talk on cryptography at lycée Rodin, Paris, February 2, 2016.
- Sébastien Duval gave a talk on cryptography at lycée des 7 Mares, Maurepas, December 2, 2016
- Anne Canteaut has been involved in the AlKindi competition, which is a national competition on cryptanalysis for students in "Seconde" <http://www.concours-alkindi.fr/>.

The best teams from Paris have been visiting the SECRET project-team in June 2016 <https://www.youtube.com/watch?v=EVLHEOWAORc>.

- Julia Chaulet participated to a general-public mediation about the use of mathematics in industry at "Salon Culture & Jeux Mathématiques", Paris, May 28, 2016.
- Yann Rotella hold a stand to explain cryptography at Futur en Seine, Carreau du Temple, Paris, June 12, 2016.

MATHERIALS Project-Team

9.4. Popularization

- É. Cancès has delivered a conference in Nancy in November 2016, in the framework of the series of lectures “Sciences et société”.
- A. Levitt participated in the “Young doctors” session of the Salon Culture & Jeux Mathématiques in May 2016.

MATHRISK Project-Team (section vide)

MOKAPLAN Project-Team

10.3. Popularization

G. Peyré wrote the large audience articles : “Claude Shannon et la compression de données” on *Image des Mathématiques*⁰ ; “Parcimonie, problèmes inverse et échantillonnage compressé” in *La Gazette des Mathématiciens (SMF)*. G. Peyré organized the conference in the honor of Claude Shannon in CIRM⁰.

⁰<http://images.math.cnrs.fr/Claude-Shannon-et-la-compression-des-donnees>

⁰<http://www.fr-cirm-math.fr/hommage-claude-shannon.html>

QUANTIC Project-Team

8.3. Popularization

Mazyar Mirrahimi gave interviews for radios, newspapers, magazines and websites (France Culture, Le Monde, La Recherche, Silicon, Industrie and Technologies).

Pierre Rouchon was invited by the "Département de Mathématiques Appliquées de l'Ecole Polytechnique" to give a talk entitled "Dynamique et contrôle des systèmes: du classique au quantique" for the students of Ecole Polytechnique (April 21, 2016).

Alain Sarlette is answering questions about quantum control and quantum computing on the website "ik-heb-een-vraag.be" where Flemish layman can ask questions to scientific experts.

SIERRA Project-Team (section vide)

ANGE Project-Team

10.3. Popularization

March E. Audusse intervened in a middle school on the occasion of the French week of Maths.
J. Salomon went to a high school at Limay.

May N. Aïssiouene, E. Audusse, E. Godlewski (organiser), Y. Penel and F. Wahl ran a stand on the occasion of the “salon de la culture et des jeux mathématiques”.

July M. Parisot gave a vulgarisation talk at Inria (“demi-heure de la science”).

October E. Audusse intervened in a high school on the occasion of Savantes Banlieues.

November E. Nayir, Y. Penel and F. Wahl ran a stand during the ONISEP exhibition.

December E. Godlewski managed a group of middle school students at the Jacques-Louis Lions lab.

December F. Wahl helped the organisation at the “Math. Employment” show.

A. Sergeant-Boy, A. Mangeney, E. Stutzmann, J.-P. Montagner, F. Walter, L. Moretti, and O. Castelnaud wrote an article entitled “La sismologie pour ausculter les pertes des glaciers des calottes polaires, lors du vèlage d’icebergs” in the CNRS–INSU newspaper (Apr.).

A. Mangeney is coaching high-school students from disadvantaged areas to manage scientific projects.

ARAMIS Project-Team

10.3. Popularization

With the precious help of the communication department of the Inria Paris Center, ARAMIS prepared and presented games on brain data analysis, presented at the "Salon Culture et Jeux Mathématiques" and at the "Fête de la Science".

CLIME Project-Team

10.3. Popularization

Vivien Mallet and Raphaël Ventura, together with Cong Kinh Nguyen (MiMove), Pierre-Guillaume Raverdy (SED), Fadwa Rebhi (MiMove), Fabienne Giboudeaux (Paris city), Awa Ndiaye (Paris city), Gilles Plattner (Particitae) and Laure Turcati (Particitae), took part to collaborative measuring of noise pollution with volunteers from the general public. Using the mobile application Ambiciti, the volunteers carried out a journey in a city district in order to measure noise pollution with their smartphones, and therefore help to map noise pollution in the area. At the end of the journeys, the observations were merged with an existing noise map so as to produce an improved map. Discussion about the strengths and limitations of mobile observation were engaged, and the activity helped to inform about noise pollution. This was carried out in Paris at the opening of the “Canopée des Halles”, at Futur en Seine festival and during the “journée sans voiture”.

MAMBA Project-Team (section vide)

MYCENAE Project-Team

9.3. Popularization

Jonathan Touboul has given a presentation in the framework of the “demi-heure de science” : Mathematical exploration of the brain activity (January 7th).

Frédérique Clément has given a 3h lecture on “Multiscale modeling of folliculogenesis in mammals” in the M2 master “Predictive & integrative animal biology” (**PRIAM**) of Université Paris-Saclay.

REO Project-Team

10.3. Popularization

- Céline Grandmont
 - Conference : "Filles et Maths : une équation lumineuse", 60 students secondary school level, Feb 2016
 - Popularization paper with J.-F. Gerbeau : "Maths, médecine et entreprises : des collaborations gagnantes", brochure Maths Société Express, 2016
 - Conference "Métier": Master 1 Maths students, UPMC, Nov 2016
- Irene Vignon-Clementel
 - Telerama, Interview (Richard Senejoux), Mar 10, 2016
 - Presentation, Inauguration of Inria Paris research center in presence of the Minister of Research and presidents of Universities, ANR, EPST, media, etc. Mar 10, 2016, Paris
 - High school conference, Mar 14, 2016, Lycée St François d'Assise, Montigny le Bretonneux

SERENA Team

9.3. Popularization

F. Clément was member of the Organizing Committee of the *17e Salon Culture & Jeux Mathématiques*, held in Paris, 26–29 May, 2016. He was member of the Editorial Board of the *Maths Société Express* booklet distributed during the exhibition. He was also coordinator of the Maths-Enterprises booth for **AMIES**.

F. Clément realized, with the Communication Department of the Inria Research Center of Paris, an exhibition illustrating the results of the *Etude de l'impact socio-économique des mathématiques en France* sponsored by **AMIES**, **FSMP**, and **FMJH**.

F. Clément coordinated an article about **AMIES** in the magazine PLOT published by the *Association des Professeurs de Mathématiques de l'Enseignement Public*.

TAPDANCE Team (section vide)

ALPINES Project-Team

10.3. Popularization

- 2 Conferences on being a mathematicien: **Applied Mathematics, Research...**, in the high school Viollet le Duc - Villiers-Saint-Frédéric, France for 200 high school students in 11th and 12th grade, april 2016.
- Part of the teaching duty of Xavier Claeys (around 70 hours total) has been dedicated to "orientation and insertion professionnelle". This has consisted in familiarizing young students (2nd year bachelor) with potential curricula, professionnal activities and networks related to mathematics.

DYOGENE Project-Team

10.3. Popularization

- Anne Bouillard: invited speaker at “Girls can code” 2016 session (Training session for female junior and senior highschool students).

EVA Project-Team

10.3. Popularization

10.3.1. Demos

Inria-EVA is working with the Inria-Paris management team to install a permanent demo on the Inria-Paris premises in Q1 2017. Pieces of the same demo have been presented to all people and teams visiting the lab. For example, the high school students from the Lycee Louis-Le-Grand on 1 June 2016.

10.3.2. Videos

The following videos were prepared with the audio/video team of Inria.

1. Interview of **Thomas Watteyne** during the “Nouveaux Arrivants” workshop. To be published.
2. “Save The Peaches” details the Smart Agriculture deployment. Featuring **Thomas Watteyne** and Keoma Brun-Laguna.
 - English version: https://www.youtube.com/watch?v=_qGSH810Vkk
 - French version: <https://www.youtube.com/watch?v=cZvGw7DyIzI>

10.3.3. In the News

1. **Thomas Watteyne** featured in “Experto en IoT realiza webinar con Inria Chile”. Inria-Chile newsletter, December 2017.
2. Interview of **Thomas Watteyne**: “In Argentina alone, connected agriculture could have saved 10,000 jobs in one year”, Inria Homepage, November 2016.
3. Interview of **Thomas Watteyne** in “La Gazette”, the Inria-Paris newsletter, on Smart Agriculture, October 2016.
4. **Thomas Watteyne** featured in “Outcome Report from the US-Europe Invited Workshop on Next-Generation Internet of Things @USC”, Inria-SiliconValley Newsletter, 26 July 2016.
5. Keoma Brun-Laguna presented the PEACH project during the annual Math exhibition in Paris, on 28 May 2016.
6. **Thomas Watteyne** featured in “Inria deploys a wireless sensor network in Argentina to save peaches”, Inria-Paris homepage, 22 April 2016.
7. **Thomas Watteyne** featured in “Great fun at the OpenWSN & OpenMote tutorial at IEEE GLOBE-COM in San Diego!”, Inria-SiliconValley Newsletter, 17 March 2016.
8. **Thomas Watteyne** featured in “6TiSCH cherche à concilier protocole IPv6, réseau radio maillé et performance industrielle”, L’embarque, 8 February 2016.

10.3.4. Web Presence & Social Media

- The Inria-EVA team maintains the following websites:
 - <https://team.inria.fr/eva/>
 - <http://www.savethepeaches.com/>
 - <http://www.snowhow.io/>
 - <http://www.solssystem.io/>
 - <http://www.headsup.tech/>
- The Inria-EVA team maintains the Twitter accounts:
 - EVA (<https://twitter.com/InriaEVA>), 180 tweets
 - OpenWSN (<https://twitter.com/openWSN>), 88 tweets
 - savethepeaches (<https://twitter.com/peachesthesave>), 73 tweets
 - HeadsUp! (https://twitter.com/heads_up_tech), 28 tweets
 - REALMS team (https://twitter.com/realms_team), 28 tweets
 - SOLsystem (<https://twitter.com/SOLsystem>), 16 tweets
 - snowhow (https://twitter.com/snowhow_io), 14 tweets

GANG Project-Team

9.3. Popularization

- Laurent Viennot is “commissaire d’exposition” for the permanent exposition on “Informatique et sciences du numérique” at Palais de la découverte in Paris (opening in October 2017).
- An article centered around the eLife 2016 paper “A locally-blazed ant trail achieves efficient collective navigation despite limited information” [14], whose co-authors include Amos Korman (co-corresponding author), Lucas Boczkowski, and Adrian Kosowski, appeared on the Israeli daily newspaper “Haaretz”, Dec 2016.
- The team has made contributions to the Encyclopedia of Algorithms [44], [41].

MIMOVE Team (section vide)

MUSE Team (section vide)

RAP Project-Team (section vide)

REGAL Project-Team

9.3. Popularization

Julien Sopena animated an activity during the [Science Festival 2016 at UPMC](#)

WHISPER Project-Team

10.3. Popularization

10.3.1. Talks

- Julia Lawall: Coccinelle: invited talk, Linux Security Summit, 2016.
- Julia Lawall: Coccinelle BoF: Linuxcon Europe 2016.
- Julia Lawall: Outreachy intern panel, Linuxcon Europe 2016.
- Julia Lawall: Prequel, 2016 OSADL networking day.

ALPAGE Project-Team

9.3. Popularization

- Interview of Laurent Romary on new scientific publication models for APS news, American Physical Society (<http://www.aps.org/publications/apsnews/201602/arxiv.cfm>).
- Laurent Romary and Marie Puren have given an interview on 24/11/2016 on the European project Parthenos for the Inria website (<https://www.inria.fr/centre/paris/actualites/epi-alpage-historiens-et-informaticiens-reunis-dans-le-projet-europeen-parthenos>).
- Timothée Bernard has welcomed two high school students at Alpage during 4 days, in the framework of the “Science Académie” of the “Paris-Montagne” association.

RITS Project-Team

9.3. Popularization

An article about YoGoKo (spinoff RITS) was published by bpiFrance. “*YoGoKo joue la connectivité routière*”. Date: 09/02/2016.

“La Tribune” published an article about the Link&Go prototype developed by AKKA Technologies and Inria-Rits. “*Voiture autonome : la LINK & GO d’AKKA veut sortir des frontières*”, pp.72-73. Date: 29/06/2016. Journalist: Marie-Annick Depagneux.

Fawzi Nashashibi was interviewed in the “L’Auto-Journal” journal. Title: “*Les voitures autonomes sont là.*”. Date : 21/01-03/02 16. OJD : 105052, pp.30-32. Journalist: Brice Perrin.

Fawzi Nashashibi was interviewed in the “Usine Nouvelle” journal. Title: “*À la recherche du véhicule vraiment autonome*”. Date: 14/04/2016. Also: “*Le véhicule autonome fait avancer la simulation*”, pp. 48-49. Journalist: Frédéric Parisot.

Fawzi Nashashibi was interviewed in the “webcar center” (<http://www.webcarcenter.com>). Title: “*Conduite autonome : les premières voitures sont là*”. Date: 10/02/2016. Journalist: Brice Perrin.

Fawzi Nashashibi was interviewed by “L’Automobile & L’Entreprise” (<http://www.automobile-entreprise.com>). Journalist: Séverine Fontaine.

Fawzi Nashashibi was interviewed by “Télérama” magazine. Title: “*IA : c’est vraiment demain?*”. Date : 23/04-29/04 16. OJD : 578680. Journalists: Olivier Tesquet / Richard Sénéjoux.

Fawzi Nashashibi was interviewed by "Innovation Review". Title: “*Voitures autonomes : quel est le rôle du « deep learning » ?*”. Journalist: Thibault Lescuyer.

Fawzi Nashashibi was interviewed by “Les Echos” newspaper. Title: “*Google Car, le robot qui a remis la voiture autonome dans la course*”. Date: 02-03 Sept. 2016, pp.10-11. Journalist: Jacques Henno.

Fawzi Nashashibi was interviewed by “Science & Vie Special Edition - High Tech -”. Title: “*Voiture connectée : la révolution cachée*”, pp. 78-83. Date: N 43/2016.

Fawzi Nashashibi was interviewed by “Industrie & Technologies”. Title: “*Pourquoi et comment les véhicules autonomes vont devoir coopérer*”. Date: 11/10/2016. Journalist: Juliette Raynal. (<https://www.industrie-techno.com/pourquoi-et-comment-les-vehicules-autonomes-vont-devoir-cooperer.46065>).

Fawzi Nashashibi participated to a radio program on France Culture, La méthode scientifique, “*Jusqu’où ira l’autonomie des voitures ?*”, September 28, 2016.

Fawzi Nashashibi participated to a round table on “*Transports et énergies du futur*” for the event *Science en direct*, organized at the Cité des sciences et de l’industrie, Paris, October 8, 2016.

RITS team members participated to the making of a short movie dedicated to Teletoon Channel. Title/Serie: “*Culture Décode*”. Date: 09/12/2016. Journalist: Benjamin Brun (Tralalère: <http://www.tralalere.com/>).

WILLOW Project-Team

10.3. Popularization

- Participation to the round table on "L'IA est-elle réservée aux GAFA", NUMA, June 2016 (J. Ponce).
- Participation to the round table on "Fictions, magie numérique et réalités", Post-digital program, ENS/PSL Research University, October 2016 (J. Ponce).
- Debate with Jacques Attali, "Intelligence Artificielle, science avec conscience?", "Intelligence Artificielle : de la technique au business" Conference, December 2016 (J. Ponce).
- Participation to the round table on AI, Liberté Living Lab, December 2016 (J. Ponce).
- Participation to the round table on ethics at the Senate's public hearing on Artificial Intelligence, January 2017 (J. Ponce).
- Interview on Nolife 56Kast (https://www.youtube.com/watch?v=8UgH8_J2ugU) (J. Ponce).
- Interview in Le Monde (http://www.lemonde.fr/pixels/article/2016/01/08/intelligence-artificielle-ce-que-voient-les-machines_4843858_4408996.html) (J. Ponce).
- Interview in Télérama (<http://www.telerama.fr/monde/trouver-le-calme-reconstituer-palmyre-ou-choisir-un-traitement-grace-a-l-ia,141131.php>) (J. Ponce).