



RESEARCH CENTER
Sophia Antipolis - Méditerranée

FIELD

Activity Report 2018

Section Popularization

Edition: 2019-03-07

ALGORITHMICS, PROGRAMMING, SOFTWARE AND ARCHITECTURE

1. AROMATH Project-Team	4
2. DATASHAPE Project-Team	5
3. KAIROS Team (section vide)	6
4. MARELLE Project-Team	7

APPLIED MATHEMATICS, COMPUTATION AND SIMULATION

5. ACUMES Project-Team	8
6. ECUADOR Project-Team (section vide)	9
7. FACTAS Team	10
8. MCTAO Project-Team	11
9. NACHOS Project-Team (section vide)	12
10. TOSCA Project-Team	13

DIGITAL HEALTH, BIOLOGY AND EARTH

11. ABS Project-Team	14
12. ATHENA Project-Team	16
13. BIOCORE Project-Team	17
14. BIOVISION Project-Team	18
15. CAMIN Team	19
16. CASTOR Project-Team (section vide)	20
17. COFFEE Project-Team (section vide)	21
18. EPIONE Project-Team	22
19. LEMON Team	23
20. MATHNEURO Team	24
21. MORPHEME Project-Team	25

NETWORKS, SYSTEMS AND SERVICES, DISTRIBUTED COMPUTING

22. COATI Project-Team	26
23. DIANA Project-Team	27
24. FOCUS Project-Team	28
25. INDES Project-Team	29
26. Neo Project-Team	30

PERCEPTION, COGNITION AND INTERACTION

27. GRAPHDECO Project-Team	31
28. GRAPHIK Project-Team	32
29. HEPHAISTOS Project-Team	33
30. STARS Project-Team (section vide)	34
31. TITANE Project-Team	35
32. WIMMICS Project-Team	36
33. ZENITH Project-Team	37

AROMATH Project-Team

8.3. Popularization

8.3.1. Interventions

- Ioannis Emiris was an invited speaker at “Open Science Days”, Athens, 29 November 2018, and at “Mathematics Education Forum” within the Greek Mathematical Society annual meeting, Athens, December 2018.

DATASHAPE Project-Team

10.3. Popularization

10.3.1. Interventions

- Frédéric Chazal: Fujitsu Forum, “Topological Data Analysis: from academic success to industrial innovation”, Tokyo, Japan, May 2018.
- Frédéric Chazal: “TDA and AI for biomedical applications”, Kaohsiung MEDical Technology Expo, Taiwan, May 2018.

KAIROS Team (section vide)

MARELLE Project-Team

9.3. Popularization

9.3.1. Interventions

Cyril Cohen presented the work of the Marelle team at a presentation for students coming from Mediterranean regions: Meddays.

ACUMES Project-Team

9.3. Popularization

9.3.1. Articles and contents

- Press article: *Dossier. Cette mathématicienne met le trafic en équation pour réduire les embouteillages*, Nice Matin, August 2018 (P. Goatin).
- TV interview for the program “Dimanche en politique”, France 3 Côte d’Azur channel, October 14, 2018 (P. Goatin).

ECUADOR Project-Team (section vide)

FACTAS Team

9.3. Popularization

9.3.1. Internal or external Inria responsibilities

M. Olivi is responsible for Scientific Mediation and president of the Committee MASTIC (Commission d'Animation et de Médiation Scientifique) <https://project.inria.fr/mastic/>. Her main contributions related with this mission were:

- submit applications to get founding for 2019: “cordées de la réussite” (accepted) et “APOCS région”.
- co-organize 10 robotic sessions for 2 classes of middle school students (device “MEDITES” <http://medites.fr>, founded by ANRU, the “Agence Nationale de Rénovation Urbaine”),
- co-organize the “stage MathC2+” <https://project.inria.fr/mastic/mediation/stage-mathc2/>, a four-day internship for 50 high school students (“secondes”, about 16 years old) organized by the Committee MASTIC and its partners (June 19-22),
- co-organize Inria participation to the event “Le Village des Sciences et de l’Innovation” in Antibes (October 20-21, 10000 people), and the event “Mouans-Sartoux fête les sciences du quotidien” <http://univ-cotedazur.fr/events/fetedelascience>.
- co-organize about 10 “cafés scientifiques” (c@fé-in’s and cafés Techno, 30 to 80 participants each) <https://project.inria.fr/mastic/category/cafein/>.

9.3.2. Education

- M. Olivi animated a half-day workshop session “activités débranchées” at “l’ESPE de Nice” for primary school students (April 10).

9.3.3. Interventions

- National events: M. Olivi participated to the event “Le Village des Sciences et de l’Innovation” in Antibes (October 20-21, 8000 people) and to the event “Mouans-Sartoux fête les sciences du quotidien” (October 13, 1000 people).
- In educational institutions: M. Olivi participated to the event “bilan Medium’s” at the “collège Émile Roux, Le Cannet”.
- Welcoming of schoolchildren or the general public in an Inria center: M. Olivi animated a workshop session during the “stage MathC2+”, a four-day internship for high-school students organized by the Committee MASTIC and its partners (June 19-22).

9.3.4. Internal action

- M. Olivi presented the scientific objects produced during the year at the CaféIn of the Research Center, <https://project.inria.fr/mastic/cafe-in-12-fevrier-manipulons-et-echangeons/>, February.
- J. Leblond together with members of the SED gave a communication at the CaféIn of the Research Center, <http://project.inria.fr/mastic/category/cafein/>, October.

9.3.5. Creation of media or tools for science outreach

M. Olivi participated in the creation of the web pages <https://pixees.fr/jouons-avec-des-experiences-scientifiques/>.

MCTAO Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

Clément Moreau is a member of the team « équipe actualités » of [Images des Mathématiques](#) since October, 2018.

J.-B. Caillau is member of the MASTIC initiative at Inria Sophia (Médiation et animation scientifiques Inria) and delivers regular talks in high school or college.

10.3.2. Articles and contents

Clément Moreau participated in the radio show « [La méthode scientifique](#) » on March 7, 2018.

Clément Moreau participated in the national competition « [Ma thèse en 180 secondes](#) ».

10.3.3. Education

Lamberto Dell'Elce is involved in the PoBot challenge promoted by MEDITES. Specifically he supervises a class in the College Emile Roux in Cannes.

10.3.4. Interventions

Clément Moreau participated in the « journées portes ouvertes » at Inria Sophia Antipolis in the framework of the 2018 « Fête de la Science », October 7, 2018, and in a scientific discovery workshop for secondary school students at the concrete Art Museum, Mouans-Sartoux, October 11, 2018.

Lamberto Dell'Elce gave the talk "CubeSats: Concevoir et Realiser un Satellite à l'Université" at the *Cafe In* meeting held at Inria Sophia on June 6, 2018, and for high school students during the [stage MathC2+](#) in June, 2018.

NACHOS Project-Team (section vide)

TOSCA Project-Team

8.3. Popularization

8.3.1. Interventions

- M. Bossy gave the plenary lecture for the Academic Awards Ceremony of the Olympics of Geosciences and Mathematics 2018.
- Q. Cormier has animated the Inria desk at *Fête de la Science*.
- E. Tanré has presented his researches at *Journées Portes Ouvertes - Inria Sophia-Antipolis*.

ABS Project-Team

7.3. Popularization

This part mainly concerns Dorian Mazauric.

7.3.1. Internal or external Inria responsibilities

- Member of Mastic Commission (Médiation et Animation scientifiques Inria Sophia Antipolis - Méditerranée).
- Coordinator of the popularization project GALEJADE (Graphes et ALgorithmes : Ensemble de Jeux À Destination des Écoliers (mais pas que)) founded by Inria, Fondation Blaise Pascal, and Université Côte d'Azur. See <https://galejade.inria.fr>.
- Coordinator of the internships for undergraduates of middle school (niveau collège, troisième) at Inria Sophia Antipolis - Méditerranée (12 interns during one week).

7.3.2. Articles and contents

Frédéric Cazals published the following opinion article:

- *Recherche et développement : les entreprises françaises n'ont pas de vision*, Le Monde, April 2018. See https://www.lemonde.fr/sciences/article/2018/04/20/r-d-les-entreprises-francaises-n-ont-pas-de-vision_5288104_1650684.html.

Dorian Mazauric published online contents and posters. See <https://galejade.inria.fr>.

7.3.3. Education

- Trainings for 100 future teachers at ÉSPÉ (École Supérieure du Professorat et de l'Éducation) of Académie de Nice.
- Two trainings for 60 teachers of Cycle 3 (Le Cannet).
- Trainings for 20 teachers at numeric culture week-end organised by Class'Code MED.

7.3.4. Interventions

- National events:
 - Fête de la Science : Village des Sciences de Vinon-sur-Verdon, Juan-les-Pins, Villeneuve-Loubet et Mouans Sartoux : *La magie des graphes et du binaire, Algorithmes grandeur nature et jeux combinatoires.*
 - Semaine des maths : Conferences and activities at Centre International de Valbonne. With Christophe Godin. *Réfléchir pour Calculer ou Calculer pour Réfléchir.*
 - Conferences and activities at salon Code & Play 2018. *Graphes et algorithmes ? Jeux grandeur nature : algorithme de plus court chemin, algorithme de tri avec des cerceaux et des lattes en plastique – La magie des graphes et du binaire : tours de magie.*
- In educational institutions:
 - Two trainings for 60 teachers of Cycle 3 (Le Cannet).
 - Trainings for 100 future teachers at ÉSPÉ (École Supérieure du Professorat et de l'Éducation) of Académie de Nice.
 - High school: Conferences at Centre International de Valbonne. *Pas besoin de réfléchir, les ordinateurs calculent tellement vite ? Théorie des graphes et algorithmique.*
 - Middle school: Conferences at collège Alphonse Daudet of Nice and conferences at collège Jules Verne of Cagnes-sur-Mer. *La magie des graphes et du binaire.*
 - Primary: Conferences at École élémentaire of Tournettes-sur-Loup. With Florence Barbra.

- Welcoming of schoolchildren or the general public in an Inria center:
 - MathC2+ internship: Activity for 40 students (high school). With Maria Guramare. *Algorithmes grandeur nature pour le calcul du plus court chemin et pour trier.*
 - Open days of Inria Sophia Antipolis - Méditerranée: *La magie des graphes, des algorithmes et du binaire.*
 - Presentation for twelve interns of middle school (niveau collège, troisième) by Frédéric Cazals.

7.3.5. Creation of media or tools for science outreach

- Creation of the website of the popularization project GALEJADE (Graphes et ALgorithmes : Ensemble de Jeux À Destination des Écoliers (mais pas que)) founded by Inria, Fondation Blaise Pascal, and Université Côte d'Azur. See <https://galejade.inria.fr>.
- Development of wooden objects for the dissemination of the scientific culture: wooden plateau for graph algorithms and convex hull, chocolate bar game made by 3D printers, kakemonos... See <https://galejade.inria.fr/francais-pret-de-materiel/>.

ATHENA Project-Team

8.3. Popularization

8.3.1. Interventions

- M. Clerc participated in the Brain Awareness Week with a talk about Brain Computer Interfaces at CHU Nice Pasteur, March 16 2018.
- M. Clerc participated in the Brain Awareness Week with a talk about Music and the Brain at Villa Arson, Nice, March 17 2018.
- M. Clerc, T. Papadopoulo, F. Turi and R. Lacroix participated in the Fête de la Science with a BCI demo where the general public could test a P300 speller system.

BIOCORE Project-Team

10.3. Popularization

10.3.1. Articles and contents

- A popularization paper has been published on the study of peach sugar metabolism [64].
- L. Mailleret was a co-author of the press kit “Les conquêtes de l’INRA pour le biocontrôle” [86].
- The activities related to microalgae have generated many articles in national newspapers (Le Monde, Nice Matin, ...), and broadcasts on national TV (France 3). See, for instance, <https://www.nicematin.com/vie-locale/ces-azureens-inventent-223249>.

10.3.2. Interventions

- O. Bernard together with R. Lemée gave a general public conference on the topic “Les microalgues en Méditerranée: quels avènements environnementaux, énergétiques, sanitaires et industriels?” (MA-MAC, Nice, 6 Apr 2018).
- L. Chambon and O. Bara participated in the open doors days of Inria Sophia-Antipolis on the 7th of October. L. Chambon presented a popularization poster about Biocore scientific methodologies to general public.
- L. Chambon represented Biocore, Inria in the national event “Fête de la Science” in Mouans-Sartoux and Juan-les-Pins (13th and 20th of October). She presented scientific popularization games and experiments to children and general public.
- L. Mailleret presented three Posters on biological control with predatory mites during the visit of the national press (AFP, France Inter, Le Parisien,...) at Institut Sophia Agrobiotech on the 30th of May 2018.

BIOVISION Project-Team

9.3. Popularization

9.3.1. Internal or external Inria responsibilities

- E. Kartsaki and S. Souihel are participating to the organization of the Inria Sophia PhD seminars.

9.3.2. Interventions

- The Biovision team participated to the "fête de la science 2018".

CAMIN Team

9.3. Popularization

9.3.1. Education

Christine Azevedo Coste is mentor (2018-2019) for one Savanturiers project with Saussan school (CM1/CM2 level) <https://les-savanturiers.cri-paris.org/>

Christine Azevedo organized initiation sessions to informatics using Thymio robot at École Calendreta La Cardonilha (Mèze, France) in CP/CE1 level, 3 sessions of 2 hours (April 2018) .

Christine Azevedo organized initiation sessions to informatics using Thymio robot at École Valfalis (Montbazin, France) in CM1/CM2 level, 4 sessions of 2 hours (May-June 2018) .

As a COERLE member Christine Azevedo Coste was involved in one session on Ethics for phd students in Inria IRISA center (Rennes, france) (November 2018).

9.3.2. Interventions

- François Bonnetblanc : Pint of Science 16 mai 2018, François Bonnetblanc, Montpellier

CASTOR Project-Team (section vide)

COFFEE Project-Team (section vide)

EPIONE Project-Team

9.3. Popularization

9.3.1. Interventions

- Nicolas Cedilnik, Pierre Tramaloni, Thomas Demarcy, Hervé Delingette and Maxime Sermesant organised a cardiac intervention simulator demo and a cochlear implant demo for the Science Festival at Inria (Dec 7).
- On April the 10th, during the "mathematics week", 2 PhD students (Nicolas Cedilnik and Raphael Sivera) met young pupils (age 8-10) at the ESPE (école supérieure du professorat et de l'éducation) Nice. The pupils were introduced to mathematical concepts in a practical way through the use of toys.

LEMON Team

10.3. Popularization

Antoine Rousseau is member of the editorial board of [Interstices](#) and the [Binaire Blog](#) in Le Monde.

10.3.1. Internal or external Inria responsibilities

Antoine Rousseau is member of "Bureau du Comité des Équipes-Projet" in the research center of Sophia-Antipolis Méditerranée.

10.3.2. Interventions

Antoine Rousseau has given lectures in the following events:

- Fête de la Science (Genopolys Montpellier) and Semaine des maths (Collège Les Fontanilles, Castelnaudary)
- FUTUR-E-S in La Villette (Paris) for a [demo of Tsunamilab](#)
- another Tsunamilab demo for Region Occitanie (November 30th, Port Barcarrès)
- [Centre d'Alembert](#) (Orsay-Saclay)
- public schools of Aubais (Gard) and Castelnaudary (Aude)

10.3.3. Internal action

- Antoine Rousseau gave a talk in the Café des Sciences at Inria Rocquencourt, March 20th.

10.3.4. Creation of media or tools for science outreach

- Antoine Rousseau has contributed to the development of Tsunamilab in collaboration with Inria Chile
- Antoine Rousseau is a co-administrator of the association [Le Calendrier Mathématique](#)

MATHNEURO Team

6.3. Popularization

6.3.1. Interventions

National events: Romain Veltz participated at the conference "Fête de la Science".

6.3.2. Internal action

Romain Veltz gave a talk at "Café des sciences" about "Vers un modèle de synapse excitatrice"

MORPHEME Project-Team

9.3. Popularization

9.3.1. Interventions

The Morpheme team took part in "La fête de la Science" both at Inria and during the "Village de la Science" in Juan-Les-Pins. Sarah Laroui, Somia Rahnmoun and Arne Bechensteen were holding a stand in these events.

COATI Project-Team

9.3. Popularization

9.3.1. Internal or external Inria responsibilities

- Frédéric Havet :
Vice-president and member of the scientific committee of the association Institut Esope 21 (<http://www.esope21.eu>).
- Nicolas Nisse:
Membre de Mastic (Médiation et Animation scientifiques Inria Sophia Antipolis - Méditerranée).

9.3.2. Education

- Frédéric Havet, Joanna Moulierac and Nicolas Nisse : Participation to Galejade projet.
Design of pedagogical resources introducing graphs and algorithms to primary school students.
Training of primary school teachers, ESPE April 9-10 2018.

9.3.3. Interventions

- Fête de la Science (Frédéric Havet, Nicolas Nisse, Fionn Mc Inerney, Ali Al Zoobi)
Journée portes ouvertes, Inria Sophia Antipolis, Sunday October 7, 2018.
Palais des Congrès de Juan-Les-Pins, October 20-21, 2018.
Collège de Vinon-sur-Verdon (83), October 9-12, 2018.
- Frédéric Havet, Joanna Moulierac, and Nicolas Nisse
Participation to the supervision of the internships of 12 pupils of 3eme, December 17-21, 2018.
- Frédéric Havet
L'élégance des Mathématiques. Conference at Lycée Janetti, St Maximin, February 16, 2018. Audience: 3 classes (1e S and ES).
La magie des graphes et du binaire. Conference at collège Alphonse Daudet, Nice, April 17, 2018. Audience: 2 classes of 4e and 1 of 6e.
L'élégance des mathématiques. General audience conference, Rians, Var, France, April 28, 2018.
- Nicolas Nisse
Training and awareness of school teachers (Cycle 2, CP-CE2) to scientific mediation. Le Cannet, November 21 and Mandelieu, November 28, 2018.
Training and awareness of future teachers to scientific mediation, Ecole Supérieure du Professorat et de l'Education (ESPE, ex IUFM) of Académie de Nice. March 19-20 and April 9-10, 2018.
Liens entre médiation numérique et recherche, Maison méditerranéenne des Sciences de l'homme (MMSH), Aix en Provence, March 14, 2018.
Mediation for the Master en science de l'éducation, Nice, October 18, 2018.
- Fionn Mc Inerney :
Presentation at Collège Victor Hugo, Nevers, France, March 23, 2018.
Participation in the day "*L'informatique, c'est pas génétique, filles ou garçons, les clics sont identiques!*", Lycée Raoul Follereau, Nevers, France, March 22, 2018.
Presentation at Ecole Primaire Romain Rolland, Varennes-Vauzelles, France, March 21, 2018.
Supervised internship of a school girl in 2nd, Inria Sophia-Antipolis - Méditerranée, France, June 18-22, 2018.
- Michel Syska :
Organisation and supervision of the code competition "*La nuit de l'info*", December 6-7, 2018.

DIANA Project-Team

9.3. Popularization

9.3.1. Interventions

Chadi Barakat keeps participating to the organization of the Mediterranean Students Days @ Campus SophiaTech. The sixth edition took place on Feb 12 - 14, 2018. All details on this event can be found at <http://univ-cotedazur.fr/events/meddays>. He also participated to the organization of the French-American Doctoral Exchange Seminar (FADEx) 2018 held in June 2018 on the three French sites Sophia Antipolis, Grenoble, and Paris.

Damien Saucez is part of the MASTIC (<https://project.inria.fr/mastic>) group at Inria. MASTIC groups all the activities for scientific dissemination for Inria Sophia Antipolis. Within the team, we gave a 3h game-based class to 12 collège interns that made an internship at Inria in December to introduce them to the fundamental algorithms used in the Internet (shortest-path, longest prefix matching, distance-vector, AIMD). Damien Saucez was involved in the organization of the “Journée portes-ouvertes” of the Inria Sophia Antipolis premises. Specifically, DIANA presented R2LAB and Electrosmart.

FOCUS Project-Team

8.3. Popularization

8.3.1. Education

Michael Lodi and Simone Martini have carried out extended work of scientific popularization, including the following.

- They are members of the technical committee of Olimpiadi del Problem Solving (at Italian Ministry of Education), <http://www.olimpiadiproblemsolving.com>; this involves preparation of material and supervision and jury during the finals.
- S. Martini has given various talks at institutes and workshops on the teaching methods for Computer Science, including a talk on "Abbiamo davvero bisogno del pensiero computazionale?", at the conference "I bit rotolano dovunque", Università di Roma Tor Vergata, May 2018.

8.3.2. Interventions

Daniel Hirschhoff was part of the organising committee for the "École Jeunes Chercheurs en Programmation", 25-29 June 2018, in Lyon.

8.3.3. Other duties

S. Martini has been Head of the Department of Computer Science and Engineering, University of Bologna, until May 2018.

M. Gabrielli is Deputy Head of the Department of Computer Science and Engineering, University of Bologna, since May 2018.

G. Zavattaro is coordinator of undergraduate studies at the Department of Computer Science and Engineering, University of Bologna (Informatica per il Management).

INDES Project-Team

8.3. Popularization

8.3.1. Internal or external Inria responsibilities

Tamara Rezk is member of the editorial board of Interstices and Blog Binaire Le Monde

8.3.2. Articles and contents

Tamara Rezk published the article "Est-ce que mon programme est bien protégé ?" in blog binaire Le Monde in February 2018. The article with some minor modifications was retaken by Interstices and published in December 2018. <http://binaire.blog.lemonde.fr/2018/02/09/est-ce-que-mon-programme-est-bien-protége-contre-les-cyberattaques/>.

Nataliia Bielova was interviewed by Sophie Casals, "Comment mieux protéger sa vie privée en naviguant sur internet? Les conseils d'une spécialiste" in Nice Matin, June 2018. <https://www.nicematin.com/faits-de-societe/comment-mieux-protéger-sa-vie-privée-en-naviguant-sur-internet-les-conseils-dune-specialiste-239166>

8.3.3. Education

8.3.3.1. Skini and the Fabrique à Musique

Skini is currently used with a class of secondary school in order to create a musical show in collaboration with the Conservatory of Nice and the CIRM (National Center for Music Creation). A group of 25 children, 12 year old, are creating together a story, and use the distributed sequencer of Skini to design basic musical patterns using tablets. The next step is to organize with them the orchestration of the piece which is coded in HipHop. The activation of the piece will be done in real time by the children using the tablet and the Skini platform. This project is funded by SACEM (Société des auteurs, compositeurs et éditeurs de musique). The project will end in May 2019 with a public concert in the Conservatory of Nice.

8.3.3.2. MOOC Protection de la vie privée dans le monde numérique

Nataliia Bielova has participated to the MOOC "Protection de la vie privée dans le monde numérique" (Session 2) that was shooted in July 2018 under the guidance of Inria Learning Lab and was open to general public between 5 November 2018 and 7 January 2019, <https://www.fun-mooc.fr/courses/course-v1:inria+41015+session02/about>.

8.3.4. Interventions

- Nataliia Bielova held a stand at Portes ouvertes (Fête de la science) of Inria Sophia Antipolis explaining how to protect privacy on the Web, October 2018.
- Ilaria Castellani and Héloïse Maurel held the stand "Science au féminin" together with Carine Antico from CNRS at the Fête de la Science in Antibes Juan-les-Pins, October 2018.

8.3.5. Internal action

- Nataliia Bielova gave a talk at the PhD seminar special edition on "Tracking technologies and protection of your privacy on the Web", March 2018.
- Nataliia Bielova gave a talk at the Data Science meetup Nice on "How companies track you as you browse the web and how to protect yourself?", <https://www.meetup.com/Data-Science-Meetup-Nice-Sophia-Antipolis/events/255546602/>, October 2018.

Neo Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

- D. Politaki is a member of MASTIC, a commission in charge of popularization and regional and internal scientific animation, since July 2016.

10.3.2. Interventions

On October 12th, in the framework of *La Fête de la Science*, M. Drevetton participated in a mediation activity at *Espace de l'Art Concret* in Mouans-Sartoux. It was a mix between art and sciences (maths and physics). The topic was randomness and the targeted public was primary school students, from two different classes (one in the morning and one in the afternoon). Activities involved loaded dices, Galton Board, double pendulum, and some online program (<http://weavesilk.com/>, pupils really liked this). Each game was presented and students would figure out where the randomness comes from, and play/experiment by themselves (30 min per group).

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+*.

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

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

STARS Project-Team (section vide)

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.

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.