



RESEARCH CENTER

FIELD

Perception, Cognition and Interaction

Activity Report 2018

Section Popularization

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CEDAR Project-Team

9.3. Popularization

9.3.1. Articles and contents

- In books/journals for the general public: Our research on computational fact-checking has been featured in Le Journal Toulousain in an article titled “La science se met au service de l’information” , in February 2018 (<http://www.lejournaltoulousain.fr/societe/la-science-se-met-au-service-de-linformation-pour-detecter-les-fake-news-54906>). Further, I. Manolescu has been interviewed as an expert for an article in Le Figaro, in March 2018 (<http://www.lefigaro.fr/secteur/high-tech/2018/03/08/32001-20180308ARTFIG00341-sur-twitter-les-fake-news-voyagent-plus-vite-que-les-vraies-informations.php>).

9.3.2. Interventions

- Ioana Manolescu participated to a televised debate on fake news and the media in “Le Grand Barouf Numérique”, a technology/society meet up organised by the city of Lille, in March 2018. The debate was broadcast by France 3 (<https://france3-regions.francetvinfo.fr/hauts-de-france/nord-0/lille/debat-fake-news-medias-sont-ils-malades-1446365.html>).
- Ioana Manolescu has participated to a debate on regulating the news media in “Les Journées de l’Economie”, a national event organized in Lyon, in November 2018 (<http://www.touteconomie.org/index.php?arc=bv1&manif=594>)

9.3.3. Creation of media or tools for science outreach

Our research on computational fact-checking has been featured in a documentary (<http://www.universcience.tv/video-tech-check-des-scientifiques-face-aux-fake-news-19501.html>) by UniverScience.TV, the organization responsible of preparing scientific short movies next to Cité des Sciences. The movie has been featured in an article in Le Monde (https://www.lemonde.fr/sciences/video/2018/01/24/comment-la-science-aide-a-reperer-les-fake-news_5246356_1650684.html).

GRAPHIK Project-Team

9.3. Popularization

9.3.1. Articles and contents

- M. Chein, Sur la science informatique et son installation à Montpellier, Conf. Association française pour l'avancement des sciences, Montpellier avril 2017 /Bull. Acad. Sc. Lett. Montp., vol. 48, suppl. C1 (2017), p.89-102/
- M. Chein, L'informatique : la science au coeur du numérique , Conf. Académie des Sc ; et Lett. De Montpellier, mai 2017, /Bull. Acad. Sc. Lett. Montp., vol.48 (2017), p.203-214/

9.3.2. Interventions

- M. Chein, Intelligence artificielle : Mythes et Réalités, Médiathèque, La Boissière, mars 2018
- M. Chein, La complexité en Informatique. Complexité spatio-temporelle des programmes, des algorithmes et des problèmes. Pierre Rouge Sciences, Assas, janvier 2018

LACODAM Project-Team

10.3. Popularization

10.3.1. Interventions

- Public debate on Artificial Intelligence at Café des Champs-Libres, Rennes (E. Fromont)
- Radio C-LAB, invited to the "Mars 2081" show on AI. (E. Fromont)
- Invited member to the focus group "Transition numérique et pratiques de recherche et d'enseignement en agriculture, alimentation, environnement et sciences vétérinaires à l'échéance 2040" (T. Guyet)
- Intervention at the Pint of Science 2018 event, topic: Artificial Intelligence and Data Science (A. Termier)
- Invited talk at "Matinale Rennes Atalante", Rennes (A. Termier, 22/12/2018) ⁰.
- Invited talk at Lacroix-Sofrel industrial group (A. Termier)
- Invited talk at the kickoff the OpenLab PSA-Inria, where Lacodam is actively involved (A. Termier)
- Invited talk at the conference *IN'Sciences "Big data : comment combiner intelligence artificielle et gestion de données ?"* (L. Galárraga, chaired by L. Rozé)

⁰Video: <http://www.rennes-atalante.fr/actualites-technopole/captations-matinales-rennes-atalante/2018/visionnez-la-matinale.html>

LINKS Project-Team

10.3. Popularization

10.3.1. Internal action

General Assembly of Inria Lille Niehren presented Links work on data and knowledge bases on the Dynamic Semantic Crosswords demonstration during a general assembly of Inria Lille in July 2018.

10.3.2. Creation of media or tools for science outreach

Dynamic Semantic Crosswords Bacquey's demonstration system on dynamic semantic crosswords is presented in the new showroom of Inria Lille in the new building Place. The demo generates dynamically crosswords while streaming Twitter feeds, depending on a semantic topic specified by the user. The specification can be given by a list of hashtags, and in the future by a XPath 3.0 query, that can be executed on streams by using Links QuiXPath tool. This illustrates the work on complex event processing by Niehren and his students during the last years.

MAGNET Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

- AURÉLIEN BELLET is the scientific mediation contact for Inria Lille center.
- PASCAL DENIS served as committee member on the Inria Lille Commission Emploi Recherche (CER).
- PASCAL DENIS also served as committee member on Commission de Développement Technologique (CDT).
- PASCAL DENIS is administrator of Inria membership to Linguistic Data Consortium (LDC).

10.3.2. Articles and contents

- AURÉLIEN BELLET and MARC TOMMASI provided expertise for an upcoming TV program on Arte about new technologies.

10.3.3. Interventions

- National events: JAN RAMON and MARC TOMMASI participate to a round-table meeting at the *Fête des libertés numériques* for the RGPD day ⁰.
- In educational institutions: MARC TOMMASI gave a talk on privacy and machine learning in Journées polytech ⁰.

⁰https://www.meshs.fr/page/donnees_personnelles_et_droits_et_libertes_numeriques

⁰<http://www.polytech-lille.fr/big-data-machine-mearning-p11419.html#.WqIHjExFxPb>

MOEX Project-Team

6.3. Popularization

6.3.1. Interventions

- Jérôme Euzenat gave a talk on “Artificial intelligence: a broad view” to BEST Spring course, Grenoble (FR), 2018-04-16
- Jérôme Euzenat gave a talk on “mOeX: évolution de la connaissance” Inria “Mon projet en 180 secondes”, Grenoble (FR), 2018-05-29
- Jérôme Euzenat gave a talk on “Evolving knowledge: different facets of Artificial Intelligence” to the French-American Doctoral Exchange (FADEx) seminar, Grenoble (FR), 2018-06-27

ORPAILLEUR Project-Team (section vide)

PETRUS Project-Team

10.3. Popularization

- Nicolas Ancaux: "Respectez les données personnelles de vos clients avec PLUGDB", Inria Tech Talk, French Tech Central - Station F, 12 Dec. 2018. video: https://youtu.be/9y3VdMe_sAQ, slides: <https://french-tech-central.com/events/inria-tech-talk-respectez-les-donnees-personnelles-de-vos-clients-avec-plugdb/>
- Nicolas Ancaux: auditions de la mission de préfiguration du « Health Data Hub », DREES, July 2018. Slides: <http://petrus.inria.fr/~ancaux/papers/D39.pdf>
- Nicolas Ancaux: interview, magazine La Recherche N°535, Mai 2018, "IA : les défis de la stratégie française", pp.14-16, by Gautier Cariou. Link: <https://www.larecherche.fr/parution/mensuel-535>

TYREX Project-Team

8.3. Popularization

- N. Layaïda contributed to the special édition of the newspaper : Le Dauphiné libéré des enfants – C'est quoi le numérique ? – n°14 November-December 2018.
- P. Genevès presented the Tyrex team activities in 180 seconds in a dissemination event organized at Inria Montbonnot in June 2018.

8.3.1. Creation of media or tools for science outreach

- T. Michel built a mobile application for the Inria public showroom, Espace Login, called Login'AR. The application was designed to showcase the combination of indoor positioning with Augmented Reality capabilities. The application is now part of the permanent Login public exhibition. The application was developed with the help of four Grenoble INP interns (A. Convert, A. Fortecof, G. Montano and S.J. Tourangeau).

VALDA Project-Team

8.3. Popularization

8.3.1. Internal or external Inria responsibilities

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

8.3.2. Articles and contents

Serge Abiteboul published *Le bot qui murmurait à l'oreille de la vieille dame* at the *Le Pommier* éditions, a collection of short stories on the digital world, accompanied with scientific and technical discussions.

Serge Abiteboul writes regular columns on popularization of computer science in *La Recherche* and *Le Monde* (Économie).

8.3.3. Education

Pierre Senellart participated to a week-long meeting of teachers in *classes préparatoires* in Lumini in May 2018 to discuss the future of computer science education and to give an introduction to database research.

WIMMICS Project-Team

10.3. Popularization

10.3.1. Interventions

- Michel Buffa presented the WASABI ANR project during *La fête de la Science* in *L'esprit Sorcier* TV program ⁰.

⁰<https://youtu.be/-iExdePDsPA>

ZENITH Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

F. Masegla is “Chargé de mission auprès de la DGD-S Inria pour la médiation scientifique” (50% of his time) and heads Inria’s national network of colleagues involved in science popularization (<https://www.inria.fr/recherches/mediation-scientifique/actions-de-mediation-scientifique/presentation>)

10.3.2. Articles and contents

Alexis Joly participated to the realization of a report on "Deep Learning and Agriculture" edited by the AgroTIC chair (<https://www.agrotic.org/>). He co-authored on article on data collection in citizen science projects [37].

10.3.3. Education

Teaching code is now officially in the school programs in France. Class’Code is a PIA project that aims at training the needed 300,000 teachers and professionals of education France. The project is a hybrid MOOC (both online courses and physical meetings). Florent Masegla is co-author of the first course and scientific referent of the other courses.

Along with Class’Code, the association “La main à la pâte” has coordinated the writing of a school book on the teaching of computer science teaching, with Inria (Gilles Dowek, Pierre-Yves Oudeyer, Florent Masegla and Didier Roy), France-IOI and the University of Lorraine. The book has been requested by and distributed to 15,000 readers in less than one month. The extension of this book for the French "Collège" has been released in 2017 with new activities and new scientific content.

F. Masegla is giving a doctoral training at different doctoral schools in Montpellier, in order to train facilitators for helping teachers and people of the education world to better understand the "computational thinking". So far, 14 people have been trained.

P. Valduriez gave an invited talk on "Succeed in your Ph.D. Thesis: good practices and return of experience" at the Ph.D. meeting at LIRIS, Lyon, on December 11.

F. Masegla is member of the pedagogic committee of "Edu’up", a project from France-IOI on learning code and computational thinking.

F. Masegla gave a one day training session to school teachers in Créteil, on October 3.

Alexis Joly gave about 15 hours of professional training in the use of digital tools for environmental education (Pl@ntNet, ThePlantGame and Smart’Flore).

10.3.4. Interventions

Zenith participated to the following events:

- F. Masegla co-organized the regional Code-Week events with the local network of media-library ("réseau des médiathèques de Montpellier Méditerranée Métropole").
- F. Masegla is member of the project selection committee for “La fête de la science” in Montpellier.
- F. Masegla animated a stand at the "semaine de la mémoire" event organized by Genopolys (September 20&21).
- F. Masegla participated in a class visit, at Saussan, with Charles Torossian (co-author of the "Vallani-Torossian" report) and the rectrice, about code teaching.

10.3.5. Internal action

F. Masegla organized, and participated to, a 2 days training session on the Poppy Ergo Jr robot (June 25&26).

10.3.6. Creation of media or tools for science outreach

In the context of the Floris'tic project, A. Joly participates regularly to popularization, educational and citizen science actions in France (with schools, cities, parks, associations, etc.). The softwares developed within the project (PI@ntNet, Smart'Flore and ThePlantGame) are used in a growing number of formal educational programs and informal educational actions of individual teachers. For instance, Smart'Flore is used by the French National Education in a program for reducing early school leaving. PI@ntNet app is used in the Reunion island in an educational action called Vegetal riddle organized by the Center for cooperation at school. It is also used in a large-scale program in Czech republic and Slovakia (with a total of 100 classrooms involved in the program). An impact study of the PI@ntNet application did show that 6% of the respondents use it for educational purposes in the context of their professional activity.

F. Maseglia participated in the work group on "Jeu des 7 familles de l'informatique". This card game, to be announced officially in January 2019, provides support for education to computer science from the history point of view.

ALICE Project-Team (section vide)

AVIZ Project-Team

8.3. Popularization

8.3.1. Articles and contents

- [Lonni Besançon's](#) PhD work was featured in [Le Monde's Binaire blog](#).
- Steve Haroz was interviewed on the [Data Stories podcast](#), October 10, 2018

8.3.2. Creation of media or tools for science outreach

- Pierre Dragicevic and Yvonne Jansen: the [data physicalization wiki](#) and the [List of Physical Visualizations and Related Artefacts](#) (500 weekly visits) are continuously being updated.

EX-SITU Project-Team

9.3. Popularization

9.3.1. Articles and contents

- Radio show “Les P’tits Bateaux” on France Inter public radio: Michel Beaudouin-Lafon (interviews in response to children questions on 10 June 2018, 16 September 2018, 7 October 2018)
- Panel at “*La Fabrique de la Danse*”, Centre 104, Paris, 5 Avril 2018: Baptiste Caramiaux (panel member)

9.3.2. Interventions

- Le Plateau des Recherches Infinies: art-science project with photographer Didier Goupy presenting the portraits of 100 researchers of Université Paris-Saclay. Fête de la Science, Gif-sur-Yvette, October 2018
- Workshop on “Rapid Prototyping with Interactive Materials”, Fab14, Toulouse, July 2018: Michael Wessely
- Workshop “*Relational Listening*”, CLOUD/Danslab, Lake Studios, Berlin, 22 July 2018: John MacCallum (co-facilitator).

GRAPHDECO Project-Team

9.3. Popularization

9.3.1. Internal or external Inria responsibilities

- George Drettakis chairs the local “Jacques Morgenstern” Colloquium organizing committee.
- Adrien Bousseau is a member of “comité du centre” and “comité du suivi doctoral”.

9.3.2. Articles and contents

- Nice Matin published an article about the ERC project of George Drettakis.

9.3.3. Interventions

- Bastien Wailly gave a demo of our sketch-based modeling tool during *Fete de la Science*.
- Valentin Deschaintre presented his work to high school student and advised them on a small scientific project for *Math C2+*.

HYBRID Project-Team

10.3. Popularization

As a salient action in 2018, Hybrid could organize a **press conference** on the topic of "Neurofeedback" in Paris (November 14th), which ended up with numerous media coverages (radio, press, etc).

10.3.1. Articles and contents

- "Autour de la question" (07/18) Radio France International: interview of Valérie Gouranton, Ronan Gagne and Théophile Nicolas on "cultural heritage applications in VR/AR"
- "Sciences Ouest" (11/18) : interview of Anatole Lécuyer about "Neurofeedback"
- "Journal de 7h30" (11/18) France Inter radio : interview of Anatole Lécuyer about "Neurofeedback"
- "Sciences Ouest" (10/18): interview of Maud Marchal for "Epreuve par 7".

10.3.2. Interventions

- Technoférence du Pôle Images et Réseaux (Rennes, 02/18): co-organization by Ronan Gagne, presentation from Maud Marchal on haptic in VR, demonstrations in Immersia.
- "Journées Science et Musique 2018" (Rennes, 10/18): co-organization of this event, and presentation of several demos of the team.
- Press Conference on "Neurofeedback" (Paris, 11/18): co-organization of this event, and presentation from Anatole Lécuyer, followed by several media coverages.

ILDA Project-Team (section vide)

IMAGINE Project-Team

10.3. Popularization

Rémi Ronfard and Julie Valéro organized a panel at Experimenta on "Virtual reality storytelling between cinema and theatre", with invited guests Christelle Derré, (collectif Or Norme), Philippe Fuchs (MINES ParisTech), Pauline Bouchet (Univ. Grenoble Alpes), Pierre-Emmanuel Le Goff (France TV) and Annick Jakobowicz (France TV).

Rémi Ronfard presented new results of the COLLODI2 project to Computer Animation professionals at MIFA in June 2018, Next-generation computer animation with RUMBA, International Animation Film Festival Annecy.

Marie-Paule Cani and Rémi Ronfard were featured in a special report on Intelligence artificielle et création artistique, Science et Avenir, aout 2018.

Rémi Ronfard and Julie Valéro published online three new video documentaries shot using our KINO AI virtual cinematography system during rehearsals of the stage adaptation of Mary Shelley's Frankenstein, written and directed by Jean-Francois Peyret.

Rémi Ronfard and Julie Valéro wrote a blog entry, L'informatique rentre en scène, Blog Binaire, Le Monde, 4 décembre 2018.

LOKI Team

9.3. Popularization

9.3.1. Internal or external Inria responsibilities

AIRLab selection committee for the funding of **art and science projects**, Stéphane Huot (representative for Inria Lille – Nord Europe)

9.3.2. Articles and contents

2067 ou la disparition des interfaces humains-machines, interview in an **Inriality and Usbek & Rica joint article**, Stéphane Huot

Le raccourci clavier: Une meilleure interaction entre l'Homme et la machine ?, in **Lille by Inria N°7**, Sylvain Malacria

9.3.3. Education

Structuration et fonctionnement de la recherche, training session for academic librarians at **Médi-aLille**, Thomas Pietrzak

9.3.4. Internal action

Chorégraphie d'animation : structurer pour mieux comprendre, talk at Inria Lille – Nord Europe “**13:45**”, Amira Chalbi

Reliability and Perceived Reliability in Ubiquitous Gestural Input, talk at Inria Lille – Nord Europe “**30 minutes de sciences**”, Edward Lank

The TurboTouch latency compensation method, demonstration at the opening ceremony of Bâtiment Place (Inria Lille – Nord Europe), Mathieu Nancel

MANAO Project-Team

10.3. Popularization

10.3.1. Interventions

- Public exhibitions: Station Campus, Live Painting with Maud Mulliez at the Musée Ethnographique de Bordeaux (November 29th, 2018).
- Talks for schoolchildren: Camille Brunel and Pierre Bénard gave a 30 minutes talk titled *L'art et la science des films d'animation 3D* in front of secondary students during "la semaine des Maths" (March 15th, 2018), "le Printemps de la Mixité" (March 27th, 2018), and "la Fête de la Science" (October 10th, 2018).
- Talk at e-artsup: Pierre Bénard gave a 1 hour talk titled *Sciences et techniques pour l'animation 3D* in front of art students (October 8th, 2018).
- Open days at Inria Bordeaux Sud-Ouest : Demonstration of the *Wedge Camera* at "la Fête de la Science" (October 13th, 2018)

10.3.2. Internal action

- 10-year-celebration of Inria Bordeaux Sud-Ouest : Demonstration of the *Wedge Camera* (September 27th, 2018)

MAVERICK Project-Team

9.3. Popularization

Every year, “MobiNet” (see section 6.7) classes are conducted with high school pupils of the large Grenoble area to practice initiation and intuition on Computer Science, Maths and Physics. Depending on the year, we have 2 to 4 groups in the scope of INP-Grenoble “Engineering weeks”, and 0 to 2 groups in the scope of Math-C2+ operations.

Fabrice Neyret published a popularization article "Le mouvement sous toutes ses coutures" [19] in the booklet "Maths Mouvement Express 2018".

Fabrice Neyret maintains the blog [shadertoyunofficial \(https://shadertoyunofficial.wordpress.com/\)](https://shadertoyunofficial.wordpress.com/) and various shaders examples on Shadertoy site (<https://www.shadertoy.com/>) to popularize GPU technologies as well as disseminates academic models within computer graphics, computer science, applied math and physics fields.

Cyril Soler presented at FOSDEM2018 his work on privacy preserving data distribution over decentralized mesh networks (<https://www.youtube.com/watch?v=FR9SSdGN0K8>).

MFX Team

9.3. Popularization

9.3.1. Ada Lovelace Day

In the context of the Ada Lovelace Day, 9th October 2018, Noémie Vennin received about twenty young girls in our 3D printer room. The Ada Lovelace Day is an international celebration of the achievements of women in science, technology, engineering and maths (STEM). It aims to increase the profile of women in these fields and, in doing so, create new role models who will encourage more girls into STEM careers and support women already working in.



Figure 11. Ada Lovelace Day at MFX Team.

9.3.2. IceSL Event for non-academic users

The IceSL event was held on February 22, 2018 in Paris. The objective was to bring together our community as well as new users. We invited external users, industrial partners and FabLabs at large (through national mailing lists).

The program (<https://www.weezevent.com/icesl>) involved training with the software (by all the IceSL team members, 6 sessions in total), then we had our most experienced users present advanced use of IceSL: advanced modeling with implicit volumes by Loic Fejoz, modeling of orthopedic braces by Pierre Alexandre Hugron, the making-of of a complex table with our partner Creative Industry. We finally had a social event with an exhibition of our best parts.

The gathering was a success, with 50 attendees – the maximum we could host – from a variety of backgrounds (makers and industry). Following the event we saw a clear growth in the interest around the software, with a tripled visit rate to our website and a steep increase in downloads (25% additional downloads since then). The French IceSL community is especially active, with 15% of our total visits, just after the United States (23%).

We are scheduled to repeat this event (in a more compact format) in March 2019 at Station F, in Paris.

MIMETIC Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

Franck Multon is coordinator of Inria national initiative "Sport Inria" in relation with the French Ministry of Sports, and the French Ministry of Research, for Olympic Games 2024

10.3.2. Articles and contents

Co-author of a book dedicated to undergraduate STAPS students, Elsevier Health Sciences, Sept. 2018. « STAPS: anatomie, physiologie, neurosciences et biomécanique » (P Delamarche, F Multon, T Horrut, V Nougier). Author of the chapter entitled « Biomécanique de la performance motrice » (47 pages).

Book chapter "Réalité virtuelle au service du sport" in a book "Corps et Sport" dedicated to general public, pages 148–164, Editions de la Martinière, 2018.

Book chapter "The democratization of VR-AR" in a book "Virtual Reality and Augmented Reality: Myths and Realities" dedicated to general public, pages 73-123, ISTE Ltd, 2018.

Book chapter "Vers une démocratisation de la RV-RA ?" in a book "Réalité virtuelle et réalité augmentée" dedicated to general public, pages 95-141, ISTE Ltd, 2018.

10.3.3. Interventions

Richard Kulpa was member of the scientific committee for temporary exhibition (1000m²) entitled "Corps et Sport" in "Cité des sciences et de l'industrie", Octobre 16th 2018 to January 5th 2019. The idea is to propose a new approach of sports to the wide public audience.

POTIOC Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

- Member of editorial Board of Blog Binaire - Le Monde, Pascal Guitton

10.3.2. Articles and contents

- Martin Hachet, *Art et Informatique: Fertilisation croisée*, Blog Binaire - Le Monde, [46]
- Pascal Guitton, *L'accessibilité numérique, pourquoi il faut la développer*, Blog Binaire - Le Monde, [45]
- Bruno Arnaldi, Pascal Guitton & Guillaume Moreau, *Rendez-vous dans 10 ans*, Blog Binaire - Le Monde, [44]

10.3.3. Education

- Potioc booth at EdTech days, Bordeaux, May 18
- "Pensez-vous qu'il soit possible de lire dans les pensées?", Scientific debate to launch the "projets indisciplinés" of University of Bordeaux, October 2018, Fabien Lotte
- "La recherche sur les interfaces cerveau-ordinateur chez Potioc", Presentation for Bachelor 3, ENS Lyon, visiting Inria Bordeaux, December 2018, Fabien Lotte
- "Le futur des interfaces : interfaces invisibles", Master Class Festival Futur.e.s, Lauren Thévin
- Booth at Laval Virtual (Espace Révolution)

10.3.4. Interventions

- **Pint of Science**, Bordeaux, May 18, Martin Hachet and Philippe Giraudeau
- **Cinema Sciences**, Merignac, April 18, Martin Hachet
- Goûter des sciences / Les petits débrouillards (Figure 9), Bordeaux, December 18, Martin Hachet, Philippe Giraudeau, Théo Segonds, Nicolas Palard
- Organization of a workshop for middle and high school students, Ethnography museum, University of Bordeaux, 8-11th Oct. 2018, Léa Pilette
- "Optimizing humans digital learning by decoding brain activity in real time", Poster, ESOF Toulouse, France, July 2018, Aurélien Appriou
- "Flow theory for optimizing BCI", CogTalk, Bordeaux, November 2018, Jelena Mladenovic
- "Cerveau et jeux vidéo", CogTalk, Bordeaux, March 2018, Pierre-Antoine Cinquin
- L'accessibilité des jeux vidéo, Masterclass Scientific Game Jam, March 2018, Université de Bordeaux
- Seminar for PhD students – Flow theory for optimizing BCI, ISPED Bordeaux, November 2018, Jelena Mladenovic
- "Contrôler un ordinateur par l'activité cérébrale : Mythe ou Réalité ?", Conférence grand public de restitution des pauses de l'institut des études avancées de l'université de Bordeaux, Talence, June 2018, Fabien Lotte
- "Les Interfaces Cerveau-Ordinateur : Progrès et questions", Centre Culturel du Hâ, Bordeaux, France, May 2018, Fabien Lotte
- "Mixed reality for visual impaired people", Cherchons pour Voir & IJA (Institut des Jeunes Aveugles, Toulouse), Apéro Sciences, Lauren Thévin
- "Accessibilité numérique : pourquoi et comment", Inria Tech Talk, Station F, Paris, Pascal Guitton

10.3.5. Internal action

- Unithé ou Café, Martin Hachet, May 18
- Potioc Demos for 10th anniversary of Inria Bordeaux, Sept. 18
- Fete de la sciences, Demo at CapSciences, Oct. 18.



Figure 9. The Potioc team at Gouter des Sciences / les petits débrouillards, Dec. 18.

TITANE Project-Team

10.3. Popularization

Yuliya Tarabalka gave a seminar for the academic-industrial event “Les rendez-vous Université Côte d’Azur-Entreprise”, May 2018.

10.3.1. Internal or external Inria responsibilities

Pierre Alliez is head of science of the Inria Sophia Antipolis Center since September 2018, and member of the Inria evaluation committee.

10.3.2. Interventions

- Pierre Alliez gave a seminar and demo for the “fête de la science”, October 7th.

ALMAAnaCH Team

9.3. Popularization

9.3.1. Interventions

- Welcoming of schoolchildren at Inria Paris (half a day with ALMAAnaCH members within an one-week-long stay; December 2018)
- ALMAAnaCH members were involved in the Profiterole ANR project's presentation at the *Salon de l'Innovation* of the conference TALN 2018 (the "SiTAL" show).
- Presentation in Education Network ISN "Informatique et Science du Numérique" (March)
- Invited speaker in a citizen debate on Artificial Intelligence (association "Les coteaux en Seine", Bougival, November 21st 2018)

COML Team

9.3. Popularization

E. Dupoux talked in two general public conferences on speech technologies, one organized by the Institut Carnot Cognition (La Vilette, oct, 2018), one by the Institut IA in Toulouse (oct 2018), both with around 200 participants. He gave and/or organized smaller meetings geared towards enhancing contacts between industry and research in the general area of AI and Cognition (1 day and a half of scientific meetings between PSL and Facebook, seminar-style intervention with MSR, and with the CVT Athena). He co-chaired the conference Legrain on AI and Cognition which, besides the scientific track had a general public track and an industry track, which were both attended by 100-200 attendees (see <http://olivierlegrain.ens.psl.eu/ia-et-cognition.html>).

N. Zeghidour did a high level presentation of AI in Vivatech on the Facebook Stand (100 000 visitors). He presented the state of the art in ASR and TTS in the BNP Paribas-PRAIRIE Summer School with participants from the IT Industry. He co-redacted a 5 pages popularization article on neural networks and deep learning in the magazine "Tangent, the mathematical adventure" for high school students, 20,000 printed copies.

MULTISPEECH Project-Team

10.3. Popularization

- Participation to the "Ada Lovelace Day" organized by Inria Nancy - Grand Est, October 2018 (A. Bonneau).

10.3.1. Articles and contents

- Interview for "GAFA : la voix est libre", le Magazine de la Rédaction, *France Culture*, January 5, 2018 (E. Vincent)
- Interview for "Les enceintes connectées vont révolutionner vos vies et vous ne pourrez plus vous en passer", *18h39.fr*, February 22, 2018 (E. Vincent)
- Interview for "Annecy 2018 : Dynalips, solution de lip-sync automatisée.", *3DVF.com*, June 18, 2018 (S. Ouni)

10.3.2. Interventions

- Demonstration at Journée des métiers, Collège Péguy, le Chesnay, April 2018 (A. Piquard-Kipffer)
- Exhibition of an automatic lip-sync system at The Annecy International Animation Film Festival, Annecy, 12-15 June 2018 (S. Dahmani, V. Girard, T. Biasutto-Lervat, S. Ouni)
- Demonstration at Fête de la Science, University of Lorraine, October 12, 2018 (N. Turpault, R. Serizel, E. Vincent)
- Demonstration and participation in a panel discussion at Forum des Sciences Cognitives, Artem, Nancy, November 7, 2018 (N. Turpault, E. Vincent)
- Invitation to Serbia Science Festival 2018 (Belgrade) by the French institute of Serbia to give four popularization lectures and present a demonstration on "teaching robots to hear us", November 2018 (A. Deleforge).

PANAMA Project-Team

10.3. Popularization

10.3.1. *Journée Science et Musique (JSM 2018)*

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

with contributions and support from: 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 2018 hosted approximately 500 visitors and was a partner of the “Festival des Sciences” and “Festival Maintenant” in Rennes.

10.3.2. *250th Anniversary of Joseph Fourier’s birth*

Participants: Nancy Bertin, Frédéric Bimbot, Antoine Deleforge, Rémi Gribonval.

PANAMA has been involved in the *Comité Fourier 250* by participating to, and triggering interest for the 250th Anniversary of Joseph Fourier’s birth, in the framework of *Commémorations Nationales* for the year 2018. In particular, Frédéric Bimbot has been invited to give a talk at the JEP 2018 on Fourier’s heritage in Speech Processing, and the *Journée Science et Musique 2018* (see above) has included a conference where Fourier’s Transform was introduced and called for to explain concepts relating to music perception.

10.3.3. *Articles and contents*

Rémi Gribonval wrote an article published online on Interstices [47]

SEMAGRAMME Project-Team

8.3. Popularization

8.3.1. Internal or External Inria Responsibilities

- Maxime Amblard is the vice head of editorial board of [Interstices.info](#)

8.3.2. Articles and Contents

- Karèn Fort and Bruno Guillaume have published an article in Interstices [27] about ZombiLingo. The paper explain to non-specialists how crowdsourcing may be used to build resources that are needed for Natural Language Processing applications. They explain the aim of the project.
- Maxime Amblard has written articles for [Interstices.info](#) as *Idée reçue : Les algorithmes prennent-ils des décisions ?*

8.3.3. Education

- Maxime Amblard participates in the event *S'orienter et se réorienter dans les sciences numériques* under the patronage of FAFIEC, ONISEP Grand Est and Académie de Nancy-Metz, November 14th, 2018

8.3.4. Interventions

- Maria Boritchev participated in *Samedi des curieux*, March 2018, Paris France: [Comment confondre de faux témoignages ?](#)
- Maxime Amblard participates in the Ada Lovelace day in Nancy Grand-Est
- Maxime Amblard gave a talk about ethics in Artificial Intelligence at the *Café des Sciences* of the Cognitive science student association
- Maxime Amblard was organizer of the *forum des sciences cognitives 2018* in Nancy
- Maxime Amblard has organized and supervised two panel discussions (new trend in IT recruitment and New Challenge for Neural Networks in Artificial Intelligence and NLP) for the *forum des sciences cognitives 2018*

8.3.5. Creation of Media or Tools for Science Outreach

- Maxime Amblard was the leader of the project Happy Family card Games, where a group of 10 researchers develop such a game for promoting computer science as a scientific field and give epistemological perspectives. More than 10 000 copies are printed and the promotion of the project will be in 2019.

AUCTUS Team

10.3. Popularization

10.3.1. Articles and contents

- Jean-Marc Salotti published an article entitled “La robotique humanoïde”, published in Questions Internationales [8]. It briefly describes the main issues and trends in humanoid robotics. Questions Internationales is a journal from La Documentation Française, which is a brand of the “Direction de l’Information Légale et Administrative”, under the direction of the Central Administration of the French Prime Minister.
- David Daney was interviewed regarding the collaboration of Auctus with AIO on the Numii project [10], [11].

10.3.2. Education

- Collaboration with IUT Angoulême. A delegation of professors from IUT Angoulême, GEII Department, came to visit us on December 4, in order to benefit from our expertise on the use of UR3 (Universal Robots) for teaching activities.

10.3.3. Interventions

- Unithé ou café, Inria Bordeaux, February 26: Anna Pugach gave a presentation: “Le textile intelligent”
- Journée portes ouvertes, 10 ans Inria Bordeaux, September 27: Vincent Padois gave demonstrations on collaborative robotics with the Panda robot
- Village des Sciences, Cap Sciences, Bordeaux, October 13: Jean-Marc Salotti animated a movie/debate: “Un robot peut-il partager vos émotions?”
- Village des Sciences, Cap Sciences, Bordeaux, October 14: Vincent Padois and David Daney gave demonstrations on collaborative robotics with the Panda robot
- ENSC inauguration, November 30: Nassim Benhabib gave demonstrations on collaborative robotics with the Panda robot

Chroma Project-Team

10.3. Popularization

10.3.1. Articles and contents

- O. Simonin participated to the writing of "Livre blanc sur les Véhicules Autonomes et Connectés"⁰
- O. Simonin given several interviews in order to popularize AI & Robotics, and Autonomous Vehicles: JDN (Journal du Net), INSA letter, etc.
- C. Laugier, J. Lussereau and J.A. David have been interviewed in October 2018 by Radio France in order to popularize Autonomous Vehicles. The interview has been broadcasted by France Bleu Isere on October 11th 2018 at respectively 6:40 a.m and 8:15 a.m.

10.3.2. Education

- J. Dibangoye created a MOOC on deep reinforcement learning for drones, which will be launched in 2019 on OpenClassRooms.

10.3.3. Interventions

- C. Wolf gave a talk for developers at the journée ARAMIS on May 24th.
- C. Wolf gave a talk for developers at the conference #MixIT, Lyon on April 20th.

10.3.4. Internal action

- Demo "Crazyflie micro-drones" at the Journées Recherche Inria & Industrie (O. Simonin and S. d'Alu), Paris, November 20th. Lien video : <https://youtu.be/TgwrB4xpJOA>

⁰<https://www.inria.fr/actualite/actualites-inria/livre-blanc-vehicules-autonomes-et-connectes>

DEFROST Project-Team

10.3. Popularization

- Damien Marchal, Olivier Goury and Christian Duriez participated in “Fête de la science: Opération Chercheurs itinérants”, which involves giving scientific lectures in middle and high schools.
- Olivier Goury presneted a tutorial for the “Journée de l’Enseignement de l’Informatique et de l’Algorithmique (Journée JEIA)”, which is an event for high school teachers willing to learn more about computer science.
- Olivier Goury et Thomas Morzadec took part in the “Journée RIC (Recherche - Innovation - Créativité)”, happening at IMT Lille Douai. A demonstration was made for students of engineering schools and the university of Lille.

10.3.1. Interventions

- National events: Fête de la Science: participations à l’opération “chercheur itinérant”.

10.3.2. Creation of media or tools for science outreach

Développement du site hands-soft-robotics. <http://handsonsoftrobotics.lille.inria.fr/>

FLOWERS Project-Team

10.3. Popularization

10.3.1. Teaching and Education

10.3.1.1. Inirobot

IniRobot (a project done in collaboration with EPFL/Mobsya) aims to create, evaluate and disseminate a pedagogical kit which uses Thymio robot, an open-source and low cost robot, for teaching computer science and robotics.

IniRobot Project aims to produce and diffuse a pedagogical kit for teachers and animators, to help them and to train them directly or by the way of external structures. The aim of the kit is to initiate children to computer science and robotics. The kit provides a micro-world for learning, and takes an inquiry-based educational approach, where kids are led to construct their understanding through practicing an active investigation methodology within teams. See <https://dm1r.inria.fr/> or <http://www.inirobot.fr>.

Deployment: After 4 years of activity, IniRobot is used by more than 3000 adults, 30 000 children in France. Inirobot is also used in higher education, for example in Master 2 "Neurosciences, human and animal cognition" at the Paul Sabatier University in Toulouse. Inirobot is additionally used to train the management and elected officials of the Bordeaux metropolitan area (20 people). The digital mediators of the 8 Inria centers are trained to Inirobot and use it in their activities.

The project continues to be carried out in main collaboration with the LSRO Laboratory from EPFL (Lausanne) and others collaborations such as the French National Education/Rectorat d'Aquitaine, the Canopé Educational Network, the ESPE (teacher's school) Aquitaine, the ESPE Martinique, the ESPE Poitiers and the National Directorate of Digital Education.

Created pedagogical documents and resources:

- The inirobot pedagogical kit [83]: This pedagogical booklet provides activities scenarized as missions to do. An updated version of the Inirobot pedagogical kit is available at: <https://dm1r.inria.fr/uploads/default/original/1X/70037bdd5c290e48c7ec4cb4f26f0e426a4b4cf6.pdf>. Another pedagogical booklet has been also created by three pedagogical advisers for primary school, with pedagogical instructions and aims, under our supervision. The new pedagogical kit, "Inirobot Scolaire, Langages et robotique", which extends Inirobot to a full primary school approach is available at <http://tice33.ac-bordeaux.fr/Ecolien/ASTEP/tabid/5953/language/fr-FR/Default.aspx>
- Inirobot website and forum: <https://dm1r.inria.fr/> or <http://www.inirobot.fr> On this website, teachers, animators and general public can download documents, exchange about their use of inirobot's kit.

Inirobot activities are used by several projects: Dossier 123 codez from Main à la Pâte Foundation, Classcode project, ...

10.3.1.2. MOOC Thymio

Didier Roy played a central role in the design and making of The MOOC Thymio, released in october 2018, in collaboration with Inria Learning Lab and EPFL (Lausanne, Switzerland), on FUN platform and edX EPFL Platform), use Inirobot activities to teach how to use Thymio robot in education. Web: <https://www.fun-mooc.fr/courses/course-v1:inria+41017+session01/about>

10.3.1.3. Poppy Education

As part of the Poppy Education project, thanks the robotic platform Poppy we created pedagogical kits open-source and low cost for teaching computer science and robotics. It is designed to help young people to take ownership with concepts and technologies of the digital world.

The Pedagogical kits includes robots and pedagogical resources. They have been co-created directly with users (mainly high schools teachers) and evaluated in real life by experiments in classrooms [120].

The activities were designed with the visual programming language Snap! (Scratch like) and Python, but some are in Java / Processing (thanks the robot API you can use the language of your choice).

Most activities are using the robot Poppy Ergo Jr, but some use Poppy Torso (mostly in higher school because of its cost) and Poppy Humanoid (in kinder-garden for dance projects) :

- The Poppy Ergo Jr robot is a small and low cost 6-degree-of-freedom robot arm. It consists of simple shapes which can be easily 3D printed. It has several 3D printed tools extending its capabilities (there are currently the lampshade, the gripper and a pen holder but you can design new ones). They are assembled via rivets which can be removed and added very quickly with the OLLO tool. Each motor has LEDs on (8 different color can be activated). The electronic card (raspberry Pi) is visible next to the robot, that allow to manipulate, and plug extra sensors.
- The Poppy Torso robot is an open-source humanoid robot torso which can be installed easily on tabletops. More affordable than the robot Poppy Humanoid, it is an ideal medium to learn science, technology, engineering and mathematics.

We continued to improve the robots functionalities and you can see below the resources we created :

- A website have been created to present the project and to share all resources and activities.
<https://www.poppy-education.org/>
- To complete the pedagogical booklet [119] that provides guided activities and small challenges to become familiar with Poppy Ergo Jr robot and the Programming language Snap! (<https://drive.google.com/file/d/0B2jV8VX-IQHwTUxXZjF3OGxHVGGM/view>) we provided a list of Education projects. Educational projects have been written for each activity carried out and tested in class. So each projects have its own web page including resources allowing any other teacher to carry out the activity (description, pedagogical sheet, photos / videos, pupil's sheet, teacher's sheet with correction etc.). There is now 32 activities documented available on Poppy Education website.

You can see the activities on this links (in french):

- Introduction to Ergo Jr and Snap! :
<https://www.poppy-education.org/activites/initiation-ergo-jr-et-snap>
- Ergo Jr and Python tutorials :
<https://www.poppy-education.org/activites/tuto-python-robot-ergojr>
- High-school levels :
www.poppy-education.org/activites/activites-lycee
- Middle-school level :
www.poppy-education.org/activites/activites-college
- Primary Schools level :
<https://www.poppy-education.org/activites/activites-primaire/>
- Demonstrations (just videos to show the possibilities) :
<https://www.poppy-education.org/activites/demos/>
- We continued to improve the documentation of the robotic platform Poppy (<https://docs.poppy-project.org/en/>) and the documentation has been translated into French (<https://docs.poppy-project.org/fr/>).
- A FAQ have been written with the most frequents questions to help users: <https://www.poppy-education.org/aide/>
- New activities on Poppy Education website and forum.
- New section : Activities with Python.
- Improvements in the Resources page of the Poppy Education website.

10.3.2. Talks and Hands-on

- Thibault Desprez, December 2018 at Inria Bordeaux, welcomed three students from middle-school during two days to discover the working environment and to introduce them to robotics.
- Thibault Desprez, Inria Bordeaux open day, November 2018, exhibition stand to present Poppy Education and Poppy robots
- Thibault Desprez, National Meeting of Educational Robotics, October 2018 at ifé ENS Lyon, two talk to present Poppy robots kits in school.
- Thibault Desprez, National Meeting of Educational Robotics, October 2018 at ifé ENS Lyon, exhibition stand to present Poppy Station and Poppy robots.
- Thibault Desprez, Théo Segonds, Fête de la science (Inria Bordeaux Sud-Ouest), October 2018, 4 programming workshop in 2 days (with middle school students) using Snap! and the robot Poppy Ergo Jr.
- Thibault Desprez, Meet-up & Educate, October 2018 at INP Bordeaux, exhibition stand to student recruitment for a project on Poppy robots.
- Thibault Desprez, PI space inauguration, July 2018 at ESPE Mérignac, exhibition stand to present Poppy Station and Poppy robots.
- Thibault Desprez, Bordeaux Geek Festival, May 2018, Parc expo, Talk about societal problem on robotics.
- Thiabult Desprez, Usine Végétale inauguration, May 2018 at Le Fieu, exhibition stand to present Poppy Education and Poppy robots in rural zone.
- Thibault Desprez, Connect'houars, April 2018 at Talence, Workshops to initiate in programming.
- Thibault Desprez, Didapro 7, February 2018 at HEP Vaud, Lausanne, talk to present the article : "Poppy Ergo Jr : un kit robotique au coeur du dispositif Poppy Éducation"
- Thibault Desprez, Théo Segonds, Fondation Main à la pate, February 2018 at Paris, Two days to train a group of teachers to robotics and programmation with Poppy Ergo Jr robot.
- Thibault Desprez, e-Fran seminar, January 2018 at Minister of Higher Education, Research and Innovation, poster to present my thesis.
- Théo Segonds. Poppy Ergo Jr Workshop at CERN (Geneve). Construction and programming of the robotic arm Poppy Ergo Jr.
- Théo Segonds. Scientae Robotica, Lausanne. Poppy Ergo Jr Workshop. Construction and programming of the robotic arm Poppy Ergo Jr.
- Benjamin Clement and Alexandra Delmas, EdTech days, may 2018. Presentation of kidlearn and kidbreath projects.
- Theo Segonds, Didier Roy. PLAIRE Festival in Evian with Poppy exhibition during 2 days.
- Alexandra Delmas, Didier Roy. Forum Educavox in Bordeaux. Presentation of kidlearn and kidbreath projects.
- Didier Roy. R2T2 Richter event, remote robotics programming, in caribbean islands, in collaboration with EPFL.
- Didier Roy. Inria Scientific Days, presentation of educational projects in Flowers Team.
- Stephanie Noirpoudre. Poppy Education présent à la journée EIDOS 65 : Le forum des pratiques numériques pour l'éducation. Description and feedback of the 9th edition of the EIDOS 65 day (the digital practice forum for education).
- PY Oudeyer mentored students from College de Cadillac for their robotics project (2 days), march 2018.
- PY Oudeyer gave a talk "Intelligence artificielle: un outil pour nous aider à mieux comprendre l'intelligence naturelle?" at Collège Cadillac, Gironde, may 2018.

- PY Oudeyer gave a talk "Intelligence artificielle: apprentissage automatique et sciences cognitives" at a training event for members of Bordeaux Metropole political and decision staff, Nov. 2018.
- PY Oudeyer gave a talk "Intelligence artificielle: apprentissage automatique et sciences cognitives" at Université de Tous les Savoirs, Arcachon, janv. 2018.

10.3.3. Popularizing inside Inria

- Théo Segonds and Thibault Desprez. Poppy Ergo Jr training for Inria Scientific Mediation members.
- Inria National Scientific Mediation Seminar: Presentation by Stéphanie Noirpoudre and Théo Segonds of Poppy Ergo Jr, and workshop.
- Sébastien Forestier made a presentation on models of curiosity-driven development at Unithé ou Café.

10.3.4. Innovation and transfer

- Since 1 september 2017 until february 2019, PerPoppy and Poppy Station Projects : D. Roy, P.-Y. Oudeyer. These projects aim to perpetuate the Poppy robot ecosystem by creating an external structure from outside Inria, with various partners. After the Poppy Robot Project, the Poppy Education Project has ended and Poppy Station structure is born. Many exchanges have already taken place with potential partners such as the EPFL, the ENSAM network, the «Ligue de l'Enseignement», Génération Robots, the French Institute of Education, several academies, the direction of digital education of the Ministry of Education, ... PerPoppy is the project which is building the new structure, and Poppy Station is the name of the new structure. Poppy Station, which includes Poppy robot ecosystem (hardware, software, community) from the beginning, is a place of excellence to build future educational robots and to design pedagogical activities to teach computer science, robotics and Artificial Intelligence. <https://www.poppystation.org>

10.3.5. Internal or external Inria responsibilities

D. Roy is member of the Class'code team (Inria is member of the consortium of this project) <https://pixees.fr/classcode/accueil/>. Class'code is a blended formation for teachers and animators who aim to initiate young people to computer science and robotics. D. Roy has in charge the robotics module of the project.

D. Roy is adviser of the organization of computer science exhibition in "Palais de la découverte" which has begun on 2018 March. He helps for robotics part.

D. Roy is member of the team "Education en Scène" which organize educational activities with robotics in Bordeaux Digital City.

D. Roy is member of the scientific committee of "Learning Computer Science at School" project in Canton de Vaud (Switzerland).

D. Roy is member of the Robocup Junior French committee, an international robotics challenge <http://rcj.robocup.org/>.

D. Roy is member of the scientific committee of "Ludovia CH" Conference which will be held in Yverdon (Switzerland) on 2019 March.

D. Roy is project co-leader of MOOC Thymio, in collaboration with EPFL and Inria Learning Lab. The aim of this MOOC is to propose to teachers a training on basics of computer science, using the robotic platform Thymio.

D. Roy is associate member of the EPFL "LEARN" center.

PY. Oudeyer continued to be the PI of the Poppy Education project.

PY. Oudeyer was scientific mentor for students of Collège de Cadillac, within the program "Main à la pâte" of Maison des Sciences.

10.3.6. Articles and contents

- Adrien Laversanne-Finot wrote a blog post on "Discovery of independently controllable features through autonomous goal setting", <https://openlab-flowers.inria.fr/t/discovery-of-independently-controllable-features-through-autonomous-goal-setting/494>
- Cédric Colas wrote a blog post on "How Many Random Seeds Should I Use? Statistical Power Analysis in (Deep) Reinforcement Learning Experiments", <https://openlab-flowers.inria.fr/t/how-many-random-seeds-should-i-use-statistical-power-analysis-in-deep-reinforcement-learning-experiments/457>
- Cédric Colas wrote a blog post on "Bootstrapping Deep RL with population-based diversity search"
- PY Oudeyer was interviewed for an article of **The Economist** on curiosity-driven learning, <http://www.pyoudeyer.com/TheEconomist2018.pdf>
- PY Oudeyer was interviewed for an article of **Scientific American** on curiosity-driven learning, <http://www.pyoudeyer.com/IntelligentMachinesThatLearnLikeChildren-Scientific%20American2018.pdf>
- PY Oudeyer was interviewed for an article of **MIT Technology Review** on curiosity-driven learning, <http://www.pyoudeyer.com/may17MITTechnology%20Review.pdf>

HEPHAISTOS Project-Team

10.3. Popularization

10.3.1. Articles and contents

- J-P. Merlet has given two interviews at Nice-Matin and is a member of the scientific committee for the preparation of a permanent robotics exhibition at Cité des Sciences et de l'Industrie, Paris

10.3.2. Education

- Y.Papegay is actively participating to the Math.en.Jeans initiative for Mathematics teaching for undergraduate students. He is developing several pedagogical resources based on small robotics devices at high-school level. He has organized and animated summer schools in experimental mathematics and computer sciences. Several one week sessions have been held in Oxford in June, July, August and November gathering more than 70 high-school students - most of them were awardees in Mathematics Olympiads.
- O. Pourtallier is corresponding researcher for two MATH.en.JEANS workshops, an initiative for Mathematics teaching for undergraduate students.

10.3.3. Interventions

- J-P. Merlet and Y. Papegay have meet several schoolchildren (3ème)
- J-P. Merlet has given a talk during the Art'DI (a meeting between handicapped people and artists) day at Cannes
- J-P. Merlet and E. Wajnberg have given two talks in the framework of "Science pour tous"

10.3.4. Internal action

- J-P. Merlet has given a talk at Café Techno and at Café ADSTIC (for local PhD students), has invited Nathalie Rochet, a member of south-east CPP to give a talk at a Café-In

10.3.5. Creation of media or tools for science outreach

- the Hephaistos team proposes simple cable-driven parallel robots that are used to illustrate scientific concepts such as showing what is a sinus, instantiating the geometrical definition of an ellipse

LARSEN Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

- Amine Boumaza is a member of the editorial board of “Interstice”.

10.3.2. Articles and contents

- Jean-Baptiste Mouret gave interviews for France Culture (radio), France 3 Lorraine (TV), and Socialter (printed magazine)
- François Charpillet gave an interview which gave an article on Re.Med. La revue de la Recherche Médicale du CHRU de Nancy.

10.3.3. Education

- Vincent Thomas was member of the organization comitee of the “24h des DUT informatique” event (Nancy, 2018) and organized the Artificial Intelligence competition during the event (218 students from 25 DUT of computer science).
- Serena Ivaldi is in the scientific committee for the robotics exhibition at the “Cité des sciences et de l’industrie” in Paris (starting in April 2019).
- Serena Ivaldi presented our activities in robotics at the Lycée Henri Loritz in Nancy

10.3.4. Interventions

- Public workshop on robot programming with Thymio for the Ada Lovelace Day [Alexis Scheuer]
- Public workshop on robot programming with Thymio at “Fête de la Science” [Alexis Scheuer, Olivier Rochel, Francis Colas]
- The team showed demonstrations for the Ada Lovelace Day (around 20 female students)
- Participated to a panel at the “Forum des Sciences Cognitives” (Nancy, France) [Jean-Baptiste Mouret]
- Tutorials on “physics simulation” and “path planning” for teachers during “journées ISN-EPI” (Nancy, France) [Vincent Thomas]

10.3.5. Internal action

- Jean-Baptiste Mouret gave a talk for the Colloquium organied by LORIA

PERVASIVE Project-Team (section vide)

RAINBOW 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>).
- In October Firas Abi Farraj, Marco Aggravi, Claudio Pacchierotti and Fabien Spindler attended to the “Maker Fair” even in Rome (<https://2018.makerfairerome.eu/it/>) presenting various vision-based and shared control robotic demonstrations with Viper and Franka arms and haptic devices.
- Eric Marchand is an editor for Interstices)i(

10.3.1. Interventions

- Marie Babel participated to the Science Festival in October 2018 and animated an interactive animation session for general public organized in Acigné, France
- Solenne Fortun participated to the Tech’in Vitré forum with an interview in March 2018.
- Marie Babel animated an interactive session organized in INSA Rennes about "Women in Sciences" on December 19th, 2018 for female students.

RITS Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

Fawzi Nashashibi was the coordinator of the Inria Livre Blanc "Véhicules autonomes et connectés, les défis actuels et les voies de recherche" ⁰.

10.3.2. Articles and contents

A few press interviews and popular science was done in 2018.

- In books/journals/radios for the general public:
 - Raoul de Charette was interviewed by A. Devillard for:
 - *Pour la voiture autonome, l'algorithme d'apprentissage qui ne s'entraîne pas*⁰, Science et Avenir, 2018-03-18;
 - *Les failles de la voiture autonome*⁰, Sciences et Avenir, 2018-04-26;
 - Raoul de Charette and Fawzi Nashashibi were interviewed by M. Moragues for *[Infographie] L'intelligence artificielle n'est pas un as du volant*⁰, L'Usine Nouvelle, 2018-09-23;
 - Raoul de Charette was interviewed for Sciences et Avenir, *La voiture autonome en quête de la "vision" parfaite*, 2018-09-27;
 - Raoul de Charette and Fawzi Nashashibi were interviewed for Challenges, *L'intelligence artificielle bute sur la sécurité routière*, 2018-10-04;
 - Raoul de Charette was interviewed for Radio France Internationale, 2018-03-30;
 - Fawzi Nashashibi was interviewed for La Tribune, *Ce que l'IA change dans l'auto : l'ère de la voiture autonome*⁰, 2018-05-02;
 - Fawzi Nashashibi was interviewed by Dominique Filippone for *Voitures autonomes : Pas avant 2040 en France selon l'Inria*⁰, Le Monde Informatique, 2018-05-15;
 - Fawzi Nashashibi was interviewed by Loup Besmond de Senneville for *Les recommandations des chercheurs pour l'éthique des voitures autonomes*⁰, La Croix, 2018-05-18;
 - Fawzi Nashashibi was interviewed by Frank Niedercorn for *Fawzi Nashashibi : "Il y a encore bien des obstacles pour le véhicule autonome"*⁰, Les Echos, 2018-06-29;
 - Fawzi Nashashibi was interviewed for L'Usine Nouvelle, no 3577, *Automobile le graal de l'autonomie*, 2018-09-20;
 - Fawzi Nashashibi was interviewed by Laurène Le Fournier for Radio Village Innovation, July 2018.
 - Fawzi Nashashibi was interviewed for France Info, 2018-09-07.
- For online publications: (Interstices, Images des Maths, Binaire, Wikipedia), and more widely blog articles:

⁰<https://www.inria.fr/institut/strategie/vehicules-autonomes-et-connectes>

⁰https://www.sciencesetavenir.fr/high-tech/pour-la-voiture-autonome-un-algorithme-d-apprentissage-qui-ne-s-entraîne-pas_122033

⁰https://www.sciencesetavenir.fr/high-tech/transports/les-failles-de-la-voiture-autonome_123502

⁰<https://www.usinenouvelle.com/editorial/infographie-l-intelligence-artificielle-n-est-pas-un-as-du-volant.N742309>

⁰<https://www.latribune.fr/entreprises-finance/industrie/automobile/ce-que-l-ia-change-dans-l-auto-l-ere-de-la-voiture-autonome-776767.html>

⁰<https://www.lemondeinformatique.fr/actualites/lire-voitures-autonomes-pas-avant-2040-en-france-selon-l-inria-71733.html>

⁰<https://www.la-croix.com/Sciences-et-ethique/Ethique/recommandations-chercheurs-lethique-voitures-autonomes-2018-05-18-1200940092>

1200940092

⁰https://www.lesechos.fr/29/06/2018/LesEchos/22727-506-ECH_fawzi-nashashibi—il-y-a-encore-bien-des-obstacles-pour-le-vehicule-autonome-.htm

Raoul de Charette was interviewed by K. Haske for MyScienceWork *Where are they now ? Raoul de Charette*⁰, 2018-09-04, and by J. Jongwane for Interstices *Les algorithmes de vision pour les véhicules autonomes*⁰ [36];

Fawzi Nashashibi was interviewed by Mrs. Barbara Vignaux to prepare an exhibition on the autonomous car for the *Science Actualités* area of the City of Science and Industry (*Cité des Sciences et des Industries*), Paris. It was followed by the development of an article entitled "*Voiture autonome: révolution en route ?*" (Autonomous Car: revolution on the way?);

In January 2018, Gérard Le Lann has been invited to contribute to Blog Binaire Le Monde on: *Sécurité routière et cybersécurité*⁰;

In May 18th, an on-line article titled *Inria dévoile son Livre blanc sur les Véhicules Autonomes et Connectés* and relaying the contents of Inria white paper on connected autonomous vehicles was published at <http://www.auto-innovations.com/communique/1374.html>.

10.3.3. Interventions

- Raoul de Charette and Renaud Poncelet made a demonstration at Inria RII meeting ("Mobilité & environnements", 2018-11-20, Station F, Paris);
- RITS was involved in welcoming schoolchildren in Paris center on December 21st.

⁰<https://www.mysciencework.com/omniscience/now-raoul-charette>

⁰<https://interstices.info/les-algorithmes-de-vision-pour-les-vehicules-autonomes/>

⁰<http://binaire.blog.lemonde.fr/2018/01/19/securete-routiere-et-cybersecurite/>

LINKMEDIA Project-Team

9.3. Popularization

9.3.1. Articles and contents

- Interviews in order to popularize: Guillaume Gravier was interviewed on AI technology for Sciences Ouest
- Vincent Claveau gave interviews about Fake News detection in the following journals: *Stratégies* 06/06/2018 and 12/10/2018, *LCI.fr* 8/06/2018, *Le Monde.fr* 24/05/2018, *Sciences Ouest* n363, *Sciences et Avenir* 30/05/2018 and xx/12/2018, *01net* n894
- Ewa Kijak was interviewed by *LeTemps.ch*

9.3.2. Interventions

- Public exhibitions: Vincent Claveau and Guillaume Gravier presented at *Futur.e.s*
- Vincent Claveau participated in a press conference organized by the CNRS in May 2018
- Vincent Claveau gave an invited talk about NLP and fake news at the Forum des sciences cognitives in Nancy
- Vincent Claveau was heard at the French National Assembly by the parliamentary group *Économie numérique de la donnée, de la connaissance et de l'intelligence artificielle*
- Miaojing Shi was invited for a panel discussion about *China is AI: perspective on the booming Chinese AI ecosystem* at *FranceIsAI*, Oct 2018, Paris.
- Miaojing Shi was invited to the 2nd Edition of the Purple Night organized by the France China Committee in order to value the Franco-Chinese cooperation.

9.3.3. Internal action

- Regional events: Guillaume Gravier was invited conferencer on AI for *Café des Sciences* (general public audience, ~100 pers.)

9.3.4. Creation of media or tools for science outreach

- Cédric Maigrot and Vincent Claveau participated to the educational video from *Cité des Sciences* about Fake News detection <https://bit.ly/2Rz7MAp>

MAGRIT Project-Team

9.3. Popularization

Members of the team participate on a regular basis, to scientific awareness and mediation actions.

9.3.1. Internal or external Inria responsibilities

Erwan Kerrien is Chargé de Mission for scientific mediation at Inria Nancy-Grand Est, and thereby is part of the Inria scientific mediation network. As such, he is a member of the steering committee of "la Maison pour la Science de Lorraine"⁰, and member of the IREM⁰ steering council. He also serves as the academic referent of an IREM working group aiming at introducing computer science in lower and upper secondary school curricula.

9.3.2. Articles and contents

Erwan Kerrien was interviewed for a special edition of the journal of Nancy University Hospital about AI in medicine.

9.3.3. Education

- Gilles Simon participated to the "Fête de la science 2018" at the Faculté des Sciences et Technologies of the Université de Lorraine. He presented unplugged activities of computer science.
- Pierre-Frédéric Villard participated to open days and science festival in the IUT of Saint-Dié des Vosges. He presented augmented and virtual reality demos and their link to the high school mathematics program.
- Erwan Kerrien participated in the creation of a MOOC for teachers of the new ICN option (Informatique et Création Numérique - *Computer Science and Digital Creation*) at the beginning of high school curriculum (see <https://www.fun-mooc.fr/courses/inria/41014/session01/info>). This MOOC is part of the Class'Code project (<https://pixees.fr/classcode-v2>). During the year, he took his part in the animation and participated in the evolution of this MOOC to adapt to the new SNT class (Sciences du Numérique et Technologie - *Digital Science and Technology*) that generalizes ICN, and is included in the 1st year core curriculum in upper secondary education. He also participated in the creation and teaching, of a 5-day training course for scientific animators (in a broad sense, from science club animators to science teachers). This course was funded by Région Lorraine (see <https://fan.loria.fr>).

He gave a 2-day course about the use of unplugged computer science to introduce computer science in science class, along with another researcher and 2 secondary school maths teachers. This course has been organized with Maison pour la Science since 2015, and is proposed to around 20 maths and science secondary school teachers each year.

9.3.4. Interventions

- Gilles Simon was invited to participate in a round table on geomatics as part of the Saint-Dié-des-Vosges Geography Festival.
- Erwan Kerrien was an associate researcher to a MATH.en.JEANS workshop within Loritz high school in Nancy. He was also part of the organizing committee of the MATH.en.JEANS conference that took place in Nancy, and gathered around 500 pupils and teachers from North-East France, Belgium and Romania. He also proposed computer science unplugged activities to secondary school pupils, especially when around 100 girls were welcome in the Inria Nancy-Grand Est center to celebrate the Ada Lovelace Day.

⁰"Houses for Science" project, see <http://maisons-pour-la-science.org/en>

⁰Institut de Recherche sur l'Enseignement des Mathématiques - *Research Institute for Teaching Mathematics*

MORPHEO Project-Team (section vide)

PERCEPTION Project-Team (section vide)

SIROCCO Project-Team

10.3. Popularization

- C. Guillemot and A. Roumy participated in the editorial board of a series of articles, towards a general audience, on Fourier, in the context of his 250th birth anniversary (2018)

STARS Project-Team (section vide)

THOTH Project-Team

10.3. Popularization

- P. Luc: Interviews with “Computer Vision News” and “Les Echos Start”.
- J. Mairal: intervention grand public sur l’IA lors d’un événement organisé par PWN (Professional Woman Network) à Lyon en octobre 2018.
- J. Mairal: conférence grand public sur l’IA avec Cédric Villani en juin 2018, mairie de Lyon.
- J. Mairal: participation à un débat public sur l’IA organisé par Mme la députée Cendra Motin en avril 2018, Montalieu-Vercieu.

10.3.1. Internal or external Inria responsibilities

- C. Schmid: Member, “Comité scientifique”, Inria Grenoble, since 2015.
- J. Verbeek: Scientific correspondent, national project calls, Inria Grenoble, since 2017.
- J. Verbeek: Member, Inria Grenoble working group on HPC - Big Data - Machine learning, since 2018.

WILLOW Project-Team

10.3. Popularization

10.3.1. Articles and contents

- J. Ponce was the subject of an article in the photography magazine Polka. He was also interviewed by France Culture, Le Monde, Paris-Match, Québec Science, and Science et Vie.
- J. Ponce was interviewed by the Académie des Sciences working group on Artificial Intelligence on Oct. 2, 2018.

10.3.2. Interventions

- J. Ponce participated in round tables about AI at the France Culture Forum in Paris, March 1, 2018, at the BNP Parisbas summer school Aug. 23, 2018, at the French embassy in Berlin on Nov. 6, 2018, at the Erasme-Descartes conference in Paris on Nov. 15, 2018, and at the AI summit in New York City on Dec. 6, 2018.
- J. Ponce gave general audience lectures at the X-IA meeting in Palaiseau, Oct. 8, 2018 and at the Institut français de Croatie in Zagreb, Croatia, Nov. 9, 2018.

10.3.3. Creation of media or tools for science outreach

- I. Laptev, Y. Hasson, S. Allayen, T. Eboli, I. Kalyevath, Y. Labbe, R. Strudel, G. Varol, D. Zhukov, Presentation of computer vision for high-school students, Inria, December 2018.