

Inria

RESEARCH CENTER
Rennes - Bretagne-Atlantique

FIELD

Activity Report 2019

Section Popularization

Edition: 2020-03-21

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CAIRN Project-Team

8.3. Popularization

8.3.1. Articles and contents

O. Sentieys contributed to the Inria white book on scientific reviews and challenges in cybersecurity https://files.inria.fr/dircom/extranet/LB_cybersecurity_WEB.pdf.

8.3.2. Interventions

Members of the team participated in the national science festival (*Fête de la Science*) in Lannion, October, with demonstrations on wireless sensor networks, body sensor network, cryptology and digital circuit design.

CELTIQUE Project-Team

6.3. Popularization

6.3.1. Interventions

- Thomas Genet gave a talk “Bug, Virus, Intrusion, Pirates... So many threats and no defense? Yes... maths.” in high schools close to Rennes. 2019.

CIDRE Project-Team

9.3. Popularization

9.3.1. Articles and contents

- In books/journals for the general public
Dis, c'est quoi là haut dans le ciel ? C'est un Linux, mon petit ![39], Viet Triem Tong Valérie, Fournier Benoît, Fournier Guillaume, Ouairy Leopold, Cotret Pascal, Guette Gilles, MISC numéro 104, juillet 2019.
- Online publications
La cybersécurité aux multiples facettes. Steve Kremer, Ludovic Mé, Didier Rémy et Vincent Roca. Blog binaire (<https://www.lemonde.fr/blog/binaire/>), 4 juillet 2019.
- White Papers - white Papers for Popularization
Ludovic Mé co-authored (with S. Kremer, D. Rémy and V. Roca) Inria's White Book on Cybersecurity [37].

9.3.2. Interventions

- Valérie Viet Triem Tong has participated to the *Vive la Recherche* event to promote research activities to engineering students at CentraleSupelec
- Valérie Viet Triem Tong has been involved in an artistic performances involving actors and researcher at the **Digital Tech Conference**, December Rennes, France.

DIONYSOS Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

Yann Busnel is member of Development Council of Computer Sciences Master at Université de Nantes (2017–*).

10.3.2. Interventions

G. Rubino makes regular presentations to high school students about the research work in general, and specific technical topics in particular. Current talks:

- Randomness as a tool
- Internet as a research problem
- Great challenges in maths: the Riemann Hypothesis
- Great challenges in math/computer science: the “P versus NP” problem

DIVERSE Project-Team

9.3. Popularization

9.3.1. Interventions

- STAMP - Orange Test and Dev Day, Grenoble, France - Nov 2019
- STAMP - Eastern Paris Dev Meetup, Lunatech, Chessy, France - Jul 2019
- STAMP Breakout Session & Talks - OW2con'19, Orange Gardens, Paris Châtillon - Jun 2019
- STAMP Workshop for EC-DGIT (European Commission DGIT) - Brussels - May 2019
- STAMP - Devox Paris - Apr 2019
- STAMP & CI testing automation - BreizhCamp 2019 - Mar 2019
- STAMP Talk and Workshop - Station-F, Paris - Feb 2019
- Tech talk at Alten - Rennes - Dec 2019
- Tech talk at Harmonic - Cesson-Sévigné - Oct 2019
- Tech talk at Veonum - Rennes - Sep 2019
- Tech talk at Nokia - Rennes - Jun 2019
- Tech talk at OrangeLabs : Hands-on Workshop - Cesson-Sévigné - May 2019
- Tech talk at Solocal and Kereval - Rennes - Mar 2019
- Tech talk at FaberNovel - Test amplification - Mar 2019
- Sciences de l'Ingénieur au féminin - Lycée Sévigné, Cesson-Sévigné - Nov 2019
- *J'peux pas j'ai informatique* - Inria, Rennes - Apr 2019
- *Petit-déjeunr des métiers* - Lycée Sévigné, Cesson-Sévigné - Mar 2019 (je ne suis pas sure de la date)
- Devox 2019 - Les APIs hypermedia expliquées simplement (17-19 avril 2019) ("While web pages are full of hyperlinks and hypermedia, web APIs are not. However, augmenting web APIs with links is at the core of the REST architectural style, but only 5% of APIs actually do it. That's right, only 5%, despite most people saying that they provide RESTful APIs. In this talk, we discuss what an hypermedia-powered API looks like, what problems of distributed systems integration and composition it can solve and what it would change in frontend code to have such APIs.
- Embedded Linux conference Europe [54] – Given a configuration, can humans know in advance the size, the compilation time, or the boot time of a Linux kernel? Owing to the huge complexity of Linux (there are more than 15000 options with hard constraints and subtle interactions), machines should rather assist contributors and integrators in mastering the configuration space of the kernel. In this talk, we introduce TuxML an OSS tool based on Docker/Python to massively gather data about thousands of kernel configurations. Mathieu will describe how 200K+ configurations have been automatically built and how machine learning can exploit this information to predict properties of unseen Linux configurations, with different use cases (identification of influential/buggy options, finding of small kernels, etc.) The vision is that a continuous understanding of the configuration space is undoubtedly beneficial for the Linux community, yet several technical challenges remain in terms of infrastructure and automation.
- API Days - Backend is the new frontend (9-11 décembre 2019)

DYLISS Project-Team

10.3. Popularization

10.3.1. Interventions

- "J'peux pas j'ai informatique", Welcoming of high-school students to leverage stereotypes about computer sciences (110 participants), Apr. 2019 [O. Dameron, A. Siegel]
- "Elles codent Elles créent" Our Ph-D students have been involved in creative Python learning sessions for female students in two high-schools. [M. Louarn, M. Wéry, A. Siegel]
- Operation DECLIC (Dialogues Entre Chercheurs et Lycéens pour les Intéresser à la Construction des Savoirs). Lycée Descartes, Rennes. Nov 2019 [\[More details\]](#) [N. Théret, M. Conan, P. Vignet, O. Dennler]

10.3.2. Internal action

- Organization of the weekly seminar "Symbiose", involving teams DYLISS, GENSCALE and GENOUEST: [S. Blanquart]

10.3.3. Creation of media or tools for science outreach

Science en Cour[t]s (<http://sciences-en-courts.fr/>) Many of our current and former PhD students (M. Wéry, L. Bourneuf, A. Antoine-Lorquin, C. Bettembourg, J. Coquet, V. Delannée, G. Garet, S. Prigent) have been heavily involved in organization of a local Popularization Festival where PhD. students explain their thesis via short movies. The movies are presented to a professional jury composed of artists and scientists, and of high-school students. Previous years films can be viewed on the festival web-site [\[More details\]](#)

EASE Project-Team (section vide)

EMPENN Project-Team

10.3. Popularization

10.3.1. Brain awareness week: “Semaine du Cerveau”

Empenn team took part in Brain awareness week 2019. Giulia Lioi, Claire Cury and Élise Bannier coordinated this event for Empenn/Neurinfo.

- Camille Maumet and Christian Barillot: Talk "" Le cerveau numérique: explorons-le!"". March 2019, Rennes, France.
- Quiz on brain imaging, March 2019, Rennes, France.
- Lab visits for students (3e and 1ere S) about MRI, functional MRI, EEG and neurofeedback, and image processing.
- Pierre-Yves Jonin: Talk "Entre connaissances et souvenirs : voyage en terre mnésique", March 2019, Rennes, France

10.3.2. Journée Science et Musique (JSM)

This event was initiated in 2010 by IRISA. The idea is to offer a scientific and festive immersion in the research and new technologies of the music of neurosciences and sounds to the general public. Free workshops, conferences, demonstrations and concerts are available to all throughout the day (for more detail see <https://jsm.irisa.fr>). Claire Cury organized the event this year with Nancy Bertin, PANAMA team.

10.3.3. Sciences en Cour[t]s

This event is a festival of short movies, which offers doctoral students the opportunity to make short films about their thesis work. Raphael Truffet, Antoine Legouhy and Xavier Rolland won the high school award <https://www.youtube.com/watch?v=IKgqv-iCwak>.

10.3.4. "J'peux pas j'ai informatique"

"J'peux pas j'ai informatique" is an outreach program to welcome secondary school students for a day at Inria Rennes / IRISA and introduce them to the various facets of computer science. Camille Maumet and Pierre Maurel helped out to run the hands-on tutorials in which students could learn how a computer works without computers.

10.3.5. Other interventions

- Pierre-Yves Jonin: Series of 2 talks on neuropsychology, Universités du Temps Libre de Bretagne, Jan-Dec, Rennes, France.

10.3.6. Education

- L codent L créent - An outreach program to send PhD students to teach Python to middle school students in 8 sessions of 45 minutes. Camille Maumet is a co-organizer of the local version of this program, initiated in Lille. The program is currently supported by: Fondation Blaise Pascal, ED MathSTIC, Inria and Fondation Rennes 1.

FLUMINANCE Project-Team

9.3. Popularization

9.3.1. Education

Jocelyne Erhel

- présidente du jury du rallye de mathématiques du CNED, since 2017.

9.3.2. Interventions

Jocelyne Erhel

- conference about spreading epidemics, "les amphis lycéens 2018-2019", March 2019.
- conference about spreading epidemics, "les amphis lycéens 2019-2020", December 2019. [46].

9.3.3. Creation of media or tools for science outreach

Jocelyne Erhel

- was scientific coordinator of the website Interstices (June 2012 - September 2019). She is now member of the editorial board, from October 2019.

GALLINETTE Project-Team

8.3. Popularization

8.3.1. Education

- Hervé Grall has contributed to the project **Merite**, which aims to promote science learning in middle and high schools. He is the main contributor to the theme "Communication between machines". The project is coordinated by IMT-Atlantique in partnership with 7 other french higher education institutions, the rectorates of the Nantes and Rennes academies, and financed by the "Investments in the Future" and the fund FEDER Pays-de-la-Loire.
- A. Mahboubi has worked with composer Alessandro Bossetti and students of the professional high-school Lycée Michelet, on a project "Art and Mathematics", supported by the **Athenor** theater.

8.3.2. Interventions

- P.-M. Pédrot was invited to give a talk about his scientific activities in Le Pleyne, during the "Semaine Sport-Études" of the first year students in computer science from the ENS Lyon.
- P.-M. Pédrot gave a similar talk about his scientific activities at the LS2N, during the visit of first year students in computer science from the ENS Cachan.

8.3.3. Internal action

- A. Mahboubi participates to the Irisa/Inria mentoring program.

GENSCALE Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

- Member of the Interstice editorial board [P. Peterlongo]

10.3.2. Interventions

- In educational institutions : Participation to operation "A la découverte de la recherche" in high schools [P. Peterlongo]
- Short Movie "Moi, mon chien et les autres: à la recherche des transcrits perdus", presented at Sciences en Courts, a local contest of popularization short movies made by PhD students (<http://sciences-en-courts.fr/>) [G. Siekaniec].

10.3.3. Internal action

- co-organizer of Sciences en cour[t]s event, Nicomaque association (<http://sciences-en-courts.fr/>) [W. Delage]

10.3.4. Creation of media or tools for science outreach

- Popularization article in Interstices. "Analyser le génome des océans" <https://interstices.info/analyser-les-genomes-des-oceans/> [P. Peterlongo]

HYBRID Project-Team

10.3. Popularization

10.3.1. Articles and contents

- Ouest-France: Interview of Anatole Lécuyer (October 2019)
- France Inter: Interview of Anatole Lécuyer in the broadcast "Du vent dans les synapses" (November 2019)
- France TV: Interview of Guillaume Moreau and Jean-Marie Normand in "Télématin"

10.3.2. Interventions

- "Technoférence Humain Augmenté": Presentation from Rebecca Fribourg (Nantes, January 2019)
- "Made by DV-Group": Event organized by Rennes Metropole about "VR and Cinema", presentations and demos from Ferran Argelaguet (Rennes, February 2019)
- "Laval Virtual 2019": Demos of FIVE/SEVEN software (March 2019)
- "Journées Nationales de l'Archéologie": Demos made by Ronan Gaugne and Valérie Gouranton (Champs Libres, Rennes, June 2019)
- "Journées Européennes du Patrimoine": Conference and Demos made by Ronan Gaugne and Valérie Gouranton (Musée des Beaux Arts, Rennes, September 2019)
- "Festival Demain/Maintenant" : Presentation from Anatole Lécuyer (Rennes, October 2019)
- "Fête de la Science" 2019 : Presentation from Anatole Lécuyer (Saint-Louis, October 2019)
- "Journée Science et Musique" : Demos made by Florian Nouviale, Ronan Gaugne and Valérie Gouranton (Rennes, October 2019). Rebecca Fribourg and Diane Dewez also participated in the organization of the event.
- "Festival du Livre du Var" 2019 : Presentation from Anatole Lécuyer (Toulon, November 2019)
- "Digital Design Days" 2019 : Presentation from Ronan Gaugne (Milano, Italy, November 2019)

10.3.3. Internal action

- Inria/IRISA "VR Hackathon" 2019: Hackathon (20 participants) organized by Hybrid team and open to all members of Inria Rennes center (May 2019).
- "20 years of Immersia": Event organized by Inria Rennes/IRISA center, with presentations from Anatole Lécuyer and Bruno Arnaldi, and demos made by Florian Nouviale and Ronan Gaugne (November 2019).

10.3.4. Creation of media or tools for science outreach

The ANR-FRQSC INTROSPECT project produced a transparent 3D printing of the content of an Egyptian mummy cat from a CT scan. The mummy is part of the collection of the Musée des Beaux-Arts of Rennes. The 3D printing is permanently exhibited in the Museum, next to the real mummy (Figure 21)

The immersive VR application of the LSI project developed during the hosting of the invited professor Franz Fischnaller from Albertina Accademy of Fine Arts around the Last Supper painting of Leonardo da Vinci was deployed and exhibited in the Deep Space 8K of the Ars Electronica center in Linz, Austria (Figure 22).



Figure 21. The mummy cat and its copy in the Museum des Beaux-Arts in Rennes.



Figure 22. The LSI project in the Ars Electronica center in Linz.

HYCOMES Project-Team

9.3. Popularization

9.3.1. Internal action

The Hycomes team has hosted short internships for secondary school students. This has been an opportunity to promote women in computing, since three female students visited the team for four days, to discover what scientific research is, and what research in computer science could mean. All team members contributed to the initiative.

I4S Project-Team

9.3. Popularization

9.3.1. Internal or external Inria responsibilities

- L. Mevel is member of CLHSCT committee in Rennes.
- L. Mevel is member of Comité de centre committee in Rennes.
- L. Mevel is Head of Science in 2nd of Inria Rennes Center.
- V. Le Cam is Head of SII LAb at IFSTTAR Nantes.
- J. Dumoulin is scientific Head SII LAb at IFSTTAR Nantes.

9.3.2. Articles and contents

9.3.2.1. Encyclopedia article on nonlinear system identification

In the second edition of Encyclopedia of Systems and Control, published by Springer in September 2019, the article on nonlinear system identification authored by Q. Zhang has been updated with the latest progresses on this topic.

Nonlinear mathematical models are essential tools in various engineering and scientific domains, where more and more data are recorded by electronic devices. How to build nonlinear mathematical models essentially based on experimental data is the topic of this entry. Due to the large extent of the topic, this entry provides only a rough overview of some well-known results, from gray-box to black-box system identification. DOI: https://doi.org/10.1007/978-1-4471-5102-9_104-2

9.3.3. Interventions

M. Doehler and Q. Zhang participated the outreach activity "J'peux pas, j'ai informatique" for school classes on April 2, 2019.

9.3.4. Creation of media or tools for science outreach

9.3.4.1. Showroom demonstrations

A damage localization mockup has been developed and installed in the showroom of Inria Rennes. It has been the support for a demonstration for the outreach activity "J'peux pas, j'ai informatique" for school classes on April 2, 2019, showing that computer science also can be related to physics and statistics. An ADT Carnot has been funded on that topic and will help the maturation of such project.

KERDATA Project-Team

9.3. Popularization

9.3.1. Internal or external Inria responsibilities

Alexandru Costan

- In charge of internships at the Computer Science Department of INSA Rennes.
- In charge of the organization of the IRISA D1 Department Seminars.

LACODAM Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

- (E. Fromont) 2018-?: Nominated at the scientific council of the "Fondation Blaise Pascal" (dedicated to scientific mediation, funded by Inria)

10.3.2. Education

- In 2019, Alexandre Termier and Elisa Fromont are co-heads of a special training for high school teachers, ordered by the Ministry of Education. From September 2019, French high school students will have the opportunity to have reinforced Computer Science courses, with the same importance as Mathematics or Physics for example. As new teachers are not yet hired to teach these courses, there was thus an urgent need to train existing high school teachers so that they can train the new teachers. A national formation has been set up, with some coordination between all universities. Alexandre and Elisa represent the University of Rennes, which is the formation center for all of Brittany. The formation load is 125 teaching hours, to a group of 71 high school teachers.
- Elisa Fromont is also leading the set up of a CAPES in University of Rennes 1, which will allow to prepare future high school teachers in computer science.

10.3.3. Interventions

- A. Termier participated at a mediation action on Artificial Intelligence for a general technical public, the "Trial of metro car number 42", at the Digital Tech in Rennes (november 2019, <https://www.ladigital.tech/proces-rame-metro-numero-42/>)
- Alexandre Termier did two 2h interventions at the Emile Zola high school, aimed at math teachers. The topics were "Artificial Intelligence" and "Big Data".
- (E. Fromont) 6/12/2019: Master Class at La Digital Tech Conference on "IA, Machine learning et Deep learning : démêlons les concepts !", Rennes.

LINKMEDIA Project-Team

10.3. Popularization

10.3.1. Articles and contents

- Vincent Claveau was interviewed for his activities about fake news detection in: hors-série 199 de Sciences et avenir Oct/Nov 2019; Sciences Ouest n375; Télérama; Science et vie; Science et avenir; 01net N 894.
- Vincent Claveau was interviewed for his activities about text mining the Grand Débat contributions: AEG infos; Ouest France.
- Ewa Kijak and Vincent Claveau were interviewed for the TV show Télématin Science, nov 2019.
- Ewa Kijak was interviewed about fake news and deepfake detection in: AFP, Le Télégramme, Data Analytics Post, Sciences Ouest n375, Le Temps, FranceTV Info (TV show "Vrai ou Fake"), tv5 monde
- Ewa Kijak was invited on the radio show "La méthode scientifique", France culture, on "Deepfake : faut-il le voir pour le croire ?"
- Teddy Furon was interviewed by Data Analytics Post about the connection of deepfake and watermarking.

10.3.2. Education

LINKMEDIA has been actively involved into the "L codent, L créent" initiative with Cyrielle Mallart and Oriane Siméoni.

10.3.3. Interventions

- Guillaume Gravier gave an invited talk entitled "Strengths, weaknesses and limits of AI illustrated" at the West Data Festival (professional forum, 100 attendees)
- Ewa Kijak gave an invited talk entitled "Fighting Fake news and deep fakes" at the CEPIC congress (Coordination of European Picture Agencies Stock, Press and Heritage)

MIMETIC Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

- Franck Multon is coordinating the national action of Inria in sports

10.3.2. Interventions

- Charles Pontonnier - "La simulation musculo-squelettique pour la robotique" - 4èmes rencontres interdisciplinaires Innovation, Robotique et Santé, December 2019
- Franck Multon - "fête de la Science" Rennes in Champs Libres for two days (October 4th and 5th) demos in the field of VR for sports for a wide public audience
- Franck Multon - "fête de la science" Paris (October 5th), stand-up talk about VR & Sports to the wide public audience, interview with "Esprit Sorcier" for a web-Tv diffusion
- Franck Multon - Sport Unlimitech Lyon, a large event about new technologies for sports (September 19-21), with keynote talks/round tables, managing the booths of Inria
- Armel Crétual - "La science sur les planches", Spectacle "Marcher!!!" avec le Collège Théophile Briant de Tinténiac et la compagnie Kali&Co
- Richard Kulpa - "La réalité virtuelle pour le sport, ludique mais encore ?", Mardis de l'Espace des Sciences, December 2019
- Richard Kulpa - Inria booth at Sport Unlimitech Lyon, a large event about new technologies for sports, September 2019
- Richard Kulpa - Booth at FIFA Women's World Cup 2019
- Anthony Sorel - Inria booth at Sport Unlimitech Lyon, a large event about new technologies for sports, September 2019

10.3.3. Internal action

- Franck Multon - "Journées scientifiques Inria", June 5-6th, plenary talk entitled "La réalité virtuelle pour le sport : un jeu vraiment sérieux ?"
- Franck Multon, Ronan Gaugne - "20 years of Immersia": Event organized by Inria Rennes/IRISA center, November 2019, plenary talks

MINGUS Project-Team

9.3. Popularization

9.3.1. Internal or external Inria responsibilities

- F. Castella was member of the HCERES committee for the evaluation of the laboratory "Mathématiques et Informatique pour la Complexité et les Systèmes (MICS)", CentraleSupélec, Gif-sur-Yvette.
- P. Chartier was member of the hiring committee CR2-Inria (Bordeaux)
- P. Chartier was member of the hiring committee for the Inria promotion DR1-DR0.
- N. Crouseilles is member of the Inria Evaluation Committee (2019-2023).
- N. Crouseilles was member of the Inria hiring committee for the following Inria promotions: CRHC, DR2-DR1, DR1-DR0, DR0-DR02.
- N. Crouseilles is member of the hiring committee of the professor position, ENS Rennes.
- E. Faou was member of the CNU 26 until the summer 2019.
- E. Faou was member of the HCERES committee for the evaluation of the Mathematics Institute of Toulouse, University Paul Sabatier.
- E. Faou is AMIES correspondent (Agency for Interaction in Mathematics with Business and Society) for Inria Rennes Bretagne atlantique and IRMAR.

9.3.2. Interventions

- N. Crouseilles: participation to high school students internship at IRMAR laboratory (one week), June 2019.
- N. Crouseilles: interview by a first year student of University Rennes I (in order to inform the different ways to become Inria researcher).
- J. Massot: talk at the N. Mandela high school (terminal S classes) about the links between astronomy and mathematics, April 2019.
- J. Massot: participation to high school students internship at IRMAR laboratory (one week), June 2019.
- P. Navaro: participation to the Julia day, Lyon, France, January 2019.
- P. Navaro: participation to the Julia day, Nantes, France, June 2019.
- A. Rosello: participation to "MATHC2+", June 2019, ENS Rennes.
- L. Trémant: participation to "Maths en Jean", June 2019, University of Rennes.

9.3.3. Internal action

- J. Massot: writing of a Python library *ponio* (Python Objects for Numerical IntegratOr) <https://pypi.org/project/ponio/0.1/>
- P. Navaro: Python training at the IRMAR laboratory.
- P. Navaro: Julia training at the IRMAR laboratory.
- P. Navaro: R training at the Finist'R internal workshop, Roscoff, France, August 2019.
- P. Navaro, Python courses, within the exchange program between ENSAI and Hong Kong university.

Myriads Project-Team

9.3. Popularization

9.3.1. Internal or external Inria responsibilities

- Martin Quinson is on the scientific board of the Blaise Pascal foundation, boosting the scientific outreach in the domains of Maths and Computer Science.

9.3.2. Education

- Guillaume Pierre shared his experience as the coordinator of a H2020 Maria Skłodowska Curie Action project with CCRRDT, the Brittany Region’s consultative committee for research and technological development. January 14th 2019.
- “L codent L créent” is an outreach program to send PhD students to teach Python to middle school students in 8 sessions of 45 minutes. Tassadit Bouadi (Lacodam), Camille Maumet (Empenn) and Anne-Cécile Orgerie (Myriads) are coordinating the local version of this program, initiated in Lille. The first session in Rennes occurred in April 2019, and a new session has started for 2019-2020. The program is currently supported by: Fondation Blaise Pascal, ED MathSTIC, Université Rennes 1 and Fondation Rennes 1.
- “J’peux pas, j’ai informatique” is an outreach program to deconstruct IT stereotypes. Organized over one day, this program welcomes 110 college students (5ème) each year and is coordinated by Anne-Cécile Orgerie. The next event is planned in April 2020.
- Martin Quinson participated to the DIU EIL (Enseigner l’Informatique au Lycée), training existing maths and engineering teachers so that they can teach Informatics in their colleges.
- Martin Quinson is in charge of a M2 lecture on scientific vulgarization at ENS Rennes. The students are asked to come up with new activities (or improve existing ones) on their research field.
- Martin Quinson gave a doctoral teaching on December 13 on scientific outreach targeting either schools or science forums at IRISA laboratory.

9.3.3. Internal action

- Anne-Cécile Orgerie, Martin Quinson and Matthieu Simonin: organize experimenter meetings for the large-scale systems department of IRISA: <https://xug.gitlabpages.inria.fr/meetings/>

9.3.4. Creation of media or tools for science outreach

- Martin Quinson is working on a set of new outreach activities with his Master 2 class at ENS Rennes since several years. The most promising activities are then tested on field in schools during another lecture at ENS Rennes, at Licence 3 level. All available resources are freely available at <https://github.com/InfoSansOrdi/pedago-rennes/>.

PACAP Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

Caroline Collange is a member of the committee of the Gilles Kahn PhD prize of Société Informatique de France.

10.3.2. Articles and contents

- Erven Rohou gave an interview in the *Émergences* magazine on (volume 56, Mar 22nd 2019) on automatically masking sensitive information to protect against side-channel attacks.

10.3.3. Education

Nicolas Bellec and Isabelle Puaut taught *Basics of computer architecture*, a training of high school teachers as part of the opening of the new computer science option in the two final years before Baccalauréat, 10 hours.

Erven Rohou was invited to present the life of a researcher in computer science to middle school students (*Collège de Cesson-Sévigné*)

10.3.4. Interventions

Erven Rohou was present at the International Cybersecurity Forum in Lille (FIC <https://www.forum-fic.com/en/home.htm>). He presented a demo on compiler-generated countermeasures against side-channel attacks, developed within the context of the CHIST-ERA SECODE project.

10.3.5. Internal action

Erven Rohou presented the activities of PACAP at the SecDays event organized at Inria Rennes and IRISA.

PANAMA Project-Team

9.3. Popularization

9.3.1. *Journée Science et Musique (JSM 2019)*

Participants: Nancy Bertin, Rémi Gribonval, Nancy Bertin, Frédéric Bimbot, Ewen Camberlein, Stéphanie Gosselin-Lemaile, Corentin Louboutin, Antoine Chatalic, Clément Gaultier, Cássio Fraga Dantas, Diego Di Carlo.

with contributions and support from: Claire Cury, Elisabeth Lebret, Valérie Gouranton, Ronan Gaugne, Florian Nouviale, Evelyne Orain, Agnès Cottais, Catherine Jacques-Orban and many more.

PANAMA coordinated the organization of a public event called “Journée Science et Musique” (“Music and Science Day”). This yearly event organized by the METISS/ PANAMA Team since 2011 aims at sharing with the wide audience the latest innovations and research projects in music. The motivation for hosting this event is to explain and promote the technology behind audio-processing that people face in their daily lives. The event is free to everyone and people have the possibility to attend talks by selected speakers or meet numerous experts that demonstrate current projects in which people can interactively participate. Edition 2019 hosted approximately 300 visitors and was a partner of the “Festival des Sciences” and an official event of CNRS 80th birthday celebrations.

9.3.2. *Participation to Equinoxes#1*

Frédéric Bimbot gave a popularization conference at the **Equinoxes#1** event, organised by Artoutaï (13 October 2019), on "the mysterious spectrum of sound" (4 times during the day)

9.3.3. *Internal or external responsibilities*

Frédéric Bimbot is a member of a working group of the CNRS/DR17 on the topic "changer le regard sur le handicap au travail"

RAINBOW Project-Team

9.3. Popularization

- Due to the visibility of our experimental platforms, the team is often requested to present its research activities to students, researchers or industry. Our panel of demonstrations allows us to highlight recent results concerning the positioning of an ultrasound probe by visual servoing, vision-based shared control using our haptic device for object manipulation, the control of a fleet of quadrotors, vision-based detection and tracking for space navigation in a rendezvous context, the semi-autonomous navigation of a wheelchair, the power wheelchair simulator, and augmented reality applications. Some of these demonstrations are available as videos on VispTeam YouTube channel (<https://www.youtube.com/user/VispTeam/videos>).

9.3.1. Interventions

- François Pasteau participated to the Tech'in Vitré forum with an interview in March 2019.
- Solenne Fortun participated to the Société de gérontologie de l'ouest et du centre (SGOC) congress with an interview in May 2019.
- Marie Babel animated an interactive session organized in Inria Rennes about "J'peux pas, j'ai informatique" on April 3rd, 2019 for secondary-school pupils.

SERPICO Project-Team (section vide)

SIMSMART Project-Team

8.3. Popularization

8.3.1. Interventions

Patrick Héas has made a CS workshop for middle school students based on the ideas of 'Computer Science Unplugged'.

SIROCCO Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

- C. Guillemot is responsible of the theme « compression et protection des données images » for the realization of the encyclopedia SCIENCES of the publisher ISTE/Wiley (2019-2021).

STACK Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

- S. Ibrahim, Online publication <http://emergences.inria.fr/2019/newsletter-n59/159-Kerstream>: *Un intergiciel post-Hadoop pour gérer les flux de données.*

10.3.2. Articles and contents

As a follow-up of the aLIFE workshop (Nantes, Jan. 2018), organized in partnership with colleagues from IMT Atlantique and gathering both academic and industrial partners, H el ene Coullon and Jacques Noy e have participated to a booklet publication [29] summarizing the workshop discussions and proposing a shared vision of what software research could bring to Industry 4.0 initiatives.

SUMO Project-Team

10.3. Popularization

10.3.1. Education

Nicolas Markey is involved in the organization of action "J'Peux Pas, J' Ai Informatique", whose aim is to break down stereotypes about computer science for 12-year-old pupils.

TAMIS Project-Team (section vide)

TEA Project-Team (section vide)

WIDE Project-Team

9.3. Popularization

Algorithm Watch wrote an article about a recent work involving Erwan Le Merrer, concernant remote transparency. The article is called "Explainable AI doesn't work for online services – now there's proof". Available at <https://algorithmwatch.org/en/story/explainable-ai-doesnt-work-for-online-services-now-theres-proof/>.