

Inria

RESEARCH CENTER
Lille - Nord Europe

FIELD

Activity Report 2019

Section Popularization

Edition: 2020-03-21

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BONUS Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

- N. Melab: Chargé de Mission of High Performance Computing and Simulation at Université de Lille, since 2010.

10.3.2. Internal action

- A. Liefoghe: 30 minutes de sciences, Inria Lille-Nord Europe, Lille, France, June 2019.
- O. Abdelkafi: Intervention auprès des inspecteurs d'académie, Inria Lille-Nord Europe, Lille, France, Mars 2019.

DEFROST Project-Team

10.3. Popularization

- <http://handsonsoftrobotics.lille.inria.fr/>
- SIDO 2019: SIDO is leading European Solutions and Technologies event for IoT, Artificial Intelligence and Robotics for strategic decision-makers in innovation and business operations. Jeremie Dequidt has presented current research works arund Soft Robotics.

10.3.1. Interventions

- Fête de la science 2019: Bruno Carrez and Olivier Goury took part in the "village des sciences" at the "Gare Saint-Sauveur" in Lille city center to present soft robots to several groups of students from middle school and high school which represents about 150 children over 2 days between October 10th and 11th 2019.
- FOSDEM 2019 Brussels: its an open-software manifestation which happen every years during 2 days. Some people of our team (Damien Marchal, Eulalie Coevoet, Bruno Marques, Bruno Carrez and Félix Vanneste) went there to help the SOFA consortium to make some advertisement of our simulation tools.
- ISN intervention: Olivier Goury presented the field of soft robotics to high school students taking a Computer Science option (Informatiques sciences du numérique) and exchanged about the school projects on March the 20th 2019.
- Défi Robotique at Lycée Baggio: Olivier Goury took part in the Défi Robotique at Lycée Baggio in which teams of middle school, high school, preparatory classes and engineering students have 24 hours to solve a robotics challenge. Olivier Goury gave a conference on Soft Robotics and was a member of jury.
- Journée de la recherche Centrale Lille: Alexandre Kruszewski, Thor Morales-Bieze and Bruno Carrez presented the research activities (with live demos) in a showroom dedicated to the promotion of the scientific activities of the Laboratory of the campus.

FUN Project-Team

9.3. Popularization

9.3.1. Internal or external Inria responsibilities

- Nathalie Mitton is the referent researcher for the creation of the MATH Laboratory in Nord

9.3.2. Articles and contents

- Nathalie Mitton published a paper in Techniques de l'Ingénieur.
- Valeria Loscri released an interview "Innovation Valeria Loscri, la lumière des LED contre le wifi électromagnétique" for the newspaper La Voix du Nord

INOCS Project-Team

10.3. Popularization

- Luce Brotcorne, Journées scientifiques de l’Inria, Lyon, June 2019
- Frédéric Semet, Cité de l’IA - Intelligence Artificielle, MEDEF Lille Métropole, April 2019
- Maxime Ogier, Frédéric Semet, 4ème séminaire humAIn : IA, optimisation et retail - logistique, Polytech Lille, October 2019

10.3.1. Internal or external Inria responsibilities

- Frédéric Semet, 30 minutes de sciences, Inria Lille Nord Europe, April 2019

LINKS Project-Team

10.3. Popularization

10.3.1. Education

RIC Days S. Salvati organizes the *Recherche Innovation et Créativité days*. It presents research professions to student (primarily Master students)

10.3.2. Interventions

Introduction to programming I. Boneva has supervised second year students from DUT while they conducted activities on introduction to programming to 9-10 years old students in Villeneuve d'Ascq

TFJM² In 2019, L. Gallois participated in the organization of this event of the *Tournoi Français des jeunes mathématiciennes et mathématiciens*, a national contest of mathematics for high-school students

10.3.3. Internal action

- Inria by Lille: J. Niehren contributed an article in the december issue of "Inria by Lille" titled "Interroger les bases de données d'une manière plus intelligente"

LOKI Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

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

10.3.2. Articles and contents

The Mother Of All Demos, l'autre révolution de 1968, interview for **Carré, Petit, Utile : Le programme radio des gens du numérique** on Radio <FMR>, Stéphane Huot
web series Dopamine on Arte.tv, scientific expertise, Stéphane Huot

10.3.3. Interventions

Intervention during the official **launch event** of the new **NF Z71-300** French keyboard standard at the Assemblée Nationale: Mathieu Nancel

MAGNET Project-Team

9.3. Popularization

9.3.1. Internal or external Inria responsibilities

AURÉLIEN BELLET is member of the Operational Committee for the assesment of Legal and Ethical risks (COERLE).

PASCAL DENIS is administrator of Inria membership to Linguistic Data Consortium (LDC).

9.3.2. Articles and contents

AURÉLIEN BELLET and MARC TOMMASI provided expertise for the Dopamine TV program on Arte about new technologies ⁰.

AURÉLIEN BELLET co-authored an article in the French daily newspaper Libération on AI and transparency ⁰.

RÉMI GILLERON authored a book (in French) introducing Machine Learning ⁰.

RÉMI GILLERON gave a talk in order to popularize Artificial Intelligence.

9.3.3. Interventions

In educational institutions: MARC TOMMASI was facilitator for the event *Jouer à débattre*, about machine learning in high school (Tourcoing).

⁰<https://www.arte.tv/fr/videos/RC-017841/dopamine/>

⁰https://www.liberation.fr/debats/2019/04/07/grand-debat-et-ia-quelle-transparence-pour-les-donnees_1719944

⁰<https://www.editions-ellipses.fr/accueil/4741-apprentissage-machine-cle-de-l-intelligence-artificielle-une-introduction-pour-non-specialistes-9782340028807.html>

MEPHYSTO Team

7.3. Popularization

7.3.1. Interventions

M. Simon participated in the programs “Chercheurs itinérants” and “Fête de la Science”, and gave several lectures aimed at high-school students.

MODAL Project-Team

10.3. Popularization

10.3.1. Internal or external Inria responsibilities

Christophe Biernacki acts as a member of the working group calculation for Inria.

10.3.2. Interventions

- Pascal Germain participated in the school activity “Jouer à débattre” of the organization “L’arbre des connaissances”, as an expert in artificial intelligence (Lycée EIC de Tourcoing, February 7, 2019).
- Pascal Germain gave a vulgarization talk about neural networks and deep learning at the “Journée de l’Enseignement de l’Informatique et de l’Algorithmique” (Université de Lille, March 6, 2019).
- Christophe Biernacki participated in a round table “Deep Learning for PHM: Opportunities and Challenges”, The 10th Prognostics and System Health Management Conference Paris, France, May 2 - May 5, 2019.
- Christophe Biernacki gave a talk at the Forum Teratec in June 12nd 2019, Ecole Polytechnique, Palaiseau with Margot Correard (DiagRAMS) on Predictive maintenance solution without additional sensors [40].
- Cristian Preda was invited as a speaker at IoT Week on predictive maintenance, Méaulte, December 4, 2019.
- Cristian Preda was invited as a speaker at IT Tour by Le Monde Informatique on artificial intelligence, November 14, 2019.

RAPSODI Project-Team

10.3. Popularization

C. Calgaro is in charge of the communication of the Laboratoire Paul Painlevé. She organized in 2019 various events to promote mathematics among young people:

- “Les mathématiciens de Lille fêtent les 80 ans du CNRS” (about 600 participants from high-school or Classes Préparatoires);
- a conference of E. Ghys for the presence of the Jury de l’Agrégation de Mathématiques in Lille (about 200 participants);
- les “Mathématiques itinérantes”, a series of conferences in high-schools.

E. Creusé gave two popularization talks at Université Polytechnique Hauts-de-France:

- “Le calcul scientifique pour la simulation et le contrôle des écoulements” for the first Rencontres Mathématiques Valenciennes in March;
- “Comment prévoir la population de poissons dans l’océan ou le déplacement d’oiseaux migrateurs dans le ciel ? Les maths nous répondent !” for the Semaine des Mathématiques 2019 in March.

M. Herda gave a talk at Inria Lille - Nord Europe for the internal scientific popularization event “30 minutes of Science” in January.

T. Rey was one of the four speakers of the event “Les mathématiciens de Lille fêtent les 80 ans du CNRS”.

RMOD Project-Team

10.3. Popularization

10.3.1. Articles and contents

- Olivier Auverlot, Stéphane Ducasse, Luc Fabresse. *TinyBlog: Créer votre première application web avec Pharo* [15].
- Olivier Auverlot, Stéphane Ducasse, Luc Fabresse. *TinyBlog: Develop your First Web App with Pharo* [16].
- Stéphane Ducasse. *Pharo with Style* [17].

10.3.2. Education

- A MOOC for Pharo is online (Stéphane Ducasse).
<http://mooc.pharo.org>
- The Pharo Consortium was part of GSOC (Google Summer of Code) again in 2019. Oleksandr Zaitsev was co-organizer. RMoD mentored some of the Students.

10.3.3. Interventions

- Multiple public Pharo Sprints in Lille.
<https://association.pharo.org/events>
- RMOD co-organized and participated at ESUG 2019.
<http://www.esug.org/wiki/pier/Conferences/2019>

10.3.4. Internal action

- 30 Minutes de Sciences, Inria Lille - Nord Europe. 25 octobre 2019: *Hard bugs and how to track them with Unanticipated Debugging*, Steven Costiou.

SEQUEL Project-Team

10.3. Popularization

10.3.1. Articles and contents

- Philippe Preux:
 - interviewed by *Le Monde* published in Sep 2019
 - interview on I-SITE project B4H, Inria

10.3.2. Education

- Odalric-Ambrym Maillard:
 - “Reinforcement Learning: successes and promises”, Executive Master, Ecole Polytechnique, Palaiseau, Nov 2019

10.3.3. Interventions

- Philippe Preux:
 - panel on “Promises and perils of AI”, CGIAR, Hyderabad, India, Oct 2019
 - panel on “AI and man”, Euratechnologies, Lille, Sep 2019
- Yannis Flet-Berliac and Philippe Preux: panel on “Who’s the pilot: man of software?”, FOOR, Le Fresnoy, Tourcoing, Nov 2019
- Yannis Flet-Berliac: “Princess of parallelograms” installation (with Thomas Depas), Le Fresnoy, Tourcoing, “Damien & The Love Guru” gallery in Brussels, Belgium, Sep–Dec 2019



Figure 1.

Princess of parallelograms is a collaborative project between Yannis Flet-Berliac and a student from Le Fresnoy National Studio of Contemporary Arts. They created an interactive sculpture made of a variety of computer vision attributes: a support for anthropomorphic projections, a set of generated virtual masks, or a new form of photographic trap. When visitors stand in front of the device’s webcam, a Deep Convolutional Conditional-GAN Auto-Encoder model applies a filter on their face with virtual flesh, hair, and facial expressions in real-time. In the meantime, an emotion detection model trained on the FER-2013 dataset is running in the background. The system allows the users to actively interact with the installation. So far, the project has been exposed at Le Fresnoy and in Brussels.

SPIRALS Project-Team

10.3. Popularization

10.3.1. Interventions

Pierre Laperdrix gave a talk in May at the RuhrSec IT security conference organized by the Ruhr University Bochum. The aim of the conference is to popularize different topics to an audience of non-experts so that they are familiar with the latest trends in computer security.

VALSE Project-Team

9.3. Popularization

9.3.1. Internal or external Inria responsibilities

At Inria (Lille), R. Ushirobira is responsible for a monthly organized talks “30 minutes de sciences”.

9.3.2. Education

- R. Ushirobira, referent researcher for projects with middle-school students at Collège A. Daudet (Leers) within the framework of **Math en Jeans**