



RESEARCH CENTER
Grenoble - Rhône-Alpes

FIELD

Activity Report 2018

Section Popularization

Edition: 2019-03-07

ALGORITHMICS, PROGRAMMING, SOFTWARE AND ARCHITECTURE	
1. ARIC Project-Team	5
2. CASH Team	6
3. CONVECS Project-Team (section vide)	7
4. CORSE Project-Team	8
5. DATASPHERE Team	9
6. PRIVATICS Project-Team	10
7. SPADES Project-Team	12
APPLIED MATHEMATICS, COMPUTATION AND SIMULATION	
8. ELAN Team	13
9. MISTIS Project-Team	14
10. NANO-D Project-Team	15
11. NECS Project-Team	16
12. TRIPOP Team (section vide)	17
DIGITAL HEALTH, BIOLOGY AND EARTH	
13. AIRSEA Project-Team	18
14. BEAGLE Project-Team	20
15. DRACULA Project-Team	21
16. ERABLE Project-Team	22
17. IBIS Project-Team	23
18. MOSAIC Team	24
19. NUMED Project-Team (section vide)	25
20. STEEP Project-Team	26
NETWORKS, SYSTEMS AND SERVICES, DISTRIBUTED COMPUTING	
21. AGORA Project-Team (section vide)	28
22. AVALON Project-Team	29
23. CTRL-A Project-Team	30
24. DANTE Project-Team	31
25. DATAMOVE Project-Team	32
26. POLARIS Project-Team	33
27. ROMA Project-Team	34
28. SOCRATE Project-Team (section vide)	35
PERCEPTION, COGNITION AND INTERACTION	
29. Chroma Project-Team	36
30. IMAGINE Project-Team	37
31. MAVERICK Project-Team	38
32. MOEX Project-Team	39
33. MORPHEO Project-Team (section vide)	40
34. PERCEPTION Project-Team (section vide)	41
35. PERVASIVE Project-Team (section vide)	42
36. THOTH Project-Team	43

37. TYREX Project-Team 44

ARIC Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

- Nathalie Revol is a member of the editorial board of *interstices*; she belongs to the steering committee of MMI (Maison des Mathématiques et de l'Informatique, Lyon)
- Bruno Salvy is "référent chercheur" for the Inria Grenoble Center.

10.3.2. Articles and contents

Nathalie Revol belonged to the working group that elaborated the "7 families of computer science" playcards

10.3.3. Education

Nathalie Revol taught "Dissemination of Scientific Knowledge", 10h, to the 4th year students (between Master and PhD) of ENS de Lyon, France. She has been invited to a panel about "Flashmob" type activities, at ESOF 2018 (EuroScience Open Forum), July 9–14, 2018, Toulouse, France.

Nathalie Revol works with DANE (Délégation Académique au Numérique dans l'Éducation) of Rectorat de Lyon towards educating primary school teachers, by educating educators. She has been invited to present her past activities, using educational robots, at 3es Rencontres Nationales de la Robotique Éducative, October 2–3, Lyon, France.

10.3.4. Interventions

Laurent Grémy and Fabrice Mouhartem gave talks at *Fête de la Science* for a general audience. Nathalie Revol gave talks at *Fête de la Science* for 3 classes (9 years old, 11 years old and 13 years old).

As an incentive for high-school pupils, and especially girls, to choose scientific careers, Nathalie Revol gave talks at Lycée Ella Fitzgerald (Saint-Romain-en-Gal) and Mondial des Métiers (in February 2018). With Jérôme Germoni and Natacha Portier, she organized a day *Filles & Info* in March 2018, gathering about 100 high-school girls of 1e S. She was part of the panel discussing with the audience after the movie "Les figures de l'ombre - Hidden figures" at Comoedia cinema in Lyon in March 2018.

Damien Stehlé received at ENS de Lyon several winning teams of the Alkindi highschool competition. Alice Pellet–Mary and Fabrice Mouhartem gave talks at this event.

CASH Team

9.3. Popularization

9.3.1. Education

- Laure Gonnord is part of the local organisation of the Computer Science preparation for the Agregation examination for future maths teachers (MEEF).

9.3.2. Interventions

- Talk at “Campus du libre” by Matthieu Moy, Doua Lyon, “Pourquoi et comment se lancer dans le libre quand on est étudiant (ou pas) ?”, November 2018.

9.3.3. Internal action

- Café développeur by Matthieu Moy, “Utilisation avancée de Git” at LIRIS (2 sessions), October 2018.

9.3.4. Creation of media or tools for science outreach

- Video “Mon équipe en 180 secondes” by Matthieu Moy for the CASH team.

CONVECS Project-Team (section vide)

CORSE Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

- Yliès Falcone: Elected member of the Research Council of Univ. Grenoble Alpes.
- Yliès Falcone: Elected member of the Academic Council of Univ. Grenoble Alpes.
- Yliès Falcone: Elected member of the Laboratory Council of the Laboratoire d'Informatique de Grenoble
- Yliès Falcone: Mission Valorisation for the Laboratoire d'Informatique de Grenoble.

DATASPHERE Team

10.3. Popularization

Various publications have appeared in journals accessible to a larger audience [3], [2].

PRIVATICS Project-Team

8.3. Popularization

8.3.1. Hearings

- Claude Castelluccia: *Understanding Algorithmic Decision-Making Systems*, European Parliament, 10/2018, Strasbourg, France.
- Daniel Le Metayer: *Understanding Algorithmic Decision-Making Systems*, European Parliament, 10/2018, Strasbourg, France.
- Daniel Le Metayer: *Transparence et explicabilité des algorithmes d'aide à la décision*, CCNE, 02/2018, Paris, France.

8.3.2. Internal or external Inria responsibilities

- Claude Castelluccia is co-leader of the Worpackage 5 (data governance and privacy) of the Grenoble Data Institute.
- Claude Castelluccia is co-leader of Grenoble CyberAlps (cybersecurity institute of Grenoble).
- Daniel Le Metayer chairs the CNIL-Inria privacy award.
- Vincent Roca is co-editor of the white book *Cybersecurity: current challenges and Inria's research directions*.

8.3.3. Articles and contents

- Claude Castelluccia: *Manipulation informationnelle et psychologique*, Le blog binaire du Monde, 05/2018.
- Claude Castelluccia: *Data surveillance and manipulation*, Interview for Magazine Capital, 12/2018.
- Mathieu Cunche: *Cybersécurité et menace informatique*, Sommet des start-up sciencesetavenir.fr, 11/2018, Lyon, France.
- Mathieu Cunche: *Attaque par déni de service dans le Wi-Fi*, GNU/Linux Magazine HS 99, 11/2018.
- Mathieu Cunche: *Comprendre les attaques Krack*, GNU/Linux Magazine HS 99, 11/2018.
- Daniel Le Metayer: *Weighting the impact of the GDPR*, Communications of the ACM, 11/2018.
- Daniel Le Metayer: *Qui gouverne les algorithmes ?*, Revue THIRRD, 11/2018.
- Vincent Roca: Inria White Paper in Cyber-Security.

8.3.4. Education

- Cédric Lauradoux: *Action nombres et cryptographie*, Maison pour la science, Inria, 06/02/2018, Grenoble, France.
- Cédric Lauradoux: *Action nombres et cryptographie*, Maison pour la science, 18/12/2018, Annecy, France.
- Cédric Lauradoux: *Animation du forum du MOOC Protection de la vie privée dans le monde numérique*, 02-03/2018.
- Cédric Lauradoux: : *Animation du forum du MOOC Protection de la vie privée dans le monde numérique*, 11-12/2018.

8.3.5. Interventions

- Cédric Lauradoux: *Atelier cryptographie*, Fête de la Science, 11-12/10/2018, Grenoble, France.
- Cédric Lauradoux: *Cryptologie et Vie privée*, Semaine des mathématiques, Lycée Gabriel-Faure, 15/03/2018, Tournon, France.

- Cédric Lauradoux: *Cryptologie et Vie privée*, Semaine des mathématiques, Lycée Boissy d'Anglas, 16/03/2018, Annonay, France.
- Cédric Lauradoux: *Challenge de cryptologie*, MathC2+ internship, 26/06/18, Grenoble, France.
- Cédric Lauradoux: *Challenge de cryptologie*, Cité scolaire Jean PREVOST, 02/06/2018, Villard de Lans, France.
- Cédric Lauradoux: *Challenge de cryptologie*, Collège Barnave, 18/01/2018, Saint-Égrève, France.

8.3.6. Internal action

- Cédric Lauradoux: *Réglementation sur les données*, Inria, Grenoble, 19/06/2018.
- Cédric Lauradoux: *Réglementation sur les données*, IMAG, Grenoble, 09/07/2018.

SPADES Project-Team

9.3. Popularization

9.3.1. Interventions

Sophie Quinton gave a keynote at the MathC2+ event organized by Inria, entitled “Faire des preuves par ordinateur : Pourquoi et comment ?” (Computer-assisted proofs: Why and how?).

ELAN Team

8.3. Popularization

8.3.1. Articles and contents

- Interview about our past work on hair and cloth for a press article in [Dauphiné Libéré des Enfants](#) in November 2018.
- Press interview about our SIGGRAPH Asia paper on [inverse shell design](#) for an [ACM Press Release](#) in November 2018.

MISTIS Project-Team

10.3. Popularization

Florence Forbes was a speaker at the Paris Biotech Sante Forum on AI in life sciences, in November 2018, [\(Program\)](#).

10.3.1. Articles and contents

S. Girard and C. Albert have given an interview "When statistics help to predict disasters" for Citizen press: <https://www.inria.fr/en/centre/grenoble/news/statistics-and-disasters>

NANO-D Project-Team

8.3. Popularization

8.3.1. *Articles and contents*

Sergei Grudinin and Guillaume Pagès were interviewed by Le Figaro about the progress of deep learning and artificial intelligence in protein structure prediction [88].

NECS Project-Team

9.3. Popularization

9.3.1. Articles and contents

P. Frasca has co-authored a column on the IEEE Control Systems Magazine about the activities of the Technical Committee on Networks and Communications Systems [67].

9.3.2. Education

M. L. Delle Monache gave a talk on "Les mathématiques cachées du trafic routier" to the high school teachers in the framework of the ISN Conference in collaboration with the Académie de Grenoble. The video of the conference is available at https://www.canal-u.tv/video/inria/les_mathematiques_cachees_du_trafic_routier.44275.

9.3.3. Interventions

Vadim Bertrand presented demos of the GTL-Ville:

- at *Club PTV Vision* (https://discover.ptvgroup.com/Club_PTV_Vision_2018), on Oct. 4th, in Paris
- at *Rencontres Inria-industrie* (<https://www.inria.fr/innovation/recherche-partenaire-iale-transfert/rencontres-inria-industrie/presentation>), on Nov. 20th, in Paris

TRIPOP Team (section vide)

AIRSEA Project-Team

9.3. Popularization

9.3.1. Internal or external Inria responsibilities

E.Kazantsev is a member of the Local Commission for Permanent Formation of Inria Grenoble - Rhône-Alpes.

9.3.2. Articles and contents

Blog : E. Blayo, Les big data peuvent-ils faire la pluie et le beau temps ?, October 25, 2018, <http://binaire.blog.lemonde.fr/2018/10/25/les-big-data-peuvent-ils-faire-la-pluie-et-le-beau-temps/> Binaire and <https://theconversation.com/quand-les-big-data-font-la-pluie-et-le-beau-temps-105608> The conversation

Interviews : E. Blayo, Carnets de campagne - France Inter, September 27, 2018

E. Arnaud, "Sans le numérique, pas de prévision météo !" Dossier C'est quoi le numérique. "Le dauphiné des enfants", numéro 14, novembre-décembre 2018, http://www.ledauphinedesenfants.ledauphine.com/numero-archiv/dde2018_14#

In collaboration with teachers, M. Nodet wrote an article about how to set up a "glaciers" for secondary school teachers in Reperes IREM journal [31]

9.3.3. Education

E. Arnaud, animation of a "Laboratoire des mathématiques" in Lycée Pablo Neruda (Saint Martin d'Hères), on the subject of math and critical thinking.

C.Kazantsev is a member of an IREM group for creation of scientific activities for professional development of secondary schools teachers.

C.Kazantsev is the creator and animator of the mathematical club for motivated pupils aged from 8 up to 18 years. 10 meetings for about 20 pupils of 2 hours each have been organized on Sunday morning during the year.

C.Kazantsev participated in the meeting "Espace Mathématique Francophone" EMF2018, Gennevilliers, October, 22-26, 2018. Presentation of animations and participation in the working group "Étude des processus de vulgarisation".

C.Kazantsev participated in the elaboration and planning of the permanent exposition of the "Salle de thé" group at the meeting IHP2020, 30 October, Institut Henri Poincaré, Paris.

9.3.4. Interventions

- National events:
 - E. Arnaud, M. Nodet. (Se) tromper avec les chiffres. Colloque "Sciences et esprit critique, interroger les certitudes", Maison pour la sciences, Académie de Grenoble, 8 nov. 2018, Grenoble - intervention in a training days for teachers from Education Nationale
 - M. Nodet facilitated a yearly math club with three secondary schools around Grenoble, aiming pupils to research open projects ("Math en Jeans" initiative)
 - M. Nodet facilitated a workshop about "Math modelling, example with oceanography" for high school and secondary school teachers
 - M. Nodet welcomed schoolchildren for short-time internship and offered a small workshop about oceanography
 - E. Blayo gave several outreach talks, in particular for middle school and high school students, and for more general audiences.

Ch. Kazantsev and E. Blayo are strongly involved in the creation of "La Grange des maths", a science popularization center that will be located in Varcès (south of Grenoble), which will offer a huge variety of mathematical hands-on exhibits. See <http://www.la-grange-des-maths.fr/>

Ch. Kazantsev participated in the "Fête de la Science", Parvis de Sciences, October, 13.

Ch. Kazantsev participated in the "Fille et Maths" day, Decembre, 5, with the presentation of the "La Grange des Maths" center and its activities.

Ch. Kazantsev presented the exposition "La recherche se prend au jeu" at the "Culture and mathematical games Salon" by invitation of the Henri Poincaré Institute, Place St Sulpice, Paris, 24-27 May.

- Public exhibitions

C.Kazantsev participated in the "Oriol des Maths" and in the "Forum des associations" with the presentation of the "La Grange des Maths" center and its activities. Varcès, March, 11.

C.Kazantsev participated at the "Raout de Domène" with the presentation of mathematical animations. Domene, September, 3.

C.Kazantsev participated at the "Maths en ville" with the presentation of the "La Grange des Maths" center and its activities. Grenoble, November, 28.

- In educational institutions

L. Debreu gave an introductory lecture on the finite element method at the Ecole des Pupilles de l' AIR (superior mathematics)

C.Kazantsev presented mathematical animations to pupils of the Poussous scholl in Varcès for about 80 children during 3 hours. Varcès, March, 15.

9.3.5. Creation of media or tools for science outreach

C.Kazantsev participated in the edition of the Teachers notebooks which explain and advise how to use the "La Grange Suitcases" (sets of mathematical games, problems and animations) destined for primary and secondary schools teachers as well as for the general public.

C.Kazantsev participated in the creation of mathematical activities that can be autonomously used by schoolchildren of primary and secondary schools and by the general public.

E. Arnaud, in charge of the UGA Idex project math@uga : implementation of a collaborative moodle platform <http://math.u-ga.fr> to share pedagogical resources within teachers and towards students.

E. Arnaud, participation to UGA Idex projects Caseine and data@ugat

BEAGLE Project-Team

9.3. Popularization

9.3.1. Interventions

- Eric Tannier gave a series of four lectures at the Université Populaire de Lyon, on "science and democracy".
- Eric Tannier participated to a round table on scientific communication for the BMIC days, november 2018.
- Audrey Denizot has participated in the organization and animation of activities for children about research during the event "Dans la blouse d'un chercheur" in ENS de Lyon. More specifically, she worked on a project aiming at explaining to children what microbes are, where they are and if/when you should worry about them and what is immunodeficiency. She made a small movie about it.
- Audrey Denizot is a member of a public outreach association : DéMesures. She is in charge of collaborations with external entities, including laboratories, museums and artists collectives. Website: <https://demesures.jimdo.com/> Facebook: <https://www.facebook.com/DMesures/> Twitter: <https://twitter.com/DMesures> Radio podcasts: <https://demesures.jimdo.com/radio-1/radio-brume/> Interviews are available on our YouTube channel: <https://www.youtube.com/channel/UCIn3CucWk1mLgbzE0noO2Iw>
- National events: Audrey Denizot organized several events including Fête de la Science 2017 and 2018 and A Nous de Voir 2018, as well as conducted projects such as radio podcasts on science/society topics, interviews of researchers, projects mixing Science and Art.

9.3.2. Creation of media or tools for science outreach

- In collaboration with Sylvain Charlat (LBBE, Lyon), we developed game to present the effect of random mutations on evolution to young children. The "GreenMice" game has been presented to the general public in the "Maison des Mathématiques et de l'Informatique" during the exhibition "Comme par hasard".

DRACULA Project-Team

7.3. Popularization

7.3.1. Articles and contents

- L. Pujo Menjouet : interview dans Causette (hors série Juillet-Août 2018)
- L. Pujo Menjouet : interview dans le magazine Society (fin juillet 2018)

7.3.2. Interventions

- T. Lepoutre: Visite de l'inria pour les stagiaires de 3e de l'ICJ (plusieurs fois dans l'année, une matinée en général).
- T. Lepoutre: présentation de l'antenne et des équipes à deux classes lors du congrès Maths en Jeans (mars 2018)
- T. Lepoutre participation to MathaLyon interventions
- L. Pujo Menjouet : participation à Math en Jeans édition 2018 (collège de la côte Roannaise, Renaison)
- L. Pujo Menjouet : présentation de deux conférences au collège de Saint Bonnet le château le 21 juin 2018

ERABLE Project-Team

9.3. Popularization

9.3.1. Interventions

Blerina Sinaimer and Ricardo Andrade participated to the Inria Fête de la Science in October 2018. Blerina Sinaimer and Mariana G. Ferrarini presented the research topics of the team in an event for welcoming international scientists at the Espace Ulys of the University of Lyon. The presentation was entitled “ERABLE : A bio-info symbiosis” and discussed mainly about the multidisciplinary of the ERABLE Team. Finally, Mariana Galvao Ferrarini participated in the Fête de la Science INRA at the Mediathèque de Bron in October 2018.

Fabrice Vavre participated to the Forum des métiers, Collège Clément Marot, on “La recherche au CNRS”.

IBIS Project-Team

8.3. Popularization

8.3.1. Creation of media or tools for science outreach

Hidde de Jong presented the work of IBIS in the framework of the communication action "Mon équipe en 180 secondes". The video is on-line at the following address: <https://videotheque.inria.fr/videotheque/media/47816;jsessionid=D615F60B85E6C88DEDD129AD56E4431E>

MOSAIC Team

9.3. Popularization

9.3.1. Articles and contents

- Christophe Godin
 - made a presentation at *My team in 180 seconds*, June 2018 (in French).
 - wrote a paper *Pourquoi les Plantes font des maths* co-authored with Fabrice Besnard and Teva Vernoux, that was published in *Pour La Science* (Aug 2018) and in the hors-série issue on *La révolution végétale* (Nov 2018). (Nov 2018)

9.3.2. Interventions

- O. Ali has been an invited speaker for an art/science conference and debate organized by the modern art museum of Lyon, October 2018.
- Romain Azaïs won a special mention in the comics contest *Maths et Polar* organized by the website *Image des Mathématiques* of the CNRS, April 2018.
- Guillaume Cerutti, Christophe Godin and Jonathan Legrand have been involved in Déclics initiatives (presentation and discussion with high school students in order to promote science and research careers), October and December 2018.
- Christophe Godin gave an invited 2 hours seminar to 4 classes of high-school students for the Math week (March) at the Lycée International de Valbonne, France.
- H. Oliveri took part in the Class'Code Initiative, a Mooc produced by Inria and OpenClassRoom providing supports and guidelines for people wanting to teach computer science to young childrens.

NUMED Project-Team (section vide)

STEPP Project-Team

8.3. Popularization

8.3.1. Conferences “Understanding and Acting” :

Saving Civilization is not a spectator sport
Lester Brown

Following a dynamics of exponential growth in a finite world, humanity today faces a number of unprecedented and tightly interlinked challenges. With a growing number of environmental limits being largely and irreversibly exceeded (GHG concentrations in the atmosphere, biodiversity loss, soil erosion, freshwater shortages...), social, economic, geopolitical, humanitarian (etc.) consequences are becoming more urgent than ever to address, while the threat of an uncontrolled global collapse is now more than a prospect. It is urgent to initiate deep, structural, socioeconomic changes on virtually all aspects of our increasingly global societies (economics, industrial and agricultural production, consumption, education, all requiring major new local and global policies).

In view of these facts, the STEEP research team has initiated in 2016 a series of conferences-debates entitled “Understanding & Acting” (“Comprendre et agir”) that examines these issues in order to help researchers and citizens to increase their awareness of the various issues at stake in order to initiate relevant individual and collective actions. From now on, the scientific community at large must realize that its duty also lies in helping citizens to better understand these issues. If the fraction of people in society whose privilege is to be paid to think about society’s problems do not seize this opportunity in the critical times we face, who will? Researchers must become more involved in the search of socioeconomic alternatives and help citizens to implement them. The interactions between researchers and citizens must also to be reinvented.

The presentations of this series of conferences typically last between 30 to 45 minutes; they are followed by a 45 minute public debate with the audience. The presentations are captured on video and then made directly accessible on the YouTube Channel “Comprendre et Agir”. At the end of 2017 the YouTube channel reached almost 45,000 views with a rate of integral viewings remaining at above 25%.

Examples of conferences given in 2016-2017:

- “Why and how to recognize money as a common good?” by Jean-Michel Servet, Graduate institute of international and development studies (IHEID) at Genève.
- “What alternative to the crisis of representation?” by Loic Blondiaux, University of Paris I Panthéon-Sorbonne.
- “Reinventing agriculture and food in the 21st century?” by Gilles Billen, CNRS.
- “Can the commons movement re-activate democracy?” by Christian Laval, University of Paris Ouest Nanterre La Défense.
- “Limiting climate change: Why do we not do it?” by Denis Dupré, University of Grenoble Alpes.
- “Understanding society collapses. What future for ours?” by Emmanuel Prados, Inria.
- “Environment, economy, collapse: squaring the circle?” by Pierre-Yves Longaretti, CNRS.

Link to the web page of the series [program, abstracts, dates, complements etc.]:

<https://team.inria.fr/steep/les-conferences-debats-comprendre-et-agir/>

Link to the YouTube channel :

https://www.youtube.com/channel/UCJbcXCcOA63M8VMysAbmt_A

8.3.2. Other popularization activities :

- Emmanuel Prados was guest speaker at
 - the **public debate "defying disaster"** that held at Grenoble City Hall., Grenoble, France, 13 December 2018. Organizers: City of Grenoble. "Climat, défier la catastrophe : vers un nouvel humanisme"
http://www.grenoble.fr/uploads/Externe/a1/757_069_Conference-Climat-defier-la-catastrophe-vers-un-nouvel-humanisme.pdf
Video of the conference on YouTube : <https://www.youtube.com/watch?v=IfvFHx0kYa0>
 - the **exchange day on travel modelling in Grenoble** "", Grenoble, France, 5 October 2018. Organizers: Agence d'urbanisme de Grenoble.
 - the **Controversation** entitled "Digital technology in the face of environmental impasse: an exit door or a way forward?", Aix en Provence, France, 17th of February 2018. Organizers: association "Tous Chercheurs" in collaboration with the students of the School of Journalism and Communication of Aix-Marseille ; Amina Mokrane.
 - the **Opening Conference at the Alterre Day** «Voyages en transitions » : "De l'urgence de tout changer face à l'effondrement qui vient", Dijon, France, March 21th 2018. Organizers: Alterre Bourgogne-Franche-Comté (Agence régionale pour l'environnement et le développement soutenable) ; Fabienne Lapiche-Jaouen.
<https://www.alterrebourgognefranchecomte.org/c/agenda/10604/journee-alterre-sur-le-theme-des-transitions?>
- Emmanuel Prados participated **Fictionnalisation de controverse** in the research-action project FORCCAST. 22 April, 2018, Paris.
- Emmanuel Prados gave a conference at **STMicroelectronics Grenoble** : "Collapse: understanding and accepting the game over of our modern society", Grenoble, France, March 8 2018. Organizers: Philippe Vincent and Violaine Pasini.

AGORA Project-Team (section vide)

AVALON Project-Team

10.3. Popularization

10.3.1. Articles and contents

Laurent Lefèvre has been interviewed for the articles:

- "Le Groupe Casino remplace ses radiateurs par des data centers", Le Point Journal (December 23, 2018)
- "Comment cliquer sans trop polluer", Laurent Lefèvre, Le Progrès Journal, November 21, 2018
- "Google utilise-t-il réellement 100% d'énergie verte pour alimenter ses services ?", Libération, July 13, 2018
- "J'ai le (dé) clic écolo pour réduire mon empreinte", Journal La Vie, February 15, 2018

He was interviewed and filmed for "Pollution numérique/Digital pollution", Journal 19/20, France3 National Channel, December 9, 2018.

10.3.2. Education

Yves Caniou is responsible of the LPI Certification at Université Claude Bernard Lyon 1. Further discussions are in progress concerning the proposed tools and redaction of courses/questions.

In the contexte of the CHEL[s] (Collège des Hautes Etudes Lyon Science[s]) Eddy Caron is mentor for the MedTech project building the start-up VETARIA.

Jean-Patrick Gelas manage and build several modules of education about blockchain technologies for an erasmus+ european project. The BLISS project (Blockchain skills for ICT professionals), aims to improve the skills and competencies of ICT professionals by developing and making available educational resources and materials to address existing occupational needs and mismatches, resulting from the dynamic penetration of blockchain technology across all sectors of the EU economy (including banking, accounting, auditing and government services).

10.3.3. Interventions

Laurent Lefèvre has given several invited talks for :

- "Green-It and Video Games infrastructures - Jeu vidéo et collapsologie #2 : Meetup - Le dématérialisé, ça sauve les pandas ?", Meet-up Game Impact, Paris, November 29, 2018
- "Vers des Data Centers éco-responsables", Data Center World, Paris, November 28, 2018
- "Agile (d'accord !) mais Green (d'abord !)", Agile Tour 2018, Epitech, Bordeaux, November 2-3, 2018
- "Numérique et Environnement", with Françoise Berthoud, Groupe de travail développement durable, Centre Inria Bordeaux, October 19, 2018
- "CES 2018 : l'humain numérique de demain...", Journée Réseau Aramis, University Lyon2, Lyon, May 24, 2018
- "Le futur peut-il être numérique ?", with Françoise Berthoud and Jonathan Schaeffer, Journée Réseau Aramis, University Lyon2, Lyon, May 24, 2018
- "EE@G5K : the story continues...", Grid5000 Scientific Advisory Board, Sophia Antipolis, April 4, 2018
- "Rendre l'informatique plus verte", Conférence de formation des professeurs du secondaire en science informatique, Inria Montbonnot, March 21, 2018
- "WG5 : Energy efficiency final results", Network for Sustainable Computing (Nesus), COST European Action IC1305, Final Action Meeting, with Ariel Oleksiak, Madrid, Spain, March 15-16, 2018
- "CES 2018 - so little Green", Rencontres Ecoinfo, Lyon, January 30, 2018

CTRL-A Project-Team

9.3. Popularization

9.3.1. Articles and contents

The Ctrl-A team is featured in a special issue on the numeric world in the "*Dauhiné Libéré des enfants*" (nov.-dec. 2018).

9.3.2. Internal action

The Ctrl-A team participated in the event "mon équipe en 180 secondes" at Inria Montbonnot.

DANTE Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

Isabelle Guérin Lassous is the managing director of the Foundation Blaise Pascal. The objectives of the foundation are to promote mathematics and computer science and to attract young people to scientific fields like computer science and mathematics. The actions of the FBP focus on:

- a support to actors that promote mathematics and computer science via allocated funding based on call of proposals;
- a structuring of actors to increase the impacts of their actions, to coordinate the efforts and to share experiences;
- a development of innovative experiences via summer camps and clubs of mathematics and computer science.

10.3.2. Articles and contents

- Éric Guichard wrote an article with Nicolas Schabanel in newspaper *Libération*, September 10, 2018, p. 24: « Copyright numérique: stériliser pour mieux tuer », https://www.liberation.fr/debats/2018/09/09/copyright-numerique-steriliser-pour-mieux-tuer_1677568.
- Éric Guichard gave an interview in newspaper *O Globo* (Brazil), Jan 1st, 2018.

10.3.3. Interventions

Paulo Gonçalves and Eric Guichard animated a citizen meeting on Artificial Intelligence and Social impacts. November 2018. Orliénas. <https://www.vepm.net/2018/10/26/cafe-citoyen-orlienas-9-novembre-2018-lintelligence-artificielle/>

DATAMOVE Project-Team

9.3. Popularization

9.3.1. Interventions

- Talk *Des besoins en calcul de plus en plus performant* for the conference cycle "Accompagnement de l'informatique au lycée en 2018".

POLARIS Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

- Jean-Marc Vincent is responsible for the mediation in the Inria Rhône-Alpes center in relation with the Rectorat de l'Académie de Grenoble (organisation of ISN conferences, Class'Code for digital referents)
- Jean-Marc Vincent coordinates the group "Info sans ordi" (computer science without computer)–in which Florence Perronnin participates

10.3.2. Articles and contents

Jean-Marc Vincent has coordinated and participated to the redaction of the 96 pages special issue of *Tangente* on *Informatique Débranchée*: http://www.infinimath.com/librairie/descriptif_livre.php?type=magazines&theme=7&soustheme=26&ref=2568#article.

10.3.3. Education

- Highschool Professors: Vincent Danjean is responsible of the University Dept. for Highschool Professors Training in Computer Science (in relation with the rectorat).
- Highschool Professors: Jean-Marc Vincent is member of the steering committee for the training of Highschool Professors towards the new option NSI (Numérique et Sciences Informatiques) for Baccalauréat and participated in the creation of a inter-university diploma in CS.
- Arnaud Legrand gave a lecture on "Reproducible Research" at CIRM in May 2018 to the computer science teachers of classes préparatoires.
- Bruno Gaujal: Course on game theory at the 7 laux of ENS Lyon students
- Bruno Gaujal: Course on dynamique optimization for high school teachers.
- Florence Perronnin: creation of an option in Licence on "Sciences Informatiques et Médiation" (CS and mediation)

10.3.4. Interventions

- Arnaud Legrand made a podcast with Interstice on reproducible research <https://interstices.info/la-recherche-reproductible-pour-une-science-transparente/>
- Participation to mediation events of the center (Fête de la science, journées math C2+, journée login)
- Participation to mediation actions Inria/Irem/Maison for Science (Jean-Marc Vincent)

ROMA Project-Team

10.3. Popularization

10.3.1. Interventions

- Frédéric Vivien took part in the committee which listened to the presentations of high-school students in the scope of a “MATH.en.JEANS” action (December 2018).
- Yves Robert gave the honorary speech for the Honoris Causa Diploma of ENS Lyon awarded to Marc Snir on November 9, 2018.

SOCRATE Project-Team (section vide)

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>

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.

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/>) 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>).

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

MORPHEO Project-Team (section vide)

PERCEPTION Project-Team (section vide)

PERVASIVE 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.

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).