



RESEARCH CENTER
Rennes - Bretagne-Atlantique

FIELD

Activity Report 2017

Section Popularization

Edition: 2018-02-19

1. ASAP Project-Team	4
2. ASCOLA Project-Team (section vide)	5
3. ASPI Team (section vide)	6
4. CAIRN Project-Team (section vide)	7
5. CELTIQUE Project-Team	8
6. CIDRE Project-Team	9
7. DIONYSOS Project-Team	10
8. DIVERSE Project-Team	11
9. DYLISS Project-Team	12
10. FLUMINANCE Project-Team	13
11. GENSCALE Project-Team	14
12. HYBRID Project-Team	15
13. HYCOMES Project-Team (section vide)	16
14. I4S Project-Team	17
15. IPSO Project-Team (section vide)	18
16. KERDATA Project-Team	19
17. LACODAM Project-Team	20
18. LAGADIC Project-Team	21
19. LINKMEDIA Project-Team	22
20. MIMETIC Project-Team	23
21. MYRIADS Project-Team	24
22. PACAP Project-Team	25
23. PANAMA Project-Team	26
24. SERPICO Project-Team (section vide)	27
25. SIROCCO Project-Team (section vide)	28
26. SUMO Project-Team	29
27. TACOMA Team	30
28. TAMIS Team	31
29. TEA Project-Team (section vide)	32
30. VISAGES Project-Team	33

ASAP Project-Team**8.3. Popularization**

- Davide Frey published an article on the Telecom ParisTech Magazine. Issue 185.
- Pierre-Louis Roman gave an Invited talk at the Regional council of notaries of Brittany, Rennes, France, December 15, 2017. Title “Demystifying the blockchain and its utility for notaries” (talk in French).

ASCOLA Project-Team (section vide)

ASPI Team (section vide)

CAIRN Project-Team (section vide)

CELTIQUE Project-Team

6.3. Popularization

Article “JavaScript, un langage à la croissance organique”, Alan Schmitt, blog Binaire Le Monde. <http://binaire.blog.lemonde.fr/2017/05/12/javascript-un-langage-a-la-croissance-organique/>

Article “L’assistant de preuve Coq”, Sandrine Blazy, Pierre Castéran, Hugo Herbelin, Techniques et Sciences de l’ingénieur, août 2017. <https://www.techniques-ingenieur.fr/base-documentaire/technologies-de-l-information-th9/programmation-42304210/coq-assistant-de-preuve-h3310/>

Talk “Bug, Virus, Intrusion, Pirates... So many threats and no defense? Yes... maths.”, Thomas Genet, given three times in high schools close to Rennes.

CIDRE Project-Team

10.3. Popularization

Valérie Viet Triem Tong has participated to the scientific television show *l'Esprit Sorcier* recorded at *Musée des Sciences et de l'Industrie* during the *Fête de la Science*. She has also participated to the scientific promotion movie about *High Security Laboratory* recorded at Nancy.

Damien Crémilleux has participated to the event “[Ma thèse en 180s](#)” and the “RCC challenge: my thesis 3.0” for the popularization of his work’s thesis on security visualization.

DIONYSOS Project-Team

10.3. Popularization

- B. Tuffin. La simulation de Monte-Carlo. Interstices. 2017. https://interstices.info/jcms/int_69164/la-simulation-de-monte-carlo
- 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

10.3. Popularization

IT industry forums . Pierre Laperdrix presented his work on the mitigation of browser fingerprinting at the Mozilla Festival ⁰. The results of STAMP ⁰ have been presented at EclipseCon ⁰, the Paris Open Source Summit ⁰, OW2'con ⁰ and the cloud computing world expo ⁰.

Science festivals . Jean-Marc Jézéquel and Benoit Baudry have presented overviews of research issues in Cybersecurity to general public audiences in several events, such as the 2017 Pint of Science ⁰ and the science en bobine festival ⁰.

⁰<https://mozilla-festival.org/>
⁰<https://www.stamp-project.eu>
⁰<https://www.eclipsecon.org/europe2017/>
⁰<http://www.opensourcesummit.paris/>
⁰<https://www.ow2con.org>
⁰<http://www.cloudcomputing-world.com/>
⁰<https://pintofscience.fr/>
⁰<https://sciencesenbobines.org/rennes-35/>

DYLISS Project-Team

10.3. Popularization

10.3.1. General audience paper

We have written a contribution to the collaborative book edited by CNRS on the main issues of data-mining. Our contribution was specifically related to modeling issues arising in ecology with the development of NGS technologies [32].

10.3.2. Science en Cour[t]s

(<http://sciences-en-courts.fr/>) Many of our on-going and former Ph-D students (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 Ph.D. 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 ⁰ In this context, the following scientific film has been created by the team members in 2017 *Helene et les cartons*⁰.

⁰<https://www.youtube.com/embed/3DRgLLITKUc>

⁰<https://www.youtube.com/embed/yheO8Y0nWu0>

FLUMINANCE Project-Team**10.3. Popularization**

Jocelyne Erhel

- présidente du jury du rallye de mathématiques du CNED, 2017 and 2018.
- First prize of the second Mathematics of Planet Earth international competition. Module "Simulating the melting of ice caps", authors M. Nodet and J. Erhel.

Dominique Heitz

- Interview dans L'Usine Nouvelle, No 3479, pp. 30-31, 2016

GENSCALE Project-Team

10.3. Popularization

- Participation to operation "A la découverte de la recherche" in high schools [P. Peterlongo]
- Intervention for "Imagine For Margo" [P. Peterlongo]
- Bioinformatics introduction to secondary school pupils [F. Legeai]

HYBRID Project-Team

10.3. Popularization

The results of the team have been disseminated in various media coverages in 2017:

- "XENIUS" TV channel Arte (02/17) : presentation of Immersia activity in Cultural Heritage applications
- "Sciences et Avenir" magazine (02/17) : article on "BCI, VR and videogames"
- France-Info radio (07/17) : 4-min interview of Anatole Lécuyer on Virtual Reality
- 20-minutes magazine (10/17) : article on Immersia activity
- Virgin Radio (10/17) : interview of Ronan Gaugne on Immersia
- France 3 Bretagne (10/17) : presentation of "Journée Science et Musique" in Immersia
- France 3 Centre (11/17) : presentation of INTROSPECT project

The team has also participated to several dissemination events in 2017 (chronological order):

- "Ma Thèse en 180 secondes" (Rennes, 03/17) : Lorraine Perronet presented her PhD.
- "Semaine du Cerveau 2017" (Rennes, 03/17) : presentation and demo of BCI by Nataliya Kosmyna.
- Pint of Science (05/17) : presentation on virtual incarnation by Ferran Argelaguet.
- "Journées Science et Musique 2017" (Rennes, 10/17) : co-organization of this event, and presentation of several demos.
- "Journées du Pôle Aerospace Valley" (Agen, 12/17) : presentation by Guillaume Moreau.

HYCOMES Project-Team (section vide)

I4S Project-Team**10.3. Popularization**

The Hybrid solar road Mock-up (presented at the French Pavillon during COP21) has been invited and presented at:

- Forum National des Travaux Publics, Carroussel du Louvre (Paris), February 2017
- Innovation day des Travaux Publics, Casino du Lyon Vert (Lyon), December 2017
- Fête de la science, Ecole d'architecture de Nantes, October 2017

IPSO Project-Team (section vide)

KERDATA Project-Team

9.3. Popularization

Gabriel Antoniu:

ORAP Forum, Paris: ORAP is a French national forum intended for all stakeholders in the HPC area (industry and academia). Invited talk: *Convergence of HPC and Big Data: a storage-oriented perspective* in March 2017.

Available resources: [Video](#) and [Slides](#).

Plenary Meeting of Inria's Department for International and European Relations:

Convergence of HPC and Big Data: Where Are We Going?, Inria, Rocquencourt, October 2017.

Luc Bougé:

Doctoral Program, Rennes. Invited presentation to the PhD students about *Preparing your applications after your PhD* (November 2017).

Master Program, Rennes. Invited presentation to the M2 students about *Informatics as a scientific activity: Toward a responsible research* (November 2017).

LACODAM Project-Team

10.3. Popularization

M.-O. Cordier is editorial board member of Interstices webzine.

C. Largouët and L. Galárraga participated in a science diffusion talk at the educational institution "Assomption" on 20/10/2017.

L. Galárraga participated as AI specialist in a discussion forum at the general election assembly of the "Pôle Images et Réseaux" on 23/11/2017.

T. Guyet gave a public talk about Artificial Intelligence and Data Mining in MDA Rennes (FranceIA events) on 01/03/2017.

A. Termier gave a public talk about Artificial Intelligence at the Esaconnect event on 26/10/2017
<https://www.chaire-mutations-agricoles.com/evenements/esaconnect-2017/programme/panorama-de-lintelligence-artificielle-en-2017-alexandre-termier/>link.

A. Termier was interviewed for the December podcast of the Interstices webzine.

LAGADIC Project-Team

10.3. 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, grasping and dual arm manipulation by Romeo, 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, and augmented reality applications. Some of these demonstrations are available as videos on VispTeam YouTube channel (<https://www.youtube.com/user/VispTeam/videos>). This year there were among others, demonstrations organized for the new year's lab greetings, for the Inria industry journey focused on data and applications in Paris, for the "Semaine de l'Informatique Graphique et de la Réalité virtuelle", and for the Science and music journey.
- Marie Babel participated as a member in a panel discussion during the Digital Tech Conference organized in Rennes in December 2017.
- Julien Pettré wrote a vulgarization paper [68], explaining how crowd simulation is used in the field of visual effects for the movie and the video-game industries. The crowd simulation topic was presented during the "Pint of Science FR 2017" event, which organizes mini conferences animated by researchers in public places such as cafes and bars.

LINKMEDIA Project-Team**10.3. Popularization**

Vincent Claveau

participated to the collective book "Les Big Data à découvert", CNRS éditions
got an interview published in CNRS - Le journal about detecting fake news and image forgeries
(joint work with C. Maigrot and E. Kijak).

MIMETIC Project-Team**10.3. Popularization**

Ludovic Hoyet, Journées de la Science 2017. Présentation et démo "Ma main à 6 doigts: Avatar et Réalité Virtuelle" à des classes de primaire et lycée.

Ludovic Hoyet, démonstrations pour les 50 ans d'Inria à Paris, "Ma main à 6 doigts: Avatar et Réalité Virtuelle".

MYRIADS Project-Team

10.3. Popularization

Martin Quinson is a member of the ISO national working group (Info Sans Ordi – CS without computer), that aims at inventing, improving and spread unplug activities. These outreach activities are meant to introduce fundamental concepts of Computer Science in schools without the need of any electrical devices. In 2017, the group produced a special issue to the Tangente magazine (read by maths teachers in France). Martin Quinson authored two articles in this special issue.

Martin Quinson is on the scientific board of the Blaise Pascal foundation, boosting the scientific outreach in the domains of Maths and Computer Science. He participated this year to a working group aiming at the development of an online game that teaches maths to pupils.

Martin Quinson was in the scientific organizing committees for several outreach events toward the popularization of Maths and Computer Science this year: «Maths Vivantes» had a very general audience: a booth on a public space of Rennes for one afternoon (March). «Maths C2+» invited about 20 pupils invited at ENS Rennes for 3 days (March). «Metier en tout Genre» invited several dozen of high-school students for one day on the Rennes university campus (November).

PACAP Project-Team

9.3. Popularization

Nicolas Kiss, Damien Hardy and Erven Rohou presented a poster at the “European Cyber Week”, organized by the “Pôle d’Excellence Cyber”.

Erven Rohou presented a poster at the Teratec Café, describing the ANTAREX H2020 project.

PANAMA Project-Team

10.3. Popularization

10.3.1. Journée Science et Musique

Participants: Antoine Deleforge, Rémi Gribonval, Frédéric Bimbot, Romain Lebarbenchon, Clément Gaultier, Nancy Bertin, Ewen Camberlein, Stéphanie Lemaile, Corentin Louboutin, Corentin Guichaoua, Cásio Fraga Dantas, Valentin Gillot, Antoine Chatalic, Yann Traonmilin.

with contributions and support from: Valérie Gouranton, Ronan Gaugne, 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 2017 hosted more than 800 visitors and was a partner of the “Festival des Sciences” and “Festival Maintenant” in Rennes.

SERPICO Project-Team (section vide)

SIROCCO Project-Team (section vide)

SUMO Project-Team**10.3. Popularization**

- Éric Badouel gave a talk at TEDx Lorient on digital democracy (coordination of citizen debates).

TACOMA Team

9.3. Popularization

Under the leitmotif "testing and learning about digital mobility solutions in Rennes", Rennes Metropole will open the doors of its city from March 14 – 18, 2018 for a new type of inclusive and collaborative event experience, dedicated to transforming mobility services: inOut! Composed of two distinct but complementary parts, inOut will combine debates among professionals from established and incumbent companies, start-ups, academics, students and live experiences on the city territory including the citizens of Rennes and its surroundings. More than just a recurrent annual event, inOut is set to continue throughout the year as a unique incubator on a human scale, where new mobilities are invented [IN]door and are tested [OUT]doors with users in real time. It's a one-of-a-kind co-creation platform providing industrial partners, start-ups, incumbent and new mobility players the opportunity to invent new mobility services, to experiment and test new use cases and business models, in close proximity to and with the citizens. Through a series of controversial debates, the event invites professionals, academics and local authorities from all over the world to separate hype from reality and discuss enablers and potential blocking points of these new mobilities.

We have been strongly involved in the creation of InOut and Jean-Marie Bonnin is responsible of the "Expert Committee" of the event.

This autumn the work done to design the InOut concept provided the basis to build the answer of Rennes Metropole to the AMI "Territoire Innovant de Grande Ambition".

TAMIS Team**10.3. Popularization**

- Axel Legay participated to the "Forum Cyberstrategia" organized by the ministry of defense, September 2017
- Axel Legay participated to the "Inria Industry days" organized by Inria, October 2017
- Axel Legay participated to the "table ronde sur l'intelligence économique", Rennes November 2017
- Fabrizio Biondi participated to the "Forum International de la Cybersécurité", January 2017
- Fabrizio Biondi participated to the "Forum Cyberstrategia" organized by the ministry of defense, September 2017
- Fabrizio Biondi participated to the "Inria Industry days" organized by Inria, October 2017
- Fabrizio Biondi participated to the "European Cyber Week" organized by IRISA and Bretagne Development Innovation, November 2017

TEA Project-Team (section vide)

VISAGES Project-Team

10.3. Popularization

10.3.1. My thesis in 180 seconds

- Lorraine Perronet and Cédric Meurée participated in the 2017 edition of the French edition of the "Three Minutes Thesis competition" :
 - Lorraine Perronet : "Combinaison de l'ElectroEncéphaloGraphie et de l'Imagerie par Résonance Magnétique fonctionnelle pour la rééducation du cerveau par Neurofeedback"
 - Cédric Meurée : "Amélioration de la résolution d'images d'IRM de perfusion"

10.3.2. La semaine du cerveau (The Brain Week), from 13/03/2017 to 19/03/2017, Rennes

- Antoine Legouhy et Corentin Vallée : "PhD students processing MRI acquisition"
- Christophe Paya : "Discover brain anatomy with 3D models"
- Isabelle Corouge : "Neurinfo: An MRI dedicated to research"
- Pierre Maurel : "Let's play to the brain quizz in 3D immersion (using oculus rift)"
- Emmanuel Caruyer : "Medinria: Computer science serving cerebral imaging"

10.3.3. Journées Française de Radiologie 2017, 13-16 Octobre, Paris

- Stand FLI-IAM (Michael Kain, Yao Chi, Aneta Morawin, Mathieu Simon, Ines Fahkfaik, Arnaud Touboulis, Christian Barillot)
- Journée du Réseau d'Entraide en IRM Multicentrique (REMI) co-organisée par Elise Bannier

10.3.4. 50 ans Inria, Paris

- Stand "MedInria" (Olivier Commowick, Pierre Maurel), Nov 7-8, 2017

10.3.5. Journée du Président de la Société Française de Neurologie, Rennes, 7 Décembre 2017

- Organised by Gilles Edan