



RESEARCH CENTER
Sophia Antipolis - Méditerranée

FIELD

Activity Report 2014

Section Popularization

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AOSTE Project-Team (section vide)

GALAAD2 Team (section vide)

GEOMETRICA Project-Team

9.3. Popularization

Thomas Bonis and Mathieu Carrière presented the *Photomaton 3d* at the *Fête de la Science* in October 2014. This animation consists in scanning a volunteering person in 3d using a Kinect and dedicated software, then illustrating the concepts of 3d shape comparison, retrieval and matching.

MARELLE Project-Team

9.4. Popularization

Laurent Théry presented his researcher work to three different classrooms during the event "semaine des maths", in March.

APICS Project-Team

9.3. Popularization

- L. Baratchart was a speaker at “Café in” (Oct. 2014, Inria Sophia-Antipolis-Méditerranée).
- J. Leblond is a member of the Committee MASTIC. She was an invited speaker at the seminar associated with the lecture by G. Berry at the Collège de France (Jan. 2014).
- M. Olivi is president of the Committee MASTIC (Commission d’Animation et de Médiation Scientifique) <https://project.inria.fr/mastic/>. She is responsible for Scientific Mediation.

ECUADOR Project-Team

9.3. Popularization

- Laurent Hascoët made a presentation on “Adjoint Automatic Differentiation for Data Assimilation” at the EGC 2014 conference in Rennes, January 28.
- Laurent Hascoët made a presentation on “Using Algorithmic Differentiation Tools to Compute Derivatives” at the ATOC Adjoint 2014 workshop organized by the British Antarctic Survey, Cambridge, July 1-2.
- Laurent Hascoët was invited to a seminar on adjoint methods <http://www.dagstuhl.de/program/calendar/partlist/?seminr=14371&SUOG> in Dagstuhl, Germany, september 7-12.

MCTAO Project-Team (section vide)

NACHOS Project-Team (section vide)

OPALE Project-Team

8.3. Popularization

P. Goatin authored a short contribution to the book “*Brèves de Maths - Mathématiques de la planète Terre*”, Nouveau Monde ed., 2014.

J.-A. Désidéri is a consultant at ONERA (*The French Aerospace Lab*) and participates in the scientific activities of DSNA (Department of Numerical Simulation and Aeroacoustics, Châtillon) and DAAP (Department of Applied Aerodynamics, Meudon).

TOSCA Project-Team

9.3. Popularization

M. Bossy published in the *Brèves de maths* book [25].

ABS Project-Team (section vide)

ASCLEPIOS Project-Team

8.3. Popularization

Maxime Sermesant gave 2 presentations in 2014 about research and medical imaging in local high schools (Lycée Tocqueville in Grasse and Lycée Saint Exupéry in Saint Raphaël).

ATHENA Project-Team (section vide)

BIOCORE Project-Team

9.3. Popularization

The activities related to microalgae have generated many articles in national newspapers (Le Monde.fr, Libération, Le Point.fr, ...), and broadcasts on national TV. Several articles were written by the team members to explain the hurdles and potential of microalgae [74]. A book [93] was also written with C. Gudin (formerly at CEA Cadarache) on the potential of microalgae. We also developed a Java applet for the simulation of microalgae growth and biological pest control. The aim of the applet is for the general public to understand the goals and difficulties of controlling such systems.

We have also made a short movie to explain the advantages of our supervision software **ODIN** and to present the pilot photovoltaic greenhouses which will be developed within the ANR Purple Sun project.

CASTOR Project-Team

9.2. Popularization

Contribution of B. Nkonga to a Newspaper in the local Journal La Marseillaise www.lamarseillaise.fr/.../30371-90-mathematiciens-en-fusion-a-luminy

Contribution of B. Nkonga to the Iter interfaces news. <http://www.itercad.org/Interfaces/Interfaces51.pdf>

B. Nkonga and H. Guillard was organizers of the summer school CEMRACS 2014 on Numerical modeling of plasmas, July 21 - August 29, CIRM, Marseille

COFFEE Project-Team (section vide)

DEMAR Project-Team (section vide)

LEMON Team

9.3. Popularization

Antoine ROUSSEAU is co-author of the **book** [16] (and **blog**) *Brèves de Maths* (Ed. Nouveau Monde, Nov. 2014)

Antoine ROUSSEAU gave several conferences for highschool students and their teachers in France, on the topics of mathematical modeling for environmental sciences:

Fête de la Science, Oct. 2014, Genopolys Montpellier (with Twitter reports on the national account **@EnDirectDuLabo**)

Fête de la Science, Oct. 2014, Centre International de Valbonne

Initiation à la recherche, Oct. 2014, **Lycée Saint-Sernin**, Toulouse

Antoine ROUSSEAU gave a public lecture for Inria staff *Café In'* in Inria Sophia, Dec. 2014

Antoine ROUSSEAU was invited to the *Société Informatique de France* annual workshop **SIF 2014** to participate to a round table on scientific outreach

Antoine ROUSSEAU is member of the national Inria network for scientific outreach *Médiation scientifique*

Arnaud Duran gave a public lecture for high school students at Collège Jean Bène (Pézénas, France), Feb 2014.

MODEMIC Project-Team

8.3. Popularization

Jointly with Inria project-team LEMON, MODEMIC has participated to the elaboration of a “serious” game for learning how to purify fast and well a water reservoir, in the scope of the international initiative Mathematics of Planet Earth and the french consortium Cap’Maths (see [5.1](#)).

MORPHEME Project-Team

7.3. Popularization

Eric Debreuve was invited to give a presentation for the seminar series “Café-in”, Inria CRI SA-M, November 2014.

NEUROMATHCOMP Project-Team (section vide)

VIRTUAL PLANTS Project-Team

8.3. Popularization

- Christophe Godin and Frédéric Boudon presented the Secret Code of Flowers in the context of an Inria initiative at the Science Festival in October.
- Christophe Godin gave two classes on Fractals in science at Lycée Pompidou (Castelnau-Le-Lez).
- Yann Guédon gave a class about the analysis of plant architecture for high-school students "Math C2+" organized by Montpellier 2 University.

COATI Project-Team

9.3. Popularization

- Fête de la Science

Frédéric Giroire presented the stand "Mathémagie" (Magie et Mathématiques) at Rians, France, October 13-18, 2014;

Frédéric Havet organized the "Village des Sciences de Rians", October 13-18 (900 attendants) and created several stands and trained some people to conduct them;

Frédéric Havet presented the stand "Pavages: art, preuves et jeux" at Rians, France, October 13-18, 2014.

- Institut Esope - Maison des Sciences de Rians

Frédéric Havet is vice-president of the association Esope 21 whose aim is scientific and literary popularization. He organized many local events and conducted various discovery workshops in elementary and secondary schools. In total , in spoke in front of about 30 classes on various topics (Mathematics, Computer Science, Astronomy, Ornithology, Job in research, etc.).

DIANA Team

8.3. Popularization

Walid Dabbous presented Future Internet challenges to high school students at Lycée de Valabre Gardanne in April 2014 and at CIV in October at CIV for the Science Week (Fête de la science).

Walid Dabbous made a presentation on Software Defined Networking and Network Functions Virtualization at the Inria Industry Day in Paris on the theme “Télécoms du futur”.

Chadi Barakat presented ACQUA at the Inria Industry Day in Paris on the theme “Télécoms du futur”. See <http://www.inria.fr/en/centre/paris-rocquencourt/innovation/rii-telecoms-du-futur/program>.

FOCUS Project-Team

8.3. Popularization

Simone Martini has carried out extended work of scientific divulgation:

- member of the technical committee of Olimpiadi del Problem Solving (at Italian Ministry of Education), <http://www.olimpiadiproblemsolving.com>;
- member of the technical committee of two national projects of Italian Ministry of Education, founded by ESF - European Social Fund: “Robotica educativa”, and “Informatica nei licei”;
- various talks at institutes and workshops on the teaching methods for Computer Science.
- coordinator of some initiatives for the ‘Hour of Code’, see italia.code.org and programmailfuturo.it.

D. Hirschhoff takes part in several popularization activities in schools, in Lyon (association "Maths en Jeans").

INDES Project-Team (section vide)

MAESTRO Project-Team

9.3. Popularization

S. Alouf is a member of MASTIC, a commission in charge of popularization and regional and internal scientific animation (since November 2011).

SCALE Team

9.3. Popularization

- Françoise Baude is in charge since September 2011 of the set up and animation of an educational program *Cordées de la Réussite*. She leads as Polytech'Nice Sophia member, and in connection with MASTIC activities at Sophia-Antipolis, two *Cordées pour la Science à Sophia* groups (one with Lycée Vinci Antibes, the other with Lycée Tocqueville Grasse). Since 2013, she is in charge of the AVOSTII-STI2D program implementation for Polytech'Nice Sophia, requiring advertising high-school pupils for engineering studies, in particular in ICT.
As ICT Labs Master School University of Nice Sophia-Antipolis coordinator, she is in charge of publicizing, orchestrating, and reporting about all the ICT Labs master programmes involvement of UNS (Internet and Technology Architecture, and Data Science programmes); and as part of the *Paris Node comité de pilotage*, to follow French activities within ICT Labs, and report about UNS activities within this KIC. Overall this mission required about two full-time months of work in 2014.
- Fabrice Huet is in charge, since 2011, of the *Informatiques et Sciences du Numérique* courses for the academia of Nice. These courses are offered to high school teachers who volunteer to offer a Computer Science option to their students. He has also given seminars in high school during the *Fête de la Science*.

AYIN Team

8.3. Popularization

- Aurélie Boisbunon is the representative of PhD students and postdocs at the Mediation and Animation commission (MASTIC) of Inria Sophia Antipolis.
- Aurélie Boisbunon gave talks about machine learning and image processing to high school students and junior high school students for the MathsC2+ training course and for the Fête de la Science 2014.
- Aurélie Boisbunon is participating in a project with junior high school students from Collège Nucéra, in Nice, aiming at giving an introduction to programming and robotics.
- Josiane Zerubia gave a talk on aerial and satellite image processing to high school students in Physics at Valbonne International Center during the “Fête de la Science 2014.”
- Josiane Zerubia presented Inria and Inria-SAM to interested PhD and post-doc students at Inria booth during ICIP’14 in Paris as well as Mc Master University in Canada, University of Szeged and MTA SZTAKI in Hungary.
- Josiane Zerubia is organizing a monthly scientific seminar at Inria-SAM with national and international speakers (see <https://team.inria.fr/ayin/ayinseminars/>).

GRAPHIK Project-Team (section vide)

HEPHAISTOS Team

8.3. Popularization

- M. Gautier has participated to the Fête de la science CIV, to the Carrefour des métiers Nice and has proposed a programming initiation to a 6ème class in view of the participation to the Junior Robotics Pobot Cup.
- Y.Papegay is actively participating to the Math.en.Jeans initiative for Mathematics teaching for undergraduate students.
- we extensively use the MARIONET-SCHOOL robots for pedagogy and teaching at all level.
- J-P. Merlet has given several national newspapers and TV interviews

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.

REVES Project-Team

9.3. Popularization

9.3.1. Popularization, Invited Talks

- We participated in the VERVE workshop on virtual reality technologies for ageing, which took place at the Institut Claude Pompidou on Nov. 6th. Over 200 participants (patients, families and caregivers) visited during this day. George Drettakis gave a short interview on our research for local television.
- Adrien Bousseau presented his work on sketch-based modeling at Lycée de Vence during the Fête de la science 2014. He also participated to a “cafe science” during the Semaine du Cerveau event in Marseille.
- Adrien Bousseau gave an invited talk at the Amadeus Global Technical Forum, December 2014.
- Adrien Bousseau and George Drettalis gave invited talks at UC Berkeley in the context of the associate team CRISP.

9.3.2. Demos

We gave demos to companies visiting the site, often including presentations in the immersive space: Visteon, Optis. We also gave demos and presentations at the Mediterranean Days event, to university and high school students (“stages 3eme”), as well as representatives from the Sustainable Design School in Nice.

STARS Project-Team

9.3. Popularization

François Brémond was invited to give a talk at Conférence des métiers at International Lycée (CIV) in Sophia 27 January 2014.

François Brémond was interviewed by Nice Matin on CoBTeK and Alzheimer issues, Opening of ICP, 10 March 2014.

François Brémond was interviewed by Monaco TV on MONAA and Autism issues, 12 March 2014.

François Brémond has participated to the ERCIM News 98 -Special theme: Smart Cities, July, 2014.

Guillaume Charpiat was part of the popularization MASTIC committee.

TITANE Project-Team (section vide)

WIMMICS Project-Team

9.3. Popularization

Fabien Gandon

Meeting Inria-Industry *Technologies du Web : ce réseau de ressources numériques mondial*⁰, Lille.

Amadeus QLM Staff Briefing keynote, *Semantic Web*, February 14th.

Invited speaker on *Quel avenir pour le Web ?* in the cycle of conferences *Les enjeux du Web 3.0 dans le secteur culturel* - Ministry of Culture and Inria.

Scientific days at Inria : *Relations between Inria and W3C* and *Presentation of LabCom SMILK*.

⁰<http://www.inria.fr/centre/lille/innovation/rii/rii-technologies-du-web/presentation>

ZENITH Project-Team

9.3. Popularization

Today, one of the main questions in science popularization and computer science teaching at school in France is: "how to scale?". Some of our recent actions in the domaine are mainly oriented towards this goal of scaling.

F. Massegli has coordinated a national network of colleagues for promoting code learning. This action has given the "KidEtCode" studios of Inria, and the involved colleagues have benefited from two training sessions on the subject. After some successful organizations of studios by colleagues in the network, F. Massegli has written a series of interviews where they give a feedback on "howto" set up a KidEtCode studio, find partners and provide relevant content.

F. Massegli has given a 3 days training to elementary school teachers. This event, called "Graines de sciences" (Ecole de Physique des Houches, <http://www.fondation-lamap.org/fr/graines-de-sciences>) was funded by "La main à la pâte" (<http://www.fondation-lamap.org/>), a French foundation dedicated to science popularization based on manual activities. The goal, here, was to give a 3h training to groups of a dozen of teachers, by mainly using games and activities they would be able to transfer in their classrooms. In <http://binaire.blog.lemonde.fr/2014/11/14/comment-semer-quelques-graines-de-sciences>, we give our point of view on how helping teachers to bring computer sciences in their classroom is more than feasible.

Following this autumn school for teachers, "La main à la pâte" is now working with Inria (Gilles Dowek, Pierre-Yves Oudeyer, Florent Massegli and Didier Roy), "France-IOI" and the University of Lorraine in order to write a school book on computer science teaching.

Zenith participated to the following events in Montpellier, and therefore participated in the effort of relaunching science popularization activities in Montpellier:

- F. Massegli co-organized and co-animated the Inria's stand at "La fête de la science" (Montpellier), held by Genopolys (a science village).
- F. Massegli organized and animated several "Kid&Code" studios in the greater metropolitan area of Montpellier, involving the network of media libraries and the network of extracurricular activities. He also has proposed a two sessions training to media libraries activity leaders. The goal is to accompany media libraries in the region of Montpellier and help them until they are autonomous in this activity.

F. Massegli is a member of the steering committee, and contributor, of interstices (<https://interstices.info>), and a member of the scientific committee for the edition of "Datagramme", the game from Inria on science popularization. He has participated to the two days training sessions on "science popularization" given by Claude Vadel in Paris, on Dec. 4 and 5, 2014.

F. Massegli is a member of the management board of "Les Petits Débrouillards" in Languedoc-Roussillon. He also is the scientific responsible for schools visits in the Lirmm Laboratory.

A. Joly presented the PI@ntNet project and the associated iPhone app in several events including "Futur en Seine 2014" where it received the price of collaborative research, "les rencontres Inria/industries" , "LeWeb 2014", etc. Many news media articles, blogs, TV news and twitts also reported on PI@ntNet (typing "PI@ntNet" on Google is the best way to get most of them).

P. Valduriez gave a talk on "Cloud Big Data" at Université du Tiers Temps, Montpellier.