



RESEARCH CENTER
Rennes - Bretagne-Atlantique

FIELD

Activity Report 2014

Section Popularization

Edition: 2015-03-26

1. ALF Project-Team (section vide)	4
2. ASAP Project-Team (section vide)	5
3. ASCOLA Project-Team (section vide)	6
4. ASPI Project-Team (section vide)	7
5. ATLANMOD Project-Team	8
6. CAIRN Project-Team (section vide)	9
7. CELTIQUE Project-Team	10
8. CIDRE Project-Team	11
9. DIONYSOS Project-Team	12
10. DIVERSE Project-Team	13
11. DREAM Project-Team	14
12. DYLISS Project-Team	15
13. ESTASYS Exploratory Action (section vide)	16
14. FLUMINANCE Project-Team	17
15. GENSCALE Project-Team (section vide)	18
16. HYBRID Project-Team	19
17. HYCOMES Team (section vide)	20
18. I4S Project-Team	21
19. IPSO Project-Team (section vide)	22
20. KerData Project-Team	23
21. LAGADIC Project-Team	24
22. LINKMEDIA Project-Team	25
23. MIMETIC Project-Team (section vide)	26
24. MYRIADS Project-Team	27
25. PANAMA Project-Team	28
26. SAGE Project-Team	29
27. SERPICO Project-Team (section vide)	30
28. SIROCCO Project-Team	31
29. SUMO Project-Team (section vide)	32
30. TACOMA Team (section vide)	33
31. TASC Project-Team	34
32. TEA Project-Team (section vide)	35
33. VISAGES Project-Team	36

ALF Project-Team (section vide)

ASAP Project-Team (section vide)

ASCOLA Project-Team (section vide)

ASPI Project-Team (section vide)

ATLANMOD Project-Team

8.3. Popularization

In January 2014 the team participated to the Rencontres Inria - Industrie on the theme Répondre aux Défis de L'Ingénierie Logicielle, in which we notably presented our MoDisco project and collaboration⁰. The seminar had many participants from both industry and academia. Moreover, since several years, the AtlandMod team is already very involved in the open source community, notably via its constant activity within the context of the Eclipse Foundation. This activity actually takes different forms: creation and leading/development of Eclipse projects (under *Eclipse.org* or *Eclipse Labs*), participation to the major worldwide community events (i.e.; EclipseCon North America, EclipseCon Europe and EclipseCon France), organization of events targeting the local community (i.e. Eclipse DemoCamps), etc. This year again, the team has been active and visible in terms of concrete contributions to the community. The main remarkable items are the following ones:

- Leading of the MDT MoDisco project (Hugo Bruneliere), the Eclipse reference project concerning model-driven reverse engineering;
- Commitment to other projects directly under *Eclipse.org*: MMT ATL and EMFT EMF Facet (Hugo Bruneliere);
- Commitment to other projects under *EclipseLabs*: EMFToCSP (Jordi Cabot, Carlos Gonzalez) and EMF Views (Juan David Villa Calle, Jokin Garcia Perez, Hugo Bruneliere);
- Creation and development of a new incubation project under *Eclipse Labs*: Collaboro (Javier Canovas);
- Publication of a paper about our experience and feedback on developing and promoting open source projects in Eclipse [23], presented during the Open Source Software for MDE workshop at MODELS 2014 Conference (Hugo Bruneliere and Jordi Cabot);
- Presentation of talks during two main Eclipse events (Hugo Bruneliere): at EclipseCon North America 2014 about EMF Views [36], at EclipseCon France 2014 about Neo4EMF [35].
- In the context of the ARTIST EU collaborative project, we are strongly involved in the official ARTIST Open Source Release⁰, notably by developing and making available several (MoDisco-based) model discovery components from Java and SQL.

Generally, the team visible presence under Eclipse is also an efficient way to continue active collaborations with industrial partners, such as Mia-Software (Sodifrance) on MoDisco - EMF Facet, and Obeo on ATL.

⁰<http://videos.rennes.inria.fr/InriaMeito/index-HugoBruneliere.html>

⁰<http://www.artist-project.eu/open-source-package>

CAIRN Project-Team (section vide)

CELTIQUE Project-Team

7.3. Popularization

- Talk “Bug, Virus, Intrusion, Pirates... So many threats and no defense? Yes... maths.”, Thomas Genet, for high school teachers, ENS Rennes, Oct. 2014.

CIDRE Project-Team

9.3. Popularization

Guillaume Piolle has participated to two scientific popularization activities, both oriented towards secondary education pupils. In both cases, his participation consisted in presentations about the objectives, methods and results of research activities in computer security and privacy (including, but not limited to our activities in CIDRE):

- *Les cordées de la réussite* : national program aimed at facilitating access to higher education for pupils from various social backgrounds ;
- *A la découverte de la recherche* : local program aimed at providing high school pupils with insights of research issues and activities.

Nicolas Prigent made a Tutorial Presentation at OSSIR Bretagne dealing with Visualization for Security.

Sébastien Gambis has participated to the event “A la découverte de la recherche”, in which he did five presentations in high school in order to raise the awareness of teenagers on privacy issues related to information technologies and to explain them the research on this topic.

DIONYSOS Project-Team

8.3. Popularization

- In their position paper [79], Bruno Tuffin and his co-author Patrick Maillé discuss for a large audience the issues and challenges of network neutrality in response to the European parliament text voted in April 2014.
- 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

Our recent work on diversity against browser fingerprinting and the associated web site ⁰ have been demonstrated in two open source forums (OWF'14 ⁰ and FOSSA'14 ⁰). Following this, our work has been mentioned in general-audience press. In particular the Clubic magazine published a complete article about our work ⁰, which was followed by 6000 unique visits on our web site in the following 24 hours. The work was also mentioned in Le Monde ⁰.

⁰<https://amiunique.org/>

⁰<http://www.openworldforum.paris/>

⁰<https://fossa.inria.fr/>

⁰<http://pro.clubic.com/webmarketing/publicite-en-ligne/actualite-742853-fingerprinting-cookies.html>

⁰http://abonnes.lemonde.fr/sciences/article/2014/11/24/le-fossa-bazar-techno-participatif_4528568_1650684.html

DREAM Project-Team

9.3. Popularization

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

DYLISS Project-Team

8.3. Popularization

- *Revue Math/info Tangente* Nous avons participé à un numéro spécial de cette revue destinée aux lycées avec un article de bioinformatique sur les langages des molécules du vivant illustrant l'intérêt de la modélisation par langages formels dans ce cadre. [J. Nicolas, C. Belleannée, F. Coste] [41]
- *Rencontre Inria Industrie* "Bio-informatique et outils numériques pour les produits de santé" Lyon (Feb. 2014) [F. Coste, A. Antoine-Lorquin, A. Siegel, S. Videla]
- *FrenchTech Rennes* Popularization of genome assembly on a Raspberry Pi at a FrenchTech event in Rennes (Dec. 2014) [G. Collet].
- *Bioinfo-fr.net* Bioinfo-fr.net is a french web site where researchers, engineers and students talks about bioinformatics. We have written 6 articles for this web site on diverse subjects: metabolic networks, genome assembly, phylogenetics, network visualization. [G. Collet, S. Prigent, O. Dameron]. [more info].
- *Fête de la science (LINA, Nantes)* During the 17th of october, 250 students discovered bioinformatics, genome assembly, metabolomics and algorithmic by practicing games and tutorials made by our team with the help of Julien Gras, Erwan Delage and Stephanie Noguét (LINA) [J. Bourdon, D. Eveillard, Y. Guitton].
- *Organization of Sciences en Cour[t]s*. Popularization Festival where PhD students explain their thesis via short films. [S. Prigent, C. Bettembourg, G. Garet] [more info].
- *GNU/Linux Magazine* Article "La bioinformatique avec Biopython", Hors-série 73, pp 84–97. 2014. [O. Dameron] [40]

ESTASYS Exploratory Action (section vide)

FLUMINANCE Project-Team

9.3. Popularization

Etienne Mémin

- E. Mémin. Ou vont les nuages ?, Un jour, une brève, Mathématiques de la planète terre, (Brève)
- Invited paper in the journal "Revue française de photogrammétrie et de Télédétection", Outils méthodologiques d'analyse d'images MSG : estimation du mouvement, suivi de masses nuageuses et détection de fronts, with T. Corpetti, V. Dubreuil, E. Mémin, O. Planchon, C. Thomas.
- Invited paper in the journal de la Société Française de Statistique, Image data assimilation with filtering methods, with Anne Cuzol.

GENSCALE Project-Team (section vide)

HYBRID Project-Team

9.3. Popularization

- Massive media coverage of the “Mind-Mirror” system : following a press conference and press release organized in May 2014. This ended up with numerous appearances in the media (TV, Press, Radio).
- Other regular and numerous appearances of the team results and activity at: French TV (e.g., France5, France 3, France 2) or newspapers and journals (e.g., articles in "Archeologia" (Feb 2014) and "Science et Avenir" (Aug 2014) on "Virtual Reality and Archaeology").
- "Journées Science et Musique" 2014 (Rennes, Oct 2014) : organization of this event, and presentation of several demos of the team in Immersia room, Rennes.
- "Journée Nationales d'Archéologie" 2014 (Rennes, June 2014) : organization of this event, and presentation of several demos, Rennes.
- Participation at "Forum Libération" (Rennes, April 2014) : presentation of Anatole Lécuyer.
- Participation at "LE WEB 2014" Conference (Paris, Dec 2014) : demos of the FLyVIZ system.

HYCOMES Team (section vide)

I4S Project-Team

9.3. Popularization

Qinghua Zhang has published the following work:

Q. Zhang: Encyclopedia article '*Nonlinear system identification – an overview*', in Encyclopedia of Systems and Control, Springer, 2014, (<http://www.springerreference.com/docs/html/chapterdbid/364854.html>) [57].

IPSO Project-Team (section vide)

KerData Project-Team

9.3. Popularization

- Gabriel Antoniu
Microsoft Research, Redmond. Invited presentation at the Workshop on *E-Science in the Cloud*. Subject: Big Data management in the Cloud (A-Brain and Z-CloudFlow projects). Audience: engineers, students and researchers, from academia and industry (April 2014).
ORAP Forum. Invited Speaker. *Big Data: Concepts-clés et enjeux* (April 2014).
Radio France. Invited interview about Big Data at the *Labo des savoirs*. Available on line at <http://labodessavoirs.fr/chroniques-et-reportages/un-nouveau-paradigme/>.
Institut Français de Bio-informatique, Grand-Ouest, Rennes. Invited presentation at the *12e Rencontres des plates-formes de Bioinformatique du Grand Ouest* about the team's experience with the Microsoft Azure cloud platform (November 2014).
- Shadi Ibrahim
Parallel and Distributed Computing Centre (PDCC), Nanyang Technological University (NTU), Singapore. Invited seminar. Subject: *Consistency Management for Big Data Applications in the Clouds* (January 2014).
- Alexandru Costan
EIT ICT Labs, Rennes. Invited presentation at the Workshop on *Trusted Clouds* about *KerData Team: Scalable Data Management on Clouds and Beyond* (March 2014).
- Matthieu Dorier
Inria, Grenoble. Invited seminar about *Damaris: data management for scientific simulations on post-Petascale supercomputers* (June 2014).

LAGADIC Project-Team

9.3. Popularization

- Due to the visibility of our experimental platforms, the team is often asked 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, the construction of a tower by combining 3D model-based visual tracking and visual servoing techniques to pick up cubes that are assembled, vision-based detection and tracking for space navigation in a rendezvous context, the semi-autonomous navigation of a wheelchair, and augmented reality applications.
- Marie Babel and François Pasteau gave a press conference in December 2014, organized at Pôle Saint Hélier (Rennes)
- Marie Babel gave a talk on "A driving assistance solution" in October 2014, during the "Semaine des Télécoms - Robotique et objets connectés" organised at Insa Rennes
- Fabien Spindler is a member of the editorial board of "Ouest Inria", the internal journal at Inria Rennes-Bretagne Atlantique.

LINKMEDIA Project-Team

9.4. Popularization

Laurent Amsaleg. Lettre d'information Émergence, issue 32, 11/07/2014, "Un outil pour fouiller plus vite les disques durs saisis".

Laurent Amsaleg. Sciences Ouest, issue 324, October 2014, "Ils repèrent les contenus illicites".

Vincent Claveau co-organized and co-animated a round table held during the TALN conference about the evolution of NLP, from the points of view of education, research and industry.

Hervé Jégou was invited panelist at Intl. Conf. on Multimedia Retrieval, April 2014.

Hervé Jégou gave an invited tutorial on large-scale image search at Intl. Conf. on Multimedia Retrieval, April 2014.

Hervé Jégou gave a tutorial on efficient matching at Conf. on Computer Vision and Pattern Recognition, June 2014.

Hervé Jégou was invited speaker at Conf. on Computer Vision and Pattern Recognition, June 2014.

Pascale Sébillot: Invited speaker (3h) NLP tackling large volumes of potentially damaged textual data: what is different?, IST Inria seminar on "Big data: new information partitions", October 2014.

MIMETIC Project-Team (section vide)

MYRIADS Project-Team

7.3. Popularization

- Roberto-Gioacchino Cascella presented a demonstration of the VEP-S system at the EIT ICT Labs result day, Helsinki, Finland, December 2014.
- Christine Morin gave a talk entitled "Contrail Project Overview" at the Contrail Business Days, Roma, Italy, January 2014.
- Christine Morin was invited to give a talk on Myriads activities on cloud computing at the EIT ICT Labs meeting on future clouds, Rennes, France, March 2014.
- Christine Morin gave a talk entitled "Contrail: Interoperability and Dependability in a Cloud Federation" at the first workshop of the Joint Laboratory for Extreme Scale Computing, Sophia-Antipolis, France, June 2014.
- Christine Morin was invited to give a talk entitled "Contrail: Toward a Trusted Cloud Market Place" at the EIT ICT Labs Symposium on Future Cloud Computing, Rennes, France, June 2014.
- Christine Morin was invited to give a talk entitled "Contrail: Toward a Trusted Cloud Market Place" at the Inria Scientific Days, Lille, France, June 2014.
- Christine Morin gave an invited talk entitled "Snooze: A Scalable Energy-Efficient IaaS Cloud Management System" at the Next-GWiN 2014 Workshop, Rennes, France, October 2014.
- Christine Morin gave a talk entitled "Checkpointing as a Service in Heterogeneous Clouds" at the second workshop of the Joint Laboratory for Extreme Scale Computing, Chicago, USA, November 2014.
- Guillaume Pierre organized the 2nd ConPaaS workshop (Rennes, May 26th 2014) and gave the opening presentation
- Guillaume Pierre organized the EIT ICT Labs Future Cloud Symposium (Rennes, June 23-24th 2014).
- Anne-Cécile Orgerie gave a talk entitled "Green IT : maîtrise de la consommation énergétiques des équipements informatiques", at Rencontres de la recherche, Fondation Rennes 1, Rennes, September 19, 2014.
- Anne-Cécile Orgerie gave a talk entitled "Toward Energy-Efficient Cloud Computing" at the Inria-Technicolor Workshop, Rennes, December 4, 2014.
- Anne-Cécile Orgerie gave a tutorial entitled "Green Big Data Processing using Hadoop: An Introductory" with Shadi Ibrahim from KerData team, at the ACM/IFIP/USENIX Middleware conference, Bordeaux, December 2014.
- Arnab Sinha presented a demonstration of the VEP-S system at the EIT ICT Labs result day, Helsinki, Finland, December 2014.
- Cédric Tedeschi gave a talk about workflow activities within the DALHIS associate team at the Berkeley Inria Stanford workshop, Paris, June 2014.

PANAMA Project-Team

9.3. Popularization

9.3.1. *Journée science et musique*

Participants: Anaik Olivero, Jules Espiau de Lamaestre, Pierre Machart, Gilles Puy, Nancy Bertin, Frédéric Bimbot, Rémi Gribonval, Corentin Guichaoua, Srdan Kitic, Stéphanie Lemaile, Nicolas Keriven, Ewen Camberlein, Romain Lebarbenchon, Luc Le Magoarou, Nathan Souviraà -Labastie.

PANAMA coordinated the organization of a public event called “Journée Science et Musique” (Day of Music and Science). 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 2014 hosted 260 visitors.

9.3.2. *Radio and press*

Nancy Bertin and Rémi Gribonval co-authored a popularization article about compressed acoustic holography (with L. Daudet and F. Ollivier). It was accepted by the journal "Pour la Science" for publication in 2015.

Nancy Bertin, Jules Espiau and Rémi Gribonval (with L. Daudet, A. Bordenave and Inria audiovisual department) participated in the realization of a pedagogical video presenting the ANR ECHANGE project results on acoustic holography <http://videotheque.inria.fr/videotheque/embed/25816>.

Jules Espiau and Pierre Machart were interviewed in a one-hour scientific radio show on Radio Prune (radio of the Nantes region) at the occasion of the "Journée Science et Musique".

SAGE Project-Team

8.3. Popularization

- J-R. de Dreuzy, J. Erhel and G. Pichot presented a poster entitled "Une eau souterraine très sollicitée", at Rencontres de la Transition Ecologique en Bretagne, January 2014 [39].
- J. Erhel gave a talk entitled "la terre se met aux maths", at lycée Descartes, Rennes, in March 2014 [38].
- J. Erhel participated in the panel on "Parle-t-on d'informatique comme on parle des autres sciences?", congrès SIF, Poitiers, France, Feb 2014
- The text "Henry Darcy et sa loi" from J. Erhel was published in the book brèves de maths [37]
- É. Canot, J. Erhel and L. Lenôtre, with M-O. Cordier, N. Lacaux, C. Lafon and J. Stainer, were in charge of the two stands Inria and Interstices at Village des sciences, Chartres de Bretagne, Sep 2014.
- J. Erhel and M-O. Cordier, with Espace des Sciences de Rennes, invited J.-P. Delahaye to celebrate the ten years of Interstices and to give a conference about the bitcoin, Rennes, October 2014.
- L. Lenôtre gave a talk at Conf'Lunch, Inria Rennes, December 2014.

SERPICO Project-Team (section vide)

SIROCCO Project-Team

9.4. Popularization

- A. Roumy participated in the in-service training for teacher in Computer Science (Informatique et Science du Numérique (ISN), level bac -1 to bac+2) and gave a 3h course on video and image compression.
- As part of a seminar dedicated to teachers of secondary and preparatory schools, Laurent Guillo presented a possible use of Agility methods for pupils' projects and he animated the related workshop, ENS Rennes, October 2014.

SUMO Project-Team (section vide)

TACOMA Team (section vide)

TASC Project-Team

9.3. Popularization

- A user guide is now available for **CHOCO**: 164 pages describing how to use **CHOCO**, together with a new website, see <http://www.choco-solver.org>. The next topics on the way will include:
 - Dealing with strong consistencies.
 - Designing an even more efficient free search strategy.
 - Providing a light explanation framework.
- Within the context of the **global constraint catalog**:
 - On-line interactive exercises completed (see http://imedia.emn.fr/global_constraints_course/).
 - Effort for providing more **TikZ** illustrations has been continued (about 1000 figures are currently available and 60 figures remain to be redesigned to **TikZ**) by **Nicolas Beldiceanu**.
 - Reorganization of the production of the **pdf** version (and enhancing look and navigation within the pdf) by **Mats Carlsson**.
 - Update of the web version (see <http://sofdem.github.io/gccat/>) by **Sophie Demassey**.
- A strong effort has also been made in 2014 to improve the dissemination of **IBEX** and the collaboration of programers. This includes:
 - Course on **IBEX** by **Gilles Chabert** at **MACS 2015**.
 - Creation of a new web site, see <http://www.ibex-lib.org/>.
 - Documentation writing (low-level interval arithmetic operations, contractors), see <http://www.ibex-lib.org/doc/>.
 - Migration of the code from SVN+sourceforge to github (github.com/ibex-team/ibex-lib).
 - Support via the new forum (<http://ibex-lib.org/forum>).
 - Bug/issue tracking system, private wiki for developers.
 - Introduction of Travis for continuous integration.
- Within the context of *Artificial Intelligence and real time strategy games*,
 - Interview by Inria Bretagne of **F. Richoux** on his work about Game AI, see emergences.inria.fr/emergences-2014/newsletter-n30/L30-STARCRAFT.
 - **F. Richoux** has been invited to write a short article about his work about Game AI in the “Bulletin de l’Association Française pour l’Intelligence Artificielle”. It should appear on January 2015.
- Presentation at the workshop **les femmes dans le monde académique** by **Charlotte Truchet**.
- At the 2014 edition of the Fête de la Science (Nantes University):
 - One talk on *Challenges around optimizations problems* was given by **Xavier Lorca**.
 - A session discussing and answering questions around the work of professor and researcher in computer science with young persons (18 years old) was spent by **N. Beldiceanu**.

TEA Project-Team (section vide)

VISAGES Project-Team

9.3. Popularization

- Conférence/débat public "Le partage de données d'imagerie en santé: Noeud FLI-IAM", Journées Françaises de Radiologie
- Conférence/débat public "Les biomarqueurs d'imagerie" Collège de France
- Conférence/débat public Technoférence "E-santé", Pôle Image et Réseaux
- Exposition Stand démonstration Inria, Journées Françaises de Radiologie
- Presse écrite "Équipe de recherche Visages et ses projets innovants", Revue CAPITAL
- Site web de vulgarisation "Projet Hemisfer", lettre d'information Emergences Inria
- Site web de vulgarisation : reportage photo Serimedis/inserm
- Site web de vulgarisation Emergence Inria: <http://emergences.inria.fr/emergences-2014/newsletter-n30/L30-SHANOIR>