Activity Report 2017

Section Popularization

Edition: 2018-02-19
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ANTIQUE Project-Team (section vide)
AOSTE2 Team

10.3. Popularization

Popularization video of the probabilistic notions for mixed-criticality systems https://www.youtube.com/watch?v=sSJT4eGhS_A
CASCADE Project-Team (section vide)
10.3. Popularization

Xavier Leroy wrote a popularization article describing the hunt for a hardware bug in Intel processors, which was published by the Web news site The Next Web [32].
PARKAS Project-Team (section vide)
8.3. Popularization

Hugo Herbelin wrote with Sandrine Blazy and Pierre Castéran an introduction to Coq for engineers edited by Techniques de l’Ingénieur.
9.3. Popularization

The activity of POLSYS in post-quantum cryptography has been covered in several large audience magazines:


Ludovic Perret is member of the Cloud Security Alliance (CSA) quantum-safe security working group. In particular, he contributed to the following documents:


Ludovic Perret is also member of the quantum-safe cryptography specification group of the European Telecommunications Standards Institute (ETSI) where is the referee for a document on quantum-safe signatures.

Since May 2010, Daniel Lazard is engaged in a strong edition work on the English Wikipedia (more than 6,000 contributions, including vandalism revert and talk pages). Initially focused on the themes of POLSYS, these contributions were later enlarged to general algebra and algebraic geometry, because many elementary articles require to be expanded to be useful as a background for computer algebra. Examples of articles that have been subject of major editing: “System of polynomial equations” (created), “Computer algebra”, “Algebra”, “Algebraic geometry”, “Polynomial greatest common divisor”, “Polynomial factorization”, “Finite field”, “Hilbert series and Hilbert polynomial”, …

For the year 2017, this contribution amounts to about 2,000 edits on the English Wikipedia.

Mohab Safey El Din was invited by FMJH to present and popularize symbolic and algebraic computation to Master students in Mathematics following the curricula proposed by Univ. Paris-Saclay.
9.3. Popularization

- Karthikeyan Bhargavan, Benjamin Beurdouche, Jean Karim Zinzindohoue published a paper in the Communications of the ACM.
10.3. Popularization

- **Alkindi cipher challenge**: Several members of the project-team are involved in the cipher challenge for high-school students "concours Alkindi" [http://www.concours-alkindi.fr/](http://www.concours-alkindi.fr/). Matthieu Lequesne organized the challenge and created the scientific content of the competition. He also gave a talk during the final of the cipher challenge Alkindi on May 17 at the "Cité des Sciences" in Paris. The 2018 edition of the competition has been launched in December 2017 at Lycée de la Vallée de Chevreuse, Gif-sur-Yvette. Matthieu Lequesne, Sébastien Duval and Yann Rotella gave talks on cryptography during the opening ceremony. The best teams from Académies de Dijon and Orléans-Tours have been visiting the SECRET project-team in June 2017 [https://www.youtube.com/watch?v=EVLHEOWAORc](https://www.youtube.com/watch?v=EVLHEOWAORc).


- A. Chailloux *Cryptographie Quantique en théorie* - Journée Maths en Mouvement sur l’ordinateur quantique organized by the FSMP, Paris, France, May 2017

- Matthieu Lequesne co-organized the final of the French Tournament of Young Mathematicians at École polytechnique on May 26-28 and was chaired the jury sessions. He also participated to the elaboration of the problems for the 8th French Tournament of Young Mathematicians (TFJM²) in December 2017.

- Matthieu Lequesne co-organized the International Tournament of Young Mathematicians (ITYM) in Iasi, Romania in July 2017 and was part of the international jury.

- Matthieu Lequesne taught for one week during a mathematical summer camp for high school students in Bethlehem, Palestine, organized by the Al Khwarizmi Noether Institute in August 2017.

- Matthieu Lequesne co-organized a weekend for female high-school students interested in mathematics (Rendez-vous des Jeunes Mathématiciennes) at ENS Ulm, November 25-26.


- Several members of the team (C. Boura, A. Canteaut, M. Lequesne, A. Leverrier, Y. Rotella) have been involved in the *Cinquante ans d’Inria*, November 2017. They hold a stand to present a serious game on cryptography. A. Canteaut has participated on a panel on Cyber-security. A. Leverrier gave a short talk (pitch de science) on quantum computing.

- Matthieu Lequesne was auditioned by the committee in charge of proposing a reform of mathematical education (Mission Maths Villani-Torossian) on November 29.
10.5. Popularization

- A. Levitt is a member of the editorial board of Interstices, Inria’s popularization website.
- P. Monmarché gave a talk about mathematics and music to high school students at lycée Pablo Picasso, Avion, in May 2017.
- P. Monmarché participated to Les Matinales de la Recherche de l’ENPC and presented a poster about his work to the students of ENPC in April 2017.
- G. Stoltz participated to Les Matinales de la Recherche de l’ENPC and gave a talk about his work to the staff of ENPC in April 2017.
- G. Stoltz, together with Gilles Buisson (Ecole des Ponts), published a contribution to the proceedings of QPES 2017 (Questions de Pédagogie dans l’Enseignement Supérieur), on his teaching experience involving flipped classrooms organized at the level of a complete class of first year students at Ecole des Ponts. See G. Buisson and G. Stoltz, La classe inversée à grande échelle en école d’ingénieur, Actes du colloque QPES 2017, 633-640.
MATHRISK Project-Team (section vide)
MOKAPLAN Project-Team (section vide)
QUANTIC Project-Team

8.3. Popularization

Mazyar Mirrahimi has been interviewed by Le Monde for a dossier on quantum information.

Mazyar Mirrahimi gave an invited talk on “Quantum computing” at the CRiP’s ITES Innovation Summit at Deauville, France in Mars 2017.

Mazyar Mirrahimi gave an invited talk on “Quantum computing” at X-Creation (X-Drahi) in May 2017.

Pierre Rouchon was invited to give a talk "Contrôle des systèmes: du classique au quantique", Journée d’inauguration du programme PSL-maths, 19 October 2017 at ENS-Paris.

Alain Sarlette has been speaking at inria-organized dissemination events:
- 03/07 “fresh from the labs” talk about quantum technology hardware (at Boston Consulting Group, Paris – team gamma)
- 06-08/06 Keynote speech at Journées DGDT
- 10/07 presentation at inria-Paris-labs visit by high-level managers and stakeholders

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.
9.3. Popularization

- A. d’Aspremont: Journée innovation défense
- P. Gaillard: testimony for EDF fellows day
ANGE Project-Team (section vide)
10.3. Popularization

With the precious help of the communication department of the ICM, ARAMIS prepared and presented games on brain data analysis at the "Fête de la Science" 2017.

Fabrizio De Vico Fallani was invited speaker at the Neuroplanete conference held in Nice 2017. In that occasion, a live BCI experiment has been presented to the public. This event has been reported by France 3.

Fabrizio De Vico Fallani was invited speaker at the Palais Decouverte in Paris for the theme "Vers le meilleur des mondes" 2017.

Olivier Colliot was invited speaker at the Palais Decouverte in Paris for the theme "Vers le meilleur des mondes" 2017.

Stanley Durrleman and Stéphane Epelbaum were invited speakers at the "Open Brain Bar: Artificial intelligence and Alzheimer’s disease" event orginized by the ICM in Paris 2017.

Olivier Colliot was invited speaker for the "Olympiades académiques de mathématiques", Paris, 2017.

S. Durrleman gave a presentation for the 50th anniversary of Inria featuring 50 ERC laureates
S. Durrleman gave two interviews for the magazine Sciences et Avenir (1 video interview, one article)
S. Durrleman and S. Epelbaum took part in the program “Priorité Santé” of the radio Radio France International
S. Durrleman gave a video interview for FrenchWeb.fr
S. Durrleman gave an talk at the event S3 Odéon (www.s3odeon.fr)
ARAMIS was featured in a video of the Agence France Presse (AFP)
MAMBA Project-Team (section vide)
9.3. Popularization

Frédérique Robin participated in a regional committee in the framework of the “Tournoi français des jeunes mathematiciennes et mathematiciens” (TFJM).

Book chapter in the new edition of the Encyclopedia of Endocrine Diseases
D. Monniaux, V. Cadoret, F. Clément, R. Dalbies-Tran, S. Elis, S. Fabre, V. Maillard, P. Monget, and S. Uzbekova
Editors Ilpo Huhtaniemi and Luciano Martini, Section Editor Sophie Christin-Maitre
10.3. Popularization

- Céline Grandmont
  - Conference “Métier”: Master Maths students, UPMC, Oct 2017
- Irene Vignon Clementel
  - Presentation to celebrate the renewal of UPMC-Inria Paris partnership, June 22nd 2017, Paris, France
10.3. Popularization

F. Clément was the coordinator of the Maths-Enterprises booth for AMIES and Labex mathématiques Hadamard at the 18e Salon Culture & Jeux Mathématiques, held in Paris, 27–30 May, 2017.

F. Clément coordinated an article for AMIES in Interstices ([42]).
TAPDANCE Team (section vide)
ALPINEN Project-Team (section vide)
DYOGENE Project-Team (section vide)
EVA Project-Team

10.3. Popularization

Outreach is very important for Inria-EVA, and it brings enormous visibility to the research done in the team. We use it to target a audience different that the one targetted through purely scientific publications.

10.3.1. Web presence

Within the Inria-EVA team, we are regular Twitter contributor through a dozen Twitter accounts, promoting the activities of Inria and Inria-Paris.

Inria-EVA also maintains the following Inria websites:

- https://team.inria.fr/eva/
- http://www.openwsn.org/
- http://smartmarina.org/
- http://www.savethepeaches.com/
- http://www.snowhow.io/
- http://www.solsystem.io/
- http://www.headsup.tech/

10.3.2. Tradeshows


10.3.3. In The News

- Interview by L’Esprit Sorcier about SmartMarina, Fete de la Science, 8 October 2017 (Thomas Watteyne).
- Presenting the Smart Marina project at the VIVA Tech trade-show, Inria@Silicon Valley Newsletter, 19 September 2017 (Thomas Watteyne).
- (French, TV) Cap d’Agde : Une puce innovante pour gérer le port de plaisance, TV Sud, aired 20 June 2017 (Thomas Watteyne).
- (French) 1ère mondiale au Cap d’Agde, des capteurs détectent les entrées les sorties de bateaux, Atout Nautic, 20 June 2017 (Thomas Watteyne).
- (French) Le port du Cap d’Agde connecté, une première mondiale, France Bleu, 20 June 2017 (Thomas Watteyne).
- Interview with Thomas Watteyne “The new use of marinas requires rethinking their operation and imagining a new offer of services”, Marine & Oceans, June 2017 (Thomas Watteyne).
- (Spanish) Experto en IoT de Inria visita Inria Chile, Inria Chile, 9 May 2017 (Thomas Watteyne).
- (Spanish) Proyecto SmartMarina reinventa los puertos utilizando IoT, Inria Chile, 5 May 2017 (Thomas Watteyne).
- The EVA team reinvents the Smart Marina, Inria.fr, 26 April 2017 (Thomas Watteyne).
- FBF supports SmartMarina project in Cap d’Agde, France. France Berkeley Fund new, 21 April 2017 (Thomas Watteyne).
- (French, video) Objets connectés : des capteurs intelligents pour mesurer l’environnement, YouTube InriaChannel, March 2017 (Thomas Watteyne).

10.3.4. Miscellaneous Activities

The Inria-EVA team is running a permanent demo in the Inria-Paris demo showroom.
We worked together with the A/V team on the following videos:

- SmartMarina [English] https://www.youtube.com/watch?v=LUcLE8D0RbM
- SmartMarina [French] https://www.youtube.com/watch?v=CwgyCmJvyuw
- interview [French] https://www.youtube.com/watch?v=zsbS310YVe0
- SolSystem [French] https://www.youtube.com/watch?v=juQGnGX5OGs
- SaveThePeaches [English] https://www.youtube.com/watch?v=_qGSH8l0Vkk
- SaveThePeaches [French] https://www.youtube.com/watch?v=cZvGw7DyIzI
- HeadsUp! [English] https://www.youtube.com/watch?v=51mIibi-tDs

The Inria-EVA team very regularly hosts visiting companies interested in using the technology developed.
GANG Project-Team

9.3. Popularization

- Amos Korman wrote the article “Conseils d’une fourmi: Ne me prenez pas trop au sérieux !” published in the French journal *interstices* in 10.7.2017.

- An article about a paper by Amos Korman, Adrian Kosowski and Lucas Boczkowski was published in *CNRS news* in 10.1.2017.

- An article called “Les fourmis, génies de l’orientation” about a paper by Amos Korman, Adrian Kosowski and Lucas Boczkowski was published in *Le Monde* in 30.1.2017.

- 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 February 2018).
MIMOVE Team (section vide)
RAP2 Team (section vide)
REGAL Project-Team

8.3. Popularization

Jonathan Lejeune and Julien Sopena animated an activity during the Science Festival 2017 at UPMC
10.3. Popularization

- Julia Lawall: Coordinator of the Outreachy internship program for the Linux kernel. Outreachy provides remote 3-month internships twice a year for women and other underrepresented minorities on open source projects. Julia Lawall also mentored Bhumika Goyal as part of this program.
ALMANACH Team

10.3. Popularization

- BS, jointly with Emmanuel Dupoux (EHESS & ENS), gave a talk on “NLP and AI” as part of the seminar on AI organised by the Institut de l’École Normale Supérieure (21 June 2017)
- EVdLC and BS presented ALMANaCH’s research (as well as its spin-off opensquare) at the “Rencontres Inria-industries” (forum bringing together Inria and companies) (18 November 2017)
- DSBE and BS: participation to a meeting on Digital Humanities bringing together researchers from the PSL ComUE, the University of Cambridge (UK) and the EPFL (Switzerland) (11 May 2017)
- BS: with Jean Ponce, Isabelle Ryl and Hélène Robak, represented the Inria Paris research center at the forum organised for the 30th anniversary of the DRM (the French Military Intelligence Office) (23 March 2017)
- BS and DSBE: talks during the NLP edition of the “Paris Sciences et Data” conference series.
- EVdLC: talk at the opening of the Math Olympiades 2017 about “Une palette mathématique pour appréhender le langage” (Versailles, January 25 2017)
- EVdLC: talk at the GFII DIXIT Seminar on “IA et Traitement Automatique des Langues (TAL) : Quel panorama ?” (Paris, February 24th 2017); member of the organizing committee of the forum 2017 of the GFII and panelist of the session on “de l’IA washing à la réalité industrielle, quels sont les contours du renouveau actuel de l’IA ?” (December 5th, 2017)
- EVdLC: co-animator of a new GFII Working Group “Technologies de la Connaissance”, with a focus on AI
- Loïc Grobol: participation to the 18th meeting on “Culture & Jeux Mathématiques” organized by AMIES
- MP, LR : Webinar on “Humanities and Open Science: Workflows and tools for publishing, licensing, versioning, identifiers, archiving, software...” for the International Open Access Week, 26 October 2017.
COML Team

10.3. Popularization

E. Dupoux talked in two general public conferences on speech recognition, one organised par France is AI (oct 17, 2017) and the other by Paris Sciences& Data (dec 7, 2017). The public was composed of entrepreneurs in machine learning. He also gave a training course in speech and language technology organised by the Institut de l’Ecole Normale (june 21) aimed at information technology professionals. He gave three interview on the limits of deep learning in general public outlets (Le Monde, La Recherche, Usine Nouvelle).

N. Zeghidour did a high level presentation of AI to 30 students and 8 teachers from Sciences-Po and Ecole 42 during the Policy Innovation Lab following the visit of Facebook’s COO. He has been a Mentor (technical advisor) for 9 European start-ups during a pitching event for the IBM Watson AI Xprize. He animated a booth on AI at the Platform Meetup Paris of Facebook. He gave an interview to Libération included in a 100 page special issue on AI. He taught a class on Speech Recognition as part of the Facebook AI Masterclass, a class for developers located at Ecole 42 and broadcasted in developer circles over 25 cities of Europe, Middle-East and Africa with 850 people attending, followed by a live Q&A session with several of these cities over video-conference.

0http://www.larecherche.fr/lintelligence-artificielle-a-lassaut-des-labos
0https://ai.xprize.org/
0http://www.liberation.fr/voyage-au-coeur-de-IA/2017/12/20/en-kiosque-notre-hors-serie-voyage-au-coeur-de-l-ia_1617896
9.3. Popularization


Raoul de Charette: participation to the Hackathon round-table in collaboration with approximately 10 journalists and a handful of Inria researchers. Exchange on the implementation of future autonomous transportation in cities. It lead to several press article. June 7th, Paris.


Raoul de Charette: exchange on upcoming challenges for autonomous driving for the article "Véhicules autonomes : où en est-on réellement ?", journalist Benoit Fleuriet. Microsoft RSLN. June 22th. (https://rslnmag.fr/cite/vehicules-autonomes-ou-en-est-on-reellement/).


Fawzi Nashashibi: participation to the round-table on "L'Intelligence Artificielle pour le transport autonome" during the workshop "Journée de l’IA / Evenement Public ♯ FranceIA" organized by SystemX at Nano-INNOV (Palaiseau), March 3rd.


Fawzi Nashashibi: participation to the round-table on "les questions éthiques et juridiques en robotique" during the workshop on "Ethique de la recherche en numérique", organized by the CERNA, Paris (Institut Mines-Télécom), June 15th.

Fawzi Nashashibi: interview for "L'Esprit Sorcier" number 29 on "La voiture autonome", journalist: Melvin Martineau (https://www.lespritsorcier.org/dossier-semaine/la-voiture-automone/).


Fawzi Nashashibi: interviewed by Jéréôme Bonaldi (Science & Vie TV) for "Le Mag de la Science" on September 2017 (to be broadcasted in 2018).
8.3. Popularization

Serge Abiteboul is involved in several popular science activities. He founded and animates the blog [http://binaire.blog.lemonde.fr](http://binaire.blog.lemonde.fr/) on computer science. He was the scientific curator (*commissaire scientifique*) of the exhibition “Terra Data” at the Cité des Sciences. He published two scientific popularization books in 2017, “Le temps des algorithmes” [26], with Gilles Dowek, and “Terra data” [27], with Valérie Peugeot.

Serge Abiteboul is the president of the strategic committee of the Blaise Pascal foundation for scientific mediation.
10.3. Popularization

- Interview with Science et Vie, June 2017 (J. Ponce).
- Interview with Forbes Russia, June 2017 (J. Ponce).
- Interview "Science et Vie Junior", July 2017 (J. Ponce).
- Interview for the "les 100 français de l’IA" dossier of Usine Nouvelle, Dec. 2017 (J. Ponce).
- Two articles in "Binaires" for the newspaper Le Monde (J. Ponce).