



RESEARCH CENTER

FIELD

**Perception, Cognition and Interaction**

# Activity Report 2017

## Section Dissemination

Edition: 2018-02-19



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## CEDAR Team

# 9. Dissemination

## 9.1. Promoting Scientific Activities

### 9.1.1. Scientific Events Selection

#### 9.1.1.1. Chair of Conference Program Committees

Y. Diao has been the PC co-chair of IEEE International Conference of Data Engineering (ICDE) 2017.

I. Manolescu has been a track chair for the ACM SIGMOD (Special Interest Group on the Management of Data) 2017 conference.

#### 9.1.1.2. Member of the Conference Program Committees

I. Manolescu has been member of the PC of the DASFAA Conference 2017, of the Semantic Big Data Workshop (SBD) and of the WebDB (Web and Databases) Workshops in conjunction with the SIGMOD Conference 2017.

M. Thomazo has been member of the PC of BDA 2017, and IJCAI 2017.

### 9.1.2. Journal

#### 9.1.2.1. Member of the Editorial Boards

Y. Diao is the editor-in-chief of ACM SIGMOD Record.

I. Manolescu has been an Associate Editor for PVLDB (Proceedings of Very Large Databases) 2017.

#### 9.1.2.2. Reviewer - Reviewing Activities

M. Thomazo has been a reviewer for JODS and TOCL.

### 9.1.3. Invited Talks

- Y. Diao gave a distinguished lecture at the Technische Universitaet Darmstadt, in November 2017.
- I. Manolescu gave a keynote talk at the DEXA Conference in August 2017 [23].
- I. Manolescu gave a keynote talk at the iiWAS Conference in December 2017 [24]

### 9.1.4. Leadership within the Scientific Community

Y. Diao is a member of the ACM SIGMOD Executive Committee, and also a member of the PVLDB Endowment.

I. Manolescu is a member of the PVLDB Endowment, of the ACM SIGMOD “Jim Gray” PhD Award Committee, and of the steering committee (*Comité de Pilotage*) of “Bases de Données Avancées” (BDA), the informal association organizing the database research community in France and french-speaking countries.

### 9.1.5. Research Administration

Y. Diao is on the advisory board of the Data Science Initiative (DSI), a joint center between the applied mathematics and computer science departments of Ecole Polytechnique.

I. Manolescu is responsible of the “Massive Data Processing” axis of the Inria partnership with DGA (Direction Générale de l’Armement).

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

- Master: Y. Diao is a Professor at Ecole Polytechnique, where she teaches “System for Big Data” in M1; she also teaches “Systems for Big Data Analytics” in M2 in the Data Science Master Program of Université Paris Saclay, and organizes a data science research project of M1 (third-year) students at École Polytechnique.
- Master: I. Manolescu, Architectures for Massive Data Management, 12h, M2, Université Paris-Saclay.
- Master: I. Manolescu, Database Management Systems, 52h, M1, École Polytechnique.

### 9.2.2. Supervision

PhD in progress: Maxime Buron: “Raisonnement efficace sur des grands graphes hétérogènes”, since October 2017, François Goasdoué, Ioana Manolescu and Marie-Laure Mugnier (GraphIK Inria team in Montpellier)

PhD in progress: Tien Duc Cao: “Extraction et interconnexion de connaissances appliquée aux données journalistiques”, since October 2016, Ioana Manolescu and Xavier Tannier (LIMSI/CNRS and Université de Paris Sud)

PhD in progress: Sejla Čebirić: “CloudSelect: Data Mobility Within, Across and Outside Clouds”, since September 2015, François Goasdoué and Ioana Manolescu.

PhD in progress: Ludivine Duroyon: “Data management models, algorithms & tools for fact-checking”, since October 2017, François Goasdoué and Ioana Manolescu (Ludivine is in the Shaman team of U. Rennes 1 and IRISA, in Lannion)

PhD in progress: Enhui Huang: “Interactive Data Exploration at Scale”, since October 2016, Yanlei Diao and Anna Liu (U. Massachussets at Amherst, USA)

PhD in progress: Luciano di Palma, “New sampling algorithms and optimizations for interactive exploration in Big Data”, since October 2017, Yanlei Diao and Anna Liu (U. Massachussets at Amherst, USA)

PhD in progress: Felix Raimundo: “Nouveaux algorithmes et optimisations pour l’analyse profonde du génome à l’échelle de la population”, since October 2017, Yanlei Diao and Avinash Abhyankar (New York Genome Center, USA)

PhD in progress: Alexandre Sevin: “Exploration interactive de données sur de grandes sources de données hétérogènes”, since October 2017, Yanlei Diao and Peter Haas (U. Massachussets at Amherst, USA)

PhD in progress: Khaled Zaouk: “Performance Modeling and Multi-Objective Optimization for Data Analytics in the Cloud”, since October 2017, Yanlei Diao

### 9.2.3. Juries

Y. Diao has been a member of the PhD committee of Julien Pilourdault (defended in September 2017, at LIG, Grenoble). The thesis was titled “Scalable Algorithms for Monitoring Activity Traces”.

I. Manolescu has been a member of the PhD committee of Olivier Wang (defended in June 2017, at LIX), the thesis was titled “Adaptive Rule Models: Active Learning for Rule-Based Systems” and also of the PhD committee of Maria Rossi (defended in November 2017, at LIX). The thesis was titled “Graph Mining for Influence Maximization in Social Networks”.

I. Manolescu has been a reviewer and a member of the HDR committee of Vicent Leroy (defended in September 2017, at LIG, Grenoble). The thesis was titled “Data Analysis at Scale: Systems, Algorithms and Information”.

### 9.3. Popularization

- M. Buron, I. Manolescu, F. Raimundo and T. Merabti animated a booth at the “Fête de la Science 2017” at Inria Saclay, in October 2017.
- I. Manolescu published an article on computational fact-checking titled “La vérité, rien que la vérité” in the Binaire blog of Le Monde (<http://binaire.blog.lemonde.fr/2017/04/05/la-verite-rien-que-la-verite/>)
- I. Manolescu participated to a panel on Data Journalism at the Web2Day, a 3000-strong IT and digital conference in Nantes, in June 2017 (<https://web2day.co/en/speakers/ioana-manolescu/>)
- I. Manolescu gave a talk at the Inria Alumni Jam Session “ Fausses informations, post vérité : allons aux faits ! ”, presenting our current work on data management for data journalism (<http://www.inria-alumni.fr/evenement/session-inria-alumni-fausses-informations-post-verite-allons-aux-faits-25-octobre-2017-cnam-paris/>)

## GRAPHIK Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

- **Organization of DL 2017 (30th Workshop on Description Logics)**, Montpellier, July 2017. The DL workshop is the major annual event of the Description Logic research community. It is the forum at which those interested in description logics, both from academia and industry, meet to discuss ideas, share information and compare experiences. Meghyn Bienvenu and Marie-Laure Mugnier were general co-chairs and the team GraphIK was in charge of the local organisation (Jean-François Baget, Pierre Bisquert, Stathis Delivouras, Abdelraouf Hecham, Federico Ulliana, Bruno Yun, and the team assistant, Annie Aliaga, were members of the organisation committee).  
<https://project.inria.fr/dl2017>
- **Co-organization of the Graph Based Knowledge Representation and Reasoning Workshop** associated with the **IJCAI 2017** international conference. Madalina Croitoru, with Sebastian Rudolph (Univ Dresden), Pierre Marquis (Univ Artois) and Gem Stapleton (Univ Brighton), organized this event. This is the 5th edition of this workshop series that Madalina Croitoru initiated for IJCAI 2011.  
<http://www.lirmm.fr/~hecham/GKR/index.html>
- **Co-organization of the Workshop Reasoning on Data** associated with **The Web 2018** international conference (Lyon, March 2018). Marie-Laure Mugnier, with Catherine Roussey (Iristea) and Pierre Senellart (ENS Paris, Inria Valda team), are chairs of this workshop linked to the French national action 'Reasoning on Data' common to GDR MaDICS and IA.  
<https://sites.google.com/site/2018rod/>
- **Co-organization of the International Workshop on ASP technologies for Querying large scale multisource heterogeneous web information (WASPIQ 2017)** associated with the **IEA/AIE 2017** conference (30th International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems). M.-L. Mugnier, with Odile Papini (LSIS), Salen Benferhat (CRIL) and Laurent Garcia (LERIA), organized this workshop linked to the ANR ASPIQ project.  
<http://waspiq2017.lsis.org>.
- **Organization of a Special Track on "Agronomy and Artificial Intelligence"** associated with the **IEA/AIE 2017** conference (30th International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems). M. Croitoru and P. Bisquert organized this event.  
<http://www.cril.univ-artois.fr/ieaaie2017/main/specialtracks>

### 10.1.2. Scientific Events Selection

#### 10.1.2.1. Chair of Conference Program Committees

- Meghyn Bienvenu will be tutorial co-chair for the International Joint Conference on Artificial Intelligence (IJCAI) 2018.

#### 10.1.2.2. Member of the Conference Program Committees

We are regularly members of the program committees of major conferences in AI or in databases (i.e., IJCAI, AAAI, ECAI, AAMAS, ICDT, PODS) and more focused conferences and workshops (such as RuleML+RR—Web reasoning and Rule Systems— and Description Logics). We also take part in the animation of the national community (JIAF, EGC, IC, BDA).

For 2017, we served in the following program committees:



**International**

- IJCAI 2017 (International Conference on Artificial Intelligence) : 1 Senior PC + 2 PC
- AAAI 2017 (AAAI Conference on Artificial Intelligence) : 2 PC
- PODS 2017 (ACM SIGMOD-SIGACT-SIGAI Symposium on Principles of Database Systems) : 1 PC
- ICDT 2017 (International Conference on Database Theory) : 1PC
- ISWC 2017 (International Semantic Web Conference) : 1 PC
- AAMAS 2017 (International Conference on Autonomous Agents and Multiagent Systems) : 1 PC
- RuleML+RR 2017 (International Joint Conference on Rules and Reasoning) : 2 PC
- EFITA 2017 (European Federation for Information Technology in Agriculture, Food and the Environment) : 2 PC
- IEA/AIE 2017 (International Conference on Industrial, Engineering, Other Applications of Applied Intelligent Systems) : 1 PC
- FQAS 2017 (International Conference on Flexible Query Answering Systems) : 1 PC

**National**

- JIAF 2017 (Journées Françaises d'Intelligence Artificielle Fondamentale) : 1 PC
- EGC 2017 (Extraction et Gestion des Connaissances) : 2 PC
- IC 2017 (Ingénierie des Connaissances) : 1 PC
- BDA 2017 (Conférence sur la gestion de données) : 1 PC

For 2018, we will serve in the following international program committees (list not exhaustive yet):

- IJCAI-ECAI 2018 (International Joint Conference on Artificial Intelligence joint with the the 23rd European Conference on Artificial Intelligence) : 2 Senior PC + 2 PC
- AAAI 2018 (AAAI Conference on Artificial Intelligence) 1 Senior PC + 1 PC
- RuleML+RR 2018 (International Joint Conference on Rules and Reasoning) : 1PC
- FOIKS 2018 (International Symposium on Foundations of Information and Knowledge Systems) : 1 PC
- ROD 2018 (Reasoning on Data Workshop) @ The Web 2018 : 1 PC

**10.1.3. Journal***10.1.3.1. Member of the Editorial Boards*

- ARIMA : “Revue africaine de la recherche en informatique et mathématiques appliquées” (P. Buche)

*10.1.3.2. Reviewer - Reviewing Activities*

- Journal of Artificial Intelligence Research (JAIR)
- ACM Transactions on Computational Logics (ToCL)
- Information Systems Journal
- Distributed and Parallel Databases Journal (DAPD)
- EURO Journal on Decision Processes (EJPD) : Special issue on Supporting and Explaining Decision Processes by means of Argumentation

**10.1.4. Invited Talks and Seminars**

- J.-F. Baget, “Computing repairs (and more) with Answer Set Programming”, Workshop on ASP technologies for Querying large scale multisource heterogeneous web information (WASPIQ 2017) June 2017.
- F. Ulliana, “Ontology-Mediated Query Answering and Heterogeneous Data” 1ère journée ROD (Reasoning on Data), June 2017.

- M. Bienvenu, "Query Rewriting: Limits and Possibilities", KR seminar, Department of Computer Science of the University of Toronto, December 2017.
- R. Thomopoulos, "Science for Food and Bioproduct Engineering at INRA: a knowledge engineering perspective", Seminar at ATEI Thessaloniki, Greece (November 2017).
- P. Buche, "Ingénierie des connaissances pour l'aide à la décision dans la filière agroalimentaire", 6ème rencontre ESOF (EuroScienceOpen Forum) sur la transformation numérique des agrochaînes, Toulouse, October 2017.
- M.-L. Mugnier, "Accès aux données médiatisé par une ontologie", 25th Anniversary of the LIRMM laboratory, November 2017.
- Marie-Laure Mugnier, "Accès aux données médiatisé par des connaissances", First seminar of the axis "Système d'information, stockage et transfert de données" of #DigitAg, November 2017
- P. Buche, "Retour d'expérience d'une pratique Open Science au sein du département CEPIA", Séminaire annuel du département INRA CEPIA à Magny-le-Hongre, Session Open Science, Octobre 2017.
- J. Fortin, "Capitaliser l'expertise et la rendre accessible : la démarche Docamex", Séminaire INRA/CEPIA, 2017.

#### **10.1.5. Leadership within the Scientific Community**

- Marie-Laure Mugnier, together with Marie-Christine Rousset (LIG), Véronique Bellon (ITAP, IRSTEA/SupAgro) and Olivier Palombi (LDAF-CHU Grenoble-Alpes) launched a national action (2017-2018, 2 years), named Reasoning on Data (Rod), common to CNRS research groups ('GDR') IA (formal and algorithmic aspects of artificial intelligence) and MaDICS (Big Data, Data Science). The aim of this action is to build a national community on the issue of knowledge representation and reasoning oriented towards better exploiting data. The first meeting was held in June 2017 within the MaDICS annual workshop. The second meeting will be held in March 2017 in association with the RoD workshop at the conference The Web 2018. For more detail, see <http://www.lirmm.fr/rod/>
- Patrice Buche he coordinates both the CATI (Ingénierie des Connaissances et Analyse Textuelle) INRA group (<https://www6.inra.fr/cati-icat>) and the INRA IN-OVIVE group ([www6.inra.fr/reseau-in-ovive](http://www6.inra.fr/reseau-in-ovive)) for which he organized an invited session at EFITA'2017.
- Rallou Thomopoulos is coordinator of the INRA-CEPIA transversal programs on knowledge and model integration, multiperformance design, and ethical issues.
- Marie-Laure Mugnier is member of the animating committee of the GDR IA (formal and algorithmic aspects of artificial intelligence).

#### **10.1.6. Scientific Expertise**

- Rallou Thomopoulos has been elected member of the Scientific Committee of the INRA-CEPIA research division for the period 2016-2020.

### **10.2. Teaching - Supervision - Juries**

#### **10.2.1. Teaching**

The six faculty members teach at all university levels (IUT, Licence, Master). The main courses they are in charge of are: Logics (L), Databases (M), Web Technologies (IUT), Artificial Intelligence (M), Knowledge Representation and Reasoning (M), Social and Semantic Web (M). Concerning full-time researchers in 2017, Jean-François Baget gave Master courses (40 h) and Rallou Thomopoulos was instructor for "Participative modelling and simulation", a one week full time training school for INRA-CIRAD researchers (which is held once to twice a year, since 2016).

Moreover, faculty members have some specific responsibilities in the Computer Science Licence and Master:

- Michel Leclère (Faculty): from 2011 to 2017, he managed the program “Data, Knowledge and Natural Language Processing” (DECOL), part of the Master of Computer Science (about 30 students). This program was co-managed with Federico Ulliana (Faculty) 2016, which became the coordinator for 2017.
- Marie-Laure Mugnier (Faculty): from 2011 to 2017, she was (co)-director of the Master in Computer Science, which gathers 6 programs (about 250 students). She also led the Master project for the next four years (LMD4, from 2015/16 to 2018/2019).
- Madalina Croitoru (IUT): since Sept. 2014, she manages the “année spéciale” (about 25 students).

### 10.2.2. Involvement in University Structures

- Michel Leclère: since Sept. 2015, he is deputy manager of the Computer Science teaching Department from the Science Faculty, University of Montpellier. He is also coordinator for the Information Systems (“systèmes d’Informations et salles informatiques”) for the Science Faculty, University of Montpellier.
- Marie-Laure Mugnier: since 2016, she is member of the Council of the Scientific Department MIPS (Mathematics Informatics Physics and Systems) of the University of Montpellier - Marie-Laure Mugnier.

### 10.2.3. Supervision

PhD in progress are:

- Stathis Delivorias. Supervisors: Federico Ulliana, Michel Leclère and Marie-Laure Mugnier. “Boundedness and Module extraction in Existential Rules KBs”. Started Oct. 2015.
- Abdelraouf Hecham. Supervisors: Madalina Croitoru and Pierre Bisquert. “Logical argumentation with dual cognitive systems”. Algerian National Ministry Grant 2015-2018.
- Bruno Yun. Supervisors: Madalina Croitoru, Rallou Thomopolous, Srdjan Vesic. “Decision Making and Ranking Semantics in Logical Argumentation Frameworks”. French National Ministry Grant 2016-2019.

### 10.2.4. Juries

- Marie-Laure Mugnier was reviewer for the HDR of Mantas Šimkus - TU Wien (Vienna University of Technology).
- Rallou Thomopoulos was jury member of Jérémy Bénard’s PHD thesis “Exploitation of an ontology of knowledge representation languages for the semantic and generic import, export and translation of knowledge representations”, Université de La Réunion, June 2017.

## 10.3. Popularization

- M. Chein, "Sur la science informatique et son installation à Montpellier" Association Française pour l’Avancement des Sciences, Montpellier, April 2017.
- M. Chein, "L’informatique : la science au coeur du numérique", Académie des Sciences et Lettres de Montpellier, May 2017.
- J.-F. Baget, Animation of a panel on "Artificial Intelligence", Lycée Jean Monnet, Montpellier, December 2017.

## LACODAM Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

#### 10.1.1.1. Member of the Organizing Committees

Organization co-chair (T. Guyet) of the first conference on “usage of the medico-administrative database of french insured for health research” (<http://www.rennes-donnees-sante-2017.fr/>)

Organization chair (T. Guyet) of GAST workshop at EGC 2018 and at EGC 2017 (<https://gt-gast.irisa.fr/>)

Organization co-chair (T. Guyet) of the technical track “Knowledge Extraction from Geographical Data” of the 33rd ACM/SIGAPP Symposium On Applied Computing

Webmaster (L. Galárraga) of the ICDE 2018 conference (<https://icde2018.org/>)

### 10.1.2. Scientific Events Selection

#### 10.1.2.1. Member of the Conference Program Committees

AAAI Conference on Artificial Intelligence 2017, 2018 (T. Guyet)

Conférence Nationale sur les Applications Pratiques de l’Intelligence Artificielle (APIA) 2017 (C. Largouët)

IEEE International Conference on Data Science and Advanced Analytics (DSAA) 2017 (A. Termier)

European Conference Dedicated to the Future Use of ICT in the Agri-food Sector, Bioresource and Biomass sector (EFITA) 2017 (A. Termier, C. Largouët)

Extraction et Gestion de Connaissances (EGC) 2018 (T. Guyet, R. Quiniou, A. Termier).

European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (EMLCPKDD) 2017 (E. Fromont)

International Conference on Data Mining (ICDM) 2017 (A. Termier)

Conference on Intelligent Data Analysis (IDA) 2017 (E. Fromont)

International Joint Conference on Artificial Intelligence (IJCAI) 2017 (T. Guyet, A. Termier)

Symposium on Information Management and Big Data (SimBig) 2017 (T. Guyet)

#### 10.1.2.2. Reviewer

Y. Dauxais, C. Gautrais: IJCAI 2017, ICDM 2017, EGC 2018

E. Fromont: ECMLPKDD 2017, AAAI 2017, IDA2017, ECMLPKDD demo track 2017

L. Galárraga: The Web Conference 2018, WebDB workshop 2017, AKBC workshop 2017

T. Guyet: IJCAI 2017, ICDM 2017, AAAI 2018, AAAI 2017

R. Quiniou: IJCAI 2017, ICDM 2017, AAAI 2018

A. Termier: EuroPar 2017

### 10.1.3. Journal

#### 10.1.3.1. Member of the Editorial Boards

E. Fromont: Machine Learning and Data Mining ECMLPKDD special issue

T. Guyet: Revue d’Intelligence Artificielle (RIA)

#### 10.1.3.2. Reviewer - Reviewing Activities

- E. Fromont: Data Mining and Knowledge Discovery, Machine Learning Journal
- L. Galárraga: Data Mining and Knowledge Discovery, Artificial Intelligence Review, Semantic Web Journal
- C. Gautrais: Data Mining and Knowledge Discovery
- T. Guyet: Journal of Biomedical Informatics, Journal of Intelligent Information Systems, Artificial Intelligence Review
- C. Largouët: Natural Computing, International Journal of Agricultural and Environmental Information Systems (IJAEIS)
- A. Termier: Knowledge and Information Systems, The Very Large DataBases Journal

#### 10.1.4. Invited Talks

- E. Fromont gave an invited talk for the Machine Learning seminar of the KULEUVEN University in May 2017, Ostende, Belgium.
- A. Termier gave an invited talk at KU Leuven on 09/06/2017.
- E. Fromont gave an invited talk "Big Data and Business" summer school organised by the IRIXYS consortium and ATOS, Chiemsee, Germany.
- A. Termier gave an invited talk at the esaconnect event of ESA agriculture school (Angers), on 26/10/2017.
- L. Galárraga gave an invited talk at the LTCI Data Science Seminar (<https://ltci.telecom-paristech.fr/data-science-seminar/>) at Télécom ParisTech on 16/11/2017.
- T. Guyet gave an invited talk at the SPECIF Campus association (<https://www.specifcampus.fr/les-supports-de-la-journee-du-24-novembre-2016/>) on 24/11/2017.

#### 10.1.5. Leadership within the Scientific Community

- A. Termier is the representative of Inria for the #DigitAg Convergence Institute

#### 10.1.6. Scientific Expertise

- Evaluation of one project proposal for IFREMER: T. Guyet
- Evaluation of two projects proposals for ANR: A. Termier
- Comité d'évaluation scientifique ANR CE23 - Données, Connaissances, Big data, Contenus multi-médias, Intelligence Artificielle: E. Fromont
- Groupe de travail national "infrastructure de recherche pour l'Intelligence Artificielle" (demandé par Allistene): E. Fromont

#### 10.1.7. Research Administration

- Member of INRA CEI (Engineers Evaluation Committee): T. Guyet
- Member of the scientific board of department EA of INRA: A. Termier
- Member of the scientific board of Agrocampus Ouest - COREGE: C. Largouët

### 10.2. Teaching - Supervision - Juries

#### 10.2.1. Teaching

Many members of the project-team LACODAM are also faculty members and are actively involved in computer science teaching programs in ISTIC, INSA and Agrocampus-Ouest. Besides these usual teaching activities, LACODAM is involved in the following programs:

- A. Termier, DMV Module: Data Mining and Visualization, 18h, Master 2, Istic, Univ. Rennes 1
- L. Bonneau and C. Largouët, DataViz with R, 10h, Master Datascience, Agrocampus Ouest Rennes
- L. Bonneau and C. Largouët, Computer Science for BigData, 30h, Master Datascience, Agrocampus Ouest Rennes
- C. Largouët, Scientific Programming, Master 1, Agrocampus Ouest Rennes
- C. Largouët, Data Management, Master 1, Agrocampus Ouest Rennes

### 10.2.2. Supervision

PhD in progress: Maël Guillemé, “New data mining approaches for improving energy consumption in factory”, 03/10/2016, A. Termier, V. Masson, L. Rozé and R. Quiniou

PhD in progress: Clément Gautrais, “Mining massive data from client purchases”, 01/10/2015, A. Termier, P. Cellier, T. Guyet and R. Quiniou

PhD in progress: Yann Dauxais, “Query-language for care-pathway mining and analysis”, 01/02/2015, D. Gross-Amblard, T. Guyet, A. Happe

PhD in progress: Colin Leverger, “Cluster resources optimization through forecasting and management of metric time series”, 01/10/2017, T. Guyet, S. Malinowski, R. Marguerie, A. Termier

PhD in progress: Alban Siffer, “DataMining approaches for cyber attack detection”, 05/2016, P.-A. Fouque, A. Termier, C. Largouët

PhD in progress: Kevin Fauvel, “Using data mining techniques for improving dairy management”, 10/2017, V. Masson, P. Faverdin, A. Termier

PhD in progress: Raphaël Gauthier, "Modelling of nutrient utilization and precision feeding of lactating sows", 11/2017, C. Largouët, J.-Y. Dourmad

### 10.2.3. Juries

Committee member of Georges Nassopoulos' PhD defense on 22/05/2017 (Université de Nantes): R. Quiniou

Committee member of Chemseddine NABTI's PhD defense (Université Claude Bernard Lyon 1): A. Termier

Reviewer of Vladimir Dzyuba's Phd (KU Leuven): A. Termier

Committee member of Hoang Son Pham's PhD defense (Université de Rennes 1): A. Termier

Thesis advisory committee member of Jean Coquet (Univ. Rennes 1): A. Termier

Thesis advisory committee member of Mathilde Chen (INRA): A. Termier

Thesis advisory committee member of Benoit Bellot (INRA/IGEPP): T. Guyet

Thesis advisory committee member of Zhi Cheng (UNC/PPME): T. Guyet

Thesis advisory committee member of Vanel Siyou (Univ. Blaise Pascal/LIMOS): T. Guyet

Committee member of Asma Dachraoui's PhD defense on 31/01/2017 (ABIES/AgroParisTech): T. Guyet

Member of the associate professor hiring committee on 12/05/2017 (LINK/AgroParisTech) : T. Guyet

Committee member of Jordy Salmon-Monviola's PhD defense on 05/04/2017 (AgroCampus Ouest): V. Masson

Committee member (as co-supervisor) of Damien Fourure on 12/12/2017 (Univ. Saint-Etienne) : E. Fromont

Committee member of Van-Tinh TRAN, (University of Lyon) on 11/07/2017 : E. Fromont

Committee member of Maxime Gasse, (University of Lyon) on 13/01/2017: E. Fromont

Committee member of Pauline Wauquier, (University of Lille 3) on 29/05/2017 : E. Fromont

Committee member of Ouadie Gharroudi, (University of Lyon) on 21/12/2017 : E. Fromont

Thesis advisory committee member of Mohamed Ali Hammal on 30/04/2017 (University of Lyon), Maxime CHABERT on 11/04/2017 and 2/06/2017 (University of Lyon), Tuan Nguyen on 21/06/2017 (Université Savoie Mont Blanc), Jean-Jacques Ponciano on 17/05/2017 (Univ. Saint-Etienne), Julien Tissier, Jordan Fréry, Carlos Arango, Dennis Diefenbach on 12/07/2017 (Univ. Saint-Etienne): E. Fromont

### 10.3. Popularization

M.-O. Cordier is editorial board member of Interstices webzine.

C. Largouët and L. Galárraga participated in a science diffusion talk at the educational institution "Assomption" on 20/10/2017.

L. Galárraga participated as AI specialist in a discussion forum at the general election assembly of the "Pôle Images et Réseaux" on 23/11/2017.

T. Guyet gave a public talk about Artificial Intelligence and Data Mining in MDA Rennes (FranceIA events) on 01/03/2017.

A. Termier gave a public talk about Artificial Intelligence at the Esaconnect event on 26/10/2017 <https://www.chaire-mutations-agricoles.com/evenements/esaconnect-2017/programme/panorama-de-lintelligence-artificielle-en-2017-alexandre-termier/link>.

A. Termier was interviewed for the December podcast of the Interstices webzine.

## LINKS Project-Team

## 9. Dissemination

### 9.1. Promoting Scientific Activities

#### 9.1.1. Scientific Events Organisation

##### 9.1.1.1. Member of the Conference Program Committees

- I. Boneva was member of the program committees of Alberto Mendelson Workshop 2017.
- P. Bourhis was member of the program committees of IC (Ingénierie des Connaissances) 2017.
- P. Bourhis was the program chair of the demonstration track of BDA (Gestion de Données – Principes, Technologies et Applications) 2017.
- J. Niehren is the chair of the WPTE 2018 workshop collocated with FLOCS in Oxford
- J. Niehren was a member of the program committee of BDA 2017
- J. Niehren was a member of the program committee of WPTE 2017.
- S. Staworko was member of the program committees of ISWC (International Semantic Web Conference) 2017.
- S. Tison was member of the program committees of FSCD (First International Conference on Formal Structure for Computation and Deduction) 2017.
- S. Tison was member of the program committees of Highlight 2017.

#### 9.1.2. Journal

##### 9.1.2.1. Member of the Editorial Boards

- J. Niehren is editor of Fundamenta Informaticae.
- S. Salvati is managing editor of JoLLI (Journal for Logic, Language and Information).
- S. Tison is in the editorial committee of RAIRO-ITA (Theoretical Informatics and Applications).

#### 9.1.3. Research Administration

- I. Boneva was an elected member of CRISTAL laboratory council until the December 1st, 2017.
- J. Niehren is member of the Board of the Inria Lille's Board of the Comité des Equipe-Projects.
- J. Niehren is head of the Inria team Links.
- S. Salvati is secretary of the The Association for Logic, Language and Information (<http://www.folli.info>).
- S. Salvati is vice-head of the Inria team Links.
- S. Tison is president of CITC EuraRFID since June 2017.
- S. Tison is a member of coordination committee I-Site ULNE since April 2017.
- S. Tison is a vice president of the University of Lille 1 since October 2015, where she is responsible for industrial partnerships, innovation, and valorisation.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

- I. Boneva gives a Master 1 semester on Algorithms for databases.
- F. Capelli organized a research school on Knowledge Compilation at ENS de Lyon in December 2017.



A. Lemay is pedagogical responsible for Computer Science and Numeric correspondent for UFR LEA, Lille 3.

J. Niehren was teaching the course “Foundations of Data and Knowledge Bases” at the University of Cape Coast, Ghana, as part of the PhD summer school of the Academie without Borders.

J. Niehren was teaching the course “Foundations of Databases” as part of the masters 2 Mocad on Information Extraction at the University of Lille 1.

S. Salvati is pedagogical responsible of Master Miage FA, Lille 1.

S. Salvati organised the reasearch label for Computer Science Bachelor, Lille 1.

S. Staworko is pedagogical responsible of the Web Analyst Master, Lille 3.

S. Staworko has created an online lecture on R as part of the partnership between Lille 3 University and Dakar University, Senegal.

S. Tison is pedagogical responsible of first year ACT Master, Lille 1.

S. Tison has organized Catalyst Contest 2017 in Lille.

### 9.2.2. Supervision

PhD in progress: D. Gallois. Since 2015. Recursive Queries. Supervised by Bourhis and Tison.

PhD in progress: M. Sakho. Hyperstreaming Query answering on graphs. Since 2016. Supervised by Niehren and Boneva.

PhD in progress: J.M. Lozano. On data integration for mixed database formats. Supervised by Boneva and Staworko.

PhD in progress: P. Gallot. On safety of data transformations. Started on October 2017. Supervised by Lemay and Salvati.

Projet de Fin d'Étude (PFE): N. Crosetti. On weighted dependency aggregation. Supervised by Capelli, Niehren and Ramon (Team MAGNET).

### 9.2.3. Juries

S. Salvati was the reviewer of El Makki VOUNDY's thesis *Langages  $\varepsilon$ -sûrs et caractérisations des langages d'ordres supérieurs* defended on November 15, 2017, University of Marseille.

S. Salvati was a member of the jury of Félix Baschenis' thesis *Minimisation de ressources pour les transductions régulières sur les mots* defended on December 5, 2017, University of Bordeaux.

### 9.2.4. Selection committies

P. Bourhis was a member of the selection committee for two assistant professorships at the University of Lille III.

A. Lemay was a member of the selection committee for two assistant professorships at the University of Lille III.

S. Tison was a member of the selection committee for an assistant professorship at the University of Rouen.

S. Tison was a member of the selection committee for an assistant professorship at the University of Marne-la-Vallée.

S. Tison was a member of the selection committee for a professorship at the University of Calais.

S. Tison is a member of the jury of “Agrégation de mathématiques, option D”.

## 9.3. Popularization

Joachim Niehren contributed an article in the december issue of “Inria by Lille” titled “Interroger les bases de données d'une manière plus intelligentes”

## MAGNET Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

#### 10.1.1.1. Local Workshops

AURÉLIEN BELLET organized the workshop **Decentralized Machine Learning, Optimization and Privacy**. More than 50 attendees were present for a series of invited talks on Sep 11-12, 2017. The list of speakers was

- Dan Alistarh (IST Austria / ETH Zurich)
- Borja Balle (Amazon Research)
- Keith Bonawitz (Google Research)
- Hamed Haddadi (QMUL / Imperial College London)
- Stephen Hardy (Data61 / CSIRO)
- Mikael Johansson (KTH)
- Peter Richtárik (KAUST / University of Edinburgh)
- Meilof Veeningen (Philips Research)

MIKAELA KELLER co-organized the local workshop Demi-journée Dating bringing together researchers from the local teams Links, Magnet, Sequel and Sigma for an afternoon of presentations and scientific discussions.

### 10.1.2. Scientific Events Selection

#### 10.1.2.1. Member of the Conference Program Committees

AURÉLIEN BELLET served as PC member of NIPS'17, ICML'17, AISTATS'18 and MOD'17.

MARC TOMMASI served as senior PC member of IJCAI'17 and PC member of CAP'17, EGC'17, CRI'17, AAAI'18.

MIKAELA KELLER served as PC member of NIPS'17 and CAP'17.

JAN RAMON served as PC member of AISTATS'17, AISTATS'18, IEEE-BigData'17, BNaic'17, CIKM'17, DS'17, ECML/PKDD'17, ICHI'17, IJCAI'17, ISMIS'17, KDD'17, MLG'17, MOD'17, NIPS'17 and TDLSE-ECMLPKDD'17.

RÉMI GILLERON served as PC member of CAP'17, IJCAI'17, NIPS'17, AISTATS'18, ICLR'18.

PASCAL DENIS served as PC member of ACL-17, Cap'17, EACL'17, EMNLP'17, IJCAI'17, IWCS'17, CORBON'17, and NIPS'17.

### 10.1.3. Journal

#### 10.1.3.1. Member of the Editorial Boards

JAN RAMON was member of the editorial board of Machine Learning Journal.

JAN RAMON was member of the editorial board of Data Mining and Knowledge Discovery.

#### 10.1.3.2. Reviewer - Reviewing Activities

JAN RAMON acted as reviewer for project proposals and project follow-up for H2020, COST and SNF (CH).

AURÉLIEN BELLET was reviewer for Machine Learning Journal.

### 10.1.4. Invited Talks

MARC TOMMASI was invited at the seminar of the machine learning group at the University of Liege.

JAN RAMON gave an invited talk at the TDLSE'17 workshop of ECML/PKDD'17.

AURÉLIEN BELLET gave invited talks at the DALI 2017 Workshop on Fairness and Privacy in Machine Learning,<sup>0</sup> the 2nd Russian-French Workshop in Big Data and Applications,<sup>0</sup> and the Journée Apprentissage et Interactions du GdR IA.<sup>0</sup>

AURÉLIEN BELLET gave an invited lecture at the Pre-doc Summer School on Learning Systems (MPI/ETH).<sup>0</sup>

AURÉLIEN BELLET was invited at the seminars of the Distributed Computing Lab at EPFL, Multispeech (Inria Nancy), Sequel (Inria Lille), SIGMA (Centrale Lille), Proba/Stat (University of Lille), CRISAL Lille (DaTinG department day).

### 10.1.5. Scientific Expertise

MARC TOMMASI was member of the ANR CES 23 committee and served in the HCERES committee for the scientific evaluation of a French laboratory.

### 10.1.6. Research Administration

PASCAL DENIS was member of the Commission Emploi et Recherche (CER) and Commission de Développement Technologique (CDT) at the Inria Lille Research Center.

## 10.2. Teaching - Supervision - Juries

### 10.2.1. Teaching

Licence MIASHS: MARC TOMMASI, Réseaux, 24h, L1, Université Lille 3.

Licence MIASHS: RÉMI GILLERON, Traitement de données, 24h, L1, Université Lille 3.

Licence MIASHS: MATHIEU DEHOUCQ et THIBAUT LIÉTARD, Projet informatique de traitement de données en SHS, 20h, L2, Université Lille 3.

Licence MIASHS: MIKAELA KELLER, Codage et représentation de l'information, 24h, L1, Université Lille 3.

Licence SoQ (SHS): FABIEN TORRE, Traitement de contenus textuels, 24h, L3, Université Lille 3.

Licence SoQ (SHS): MIKAELA KELLER, Algorithmique de graphes, 24h, L3, Université Lille 3.

Licence SHS: MIKAELA KELLER, Langages du Web, 24h, L2, Université Lille 3.

Licence SHS: MIKAELA KELLER, Représentation numérique de l'information, 24h, L2-L3, Université Lille 3.

Licence économie gestion: RÉMI GILLERON, Traitement de données et documents, 24h, L1, Université Lille 3.

Licence MARC TOMMASI C2i, Université Lille 3.

Master MIASHS: RÉMI GILLERON et FABIEN TORRE, Web et référencement, 24h, M1, Université Lille 3.

Master MIASHS: GÉRAUD LE FALHER, Web et réseaux, 24h, M1, Université Lille 3.

Master MIASHS: MIKAELA KELLER, Programmation et bases de données, 24h, M1, Université Lille 3.

Master MIASHS: MIKAELA KELLER, Algorithmes fondamentaux de la fouille de données, 60h, M1, Université Lille 3.

Master MIASHS: MARC TOMMASI, Apprentissage et émergence de comportements, 30h, M2, Université Lille 3.

<sup>0</sup><http://dalimeeting.org/dali2017/fairness-and-privacy.html>

<sup>0</sup><https://bi.hse.ru/en/rfw/2017/>

<sup>0</sup><http://www.gdria.fr/jai17/>

<sup>0</sup><http://learning-systems.org/events/summer-school-on-learning-systems-2017>

Master LTTAC: FABIEN TORRE, Algorithmique des textes – Javascript, 36h, M1, Université Lille 3.

Master ID: FABIEN TORRE, information structurée, 20h, M2, Université Lille 3.

Master ID: FABIEN TORRE, programmation Web, 20h, M2, Université Lille 3.

Master / Master Spécialisé Big Data: AURÉLIEN BELLET, Advanced Machine Learning, 25.5h, Télécom ParisTech.

Formation continue (Certificat d'Études Spécialisées Data Scientist): AURÉLIEN BELLET, Supervised Learning and Support Vector Machines, 10h, Télécom ParisTech.

Formation continue: AURÉLIEN BELLET, Graph Mining, 3h, Télécom ParisTech pour Allianz.

### **E-learning**

SPOC: MARC TOMMASI, RÉMI GILLERON and ALAIN PREUX: Culture numérique, 5 semesters at the bachelor level, Moodle, Lille 3 university, more than 7000 students.

Pedagogical resources: texts, videos, quiz and exercises available on <http://culturenumerique.univ-lille3.fr/>, creative commons.

## **10.2.2. Supervision**

Postdoc in progress: MELISSA AILEM, Inria@SiliconValley postdoctoral grant, supervised by AURÉLIEN BELLET, MARC TOMMASI, PASCAL DENIS and FEI SHA (University of Southern California).

Postdoc in progress: BO LI, ANR-NFS REM postdoctoral grant, supervised by PASCAL DENIS.

PhD in progress: ONKAR PANDIT, Graph-based Semi-supervised Linguistic Structure Prediction, since Dec. 2017, PASCAL DENIS, MARC TOMMASI and LIVA RALAIVOLA (University of Marseille).

PhD in progress: MATHIEU DEHOUCQ, Graph-based Learning for Multi-lingual and Multi-domain Dependency Parsing, since Oct 2015, PASCAL DENIS and MARC TOMMASI.

PhD in progress: THIBAUT LIÉTARD, Adaptive Graph Learning with Applications to Natural Language Processing, AURÉLIEN BELLET, PASCAL DENIS and RÉMI GILLERON.

PhD in progress: GÉRAUD LE FALHER, Machine Learning in Signed Graphs, Inria Lille – Nord Europe, since Oct. 2014, MARC TOMMASI, FABIO VITALE and CLAUDIO GENTILE (University of Insubria, Italy).

PhD in progress: ROBIN VOGEL, Learning to rank by similarity and performance optimization in biometric identification, since 2017 (CIFRE thesis with IDEMIA and Télécom ParisTech).

PhD: PAULINE WAUQUIER, Task driven representation learning, Université de Lille, May 29th 2017, MIKAELA KELLER and MARC TOMMASI.

PhD: DAVID CHATEL, Semi-supervised spectral clustering defended, Dec. 7th 2017, MARC TOMMASI and PASCAL DENIS.

## **10.2.3. Juries**

- AURÉLIEN BELLET was member of the PhD committee of ROMAIN BRAULT (Examinateur).
- MARC TOMMASI was member (head) of the recruitment committee for Professor and Assistant Professors in Computer Science at Université Lille 3.
- MARC TOMMASI was member of the habilitation committee of JESSE READ (Rapporteur).
- MIKAELA KELLER was a member of the recruitment committee for the Assistant Professor position in Computer Science at Université Lille 3.
- MIKAELA KELLER was a member of the PhD committee of DAMIEN FOURURE (Examinatrice).
- JAN RAMON was a member of the PhD committee of GIANNIS NIKOLENZOS (Athens, Greece).
- RÉMI GILLERON was a member of the PhD committee of LUDOVIC DOS SANTOS (Rapporteur).

### **10.3. Popularization**

- AURÉLIEN BELLET participated in a discussion on Artificial Intelligence at the Fête de la Science event held at Cité des Sciences (Paris, October 8).
- JAN RAMON presented at the "Pint of Science" series in Lille on the theme of big data and data protection on May 15th.
- JAN RAMON gave a presentation on exploiting traffic data (and the MAGNET work in the MUST project in this domain) in the Inria Meet-up series on December 14th.

## MOEX Project-Team

## 6. Dissemination

### 6.1. Promoting Scientific Activities

#### 6.1.1. Scientific Events Organisation

##### 6.1.1.1. Member of Organizing Committees

- Jérôme Euzenat was organiser of the 12th Ontology matching workshop of the 16th ISWC, Wien (AT), 2017 (with Pavel Shvaiko, Ernesto Jiménez Ruiz, Michele Cheatham and Oktie Hassanzadeh)
- Jérôme Euzenat was organiser of the 1st Workshop on Interaction-Based Knowledge Sharing (WINKS) of the 3rd Joint Ontology Workshop (JOMO), Bozen-Bolzano (IT), 2017 (with Dagmar Gromann and Kemo Adrian)

#### 6.1.2. Scientific Events Selection

##### 6.1.2.1. Member of Conference Program Committees

- Jérôme David and Jérôme Euzenat have been programme committee members of the “International joint conference on artificial intelligence (IJCAI)” 2017
- Manuel Atencia, Jérôme David and Jérôme Euzenat have been programme committee members of the “International semantic web conference (ISWC)” 2017
- Jérôme David and Jérôme Euzenat have been programme committee members of the “European Semantic Web Conference (ESWC)” 2017
- Jérôme Euzenat has been programme committee member of the “International Worldwide web Conference (WWW)” 2017
- Jérôme Euzenat has been programme committee member of the “13th International Conference on Semantic Systems (Semantics)” 2017
- Jérôme Euzenat has been programme committee member of the “International Conference on Web Information Systems and Technologies (WebIST)” 2017
- Manuel Atencia and Jérôme David have been programme committee members of the ISWC “Ontology matching” workshop (OM) 2017
- Jérôme David and Jérôme Euzenat have been programme committee members of the “French Extraction and gestion des connaissances conference (EGC)” 2017
- Jérôme David has been programme committee member of the “28es Journées francophones d’ingénierie des connaissances (IC)” 2017

##### 6.1.2.2. Reviewer

- Jérôme David has been a reviewer for the 31st “AAAI Conference on artificial intelligence (AAAI)”, 2017.

#### 6.1.3. Journal

##### 6.1.3.1. Member of Editorial Boards

- Jérôme Euzenat is member of the editorial board of *Journal of web semantics* (area editor), *Journal on data semantics* and the *Semantic web journal*.

##### 6.1.3.2. Reviewer - Reviewing Activities

- Manuel Atencia has been reviewer for *Knowledge-based systems* and the *VLDB journal*.
- Jérôme Euzenat has been reviewer for *ACM transactions on the web*, and *Mobile information systems*.

### 6.1.4. Invited Talks

- “Symbolic methods for RDF data interlinking”, Lecture at EGC, Grenoble (FR), 2017-01-23 (Jérôme David)
- “Data interlinking using link keys”, Seminar Trinity college, Dublin (IE), 2017-04-13 (Jérôme Euzenat)
- “Cultural knowledge evolution: motivations and experiments”, Seminar Trinity college, Dublin (IE), 2017-04-13 (Jérôme Euzenat)
- “Linked data“, Tutorial at the 4th Journées du développement logiciel (JDEV) 2017, Marseille (FR), 2017-07-06 (Manuel Atencia)
- “Knowledge diversity under socio-environmental pressure”, Invited talk, International Conference on Computational Approaches to Diversity in Interaction and Meaning, Venezia (IT), 2017-10-08 (Jérôme Euzenat)
- “Ontology matching, adaptation and evolution”, GDRI in Web science Workshop, PUC-Rio, Rio de Janeiro (BR), 2017-12-04 (Jérôme Euzenat, Fernanda Baião, Kate Revoredo)

### 6.1.5. Leadership within the Scientific Community

- Jérôme Euzenat is member of the executive committee and the scientific council of the CNRS Pre-GDR “Artificial intelligence”.

### 6.1.6. Research Administration

- Jérôme David is member of the organising committee of the LIG keynote speeches

## 6.2. Teaching - Supervision - Juries

### 6.2.1. Teaching

- Jérôme David is coordinator of the Master “Mathématiques et informatiques appliquées aux sciences humaines et sociales” (Univ. Grenoble Alpes)
- Manuel Atencia is responsible of the option “Web, Informatique et Connaissance” of the Master 2nd year “Mathématiques et informatiques appliquées aux sciences humaines et sociales” (Univ. Grenoble Alpes)
- Jérôme Euzenat is, with Sihem Amer-Yahia, coordinator of the “AI and the web” option of the M2R in computer science and applied mathematics (Univ. Grenoble Alpes)

#### 6.2.1.1. Lectures

Licence: Jérôme David, Algorithmique et programmation par objets, 70h, L2 MIASHS, UGA, France

Licence: Jérôme David, Introduction à Python, Licence ESSIG, 24h, UGA, France

Licence: Manuel Atencia, Technologies du web, LP ESSIG, 18h, UGA, France

Master: Jérôme David, Programmation Java 2, 30h, M1 MIASHS, UGA, France

Master: Jérôme David, Formats de données du web, 15h, M1 MIASHS, UGA, France

Master: Jérôme David, JavaEE, 30h, M2 MIASHS, UGA, France

Master: Jérôme David, Développement Web Mobile, 22h30, M2 MIASHS, UGA, France

Master: Manuel Atencia, Formats de données du web, 15h, M1 MIASHS, UGA, France

Master: Manuel Atencia, Introduction à la programmation web, 30h, M1 MIASHS, UGA, France

Master: Manuel Atencia, Intelligence artificielle, 7.5h, M1 MIASHS, UGA, France

Master: Manuel Atencia, Web sémantique, 27h, M2 MIASHS, UGA, France

Master: Manuel Atencia, Semantic web: from XML to OWL, 22.5h, M2R MoSIG, UGA, France

Master: Jérôme David, Stage de programmation, 10h, M2 MIASHS, UGA, France

### 6.2.2. Supervision

- MSc: Jérémy Vizzini, Data interlinking with relational concept analysis, M2R Informatics Data science, Univ. Grenoble Alpes, June 2017 (Jérôme David and Jérôme Euzenat)

### 6.2.3. PhD committees

- Jérôme Euzenat has been committee chair of the computer science PhD of Anthony Hombiat (Université Grenoble Alpes) “OF4OSM: Un méta-modèle pour structurer la folksonomie d’OpenStreetMap en une nouvelle ontologie” supervised by Jérôme Gensel and Marlène Villanova-Oliver, 2017
- Jérôme Euzenat has been reviewer of the computer science PhD of Nguyen Thanh Dong (Université Paris 8 – Vincennes) “Révision d’ontologies fondée sur tableaux” supervised by Myriam Lamolle and Chan Le Duc, 2017
- Jérôme Euzenat has been external examiner of the computer science PhD of Zlatan Dragisic (Linköping university) “Completion of ontologies and ontology networks” supervised by Patrick Lambrix, 2017
- Jérôme Euzenat has been committee chair of the computer science PhD of Jie Sun (Université Clermont-Auvergne) “Intelligent flood adaptive context-aware system” supervised by Kun Mean Hou, Gil de Sousa and Catherine Roussey, 2017
- Jérôme Euzenat has been external examiner of the computer science PhD of Abdelfettah Feliachi (Université Paris-Est) “Interconnexion et visualisation de ressources géoréférencées du Web de données à l’aide d’un référentiel topographique de support” supervised by Bénédicte Bucher, Fayçal Hamdi and Nathalie Abadie, 2017
- Jérôme Euzenat has been committee chair of the computer science PhD of Abdullah Abbas (Université Grenoble-Alpes) “Static analysis of semantic web queries with ShEx schema constraints” supervised by Nabil Layaïda, Pierre Genevès and Cécile Roisin, 2017
- Jérôme Euzenat has been reviewer of the computer science PhD of Quentin Cohen-Solal (Université de Caen-Normandie) “Un cadre algébrique pour le raisonnement qualitatif en présence d’informations hétérogènes: application aux raisonnements multi-échelle et spatio-temporel” supervised by Maroua Bouzid and Alexandre Niveau, 2017

## 6.3. Popularization

- Jérôme Euzenat gave a talk to the local #FranceIA day “Intelligence artificielle et communication”, Grenoble (FR), 2017-03-02
- Manuel Atencia animated the workshop “Modéliser les ontologies: cas d’application d’une ontologie pour l’annotation de photos” at the 4th Journées du développement logiciel (JDEV), Marseille (FR), 2017-07-06
- Jérôme David animated the workshop “Comment faire une application avec des données liées: annotation de photos en utilisant les technos du web sémantique avec Jena” at the 4th Journées du développement logiciel (JDEV), Marseille (FR), 2017-07-06
- Jérôme Euzenat gave an interview “Dans 50 ans, les ordinateurs écriront des succès littéraires?” for the Inria web site, Montbonnot (FR), 2017-10-24



## **ORPAILLEUR Project-Team**

## **9. Dissemination**

### **9.1. Promoting Scientific Activities**

#### **9.1.1. Scientific Events Organization, General Chairs, Scientific Chairs**

- The 25<sup>th</sup> international conference on case-based reasoning (ICCBR-2017) has taken place in Trondheim (Norway) from 26 to 28 June (<http://www.iccbr.org/iccbr17/>). The program chairs were David W. Aha and Jean Lieber.
- Amedeo Napoli was the co-chair with Davide Ciucci and Sergei Kuznetsov of the special session “Special Session on Knowledge Discovery with Formal Concept Analysis and related formalisms (FCA4KD++)”, held between June 26-29 at ISMIS Warsaw (23rd International Symposium on Methodologies for Intelligent Systems [http://ismis2017.ii.pw.edu.pl/s\\_kd\\_fca.php](http://ismis2017.ii.pw.edu.pl/s_kd_fca.php)).
- Amedeo Napoli was the co-chair with Sergei Kuznetsov of the track “General Topics of Data Analysis” at the AIST Conference in Moscow in July 2017 (6th International Conference on Analysis of Images, Social Networks, and Texts <http://aistconf.org/>).
- Amedeo Napoli was the general chair of BDA 2017 held between November 14-17 2017 at Inria Nancy Grand Est/LORIA, “33ième conférence sur la Gestion de Données, Principes, Technologies et Applications” <https://project.inria.fr/bda2017/>.

##### *9.1.1.1. Scientific Animation*

- The scientific animation in the Orpailleur team is based on the Team Seminar which is called the “Malotec” seminar (<http://malotec.loria.fr/?p=1>). The Malotec seminar is held in general twice a month and is used either for general presentations of members of the team or for invited presentations of external researchers.
- Members of the Orpailleur team are all involved, as members or as head persons, in various national research groups.
- The members of the Orpailleur team are involved in the organization of conferences and workshops, as members of conference program committees (AAAI, ECAI, ECML-PKDD, ESWC, ICCBR, ICDM, ICFCA, IJCAI, ISWC, KDD, SDM...), as members of editorial boards, and finally in the organization of journal special issues.

### **9.2. Teaching - Supervision - Juries**

- All the permanent members of the Orpailleur team are involved in teaching at all levels and mainly at University of Lorraine. Actually, most of the members of the Orpailleur team are employed on “Université de Lorraine” positions.
- The members of the Orpailleur team are also involved in student supervision, at all university levels, from under-graduate until post-graduate students, engineers, PhD, postdoc students.
- Finally, the permanent members of the Orpailleur team are involved in HDR and thesis defenses, being thesis referees or thesis committee members.

## PETRUS Project-Team

## 9. Dissemination

### 9.1. Promoting Scientific Activities

#### 9.1.1. Scientific Events Selection

##### 9.1.1.1. Member of the Conference Program Committees

- Nicolas Anciaux: VLDB'18, SIGMOD'17, PAP'17, DATA'17
- Luc Bouganim: Associate Editor for VLDB'18, VLDB'17, BDA'17
- Philippe Pucheral: EDBT'17, DATA'17, MOBILITY'17
- Iulian Sandu Popa: APWeb-WAIM'17, DATA'17, IEEE MobileCloud'17

##### 9.1.1.2. Reviewer

- Guillaume Scerri: CCS'17

#### 9.1.2. Journal

##### 9.1.2.1. Member of the Editorial Boards

- Nicolas Anciaux: Associate Editor of the VLDB Journal

##### 9.1.2.2. Reviewer - Reviewing Activities

- Iulian Sandu Popa: ACM Transactions on Spatial Algorithms and Systems, International Journal of Geo-Information, Journal of Intelligent Transportation Systems

#### 9.1.3. Invited Talks

- Nicolas Anciaux: "A new Approach for the Secure Personal Cloud", Security Seminar, Loria, 23 Mar. 2017. <http://seminaire-securite.loria.fr/seances-passees.fr.html>

#### 9.1.4. Research Administration

Philippe Pucheral: Member of the HDR committee of the STV doctoral school (UVSQ) since 2014

Philippe Pucheral: Member of the steering committee of the ED STIC doctoral school of University Paris-Saclay, 'Data, Knowledge and Interactions' committee (about 250 PhD students) since 2014

Nicolas Anciaux: Member of the council of the doctoral college of the University Paris-Saclay since 2017

Nicolas Anciaux: Correspondent for Inria Saclay at ED STIC doctoral school of University Paris-Saclay since 2017

Nicolas Anciaux: Responsible for the 'Mission Jeunes Chercheurs' at Inria Saclay since 2017

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Licence : Iulian Sandu Popa, Bases de données (niveau L3), 96, UVSQ, France. Guillaume Scerri, Initiation aux bases de données (niveau L2), 63, UVSQ, France. Guillaume Scerri, Fondements de l'informatique (niveau L1), 72, UVSQ, France. Guillaume Scerri, Théorie des Langages (niveau L2), 36, UVSQ, France.

Master : Iulian Sandu Popa, Bases de données relationnelles (niveau M1), Gestion des données spatiotemporelles (niveau M2), Sécurité des bases de données (niveau M2), 96, UVSQ, France. Philippe Pucheral, responsable of the DataScale master, courses in M1 and M2 in databases and in security, introductory courses for jurists, UVSQ, France. Luc Bouganin, Bases de données relationnelles et XML (niveau M1 et M2), 20, AFTI, France. Guillaume Scerri, Bases de données relationnelles (niveau M1), 36, UVSQ, France. Guillaume Scerri, Sécurité et bases de données pour juristes, 4.5, UVSQ, France.

Engineers school : Nicolas Anciaux, courses on Databases (module IN206, niveau M1), 21, and Advanced databases (module ASI13, niveau M2), 24, at ENSTA ParisTech. Nicolas Anciaux, Systèmes d'Information "privacy by design" (niveau M1), 15, at ENSIIE Evry, France. Luc Bouganin, Systèmes d'Information "privacy by design" (niveau M1), 38, ENSIIE Evry et INSA CVL, France. Luc Bouganin, Bases de données et sécurité (niveau M2), 20, Telecom ParisTech.

### 9.2.2. Supervision

PhD in progress : Paul Tran Van, Partage de documents sécurisé dans le Cloud Personnel, October 2014, Nicolas Anciaux and Philippe Pucheral

PhD in progress : Axel Michel, Secure Distributed Computations, October 2015, Benjamin Nguyen and Philippe Pucheral

PhD in progress : Julien Loudet, Personal Queries on Personal Clouds, July 2016, Luc Bouganin and Iulian Sandu Popa

PhD in progress : Riad Ladjel, Secure Distributed Computation for the Personal Cloud, October 2016, Nicolas Anciaux and Philippe Pucheral

PhD in progress : Dimitri Tsoulovos, Privacy-by-design Middleware for Urban-scale Mobile Crowd-sensing, April 2017, Nicolas Anciaux and Valérie Issarny (Inria Mimove)

### 9.2.3. Juries

Philippe Pucheral : reviewer of the PhD thesis of Yifan Li (CNAM Paris, 15/12/2017)

Nicolas Anciaux : Jury member of the PhD thesis of David Montoya (ENS Paris-Saclay, 6/3/2017)

Luc Bouganin : Reviewer of the HDR of Jalil Boukhobza (University of Bretagne Sud, 4/7/2017)

Luc Bouganin : Reviewer of the PhD of Levent Demir (University of Grenoble Alpes, 7/12/2017)

## 9.3. Popularization

MOOC "Défis technologiques des villes intelligentes participatives", du 6 Nov. 2017 au 31 Dec. 2017. Auteur(s): Nicolas Anciaux, Stéphane Grumbach, Valérie Issarny, Nathalie Mitton, Christine Morin, Animesh Pathak, Hervé Rivano. <http://www.sup-numerique.gouv.fr/cid94187/mooc-villes-intelligentes-defis-technologiques-et-societaux.html>

EIT Digital Professional School course "Technological challenges of participatory Smart Cities". Course for companies and cities. By Nicolas Anciaux, Stéphane Grumbach, Valérie Issarny, Nathalie Mitton, Christine Morin, Animesh Pathak, Hervé Rivano. <https://www.eitdigital.eu/newsroom/news/article/eit-digital-professional-school-launches-a-smart-cities-course-for-companies-and-cities/>

Nicolas Anciaux: interview pour le magazine La Recherche. Numéro de Juin 2017, dossier "Données personnelles: Notre vie privée est-elle en danger?", pp.81-86, par Vincent Glavieux et Denis Delbecq.

Rencontre Inria - Industrie, Les données et leurs applications, Conférence "Sécurité des données", Philippe Pucheral et Eric Léandri (fondateur et PDG de Qwant), 6 Juin 2017. <https://www.inria.fr/centre/paris/innovation/rii-les-donnees-17-18-octobre-2017/programme>

Rencontre Inria - Industrie, Les données et leurs applications, Démonstration du projet Domycile, Nicolas Anciaux, , 6 Juin 2017. <https://www.inria.fr/centre/paris/innovation/rii-les-donnees-17-18-octobre-2017/demos/domycile>

Rencontre Inria - Industrie, Les données et leurs applications, Démonstration du projet Domycile, Paul Tran Van, , 6 Juin 2017.

Round table: Accès aux données et aux compétences, Convention Systematic Paris-Région, Luc Bouganim, June 2017.

Demonstration: PlugDB and the Secure Mobile Laboratory, Turing building inauguration, Luc Bouganim, Iulian Sandu Popa, Riad Ladjel, February 2017.

## TYREX Project-Team

## 9. Dissemination

### 9.1. Promoting Scientific Activities

#### 9.1.1. Scientific Events Organisation

##### 9.1.1.1. Member of the Conference Program Committees

- P. Genevès was a member of the program committee of **BDA 2017**, the 33rd National Conference on Databases and Applications.
- N. Layaïda was a member of the program committee of **The Web Conference 2018** - The Web Programming, Design, Analysis, and Implementation track.

##### 9.1.1.2. Reviewer

- P. Genevès has been referee for the following 2017 conferences: IJCAI 2017, ICALP 2017, DocEng 2017, and BDA 2017.
- N. Gesbert has been referee for CAV 2017.
- C. Roisin has been referee for the following 2017 conferences: DocEng 2017 and SMAP 2017.

#### 9.1.2. Journal

##### 9.1.2.1. Member of the Editorial Boards

- P. Genevès has been referee for the **Information and Computation (I&C)** journal

#### 9.1.3. Scientific Expertise

- P. Genevès was expert for the ANRT (CIFRE).
- C. Roisin was expert for the ANR ‘Appel à Projets Génériques’ 2017.

#### 9.1.4. Research Administration

- P. Genevès is responsible for the Computer Science Specialty at the **Doctoral School MSTII (ED 217)**.
- N. Layaïda is ‘réfèrent budget’ member of the budget commission of the Inria Grenoble – Rhône-Alpes research center. The role of this commission is to allocate yearly budget (‘dotation’) to Inria project teams and services. On a yearly basis, we meet with team and service leaders individually, collect their financial needs and set their budget.
- N. Layaïda is member of the Scientific Board of Advanced Data-mining of the Persyval Labex.
- N. Layaïda is member of the Scientific Board of Digital League, the digital cluster of Auvergne-Rhône-Alpes.
- N. Layaïda is member of the experts pool (selection committee) of the minalogic competitive cluster.
- C. Roisin is member of the CNU ‘Conseil national des Universités’ section 27.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Master: P. Genevès, Semantic Web: from XML to OWL, 54hEqTD, M2 (MOSIG), University Grenoble Alpes, France

Licence : N. Gesbert, ‘Logique pour l’informatique’, 45 h eq TD, L3, Grenoble INP

Licence : N. Gesbert, 'Bases de la programmation impérative', 33 h eq TD, L3, Grenoble INP  
 Licence : N. Gesbert, academic tutorship of an apprentice, 10 h eq TD, L3, Grenoble INP  
 Master : N. Gesbert, 'Fondements logiques pour l'informatique', 12 h eq TD, M1, Grenoble INP  
 Master : N. Gesbert, 'Construction d'applications Web', 22 h 30 eq TD, M1, Grenoble INP  
 Master : N. Gesbert, 'Analyse, conception et validation de logiciels', 41 h 15 eq TD, M1, Grenoble INP  
 Licence : C. Roisin, 'Programmation C', 12h eq TD, L2, IUT2, Univ. Grenoble-Alpes  
 Licence : C. Roisin, 'Architecture des réseaux', 112h eq TD, L1, IUT2, Univ. Grenoble-Alpes  
 Licence : C. Roisin, 'Services réseaux', 22h eq TD, L2, IUT2, Univ. Grenoble-Alpes  
 Licence : C. Roisin, 'Introduction système Linux', 21h eq TD, L1, IUT2, Univ. Grenoble-Alpes  
 Licence : C. Roisin, 'Système et réseaux', 14h eq TD, L3, IUT2, Univ. Grenoble-Alpes  
 Licence : C. Roisin, academic tutorship of four apprentices, 20h eq TD, L3, IUT2, Univ. Grenoble-Alpes  
 Licence : C. Roisin, academic tutorship of 18 students, 13h eq TD, L1, IUT2, Univ. Grenoble-Alpes  
 N. Gesbert is responsible of the L3-level course 'logique pour l'informatique' (25 apprentices) and of the M1-level course 'construction d'applications Web' (72 students).  
 P. Genevès is co-responsible of the Master-level course 'Semantic Web: from XML to OWL' in the Mosig, Univ. Grenoble Alpes.  
 C. Roisin is responsible of the Licence Professionnelle en Alternance 'Administration et Sécurité des Systèmes et des Réseaux', L3, IUT2, Univ. Grenoble-Alpes (20 apprentices).  
 C. Roisin is responsible of the L1-level course 'Architecture des réseaux' (150 students).

### 9.2.2. Supervision

PhD: Abdullah Abbas, Static Analysis of SPARQL Queries with ShEx Schema Constraints, University Grenoble Alpes, defended on November 6th 2017, supervised by Pierre Genevès and Cécile Roisin.  
 PhD: Thibaud Michel, On Mobile Augmented Reality Applications based on Geolocation, University Grenoble Alpes, defended on November 10th 2017, supervised by Pierre Genevès and Nabil Layaïda and Hassen Fourati.  
 PhD in progress: Louis Jachiet, Foundations for the Analysis and Distributed Evaluation of SPARQL Queries, started in Sept. 2014, supervised by Pierre Genevès and Nabil Layaïda.  
 PhD in progress: Raouf Kerkouche, Optimized Predictive Analytics with Big Medical Data, started in Oct. 2017, supervised by Pierre Genevès and Claude Castelluccia.  
 PhD in progress: Fateh Boulmaiz, Extensions of the SPARQLGX System, started in Nov. 2017, supervised by Pierre Genevès and Nabil Layaïda.

### 9.2.3. Juries

- P. Genevès was member of the jury for the PhD defense of Carlyna Bondiombouy entitled "Traitement de requêtes dans les systèmes multistores" and defended on July 12th, 2017 in Montpellier.
- N. Layaïda was member and president of the Jury for the Habilitation thesis from University Grenoble-Alpes of Jérôme Malick entitled "the Variational-analysis look at combinatorial optimization and other selected topics in optimization" defended on January 26th, 2017 in Grenoble.
- N. Layaïda was member and president of the Jury for the PhD thesis from University Grenoble-Alpes of Thomas Capelle entitled "Development of optimization methods for land-use and transportation models" defended on April 3rd, 2017 in Grenoble.

## Valda Team

# 8. Dissemination

## 8.1. Promoting Scientific Activities

### 8.1.1. Scientific Events Organisation

#### 8.1.1.1. Member of the Organizing Committees

- Serge Abiteboul, organization of Personal Analytics & Privacy workshop, joint with ECML-PKDD 2017, Skopje, Macedonia
- Serge Abiteboul, scientific organization of colloquium on *La communauté scientifique face au renseignement*, École militaire, Paris, France
- Serge Abiteboul, organization of colloquium on *Les enjeux scientifiques de l'éthique du numérique*, Académie des sciences
- Pierre Senellart, organization of ParisBD 2017, Télécom ParisTech, Paris, France
- Pierre Senellart, co-organizer of ACM-ICPC Southwestern Europe 2017 competition

### 8.1.2. Scientific Events Selection

#### 8.1.2.1. Chair of Conference Program Committees

- Pierre Senellart, BDA 2017 (French conference on data management)
- Pierre Senellart, WebDB workshop, joint with SIGMOD 2017

#### 8.1.2.2. Member of the Conference Program Committees

- Pierre Senellart, *Gems of PODS 2017* committee
- Pierre Senellart, SIGMOD 2017 (*distinguished PC member*), ICDT 2017, EDBT 2018

### 8.1.3. Journal

#### 8.1.3.1. Reviewer - Reviewing Activities

- Pierre Senellart, *Journal of the ACM*, *VLDB Journal*, *Artificial Intelligence*

### 8.1.4. Invited Talks

- Serge Abiteboul, keynote at PPDP-LOPSTR, Namur, Belgium
- Serge Abiteboul, keynote at ETAPS, Uppsala, Sweden
- Serge Abiteboul, keynote at Law & Big Data Conference, Paris, France

### 8.1.5. Leadership within the Scientific Community

Serge Abiteboul is a member of the French Academy of Sciences, of the Academia Europa, and of the scientific council of the Société Informatique de France.

### 8.1.6. Scientific Expertise

- Pierre Senellart, ANR, NSF

### 8.1.7. Research Administration

- Serge Abiteboul was the president of the Dune jury (*Développement d'universités numériques expérimentales*)
- Serge Abiteboul participated in the NCU jury (*nouveaux cursus à l'université*)
- Serge Abiteboul contributed to the report on *Éthique de la recherche en apprentissage machine* of Cerna-Allistene
- Serge Abiteboul is co-chair of the “Committee on Gender Equality and Equal Opportunities” of Inria.
- Luc Segoufin is a member of the CNHSCT of Inria.
- Pierre Senellart is a member of the board of section 6 of the National Committee for Scientific Research.
- Pierre Senellart is vice-director of the DI ENS laboratory, joint between ENS, CNRS, and Inria.

## 8.2. Teaching - Supervision - Juries

### 8.2.1. Teaching

Licence: Pierre Senellart, *Databases*, 54 heqTD, L3, École normale supérieure

Licence: Pierre Senellart, *Algorithms*, 18 heqTD, L3, École normale supérieure

Master: Serge Abiteboul & Pierre Senellart, *Web data management*, 36 heqTD, M2, MPRI

Master: Luc Segoufin, *Logic, descriptive complexity and database theory*, 36 heqTD, M2, MPRI

Pierre Senellart has various teaching responsibilities (L3 internships, M2 internships, M2 administration) at ENS.

Serge Abiteboul proposed with Benjamin Nguyen and Philippe Rigaux a second session of the Mooc “Bases de données relationnelles: comprendre pour maîtriser” (FUN). He proposed with Julia Stoyanovich a course on “Ethical data management” at the EDBT Summer School, Genova, 2017.

### 8.2.2. Supervision

PhD : David Montoya, *Une base de connaissance personnelle intégrant les données d'un utilisateur et une chronologie de ses activités*, Université Paris-Saclay, 6 March 2017, Serge Abiteboul & Pierre Senellart

PhD in progress: Debabrota Basu, *Reinforcement learning applications to data management problems*, started in 2015, Stéphane Bressan & Pierre Senellart

PhD in progress: Julien Grange, *Graph properties: order and arithmetic in predicate logics*, started in 2017, Luc Segoufin

PhD in progress: Miyoung Han, *Learning approaches to dynamic data management*, started in 2015, Pierre Senellart

PhD in progress: Quentin Lobbé, *Diachronic analysis of diaspora communities through web archives enrichment*, started in 2015, Pierre Senellart & Dana Diminescu

PhD in progress: Mikaël Monet, *Efficient querying of large uncertain graphs by exploiting their structure*, started in 2015, Pierre Senellart & Antoine Amarilli

PhD in progress: Karima Rafes, *Security and management of personal data in the Web of things*, started in 2015, Serge Abiteboul & Sarah Cohen-Boulakia

PhD in progress: Alexandre Vigny, *Query enumeration on nowhere-dense graphs*, started in 2015, Luc Segoufin & Arnaud Durand



### 8.2.3. *Juries*

- PhD Paul Lagrée, October 2017, Université Paris-Saclay, Pierre Senellart

## 8.3. Popularization

Serge Abiteboul is involved in several popular science activities. He founded and animates the blog <http://binaire.blog.lemonde.fr/> on computer science. He was the scientific curator (*commissaire scientifique*) of the exhibition “Terra Data” at the Cité des Sciences. He published two scientific popularization books in 2017, “Le temps des algorithmes” [26], with Gilles Dowek, and “Terra data” [27], with Valérie Peugeot.

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

## WIMMICS Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

#### 10.1.1.1. General Chair, Scientific Chair

Michel Buffa was co-responsible of the W3CX WebDev contest at Perth's Festival of the Web Standardization, W3C track at WWW 2017.

Catherine Faron Zucker:

- co-chair of the ESWC2017 workshop on Semantic Web for Scientific Heritage (SW4SH 2017),
- co-chair of the 2nd scientific day of the Inria Learning Lab, Rennes, 10/02/2017, Rennes
- co-chair of the AFIA Industry Forum for Artificial Intelligence (FIIA2017) on Knowledge management, 27/04/2017, Paris
- co-chair of the AFIA day Opportunities and Challenges of Artificial Intelligence (PDIA2017) on AI algorithms and tools, 06/10/2017, Paris

Fabien Gandon:

- General Chair EGC 2017
- Co-chair Workshop LDDL linked data and distributed ledgers (blockchain)
- PhD Symposium co-chair at ISWC 2017

Serena Villata was general chair, together with Leendert van der Torre, of the 20th International Conference on Principle and Practice of Multi-Agent Systems PRIMA, Nice, France, November.

### 10.1.2. Scientific Events Selection

#### 10.1.2.1. Chair of Conference Program Committees

Catherine Faron Zucker: Research and Innovation co-chair of the 13th Int. Conference on Semantic Systems (Semantics 2017).

#### 10.1.2.2. Member of the Conference Program Committees

Michel Buffa: WebAudio conference 2017

Elena Cabrio: Association for Computational Linguistics conference (ACL), Empirical Methods in Natural Language Processing (EMNLP), Extended Semantic Web Conference (ESWC), International Semantic Web Conference, Thirty-First AAAI Conference on Artificial Intelligence (AAAI-17) .

Olivier Corby: International Semantic Web Conference (ISWC), Extended Semantic Web Conference (ESWC), Querying the Web of Data workshop at ESWC (QuWeDa), Conférence de Recherche en Informatique (CRI), GraphQ: 6th International Workshop on Querying Graph Structured Data, Journées Francophones d'Ingénierie des Connaissances (IC), GKR workshop at IJCAI, Symposium sur l'Ingénierie de l'Information Médicale (SIIM).

Catherine Faron Zucker: WWW 2018 (The Web Conference), ICCS 2018 (Int. Conference on Conceptual Structures), IJCAI (Int. Joint Conference on Artificial Intelligence), PRIMA (Int. Conference on Principles and Practice of Multi-Agent Systems), WebSci (ACM Web Science conference), ESWC (European Semantic Web Conference), ISWC (Int. Semantic Web Conference), GKR@IJCAI (Int. Workshop on Graph Structures for Knowledge Representation and Reasoning), IC (Ingénierie des Connaissances), EGC 2018 (Extraction et Gestion des Connaissances), EIAH (Environnements Informatiques pour l'Apprentissage Humain), CNRIA (Colloque National (sénégalais) sur la Recherche en Informatique et ses Applications).

Fabien Gandon: SemWebPro, Senior PC ISWC, Senior PC IJCAI, ESWC, IC, WebScience, WI.

Alain Giboin: ISWC, VOILA Workshop (at ISWC), IC .

Roque López: Applied Natural Language Processing (ANLP, track of SIMBig).

Isabelle Mirbel: International Conference on Advanced Information Systems Engineering (CAISE), IEEE International Conference on Research Challenges in Information Science (RCIS), INformatique des ORganisations et Systèmes d'Information et de Décision (INFORSID), Toulouse, France, Second International Workshop on Semantic Web for Cultural Heritage (SW4CH).

Oscar Rodríguez Rocha: KEOD, KSE , Semantics.

Andrea Tettamanzi: ECG 2018, EvoApplications 2017, GECCO 2017, IC 2017, ISWC 2017, LREC 2018, SAC 2018, Web Intelligence 2017, and WWW 2018 SW4SH workshop at ESWC 2017.

Serena Villata: IJCAI, AAAI, AAMAS, JURIX, ICAIL.

### 10.1.3. Journal

#### 10.1.3.1. Member of the Editorial Boards

Catherine Faron Zucker: Revue d'Intelligence Artificielle.

Fabien Gandon Editor of a special issue SWJ journal for best papers of ESWC 2015 and co-author of its introduction [65]

Isabelle Mirbel: Ingénierie des Systèmes d'Information (Hermès).

Serena Villata: Artificial Intelligence & Law.

#### 10.1.3.2. Reviewer - Reviewing Activities

Elena Cabrio: Journal of Web Semantics, the Computational Linguistics journal, Argument and Computation.

Catherine Faron Zucker: IEEE's Transactions on Learning Technologies (TLT), International Journal of Medical Informatics (IJMI), internationale Traitement Automatique des Langues (TAL), revue Sciences et Technologies de l'Information et de la Communication pour l'Éducation et la Formation (STICEF), Revue d'Intelligence Artificielle (RIA).

Alain Giboin: International Journal of Human-Computer Studies, Journal of Web Semantics.

Andrea Tettamanzi : International Journal of Approximate Reasoning, Semantic Web Journal, IEEE Transactions on Fuzzy Systems, Computers, Environment and Urban Systems.

Serena Villata: Journal of Logic and Computation, Argument & Computation, Artificial Intelligence Journal.

### 10.1.4. Invited Talks

Michel Buffa, "Visites de musées à distance par un robot autonome intelligent" SemWeb Pro conference, Paris, France.

Elena Cabrio was invited speaker of the 12th International Conference on Computational Semantics (IWCS), 19-22 September, Montpellier, France.

Olivier Corby:

- "Best Practice & Design Pattern for the Semantic Web", JDEV, Marseille, July 5th.
- "A Transformation Language for the Web of Data", Data Sciences workshop, ENIT, Tunis, September 13th.
- "Semantic Web Languages and Tools", Journée *Perspectives et défis de l'Intelligence Artificielle*, AFIA, Paris, October 6th.

Fabien Gandon

- Keynote Cognitum workshop IJCAI 2017, talk on Bridging social semantics and formal semantics on the Web August 20th,

<http://cognitum.ws/2017/07/01/cognitum-2017-programproceedings/>

- Keynote at summer academy of the German National Scholarship foundation Semantic Web & Linked data and Wimmics research, September 25th,
- Invited talk at Boston Consulting group Data Analytics evening on Semantic Web and Linked data and Wimmics research, February 21st,
- Keynote for Data Science day EDF, on Semantic Web & Linked data and Wimmics research, November 17th,
- Talk at Mediametrie, Semantic Web & Linked data and Wimmics research, December 1st,
- Invited keynote Luxembourg Institute of Science and Technology (LIST) Semantic Web & Linked data and Wimmics research, December 12th.
- Talk at EDHEC Nice MBA Data Analytics Club about Semantic Web, Semantic Web & Linked data and Wimmics research.

Alain Giboin:

"How to use and teach heuristics for evaluating HCI applications" in the workshop "Enseignement de l'IHM : enjeux et solutions pour les enseignants en IUT, écoles et universités" at IHM'17.

Emilie Palagi:

"Design of a User-Centered Evaluation Method for Exploratory Search Engines", Labex UCN@Sophia Scientific Day, November 28th.

Andrea Tattamanzi:

- Invited talk on "Possibilistic Test of OWL Axioms under the Open-World Assumption" at the WASPIQ Workshop in Arras, June 27th.
- Conference on "Unsupervised Learning" at Amadeus, Sophia Antipolis, November 8th.

### **10.1.5. Scientific Expertise**

Michel Buffa is member of the WebAudio W3C Working Group and UNS academic representative at W3C.

Catherine Faron Zucker is the scientific referent of the Inria Learning Lab.

Catherine Faron Zucker was leading the working group in charge of drafting the scientific challenge on Digital Science for Education for the upcoming Inria strategic plan (2018-2022).

Catherine Faron Zucker participated to one of the working groups in charge of drafting the national strategic plan on Artificial intelligence, France IA.

Catherine Faron Zucker reviewed project proposals for the Academic Research Community (ARC) 6 of Auvergne Rhône Alpes region.

### **10.1.6. Research Administration**

Olivier Corby is member of the scientific board of Université Côte d'Azur RISE academy (Network, Information, Digital Society).

Catherine Faron Zucker is General Treasurer of the French Society for Artificial Intelligence (AFIA).

Catherine Faron Zucker is leading the steering committee of the AFIA college on Knowledge Engineering.

Catherine Faron Zucker was member of the 2017 recruitment committees of Ecole des Mines de Saint Etienne, Université de Lorraine (Nancy), Université Paul Valéry (Montpellier).

Fabien Gandon:

- director of the joint research laboratory QWANT-Inria
- supervising the convention between the Ministry of Culture and Inria
- representative of Inria at W3C consortium
- representative of Inria in the Web Science Trust Network
- member of the Steering Committee of the Scientific Board of Inria Sophia Antipolis (Bureau CP)
- member of ESWC Steering committee
- member of IW3C2 Steering committee for WWW conference series

Alain Giboin: is member of the scientific committee of the IDEX Jedi Academy 5 "Homme, Idées et Milieux". is co-facilitator of the IDEX Jedi Academy 5 initiative "Humanités numériques" (with Arnaud Zucker, CEPAM, and Damon Mayaffre, BCL), is member of the scientific committee of MSHS Axis 2 "TIC, Usages et Communautés". Is co-facilitator of the initiative "Artefacts et Coordination" of MSHS Axis 2 and served as scientific correspondent for Inria Sophia of COERLE (Inria Comité Opérationnel d'Evaluation des Risques Légaux et Ethiques), in tandem with the legal correspondent Nadège Camelio-Laurent.

### 10.1.7. Seminar Organization

"Les lundis de l'ergonomie" is a cycle of seminars on Human Computer Interaction (HCI) and UX Design organized by Emilie Palagi and Louise Chaussade. This multidisciplinary series of talks attract academic and professional profiles but also anyone interested in social science's approach to digital matters. This year, presentations took place with Laureline Améaume, Manuel Boutet and Naji Bouchiba. The slides and some video records are available on line <sup>0</sup>.

## 10.2. Teaching - Supervision - Juries

### 10.2.1. Teaching

#### Teaching Responsibilities

Michel Buffa is Director of MIAGE department (Informatics for Business) at UNS.

Catherine Faron Zucker coordinates the Web option of the 5th year of Polytech Nice Sophia engineering school and is in charge of continuous training for the computer science department of Polytech Nice Sophia Antipolis.

Isabelle Mirbel is Vice-dean of Science Department at University of Nice-Sophia Antipolis (UNS).

Andrea Tettamanzi manages the 3rd year of the *Licence* (Bachelor of Science) in Business Informatics (MIAGE) at the UFR Science of the University of Nice-Sophia Antipolis (UNS).

#### Teaching

Licence: Andrea Tettamanzi, Algorithmics – Object Oriented Programming – Python, 50h, L2, UNS, France.

Licence: Andrea Tettamanzi, Advanced Web Programming (client side), 39h, L2, UNS, France.

Licence: Andrea Tettamanzi, Web, 18 h ETD, L3, UNS, France.

License: Elena Cabrio, Web Server Programming, 45h, L1 INFO, UNS, France.

License: Elena Cabrio, Introduction to the Web, 48h, L1 INFO, UNS, France.

License: Elena Cabrio, Introduction to the Web, 40h, L2 MASS, UNS, France.

License: Elena Cabrio, Internship supervision, 6h, L3 MIAGE, UNS, France.

Licence: Geraud Fokou Pelap, Object Oriented Programming (Java), 45h, L3, MIAGE, UNS, France.

Licence : Isabelle Mirbel, Web programming (Persistency). 54h, L3, UNS, France.

Licence: Michel Buffa, JavaScript, 40h, L3 Miage, UNS, France.

Master: Michel Buffa, Technologies Web, 30h, M1 Miage, UNS, France.

Master: Michel Buffa, Server Side JavaScript & Front-end Frameworks, 30h, M2 Miage NTDP & MBDS, UNS, France.

Master: Michel Buffa, Programmable Web Front-end, 30h, M2 Polytech, UNS, France.

Master: Elena Cabrio, Web Science, 10h, M2 IFI, UNS, France.

Master: Elena Cabrio, Knowledge Engineering, 5h, M1 IFI, UNS, France.

<sup>0</sup><https://lundisergo.hypotheses.org/>

Master: Olivier Corby, Oscar Rodríguez Rocha, Catherine Faron Zucker, Fabien Gandon, Semantic Web of Data, 45h, M2, UNS, France.

Master: Olivier Corby, XML, 20h, M2 IMAFA, UNS, France.

Master: Olivier Corby, Semantic Web, 3H, M2, University of Montpellier, France.

Master: Olivier Corby, Semantic Web, 18H, M2, ENSI, Tunis, Tunisia.

Master: Catherine Faron Zucker, Web languages, 42h, M1, Polytech UNS.

Master: Catherine Faron Zucker, Knowledge Engineering, 9h, M2 IFI, Polytech, UNS.

Master: Fabien Gandon, Semantic Web, 28h, M2, Data Science Technical Institute

Master: Fabien Gandon, Web Science, 3h, M1, UNS, France.

Master: Alain Giboin, Human-Computer-Interaction Design and Evaluation, 54h, M2, UNS.

Master: Alain Giboin, Interaction Techniques and Multimodality, 8h, M2, UNS.

Master: Alain Giboin, Task and Activity Analysis for HCI design and evaluation, 6h, M2 Sociology and Ergonomics of Digital Technologies, UNS.

Master: Alain Giboin, HCI Design and Evaluation, 10h, M2 Sociology and Ergonomics of Digital Technologies, UNS.

Master : Alain Giboin, Economics and ICT: Ergonomics, 6h, M2 Economics and ICT, ISEM, UNS.

Master : Isabelle Mirbel, Project Management, 24h, M2, UNS, France.

Master : Isabelle Mirbel, Requirement Engineering, 42h, M1, UNS, France.

Master : Isabelle Mirbel, Advanced Databases. 48h, M1, UNS, France.

Master: Andrea Tettamanzi, Distributed Systems, 18h, M1, UNS, France.

Master: Andrea Tettamanzi, Parallelism, 18h, M1, UNS, France.

Master: Andrea Tettamanzi, Web Science, 5h, M1, UNS, France.

Master: Andrea Tettamanzi, Fuzzy Description Logics, 5h, M2, UNS, France.

Master: Andrea Tettamanzi, Ontology Learning, 5h, M2, UNS, France.

Master: Andrea Tettamanzi, Data Analysis in Distributed Environment, 18h, M2, UNS, France.

Master: Molka Dhoub, Knowledge Engineering, 2h, M2, UNS, France

Master: Oscar Rodríguez Rocha, Knowledge Engineering, 18h, M2, UNS, France.

### **E-learning MOOC**

Michel Buffa, "JavaScript Intro", June on EDx (MIT/Harvard).

Michel Buffa, "HTML5 Coding Essentials and Best Practices" on EDx.

Michel Buffa, "HTML5 Apps and Games" on Edx.

More than 400.000 subscriptions since 2015 on these three MOOCs.

Fabien Gandon, Olivier Corby & Catherine Faron Zucker, Introduction au Web Sémantique, 2 x 7 weeks, <https://www.fun-mooc.fr/>, Inria, France Université Numérique, Education for Adults, 4870 registered.

Fabien Gandon, Olivier Corby & Catherine Faron Zucker, Introduction to a Web of Linked Data, 2 x 4 weeks, <https://www.fun-mooc.fr/>, Inria, France Université Numérique, Education for Adults, 1703 registered.

### **Tutorial, Summer School**

Elena Cabrio & Serena Villata: Argument Mining course at the 29th European Summer School in Logic, Language, and Information (ESSLLI 2017). University of Toulouse, France, July 17-28.

Olivier Corby: RDF & SPARQL at EGC, Grenoble, France, January 24th.

Olivier Corby: STTL: A Transformation Language for the Web of Data, JDEV, Marseille, July 5th.

Fabien Gandon: Introduction to Linked data and semantic Web, Grenoble, France, January 24th.

Fabien Gandon: Linked data and semantic Web, Winter school Complex Network, Inria UNS, France

### 10.2.2. Supervision

HdR : **Catherine Faron Zucker**, *Knowledge Modelling and Processing for the Social Semantic Web*, UNS, June 12th.

PhD: **Amel Ben Othmane**, *CARS - Un système multi-agent pour l'aide à la décision dans des applications spatio-temporelles incertaines*, UNS, Nhan Le Thanh, Serena Villata and Andrea Tettamanzi, October 12th.

PhD: **Amosse Edouard**, *Détection et Analyse d'Événement dans les Messages Courts sur Twitter*, UNS, Nhan Le Thanh and Elena Cabrio, September 25th.

PhD: **Franck Michel**, *Heterogeneous Databases Federation in Distributed Environment*, UNS, Johan Montagnat, Catherine Faron Zucker, March 3rd.

PhD: **Tuan Anh Pham**, *Study and integration of the mechanism of workflow control in MVC (Model View Controller) architecture: design and implementation of an APM (Activity Process Management) platform for dynamic information systems on the networks*, UNS, Nhan Le Thanh, September 22nd.

PhD in progress: **Molka Dhouib**, *Modeling of a social network of service providers and companies – recommendation of service providers by reasoning on the social network*, UNS, Catherine Faron Zucker with Andrea Tettamanzi.

PhD in progress: **Tran Duc Minh**, *Learning Ontologies from Linked Open Data*, Andrea Tettamanzi, UNS and Nguyen Thanh Binh, University of Danang.

PhD in progress: **Ahmed El Amine Djebri**, *Distributed Artificial Intelligence for Linked Reviewable Data Management on the Semantic Web*, UNS, Andrea Tettamanzi.

PhD in progress: **Michael Fell**, *Natural Language Processing of Song Lyrics*, UNS, Elena Cabrio, Fabien Gandon.

PhD in progress: **Raphaël Gazzotti**, *Conversational Agent Assistant Endowed with Natural Language and Intuition*, UNS & SynchroNext, Fabien Gandon, Catherine Faron Zucker.

PhD in progress: **Tobias Mayer**, *Argument Mining for Clinical Trials*, UNS, Johan Montagnat (CNRS, I3S), Serena Villata and Céline Poudat (UNS).

PhD in progress: **Thu Huong Nguyen**, *Mining the Semantic Web for OWL Axioms*, Andrea Tettamanzi, UNS.

PhD in progress: **Emilie Palagi**, *Design of a Model-based Method for Evaluating Exploratory Search Systems*, UNS, Labex UCN@Sophia, Alain Giboin, Fabien Gandon with Raphaël Troncy (Eurecom).

PhD in progress: **Mahamadou Toure**, *Mobile Access for the Web of Data*, Fabien Gandon, Pascal Molli and Moussa Lo, UGB, UNS.

### 10.2.3. Juries

Catherine Faron Zucker:

- reviewer of Pauline Folz's PhD thesis, entitled *Collaboration dans une fédération de consommateurs de données liées*, defended on October 12 at Université de Nantes;
- reviewer of Hamadache's PhD thesis, entitled *Analyse et recherche dans les réseaux sociaux : vers la caractérisation et l'identification significative d'une identité de structure noyau possible au sein d'un processus évolutionnaire décrivant la dynamique d'un réseau social*, defended on July 16th at Université d'Annaba, Algérie;
- jury member of Olivier Wang's PhD thesis, entitled *Analytics Learning for Rule-Based Systems*, defended on June 28 at Ecole Polytechnique, Paris-Saclay.

Fabien Gandon:

- President of the Ph.D. jury of Franck Michel on “Integrating Heterogeneous Data Sources In The Web Of Data”, University Côte d’Azur 03/03/2017
- Reviewer HDR Hala Skaf Molli on “Decentralized Data Management for the Semantic Web”, l’Université de Nantes, 6/9/2017
- President of the HDR Catherine Faron-Zucker on “”, University Côte d’Azur, 12/06/2017
- Reviewer HDR of Pierre-Antoine Champin on “Empowering Ambivalence Supporting multiple interpretations in knowledge-based systems”, Université Claude Bernard Lyon 1, 13/06/2017
- Reviewer for PhD of Iacopo Vagliano on “Content Recommendation Through Linked Data”, Politecnico di Torino, 5/4/2017

Nhan Le Thanh:

- Reviewer and President of the Jury for Jérémy Bénard, “Import, export et traduction sémantiques génériques basés sur une ontologie de langages de représentation de connaissances”, Université de La Réunion, June 12th.
- Reviewer for HDR thesis of Jean-Baptiste LAMY, “Représentation, iconisation et visualisation des connaissances : Principes et applications à l’aide à la décision médicale”, University of Rouen, December 12th.

Isabelle Mirbel was jury member of PhD Thesis :

- Samedi Heng, “Impact of Unified User-Story-Based Modeling on Agile Methods: Aspects on Requirements, Design and Life Cycle Management”, under the supervision of Yves Wautelet and Manuel Kolp, Université Catholique de Louvain, February.
- Guillaume Surroca, “ViewointS: vers une émergence de con- naissances collectives par élicitation de point de vue”, under the supervision of Stefano A. Cerri, Philippe Lemoisson and Clément Jonquet, Université de Montpellier, June.

Andrea Tettamanzi was reviewer of the PhD thesis of:

- Iacopo Vagliano, *Content Recommendation Through Linked Data*, Politecnico di Torino, May 5th;

and Chairman of the Jury for the thesis of

- Tuan Anh Pham, *Study and integration of the mechanism of workflow control in MVC (Model View Controller) architecture: design and implementation of an APM (Activity Process Management) platform for dynamic information systems on the networks*, September 22nd.

#### 10.2.4. Internships

- Arthur Lemaire de Mil

Date: May–August

Institution: École Nationale Supérieure de Cognitique, École Polytechnique de Bordeaux.

Title: User-centered redesign of the user Interface allowing to remotely control the AZKAR robot

Supervisors: Thierry Bergeron, Alain Giboin.

### 10.3. Popularization

Michel Buffa:

- New-York-Times, March 14th: "Let a Robot Be Your Museum Tour Guide" <sup>0</sup>.
- Nice-Matin December 8th: "Et si vous visitiez une exposition à l’autre bout de la planète, sans bouger de votre salon" <sup>0</sup>.

<sup>0</sup><https://www.nytimes.com/2017/03/14/arts/design/museums-experiment-with-robots-as-guides.html>

<sup>0</sup><http://www.nicematin.com/sciences/dossier-et-si-vous-visitez-une-exposition-a-lautre-bout-de-la-planete-sans-bouger-de-votre-salon-190462>



Catherine Faron Zucker:

- Interview on Artificial Intelligence for Higher Education in *L'Etudiant* online journal <sup>0</sup>.

Fabien Gandon:

- Interview for Science et Vie Junior about Semantic Web
- Interview for Survey Magazine about Semantic Web
- SIF article on the history of the Web [62]

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<sup>0</sup> <http://www.letudiant.fr/educpros/entretiens/intelligence-artificielle-entre-dans-enseignement-superieur.html>

## ZENITH Project-Team

# 10. Dissemination

## 10.1. Scientific Animation

Editorial board of scientific journals:

- VLDB Journal: P. Valduriez.
- Journal of Transactions on Large Scale Data and Knowledge Centered Systems: R. Akbarinia and E. Pacitti are guest editors of a special issue on data management in internet of things (IoT).
- Distributed and Parallel Databases, Kluwer Academic Publishers: E. Pacitti, P. Valduriez.
- Internet and Databases: Web Information Systems, Kluwer Academic Publishers: P. Valduriez.
- Journal of Information and Data Management, Brazilian Computer Society Special Interest Group on Databases: P. Valduriez.
- Book series “Data Centric Systems and Applications” (Springer): P. Valduriez.
- Multimedia Tools and Applications: A. Joly.

Organization of conferences and workshops:

- Alexis Joly was the chair of the LifeCLEF 2017 international workshop <sup>0</sup> dedicated to content-based biodiversity identification techniques, Dunlin, sept. 2017
- Alexis Joly was in the organizing committee of the Floris’tic national workshop held in Toulouse, nov. 2017 (<http://floristic.org/journeefloristic/>)

Conference program committees :

- International Conference on Very Large Data Bases (VLDB), 2017: R. Akbarinia, F. Masseglia
- International Workshop on Big Data Management in Cloud Systems, 2017: R. Akbarinia
- International Conference on XLDB, 2017: P. Valduriez
- Int. Conf. on Extending DataBase Technologies (EDBT), 2017: E. Pacitti
- 2nd Workshop on Big Data and Data Mining Challenges on IoT and Pervasive Systems (BigD2M), 2016: E. Pacitti
- ACM Multimedia conference (ACMMM), 2017: A. Joly
- IEEE International Conference on Image Processing (ICIP), 2017: A. Joly
- ACM International Conference on Multimedia Retrieval (ICMR), 2017: A. Joly
- International Conference and Labs of the Evaluation Forum (CLEF), 2017: A. Joly
- IEEE Int. Conf. on Data Mining, 2017: F. Masseglia
- ACM Symposium on Applied Computing 2017: F. Masseglia
- IEEE Int. Conf. on Data Science and Advanced Analytics (DSAA), 2017: F. Masseglia
- Int. Symposium on Information Management and Big Data (SimBig), 2017: F. Masseglia
- Int. Symposium on Methodologies for Intelligent Systems (ISMIS), 2017: F. Masseglia

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<sup>0</sup><http://www.imageclef.org/lifeclef/2017>

Reviewing in international journals :

- Distributed and Parallel Databases: R. Akbarinia
- ACM Transactions on Database Systems (TODS): A. Joly
- IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI): A. Joly
- Information Sciences: A. Joly
- Ecological Informatics: A. Joly
- Multimedia Tools and Applications Journal (MTAP): A. Joly
- Multimedia Systems: A. Joly
- Transactions on Information Forensics & Security: A. Joly
- International Journal of Computer Vision: A. Joly
- Transactions on Image Processing: A. Joly
- ACM Trans. on Database Systems: E. Pacitti
- Knowledge and Information Systems (KAIS): F. Massegli
- IEEE Transactions on Knowledge and Data Engineering (TKDE): F. Massegli
- Transactions on Parallel and Distributed Systems (TPDS): F. Massegli
- Data Mining and Knowledge Discovery (DMKD): F. Massegli
- International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems (IJUFKS): F. Massegli
- Transactions on Large-Scale Data and Knowledge-Centered Systems (TLKDS): F. Massegli

Other activities (national):

- P. Valduriez is the scientific manager for the Latin America zone at Inria's Direction of Foreign Relationships (DPEI). In 2017, he has been elected President of the Scientific Committee of the BDA conference for 4 years.
- P. Valduriez gave an invited talk "Data science and science data" on Dec. 1, at the first seminar of Axis 4 "Information systems, data storage and transfer" of the #Digitag Institut de Convergence on numerical agriculture, in Montpellier.
- Alexis Joly gave invited talks in Conference of the biology society of Montpellier 2017 (60 participants), Transfer-LR seminar 2017 on machine learning (100 participants), CIRAD BIOS department seminar 2017 (100 participants).
- Alexis Joly served as a reviewer for the French International Cooperation program (STIC AmSud)
- F. Massegli participated to a Panel for Inria's 50th anniversary in Grenoble on "digital literacy", November 2017.
- F. Massegli gave invited talks: on "Big Data Analytics" at Univ. of Marseille, January 27 ; on "Massively Distributed Time Series Analytics" for LIRMM's 25th anniversary ; on "Computer Science for Everyone" at "Université du Tiers Temps" (UTT), March 2017.
- F. Massegli served as a reviewer for international programs (STIC AmSud, ECOS SUD).
- F. Massegli is scientific referent for Inria on the frame agreement with SAFRAN about "System Monitoring and Data Analytics".
- F. Massegli is "Chargé de mission pour la médiation scientifique Inria" and heads Inria's national network of colleagues involved in science popularization.
- E. Pacitti is responsible for new comers at Polytech' Montpellier's Direction of Foreign Relationships.

Other activities (international):

- E. Pacitti gave an invited talk at CEFET, Rio de Janeiro on nov 27 on “uncertainty analysis of big simulation data”.
- P. Valduriez gave several invited talks: “The CloudMdsQL Multistore System” on may 2 at the Data Systems Group Seminar Series, University of Waterloo, Canada, and on may 4 at McGill University, Montréal, Canada; “Data Science: opportunities and risks” on july 26 at the Colloquium of PESC/COPPE, UFRJ, Rio de Janeiro; “An Overview of Polystores” on oct 11 at the XLDB conference in Clermont-Ferrand; “Data science and science data” on nov 27 at CEFET, Rio de Janeiro.

## 10.2. Teaching - Supervision - Juries

### 10.2.1. Teaching

Most permanent members of Zenith teach at the Licence and Master degree levels at UM2.

Reza Akbarinia:

Master Research: New approaches for data storage, 10h, level M2, Faculty of Science, UM

Florent Massegia:

Science Popularization: 2 Ph.D students, from 2 different doctoral schools are having a 30h doctoral module under Florent Massegia’s supervision.

Esther Pacitti:

IG3: Database design, physical organization, 54h, level L3, Polytech’ Montpellier, UM2

IG4: Networks, 42h, level M1, Polytech’ Montpellier, UM2

IG4: Object-relational databases, 32h, level M1, Polytech’ Montpellier, UM2

IG5: Distributed systems, virtualization, 27h, level M2, Polytech’ Montpellier, UM2

Industry internship committee, 50h, level M2, Polytech’ Montpellier

Patrick Valduriez:

Professional: Distributed Information Systems, Big Data Architectures, 75h, level M2, Capgemini Institut

### 10.2.2. Supervision

- PhD in progress: Gaetan Heidsieck Distributed Management of Scientific Workflows for High-Throughput Plant Phenotyping, started Oct 2017, Univ. Montpellier, Esther Pacitti, Christophe Pradal, François Tardieu
- PhD in progress: Christophe Botella, Large-scale Species Distribution Modelling based on crowdsourced image streams, started Oct 2016, Univ. Montpellier, Alexis Joly, François Munoz (IRD), Pascal Monestiez (INRA)
- PhD in progress: Titouan Lorieul, Pro-active Crowdsourcing, started Oct 2016, Univ. Montpellier, Advisor: Alexis Joly
- PhD in progress: Mehdi Zitouni Closed Pattern Mining in a Massively Distributed Environment started sept. 2014, Univ. Tunis, Advisor: Florent Massegia, co-advisor: Reza Akbarinia
- PhD in progress : Djamel-Edine Yagoubi, Indexing Time Series in a Massively Distributed Environment, started oct. 2014, Univ. Montpellier, Advisors: Florent Massegia and Patrick Valduriez, co-advisor: Reza Akbarinia
- PhD in progress : Sakina Mahboubi, Privacy Preserving Query Processing in Clouds, started oct. 2015, Univ. Montpellier, Advisor: Patrick Valduriez, co-advisor: Reza Akbarinia

- PhD in progress: Khadidja Meguelati, Massively Distributed Clustering, started Oct 2016, Univ. Montpellier, Advisor: Florent Massegia, co-advisor : Nadine Hilgert (INRA)
- PhD in progress: Vitor Silva, Supporting Human-in-the-Loop in Large-scale Workflows, started 2014, UFRJ, Brazil Advisors: Marta Mattoso (UFRJ), Daniel Oliveira (UFF), Patrick Valduriez
- PhD in progress: Renan Souza, Massively Distributed Clustering, started 2015, UFRJ, Brazil Advisors: Marta Mattoso (UFRJ), Daniel Oliveira (UFF), Patrick Valduriez

### 10.2.3. *Juries*

Members of the team participated to the following PhD committees:

- A. Joly: Sanaa Chafik (ENSEM Casablanca)
- E. Pacitti: Vincent Leroy (HDR, Univ. Grenoble), Douglas Ericson Marcelino de Oliveira (UFF, Rio de Janeiro), Pauline Folz (Univ. Nantes, reviewer), Uras Tos (Univ. Toulouse, reviewer), Carlyna Bondlombouy (Univ. Montpellier).
- P. Valduriez: Patrick KamnangWanko (Univ. Bordeaux), Julien Pilourdault (Univ. Grenoble, reviewer), Yvan Brondino (Univ. Madrid, reviewer)
- F. Massegia: Andres Moreno (Univ. Nice-Sophia Antipolis), Kenza Kellou-Menouer (Univ. Versailles St-Quentin), Raef Mousheimish (Univ. Versailles St-Quentin, reviewer)

Members of the team participated to the following hiring committees:

- A. Joly: associate professor position, Univ. Toulon
- P. Valduriez: associate professor position, Univ. Nantes

## 10.3. Popularization

Zenith has major contributions to science popularization, as follows.

### 10.3.1. *Code Teaching for Kids*

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 Massegia 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 Massegia 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 this year with new activities and new scientific content.

F. Massegia 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. He is also a member of the management board of "Les Petits Débrouillards" in Languedoc-Roussillon and the scientific responsible for school visits in the LIRMM laboratory.

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

### **10.3.2. Science Outreach**

In the context of the Floris'tic project, A. Joly participates regularly to the set up of popularization, educational and citizen science actions in France (with schools, cities, parks, 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 the Czech republic (with an objective of 40 classrooms in the end). 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.

### **10.3.3. Events**

Zenith participated to the following events:

- F. Masseglia co-organized and co-animated the Inria's stand at "La fête de la science", Montpellier, held by Genopolys (a science village).
- F. Masseglia co-organized the regional Code-Week events with the local network of media-library ("réseau des médiathèques de Montpellier Méditerranée Métropole").
- F. Masseglia is member of the project selection committee for "La fête de la science" in Montpellier.
- A. Joly designed/animated several stands and public demos in events: "La fête de la science" (Montpellier, 1 day demo), 50 ans de l'Inria (Paris, 2-days demo), Expomobile Homonumericus (Itinerant expo in France).

## ALICE Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

#### 10.1.1.1. General Chair, Scientific Chair

We organized a free workshop on February 2017 (<http://shapeforge.loria.fr/workshop/>) in-between the PhD defenses of Jean Hergel and Jérémie Dumas. International jury members gave talks; the workshop was open to the public. We recorded all the talks and made them available online (<https://www.youtube.com/playlist?list=PLfUzw-QfoyuWLPJpCCp6xwTAPMIjt7Q-k>).

#### 10.1.1.2. Member of the Organizing Committees

B. Lévy is an elected member of the steering committee of Shape Modeling Association (since 2017).

### 10.1.2. Scientific Events Selection

#### 10.1.2.1. Chair of Conference Program Committees

Sylvain Lefebvre was program co-chair for SMI 2017. B. Lévy was conference co-chair of WSOM 2017.

#### 10.1.2.2. Member of the Conference Program Committees

B. Lévy was program committee member of Eurographics 2017, SGP 2017, SPM 2017

#### 10.1.2.3. Reviewer

Members of the team were reviewers for SoCG'17, Eurographics, SIGGRAPH, Computer Aided Design, Pacific Graphics, and SPM.

### 10.1.3. Journal

#### 10.1.3.1. Member of the Editorial Boards

- B. Lévy is a member of the editorial board of ACM Transactions on Graphics.
- B. Lévy is a member of the editorial board of Graphical Models (Elsevier)
- B. Lévy is a member of the editorial board of Computer Graphics and Applications
- Sylvain Lefebvre was associated editor for ACM Transactions on Graphics.

#### 10.1.3.2. Reviewer - Reviewing Activities

Members of the team were reviewers for Computer Aided Design (CAD), Discrete Applied Mathematics (Elsevier), Transactions on Visualization and Computer Graphics (IEEE), and Computers & Graphics (Elsevier).

### 10.1.4. Invited Talks

B. Lévy gave an invited keynote talk at Eurographics 2017

### 10.1.5. Research Administration

Samuel Hornus was a moderator of the CDT (Technological Development Commission) of CRI Nancy.

## 10.2. Teaching - Supervision - Juries

### 10.2.1. Teaching

Licence: Samuel Hornus, Module « mathématiques appliquées à l'informatique » (MAI). 64h eq. TD, niveau L3. à Télécom Nancy, France.

Licence: Cédric Zanni, Informatique 2, 40h ETD, L3, École des Mines de Nancy, France.

Licence: Cédric Zanni, Informatique 1, 20h ETD, L3, École des Mines de Nancy, France.

Master: Nicolas Ray, Initiation à la recherche, 10 heures, M1, université de Lorraine, France.

Master: Sylvain Lefebvre, Programmation pour le jeux vidéo, 30h ETD, Ecole des Mines de Nancy, France.

Master: Sylvain Lefebvre, Introduction au parallélisme et au graphisme, 9h ETD, ENSG Nancy, France.

Master: Sylvain Lefebvre, Introduction à la fabrication additive, 9h ETD, ENSEM Nancy, France.

Master: Cédric Zanni, Database essentials, 24h ETD, M1, École des Mines de Nancy, France.

Master: Cédric Zanni, Techniques de l'animation et du jeu vidéo, 27h ETD, M1, École des Mines de Nancy, France.

Master: Cédric Zanni, Software Engineering, 18h ETD, M1, École des Mines de Nancy, France.

Master: Cédric Zanni, Operating System, 17h ETD, M1, École des Mines de Nancy, France.

Master: Cédric Zanni, Introduction au C/C++, 34h ETD, M1, École des Mines de Nancy, France.

Master: Cédric Zanni, UML, 4h ETD, M1, École des Mines de Nancy, France.

Master: B. Lévy teaches Numerical Methods in École nationale supérieure de géologie de Nancy, France (12h).

Master: B. Lévy teaches Algorithmic Gems in École des Mines de Nancy, France (8h).

### 10.2.2. Supervision

Ph.Ds in progress supervised by B. Lévy:

- Maxence Reberol, Finite elements on hex-dominant meshes, third year. Funding: ERC ShapeForge and région Lorraine. Defense: February 15th 2018.
- Pierre Anquez, Robust meshing of geological data, consortium GOCAD, second year, co-supervised with Guillaume Caumon.
- Julien Renaudeau, Constrained geo-modelling using implicit functions, second year, Cifre Schlumberger, co-supervised with Guillaume Caumon.

Jérémie Dumas and Jean Hergel, supervised by Sylvain Lefebvre, defended their PhD theses in February 2017.

Jérémie Dumas received the University of Lorraine award for the best 2017 PhD thesis in Computer Science.

### 10.2.3. Juries

Sylvain Lefebvre was "rapporteur" for the PhD of Benoit Arbelot (Grenoble Universities, defended April 7 2017), for the PhD thesis of Luigi Malomo (CNR Pisa) and Christian Santoni (Computational Design Lab, University of Rome).

## 10.3. Popularization

Haichuan Song, Sylvain Lefebvre and Salim Perchy presented IceSL at a booth at the Maker Faire Rome 2017 (<http://www.makerfairerome.eu/en/>). This is a major event with 100K+ visitors every year. We presented the software to students, general public and 3D printing enthusiasts. We received a Maker of Merit award for our project.

Sylvain Lefebvre participated to the radio program "La méthode scientifique" on France Culture, aired on November 8 2017 (<https://www.franceculture.fr/emissions/la-methode-scientifique/la-methode-scientifique-mercredi-8-novembre-2017>).

B. Lévy gave an invited talk at "Forum Art Inovation" organized by IRCAM, Paris, Pompidou center (16-03-2017): [http://medias.ircam.fr/stream/ext/video/files/2017/04/04/Vertigo\\_16mars2017\\_%20BrunoLevy\\_GB.mov.webm](http://medias.ircam.fr/stream/ext/video/files/2017/04/04/Vertigo_16mars2017_%20BrunoLevy_GB.mov.webm).



## AVIZ Project-Team

## 8. Dissemination

### 8.1. Promoting Scientific Activities

#### 8.1.1. Scientific Events Organisation

##### 8.1.1.1. Member of the Organizing Committees

- Jean-Daniel Fekete organized the Doctoral Colloquium (Doctoriales) for the Journées Visu 2017
- Tobias Isenberg was Posters co-chair for EuroVis 2017
- Pierre Dragicevic co-organized the CHI 2017 workshop on **Moving Transparent Statistics Forward @CHI 2017**.
- Petra Isenberg was Posters co-chair for VIS 2017
- Evanthia Dimara organized the workshop "DECISive 2017: Dealing with Cognitive Biases in Visualisations" at IEEE VIS'2017 (<http://decisive-workshop.dbvis.de/>).

#### 8.1.2. Scientific Events Selection

##### 8.1.2.1. Member of the Conference Program Committees

- Jean-Daniel Fekete was a member of the program committee for IEEE VIS 2017.
- Jean-Daniel Fekete was a member of the test of time award committee for IEEE InfoVis 2017.
- Jean-Daniel Fekete was a member of the program committee for EuroVis 2017.
- Tobias Isenberg was a member of the program committee for ACM/Eurographics Expressive 2017.
- Tobias Isenberg was a member of the program committee for ACM SUI 2017.
- Tobias Isenberg was a member of the program committee for IEEE VISAP 2017.
- Tobias Isenberg was a member of the program committee for IEEE InfoVis 2017.
- Tobias Isenberg was a member of the program committee for EuroVis 2017, full & short papers.
- Tobias Isenberg was a member of the program committee for Eurographics 2017.
- Tobias Isenberg was a member of the program committee for SCCG 2017.
- Tobias Isenberg was a member of the program committee for IEEE 3DUI 2017.
- Pierre Dragicevic was a member of the program committee for IEEE VIS 2017.
- Pierre Dragicevic was a member of the program committee for IHM 2017.
- Pierre Dragicevic was a member of the program committee for the DECISive 2017 workshop.
- Petra Isenberg was a member of the program committee for IEEE InfoVis 2017.
- Petra Isenberg was a member of the program committee for EuroVA 2017.
- Petra Isenberg was a member of the short paper committee for EuroVis 2017.
- Petra Isenberg was a member of the program committee for IEEE PacificVis 2017.
- Tanja Blascheck was a member of the Program Committee – NIER and Tool Tracks for VISsOFT 2017.

##### 8.1.2.2. Reviewer

- Jean-Daniel Fekete reviewed for CHI, EuroVis, InfoVis.
- Tobias Isenberg reviewed for InfoVis, SciVis, EuroVis, SIGGRAPH, Eurographics, CHI, VR, SCCG, 3DUI, ISS, Graphics Interface, PacificVis, Expressive, SUI, VISAP.
- Pierre Dragicevic reviewed for CHI, VIS, UIST, Interact, IHM.

- Petra Isenberg reviewed for EuroVA, EuroVis, Interact, PacificVis, InfoVis.
- Christoph Kinkeldey reviewed for ACM INWUT.
- Tanja Blascheck reviewed for EuroVis, PacificVis, VISSOFT (IEEE Working Conference on Software Visualization), VRST (ACM Symposium on Virtual Reality Software and Technology).
- Lonni Besançon reviewed for 3DUI, CHI, ICMI, IHM, ISS, OzCHI, VR, VRST.

### 8.1.3. Journal

#### 8.1.3.1. Member of the Editorial Boards

- Tobias Isenberg is member of the editorial board of Elsevier's Computers & Graphics journal.
- Pierre Dragicevic is member of the editorial board of the Human-centric Computing and Information Sciences (HCIS) journal.

#### 8.1.3.2. Reviewer - Reviewing Activities

- Jean-Daniel Fekete reviewed for TVCG.
- Tobias Isenberg reviewed for TVCG.
- Pierre Dragicevic reviewed for TVCG.
- Petra Isenberg reviewed for TVCG, InfoVis Journal.
- Christoph Kinkeldey reviewed for TVCG, IEEE CG&A, IJGIS, ISPRS IJGI.
- Tanja Blascheck reviewed for JEMR (Journal of Eye Movement Research), Pattern Recognition Journal, TVCG.
- Lonni Besançon reviewed for IEEE Consumer Electronic.

### 8.1.4. Invited Talks

- Jean-Daniel Fekete: Seminar Dataviz : idée, méthode et perception Visualisation d'information : des principes au passage à l'échelle, INED, Paris, December 4, 2017
- Jean-Daniel Fekete: Keynote EA Artificial Evolution 2017, Progressive Data Analysis: a new computation paradigm for scalability in exploratory data analysis. October 25, 2017
- Jean-Daniel Fekete: Keynote ChinaVis 2017, Qingdao, China, Progressive Data Analysis: a new computation paradigm for scalability in exploratory data analysis , July 17, 2017
- Jean-Daniel Fekete: Invited Talk China-Germany Workshop, Qingdao, China, Visualization for the People, July 16, 2017
- Jean-Daniel Fekete: Keynote WSOM+ 2017, LORIA, Nancy, France, Visualization of Complex Networks, June 28th, 2017
- Jean-Daniel Fekete: Keynote VISIGRAPP 2017, Porto, Portugal, Understanding Complex Networks, Feb. 27, 2017
- Jean-Daniel Fekete: Invited Talk, Univ. of Konstanz and Univ. of Stuttgart, ProgressiVis: A New Language Paradigm for Scalability in Exploratory Analytics, Feb. 9, 2017
- Jean-Daniel Fekete: Keynote Speech, Univ. of Grenoble, Visualizing [Dense, Dynamic, Complex] Networks, Feb. 2, 2017
- Jean-Daniel Fekete: Open Data Conference, La Rochelle, Panel on Open Data and Visualization, Jan. 17, 2017
- Tobias Isenberg: Invited talk at TU Wien, Austria, December 22: "Interactive Navigation and Selection using Tactile and Tangible Inputs for 3D Data Exploration"
- Tobias Isenberg: Invited talk at Visualization research group, University of Bergen, Norway, April 7: "Abstraction in Non-Photorealistic Rendering and Illustrative Visualizations."
- Tobias Isenberg: Invited talk at Dept. of Computer Science, University of Bergen, Norway, April 6: "Tactile Navigation and Selection for 3D Data Exploration."

- Tobias Isenberg: Invited talk at Connecting The Dots/Intelligent Trackers (CTD/WIT 2017), Orsay, France, March 7: “Abstraction in Scientific Data Visualization: Application to Brain Connectivity and Structural Biology.”
- Pierre Dragicevic: “**Statistical Dances: Why No Statistical Analysis is Reliable and What To Do About It**”. Séminaires Recherche Reproductible, LIG, Grenoble. 22 June 2017.
- Petra Isenberg: “Evaluation in Visualization: A closer look at current practices, issues, and perspectives”. University of Stuttgart, Visualization Seminar Series
- Petra Isenberg: “Evaluation in Visualization: A closer look at current practices, issues, and perspectives”. Technical University of Vienna, Visualization Seminar Series
- Tanja Blascheck: “Evaluating Interactive Visualizations using Eye Tracking, Interaction Logs, and Think-Aloud Protocols”. Inria, Aviz, Saclay, France, 3 March 2017.
- Kuno Kurzhals and Tanja Blascheck: “Visual Analysis of Eye Tracking Data”. Popakademie, Mannheim, Germany, 3 July 2017.
- Tanja Blascheck: “Understanding Interactive Visualizations: Leveraging Eye Movements and Visual Analytics”. Hochschule Karlsruhe, Karlsruhe, Germany, 31 August 2017.
- Evanthia Dimara: “The Attraction Effect in Information Visualization”. Invited talk at University of Athens, 28 September 2017.
- Evanthia Dimara: “Biais cognitifs dans la visualisation d’information: implications pour l’évaluation”. Talk at Visu 2017.

#### **8.1.5. Leadership within the Scientific Community**

- Jean-Daniel Fekete is a member of the Steering Committee of EuroVis (Eurographics WG on Data Visualization).
- Jean-Daniel Fekete is a member of the Steering Committee of the IEEE Information Visualization Conference.
- Jean-Daniel Fekete is a member of the Eurographics Publication Board.
- Tobias Isenberg is a member of the Executive Committee of the Visualization and Computer Graphics Technical Committee of the IEEE Computer Society and serves as Publications Chair
- Tobias Isenberg is a member of the Steering Committee of Expressive (Joined Symposium on Computational Aesthetics, Sketch-Based Interfaces & Modeling, and Non-Photorealistic Animation & Rendering)

#### **8.1.6. Scientific Expertise**

- Tobias Isenberg reviewed for NSERC.
- Pierre Dragicevic reviewed for NSERC.

## **8.2. Teaching - Supervision - Juries**

### **8.2.1. Teaching**

- “Information Visualization” taught by Jean-Daniel Fekete at Polytechnique, Data Science, Saclay, France, Dec. 2017
- “Big Data Visual Analytics” seminar taught by Jean-Daniel Fekete at Centrale Supélec, Decision Support and Business of Intelligence, Nov. 28th, Saclay, France, 2017
- “Information Visualization and Visual Analytics” taught by Jean-Daniel Fekete at ISCD Summer School, Roscoff, France, August 2017
- “Photorealistic Rendering” taught by Tobias Isenberg at Polytech Paris-Sud and Université Paris-Saclay, France
- “Introduction to Computer Graphics” taught by Tobias Isenberg at Polytech Paris-Sud, France

- “Non-Photorealistic Rendering” taught by Tobias Isenberg at the University of Granada, Spain
- “Introduction to Statistics” guest lecture by Pierre Dragicevic for the Visual Analytics Master Course at École Centrale, Paris.
- “Interactive Information Visualization” taught by Petra Isenberg at Université Paris Sud
- “Visual Analytics” taught by Petra Isenberg at CentraleSupélec

### 8.2.2. Supervision

- PhD: Evanthia Dimara, Information Visualization for Decision Making, Université Paris-Sud, 2014, Pierre Dragicevic and Anastasia Bezerianos. Defended on Nov 30.
- PhD: Lonni Besançon, An Interaction Continuum for Scientific Visualization, Université Paris-Sud, 2014, Tobias Isenberg. Defended on December 14.
- PhD: Paola Llerena Valdivia, Wavelet-based analysis of time-varying data on graphs, University of São Paulo - USP, 2017, Jean-Daniel Fekete, Luis Gustavo Nonato.
- PhD: Marc Barnabé, Multiscale reconstruction of microbial ecosystems using semi-supervised machine learning, Université Paris-Sud, 2017, Jean-Daniel Fekete, Evelyne Lutton, INRA.
- PhD in progress: Xiyao Wang, Augmented Reality Environments for the Interactive Exploration of 3D Data, Univ. Paris-Sud; 2017, Tobias Isenberg
- PhD in progress: Sarkis Halladjian, Spatially Integrated Abstraction of Genetic Molecules, Univ. Paris-Sud; 2017, Tobias Isenberg
- PhD in progress: Haichao Miao, Visual Abstraction and Modeling for DNA Nanotechnology, TU Wien, Austria, 2016, Tobias Isenberg

### 8.2.3. Juries

- Jean-Daniel Fekete: Member of the PhD committee of Dr. Arnaud Prouzeau.
- Jean-Daniel Fekete: Member of the PhD committee of Dr. Antoine Lhuillier.
- Jean-Daniel Fekete: Member of the PhD committee of Dr. Alexandre Perrot.
- Jean-Daniel Fekete: Member of the PhD committee of Dr. Nicolas Médoc.
- Jean-Daniel Fekete: Member of the HdR committee of Dr. Jean-Philippe Cointet.
- Jean-Daniel Fekete: Member of the HdR committee of Dr. Gilles Bailly.
- Tobias Isenberg: Member of the PhD committee of Dr. Paul Issartel.
- Pierre Dragicevic: Hiring committee for tenure-track assistant Professor of Information Visualization, University of Copenhagen.
- Pierre Dragicevic: Member of the Commission Consultative de Spécialistes de l'Université Paris-Sud (CCSU).
- Pierre Dragicevic: Mid-term PhD evaluation committee of Michael Wessely.
- Pierre Dragicevic: Mid-term PhD evaluation committee of Abby Liu.
- Pierre Dragicevic: Reviewer for Ruoyi He's M2 internship.
- Petra Isenberg: Jury Inria Starting Research Positions

## 8.3. Popularization

- Jean-Daniel Fekete contributed to the DataVis section of the Terra Data exhibition at La Cité des Sciences, April 4th 2017 to January 7th 2018
- Jean-Daniel Fekete contributed to the exhibition on Jacques Bertin at EHESS Paris, November 14th to December 15th 2017
- Jean-Daniel Fekete and Charles Perin organized a workshop on data visualization for the "retrospective Jacques Bertin" at EHESS Paris on November 23-24 2017
- Pierre Dragicevic and Yvonne Jansen: the [Curated List of Physical Visualizations](#) is continuously being updated.
- Pierre Dragicevic and Jean-Daniel Fekete: Demo of [Zooids](#) at [Inria's 50th anniversary](#). 7 Nov 2017.
- Jean-Daniel Fekete and Pierre Dragicevic interviewed by France Culture (la méthode scientifique) on [Zooids](#). 21 Dec 2017.
- The [Zooids](#) video has been watched 12 million times, shared 65,000 times and liked 86,000 times on [Facebook](#).

## EX-SITU Project-Team

## 9. Dissemination

### 9.1. Promoting Scientific Activities

#### 9.1.1. Scientific Events Organisation

##### 9.1.1.1. Member of the Organizing Committees

- ACM CHI 2017, *Video-Previews* Chair: Carla Griggio
- ACM CHI 2018, *ACM Conference on Human Factors in Computing*, Web Co-Chair: Ignacio Avellino

#### 9.1.2. Scientific Events Selection

##### 9.1.2.1. Chair of Conference Program Committees

- ACM CHI 2017, *Late-Breaking Work* Co-Chair: Theophanis Tsandilas
- ACM/ISMIR 2018, *Music and Technology* Co-Chair: Wendy Mackay

##### 9.1.2.2. Member of the Conference Program Committees

- ACM CHI 2018, *ACM CHI Conference on Human Factors in Computing Systems*: Michel Beaudouin-Lafon, Wendy Mackay, Theophanis Tsandilas
- ACM CHI 2017, *ACM CHI Conference on Human Factors in Computing Systems*: Michel Beaudouin-Lafon, Wendy Mackay
- ACM UIST 2017, *ACM Symposium on User Interface Software and Technology*: Michel Beaudouin-Lafon, Wendy Mackay
- IUI 2018, *ACM IUI Conference on Intelligent User Interfaces*: Wendy Mackay
- MOCO 2017, *International Conference on Movement and Computing*: Sarah Fdili Alaoui
- EuroVR 2017, *European Virtual Reality Conference*: Cédric Fleury
- ACM C&C 2017, *Creativity and Cognition*: Andrew Webb

##### 9.1.2.3. Reviewer

- ACM CHI 2017-18, *ACM CHI Conference on Human Factors in Computing Systems*: Andrew Webb, Carla Griggio, Nolwenn Maudet, Wanyu Liu, Sarah Fdili Alaoui, Cédric Fleury, Theophanis Tsandilas, Michael Wessely, Ignacio Avellino
- ACM UIST 2017 *ACM Symposium on User Interface Software and Technology*: Andrew Webb, Marianela Ciolfi Felice, Theophanis Tsandilas, Michael Wessely, Wanyu Liu, Nolwenn Maudet, Sarah Fdili Alaoui, Cédric Fleury
- ACM DIS 2017, *ACM Conference on Designing Interactive Systems*: Nolwenn Maudet, Sarah Fdili Alaoui, Wendy Mackay
- ACM ISS 2017, *ACM International Conference on Interactive Surfaces and Spaces*: Ignacio Avellino, Philip Tchernavskij
- IEEE InfoVis 2017: Theophanis Tsandilas
- IEEE VR 2018, *Virtual Reality Conference*: Cédric Fleury
- IEEE 3DUI 2017, *Symposium on 3D User Interfaces*: Cédric Fleury
- GI 2017, *Graphics Interface Conference*: Theophanis Tsandilas
- Interaction 18: Carla Griggio, Germán Leiva
- ACM C&C 2017, *Creativity and Cognition*: Sarah Fdili Alaoui

- Mobile HCI '17 Late Breaking, *19th International Conference on Human-Computer Interaction with Mobile Devices and Services*: Germán Leiva, Philip Tchernavskij
- IHM 2017, *Conférence Francophone d'Interaction Homme-Machine*: Theophanis Tsandilas, Cédric Fleury
- Salon des Refusés 2017, workshop at <PROGRAMMING> 2017, *The International Conference on the Art, Science, and Engineering of Programming*: Philip Tchernavskij

### 9.1.3. Journal

#### 9.1.3.1. Member of the Editorial Boards

- Editor for the Human-Computer Interaction area of the ACM Books Series (published with Morgan & Claypool Publishers): Michel Beaudouin-Lafon (2013-)
- CACM, *Communications of the ACM Web Editorial Board*, ACM: Wendy Mackay (2008-)
- ACM, *ACM New Publications Board*, ACM: Wendy Mackay (2015-)
- TOCHI, *Transactions on Computer Human Interaction*, ACM: Michel Beaudouin-Lafon (2009-), Wendy Mackay (2016-)
- JIPS, *Journal d'Interaction Personne-Système*, AFIHM: Michel Beaudouin-Lafon (2009-)

#### 9.1.3.2. Reviewer - Reviewing Activities

- IHCS, *International Journal of Human-Computer Studies*, Elsevier: Theophanis Tsandilas
- TVCG, *Transactions on Visualization and Computer Graphics*, IEEE: Cédric Fleury
- MTI, *Journal of Multimodal Technologies and Interaction*, MDPI: Sarah Fdili Alaoui
- JHT, *Journal Human Technology*, special issue "the Human-Technology Choreographies: Body, movement, and space in expressive interactions", EBSCO Publishing: Sarah Fdili Alaoui
- JEP, *Journal of Experimental Psychology*: Michel Beaudouin-Lafon

### 9.1.4. Invited Talks

- Ecole Normale Supérieure de Lyon, Cultures numériques, éducation aux médias et à l'information, "Créer des Partenariats Humaine-Machine", 09 January 2017: Wendy Mackay
- Lyon Culture Numériques Table Ronde, "Créer des Partenariats Humaine-Machine", 11 January 2017: Wendy Mackay
- Invited conference, World Information Architecture Day (WIAD), Lyon, "Interfaces du futur : Unifier pour diversifier", 18 février 2017: Michel Beaudouin-Lafon
- Invited seminar, CIRMMT (Montreal, Canada), "Crafting movement in Digital Art and Human Computer Interaction", 22 March 2017: Sarah Fdili Alaoui
- Colloquium d'Informatique UPMC Sorbonne Universités, Paris, "Interfaces Homme-Machine : Unifier les principes pour diversifier l'interaction", 28 February 2017: Michel Beaudouin-Lafon
- Inria 50 years, ERC 10 years, "ERC CREATIV : Créer des Partenariats Humain-Machine", 13 March 2017: Wendy Mackay
- IFIP TC13 & TC14 Open symposium (Paris) *Crafting movement in Digital Art and Human Computer Interaction*, 22 March 2017: Sarah Fdili Alaoui
- Wellesley College (Wellesley, MA, USA), "Towards a Unified Theory of Interaction", 20 April 2017: Wendy Mackay & Michel Beaudouin-Lafon
- Massachusetts Institute of Technology (Cambridge, MA, USA), "Towards a Unified Theory of Interaction", 20 April 2017: Wendy Mackay
- 10Pines (Buenos Aires, Argentina), "Design and Development of Interactive Systems", 20 April 2017: Germán Leiva

- 10Pines (Buenos Aires, Argentina), “*Designing cross-application instruments for supporting user appropriation*”, 20 April 2017: Carla Griggio
- Participatory Design Workshop, Olin College (Needham, MA, USA), “*Apps for Activists?*”, 21 April 2017: Wendy Mackay
- CITEP UBA (Buenos Aires, Argentina) “*Introduction to HCP*”, 25 April October 2017: Germán Leiva
- CITEP UBA (Buenos Aires, Argentina) “*Designing cross-application instruments for supporting user appropriation*”, 25 April October 2017: Carla Griggio
- Atelier Unibail-Rodamco, “*Créer des Partenariats Humain-Machine*”, 02 May 2017: Wendy Mackay
- CHI Stories, Invited Address, ACM CHI’17, “*Creating the First Interactive Video*”, 09 May 2017: Wendy Mackay
- Invited Address, University of British Columbia, “*Towards Unified Principles of Interaction*”, 09 May 2017: Wendy Mackay
- Dagstuhl Seminar, “*Computational Interactivity*”, 5 - 8 June 2017: Wanyu Liu (<http://www.dagstuhl.de/en/program/calendar/semhp/?semnr=17232>)
- Colloque 10 ans de l’ERC, Université Paris-Saclay, “*ONE: Unified Principles of Interaction*”, 9 June 2017: Michel Beaudouin-Lafon
- ERC CREATIVE Workshop, “*Towards a Unified Theory of Interaction*”, 13 June 2017: Wendy Mackay
- University of British Columbia (Canada), “*Towards Unified Principles of Interaction*”, 15 June 2017: Michel Beaudouin-Lafon
- Rencontres Jeunes Chercheurs, Interaction Homme-Machine, “*Ethics and Experimental Protocols*”, 04 July 2017: Wendy Mackay
- Participatory Information Technology group, Aarhus University, “*Untangling Interactive Systems*”, 14 September 2017: Philip Tchernavskij
- Honoris Causa Invited Address, Aarhus University (Denmark), “*Human-Computer Partnerships*”, 14 September 2017: Wendy Mackay
- Aarhus University (Denmark), “*Towards Unified Principles of Interaction*”, 14 September 2017: Michel Beaudouin-Lafon
- Opening Keynote, 12th Biannual Conference of the Italian SIGCHI Chapter (CHIItaly 17), “*Towards Unified Principles of Interaction*”, 19 September 2017: Michel Beaudouin-Lafon
- Journées sur la Dynamique Interactionnelle du Geste DIG, CNRS, *Applying Laban Movement Analysis to craft movement in Digital Art and Human Computer Interaction*, 22 septembre 2017: Sarah Fdili Alaoui
- Journée LTCI , “*Bayesian Information Gain for Multiscale Navigation*”, 10 October 2017: Wanyu Liu
- Les object communicants dans l’écologie des enfants de 0 à 12 ans, MENESR-EHESS, “*Entre les enfants et les ordinateurs: Human Computer Interaction*”, 11 October 2017: Wendy Mackay
- ETH Zurich and University of Zurich, “*Understanding and Designing Interaction from an Information-Theoretic Perspective*”, 24 November 2017: Wanyu Liu
- Inria 50 Years Celebration, Robotics panel, 8 November 2017: Wendy Mackay
- Remise des Prix Doctorants, “*Bayesian Information Gain for Multiscale Navigation*”, 30 November 2017: Wanyu Liu
- Colloque “*Corps et Mobiles*”, Sorbonne Nouvelle, *Radical Choreographic Object*, 4-5 December 2017: Sarah Fdili Alaoui

- Meeting on Global Research Network, Casa Paganini Infomuse, Genova, 2017: Sarah Fdili Alaoui

### 9.1.5. Scientific Expertise

- European Research Council, Panel member for Starting Grants: Michel Beaudouin-Lafon
- CNRS Mission pour l'Interdisciplinarité, Panel member for the call "Sciences Sociales et Cognitives des Comportements Collectifs": Michel Beaudouin-Lafon
- CNRS INS2I, member of "Cellule ERC": Michel Beaudouin-Lafon
- ACM "Policy Award" committee member: Michel Beaudouin-Lafon
- ACM SIGCHI "Lifetime Service Award" committee member: Wendy Mackay

### 9.1.6. Research Administration

- CNRS INS2I, "Conseil Scientifique de l'Institut": Michel Beaudouin-Lafon (member)
- Telecom ParisTech "Comité de la recherche": Michel Beaudouin-Lafon (member)
- IRCAM Scientific Committee: Michel Beaudouin-Lafon (member)
- "Institut de la Société Numérique", IDEX Laboratory of Université Paris-Saclay: Michel Beaudouin-Lafon (member of steering committee)
- Pôle Systematic, Working group on Information Systems: Michel Beaudouin-Lafon (member of steering committee)
- Département STIC, Université Paris-Saclay: Wendy Mackay (member)
- "Conseil de Laboratoire", LRI: Wendy Mackay, Cédric Fleury (members)
- "Conseil Scientifique", LRI: Michel Beaudouin-Lafon (member)
- COERLE "Comité Operationnel d'Evaluation des Risques Légaux et Ethiques", Inria: Wendy Mackay
- CERNI "Comité d'Ethique pour les Recherches Non Interventionnelles", Université Paris-Sud: Wendy Mackay
- CCSU, "Commission Consultative de Spécialistes de l'Université", Université Paris-Sud: Michel Beaudouin-Lafon, Wendy Mackay (members)
- "Commission de Qualification pour Promotion et Changement, Professeur", Télécom Paris-Tech: Wendy Mackay (member)
- "Comité de sélection, Professeur", Université Paris-Sud: Wendy Mackay (member)
- "Comité de sélection, Maître de Conférences", Université Paris-Sud: Michel Beaudouin-Lafon (member)
- "Commission Locaux", LRI: Theophanis Tsandilas (member)
- "Commission Scientifique", Inria: Theophanis Tsandilas (member), since March 2017
- "User board" of the European project Wholodance: Sarah Fdili Alaoui, since June 2017

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Licence : Sarah Fdili Alaoui, *Programmation des interfaces interactives avancées*, 22.5h, L3, Univ. Paris-Sud

International Masters: Theophanis Tsandilas, *Probabilities and Statistics*, 32h, M1, Univ. Paris-Saclay

HCID Masters: Sarah Fdili Alaoui, *Business Development Labs*, 30h, M1, Univ. Paris-Sud

HCID Masters: Sarah Fdili Alaoui, *Innovation & Entrepreneurship thesis*, 3h, M2, Univ. Paris-Sud

HCID Masters: Sarah Fdili Alaoui, *Design Project*, 36h, M1 et M2, Univ. Paris-Sud



HCID Masters: Michel Beaudouin-Lafon, Wendy Mackay, *Fundamentals of Situated Interaction*, 21 hrs, M1/M2, Univ. Paris-Sud

Interaction & HCID Masters: Sarah Fdili Alaoui, *Stage en entreprise*, 2h, M2, Univ. Paris-Sud

Interaction & HCID Masters: Sarah Fdili Alaoui, *Creative Design*, 27h, M1 et M2, Univ. Paris-Sud

Interaction & HCID Masters: Sarah Fdili Alaoui, *Digital Fabrication*, 13,5h, M1 et M2, Univ. Paris-Sud

Interaction & HCID Masters: Michel Beaudouin-Lafon, *Fundamentals of Human-Computer Interaction*, 21 hrs, M1/M2, Univ. Paris-Sud

Interaction & HCID Masters: Michel Beaudouin-Lafon & Cédric Fleury, *Groupware and Collaborative Interaction*, 31.5 hrs, M1/M2, Univ. Paris-Sud

Interaction & HCID Masters: Wendy Mackay, *Career Seminar* 6 hrs, M2, Univ. Paris-Sud

Interaction & HCID Masters: Wendy Mackay, *Design of Interactive Systems*, 21 hrs, M1/M2, Univ. Paris-Sud

Interaction & HCID Masters: Wendy Mackay, *Advanced Design of Interactive Systems*, 21 hrs, M1/M2, Univ. Paris-Sud

Polytech: Sarah Fdili Alaoui, *Graphisme et Visualisation*, 18h, “Apprentis” 5th year, Univ. Paris-Sud

Polytech: Cédric Fleury, *Introduction à l’Informatique*, 71 hrs, 1st year, Univ. Paris-Sud

Polytech: Cédric Fleury, *Projet Java-Graphique-IHM*, 24 hrs, 3rd year, Univ. Paris-Sud

Polytech: Cédric Fleury, *Interaction Homme-Machine*, 18 hrs, 3rd year, Univ. Paris-Sud

Polytech: Cédric Fleury, *Réalité Virtuelle et Interaction*, 48 hrs, 5th year, Univ. Paris-Sud

### 9.2.2. Supervision

#### PhD students

PhD: Ignacio Avellino, *Supporting Collaborative Practices Across Wall-Sized Displays with Video-Mediated Communication*, Université Paris-Saclay, 12 December 2017. Advisors: Michel Beaudouin-Lafon & Cédric Fleury

PhD: Jessalyn Alvina, *Increasing The Expressive Power of Gesture-based Interaction on Mobile Devices*, Université Paris-Saclay, 13 December 2017. Advisor: Wendy Mackay

PhD: Nolwenn Maudet, *Designing Design Tools*, Université Paris-Saclay, 11 December 2017. Advisors: Wendy Mackay & Michel Beaudouin-Lafon

PhD in progress: Mariana Ciolfi Felice, *Substrates and Co-adaptive Instruments for Creativity*, September 2015. Advisors: Wendy Mackay & Sarah Fdili Alaoui

PhD in progress: Carla Griggio, *Interactive Human-Machine Learning*, September 2015. Advisor: Wendy Mackay

PhD in progress: Germán Leiva, *Interaction-driven Software Development*, September 2015. Advisor: Michel Beaudouin-Lafon

PhD in progress: Wanyu Liu, *Modeling the speed-accuracy trade-off of pointing tasks using the tools of information theory*, October 2015. Advisors: Olivier Rioul (Institut Mines Telecom) & Michel Beaudouin-Lafon

PhD in progress: Yujiro Okuya, *Sensorimotor interface for Collaborative Virtual Environments based on heterogeneous interactive devices: application to industrial design*, October 2015. Advisors: Patrick Bourdot (LIMSI-CNRS) & Cédric Fleury

PhD in progress: Michael Wessely, *Sketching and Physical Prototyping for Creative Fabrication Design*, November 2015. Advisors: Theophanis Tsandilas & Wendy Mackay

PhD in progress: Stacy (Shu-Yuan) Hsueh, *Embodied design for Human-Computer Co-creation*, November 2015. Advisors: Wendy Mackay & Sarah Fdili Alaoui

PhD in progress: Philip Tchernavskij, *Towards Unified Principles of Interaction*, October 2016. Advisor: Michel Beaudouin-Lafon

PhD in progress: Jean-Philippe Rivière, *Embodied Design for Human-Computer Partnership in Learning Contexts*, October 2017. Advisors: Wendy Mackay & Sarah Fdili Alaoui

*Masters students*

Jiali Liu, Telecom ParisTech, “Cross-Surface Interaction”: Michel Beaudouin-Lafon & Philip Tchernavskij

Linghua Lai, Univ. Paris-Saclay, “VideoBoard: Video for Interaction Design”: Wendy Mackay & Germán Leiva

Chengcheng Qu, Univ. Paris-Saclay, “Animated Emojis: Creating Dynamic Expressions with Expressive Keyboards”: Wendy Mackay & Jessalyn Alvina

Jean-Philippe Rivière, Univ. Toulouse, “MoveOn: Understanding and Supporting Dance Skill Acquisition through Multimodal Interactive Technology”: Wendy Mackay & Sarah Fdili Alaoui

**9.2.3. Juries**

PhD theses:

- Andrew Bluff, University of Technology Sydney (advisor: Andrew Johnston): Sarah Fdili Alaoui.
- Bart Potsma, LIMSI-CNRS, April 2017 (advisor: Brian Katz): Michel Beaudouin-Lafon, president.
- Samuel Delalez, Université Paris-Saclay, November 2017 (advisor: Christophe d’Alessandro): Wendy Mackay, president
- Maxime Guillon, LIG, November 2017 (advisor: Laurence Nigay): Michel Beaudouin-Lafon, reviewer.
- Hèlene Unaninski, Université de Toulouse, December 2017 (advisor: Stéphane Conversy): Wendy Mackay, reviewer

Habilitations:

- Caroline Appert, LRI, juin 2017: Michel Beaudouin-Lafon, examiner.
- Gilles Bailly, ISIR, octobre 2017: Michel Beaudouin-Lafon, examiner.
- Jean-Julien Aucouturier, IRCAM, novembre 2017: Michel Beaudouin-Lafon, president.

**9.3. Popularization**

- Interviews on France Culture, LCI, TV5 Monde on the standardization of the AZERTY and BEPO keyboards, June-July 2017, Michel Beaudouin-Lafon
- ACM UIST 17 Demonstration, “*CommandBoard: Creating a General-Purpose Command Gesture Input Space for Soft Keyboard*”, Jessalyn Alvina, Carla Griggio, Xiaojun Bi, Wendy Mackay
- Interview à France Culture, 22 Février 2017 @ France Culture *Machines au croisement du design et du numérique*: Nolwenn Maudet
- Demonstration at CEA Digital Days: Data Intelligence, CEA List, “*StickyLines*”, March 2017, Marianela Cioffi Felice & Wendy Mackay
- Demonstration at CEA Digital Days: Data Intelligence, CEA List, “*Expressive Keyboard*”, March 2017, Jessalyn Alvina & Wendy Mackay
- ACM SCF 2017 Poster Demonstration *Stretchis: Fabricating Highly Stretchable User Interfaces*: Michael Wessely
- Colloque l’Université Paris-Saclay fête les 10 ans de l’ERC, “*ONE - Unified Principles of Interaction*”, 9 June 2017: Michel Beaudouin-Lafon (presentation) and Philip Tchernavskij (poster)
- Presentation of the performance *Radical Choreographic Object*, April 2017 in Theatre de Villeneuve tolosane, September 2017 in Centre de développement Choreographique, October 2017 in Centre Bellegarde, November 2017 in Le 104 and December 2017 in Centre Bellegarde: Sarah Fdili Alaoui
- Presentation of the Performance *SKIN*, April 2017 in Scene 44 Pole Media, La friche de la belle, May 2017 in festival Curiositas, November 2017 in Attention Travaux, Culture en Essonne: Sarah Fdili Alaoui

- Scaling up for the Internet of Things, Workshop at Inria Silicon Valley, Berkeley, CA, USA: Wendy Mackay & Theophanis Tsandilas
- Intersections in Music, Movement, and Technology, 17–19 August 2017 *Workshop held at UC Berkeley*: John MacCallum (co-facilitator).
- Relational Listening, 8 July 2017 *Workshop presented at the Conference of Dance and Somatic Practices*: John MacCallum (co-facilitator).
- Relational Listening, 1–30 April 2017 *Workshop*: John MacCallum (co-facilitator).
- Relational Listening, 26 February 2017 *Workshop held at CLOUD/Danslab*: John MacCallum (co-facilitator).

## GRAPHDECO Project-Team

## 9. Dissemination

### 9.1. Promoting Scientific Activities

#### 9.1.1. Scientific Events Organisation

##### 9.1.1.1. Member of the Organizing Committees

G. Drettakis was a member of the ACM SIGGRAPH 2017 papers advisory board.

#### 9.1.2. Scientific Events Selection

##### 9.1.2.1. Member of the Conference Program Committees

G. Cirio was on the program committee of IEEE World Haptics 2017. A. Bousseau was a Papers Committee member of Eurographics 2018 and SIGGRAPH Asia 2017 technical briefs and posters, and a member of Eurographics STAR committee. G. Drettakis was a member of the ACM SIGGRAPH 2017 papers committee and of the Eurographics STAR committee.

##### 9.1.2.2. Reviewer

A. Bousseau was a reviewer for ACM Transactions on Graphics, SIGGRAPH, SIGGRAPH Asia, Eurographics, ACM CHI Gabriel Cirio was reviewer for Eurographics, ACM SIGGRAPH, IEEE World Haptics, IEEE Transactions on Haptics, ACM UIST, IEEE 3DUI, IEEE VR. Y. Gryaditskaya was a reviewer for SIGGRAPH Asia 2017, Eurographics 2018, ACM TOG and JEL.

#### 9.1.3. Journal

##### 9.1.3.1. Member of the Editorial Boards

A. Bousseau is an Associate Editor of The Visual Computer journal (Springer) G. Drettakis is Associate Editor of ACM Transactions on Graphics (TOG) and of Computational Visual Media (CVM).

#### 9.1.4. Invited Talks

Y. Gryaditskaya visited the Charles University of Prague in May 2017. Adrien Bousseau gave a talk about 3D reconstruction of design drawings at Delft University.

#### 9.1.5. Leadership within the Scientific Community

G. Drettakis chairs the Eurographics working group on Rendering. G. Drettakis chairs the local “Jacques Morgenstern” Colloquium organizing committee.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Licence : J. Delanoy, TP Bases de donnees and personal project, niveau L1, IUT - Université Nice Sophia Antipolis, 64h

Licence : S. Rodriguez, niveau L1, 64h as a DCCE in Polytech’Nice (UCA).

Licence : J. Philip, Introduction au Web & Application du Web, niveau L2, Polytech Nice-Sophia - Université Côte d’Azur, 64h

Licence: T. Thonat, Informatique Theorique, niveau L3, Polytech Nice, Sophia-Antipolis, 64h

Master : G. Drettakis, Computer Graphics, 12h, CentraleSupélec; 6h Université Nice Sophia Antipolis, 64h

Master : A. Bousseau, Computer Graphics, 9h, CentraleSupélec; 9h Université Nice Sophia Antipolis, 64h

### 9.2.2. Others

Y. Gryaditskaya and V. Deschaintre attended MAM and EGSR 2017 V. Deschaintre, S. Rodriguez, J. Philip and T. Thonat attended UCA Deep Learning School, 12-15 June 2017, Sophia-Antipolis, France. S. Rodriguez, J. Delanoy, T. Thonat and J. Philip attended Eurographics 2017, 24-28 April 2017, Lyon, France. Johanna Delanoy participated in the Doctoral Consortium at Eurographics 2017. Johanna Delanoy was a Student Volunteer at Siggraph 2017.

### 9.2.3. Presentations

Theo Thonat presented his 3DV-2016 multi view inpainting work at the AFIG French conference.

#### 9.2.3.1. Supervision

PhD defended: Rodrigo Ortiz-Cayon, Mixed image-based rendering, Nice Sophia Antipolis University, started Dec. 2013, defended in Feb. 2017, advisor: G. Drettakis

PhD in progress: Théo Thonat, Multi-view image processing for image-based rendering, Nice Sophia Antipolis University, started Oct. 2015, advisor: G. Drettakis

PhD in progress: Johanna Delanoy, Data-driven sketch-based modeling, Nice Sophia Antipolis University, started Oct. 2015, advisor: A. Bousseau

PhD in progress: Jean-Dominique Favreau, geometric analysis of line drawings, Nice Sophia Antipolis University, started Oct. 2014, advisors: A. Bousseau and F. Lafarge (Titane)

PhD in progress: Valentin Deschaintre, lightweight material capture, Nice Sophia Antipolis University, started Nov. 2016, advisors: A. Bousseau and G. Drettakis

PhD in progress: Julien Philip, Mixed rendering for cultural heritage, Nice Sophia Antipolis University, started Nov. 2016, advisor: G. Drettakis

PhD in progress: Simon Rodriguez, Combining image-based and procedural modeling, Nice Sophia Antipolis University, started Nov. 2016, advisor: G. Drettakis

#### 9.2.3.2. Juries

A. Bousseau was a reviewer for the PhD of Yulia Gryaditskaya (MPI Saarbruecken), Benoit Arbelot (Inria Rhône Alpes) and T. Stanko (Inria Rhône Alpes).

## 9.3. Popularization

Theo Thonat gave demos of Image Based Renderings during the 2017 "Fete de la science" at the Inria stand (Oct. 7.) for school children and adults audience.

## HYBRID Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific events organisation

#### 10.1.1.1. General chair, Scientific chair

- Bruno Arnaldi was General Chair of IGRV 2017 (journées du GDR IG-RV, Journées de l'AFRV, Journées de l'AFIG), Rennes, France.
- Anatole Lécuyer and Guillaume Moreau were General co-Chairs of IEEE Symposium on Mixed and Augmented Reality 2017 (IEEE ISMAR), Nantes, France.
- Maud Marchal was Program Chair of IEEE Symposium on 3D User Interfaces 2017 (IEEE 3DUI).
- Jean-Marie Normand was Deputy General Chair of IEEE Symposium on Mixed and Augmented Reality 2017 (IEEE ISMAR), Nantes, France.

#### 10.1.1.2. Member of the organizing committees

- Anatole Lécuyer was Member of the organization committee of IGRV 2017.
- Ferran Argelaguet was Member of the organization committee of ISMAR 2017 and IGRV 2017.
- Ronan Gaugne was Member of the organization committee of ISMAR 2017 and IGRV 2017.
- Valérie Gouranton was Member of the steering committee of ISMAR 2017 and IGRV 2017.
- Maud Marchal was Member of the organization committee of IGRV 2017.
- Florian Noviale was Member of the organization committee of ISMAR 2017 and IGRV 2017.

### 10.1.2. Scientific events selection

#### 10.1.2.1. Member of the conference program committees

- Anatole Lécuyer was Member of the conference program committee of IEEE Conference on Virtual Reality 2017.
- Ferran Argelaguet was Member of the conference program committee of IEEE Symposium on 3D User Interfaces 2017, and ACM Symposium on Spatial User Interfaces 2017 and IHM 2017.
- Maud Marchal was Member of the conference program committee of Eurographics 2017, the best paper committee of "Journées Françaises de l'Informatique Graphique" 2017, the best Phd award committee of GDR-IGRV/EGFR/AFRV.
- Guillaume Moreau was Member of the program committee of IEEE Symposium on 3D User Interfaces 2017, Area Chair of IAPR Machine Vision Applications 2017.
- Jean-Marie Normand was Member of the program committee of Augmented Human 2017, Area Chair of IAPR Machine Vision Applications 2017.

#### 10.1.2.2. Reviewer

- Ferran Argelaguet was Reviewer for IEEE VR 2017, ACM CHI 2017, ACM VRST 2017, ACM UIST 2017, WorldHaptics 2017.
- Maud Marchal was Reviewer for IEEE VR 2017, Eurographics 2017, IEEE ICRA 2017.
- Valérie Gouranton was Reviewer for IEEE VR 2017.
- Guillaume Moreau was Reviewer for IEEE 3DUI 2017, IEEE VR 2017, ACM AH 2017.
- Jean-Marie Normand was Reviewer for IEEE 3DUI 2017, IEEE VR 2017, IEEE ISMAR 2017, ACM CHI 2017, ACM MM 2017.

### **10.1.3. Journal**

#### **10.1.3.1. Member of the editorial boards**

- Anatole Lécuyer is Associate Editor of the IEEE Transactions on Visualization and Computer Graphics (since Dec 2017), Frontiers in Virtual Environments, and Presence journals. He is also Guest Editor of a Special Issue of IEEE Computer Graphics and Applications on "Virtual and Augmented Reality".
- Ferran Argelaguet is Review Editor of Frontiers in Virtual Environments.
- Maud Marchal is Review Editor of Frontiers in Virtual Environments.
- Guillaume Moreau is Associate Editor of a Special Issue of the Transactions of the Institute of Electronics, Information and Communication Engineers and for Applied Sciences.
- Jean-Marie Normand is Review Editor of Frontiers in Virtual Environments.

#### **10.1.3.2. Reviewer - Reviewing activities**

- Ferran Argelaguet was Reviewer for ACM Transactions on Graphics, IEEE Transactions on Visualization and Computer Graphics, International Journal on Human Computer Studies.
- Ronan Gaugne was Reviewer for Digital Applications in Archaeology and Cultural Heritage.
- Maud Marchal was Reviewer for IEEE Transactions on Visualization and Computer Graphics, IEEE Transactions on Haptics, The Visual Computer and Computers and Graphics Journal.
- Guillaume Moreau was reviewer for IEEE Transactions on Visualization and Computer Graphics and Computers, Environments and urban Systems.
- Jean-Marie Normand was Reviewer for Frontiers in Robotics and AI, IEEE Computer Graphics and Applications, IEEE Transactions on Visualization and Computer Graphics.

### **10.1.4. Invited talks**

- Anatole Lécuyer was Keynote Speaker at EuroVR 2017.
- Guillaume Moreau was Keynote Speaker at "Journées de l'Association Française d'Histotechnologie".

### **10.1.5. Leadership within the scientific community**

- Bruno Arnaldi is Member of Executive Committee of AFRV (French Association for Virtual Reality).
- Ronan Gaugne is Member of the Selection and Validation Committee for the French cluster "Pôle Images et Réseaux".
- Valérie Gouranton is Member of Executive Committee of AFRV.
- Maud Marchal is Member of Executive Committee of Eurographics French Chapter.

### **10.1.6. Scientific expertise**

- Valérie Gouranton was Member of a selection committee for French ANR.
- Ronan Gaugne was Expert for "Atlantist2020 Région Pays de la Loire".
- Maud Marchal was Expert for "Haute Ecole Spécialisée de Suisse Occidentale" (Switzerland).
- Jean-Marie Normand was Expert for French ANR.

### **10.1.7. Research administration**

- Bruno Arnaldi is Deputy Director of IRISA, and co-Head of the Scientific Council of University of Rennes (ENS Rennes, ENSC Rennes, IEP Rennes, INSA Rennes, University Rennes 1, and University Rennes 2).
- Maud Marchal is Co-Head of the Master of "Research in Computer Science" (SIF) at University Rennes 1.

- Valérie Gouranton is Head of cross-cutting Axis "Art, Heritage & Culture" at IRISA.
- Jean-Marie Normand is Head of the Minor "Virtual Reality" at ECN.

## 10.2. Teaching - Supervision - Juries

Anatole Lécuyer:

Master MNRV: "Haptic Interaction", 9h, M2, ENSAM, Laval, FR

Ecole Centrale de Nantes : "Haptic Interaction and Brain-Computer Interfaces", 4.5h, M1-M2, Ecole Centrale de Nantes, FR

Master SIBM: "Haptic and Brain-Computer Interfaces", 4.5h, M2, University of Rennes 1, FR

Master CN: "Haptic Interaction and Brain-Computer Interfaces", 9h, M1 and M2, University of Rennes 2, FR

Master VRI: "Pseudo-Haptics and Brain-Computer Interfaces", 6h, M2, University of Rennes 1, FR

Bruno Arnaldi:

Master INSA Rennes: "VRI: Virtual Reality and Multi-Sensory Interaction Course", 4h, M2, INSA Rennes, FR

Master INSA Rennes: "CG: Computer Graphics", 10h, M2, INSA Rennes, FR

Master INSA Rennes: "Virtual Reality", courses 6h, projects 16h, M1 and M2, INSA Rennes, FR

Master INSA Rennes: Projects on "Virtual Reality", 20h, M1, INSA Rennes, FR

Ferran Argelaguet:

Master STS Informatique MITIC: "Techniques d'Interaction Avancées", 26h, M2, ISTIC, University of Rennes 1, FR

Master INSA Rennes: "Modeling and Engineering for Biology and Health Applications", 12h, M2, INSA Rennes, FR

Maud Marchal:

Master of Research in Computer Science: "Haptic rendering and physically-based simulation", 4h, M2, University of Rennes 1, FR

Master INSA Rennes: "Computer Graphics", 26h, M1 and responsible of this lecture, INSA Rennes, FR

Master INSA Rennes: "Modeling and Engineering for Biology and Health Applications", 48h, M2 and responsible of this lecture, INSA Rennes, FR

Master SIBM: "Biomedical simulation", 3h, M2, University of Rennes 1, FR

Valérie Gouranton:

Licence: "Introduction to Virtual Reality", 22h, L2 and responsible of this lecture, INSA Rennes, FR

Licence: Project on "Virtual Reality", 16h, L3 and responsible of this lecture, INSA Rennes, FR

Master INSA Rennes: "Virtual Reality", 16h, M2, INSA Rennes, FR

Master INSA Rennes: Projects on "Virtual Reality", 20h, M1, INSA Rennes, FR

Master CN: "Virtual Reality", 6h, M1, University of Rennes 2, FR

Ronan Gagne:

INSA Rennes: Projects on "Virtual Reality", 47h, L3/M1/M2, Insa Rennes, FR

Master CN: "Virtual Reality", 3h, M1, University of Rennes 2, FR



Jean-Marie Normand:

Virtual Reality Minor, "Computer Graphics", 24h, M1/M2, Ecole centrale de Nantes, FR

Virtual Reality Minor, "Fundamentals of Virtual Reality", 14h, M1/M2, Ecole centrale de Nantes, FR

Virtual Reality Minor, "Computer Vision and Augmented Reality", 24h, M1/M2, Ecole centrale de Nantes, FR

Virtual Reality Minor, "Projects on Virtual Reality", 20h, M1/M2, Ecole centrale de Nantes, FR

### **10.2.1. Supervision**

#### *10.2.1.1. PhD (defended)*

- Jean-Baptiste Barreau, "Techniques of production, exploration and analysis of virtual archaeological environments", INSA Rennes, July 10th 2017, Supervised by Valérie Gouranton and Bruno Arnaldi
- Lorraine Perronnet, "Combining electroencephalography and functional magnetic resonance imaging for neurofeedback", University of Rennes 1, January 8th, 2017, Supervised by Anatole Lécuyer, Fabien Lotte (Potioc, Inria), Maureen Clerc (Athena, Inria) and Christian Barillot (Visages, Inria)
- Benoit Le Gouis, "Contribution to the study of haptic rendering and perception of virtual deformable objects", INSA Rennes, November 21th 2017, Supervised by Bruno Arnaldi, Maud Marchal and Anatole Lécuyer

#### *10.2.1.2. PhD (in progress)*

- Gwendal Le Moulec, "Automatic generation of VR applications", Started in October 2015, Supervised by Valérie Gouranton, Bruno Arnaldi and Arnaud Blouin (Diverse, Inria)
- Anne-Solène Dris-Kerdreux, "Training in virtual reality for construction applications", Started in November 2015, Supervised by Valérie Gouranton and Bruno Arnaldi
- Antoine Costes, "Haptic texturing", Started in November 2015, Supervised by Anatole Lécuyer, Philippe Guillotel (Technicolor), Fabien Danieau (Technicolor) and Ferran Argelaguet
- Guillaume Cortes, "Improving tracking in VR", Started in November 2015, Supervised by Anatole Lécuyer and Eric Marchand (Lagadic, Inria)
- Hakim Si-Mohammed, "BCI and HCI", Started in October 2016, Supervised by Anatole Lécuyer, Géry Casiez (Mjolinir, Inria), Nicolas Roussel (Mjolinir, Inria) and Ferran Argelaguet
- Gautier Picard, "Collaborative VR", Started in October 2016, Supervised by Valérie Gouranton, Bernard Gibaud (Inserm) and Bruno Arnaldi
- Hadrien Gurnel, "Prise en compte de la déformation d'organe pour l'assistance robotisée d'insertion d'aiguille", Started in October 2016, Supervised by Alexandre Krupa (Lagadic, Inria) and Maud Marchal
- Rebecca Fribourg, "Perception and interaction with and via avatars", Started in September 2017, Supervised by Ferran Argelaguet, Ludovic Hoyet (Mimetic, Inria) and Anatole Lécuyer
- Guillaume Bataille, "Natural interactions with IoT using VR/AR", Started in October 2017, Supervised by Valérie Gouranton, Danielle Pelé (Orange Labs) and Bruno Arnaldi
- Xavier de Tinguy, "Haptic manipulation in virtual environments", Started in September 2017, Supervised by Maud Marchal, Claudio Pacchierotti (Lagadic, Inria) and Anatole Lécuyer
- Flavien Lecuyer, "Interactive digital introspection methods for archeology", Started in September 2017, Supervised by Valérie Gouranton, Grégor Marchand (CNRS) and Bruno Arnaldi
- Etienne Peillard, "Improving Perception and Interaction in Augmented Reality", Started in October 2017, Supervised by Guillaume Moreau, Ferran Argelaguet, Anatole Lécuyer and Jean-Marie Normand

- Antonin Bernardin, "Interactive physically-based simulation of dexterous manipulation for robot understanding", Started in September 2017, Supervised by Maud Marchal and Christian Duriez (Defrost, Inria)
- Romain Lagneau, "Data-driven models for dexterous manipulation of robots", Started in Septembre 2017, Supervised by Maud Marchal and Alexandre Krupa (Lagadic, Inria)
- Romain Terrier, "Presence of self and others in a collaborative virtual environment", Started in October 2017, Supervised by Valérie Gouranton, Thomas Boggini (b<>com) and Bruno Arnaldi
- Mathis Fleury, "Neurofeedback based on fMRI and EEG", Started in November 2017, Supervised by Anatole Lécuyer and Christian Barillot (Visages, Inria)

### 10.2.2. *Juries*

#### 10.2.2.1. *Selection committees*

- Anatole Lécuyer was Member of selection committee of Assistant Professor Position at Ecole Centrale de Nantes.
- Valérie Gouranton was Member of selection committee of Assistant Professor Position at INSA Rennes, of Inria Junior Research Scientist (CR2 Inria) at Inria Rennes-Bretagne Atlantique
- Maud Marchal was Member of selection committee of Assistant Professor Position at Ecole Centrale de Nantes.
- Guillaume Moreau was Member of selection committee at Ecole Centrale de Nantes: Assistant Professor (2x), Full Professor (2x).

#### 10.2.2.2. *PhD and HDR juries*

- Anatole Lécuyer was Referee of PhD theses of Paul Issartel (Univ Paris Saclay), Cephise Louison (Univ Méditerranée) and Joan Sol Roo (Univ Bordeaux).
- Bruno Arnaldi was Referee of PhD thesis of Damien Clergeaud (Univ Bordeaux).
- Maud Marchal was Referee of PhD thesis of Fanny Morin (Univ Grenoble Alpes).
- Guillaume Moreau was Referee of PhD thesis of Judicaël Menant (INSA Rennes), and Member of PhD committee of Abdelkader Bellarbi (Univ Paris-Saclay).
- Jean-Marie Normand was Member of the committee of Barteld Postma (Univ. Paris Saclay).

## 10.3. Popularization

The results of the team have been disseminated in various media coverages in 2017:

- "XENIUS" TV channel Arte (02/17) : presentation of Immersia activity in Cultural Heritage applications
- "Sciences et Avenir" magazine (02/17) : article on "BCI, VR and videogames"
- France-Info radio (07/17) : 4-min interview of Anatole Lécuyer on Virtual Reality
- 20-minutes magazine (10/17) : article on Immersia activity
- Virgin Radio (10/17) : interview of Ronan Gaugne on Immersia
- France 3 Bretagne (10/17) : presentation of "Journée Science et Musique" in Immersia
- France 3 Centre (11/17) : presentation of INTROSPECT project

The team has also participated to several dissemination events in 2017 (chronological order):

- "Ma Thèse en 180 secondes" (Rennes, 03/17) : Lorraine Perronnet presented her PhD.
- "Semaine du Cerveau 2017" (Rennes, 03/17) : presentation and demo of BCI by Nataliya Kosmyna.
- Pint of Science (05/17): presentation on virtual incarnation by Ferran Argelaguet.
- "Journées Science et Musique 2017" (Rennes, 10/17) : co-organization of this event, and presentation of several demos.
- "Journées du Pôle Aerospace Valley" (Agen, 12/17) : presentation by Guillaume Moreau.

## ILDA Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

#### 10.1.1.1. General Chair, Scientific Chair

- EICS 2018, 10th ACM SIGCHI Symposium on Engineering Interactive Computing Systems: Emmanuel Pietriga (general co-chair)
- CHI 2017, 35th ACM SIGCHI Conference on Human Factors in Computing Systems: Caroline Appert (papers co-chair)

#### 10.1.1.2. Member of the Organizing Committees

- VIS 2017, the IEEE Visualization Conference (SciVis, InfoVis, VAST): Anastasia Bezerianos (Communities co-chair)

### 10.1.2. Scientific Events Selection

#### 10.1.2.1. Chair of Conference Program Committees

- CHI 2018, 36th ACM SIGCHI Conference on Human Factors in Computing Systems: Emmanuel Pietriga (SC - subcommittee chair)

#### 10.1.2.2. Member of the Conference Program Committees

- CHI 2018, 36th ACM SIGCHI Conference on Human Factors in Computing Systems: Anastasia Bezerianos
- UIST 2017, 30th ACM User Interface Software and Technologies Symposium: Anastasia Bezerianos
- InfoVis 2017, the IEEE Visualization Conference (SciVis, InfoVis, VAST): Anastasia Bezerianos
- WWW 2018, 27th Web Conference, research track Web Content Analysis, Semantics, and Knowledge: Emmanuel Pietriga
- ISWC 2017, 16th International Semantic Web Conference: Emmanuel Pietriga
- EICS 2017, 9th ACM SIGCHI Symposium on Engineering Interactive Computing Systems: Emmanuel Pietriga
- VOILA @ ISWC 2017, Visualizations and User Interfaces for Ontologies and Linked Data, workshop co-located with ISWC 2017: Emmanuel Pietriga
- Immersive Analytics @ InfoVis 2017: Exploring Future Interaction and Visualization Technologies for Data Analytics, workshop co-located with IEEE InfoVis 2017: Emmanuel Pietriga, Anastasia Bezerianos

#### 10.1.2.3. Reviewer

- ACM CHI 2018, Conference on Human Factors in Computing Systems: Caroline Appert, Olivier Chapuis, Bruno Fruchard, Maria Jesus Lobo Gunther, Arnaud Prouzeau
- ACM UIST 2017, Symposium on User Interface Software and Technology: Caroline Appert, Olivier Chapuis
- ACM ISS 2017, International Conference on Interactive Surfaces and Spaces: Olivier Chapuis
- ACM TEI 2017, International Conference on Tangible, Embedded and Embodied Interaction: Caroline Appert, Bruno Fruchard (WiP), Vit Rusnak (WiP)

- ACM MobileHCI 2017 , International Conference on Human-Computer Interaction with Mobile Devices and Services: Caroline Appert
- GI 2017, Graphics Interface: Olivier Chapuis, Arnaud Prouzeau
- Graph Drawing 2017: Emmanuel Pietriga
- EuroVis EG/VGTC 2017, Conference on Data Visualization: Anastasia Bezerianos
- OzCHI 2017: Vit Rusnak
- IHM 2017, Conference of the Association Francophone d'Interaction Homme-Machine: Olivier Chapuis

### **10.1.3. Journal**

#### *10.1.3.1. Member of the Editorial Boards*

- ACM ToCHI, Transactions on Computer-Human Interaction: Caroline Appert

#### *10.1.3.2. Reviewer - Reviewing Activities*

- ACM ToCHI, Transactions on Computer-Human Interaction: Olivier Chapuis
- IEEE TVCG, Transactions on Visualization and Computer Graphics: Olivier Chapuis, Emmanuel Pietriga, Caroline Appert, Anastasia Bezerianos
- IEEE Pervasive Computing: Emmanuel Pietriga
- Future Generation Computer Systems: Vit Rusnak

### **10.1.4. Invited Talks**

- Emmanuel Pietriga and Olivier Chapuis: Monitoring Air Quality in Korea's Metropolises on Ultra-High Resolution Wall-Sized Displays, Asia Data Week 2017, Jeju, South Korea, November 2017
- Caroline Appert: Reconnaître un pattern de points de contact sur une surface tactile – *Multi-Touch et Machine Learning*, Journée IHM-IA, Paris (UPMC), France, March 2017.
- Anastasia Bezerianos: Concepts of Information Visualization research, and ties to Data Management, DBTrento, University of Trento, Italy, November 2017.

### **10.1.5. Leadership within the Scientific Community**

- ANR, CES Vice chair - Interaction, Robotique: Caroline Appert

### **10.1.6. Scientific Expertise**

- H2020, Leadership in Enabling and Industrial Technologies - Space RIA: Emmanuel Pietriga
- ANR, CES Vice chair - Interaction, Robotique: Caroline Appert

### **10.1.7. Research Administration**

- Deputy Director of the Laboratoire de Recherche en Informatique (LRI): Olivier Chapuis
- President of Inria Saclay - Île de France's Commission for Technological Development (CDT): Emmanuel Pietriga

### **10.1.8. Learned societies**

- Association Francophone d'Interaction Homme-Machine (AFIHM), in charge of the relation with the SIF: Olivier Chapuis.
- SigCHI Paris Local Chapter, chair: Anastasia Bezerianos.
- SigCHI Paris Local Chapter, vice chair: Caroline Appert.

### **10.1.9. Hiring committees**

- Univ. Paris-Sud hiring committee, Commission Consultative des Spécialistes de l'Université 27ème section (computer science), members: Caroline Appert.

## 10.2. Teaching - Supervision - Juries

### 10.2.1. Teaching

Master: Anastasia Bezerianos, Head of EIT masters M1 & M2 HCID, Univ. Paris-Sud

Master: Anastasia Bezerianos, Head of M2 Interaction, Univ. Paris-Sud, Université Paris-Saclay

Master: Anastasia Bezerianos, Programming of Interactive Systems – 21h CM, M1/M2 HCID + M2R Interaction, Univ. Paris-Sud

Master: Anastasia Bezerianos, Mixed Reality and Tangible Interaction – 11h CM, M1/M2 HCID + M2R Interaction, Univ. Paris-Sud

Master: Anastasia Bezerianos, Career Seminar, – 12h CM, M2 HCID + M2R Interaction, Univ. Paris-Sud

Master: Anastasia Bezerianos, Design Project in HCI, – 21h CM, M1 HCID, Univ. Paris-Sud

Master: Anastasia Bezerianos, HCI Project, – 21h CM, M2 HCID + M2 Interaction, Univ. Paris-Sud

Master: Anastasia Bezerianos, Introduction to Java – 18h CM, M1/M2 HCID + M2R Interaction, Univ. Paris-Sud

Master: Emmanuel Pietriga, Data Visualization, 24h CM, M2 Informatique Décisionnelle, Univ. Paris-Dauphine.

Master: Caroline Appert, Evaluation of Interactive Systems, 21h CM, M2 Interaction Univ. Paris-Sud / M1-M2 HCID EIT Digital.

Master: Caroline Appert, Advanced Evaluation of Interactive Systems, 21h CM, M2 Interaction Univ. Paris-Sud / M1-M2 HCID EIT Digital.

Master: Arnaud Prouzeau, Programmation des interfaces interactives avancées, 27h, M1 Info Univ. Paris-Sud

Licence: Maria Jesus Lobo Gunther, Algorithmique Informatique Graphique, 27h, L3 Univ. Paris-Sud

Licence: Maria Jesus Lobo Gunther, Programmation des interfaces interactives avancées, 27h, L3 Univ. Paris-Sud

Licence: Maria Jesus Lobo Gunther, Interaction Homme-Machine, 12h TP, L3 Polytech Paris Sud

Licence: Arnaud Prouzeau, Interaction Homme-Machine, 12h TP, L3 Polytech Paris Sud

Licence: Arnaud Prouzeau, Programmation Impérative Avancée en C++, 16.5h TP, L1 MPI, Université Paris-Sud

Licence: Bruno Fruchard, Visualisation, 10h, Télécom Paristech.

Licence: Bruno Fruchard, Interaction Homme-Machine, 16h, Télécom Paristech.

Licence: Bruno Fruchard, Paradigmes de programmation, 12h, Télécom Paristech.

Licence: Bruno Fruchard, Infrastructures et plateformes pour l'informatique répartie, 34h, Télécom Paristech.

### 10.2.2. Supervision

PhD : Maria Jesus Lobo Gunther, Interaction Techniques for Map Multiplexing, defended on December 5th, 2017. Advisors: Caroline Appert, Emmanuel Pietriga

PhD : Rafael Morales Gonzalez, Surface Gestures for Advanced Graphical Interfaces: Which Gesture for What, defended on October 4th, 2017. Advisors: Caroline Appert, Gilles Bailly, Emmanuel Pietriga

PhD : Arnaud Prouzeau, Collaboration around Wall-Displays in Time Critical and Command and Control Contexts, defended on December 15th, 2017. Advisors: Anastasia Bezerianos, Olivier Chapuis

PhD : Evanthia Dimara, Merging Interactive Visualization and Automated Analysis for Group Decision-Making Involving Large Datasets, defended on November 30th, 2017, Advisors: Pierre Dragicevic, Anastasia Bezerianos

PhD in progress : Marie Destandau, Interactive Visual Exploration of Webs of Data, since October 2017, Advisors: Caroline Appert, Emmanuel Pietriga

PhD in progress : Anna Gogolou, Iterative and expressive querying for big data series, October 2016, Advisors: Anastasia Bezerianos, Themis Palpanas

PhD in progress : Hugo Romat, Visual exploration and interactive manipulation techniques for collections of heterogeneous data and documents, since June 2016, Advisors: Caroline Appert, Emmanuel Pietriga

PhD in progress : Bruno Fruchard, Techniques d'interaction exploitant la mémoire spatiale pour faciliter l'accès rapide aux commandes et aux données, since October 2015, Advisors: Eric Lecolinet, Olivier Chapuis

Master (M2): Dylan Lebout, Visualization of geolocated and temporal data on the Web , May - September 2017, Advisors: Caroline Appert, Emmanuel Pietriga

Master (M2): Reyhaneh Raissi, Multi-user Multi-selection on Tabletop, Mars - September 2017, Advisors: Anastasia Bezerianos, Olivier Chapuis

Master (M1): Eleonore Bartenlian, Tools for customizing tangible interfaces, May - July 2017, Advisors: Caroline Appert

### 10.2.3. Juries

HDR: Guillaume Touya (IGN/Université Paris-Est): Emmanuel Pietriga (examinateur)

PhD: Justin Mathew (Inria/Université Paris-Saclay): Emmanuel Pietriga (président du jury)

PhD: Lonni Besançon (Inria/Université Paris-Saclay): Emmanuel Pietriga (président du jury)

PhD: Hanaë Rateau (Inria/Université Lille 1): Caroline Appert (examinateur)

PhD: Maxime Guillon (Université Grenoble Alpes): Caroline Appert (examinateur)

PhD: Antoine Lhuillier (ENAC/Université Toulouse III): Caroline Appert (examinateur)

## 10.3. Popularization

- *Fête de la science*, Université Paris-Sud: Caroline Appert.
- *Science en Direct*, Cité de la Science: Maria Jesus Lobo Gunther.
- *Qu'est-ce qu'un chercheur en IHM ?*, to high-school students visiting Telecom ParisTech: Bruno Fruchard.

## IMAGINE Project-Team

## 9. Dissemination

### 9.1. Promoting Scientific Activities

#### 9.1.1. Scientific Events Organisation

##### 9.1.1.1. General Chair, Scientific Chair

Remi Ronfard was the scientific chair for the Eurographics workshop on intelligent cinematography and editing (WICED) in Lyon, France in April 2017.

#### 9.1.2. Scientific Events Selection

##### 9.1.2.1. Chair of Conference Program Committees

- Marie-Paule Cani was the Technical Paper Chair for Siggraph 2017.
- Stefanie Hahmann is the paper chair for SPM 2018.

##### 9.1.2.2. Member of the Conference Program Committees

- Marie-Paule Cani served in the Papers Committee of Eurographics 2017.
- Frédéric Devernay served as a member of the program committee for IEEE CVPR 2017, ECCV 2017, 3DV 2017, CVMP 2017, RFIA 2017.
- Damien Rohmer was member of the following International Program Committee: ACM SIGGRAPH General submissions and poster program; Symposium on Computer Animation (SCA); Symposium on Solid and Physical Modeling (SPM); Shape Modeling International; Fabrication and Sculpting Event (SMI-FASE). He was also member of the jury committee of the best paper for the "Journées d'Informatique Française 2017" (J.Fig).
- Remi Ronfard was a member of the Program Committees for Motion in Games (MIG 2017) and International Conference on Interactive Storytelling (ICIDS 2017).
- Stefanie Hahmann served in the International Program Committee for Eurographics 2017, Shape Modeling International (SMI) 2017 and SGP 2017.
- Jean-Claude Léon was member of the International Program Committee for Symposium on Solid and Physical Modeling (SPM) and Shape Modeling International-Sculpting Event (SMI-FASE)

##### 9.1.2.3. Reviewer

- Damien Rohmer was a reviewer for the journals: ACM TOG, Computer and Graphics, Computing and Informatics.
- Remi Ronfard was a reviewer for ACM Siggraph, Siggraph Asia, Computer Vision and Pattern Recognition (CVPR) and Computer Human Interface (CHI) conferences.

#### 9.1.3. Journal

##### 9.1.3.1. Member of the Editorial Boards

- Marie-Paule Cani is an Associate Editor of ACM Transactions on Graphics (TOG).
- Stefanie Hahmann is an Associate Editor of CAD (Elsevier) and Computers & Graphics (Elsevier).
- Jean-Claude Léon is an Associate Editor of CAD (Elsevier)

##### 9.1.3.2. Reviewer - Reviewing Activities

- Remi Ronfard was a reviewer for the ACM transactions on Graphics, Computers and Graphics, and Graphical Models journals in 2017.
- Stefanie Hahmann was a reviewer for the journals CAGD and CAD.

- Jean-Claude Léon was a reviewer for the journal ASME JCISE.
- Frederic Devernay was a reviewer in 2017 for IEEE Robotics and Automation Letters, IEEE Transactions on Robotics, and Traitement du Signal.

#### **9.1.4. Invited Talks**

Rémi Ronfard gave the following invited talks

- Movie Making Machines, Xerox Research Center Europe, February 2017.
- Directing virtual worlds from script to screen, Officine Sintetiche Lab, CIRMA, Torino, May 2017.
- Computer science and visual arts, CNRS, May 2017.
- Synchronization of senses, ICCV workshop CVAM, Keynote invited speaker, October 2017.

Damien Rohmer gave an invited talk at the SIAM-GD (Geometric Design) conference on "Efficient Devel-opable Surface Modeling: From Garment Design, to Paper Animation". Pittsburg, July 2017.

#### **9.1.5. Scientific Expertise**

- Marie-Paule Cani
  - was a reviewer for a consolidator and a starting ERC project.
  - did some consulting for Disney Research, Zurich.
- Remi Ronfard
  - was a member of the scientific committee at IMAGINOVE in 2017.
- Stefanie Hahmann
  - was an expert for the Netherlands Organisation for Scientific Research.
  - serves as a member of the Advisory Board (2014-2018) for the European Marie-Curie Training Network ARCADES.
- Damien Rohmer was reviewer for an ANR submission and a "Grand Est Application" project.

#### **9.1.6. Research Administration**

- Marie-Paule Cani served as first Vice-Chair and chair of the Steering Committee of the Eurographics association.
- Marie-Paule Cani and Rémi Ronfard are elected members of the executive board (CA) of EG-France, the french chapter of Eurographics.
- Marie-Paule Cani was joint director of Laboratoire Jean Kuntzmann until April 2017.
- Damien Rohmer is member of the Conseil d'Administration of Association Française d'Informatique Graphique (AFIG).
- Stefanie Hahmann
  - is an elected member of the Executive Committee of SMA (Solid Modeling Association) since 2013.
  - is the head of the French working group "GTMG" (Groupe de travail en Modélisation Géométrique) part of the CNRS GDR IM and GDR IGRV.
  - was member of the Conseil de laboratoire of the LJK lab.

## **9.2. Teaching - Supervision - Juries**

### **9.2.1. Teaching**

- Marie-Paule Cani is responsible for two courses at Ensimag/Grenoble-INP: 3D Graphics (a course that attracts about 80 master 1 students per year) and IRL (introduction à la recherche en laboratoire), a course enabling engineering students to work on a personal project in a research lab during one semester, to get an idea of what academic research is.



- Stefanie Hahmann is co-responsible for the department MMIS (Images and Applied Maths) at Grenoble INP with 120 students. (<http://ensimag.grenoble-inp.fr/cursus-ingenieur/modelisation-mathematique-images-simulation-124674.kjsp>)

Stefanie Hahmann had teaching load of 192h per year. She is responsible for 3 courses at Ensimag/Grenoble INP: Numerical Methods (240 students, 3rd year Bachelor level), Geometric Modeling (60 students, Master 1st year) and Surface Modeling (30 students, Master 2nd year).

- Olivier Palombi is responsible for the French **Campus numérique** of anatomy. He is responsible and national leader of the project SIDES (<http://side-sante.org/>). All the French medical schools (43) have planed to use the same e-learning framework (SIDES) to manage evaluations and to create a large shared database of questions.
- Damien Rohmer is coordinator of the Math, Signal, Image program at the engineering school CPE Lyon in supervising the scientific and technical content of the program. He is also co-responsible for the *Image, Modeling & Computing* specialization program attracting 35 students per year. He gives, and is responsible for one Computer Science class (130 student, 3rd year Bachelor level), an introductory Computer Graphics class (110 students, Master 1st year), and 5 specialization classes on C++ programming, OpenGL programming, 3D modeling, animation and rendering (35 students, Master 1st and 2nd year). He coordinates the association between CPE and the new computer graphics master program ID3D (Image, Développement et Technologie 3D) from University Lyon1. He also coordinates the association between CPE and the Gamagora computer game project.
- Rémi Ronfard taught courses in Computational modeling of narrative texts, movies and games, MSTII Doctoral School, University Grenoble Alpes (18 hours in March-April 2017); Game Engine Programming, M2R IMAGINA, University of Montpellier (36 hours in October-December 2017) and Advanced 3D animation, M2R MOSIG, University of Grenoble Alpes (12 hours in December 2017).
- Jean-Claude Léon is in charge of the module Mechanical Systems at Grenoble-INP ENSE3 (300 students, 64h, coordination of three courses)
- Frederic Devernay teaches Computer Science at CPP - La prépa des ING, Grenoble (50h, 200 students).

Note that MOSIG is a joint master program between University Joseph Fourier (UJF) and Institut Polytechnique de Grenoble (INPG) taught in English since it hosts a number of internal students. It belongs to the doctoral school MSTII.

### 9.2.2. Supervision

- PhD: Sébastien Crozet, *Calcul de distance minimale entre solides B-Rep CAO pour des applications de simulations mécaniques temps réelles*, Janvier 2015-Décembre 2017. Supervised by Jean-Claude Léon. Defended in December 2017.
- PhD: Grégoire Niéto (Université de Grenoble Alpes), *Dispositifs de capture de type "caméra plénoptique" pour la vision à grande distance, et algorithmes de traitement et de visualisation*, supervised by Frédéric Devernay and James Crowley (LIG, Grenoble). Defended in October 2017.
- PhD: Tibor Stanko. *Modélisation de surfaces lisses maillées à partir de capteurs inertiels*. Thèse CEA. October 2014- September 2017. Supervised by Stefanie Hahmann and GP Bonneau. Defended in December 2017.
- PhD in progress: Romain Brégier (Univ. Grenoble Alpes), *Detection and pose estimation of rigid object instances for robotics (Détection et estimation de pose d'instances d'objets rigides pour la manipulation robotisée)*. July 2014 - February 2018. Frédéric Devernay, James Crowley (LIG, Grenoble).
- PhD in progress: Guillaume Cordonnier. *Graphical simulation of mountains based on geology*. Grenoble university. October 2015-September 2018. Marie-Paule Cani and Eric Galin.

- PhD in progress: Geoffrey Guingo. *Synthesis of animated textures*. Grenoble university. October 2015-September 2018. Marie-Paule Cani, Jean-Michel Dischler and Basile Sauvage.
- PhD in progress: Sandra Nabil (Université de Grenoble Alpes), High resolution panoramic video creation and processing (Vidéo panoramique 360 degrés à très haute résolution). October 2015 - October 2018. Frédéric Devernay, James Crowley (LIG, Grenoble).
- PhD in progress: Robin Roussel. *Function-aware design for objects to be fabricated*. UCL London. October 2015-September 2018. Niloy Mitra, Marie-Paule Cani and Jean-Claude Léon.
- PhD in progress: Amélie Fondevilla. Sculpting and animating developable surfaces with video embedding. Grant MENRT. October 2016 - September 2019. Stéfanie Hahmann and Damien Rohmer.
- PhD in progress: Thomas Buffet. Efficient multi-layered cloth animation using implicit surfaces, Grant ANR FoLD-Dyn. December 2017 - November 2020. Marie-Paule Cani and Damien Rohmer.
- PhD in progress: Maxime Garcia. *Expressive performance transfer*. Grant MENRT. October 2016-September 2019. Supervised by Rémi Ronfard.
- PhD in progress: Pierre Casati. *Animating 3D antique statues and engravings*. December 2017-November 2020. Supervised by Rémi Ronfard and Stéfanie Hahmann. Funded by ANR project E-ROMA.
- PhD in progress: Ameya Murukutla. *Authoring scenarios for augmented reality anatomy learning*. December 2017-November 2020. Supervised by Rémi Ronfard and Olivier Palombi. Funded by ANR project Anatomy 2020.
- PhD abandoned: Even Entem. *3D modelling from a sketch*. Grenoble University. November 2013-March 2017. Marie-Paule Cani and Loic Barthe (IRIT Toulouse). PhD Stopped in March 2017.
- PhD abandoned: Pablo Coves. From Point Cloud Data to Functional CAD Model. Grenoble. Univ. Jean-Claude Léon, Damien Rohmer, Raphaëlle Chaine (LIRIS), Julie Digne (LIRIS). May 2015 - Sept. 2017. PhD stopped in Sept. 2017. Pablo currently pursue his career as a software engineer in the company Anatoscope.
- M2R: Sarah Kushner. Master MOSIG. Sketch-Based Posing and Interaction of Multiple Characters: Animating Dancing Couples. Supervised by Marie-Paule Cani and Rémi Ronfard. Sarah Kushner is now a PhD Student at the University of Toronto.
- M2R: Tuan Hung Vu. Master MOSIG. Learning cinematographic style from pictures. Supervised by Karteek Alahari (THOTH team) and Rémi Ronfard. Tuan Hung Vu is now a PhD student at IMT Lille Douai.
- M1: Hugo Frezat. Master MOSIG. Story Generation from Pictures. Supervised by Rémi Ronfard.

### 9.3. Popularization

Starting in May 2017, our recent work on "3D animation by gesturing and drawing" has been featured in a live demo open to the general public in the new Espace Login at Inria in Montbonnot.

On November 8 and 9, that same demo was presented at Studio 104 in Paris during the celebration of Inria's 50th anniversary, to an audience of several hundred people.

Rémi Ronfard gave presentations on

- Directing virtual worlds, Ministère de la Culture, January 2017.
- Eyetracking and the arts, Institut d'Art Contemporain, Lyon, April 2017.
- Sketch-based character animation, CITIA, Annecy, May 2017.
- Computer science and theatre, ENSATT Lyon, December 2017.

Marie-Paule Cani was invited by France Inter's Dorothée Barba on December 25, 2016 to speak about the Imagine team and the future of cinema. A podcast of the the program (Demain la veille: cinema futurismo) can be obtained from <https://www.franceinter.fr/emissions/demain-la-veille/demain-la-veille-25-decembre-2016>.

## MANAO Project-Team

## 10. Dissemination

### 10.1. Promoting Scientific Activities

#### 10.1.1. Scientific Events Organisation

##### 10.1.1.1. Chair of Conference Program Committees

Eurographics 2017 Posters chair

##### 10.1.1.2. Member of the Conference Program Committees

Expressive 2017 (NPAR-SBIM-CAe), Eurographics 2017 and 2018, Eurographics Symposium on Rendering 2017 (EGSR), Eurographics Workshop on Graphics and Cultural Heritage 2017 (GCH), Symposium on Geometry Processing 2017 (SGP), Geometric Modeling and Processing 2017 (GMP), SIBGRAPI 2017, Web3D 2017

##### 10.1.1.3. Reviewer

ACM Siggraph 2017, ACM Siggraph Asia 2017, Eurographics 2017, Graphics Interface 2017, Computer Graphics International 2017, CHI 2018, Vision meets Graphics 2017

#### 10.1.2. Journal

##### 10.1.2.1. Reviewer - Reviewing Activities

ACM Transactions on Graphics (TOG), IEEE Transactions on Visualization and Computer Graphics (TVCG), Computer Graphics Forum (CGF), Journal of Vision (JoV), i-Perception, Computers & Graphics

#### 10.1.3. Scientific Expertise

Horizon 2020 Program

## 10.2. Teaching - Supervision - Juries

### 10.2.1. Teaching

The members of our team are involved in teaching computer science at University of Bordeaux, ENSEIRB Engineering School, and Institut d'Optique Graduate School (IOGS). General computer science is concerned, as well as the following graphics related topics:

Master : Pierre Bénard, Gaël Guennebaud, Romain Pacanowski, Advanced Image Synthesis, 60 HETD, M2, Univ. Bdx, France.

Master : Gaël Guennebaud & Antoine Lucat, Numerical Techniques, 45 HETD, M1, IOGS, France

Master : Xavier Granier, Image Synthesis, 14 HETD, M2, IOGS, France

Master : Gaël Guennebaud, Geometric Modeling, 22 HETD, M2, IOGS, France

Master : Gaël Guennebaud, Thibaud Lambert, Parallel Programming, 19 HETD, M1, IOGS, France

Master : Romain Pacanowski, Thibaud Lambert, Antoine Lucat & Brett Ridel, Algorithmic and Object Programming, 60 HETD, M1, IOGS, France

Master : Xavier Granier, Romain Pacanowski, Colorimetry and Appearance Modeling, 20 HETD, M1, IOGS, France.

Master : Gaël Guennebaud and Pierre Bénard, 3D Worlds, 60 HETD, M1, Univ. Bdx and IOGS, France.

Master : Pierre Bénard, Virtual Reality, 24 HETD, M2, Univ. Bdx, France.

Master : Patrick Reuter, Graphical user interfaces and Spatial augmented reality seminars, M2, ESTIA, France.

Master : Pierre Bénard, Image Synthesis and 3D modeling, 20 HETD, M2, ENSEIRB, France.

Licence : Patrick Reuter, Digital Imaging, 30 HETD, L3, Univ. Bdx, France.

Some members are also in charge of some fields of study:

Master : Xavier Granier, M2, IOGS (Bordeaux), France.

License : Patrick Reuter, Science and Modeling, L2, Univ. Bdx, France.

### 10.2.2. Supervision

HdR : Pascal Barla, Toward a Perceptually-relevant Theory of Appearance, Inria & Univ. Bordeaux, 9 October 2017

PhD : Arthur Dufay, Adaptive high-quality of virtual environments with complex photometry, Technicolor & Univ. Bordeaux, 10 October 2017, J.-E. Marvie R. Pacanowski & X. Granier

PhD : Thibaud Lambert, Real-time rendering of highly detailed 3D models, Inria & Univ. Bordeaux, 18 December 2017, G. Guennebaud & P. B  nard

PhD in progress : Lo  s Mignard-Debize, Plenoptic function and its application to spatial augmented reality, Inria & Univ. Bordeaux, P. Reuter & I. Ihrke

PhD in progress : Antoine Lucat, Appearance Acquisition and Rendering, IOGS & Univ. Bordeaux, R. Pacanowski & X. Granier

PhD in progress : David Murray, Expressive Rendering of Volumetric Data, Thermo Fisher Scientific & Univ. Bordeaux, J. Baril & X. Granier

PhD in progress : Thomas Crespel, Autostereoscopic 3D display, Inria & Univ. Bordeaux, P. Reuter & X. Granier

PhD in progress : Charlotte Herzog, 3 dimensions X-rays imaging for medical applications, Imaging Optics, IOGS & Univ. Bordeaux, X. Granier

PhD in progress : Camille Brunel, Real-Time Animation and Deformation of 3D Characters, Inria & Univ. Bordeaux, P. Barla, G. Guennebaud & P. B  nard

## 10.3. Popularization

We took part in "FACTS", the art and science festival of Universit   de Bordeaux, and more precisely in the exhibition "Open Lab", which took place from November 14 to 21 at Espace 29. In collaboration with the artist Maud Mulliez, we presented our ongoing work, "L'empreinte du Geste", which aims at analyzing the connection between the gesture of the artist and the mark that the brush or pen produces on the final art piece. An installation combining videos and projection was allowing the audience to discover our preliminary results.

Pierre B  nard gave a talk titled *L'art et la science des films d'animation 3D* during the internal Inria BSO seminar "Unith   ou caf  " in January 2017 (45 minutes + questions) and in front of secondary students (120 split into 5 groups) during "la F  te de la Science" (30 minutes) in September 2017. This talk presents the main steps and ingredients required to create a 3D animated film (3D modeling, animation, lighting, rendering) and, for each of them, it shows the subtle but indispensable mix of physical and mathematical models, computer algorithms and artistic talent that it implies. It also highlights how the work of manao contributes to this field.

## MAVERICK Project-Team

# 9. Dissemination

## 9.1. Promoting Scientific Activities

### 9.1.1. Scientific Events Selection

#### 9.1.1.1. Member of the Conference Program Committees

- Georges-Pierre Bonneau was a member of the International Program Committees of the conferences Solid and Physical Modeling 2017, Eurographics Visualization Symposium 2017 (short paper track) and EnvirVis 2017.
- Romain Vergne was a member of the Conference Program Committee of SIBGRAPPI 2017.
- Joëlle Thollot was a member of the Conference Program Committee of Expressive 2017.
- Nicolas Holzschuch was a member of the Program Committee for the Symposium on Interactive 3D Graphics and Games (I3D) 2017.
- Nicolas Holzschuch is a member of the Steering Committee for the Eurographics Symposium on Rendering.

#### 9.1.1.2. Reviewer

All members of the Maverick team work as reviewers for the most prestigious conferences, including Siggraph, Eurographics, the EG symposium on rendering.

### 9.1.2. Journal

#### 9.1.2.1. Reviewer - Reviewing Activities

All members of the Maverick team work as reviewers for the most prestigious journals, including ACM TOG, IEEE TVCG, etc.

### 9.1.3. Invited Talks

- Romain Vergne, October 13, 2017. Blekinge Technology Institute (Karlskrona, Sweden).
- Joëlle Thollot, February 2, 2017. Loria - Inria Nancy.

### 9.1.4. Research Administration

- Georges-Pierre Bonneau is member of the “conseil du Laboratoire Jean Kuntzmann”.
- Romain Vergne is member of the “conseil du Laboratoire Jean Kuntzmann”.
- Romain Vergne is co-responsible of the GT Rendu.
- Romain Vergne is co-responsible of the PhD students of the Laboratoire Jean Kuntzmann.
- Nicolas Holzschuch is an elected member of Inria Evaluation Committee (CE), an elected member of Inria Comité Technique (CTI) and a reserve member of Inria Scientific Council (CS).
- Nicolas Holzschuch is responsible for the department "Geometry and Images" of the Laboratoire Jean Kuntzmann.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Joëlle Thollot and Georges-Pierre Bonneau are both full Professor of Computer Science. Romain Vergne is an associate professor in Computer Science. They teach general computer science topics at basic and intermediate levels, and advanced courses in computer graphics and visualization at the master levels. Nicolas Holzschuch teaches advanced courses in computer graphics at the Master level.

- Licence: Joëlle Thollot, Théorie des langages, 27h, L3, ENSIMAG, France.
- Licence: Joëlle Thollot, Séminaire d'innovation, 10h, L3, ENSE3, France.
- Master: Joëlle Thollot, Responsable du cursus en alternance, 48h, M1-M2, ENSIMAG, France.
- Master: Joëlle Thollot, Tutorat d'apprentis, 50h, M1-M2, ENSIMAG, France.
- Master: Joëlle Thollot, responsable de la filière MMIS, 24h, M1-M2, ENSIMAG, France.
- Licence : Romain Vergne, Introduction to algorithms, 64h, L1, UGA, France.
- Licence : Romain Vergne, WebGL, 29h, L3, IUT2 Grenoble, France.
- Master : Romain Vergne, Geometric modeling, 18h, M1, UGA, France.
- Master : Romain Vergne, Image synthesis, 27h, M1, UGA, France.
- Master : Romain Vergne, Image synthesis, 15h, M1, Polytech, France.
- Master : Romain Vergne, 3D graphics, 15h, M1, UGA, France.
- Master : Nicolas Holzschuch, Computer Graphics II, 18h, M2 MoSIG, France.
- Master : Nicolas Holzschuch, Synthèse d'Images et Animation, 32h, M2, ENSIMAG, France.

### 9.2.2. Supervision

- PhD: Tibor Stanko, Reconstruction de surfaces lisses maillées à partir de capteurs inertiels, Friday december 8th, 2017, Stefanie Hahmann and Georges-Pierre Bonneau.
- PhD: Benoit Arbelot, Transferts d'apparence en espace image basés sur des propriétés textuelles, April 7, 2017, Joëlle Thollot, Romain Vergne.
- PhD in progress: Alexandre Bléron, Stylization of animated 3D scenes in a painterly style, October 1, 2015, Joëlle Thollot, Romain Vergne.
- PhD in progress: Vincent Tavernier, Procedural stochastic textures, October 1, 2017, Fabrice Neyret, Joëlle Thollot, Romain Vergne.
- PhD in progress: Guillaume Loubet, Efficient representations for sub-pixel appearance, October 1, 2014, Fabrice Neyret.
- PhD in progress: Jeremy Wambecke, Temporal Data Visualization in Natural Environments, September 2015, Georges-Pierre Bonneau, Romain Vergne and Renaud Blanch.
- PhD in progress: Alban Fichet, Efficient representation for measured reflectance, October 1, 2015, Nicolas Holzschuch.

### 9.2.3. Juries

- Fabrice Neyret was in the jury of the HDR of Pascal Barla on October 9th, 2017 (Bordeaux, France).
- Joëlle Thollot was in the jury of the PhD of Hristina Hristova (Univ. Rennes 1) and Jean Hergel (Inria Nancy).

## 9.3. Popularization

Every year, "MobiNet" (see section 4.5) 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 "Maths in special effects" in the magazine "Tangentes" #178 (sep-oct 2017).

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.

## MIMETIC Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

#### 10.1.1.1. General Chair, Scientific Chair

- Anne-Hélène Olivier, Workshop VHCIE 2017, IEEE VR 2017, Los Angeles, United-States, March 2017
- Anne-Hélène Olivier, Workshop Interactions, Rennes, June 2017

#### 10.1.1.2. Member of the Organizing Committees

Ludovic Hoyet, co-organiser of the French Computer Graphics - Virtual Reality days, October 2017, Rennes, France

Marc Christie, steering committee of Motion in Games 2017

### 10.1.2. Scientific Events Selection

#### 10.1.2.1. Chair of Conference Program Committees

Ludovic Hoyet: co-chair of French Computer Graphics days 2017, October 2017, Rennes, France

Antonio Mucherino: Workshop on Computational Optimization (WCO17), in the framework of the "Federated Conference on Computer Science and Information Systems" (FedCSIS17), co-chair with Stefka Fidanova and Daniela Zaharie Web: <https://fedcsis.org/2017/wco>

#### 10.1.2.2. Member of the Conference Program Committees

Ludovic Hoyet, ACM Motion in Games MIG 2017, Barcelona, Spain, Nov. 2017

Ludovic Hoyet, ACM Symposium on Applied Perception 2017, Cottbus, Germany, Sept. 2017

Ludovic Hoyet, International Conference on Computer Graphics Theory and Applications 2018, Madeira, Portugal, Jan. 2018

Anne-Hélène Olivier, ACM Motion in Games MIG 2017, Barcelona, Spain, October 2017

Anne-Hélène Olivier, IEEE VR 2018 TVCG Conference paper, Reutlingen, Germany, March 2018

Franck Multon, ACM Motion in Games MIG 2017, Barcelona, Spain, Nov. 2017

Franck Multon, Computer Animation and Social Agents CASA 2017, Seoul, Korea, May 2017

Franck Multon, IEEE Conference on Automatic Face and Gesture Recognition FG'2017, Washington DC, US, June 2017

Franck Multon, Affective Computing and Intelligent Interaction ACII 2017, San Antonio, United States, October 2017

Richard Kulpa, International Conference on Computer Graphics Theory and Applications (GRAPP), 2017

Marc Christie, Motion In Games (MIG) 2017

#### 10.1.2.3. Reviewer

Ludovic Hoyet, ACM Siggraph, Los Angeles, United-States, July 2017

Ludovic Hoyet, IEEE VR 2018, Reutlingen, Germany, March 2018

Ludovic Hoyet, Pacific Graphics, Taipei, Taiwan, October 2017

Anne-Hélène Olivier, IEEE VR 2018 TVCG Conference paper, Reutlingen, Germany, March 2018

Anne-Hélène Olivier, ACM Motion in Games MIG 2017, Barcelona, Spain, October 2017

Anne-Hélène Olivier, ACM VRST 2017, Gothenburg, Sweden, November 2017  
 Richard Kulpa, IEEE International Conference on Automatic Face and Gesture Recognition, 2018  
 Richard Kulpa, Siggraph CHI, 2018  
 Richard Kulpa, GRAPP, 2018  
 Marc Christie Eurographics 2017  
 Marc Christie ACM Siggraph CHI 2017  
 Marc Christie Siggraph 2017  
 Marc Christie IEEE VR 2017  
 Franck Multon IEEE VR 2017  
 Franck Multon ACM VRST 2017  
 Franck Multon ACM MIG 2017  
 Franck Multon ACM VRST 2017

### **10.1.3. Journal**

#### *10.1.3.1. Member of the Editorial Boards*

Franck Multon, Presence, MIT Press  
 Franck Multon, Computer Animation and Virtual Worlds CAVW, John Wiley  
 Antonio Mucherino, Guest Editor of Optimization Letters, Springer  
 Armel Crétual, Editorial board of Journal of Electromyography and Kinesiology  
 Marc Christie, Associate Editor of the Visual Computer

#### *10.1.3.2. Reviewer - Reviewing Activities*

Franck Multon, Medical & Biological Engineering & Computing, Computer and Graphics, IEEE Journal of Biomedical and Health Informatics, IEEE Transactions on Visualization and Computer Graphics, Journal of Computer Science and Technology, Computer Animation and Virtual Worlds, ROBOMECH journal  
 Ludovic Hoyet, ACM Transactions on Graphics, IEEE Transactions on Visualization and Computer Graphics, Computers & Graphics, Computer Graphics Forum  
 Anne-Hélène Olivier, Gait and Posture, Motor Control  
 Antonio Mucherino, Journal of Global Optimization, Springer, Discrete Applied Mathematics, Elsevier  
 Armel Crétual, Journal of Electromyography and Kinesiology, Clinical Biomechanics, Gait & Posture, Journal of Orthopaedic Research, Medical & Biological Engineering & Computing, PlosOne  
 Richard Kulpa, Human Movement Science, 2017, Sport Medicine (SMOA), 2017, CGVCVIP, 2017  
 Marc Christie, IEEE TVCG, The Visual Computer, CGF

### **10.1.4. Invited Talks**

Anne-Hélène Olivier, VenLab, Brown University, Providence USA, August 2017  
 Anne-Hélène Olivier, IFSTTAR Marne la Vallée, November 2017  
 Antonio Mucherino, Institute of Computer Technology, TU Vienna, Austria. Invited by N. TaheriNejad. April 2017.  
 Antonio Mucherino, Research Center for Applied Sciences, Academia Sinica, Taipei, Taiwan. Invited by J-H. Lin. June 2017.

### **10.1.5. Scientific Expertise**



Franck Multon, ANR expert, member of the ANR CPDS 4 "Santé Bien-être" through the Allistene national Alliance to design the next ANR call for projects, CRSNG (Canada)

Armel Crétual, 5 projects evaluated for UEFISCDI (The Executive Agency for Higher Education, Research, Development and Innovation Funding, Romania)

Marc Christie, expert for CIR (credit impot recherche – two cases in 2017), expert for ANR (CE 27)

### **10.1.6. Research Administration**

Franck Multon is member of the University Rennes2 Research steering committee "commission recherche", and Academic Council "CAC",

Franck Multon is member of the M2S Lab steering committee,

Franck Multon is member of the UFR-APS steering committee in University Rennes2

Ludovic Hoyet is an elected member of the Board of Managers for the French Computer Graphics Association (Association Française d'Informatique Graphique) since Oct. 2017

Ludovic Hoyet participated in the local MESR PhD Grant Auditions 2017

Georges Dumont is president of the elected group at scientific council of École Normale Supérieure de Rennes, member of the scientific council of École Normale Supérieure de Rennes

Georges Dumont is scientific head of Immerstar platforms (Immersia + Immermove) jointly for Inria and Irisa Partners

Richard Kulpa is member of the University Rennes2 Research steering committee "commission recherche", Academic Council "CAC" and Committee of International Affairs "CAI"il "CAC",

Benoit Bideau is director of the M2S Lab

## **10.2. Teaching - Supervision - Juries**

### **10.2.1. Teaching**

Doctorat : Ludovic Hoyet & Anne-Hélène Olivier, Evaluations en informatique graphique et réalité virtuelle : concepts généraux et cas pratiques, 2.25h, Journée Jeunes Chercheurs du GDR IG-RV 2017, France

Master : Franck Multon, co-leader of the IEAP Master (1 and 2) "Ingénierie et Ergonomie de l'Activité Physique", STAPS, University Rennes2, France

Master : Franck Multon, "Santé et Performance au Travail : étude de cas", leader of the module, 30H, Master 1 M2S, University Rennes2, France

Master : Franck Multon, "Analyse Biomécanique de la Performance Motrice", leader of the module, 30H, Master 1 M2S, University Rennes2, France

Master: Charles Pontonnier, "Numerical methods", leader of the module, 36H, Mechanics, École Spéciale Militaire de Saint-Cyr Coëtquidan, France

Master: Charles Pontonnier, "Numerical simulation of mechanical systems", leader of the module, 18H, Mechanics, École Spéciale Militaire de Saint-Cyr Coëtquidan, France

Master: Charles Pontonnier, "Analytical Mechanics" , 40H, Mechanics, École Spéciale Militaire de Saint-Cyr Coëtquidan, France

Master: Charles Pontonnier, "Robotics: practical views", 24H, International cadets seminar, École Spéciale Militaire de Saint-Cyr Coëtquidan, France

Master: Charles Pontonnier, "Design and control of legged robots", leader of the module, 38H, Electronics, École Spéciale Militaire de Saint-Cyr Coëtquidan, France

Master: Charles Pontonnier, "Design, simulation and control of mechanical systems", leader of the module, 24H, Lecturers training in mechatronics, École Normale Supérieure de Rennes, France

Master: Charles Pontonnier, "Musculoskeletal modeling and ergonomics", 3H, Master 1 M2S, University Rennes2, France

Master : Georges Dumont, Responsable of the second year of the master Mechatronics, Rennes 1 University and École Normale Supérieure de Rennes, France

Master : Georges Dumont, Mechanical simulation in Virtual reality, 36H, Master Mechatronics, Rennes 1 University and École Normale Supérieure de Rennes, France

Master : Georges Dumont, Mechanics of deformable systems, 40H, Master FE, École Normale Supérieure de Rennes, France

Master : Georges Dumont, oral preparation to agregation competitive exam, 20H, Master FE, École Normale Supérieure de Rennes, France

Master : Georges Dumont, Vibrations in Mechanics, 10H, Master FE, École Normale Supérieure de Rennes, France

Master : Georges Dumont, Multibody Dynamics, 9H, Master FE, École Normale Supérieure de Rennes, France

Master : Georges Dumont, Finite Element method, 12H, Master FE, École Normale Supérieure de Rennes, France

Master : Ludovic Hoyet, Motion for Animation and Robotics, 9h, University Rennes 1, France

Master : Ludovic Hoyet, Motion Analysis and Gesture Recognition, 12h, INSA Rennes, France

Master : Anne-Hélène Olivier, "Biostatistiques", 7H, Master 2 APPCM, University Rennes2, France

Master : Anne-Hélène Olivier, "Evaluation fonctionnelle des pathologies motrices", 9H Master 2 APPCM, University Rennes2, France

Master : Anne-Hélène Olivier, "Maladie neurodégénératives : aspects biomécaniques", 2H Master 1 APPCM, University Rennes2, France

Master : Anne-Hélène Olivier, "Biostatistiques", 7H, Master 1 EOPS, University Rennes2, France

Master : Anne-Hélène Olivier, "Méthodologie", 4H, Master 1 EOPS/APPCM, University Rennes2, France

Master : Anne-Hélène Olivier, "Contrôle moteur : Boucle perceptivo-motrice", 3H, Master IIEAP, Université Rennes 2, France

Master: Antonio Mucherino, "Programmation Parallèle", M1 en Informatique, 16H, University of Rennes, France

Master: Fabrice Lamarche, "Compilation pour l'image numérique", 29h, Master 1, ESIR, University of Rennes 1, France

Master: Fabrice Lamarche, "Synthèse d'images", 12h, Master 1, ESIR, University of Rennes 1, France

Master: Fabrice Lamarche, "Synthèse d'images avancée", 28h, Master 1, ESIR, University of Rennes 1, France

Master: Fabrice Lamarche, "Modélisation Animation Rendu", 36h, Master 2, ISTIC, University of Rennes 1, France

Master: Fabrice Lamarche, "Jeux vidéo", 26h, Master 2, ESIR, University of Rennes 1, France

Master: Fabrice Lamarche, "Motion for Animation and Robotics", 9h, Master 2 SIF, ISTIC, University of Rennes 1, France.

Master : Armel Crétual, "Méthodologie", leader of the module, 20H, Master 1 M2S, University Rennes2, France

Master : Armel Crétual, "Biostatistiques", leader of the module, 30H, Master 2 M2S, University Rennes2, France

Master : Richard Kulpa, "Boucle analyse-modélisation-simulation du mouvement", 27h, leader of the module, Master 2, Université Rennes 2, France

Master : Richard Kulpa, "Méthodes numériques d'analyse du geste", 27h, leader of the module, Master 2, Université Rennes 2, France

Master : Richard Kulpa, "Cinématique inverse", 3h, leader of the module, Master 2, Université Rennes 2, France

Master: Marc Christie, "Multimedia Mobile", Master 2, leader of the module, 32h, Computer Science, University of Rennes 1, France

Master: Marc Christie, "Projet Industriel Transverse", Master 2, 32h, leader of the module, Computer Science, University of Rennes 1, France

Master: Marc Christie, "Outils pour la Conception d'IHM", Master 2, 32h, leader of the module, Computer Science, University of Rennes 1, France

Licence : Franck Multon, "Ergonomie du poste de travail", Licence STAPS L2 & L3, University Rennes2, France

Licence: Charles Pontonnier, "Numerical control", leader of the module, Electronics, École Inter-Armes de Saint-Cyr Coëtquidan, France

Licence : Anne-Hélène Olivier, "Analyse cinématique du mouvement", 100H , Licence 1, University Rennes 2, France

Licence : Anne-Hélène Olivier, "Anatomie fonctionnelle", 7H , Licence 1, University Rennes 2, France

Licence : Anne-Hélène Olivier, "Effort et efficacité", 12H , Licence 2, University Rennes 2, France

Licence : Anne-Hélène Olivier, "Locomotion et handicap", 12H , Licence 3, University Rennes 2, France

Licence : Anne-Hélène Olivier, "Biomécanique spécifique aux APA", 8H , Licence 3, University Rennes 2, France

Licence : Anne-Hélène Olivier, "Biomécanique du vieillissement", 12H , Licence 3, University Rennes 2, France

Licence: Antonio Mucherino, "Informatique 1", 80H, L1, University of Rennes, France

Licence: Fabrice Lamarche, "Initiation à l'algorithmique et à la programmation", 56h, License 3, ESIR, University of Rennes 1, France

License: Fabrice Lamarche, "Programmation en C++", 46h, License 3, ESIR, University of Rennes 1, France

Licence: Fabrice Lamarche, "IMA", 24h, License 3, ENS Rennes, ISTIC, University of Rennes 1, France

Licence : Armel Crétual, "Analyse cinématique du mouvement", 100H, Licence 1, University Rennes 2, France

Licence : Richard Kulpa, "Biomécanique (dynamique en translation et rotation)", 48h, Licence 2, Université Rennes 2, France

Licence : Richard Kulpa, "Méthodes numériques d'analyse du geste", 48h, Licence 3, Université Rennes 2, France

Licence : Richard Kulpa, "Statistiques et informatique", 15h, Licence 3, Université Rennes 2, France

Licence : Marc Christie, "Programmation Impérative 1", leader of the module, University of Rennes 1, France

### 10.2.2. Supervision

PhD: Antoine Muller, Contributions méthodologiques à l'analyse musculo-squelettique de l'humain dans l'objectif d'un compromis précision performance (Methodological contributions to the musculoskeletal analysis of humans with a trade-off between performance and precision), Ecole normale supérieure, Georges Dumont & Charles Pontonnier

PhD: Marion Morel, Suivi et étude des interactions pour l'analyse des tactiques durant un match de basket-ball, UPMC - University Rennes 2, septembre 2014, Catherine Achard & Séverine Dubuisson & Richard Kulpa

PhD in progress (beginning september 2017): Simon Hilt, Haptique Biofidèle pour l'Interaction en réalité virtuelle, Ecole normale supérieure, Georges Dumont & Charles Pontonnier

PhD in progress (beginning september 2017): Pierre Puchaud, Développement d'un modèle musculo-squelettique générique du soldat en vue du support de son activité physique, Ecole normale supérieure, Charles Pontonnier & Nicolas Bideau & Georges Dumont

PhD in progress: Rebecca Fribourg, Enhancing Avatars in Virtual Reality through Control, Interactions and Feedback, Sept. 2017, Ferran Argelaguet & Ludovic Hoyet & Anatole Lécuyer

PhD in progress: Florian Berton, Design of a virtual reality platform for studying immersion and behaviours in aggressive crowds, Nov. 2017, Ludovic Hoyet & Anne-Hélène Olivier & Julien Petré

PhD in progress: Sean D. Lynch, Perception visuelle du mouvement humain dans les interactions lors de tâches locomotrices, M2S - University Rennes 2, septembre 2015, Anne-Hélène Olivier & Richard Kulpa

PhD in progress: Amaury Louarn, A topology-driven approach to retargeting of filmic style in 3D environments, University of Rennes 1, Oct. 2017, Marc Christie & Fabrice Lamarche & Franck Multon

PhD in progress: Florence Gaillard, Evaluation en situation écologique des capacités fonctionnelles des membres supérieurs d'enfants hémiplégiques, University Rennes 2, decembre 2015, Armel Crétual & Isabelle Bonan

PhD in progress: Karim Jamal, Les effets des stimulations sensorielles par vibration sur les perturbations posturales secondaires à des troubles de la cognition spatiale après un Accident vasculaire Cérébrale, University Rennes 2, septembre 2016, Isabelle Bonan & Armel Crétual

PhD in progress: Lyse Leclercq, Intérêt dans les activités physiques du rétablissement de la fonction inertielle des membres supérieurs en cas d'amputation ou d'atrophie, University Rennes 2, septembre 2017, Armel Crétual

PhD in progress: Sean D. Lynch, Perception visuelle du mouvement humain dans les interactions lors de tâches locomotrices, M2S - University Rennes 2, septembre 2015, Anne-Hélène Olivier & Richard Kulpa

PhD in progress: Pierre Touzard, Suivi longitudinal du service de jeunes joueurs de tennis élite : identification biomécanique des facteurs de performance et de risque de blessures, University Rennes 2, septembre 2014, Benoit Bideau & Richard Kulpa & Caroline Martin

PhD in progress: Yacine Said Bouhalia, Approche transversale pour l'analyse et la reconnaissance de gestes 2D et 3D, INSA of Rennes, septembre 2015, Richard Kulpa & Franck Multon & Eric Anquetil

PhD in progress: Charles Faure, Stratégies coopératives et compétitives dans des tâches d'interactions physiques multiples, Université Rennes 2 - ENS Rennes, septembre 2016, Benoit Bideau & Richard Kulpa

PhD in progress: Théo Perrin, Evaluation de l'influence des feedbacks sur la capacité d'apprentissage dans le cadre d'interactions complexes entre joueurs et influence de ces feedbacks en fonction de l'activité sportive, Université Rennes 2 - ENS Rennes, septembre 2017, Benoit Bideau & Richard Kulpa

### **10.2.3. Juries**

PhD: Alexandra PIMENTA DOS SANTOS, Dynamical synthesis and analysis of healthy and pathological human walking, Université Pierre et Marie Curie, November 2017, Franck Multon, President

PhD: Galo Xavier MALDONADO TORO, Analysis and Generation of Highly Dynamic Motions of Anthropomorphic Systems: Application to Parkour. Université Fédérale Toulouse Midi-Pyrénées. November 2017, Franck Multon, Rapporteur.

PhD: 2017, Channarong Trakunsaranakom, Proposal for tangible, intuitive and collaborative design of manufactured products through virtual and augmented reality environments, Université de Grenoble-Alpes. 2017 june 21st, Georges Dumont Rapporteur.

PhD: 2017, Jingtao Chen, Biomechanical analysis of different aspects in virtual reality, Université de Grenoble-Alpes, 2017 january 30, Georges Dumont, Rapporteur.

PhD: 2017, Anne-Laure Kervellec, Introduction d'un logiciel dans la rééducation : optimisation et évaluation de l'engagement, Université Rennes 2, January 5th 2017, Armel Crétual, Examineur

HDR: Sophie SAKKA, Entre l'humain et l'humanoïde. Ecole Centrale de Nantes. December 2017, Franck Multon, President.

### **10.3. Popularization**

Ludovic Hoyet, Journées de la Science 2017. Présentation et démo "Ma main à 6 doigts: Avatar et Réalité Virtuelle" à des classes de primaire et lycée.

Ludovic Hoyet, démonstrations pour les 50 ans d'Inria à Paris, "Ma main à 6 doigts: Avatar et Réalité Virtuelle".

## MINT2 Team

## 9. Dissemination

### 9.1. Promoting Scientific Activities

#### 9.1.1. Scientific Events Selection

##### 9.1.1.1. Member of the Conference Program Committees

Laurent Grisoni : PC for VISIGRAPP (IEEE InfoViz Art Track), Computer Graphics International (CGI, computer graphics), MOCO (international workshop on gesture), ISEA (art-science), GRAPP (computer graphics)

##### 9.1.1.2. Reviewer

Florent Berthaut: Reviewer for ACM CHI Conference and NIME conference  
Laurent Grisoni: Eurohaptics, ACM UIST, ACM CHI

#### 9.1.2. Journal

##### 9.1.2.1. Member of the Editorial Boards

Frédéric Giraud is Associate Editor of IEEE Transactions on Haptics

##### 9.1.2.2. Reviewer - Reviewing Activities

Florent Berthaut: Reviewer for IEEE Multimedia  
Laurent Grisoni: Computer & Graphics

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

- Licence: Florent Berthaut, Spreadsheets et VBA programming, LEA L3 TCI (22h), Web programming, LEA L3, Université Lille 3, France
- Licence: Frédéric Giraud, Physique pour le génie électrique (30h), Université Lille 1
- Master: Christophe Giraud-Audine, Control of electrical machines (30h), Power Electronics (30h), signal processing (30h), niveau M1, ENSAM, France
- Master: Florent Berthaut, Web programming, LEA M1 TSM (16,5h) and LEA M1 RIC1 (48h), Database, LEA M1 ANI (22h), Université Lille 3, France
- Master: Frédéric Giraud, Control of electrical machines (30h), Power Electronics (40h) niveau M1, Université Lille1, France
- Master: Laurent Grisoni, NIHM : nouvelles Interactions Homme-Machine, (6h), niveau M2, Université Lille 1, France
- Master: Laurent Grisoni, Représentation et compression de données (24h), introduction à la programmation (38h), cryptographie (8h), Ecole Polytech'lille (dept IMA)
- Master: Laurent Grisoni: Gestion de projet en Co-design interdisciplinaire, Master Sciences et Culture du Visuel, Université de Lille Sciences Humaines et Sociales, Master Sciences et Cultures du Visuel (12h)
- Master: Laurent Grisoni, IHM et interface à gestes, (24h), niveau M2 (IMA5), Polytech Lille, France

### 9.2.2. Supervision

- PhD in progress: Ehsan Enferad, Modélisation et commande d'une interface tactile à stimulation hybride par modulation de friction et retournement temporel, Nov. 2015, F. Giraud, C. Giraud-Audine
- PhD in progress: Cagan Arslan, Fusion de données pour l'interaction homme-machine, Oct. 2015, L. Grisoni/J. Martinet
- PhD in progress: Farzan Kalantari, Interaction sur dispositif à retour tactile et kinesthésique, Oct. 2014, L. Grisoni, F. Giraud
- PhD: Hanae Rateau, Exploring Iterative Sub-Spaces for Gestural Midair Interaction, Université de Lille Sciences et Technologies, 17 May 2017, L. Grisoni
- PhD in progress: Vincent Guezou: L'architecte et ses outils, au travers de l'histoire et dans sa relation actuelle au numérique, Oct. 2014, L. Grisoni 25% (with F. Vermandel, architect, Lille School of Architecture)
- PhD in progress: Charlotte Planckeel, Le sens de la lacunae en archéologie de l'âge du bronze, archéologie et outils numériques, L. Grisoni (25%, with A. Lehoerff, Lille 3, archeologist)
- PhD in progress: Olivier Capra, Interaction de présentation, Oct. 2016, L. Grisoni, F. Berthaut

## Mjolnir Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

#### 10.1.1.1. General Chair, Scientific Chair

- **ICMI** (ACM): Edward Lank (General co-Chair)
- **Rencontres Jeunes Chercheurs** (AFIHM): Sylvain Malacria (co-Chair)  
RJC is a biyearly summer school organized by the French-speaking HCI association with courses and seminars targeting 1<sup>st</sup> and 2<sup>nd</sup> year PhD students (about 20 participants).

#### 10.1.1.2. Member of the Organizing Committees

- **VIS** (IEEE): Fanny Chevalier (Meetups co-Chair)

### 10.1.2. Scientific Events Selection

#### 10.1.2.1. Member of the Conference Program Committees

- **ICMI** (ACM): Thomas Pietrzak
- **Infovis** (IEEE): Fanny Chevalier, Sylvain Malacria
- **CHI** (ACM): Fanny Chevalier (sub-committee co-chair), Sylvain Malacria (associate chair), Mathieu Nancel (associate chair)
- **IHM** (AFIHM): Géry Casiez

#### 10.1.2.2. Reviewer

- **CHI** (ACM): Géry Casiez, Thomas Pietrzak
- **UIST** (ACM): Géry Casiez, Fanny Chevalier, Thomas Pietrzak, Sylvain Malacria, Mathieu Nancel
- **MobileHCI** (ACM): Sylvain Malacria
- **ICMI** (ACM): Christian Frisson, Mathieu Nancel
- **ISS** (ACM): Mathieu Nancel
- **DIS** (ACM): Mathieu Nancel
- **Interact** (IFIP): Géry Casiez, Fanny Chevalier, Stéphane Huot, Sylvain Malacria
- **World Haptics** (IEEE): Thomas Pietrzak
- **Eurovis** (IEEE): Fanny Chevalier
- **IHM** (AFIHM): Christian Frisson
- **DAFx**: Christian Frisson
- **OzCHI**: Amira Chalbi

### 10.1.3. Journal

#### 10.1.3.1. Member of the Editorial Boards

- **Computer Music Journal Editorial Advisory Board**: Marcelo Wanderley

#### 10.1.3.2. Reviewer - Reviewing Activities

- **Intl. Journal of Human-Computer Studies** (Elsevier): Thomas Pietrzak
- **Transactions on Visualization and Computer Graphics** (IEEE): Fanny Chevalier
- **Transactions on Computer-Human Interaction** (ACM): Fanny Chevalier



- **Intl. Journal of Human-Computer Interaction** (Taylor & Francis): Thomas Pietrzak

#### 10.1.4. Invited Talks

- *Left Brain, Right Brain: Designing Interaction for Visual Analytics and Creativity*, **Segal Seminar Series**, Northwestern University: Fanny Chevalier
- *Designing Interaction for Visual Analytics and Creativity*, giCenter, City University of London: Fanny Chevalier
- *Direct Spacetime Sketching and Editing of Visual Media*, University College London: Fanny Chevalier
- *Static and Dynamic Network Visualization*, Université Catholique de Lille: Fanny Chevalier
- *Concevoir des systèmes interactifs pour tous*, European Commission in Luxembourg: Thomas Pietrzak
- *Advanced Interaction Techniques to Favor the Transition from Novice to Expert Behavior*, **International Symposium on User Expertise and Interactive Systems (UEIS)**: Sylvain Malacria

#### 10.1.5. Leadership within the Scientific Community

**Association Francophone d'Interaction Homme-Machine (AFIHM):**

- Géry Casiez: president until Sept. 2017
- Stéphane Huot: board member until Sept. 2017, scientific council member
- Thomas Pietrzak: board member, webmaster

#### 10.1.6. Scientific Expertise

- **Natural Sciences and Engineering Research Council (NSERC) Discovery grants**: Géry Casiez (reviewer), Fanny Chevalier (reviewer)
- CN35 AFNOR normalization committee about normalizing the French keyboard, in collaboration with Aalto University and the Max Planck Institute: Mathieu Nancel
- Research Foundation - Flanders (FWO), evaluate doctoral fellowships strategic basic research applications: Mathieu Nancel

#### 10.1.7. Research Administration

For Inria:

- **Evaluation committee**: Nicolas Roussel (member until July 2017)
- Gender equity and equality committee: Nicolas Roussel (member)
- Strategic orientation committee for the information system (COSS scientifique): Nicolas Roussel (member)
- International relations working group (COST-GTRI): Stéphane Huot (member)

For Inria Lille – Nord Europe:

- Scientific officer (délégué scientifique): Nicolas Roussel (until July 2017)
- “Bureau du comité des équipes projets” (BCEP): Stéphane Huot (member since Sept. 2017)
- Research jobs committee (CER): Fanny Chevalier (member), Nicolas Roussel (member until July 2017)
- Technical development committee (CDT): Nicolas Roussel (member until July 2017)
- Consultative committee (Comité de centre): Fanny Chevalier (member)
- Operational legal and ethical risk assessment committee (COERLE): Stéphane Huot (local correspondent)
- Support to researchers (accompagnement des chercheurs): Stéphane Huot (adviser)
- Activity reports (RAweb): Nicolas Roussel (local correspondent until July 2017)

For the CRISAL lab of Univ. Lille 1 & CNRS:

- Laboratory council: Géry Casiez (elected member)
- Computer Science PhD recruiting committee: Géry Casiez (member)

For the Univ. Lille 1:

- Coordinator for internships at IUT A: Géry Casiez

### 10.1.8. Hiring committees

- Inria's eligibility jury for Junior Researcher Positions (CR2) in Lille: Stéphane Huot (president)
- University of Lille hiring committee for two Computer Science Assistant Professor positions: Thomas Pietrzak (vice-president)
- University of Nice Sophia Antipolis hiring committee for a Computer Science Full Professor position: Stéphane Huot (member)
- Université Paris-Saclay hiring committee for a Computer Science Assistant Professor position: Géry Casiez (member) and Fanny Chevalier (member)

## 10.2. Teaching - Supervision - Juries

### 10.2.1. Teaching

DUT Informatique: Géry Casiez (72h), Stéphane Huot (28h), *IHM*, 1<sup>st</sup> year, IUT A de Lille - Univ. Lille 1

DUT Informatique: Géry Casiez, *Algorithmique*, 80 h, 1<sup>st</sup> year, IUT A de Lille - Univ. Lille 1

DUT Informatique: Géry Casiez, *Modélisation mathématique*, 14 h, 2<sup>nd</sup> year, IUT A de Lille - Univ. Lille 1

DUT Informatique: Géry Casiez, *Projets*, 18 h, 2<sup>nd</sup> year, IUT A de Lille - Univ. Lille 1

Licence Informatique: Thomas Pietrzak, *Logique*, 52.5h, L3, Univ. Lille 1

Licence Informatique: Thomas Pietrzak, *Automates et Langages*, 36h, L3, Univ. Lille 1

Licence Sciences pour l'Ingénieur (SPI): Sylvain Malacria, *Introduction à l'Interaction Homme Machine*, 30h, L3, Institut Villebon Georges Charpak

Master Informatique: Thomas Pietrzak (18h), Géry Casiez (11h), Fanny Chevalier (13.5h), *NIHM*, M2, Univ. Lille 1

Master Informatique: Géry Casiez, *RVI*, 4 h, M2, Univ. Lille 1

Master Informatique: Géry Casiez, *Multi-Touch Interaction*, 10 h, M1, Univ. Lille 1

Master Informatique: Géry Casiez (4h), Thomas Pietrzak (4h), *Projets*, M2, Univ. Lille 1

Master Informatique: Thomas Pietrzak (55.5h), Sylvain Malacria (31.5), Nicolas Roussel (6h), *IHM*, M1, Univ. Lille 1

Master Informatique: Mathieu Nancel, *Information Visualization*, 9h, M2, Univ. Lille 3

Master: Géry Casiez (6h), Thomas Pietrzak (10.5h), *3DETech : 3D Digital Entertainment Technologies*, M2, IMT Lille Douai

Master: Thomas Pietrzak, *IHM et interfaces à gestes*, 12h, M2, Polytech Lille

Master Sciences Humaines et Sociales – Réseaux Sociaux Numériques (RSN): Fanny Chevalier, *Statistiques et visualisation de données*, 8h, M2, Univ. Lille 1

Master Sciences Humaines et Sociales – Réseaux Sociaux Numériques (RSN): Fanny Chevalier, *Outils et pratiques numériques*, 6h, M1, Univ. Lille 1

Doctorat: Géry Casiez, *Workshop on statistics for HCI*, AFIHM RJC IHM 2017

### 10.2.2. Supervision

PhD: Justin Mathew, *A Design Framework for User Interfaces of 3D Audio Production Tools*, defended in Oct. 2017 [11], advised by Stéphane Huot & Brian Katz

PhD in progress: Axel Antoine, *Helping Users with Interactive Strategies*, started Oct. 2017, advised by Géry Casiez & Sylvain Malacria

PhD in progress: Nicole Ke Chen Pong, *Understanding and Improving Users Interactive Vocabulary*, started Oct. 2016, advised by Nicolas Roussel, Sylvain Malacria & Stéphane Huot

PhD in progress: Thibault Raffaillac, *Languages and System Infrastructure for Interaction*, started Oct. 2015, advised by Stéphane Huot & Stéphane Ducasse

PhD in progress: Amira Chalbi-Neffati, *Understanding and Designing Animations in the User Interfaces*, started Oct. 2014, advised by Nicolas Roussel & Fanny Chevalier

PhD in progress: Hakim Si Mohammed, *Improving Interaction Based on a Brain-Computer Interface*, started Oct. 2016, advised by Anatole Lecuyer, Ferran Argelaguet, Géry Casiez & Nicolas Roussel (in Rennes)

PhD in progress: Hrim Mehta, *Data Narratives*, started Oct. 2016, advised by Christopher Collins & Fanny Chevalier (at University of Ontario)

PhD in progress: Nicole Barbosa Sultanum, *Visualization of Medical Narratives*, started Sept. 2015, advised by Michael Brudno, Daniel Wigdor & Fanny Chevalier (at University of Toronto)

PhD in progress: Alexandre Kouyoumdjian, *Multimodal Selection of Numerous Moving Targets in Large Visualization Platforms: Application to Interactive Molecular Simulation*, started Oct. 2013, advised by Stéphane Huot, Patrick Bourdot & Nicolas Ferey (in Saclay)

PhD in progress: Jeronimo Barbosa, *Design and Evaluation of Digital Musical Instruments*, McGill University, started in 2013, advised by Marcelo Wanderley & Stéphane Huot (in Montréal)

### 10.2.3. Juries

Caroline Appert (HDR, Univ. Paris-Saclay): Géry Casiez, examiner

Jessalyn Alvina (PhD, Univ. Paris-Saclay): Géry Casiez, examiner

Élie Cattan (PhD, Univ. Grenoble Alpes): Géry Casiez, reviewer

Martin Cronel (PhD, Univ. de Toulouse): Géry Casiez, examiner

Onur Ferhat (PhD, Univ. Autònoma de Barcelona): Christian Frisson, examiner

Maxime Guillon (PhD, Univ. Grenoble Alpes): Géry Casiez, reviewer

Rafael Morales González (PhD, Univ. Paris-Saclay): Stéphane Huot, examiner

### 10.2.4. Mid-term evaluation committees

- Olivier Capra (PhD, Univ. Lille 1): Stéphane Huot
- Bruno Fruchard (PhD, Univ. Paris-Saclay): Géry Casiez
- Sarah Ribet (PhD, Univ. Lille 1): Géry Casiez
- Hugo Romat (PhD, Univ. Paris-Saclay): Fanny Chevalier

## 10.3. Popularization

Dashboard software in the Sbarro car: *Mojave at the Geneva Motor Show 2017* in Geneva, Julien Decaudin, Christian Frisson, Thomas Pietrzak.

*Projet Happiness : ça roule pour le tactile*, interview in the *Inria official website*, Thomas Pietrzak, Christian Frisson, Julien Decaudin.

*Dans la peau d'un robot*, article in *le blog binaire* and in the *Inria official website*, Amira Chalbi.

*Banned From the US? There's a Robot for That*, interview in *WIRED*, Amira Chalbi.

*Mon Histoire avec l'Informatique*, presentation at "L codent L créent": Amira Chalbi, Nicole Pong.

## **POTIOC Project-Team**

# **10. Dissemination**

## **10.1. Promoting Scientific Activities**

### ***10.1.1. Scientific Events Organisation***

#### *10.1.1.1. Member of the Organizing Committees*

- EduIHM, Workshop at IHM 2017, Martin Hachet
- “Kick-off conference of CORTICO, the French BCI association”, Paris, France, January 2017, Fabien Lotte
- “2nd National congress on Neurofeedback: NeXT Steps”, Paris, France, January 2017, Fabien Lotte

### ***10.1.2. Scientific Events Selection***

#### *10.1.2.1. Chair of Conference Program Committees*

- Program Chair IHM 2017, Martin Hachet

#### *10.1.2.2. Member of the Conference Program Committees*

- ACM CHI Conference, 2018, Anke Brock
- ACM ASSETS Conference, 2017, Anke Brock
- Late Breaking Work Committee ACM CHI Conference, 2017, Anke Brock
- Augmented Human Conference (AH), 2018, Fabien Lotte
- Eurographics STA,R 2017, Martin Hachet
- IEEE VR, 2017, Martin Hachet
- 7th International Brain-Computer Interface Conference, 2017, Fabien Lotte
- Neuroadaptive Technology conference (NAT), 2017, Fabien Lotte
- Symbiotic, 2017, Fabien Lotte

#### *10.1.2.3. Reviewer*

- ACM CHI 2018, Pascal Guitton, Fabien Lotte, Joan Sol Roo
- ACM ISS 2017, Joan Sol Roo
- ACM CHI-Play 2017, Joan Sol Roo
- ACM UIST 2017, Fabien Lotte
- Augmented Human Conference (AH), 2018, Fabien Lotte, Jelena Mladenovic
- Haptics Symposium 2018, Anke Brock
- ICASSP 2018, Fabien Lotte
- IEEE VR 2018, Joan Sol Roo
- 7th International Brain-Computer Interface Conference, 2017, Fabien Lotte
- JJ-ICON 2017, Fabien Lotte
- MobileHCI 2017, Anke Brock
- Symbiotic 2017, Fabien Lotte

### ***10.1.3. Journal***

#### *10.1.3.1. Member of the Editorial Boards*

- Special Issue Chair TACCESS ACM ASSETS Conference, 2017, Anke Brock

- Member of the Editorial board of Journal of Neural Engineering, Fabien Lotte
- Member of the Editorial Board (Associate Editor) of the Brain-Computer Interface journal, Fabien Lotte
- Review Editor for the Frontiers in Human-Media Interaction journal, Fabien Lotte
- Review Editor for the Frontiers in Neuroprosthetics journal, Fabien Lotte
- Guest Editor, Frontiers in Neurosciences on “Detection and Estimation of Working Memory States and Cognitive Functions Based on Neurophysiological Measures”, 2017, Fabien Lotte

#### 10.1.3.2. Reviewer - Reviewing Activities

- ACM Transactions on Computer-Humans Interactions (TOCHI), Fabien Lotte
- BioMed Research International, Fabien Lotte
- Frontiers in Human Neurosciences, Fabien Lotte
- IEEE Access, Fabien Lotte
- IEEE Transactions on Biomedical Engineering, Fabien Lotte
- IEEE Transactions on Human-Machine Systems, Fabien Lotte
- International Journal of Human-Computer Studies, Fabien Lotte
- Journal of Accessibility and Design for All (JACCESS ), Anke Brock
- Journal of Neural Engineering, Fabien Lotte
- Nature Scientific Reports, Fabien Lotte
- PLOS One, Fabien Lotte
- Transactions on Haptics, Anke Brock

#### 10.1.4. Invited Talks

- Which feedback should be given to maximize Brain-Computer Interface training, 2nd National Day about Neurofeedback at ESPCI school in Paris, France, Jan. 2017, Léa Pillette
- The impact of flow on BCI neurofeedback training, 2nd National Day about Neurofeedback at ESPCI school in Paris, France, Jan. 2017, Jelena Mladenovic
- Engagement des publics et genre, Séminaire Projet RRI-Practice, CEA Saclay, Feb. 2017, Pascal Guitton
- Comment apprendre à contrôler un ordinateur avec son activité cérébrale ? Le projet BrainConquest, Journée 10 ans ERC - 50 ans Inria, Paris, March 2017, Fabien Lotte
- Art and Sciences at Potioc, Ministry of Culture, Paris, March 2017, Martin Hachet
- Multisensory Maps for Visually Impaired People, Robotics, Brain and Cognitive Sciences dept, Italian Institute of Technology, Genova, Italy, April 2017, Anke Brock
- Designing for Accessibility, University Bordeaux, OpenCare Project Meeting (H2020), June 2017, Anke Brock
- L'éthique en Sciences du numérique, Ecole du Management Inria, Paris, June 2017, Pascal Guitton
- Creating, learning, and meditating; a trip in tangible hybrid spaces, ETIS, Luxembourg, June 2017, Martin Hachet
- Augmented reality & tangible interaction for accessibility, University Stuttgart, HCI Lab, July 2017, Anke Brock
- Understanding and improving BCI user training to boost brain-computer communications, International Graz Brain-Computer Interfaces Conference, opening Keynote, Graz, Austria, Sep. 2017, Fabien Lotte
- Brain-Computer Interfaces technologies for the benefit of all: Neuroergonomics and Neuroeducation, Tokyo University of Agriculture and Technology (TUAT), Tokyo, Japan, Oct. 2017, Fabien Lotte

- Brain-Computer Interfaces: design, user training and new applications, Japanese French Laboratory for Informatics (JFLI), Tokyo University, Tokyo, Japan, Oct. 2017, Fabien Lotte
- L'accessibilité des systèmes numériques d'enseignement, GT Handicap, FCS Paris-Saclay, Nov. 2017, Pascal Guitton
- Interactive projection and 3D gestures for Artistic performances, OARA, Bordeaux, Nov. 2017, Martin Hachet
- Combining machine learning and psychology to design usable Brain-Computer Interfaces, RIKEN Advanced Intelligence Project, Tokyo, Japan, Dec. 2017, Fabien Lotte

### **10.1.5. Scientific Expertise**

- Reviewer for the Millennium Science Initiative 2017, Chile, Fabien Lotte
- Membre du comité ANR CE33 (Interaction, Robotics) 2017, Fabien Lotte
- Member of Inria Cellule de veille et de prospective, Pascal Guitton
- Reviews of projects : ANR, DFG, Crédit Impôt Recherche (Ministère de la recherche), Anke Brock, Martin Hachet
- Member of COSAE, scientific board of SCRIME, Martin Hachet
- Member of the scientific board of ULLO, Martin Hachet, Fabien Lotte

### **10.1.6. Research Administration**

- Representative of Inria at NEM (New European Media), Fabien Lotte
- Member of Commission de recrutement des Inspecteurs Généraux de l'Education Nationale (IGEN), Pascal Guitton
- Member of Comité de Pilotage de Software Heritage, Pascal Guitton
- Femmes & Sciences Deputy Board Member, Anke Brock
- Member of Inria Ethical Committee (COERLE), Pascal Guitton
- Member of Inria Comité Parité et Egalité, Anke Brock & Pascal Guitton
- Responsable of Inria RA2020 Committee (new annual Activity Report), Pascal Guitton
- Member of Inria International Chairs Committee, Pascal Guitton
- Member of Comité de sélection Professeur d'informatique, Université de Rennes, Pascal Guitton
- Jury member for the competitive selection - Young graduate scientist (Chargé de Recherche 2) at Inria Bordeaux (2017), Anke Brock
- Jury member for an Assistant Professorship (MCF section CNU 63, "Photonics and digital sciences") at Institut Optique / Université Paris-Sud, Anke Brock
- Jury member for the competitive selection Research scientist (CR 2) at Inria Bordeaux, Anke Brock
- Member of Bureau du comité des projets, Inria Bordeaux Sud-Ouest, Martin Hachet
- Member of Comité de Développement Technologique (CDT), Inria Bordeaux Sud-Ouest, Fabien Lotte
- Member of Comité Jeunes Chercheurs at Inria Bordeaux Sud-Ouest, Anke Brock
- Member of Comité de Pilotage Responsabilité Sociétale de l'Université, Université de Bordeaux, Pascal Guitton

## **10.2. Teaching - Supervision - Juries**

### **10.2.1. Teaching**

Licence Pierre-Antoine Cinquin, Assistive technologies for cognition, CM, 3h, 2nd year Institut de formation en ergothérapie, Bordeaux, France

Master: Pascal Guitton, Virtual and Augmented Realities, CM, 36h eqtd, M2 Computer Science, University of Bordeaux, France

Master: Pascal Guitton, Digital accessibility, CM, 12h eqtd, M1 Cognitive Science, University of Bordeaux, France

Master: Pascal Guitton, Assistive technologies, CM, 30h eqtd, M2 Cognitive Science, University of Bordeaux, France

Master: Martin Hachet, Virtual Reality and 3D Interaction, CM, 12h eqtd, M2 Cognitive Science, University of Bordeaux, France

Master: Martin Hachet, Interaction and Ergonomics, CM-TD, 8h eqtd, 3rd year (M2), Enseirb, Bordeaux, France

Master: Fabien Lotte, Brain-Computer Interfaces, CM, 2h, M2 Neuroergonomics & Human Factors International Master, ISAE, Toulouse, France

Master: Léa Pillette, Virtual Reality and 3D Interaction, CM, 5h eqtd, M2 Cognitive Science, University of Bordeaux, France

Master: Léa Pillette, Knowledge and Representations, TD, 54h, 1ère année, Ecole Nationale Supérieure de Cognitique, INP, Bordeaux, France

#### **E-learning**

MOOC : Pascal Guitton & Hélène Sauzéon, Accessibilité numérique, 5 semaines, Plateforme France Université Numérique (FUN), Inria, 2ème session (1900 inscrits)

### **10.2.2. Supervision**

PhD: Lorraine Perronnet, Combining EEG and fMRI for Neurofeedback, Université de Rennes, Sep. 2017, Anatole Lécuyer, Christian Barillot, Maureen Clerc & Fabien Lotte

PhD: Damien Clergeaud, Collaborative interaction for aerospace scenarios, Oct. 2017, Pascal Guitton

PhD: Joan Sol Roo, One Reality, Augmenting the Human Experience through the Combination of Physical and Digital Worlds, Dec. 2017, Martin Hachet

PhD in progress: Stephanie Lees, Ulster University, UK, Assessing and Optimising Human-Machine Symbiosis through Neural signals for Big Data Analytics, since Feb. 2014, Damien Coyle, Fabien Lotte, Paul McCullagh and Liam Maguire

PhD in progress: Jelena Mladenovic, BCI user modelling for adaptive BCI training and operation, since Jan. 2016, Fabien Lotte & with Jérémie Mattout

PhD in progress: Pierre-Antoine Cinquin, Design and Experimental Validation of Accessible E-learning systems for people with cognitive disabilities, since Sept. 2016, Pascal Guitton & Hélène Sauzéon

PhD in progress: Léa Pillette, Redefining Formative Feedback in Brain-Computer Interface User Training, since Oct. 2016, Fabien Lotte & Bernard N'Kaoua

PhD in progress: Aurélien Appriou, Estimating learning-related mental states from EEG signals, since Oct. 2017, Fabien Lotte

PhD in progress: Philippe Giraudeau, One Reality, Augmented Reality and Tangible Interaction to support Collaborative Learning, since Oct. 2017, Martin Hachet

PhD in progress: Stephanie Rey, Design and evaluation of a tool for personalized museum visits, Bourse CIFRE with Berger-Levrault, joint supervision by Anke Brock & Nadine Couture

PhD in progress: Rajkumar Darbar, Actuated Tangible User Interfaces, since Dec. 2017, Martin Hachet

### **10.2.3. Juries**

- PhD (Reviewer): Paul Issartel, Université Paris Sud, Saclay, 2017 April 3rd, Martin Hachet
- PhD (Reviewer): Mariacarla Memeo, University of Genova and Italian Institute of Technology, April 2017, Anke Brock
- PhD (Reviewer): Jean-Baptiste Barreau, INSA Rennes, 2017 July 10th, Pascal Guitton
- PhD (Reviewer): Kireth Dhindsa, McMaster University, Canada, 2017 Aug., Fabien Lotte
- PhD (Reviewer): Lonni Besançon, Université Paris Sud, Saclay, 2017 Dec. 14th, Martin Hachet
- PhD (Jury member): Cecilia Lindig-Leon, University of Lorraine, France, Jan. 2017, Fabien Lotte
- PhD (Jury member): Philippe Roussille, Université Toulouse 3 (IRIT), Jan. 2017, Anke Brock
- PhD (Jury member): Sarah Buchanan, University of Central Florida, USA, April 7th, Martin Hachet
- PhD (comité de suivi): Fanny Grosselin, UPMC / ICM / MyBrain technologies, France, 2017, Fabien Lotte

## 10.3. Popularization

### Duties

- Member of the Editorial board of Blog Binaire - Le Monde, Pascal Guitton

### Teaching and Education

- Participation à la création du MOOC Informatique et Création Numérique, Plate-forme FUN, Anke Brock & Pascal Guitton, <https://www.fun-mooc.fr/courses/inria/41014/session01/about>

### Talks and Hands-on

- Collaborer avec la réalité virtuelle, Pint of Sciences, Bordeaux, May 14th, Damien Clergeaud
- Demonstration of VISTE project at Colloque Robotique et Éducation 2017, Bordeaux, July 2017, Anke Brock & Jérémy Albouys
- Demonstration and presentation of VISTE project at Fête de la science, Oct 2017, Jérémy Albouys
- Demonstration and presentation of VISTE project at Nuits des chercheurs at Cap Sciences, Oct. 2017, Jérémy Albouys
- Collaborative Interaction in Virtual Reality, Airbus PhD's Days, Saint Médard en Jalles, Nov. 8th, Damien Clergeaud
- La Table de Shanghai, Open Lab FACTS Festival, Nov. 14-25th
- Organization of an Hackathon on Cognitive Science and Artificial Intelligence at Bordeaux, Dec 9-10th, Philippe Giraudeau
- Interview, Martin Hachet, Inriality, <https://www.inriality.fr/culture-loisirs/se-divertir-en-2067/>
- Interview, Martin Hachet, RFI - autour de la question, <http://www.rfi.fr/emission/20171113-comment-imaginer-notre-futur>
- Interview, Martin Hachet, Libération, [http://next.liberation.fr/musique/2017/01/27/un-nouveau-chant-de-vision\\_1544507](http://next.liberation.fr/musique/2017/01/27/un-nouveau-chant-de-vision_1544507)

### Popularizing inside Inria

- Comment favoriser l'accessibilité numérique, Unithé ou Café, Bordeaux, April 6th, Pascal Guitton
- Teegi, 50th anniversary Inria, Nov 7-8, Paris, Philippe Giraudeau, Martin Hachet

### Written, Oral or Video Content

- "Fabien Lotte about his goal to improve BCI usability", g.tec medical engineering blog, <http://blog.gtec.at/interview-fabien-lotte/>, 2017
- Interview about VISTE project for LUDOVIMAGAZINE : <https://www.youtube.com/watch?v=Hdw5O0myifY>, Anke Brock



## TITANE Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Selection

#### 10.1.1.1. Member of the Conference Program Committees

Pierre Alliez: ACM SIGGRAPH, EUROGRAPHICS, EUROGRAPHICS Star reports, EUROGRAPHICS Symposium on Geometry Processing, EG Workshop on Graphics and Cultural Heritage. He was an advisory board member for EUROGRAPHICS 2018 and chaired the EUROGRAPHICS 2017 Günter Enderle Award Committee.

Yuliya Tarabalka: IDAACS international conference.

#### 10.1.1.2. Reviewer

- Yuliya Tarabalka was a reviewer for the journals IEEE PAMI, IEEE TIP, IEEE JSTARS, Remote Sensing.

### 10.1.2. Journal

#### 10.1.2.1. Member of the Editorial Boards

Pierre Alliez is an associate editor of Computer-Aided Geometric Design and Graphical Models. He stepped down from ACM Transactions on Graphics in 2017. He is also a member of the editorial board of the CGAL open source project.

Florent Lafarge is an associate editor of The Visual Computer since 2015.

Yuliya Tarabalka is an associate editor for the Springer journal Sensing and Imaging and the International Journal of Computing since 2017.

#### 10.1.2.2. Reviewer - Reviewing Activities

- Yuliya Tarabalka was a reviewer for the IEEE IGARSS conference (student competition selection committee).

### 10.1.3. Invited Talks

Florent Lafarge gave an invited talk at the Brazilian Symposium on Remote Sensing (SBSR 2017) at Santos, Brazil.

Yuliya Tarabalka gave an invited talk at the Brazilian Congress of Cartography at Rio de Janeiro, Brazil, and a tutorial on machine learning at IGARSS conference in Fort Worth, USA.

Pierre Alliez gave an invited seminar at collège de France (Géométrie algorithmique: Données, Modèles, Programmes).

### 10.1.4. Leadership within the Scientific Community

Pierre Alliez is a member of the Steering Committees of the EUROGRAPHICS Symposium on Geometry Processing and of the EUROGRAPHICS Workshop on Graphics and Cultural Heritage. He was also elected Executive Board Member for the Solid Modeling Association, for 4 years.

### 10.1.5. Scientific Expertise

Pierre Alliez reviewed two H2020 projects for the European commission. He was also a reviewer for the Belgium Fund for Scientific Research (FNRS).

Yuliya Tarabalka was an expert evaluator for Kazakhstan national research funding foundation, and she is a member of the expert panel SBWT (signal processing) of the FWO (Belgian research funding foundation) since November 2016.

#### **10.1.6. Research Administration**

Pierre Alliez: member of the BCP (bureau du CP) since 2015, comité MASTIC (popularization), and comité espace immersif.

### **10.2. Teaching - Supervision - Juries**

#### **10.2.1. Teaching**

Master: Pierre Alliez and Florent Lafarge, Ingénierie 3D, 21h, M2, university Nice Sophia Antipolis, France.

Master: Pierre Alliez and Florent Lafarge, 3D Meshes and Applications, 32h, M2, Ecole des Ponts ParisTech, France.

Master: Florent Lafarge, Traitement d'images numériques, 6h, M2, university Nice Sophia Antipolis, France.

Master: Pierre Alliez and Florent Lafarge, Mathématiques pour la géométrie, 30h, M1, EFREI, France.

Master: Pierre Alliez and Florent Lafarge, Curves and surfaces, 60h, M1, university Nice Sophia Antipolis, France.

Master: Pierre Alliez, Geometric modeling and processing, 15h, M2, Telecom SudParis, France.

Master: Yuliya Tarabalka, Discrete inference and learning, 12h, M2 MVA, ENS Paris-Saclay & CentraleSupélec, France.

Master: Yuliya Tarabalka, Mathematical methods, 25h, MSc in data sciences and business analytics ESSEC-CS, CentraleSupélec, France.

Licence: Yuliya Tarabalka, Discrete optimization, 18h, L2, CentraleSupélec, France.

Licence: Yuliya Tarabalka, Advanced algorithms, 28.5h, L2 Networks and Telecoms, IUT Nice Côte d'Azur, France.

#### **10.2.2. Supervision**

PhD defended April 21st: Dorothy Duan, Semantized Elevation Maps, since October 2013, Florent Lafarge.

PhD defended June 22nd: Emmanuel Maggiori, Learning Approaches for Large-Scale Remote Sensing Image Classification, since January 2015, Yuliya Tarabalka and Pierre Alliez.

PhD in progress: Jean-Dominique Favreau, Sketch-based modeling in multi-view context, since October 2014, Florent Lafarge and Adrien Bousseau.

PhD in progress: Hao Fang, Scale-space understanding in urban scenes, since March 2016, Florent Lafarge.

PhD in progress: Jean-Philippe Bauchet, City modelling from high resolution satellite images, since October 2016, Florent Lafarge.

PhD in progress: Lionel Matteo: From Pleiades images to very high resolution topography in complex zones, since September 2017, Yuliya Tarabalka and Isabelle Manighetti.

PhD in progress: Onur Tasar, Using deep learning approaches to devise an efficient representation for large-scale satellite images, since October 2017, Yuliya Tarabalka and Pierre Alliez.

PhD in progress: Nicolas Girard, How to structure satellite data, since November 2017, Yuliya Tarabalka.

### **10.2.3. Juries**

Pierre Alliez:

- Thesis reviewer: Giorgio Marcias (CNR Pisa, Italy).
- Thesis reviewer: Claudio Calabrese (University Roma, Italy).
- Thesis reviewer: Florian Caillaud (LIRIS Lyon).
- Thesis reviewer: Dmitry Anisimov (University Lugano).
- Thesis reviewer: Yannick Masson (University Paris Est).
- Thesis reviewer: Ana Vintescu (Telecom ParisTech).
- HDR committee president: Maks Ovsjanikov (Ecole Polytechnique).

Florent Lafarge:

- Thesis reviewer: Andras Bodis-Szomoru (ETH Zurich).
- Thesis examiner: Renato Martins (University Mines ParisTech).
- Thesis examiner: Rodrigo Ortiz Cayon (University Nice Sophia Antipolis).

Yuliya Tarabalka:

- Thesis examiner: Amine Bohi (University of Toulon).

## **10.3. Popularization**

Pierre Alliez gave two seminars at CIV (olympic internship in mathematics) and for the national olympiads in geosciences (IESO).

## ALMANACH Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

#### 10.1.1.1. General Chair, Scientific Chair

- DSBE: Co-Chair and coorganizer of the summerschool manuSciences '17, Fréjus, France, 10-15 September 2017.
- LR, DSBE: Coorganizers of the France/Israel DH conference, Jerusalem, 27 February-1 March 2017.
- DSBE: Co-chair and coorganizer of the workshop Cambridge-PSL-Lausanne, Paris, France, 11-12 March 2017.
- DSBE: Co-chair and coorganizer of the workshop FSP-Patrima-EPHE on Scientific Approaches to Inscribed Objects, Ministry of Culture and Communication, Paris, France, 24 January, 2017.

#### 10.1.1.2. Member of the Organizing Committees

- LR, BS: Members of the Organizing Committee of the Lexical Data Masterclass, Berlin, 4-8 December 2017
- CR: Member of the Organizing Committee of the conference “La Part de l’ombre, Action clandestine et imaginaire du complot, XXe-XXIe siècles”, Paris, France, 18-19 May 2017
- MP: Member of the Organizing Committee of the conference Text as a resource. Text mining in Historical Science, Paris, France, 29-30 June 2017.
- MP: Member of the Organizing Committee of the masterclass Penser/ Utiliser les données de la recherche, Paris, France, 25-29 September 2017.
- DSBE: Member of Organizing Committee for the Poster Session on Digital Humanities at the World Congress of Jewish Studies, Jerusalem, 6-10 August 2017.

### 10.1.2. Scientific Events Selection

#### 10.1.2.1. Chair of Conference Program Committees

- MB, Program chair of the 8th ACM-SoICT, 2017, Nha Trang, Vietnam.

#### 10.1.2.2. Member of the Conference Program/Scientific/Reviewing Committee

- LR: Member of the Reviewing Committee of the following conferences: DHd 2017, DATeCH2017, ACL 2017, TOTh 2017, TPDL 2017, MDQual 2017
- EVdLC: Member of the Reviewing Committee of ACL'17 (Tagging, Chunking, Syntax and Parsing area), DaTeCH'17 (co-reviewer), TMPA-2017 (co-reviewer)
- EVdLC: Member of the Scientific, Programm or Reviewing Committee of EMNLP'17, DepLing'17, EPIA'17, LATA'18, Games4NLP'17, ToTH'17, LREC'18.
- DS: Member of the Scientific, Programm or Reviewing Committee of ACL'17, EMNLP'17, CoNLL'17, TALN2017, LREC2018, TLT #15, LAW 2017, W-NUT 2017
- DSBE: Member of the Program Committee for HIP'17, member of the Reviewing Committee of HIP 2017
- BS: Member of the Program, Scientific or Reviewing Committee of the following conferences and workshops: \*SEM 2017, CoNLL 2017, DeriMo 2017, EACL 2017, LAW XI (2017), LREC 2018, WRDTM 2017

- CR: Member of the Reviewing Committee of DH Nord and DH 2018
- MP: Member of the Reviewing Committee of the following conferences: DH Nord, Digital Humanities in the Nordic Countries, DH 2018

### 10.1.3. Journal

#### 10.1.3.1. Member of the Editorial Boards

- LR: Member of the Editorial Board of the following journals: *JDMDH*, *ACM JOCCH*
- LR: Member of the Scientific/Advisory Committee of the following journals: *Revue Humanités Numériques*, *Journal of the TEI*, *Language Resources and Evaluation*
- DSBE: Member of the Advisory Committee of the following journals: *Jewish Studies Quarterly*, *Henoch*, *Biblical Annals*, *Digital Paleography and Book History*, *Cultural Heritage Digitization*, *Marginalia*
- DSBE: Member of the Advisory Committee of the book series “Humanités numériques et patrimoine” (U. Grenoble, E. Pierazzo)
- BS, together with Olivier Bonami (LLF), was Guest Editor for a thematic issue of the journal *Morphology* on computational methods for descriptive and theoretical morphology [10].

#### 10.1.3.2. Reviewer - Reviewing Activities

- BS: Reviewer for the following journals: *Computational Linguistics*, *Journal of Language Modelling*, *Arabian Journal for Science and Engineering*, *wék<sup>W</sup>os*
- BS: Reviewer for the MIT Press
- DS: *Computational Linguistics Journal*, *Transactions on Asian and Low-Resource Language Information Processing Journal*

### 10.1.4. Invited Talks

- Héctor Martínez Alonso gave a talk at the Inria Paris Junior Seminar, Paris, France
- CR, “Traces de l’héroïsme, les plaques commémoratives de la Résistance parisienne”, Plaques commémoratives dans l’espace parisien, Paris, France
- LF, CR, “Grobid for Humanities, when engineering meets History”, DHIHA, Paris, France
- CR, “La Libération du Sud-Est parisien, un mouvement populaire, CLIO94, Créteil, France
- CR, “Traces de l’héroïsme, les plaques commémoratives de la Résistance parisienne”, Plaques commémoratives dans l’espace parisien, Paris, France
- MP, “Faciliter l’accès des chercheurs aux données patrimoniales. La Charte de réutilisation des données”, séminaires Nouveaux champs d’étude en droit du patrimoine culturel, Le Mans, France, 14 December 2017.
- MP, “La TEI et les historiens. Le projet Time-Us : Travail, rémunération, textile et foyer (XVIIe-XXe siècles)”, Edition électronique & TEI : enjeux, pratiques & perspectives, 4ème journée dayClic TEI, Le Mans, France
- DSBE: ‘Automatic layout analysis and transcription of medieval manuscripts’, Mondes anciens nouveaux regards, AnHIMA, Paris, 8 June 2017.
- DSBE: “Digital Humanities”, University of Haifa, 10 June 2017.
- DSBE: “Automatic lectionary analysis with the database Thesaurus Antiquorum Lectionarium Ecclesiae Synagogaeque”, Hagiographico-homiletic collections in Greek, Latin and Oriental Manuscripts –Histories of Books and Text Transmission in a comparative perspective, Hamburg, 27 June 2017.
- DSBE: “Teaching DH and Jewish Studies”, Hamburg, 5 September 2017.
- DSBE: “Automatic layout analysis and transcription of medieval Hebrew manuscripts”, Jerusalem, 22 June 2017.

- DS: "Robust Data Driven Parsing of Deep Syntax Graph: Syntax Is Not Dead Yet", Naverlabs, ex-Xerox, Grenoble, December 8th, 2017.

#### **10.1.5. Leadership within the Scientific Community**

- LR: President of the board of directors of DARIAH
- LR: Member of the board of directors of the TEI consortium
- LR: President of ISO committee TC 37 (Language and terminology)
- EVdLC: Chairman of the ACL special interest group SIGPARSE
- BS: Member, Deputy Treasurer and Member of the Board of the Société de Linguistique de Paris (since Dec. 2017)
- DS: Board member of the French NLP society (Atala, 2017-2020), program chair of the "journée d'études".
- Member of the ACL's BIG (Broad Interest Group) Diversity group.

#### **10.1.6. Scientific Expertise**

- EVdLC: Reviewer for an European ERC proposal and for an European COST proposal
- BS: Reviewer for the ANR (CE32 committee)
- EVdLC: Member of the selection committee for the call for projects "Langues et numérique 2017" organized by DGLFLF (Délégation générale à la langue française et aux langues de France)
- DSBE: Reviewer for a proposal at the SNF.

#### **10.1.7. Research Administration**

- XY: [description]
- DSBE: Director of the DH Programme of the EPHE.
- BS: Member of the Board of Inria Paris's Scientific Committee ("Comité des Projets")
- BS: Member of the International Relations Working Group of Inria's Scientific and Technological Orientation Council (COST-GTRI)
- BS: Deputy Head of the research strand on Language Resources of the LabEx EFL (Empirical Foundations of Linguistics), and is therefore a deputy member of the Governing Board of the LabEx; BS and DS are in charge of several research operations in the LabEx

#### **10.1.8. Teaching**

Licence: Djamé Seddah, "Certificat Informatique et Internet", 30h, L1-L2-L3, Université Paris Sorbonne, France

Licence: Djamé Seddah, "Programmation et algorithmique en Java", 50h, L2, Université Paris Sorbonne, France

Licence: Loïc Grobol, "Informatique et Industries de la Langue", 22h, L2, Université Sorbonne Nouvelle, France

Licence: Loïc Grobol, "Introduction aux Humanités Numériques", 15h, L2, Université Sorbonne Nouvelle, France

Master: Djamé Seddah, "Modèles pour la linguistique computationnelle", 36h, M2, Université Paris Sorbonne, France

Master: Djamé Seddah, "Modèles pour la linguistique computationnelle", 36h, M1, Université Paris Sorbonne, France

Master: Djamé Seddah, "Programmation générique et C++", 26h, M1, Université Paris Sorbonne, France

Master: Djamé Seddah, “Programmation réseau et Java”, 26h, M1, Université Paris Sorbonne, France

Master: Djamé Seddah, “Traduction automatique”, 30h, M2, Université Paris Sorbonne, France

Master: Laurent Romary, “Governance challenges in setting up and running an ERIC”, 1h30, Webinar Rltrain – Executive Master in Management of Research Infrastructures at University of Milano-Bicocca, 24 November 2017

Master: Marie Puren, Charles Riondet, “Formation à la TEI pour des documents historiques”, 3 heures, M1-M2, Université Aix-Marseille, France, 19 October 2017

Master: Marie Puren, “Valorisation de la recherche - Humanités numériques”, 4 X 3 heures, M2 Histoire, Université Versailles-Saint-Quentin, Rennes, France, January-March 2017.

Master/PhD: Daniel Stökl Ben Ezra, “Approches numériques aux textes du judaïsme ancien”, 26 heures, M2/PhD, EPHE

Master/PhD: Marc Bui, “Introduction à la programmation Python pour les chercheurs en SHS” (2x24h) niveau M1/M2/PhD, EPHE (EPHE students and Master humanités numériques ENC-ENS-EPHE students)

Master class, Daniel Stökl Ben Ezra, “Simple and Advanced Image Treatment for Manuscript Analysis”, 2h, manuSciences summer school, 11 September 2017

Master class: Laurent Romary, “Overview of lexical models and introduction to the TEI dictionary chapter”, 1h30, Lexical Master Class, Berlin, 5 December 2017

Master class: Laurent Romary, “Querying and presenting TEI dictionary data with XSLT”, 1h30, Lexical Master Class, Berlin, 6 December 2017

Master class: Marie Puren, “Data management practices and recommendations. Managing, sharing and preserving linguistic data”, 1h30, Lexical Master Class, Berlin, 7 December 2017

Master class: Mohamed Khemakhem, “GROBID-Dictionaries”, 4 X 3 heures, Lexical Master Class, Berlin, 5-7 December 2017

EPHE, Marc Bui, “Introduction à la conception des bases de données avec SQL” (24h)

EPHE, Marc Bui, “La mise en page avec LaTeX pour les chercheurs en SHS” (12h)

IES Inria, Laurent Romary, “Formation à la TEI, XPath et XSLT pour HAL”, 3 journées Centre Inria Paris

IES Inria, Marie Puren, Charles Riondet, “Gestion des données de la recherche”, 7 heures, Centre Inria Paris, France, 31 March 2017

INIST, Marie Puren, “Créer un plan de gestion des données” et “Les métadonnées dans un DMP”, 2h30, INIST, Vandoeuvre-Lès-Nancy, France, 6 July 2017.

INIST: Laurent Romary, “Formation à la TEI pour les documents scientifiques”, 2 X 2 journées, INIST, Vandoeuvre Lès Nancy, France

URFIST, Marie Puren, “Données de recherche : le Plan de Gestion des Données”, 1 journée, URFIST, Rennes, France, 1st June 2017

### 10.1.9. Supervision

PhD in progress: Loïc Grobol, “Reconnaissance automatique de chaînes de coréférences en français par combinaison d’apprentissage automatique et de connaissances linguistiques”, “Université Sorbonne Nouvelle”, started in Oct. 2016, supervised by Isabelle Tellier (main supervisor), Éric de La Clergerie and Marco Dinarelli

PhD in progress: Mathilde Regnault, “Annotation et analyse de corpus hétérogènes”, “Université Sorbonne Nouvelle”, started in Oct. 2017, supervised by Sophie Prévost (main supervisor), Isabelle Tellier, and Éric de la Clergerie

PhD in progress: Jack Bowers, “Technology, description and theory in language documentation: creating a comprehensive body of multi-media resources for Mixtepec-Mixtec using standards, ontology and Cognitive Linguistics”, October 2016, EPHE, Laurent Romary

PhD in progress: Axel Herold, “Automatic identification and modeling of etymological information from retro-digitized dictionaries”, October 2016, EPHE, Laurent Romary

PhD in progress: Mohamed Khemakhem, “Structuration automatique de dictionnaires à partir de modèles lexicaux standardisés”, September 2016, Paris Diderot, Laurent Romary

PhD in progress: Antony Perrot, “Qumran Opisthographs”, started in Oct 2015, EPHE, PSL, supervised by Daniel Stökl Ben Ezra

PhD in progress: Jérémie Bosom, “Big data, internet des objets, fouille de données: élaboration de services intelligents pour le pilotage industriel”, started in Oct 2015, EPHE, PSL, supervised by Marc Bui

PhD in progress: Dogu Kaan Eraslan, “Les relations entre Milet et l’Égypte à la Basse Époque (664-332 av. J.-C.)” (with a strong emphasis on computational humanity approaches for both encoding information and extracting information, e.g. with neural image processing techniques on ancient documents), started in Oct 2015, EPHE, PSL, co-supervised by Michel Chauveau and Marc Bui

### 10.1.10. *Juries*

- EVdLC: member of the PhD committee for Jakub Waszczuk at University of Blois on June 26th (Title: “Leveraging MWEs in practical TAG parsing: towards the best of the two worlds”; Supervisors: Agata Savary and Yannick Parmentier)
- MB: member of the PhD committee for Karim Sayadi at Université Paris 6 en partenariat avec EPHE on March 28th (Title: “Classification du texte numérique et numérisé. Approche fondée sur les algorithmes d’apprentissage automatique”; Supervisor: Marc Bui)
- EVdLC: examiner and member of the Master 2 jury for Jean Argouarc’h (Master de sciences cognitives, Paris Diderot; title: “Semantic models for analysis of brain activation during naturalistic text listening”; Supervisor: C. Pallier)
- BS: member of the recruiting committee for a Maître de Conférences position (NLP) at Université Paris Sorbonne

## 10.2. Standardization activities

### 10.2.1. *ISO TC 37/ SC4*

- Mohamed Khemakhem and Laurent Romary: Project leaders of the ISO 24613-4 LMF “TEI Serialisation”
- Jack Bowers: Project leader of the ISO 24613-3 LMF “Etymology Extension”
- Éric de la Clergerie: Participation to AFNOR meetings, in relation with TC37/ SC4

### 10.2.2. *COST ENEL & DARIAH*

- Laurent Romary, Mohamed Khemakhem, Axel Herold and Jack Bowers: Experts of a joint lexical standardisation action “TEI Lex0: Towards Best TEI P5 Encoding Practices”

## 10.3. Popularization

- BS, jointly with Emmanuel Dupoux (EHESS & ENS), gave a talk on “NLP and AI” as part of the seminar on AI organised by the Institut de l’École Normale Supérieure (21 June 2017)
- EVdLC and BS presented ALMANACH’s research (as well as its spin-off opensquare) at the “Rencontres Inria-industries” (forum bringing together Inria and companies) (18 November 2017)



- DSBE and BS: participation to a meeting on Digital Humanities bringing together researchers from the PSL ComUE, the University of Cambridge (UK) and the EPFL (Switzerland) (11 May 2017)
- BS: with Jean Ponce, Isabelle Ryl and Hélène Robak, represented the Inria Paris research center at the forum organised for the 30th anniversary of the DRM (the French Military Intelligence Office) (23 March 2017)
- BS and DSBE: talks during the NLP edition of the “Paris Sciences et Data” conference series.
- EVdLC: talk at the opening of the Math Olympiades 2017 about “Une palette mathématique pour appréhender le langage” (Versailles, January 25 2017)
- EVdLC: talk at the GFII DIXIT Seminar on “IA et Traitement Automatique des Langues (TAL) : Quel panorama ?” (Paris, February 24th 2017); member of the organizing committee of the forum 2017 of the GFII and panelist of the session on “de l’IA washing à la réalité industrielle, quels sont les contours du renouveau actuel de l’IA ?” (December 5th, 2017)
- EVdLC: co-animator of a new GFII Working Group “Technologies de la Connaissance”, with a focus on AI
- Loïc Grobol: participation to the 18th meeting on “Culture & Jeux Mathématiques” organized by AMIES
- MP, LR : Webinar on “Humanities and Open Science: Workflows and tools for publishing, licensing, versioning, identifiers, archiving, software...” for the International Open Access Week, 26 October 2017.
- DS gave a talk on “From Noisy Questions to Minecraft Texts: Annotation Challenges in Extreme Syntax Scenarios” at the NLP Paris Meetup, Paris, November 22th, 2017.

## COML Team

## 10. Dissemination

### 10.1. Promoting Scientific Activities

#### 10.1.1. Scientific Events Organisation

##### 10.1.1.1. General Chair, Scientific Chair

Zero Resource Challenge 2017, held as a special session of EEE ASRU 2017, Okinawa.

##### 10.1.1.2. Member of the Organizing Committees

Executive committee of SIGMORPHON (Association for Computational Linguistics Special Interest Group, <http://www.sigmorphon.org/>).

#### 10.1.2. Scientific Events Selection

##### 10.1.2.1. Reviewer

Invited editor for international conferences: Interspeech, NIPS, ACL, etc. (around 5-10 papers per conferences, 2 conferences per year)

#### 10.1.3. Journal

##### 10.1.3.1. Member of the Editorial Boards

Member of the editorial board of: *Mathématiques et Sciences Humaines*, *L'Année Psychologique*, *Frontiers in Psychology*.

##### 10.1.3.2. Reviewer - Reviewing Activities

Invited Reviewer for *Frontiers in Psychology*, *Cognitive Science*, *Cognition*, *Transactions in Acoustics Signal Processing and Language*, *Speech Communication*, etc. (around 4 papers per year)

#### 10.1.4. Invited Talks

- Learning in Machines and Brains (CIFAR) invited talk, 2017, Paris.
- CBMM (Center for Brain Mind and Machine) Workshop on Speech representation, perception and recognition. Invited talk. Feb 02-03, 2017, MIT

#### 10.1.5. Scientific Expertise

E. Dupoux is invited expert for ERC, ANR, and other granting agencies (around 2 per year).

#### 10.1.6. Research Administration

Executive committee of the Foundation Cognition, the research programme IRIS-PSL "Sciences des Données et Données des Sciences", the industrial chair Almerys (2016-) and the collective organization DARCLE ([www.darcle.org](http://www.darcle.org)).

## 10.2. Teaching - Supervision - Juries

### 10.2.1. Teaching

Licence : E. Dupoux, "Introduction to the cognitive science of language", 8h, L2, PSL, France

Master : E. Dupoux, "Theoretical Cognitive Science: Connections and symbols", 8h, M1/M2, PSL, Paris 5, Paris France

Master : E. Dupoux, "Cognitive Engineering", 80h, M2, ITI-PSL, Paris France

Doctorat : E. Dupoux, "Computational models of cognitive development", 32 h, Séminaire EHES, Paris France

### 10.2.2. Supervision

Six PhD theses are currently conducted in the team. Two are programmed to be defended in september 2018.

### 10.2.3. *Juries*

E. Dupoux participated in the PhD jury of Martin Felipe Perez-Guevara on novembre 29th, 2017 at UPMC (supervisor: C. Pallier).

## 10.3. Popularization

E. Dupoux talked in two general public conferences on speech recognition, one organised par France is AI (oct 17, 2017) and the other by Paris Sciences& Data (dec 7, 2017). The public was composed of entrepreneurs in machine learning. He also gave a training course in speech and language technology organised by the Institut de l'Ecole Normale (june 21) aimed at information technology professionals. He gave three interview on the limits of deep learning in general public outlets (Le Monde, La Recherche <sup>0</sup>, Usine Nouvelle).

N. Zeghidour did a high level presentation of AI to 30 students and 8 teachers from Sciences-Po and Ecole 42 during the Policy Innovation Lab <sup>0</sup> following the visit of Facebook's COO. He has been a Mentor (technical advisor) for 9 European start-ups during a pitching event for the IBM Watson AI Xprize <sup>0</sup>. He animated a booth on AI at the Platform Meetup Paris of Facebook. He gave an interview to Libération included in a 100 page special issue on AI <sup>0</sup>. He taught a class on Speech Recognition as part of the Facebook AI Masterclass, a class for developers located at Ecole 42 and broadcasted in developer circles over 25 cities of Europe, Middle-East and Africa with 850 people attending, followed by a live Q&A session with several of these cities over video-conference.

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<sup>0</sup><http://www.larecherche.fr/lintelligence-artificielle-a-lassaut-des-labos>

<sup>0</sup><http://www.sciencespo.fr/public/en/policy-lab/public-policy-incubator>

<sup>0</sup><https://ai.xprize.org/>

<sup>0</sup>[http://www.liberation.fr/voyage-au-coeur-de-lia/2017/12/20/en-kiosque-notre-hors-serie-voyage-au-coeur-de-l-ia\\_1617896](http://www.liberation.fr/voyage-au-coeur-de-lia/2017/12/20/en-kiosque-notre-hors-serie-voyage-au-coeur-de-l-ia_1617896)

## **MULTISPEECH Project-Team**

# **10. Dissemination**

## **10.1. Promoting Scientific Activities**

### ***10.1.1. Scientific Events Organisation***

#### *10.1.1.1. General Chair, Scientific Chair*

Elected chair, Steering Committee of the Latent Variable Analysis and Signal Separation (LVA/ICA) conference series (E. Vincent)

General co-chair, AVSP 2017 - 14th International Conference on Auditory-Visual Speech Processing (S. Ouni)

#### *10.1.1.2. Member of the Organizing Committees*

Co-organizer of the Task “Large-scale weakly supervised sound event detection for smart cars”, DCASE 2017 Challenge on Detection and Classification of Acoustic Scenes and Events (E. Vincent)

Member of the organizing committee, 2017 IEEE Automatic Speech Recognition and Understanding Workshop, Okinawa, Japan, December 2017 (E. Vincent)

Member of the steering committee, Detection and Classification of Acoustic Scenes and Events (DCASE) challenge series (E. Vincent)

Co-organizer of AVSP 2017 - International Conference on Auditory-Visual Speech Processing (S. Ouni)

### ***10.1.2. Scientific Events Selection***

#### *10.1.2.1. Chair of Conference Program Committees*

Program chair, DCASE 2017 Workshop on Detection and Classification of Acoustic Scenes and Events (E. Vincent)

Review chair, IEEE Technical Committee on Audio and Acoustic Signal Processing, responsible for organizing the review of the 313 papers submitted to the 2018 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) in the general AASP domain (E. Vincent)

Proceedings co-chair (editor), AVSP 2017 - 14th International Conference on Auditory-Visual Speech Processing [76] (S. Ouni)

#### *10.1.2.2. Member of the Conference Program Committees*

AVSP 2017 - 14th International Conference on Auditory-Visual Speech Processing (S. Ouni)

ICNLSP'2017 - International Conference on Natural Language, Signal and Speech Processing (D. Fohr, D. Juvet, O. Mella)

Area chair, 2017 IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA) (E. Vincent)

ISSP 2017 - International Seminar On Speech Production (Y. Laprie)

#### *10.1.2.3. Reviewer*

ASRU'2017 - IEEE Automatic Speech Recognition and Understanding Workshop (D. Juvet, I. Illina, E. Vincent)

AVSP 2017 - 14th International Conference on Auditory-Visual Speech Processing (S. Ouni)

DCASE'2017 - Workshop on Detection and Classification of Acoustic Scenes and Events (R. Serizel, E. Vincent)

EUSIPCO'2017 - European Signal Processing Conference (D. Juvet, A. Liutkus)  
 GLU'2017 - International Workshop on Grounding Language Understanding (D. Juvet)  
 GRETSI 2017 - Colloque du Groupe d'Etudes du Traitement du Signal et des Images (R. Serizel)  
 HSCMA'2017 - Joint Workshop on Hands-free Speech Communication and Microphone Arrays (E. Vincent)  
 ICASSP'2017 - IEEE International Conference on Acoustics, Speech and Signal Processing (D. Juvet, A. Liutkus, R. Serizel, E. Vincent)  
 ICNLSP'2017 - International Conference on Natural Language, Signal and Speech Processing (D. Juvet, O. Mella, E. Vincent)  
 INTERSPEECH 2017 (A. Bonneau, D. Juvet, I. Illina, Y. Laprie, S. Ouni, E. Vincent)  
 ISSP 2017 - International Seminar On Speech Production (Y. Laprie)  
 LVA/ICA'2017 - International Conference on Latent Variable Analysis and Signal Separation (A. Liutkus, E. Vincent)  
 PaPE 2017 - Phonetics and Phonology in Europe (A. Bonneau)  
 SLaTE'2017 - ISCA Workshop on Speech and Language Technology in Education (A. Bonneau, D. Juvet)  
 WASPAA 2017 - IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (A. Liutkus, R. Serizel, E. Vincent)

### **10.1.3. Journal**

#### *10.1.3.1. Member of the Editorial Boards*

ANAE Approche Neuropsychologique des Apprentissages chez l'enfant. Coordination of a special issue: N°147 : "Troubles de l'apprentissage du langage écrit et prise en charge multidisciplinaire: De la science à la salle de classe" (A. Piquard-Kipffer)  
 Computer Speech and Language, special issue on Multi-Microphone Speech Recognition in Everyday Environments (E. Vincent)  
 EURASIP Journal on Audio, Speech, and Music Processing (Y. Laprie)  
 Speech Communication (D. Juvet)  
 Speech Communication, special issue on Realism in Robust Speech and Language Processing (E. Vincent)  
 Traitement du signal (E. Vincent)

#### *10.1.3.2. Reviewer - Reviewing Activities*

Computer Speech and Language (D. Juvet)  
 Computers in Biology and Medicine (R. Serizel)  
 IEEE Transactions on Audio, Speech and Language Processing (A. Liutkus, S. Ouni, R. Serizel)  
 IEEE Transactions on Emerging Topics in Computational Intelligence (R. Serizel)  
 IET Signal Processing (R. Serizel)  
 Journal of the Acoustical Society of America (B. Elie, Y. Laprie)  
 Jasa Express Letters (Y. Laprie, S. Ouni, R. Serizel)  
 Logopedics Phoniatrics Vocology (S. Ouni)  
 Speech Communication (V. Colotte, S. Ouni)

### **10.1.4. Invited Talks**

Dyslexia-dysorthographie, « Dyslexie-Dysorthographie. Du repérage à la prise en charge ». Unaape, Le Chesnay, Jan 2017 (A. Piquard-Kipffer)

New paradigms in speech recognition, SIIE 2017, Feb 2017 (D. Fohr, I. Illina) [35]

Speech processing techniques for far-end spoken interactions in noisy environments, Sonos, Santa Barbara (US), March 2017 (R. Serizel)

A tutorial on probabilistic modeling for audio source separation, Kyoto University, March 2017 (A. Liutkus)

An articulatory model of the complete vocal tract from medical images, Electronic Speech Signal Processing 2017, Saarbrücken, March 2017 (Y. Laprie)

Language pathology, Séminaire “Dépistage des troubles des apprentissages” in EHESP, Rennes, March 2017 (A. Piquard-Kipffer)

Speech synthesis, Ecole Nationale d’Ingénieurs de Tunis (Tunisia), May 2017 (V. Colotte)

Speech recognition, Ecole Nationale d’Ingénieurs de Tunis (Tunisia), May 2017 (D. Jouvét)

Deep learning for distant-microphone enhancement and recognition — Expected and unexpected results, Audio Analytic, Cambridge (UK), June 2017 (E. Vincent)

Deep learning for speech and audio processing, Journées scientifiques Inria, Sophia-Antipolis, June 2017 (R. Serizel)

Deep learning for distant-microphone enhancement and recognition — Expected and unexpected results, Inria Rennes - Bretagne Atlantique (France), July 2017 (E. Vincent)

When mismatched training data outperform matched data, Erwin Schroedinger Institute Workshop on “Systematic approaches to deep learning methods for audio”, Vienna (Austria), Sep 2017 (E. Vincent)

Rehaussement et reconnaissance robuste de la parole, Université Grenoble - Alpes (France), Nov 2017 (E. Vincent)

Reading predictors, “les habiletés associées à la lecture. Comment être le mieux outillé(e) pour apprendre à lire ?”. Canopé, Nancy, Nov 2017 (A. Piquard-Kipffer)

Beginning of reading, “Les premiers apprentissages de la lecture”. Conférences de circonscriptions 1 et 2. Longwy, Nov 2017 (A. Piquard-Kipffer)

#### ***10.1.5. Leadership within the Scientific Community***

Elected chair, ISCA Special Interest Group on Robust Speech Processing (E. Vincent)

Secretary/Treasurer, executive member of AVISA (Auditory-VIsual Speech Association), an ISCA Special Interest Group (S. Ouni)

#### ***10.1.6. Scientific Expertise***

Expertise of an ANR project proposal (D. Jouvét, Y. Laprie)

Expertise of an ERC project proposal (E. Vincent)

Expertise of the ÖAW - Austrian Academy of Sciences Fund (S. Ouni)

#### ***10.1.7. Research Administration***

Vice Scientific Deputy of Inria Nancy - Grand Est from Sep 2017 (E. Vincent)

Elected Member of the board of the AM2I Scientific Pole - Université de Lorraine (E. Vincent)

Member of Comité Espace Transfert (E. Vincent)

Member of the Comipers of Inria Nancy - Grand Est until Aug 2017 (E. Vincent)

Member of the Comité de Centre of Inria Nancy - Grand Est until Aug 2017 (E. Vincent)

Vice-Chair of the Recruitment Jury for Junior Research Scientists, Inria Nancy - Grand Est (E. Vincent).

Member of the “Commission de développement technologique” (A. Bonneau)

Head of the AM2I Scientific Pole of Université de Lorraine (Y. Laprie)

Member of the Scientific Committee of an Institute for deaf people, La Malgrange (A. Piquard-Kipffer)

## 10.2. Teaching - Supervision - Juries

### 10.2.1. Teaching

DUT: I. Illina, Programming in Java, 150 hours, L1, University of Lorraine, France

DUT: I. Illina, Linux System, 65 hours, L1, University of Lorraine, France

DUT: I. Illina, Supervision of student projects and stages, 50 hours, L2, University of Lorraine, France

DUT: S. Ouni, Programming in Java, 24 hours, L1, University of Lorraine, France

DUT: S. Ouni, Web Programming, 24 hours, L1, University of Lorraine, France

DUT: S. Ouni, Graphical User Interface, 96 hours, L1, University of Lorraine, France

DUT: S. Ouni, Advanced Algorithms, 24 hours, L2, University of Lorraine, France

DUT: R. Serizel, Computer science basics, 90 hours, L1, University of Lorraine, France

DUT: R. Serizel, Introduction to office software applications, 18h, L2, University of Lorraine, France

DUT: R. Serizel, Multimedia and web applications, 20h, L1, University of Lorraine, France

DUT: R. Serizel, Digital image processing basics

Licence: V. Colotte, C2i - Certificat Informatique et Internet, 50h, L1, University of Lorraine, France

Licence: V. Colotte, System, 115h, L3, University of Lorraine, France

Licence: O. Mella, C2i - Certificat Informatique et Internet, 20h, L1, University of Lorraine, France

Licence: O. Mella, Introduction to Web Programming, 30h, L1, University of Lorraine, France

Licence: O. Mella, Computer Networking, 128h, L2-L3, University of Lorraine, France

Licence: O. Mella Supervision of student internships, 4 hours, L3, University of Lorraine, France

Licence: A. Piquard-Kipffer, Education Science, 32 hours, L1, Département Orthophonie, University of Lorraine, France

Licence: A. Piquard-Kipffer, Learning to Read, 34 hours, L2, Département Orthophonie, University of Lorraine, France

Licence: A. Piquard-Kipffer, Psycholinguistics, 12 hours, L2, Département Orthophonie, University Pierre et Marie Curie-Paris, France

Licence: A. Piquard-Kipffer, Dyslexia, Dysorthographia, 22 hours, L3, Département Orthophonie, University of Lorraine, France

Master: A. Bonneau, Ecole d'audioprothèse (Phonetics), 16h, University of Lorraine, France

Master: A. Bonneau, Ecole d'orthophonie (Speech Manipulation with Praat), 2h, University of Lorraine, France

Master: V. Colotte, Introduction to Speech Analysis and Recognition, 18h, M1, University of Lorraine, France

Master: D. Juvet, Modélisation sensorielle (partie reconnaissance de la parole), 12h, M2, University of Lorraine, France

Master: Y. Laprie, Master de Sciences Cognitives (Analyse, perception et reconnaissance de la parole), 30h, University of Lorraine, France

Master: O. Mella, Computer Networking, 60h, M1, University of Lorraine, France

Master: O. Mella, Introduction to Speech Analysis and Recognition, 12h, M1, University of Lorraine, France

Master: S. Ouni, Multimedia in Distributed Information Systems, 31 hours, M2, University of Lorraine, France

Master: A. Piquard-Kipffer Agnès, Dyslexia, Dysorthographia diagnosis, 4 hours, Département Orthophonie, University of Lorraine, France

Master: A. Piquard-Kipffer, Deafness & reading, 21 hours, Département Orthophonie, University of Lorraine, France

Master: A. Piquard-Kipffer, French Language Didactics, 73 hours, ESPE, University of Lorraine, France

Master: A. Piquard-Kipffer, Special educational needs, 18 hours, ESPE, University of Lorraine, France

Master: A. Piquard-Kipffer, Psychology, 6 hours, University of Lorraine, France

Continuous training : O. Mella, Computer science courses for secondary school teachers (ISN courses), 10h, ESPE, University of Lorraine, France

Doctorat: A. Piquard-Kipffer, Language Pathology, 20 hours, EHESP, University of Sorbonne- Paris Cité, France

Doctorat: A. Piquard-Kipffer, Language Pathology, 20 hours, University of Lorraine, France

Other: V. Colotte, Responsible for “Certificat Informatique et Internet” for the University of Lorraine, France (50000 students, 30 departments)

Other: S. Ouni, Responsible of Année Spéciale DUT, University of Lorraine, France

### 10.2.2. Supervision

PhD : Quan Nguyen, “Mapping of a sound environment by a mobile robot”, University of Lorraine, November 3, 2017, Francis Colas and Emmanuel Vincent.

PhD : Aditya Nugraha, “Deep neural networks for source separation and noise-robust speech recognition”, December 5, 2017, Antoine Liutkus and Emmanuel Vincent.

PhD in progress: Ken Deguernel, “Apprentissage de structures musicales en situation d'improvisation”, March 2015, Emmanuel Vincent and Gérard Assayag (Ircam).

PhD in progress: Amal Houdheh, “Élaboration et analyse d'une base de parole arabe pour la synthèse vocale”, December 2015, cotutelle, Denis Juvet and Vincent Colotte (France) and Zied Mnasri (Tunisia).

PhD in progress: Imène Zangar, “Amélioration de la qualité de synthèse vocale par HMM pour la parole arabe”, December 2015, codirection, Denis Juvet and Vincent Colotte (France) and Zied Mnasri (Tunisia).

PhD in progress: Amine Menacer, “Traduction automatique de vidéos”, May 2016, Kamel Smaïli and Denis Juvet.

PhD in progress: Mathieu Fontaine, “Processus alpha-stable pour le traitement du signal”, May 2016, Antoine Liutkus and Roland Badeau (Télécom ParisTech).

PhD in progress: Anastasiia Tsukanova, “Coarticulation modeling in articulatory synthesis”, May 2016, Yves Laprie.

PhD in progress: Nathan Libermann, “Deep learning for musical structure analysis and generation”, October 2016, Frédéric Bimbot (IRISA) and Emmanuel Vincent.

PhD in progress: Lauréline Perotin, “Séparation aveugle de sources sonores en milieu réverbérant”, November 2016, Romain Serizel, Emmanuel Vincent, and Alexandre Guérin (Orange).

PhD in progress: Théo Biasutto, “Multimodal coarticulation modeling: Towards the animation of an intelligible speaking head”, December 2016, Slim Ouni.



PhD in progress: Sara Dahmani, “Modeling facial expressions to animate a realistic 3D virtual talking head”, January 2017, Slim Ouni and Vincent Colotte.

PhD in progress: Guillaume Carbajal, “Apprentissage profond bout-en-bout pour le rehaussement de la parole”, March 2017, Romain Serizel, Emmanuel Vincent, and AÉric Humbert (Invoxia).

PhD in progress: Sunit Sivasankaran, “Exploiting contextual information in the speech processing chain”, July 2017, Dominique Fohr and Emmanuel Vincent.

PhD in progress: Ioannis Douros, “Combining cineMRI and static MRI to analyze speech production”, July 2017, Pierre-André Vuissoz (IADI) and Yves Laprie.

PhD in progress: Lou Lee, “Du lexique au discours: les particules discursives en français”, October 2017, Yvon Keromnes and Mathilde Dargnat (ATILF) and Denis Juvet.

### **10.2.3. Participation in HDR and PhD juries**

Participation in Habilitation Jury for Damien Lolive (Université de Rennes 1, November 2017), Y. Laprie, reviewer.

Participation in PhD thesis Jury for Dionyssos Kounades-Bastian (Université Grenoble - Alpes, February 2017), E. Vincent, reviewer.

Participation in PhD thesis Jury for Emilio Molina Martínez (University of Málaga, Spain, March 2017), E. Vincent, reviewer.

Participation in PhD thesis Jury for Simon Durand (Télécom ParisTech, May 2017), E. Vincent, reviewer.

Participation in PhD thesis Jury for Mathieu Baqué (Université du Maine, June 2017), E. Vincent, reviewer.

Participation in PhD thesis Jury for Waad Ben Kheder (Université d’Avignon et des Pays du Vaucluse, July 2017), R. Serizel.

Participation in PhD thesis Jury for Waad Ben Kheder (Université d’Avignon et des Pays du Vaucluse, July 2017), D. Juvet, reviewer.

Participation in PhD thesis Jury for Gabriel Bustamante (Université Fédérale Toulouse Midi-Pyrénées, September 2017), E. Vincent, reviewer.

Participation in PhD thesis Jury for Fangchen Feng (Université Paris - Sud, September 2017), E. Vincent, reviewer.

Participation in PhD thesis Jury for Gregory Gelly (Université Paris-Saclay, September 2017), D. Juvet, reviewer.

Participation in PhD thesis Jury for Andrew Szabados (Université de Grenoble Alpes, November 2017), Y. Laprie, reviewer.

Participation in PhD thesis Jury for Natalia Tomashenko (Université du Mans, December 2017), D. Juvet, reviewer.

Participation in PhD thesis Jury for Daniele Battaglini (EURECOM - Télécom ParisTech, December 2017), E. Vincent, reviewer.

Participation in PhD thesis Jury for Mohamed Bouaziz (Université d’Avignon, December 2017), I. Illina, reviewer.

Participation in PhD thesis Jury for Inaki Frenandez (Université de lorraine, December 2017), I. Illina.

### **10.2.4. Participation in other juries**

Participation in CAFIPEMPF Jury - Master Learning Facilitator, Académie de Nancy-Metz & Université de Lorraine, April, May 2017, A. Piquard-Kipffer

Participation in the Competitive Entrance Examination into Speech-Language Pathology Department, Université de Lorraine, June 2017, A. Piquard-Kipffer.

### 10.3. Popularization

Interview for “Quand les machines apprennent à parler l’humain — Le Zoom de la Rédaction”, *France Inter*, February 2, 2017 (E. Vincent)

Interview for “Les prochains défis de la reconnaissance vocale”, *Le Figaro*, April 11, 2017 (E. Vincent)

Interview for “2017 : Alexa, la voix d’Amazon”, *Les Échos*, August 31, 2017 (E. Vincent)

Interactions vocales, Grand-Est Numérique, September 2017 (R. Serizel)

Demonstrations at Fête de la Science, University of Lorraine, October 13, 2017 (G. Carbajal, L. Perotin, R. Serizel, E. Vincent)

Demonstrations at the Rencontre Inria Industrie “Les données et leurs applications”, October 18, 2017 (E. Vincent)

Interview for “Les assistants vocaux vont bousculer la radio”, *Le Monde*, October 19, 2017 (E. Vincent)

Interview for *France Culture*, November 2017 (E. Vincent)

Talk at “Fresh from the Labs”, Station F, Paris (France), November 30, 2017 (E. Vincent)

Demonstration at Journée des métiers, Collège Péguy, le Chesnay, March 2017 (A. Piquard-Kipffer).

Demonstration of Dynalips at “50 ans Inria”, Paris, November, 7-8, 2017 (S. Ouni)

## PANAMA Project-Team

## 10. Dissemination

### 10.1. Promoting Scientific Activities

Antoine Deleforge was elected member of the IEEEAudio and Acoustic Signal Processing Technical Committee.

Rémi Gribonval is a member of the IEEE Technical Committee on Signal Processing Theory and Methods (2012–2017), and a member of the Awards sub-committee.

Rémi Gribonval is a member of the program committee of the GRETSI.

Rémi Gribonval is a member of the EURASIP Special Area Team (SAT) on Signal and Data Analytics for Machine Learning (SiG-DML) since 2015.

Rémi Gribonval has been a member of the Steering Committee of the SPARS international workshop (chairman until 2013) until 2017.

Frédéric Bimbot is the Head of the "Digital Signals and Images, Robotics" department in IRISA (UMR 6074).

Frédéric Bimbot is a member of the International Advisory Council of ISCA (International Speech Communication Association).

Rémi Gribonval and Frédéric Bimbot are the scientific coordinators of the Science and Music Day (Journée Science et Musique) organized by IRISA.

Nancy Bertin and Frédéric Bimbot are the coordinators of the Science and Music Young Researcher Award (Prix Jeune Chercheur Science et Musique).

Antoine Deleforge organized and will co-chair with Ivan Dokmanic and Robin Schleibler a special session on "Geometry-Aware Auditory Scene Analysis" at ICASSP 2018, Calgary, Canada.

N. Bertin, A. Deleforge, and R. Gribonval co-organized a special session entitled "From Source Position to Room Properties : Learning Methods for Audio Scene Geometry Estimation", at the 2017 LVA/ICA Conference, Grenoble, February 2017

Antoine Deleforge is Area Chair in Bayesian Inference for the 14th International Conference on Latent Variable Analysis and Signal Separation (LVA/ICA 2018).

R. Gribonval was an invited speaker at the Learning Theory Workshop during the conference on Foundations of Computational Mathematics (Barcelona, July 2017) and the Les Houches Workshop on Statistical Physics (Les Houches, February 2017).

R. Gribonval has been a member of the jury of the **GDR ISIS / GRETSI / Club EAA thesis prize in signal and image processing** from 2014 to 2017.

R. Gribonval is the scientific organizer of the **13th Peyresq summer school in signal and image processing**, jointly organized in July 2018 by **GRETSI** and **GDR ISIS**.

R. Gribonval has joined in 2017 the Scientific Advisory Board of the Acoustics Research Institute from the Austrian Academy of Sciences in Vienna.

### 10.2. Teaching - Supervision - Juries

#### 10.2.1. Teaching

Bachelor : N. Bertin, "Discovery of selected topics in audio signal processing research", 6 hours, L3, École Supérieure de Réalisation Audiovisuelle (ESRA), France.

Master : N. Bertin, "Vocal and Audio Interactions", 4 hours, M2, Université Rennes 1, France.

Master : N. Bertin, "Fundamentals of Signal Processing", 24 hours, M1, Ecole Normale Supérieure (ENS) de Bretagne, Rennes, France.

Master : N. Bertin, "Sparse representations and compressive sensing", 15 hours, M2, Ecole Nationale de la Statistique et de l'Analyse de l'Information (ENSAI), Rennes, France.

Master : N. Bertin, "Sparsity in Signal and Image Processing", 12 hours, M2, Institut National des Sciences Appliquées (INSA) de Rennes, France.

Master : R. Gribonval, "High dimensional statistical learning", 12 hours, M2, Université Rennes 1, France.

Master: R. Gribonval, coordination of the HDL module "High dimensional statistical learning" within the SIF M2, 20 hours, Université Rennes 1, France.

Master : R. Gribonval, "Sparsity in Signal and Image Processing", 4 hours, M2, Institut National des Sciences Appliquées (INSA) de Rennes, France.

Master : R. Gribonval, coordination of the module "Sparsity in Signal and Image Processing", 48 hours, M2, Institut National des Sciences Appliquées (INSA) de Rennes, France.

Bachelor : A. Deleforge, "Discovery of selected topics in audio signal processing research", 6 hours, L3, École Supérieure de Réalisation Audiovisuelle (ESRA), France.

Master : A. Deleforge, "Sparsity in Signal and Image Processing", 4 hours, M2, Institut National des Sciences Appliquées (INSA) de Rennes, France.

Master : A. Deleforge, "Vocal and Audio Interaction", 6 hours, M2, Université Rennes 1, France.

Master : F. Bimbot, coordination of the VAI module "Vocal and Acoustic Interactions" within the SIF M2, 20 hours, Université de Rennes 1, France

## 10.3. Popularization

### 10.3.1. Journée Science et Musique

**Participants:** Antoine Deleforge, Rémi Gribonval, Frédéric Bimbot, Romain Lebarbenchon, Clément Gaultier, Nancy Bertin, Ewen Camberlein, Stéphanie Lemaile, Corentin Louboutin, Corentin Guichaoua, Cásio Fraga Dantas, Valentin Gillot, Antoine Chatalic, Yann Traonmilin.

*with contributions and support from: Valérie Gouranton, Ronan Gaugne, 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 2017 hosted more than 800 visitors and was a partner of the "Festival des Sciences" and "Festival Maintenant" in Rennes.

## SEMAGRAMME Project-Team

## 8. Dissemination

### 8.1. Promoting Scientific Activities

#### 8.1.1. Scientific Events Organisation

##### 8.1.1.1. General Chair, Scientific Chair

- Maxime Amblard: General chair of (In)Coherence of Discourse 4, March 2017, Université de Lorraine.
- Bruno Guillaume: General chair of “Acor4French: les corpus annotés du français”, workshop of the TALN conference.

#### 8.1.2. Scientific Events Selection

##### 8.1.2.1. Chair of Conference Program Committees

- Philippe de Groote: co-chair of MoL 2017 15th Meeting on the Mathematics of Language [20].
- Sylvain Pogodalla: co-chair of FG 2017 22nd Conference on Formal Grammar [19].

##### 8.1.2.2. Reviewer

- Maxime Amblard: (In)Coherence of Discourse 4, ACL2017, TALN 17, traitement automatique des langues, and RECITAL17 Rencontre des Étudiants Chercheurs en Informatique pour le Traitement Automatique des Langues, journée EGC-IA.
- Philippe de Groote: (In)Coherence of Discourse 4, MoL 2017, FG 2017, IWCS 2017.
- Bruno Guillaume: ACL2017, LREC2018.
- Sylvain Pogodalla: (In)Coherence of Discourse 4, TAG+13 13th International Workshop on Tree Adjoining Grammars and Related Formalisms.

#### 8.1.3. Journal

##### 8.1.3.1. Member of Editorial Boards

- Maxime Amblard: Member of the editorial board of the journal *Traitement Automatique des Langues*, in charge of the final editing process.
- Philippe de Groote: area editor of the *FoLLI-LNCS series*; associate editor of *Higher-Order and Symbolic Computation*; member of the editorial board of *Cahiers du Centre de Logique*.
- Sylvain Pogodalla: Member of the editorial board of the journal *Traitement Automatique des Langues*, in charge of the *Résumés de thèses* section.

##### 8.1.3.2. Reviewer - Reviewing Activities

- Maxime Amblard: *Journal of Language, Logic and Information*, *Traitement Automatique des Langues*.
- Philippe de Groote: *Journal of Language, Logic and Information*, *Logical Methods in Computer Science*.
- Sylvain Pogodalla: *Journal of Language, Logic and Information*, *Mathematical Structures in Computer Science*, *Traitement Automatique des Langues*;

#### 8.1.4. Invited Talks

- Maxime Amblard:
  - A Formal Account of Disorders in Dialogues, CLASP seminar, November 2017, University of Gothenburg, Sweden [8].

- Table ronde "TAL et médical", TALN 2017, June 2017, Orléans.
- Le discours des schizophrènes par la formalisation langagière, interpréter les troubles de la pensée par les troubles du langage, Séminaire C2S, June 2017, Université de Reims [9].
- Modélisation sémantique de la langue, une mise en pratique, séminaire SIESTE, computer science department, ENS Lyon, March 2017, Lyon [22].
- Timothée Bernard:
  - A Montagovian semantics for discourse connectives, NYU Semantics Group, October 2017, New York, USA.
  - Negative events, joint work with Lucas Champollion, NYU Semantics Group, December 2017, New York, USA.
- Sylvain Pogodalla: Tutorial at **FSMNLP 2017 & TAG+13** [26], Umeå, Sweden, September 2017.
- Guy Perrier: invited talk in the seminar of the TEXTE team (LIRMM, Montpellier), March 2017.

### 8.1.5. Leadership within the Scientific Community

- Philippe de Groote: president of SIGMOL, *Association for Mathematics of Language, a Special Interest Group of the Association for Computational Linguistics*; member of the LACL steering committee.
- Bruno Guillaume: Management Committee Substitute of the COST Action CA16105 "European Network for Combining Language Learning with Crowdsourcing Techniques" ([http://www.cost.eu/COST\\_Actions/ca/CA16105](http://www.cost.eu/COST_Actions/ca/CA16105)).
- Sylvain Pogodalla: member of the LACL steering committee; member of the Formal Grammar standing committee.

### 8.1.6. Scientific Expertise

- Philippe de Groote: member of the scientific council of the LIRMM, *Laboratoire d'Informatique, de Robotique et de Microélectronique de Montpellier*; member of the scientific council of the AREN e-FRAN project, *ARgumentation Et Numérique*.
- Sylvain Pogodalla: external reviewer for **CIMI LabEx**, expert for the Research Executive Agency (REA) of the EU.
- Guy Perrier: external rapporteur on the scientific activity of Prof François Lareau (Université de Montréal, Canada) for his promotion as "professeur agrégé".

### 8.1.7. Research Administration

- Maxime Amblard:
  - Member of *conseil scientifique de l'Université de Lorraine*.
  - Standing invitee at the "pôle scientifique" AM2I of Université de Lorraine.
  - Member of the standing committee of the *conseil de laboratoire du Loria*.
  - Member of the board of the *Maison des sciences de l'homme, MSH-Lorraine*.
  - Head of the master (M2) in Natural Language Processing.
  - In charge of the proposal of a new master in NLP.
  - Member of the McF selection committee 4373 (section 7 and 27), Université Paris Sorbonne.
- Philippe de Groote:
  - Member of the *bureau du comité des projets d'Inria Nancy – Grand Est*.
- Bruno Guillaume:
  - Head of the Loria department NLPKD (Natural Language Processing and Knowledge Discovery).

- Animator of the CPER 2015-2020 project *Langues, Connaissances et Humanités Numériques* (Languages, Knowledge and Digital Humanities) in which ten laboratories of the *Université de Lorraine* are implied.
- Member of the Comipers (Inria committee for PhD and Post-doctoral selection).

## 8.2. Teaching - Supervision - Juries

### 8.2.1. Teaching

#### Licence:

Maxime Amblard, Ingénierie de la langue, 25h, L3, Université de Lorraine, France.  
 Maxime Amblard, Panorama du TAL, 2h, L1, Université de Lorraine, France.  
 Timothée Bernard, Algorithmique (TD), 24h, L3, Université Paris Diderot – Paris 7, France.  
 Clement Beysson, C2I, 18h, L1, Université de Lorraine, France.  
 Clement Beysson, Linguistique, 14h, L2, Université de Lorraine, France.  
 Clement Beysson, Représentation Avancé de Donnée, 25h, L2, Université de Lorraine, France.  
 Clement Beysson, Ingénierie de la langue, 10h, L3, Université de Lorraine, France.  
 Pierre Ludmann, TD Tronc Commun d'Informatique I, 20h, 1st year Formation Ingénieur Civil, Mines Nancy, France.

#### Master:

Maxime Amblard, Formalisms: from Syntax to Discourse (english), 50h, M2, Université de Lorraine, France.  
 Maxime Amblard, Research methodology (english), 10h, M2, Université de Lorraine, France.  
 Maxime Amblard, Remise à niveau TAL (english), 4h, M2, Université de Lorraine, France.  
 Maxime Amblard, initiation au TAL, 30h, M1, Université de Lorraine, France.  
 Maxime Amblard, Programming for NLP (english), 44h, M1, Université de Lorraine, France.  
 Philippe de Groote, Formal logic, 35h, M2, Université de Lorraine, France.  
 Philippe de Groote, Computational structures and logics for natural language modeling, 18h, M2, Université Paris Diderot – Paris 7, France.  
 Bruno Guillaume, Remise à niveau TAL (english), 9h, M2, Université de Lorraine, France.  
 Bruno Guillaume, Linguistic Resources TAL (english), 15h, M2, Université de Lorraine, France.  
 Sylvain Pogodalla, Formal Languages, 24h, M2, Université de Lorraine, France.

### 8.2.2. Supervision

#### PhD in progress:

Clement Beysson, *Quantificateurs généralisés dynamiques pour l'analyse discursive*, since September 2015, Philippe de Groote and Bruno Guillaume.  
 Maria Boritchev, *Dialogue Dynamics Modeling in the Simple Theory of Types*, since September 2017, Maxime Amblard and Philippe de Groote.

Pierre Ludmann, *Construction dynamique des structures discursives*, since September 2017, Philippe de Groote and Sylvain Pogodalla.

### 8.2.3. Juries

Maxime Amblard was member of the jury of the master thesis of the master NLP (6 students).

Sylvain Pogodalla was member of the jury of the PhD thesis of Raphaël Salmon, *Natural Language Generation Using Abstract Categorical Grammars* July 10, 2017, Paris Diderot – Paris 7 University.

Sylvain Pogodalla was member of the jury of the *Prix de la thèse 2017* of the *Association pour le Traitement automatique des Langues (ATALA)*.

## 8.3. Popularization

- Maxime Amblard:
  - Vice head of the editorial board of *interstices* [ji](#)(, a French magazine popularizing computer sciences.
  - Several publication about algorithms, AI and NLP for *interstices* [ji](#)(.
  - Winner of a **Blaise Pascal Foundation** grant for a project to create a happy families game (*jeu des sept familles*) based on computer science sub-fields and scientists.
- Bruno Guillaume: interviewed by the large audience scientific newspaper *Sciences & Avenir* (January 2017) for the article *Pour aidez la recherche, jouez !*



## CHROMA Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

#### 10.1.1.1. Member of the Organizing Committees

- O. Simonin was Sponsor Chair of ECAL 2017, the 14th European Conference on Artificial Life, organized in Lyon, September 4-8 (<https://project.inria.fr/ecal2017/>).
- C. Laugier, Ph. Martinet, C. Stiller and U. Nunes, organized a workshop entitled “9th Workshop on Planning, Perception and Navigation for Intelligent Vehicle” at IEEE IROS 2017, Vancouver (Canada), September 2017 (about 170 attendees). <http://ppniv17.irccyn.ec-nantes.fr/>
- C. Laugier co-organized with Suzanne Lesecq an Inria-CEA workshop on “Technologies for Autonomous vehicles”, Grenoble, February 2017. <http://www.irtnanoelec.fr/organisation-dun-workshop-autour-des-technologies-du-vehicule-autonome/>
- C. Laugier co-organized with Chao Lu a workshop at Beijing Institute of Technology (BIT) on “Technologies for Autonomous Vehicles”, Beijing, May 2017.
- C. Laugier co-organized with NUS and MIT a workshop at IEEE ICRA 2017 entitled “Workshop on Robotics and Vehicular Technologies for Self-Driving Cars”, Singapore, June 2017. [http://cim.mcgill.ca/malika/ICRA17\\_WS/](http://cim.mcgill.ca/malika/ICRA17_WS/)
- C. Laugier has been appointed as Program co-chair for IEEE/RSJ IROS 2018 (Madrid) and General co-Chair of IEEE/RSJ IROS 2019 (Hong Kong).
- J. Dibangoye and O. Simonin co-organized the 1st Ecole d’Automne en IA, in Lyon, with Prof. C. Solnon (LIRIS, INSA Lyon) and the Pre-GDR IA, CNRS.
- F. Jamel is Member of Organizing Committees of the Robocup@Home league.
- F. Jamel is elected member of Technical Committees of the Robocup@Home league.

### 10.1.2. Scientific Events Selection

#### 10.1.2.1. Chair of Conference Program Committees

- C. Laugier was Associate Editor for IEEE/RSJ IROS 2017 (Vancouver), for IEEE ICRA 2017 (Singapore), and for IEEE ITSC 2017 (Yokohama).

#### 10.1.2.2. Member of the Conference Program Committees

- Jilles S. Dibangoye served, in quality of program committee member, for the following conferences: AAAI, IJCAI
- O. Simonin served, in quality of program committee member, for AAMAS (Autonomous Agent and Multi-agent Systems International Conference), Track Robotics.
- O. Simonin served, in quality of program committee member, for ICAPS (International Conference on Automated Planning and Scheduling), Track Robotics.
- O. Simonin served, in quality of program committee member and co-editor of the proceedings, for ECAL (European Conference on Artificial Life).
- O. Simonin is Program Committee member of the JFSMA conference since 2008 (Journées Franco-phones sur les Systèmes Multi-Agents).

#### 10.1.2.3. Reviewer

- Agostino Martinelli served, in quality of reviewer, for the following conferences: ICRA, IROS, ACC.
- Jilles S. Dibangoye served, in quality of reviewer, for the following conferences: AAAI, IJCAI, ICRA.
- Olivier Simonin served, in quality of reviewer, for the following conferences: ICRA, IROS, ICAPS, ACC.

### **10.1.3. Journal**

#### *10.1.3.1. Member of the Editorial Boards*

- C. Laugier is Member of the Steering Committee of the journal IEEE Transaction on Intelligent Vehicles.
- C. Laugier Senior Editor of the journal IEEE Transaction on Intelligent Vehicles.
- C. Laugier is member of the Editorial Board of the journal IEEE ROBOMECH.
- O. Simonin is a member of the editorial board of RIA Revue d'Intelligence Artificielle.

#### *10.1.3.2. Reviewer - Reviewing Activities*

- A. Martinelli served, in quality of reviewer, for the following journals: Transaction on Robotics, Transaction on Automatic Control, Transaction on Control System and Technology, Robotics and Automation Letters.
- Jilles S. Dibangoye served, in quality of reviewer, for the following journals: Revue d'Intelligence Artificielle, Mathematics and Artificial Intelligence Journal
- O. Simonin served, in quality of reviewer, for the following journals : Robotics and Autonomous Systems, Autonomous Robots (AURO) and RIA (Revue d'Intelligence Artificielle).

### **10.1.4. Invited Talks**

- A. Martinelli was invited to give a talk at the Robotics and Perception Group at the university of Zurich, December 2017, "Closed form solution to cooperative visual inertial sensor fusion".
- Christian Laugier was invited to give a talk at the 4th journée "Mobilité Innovante: La sécurité Par et Pour les véhicules autonomes", Clermont-Ferrand, January 2017. Title: "Perception for risk prediction and autonomous driving" [14].
- Christian Laugier was invited to give a talk at the IS-Auto-Europe 2017, Dusseldorf, April 2017. Title: "Embedded Bayesian Perception and V2X Communication for Autonomous Driving" [13].
- Christian Laugier was invited to give a talk at the GTC 2017, San José, California, May 2017. Title: "Embedded Bayesian Perception and VTX Communication for Autonomous Driving" [17].
- Christian Laugier was invited to give a talk at the IEEE ICRA 2017 Workshop on Robotics and Vehicular Technologies for Self-Driving Cars, Jun 2017, Singapore, 2017. Title: "Embedded Bayesian Perception and Collision Risk Assessment" [12].
- Jilles S. Dibangoye was invited to give a talk at the MAFTEC group of the Artificial Intelligence GDR, Nov 2017. Title: "Learning to Act Optimally in Decentralized POMDPs".
- C. Wolf was invited to a talk at DL2T : Deep Learning – Télédétection - Temps November 20th, 2017, Paris (Issy-Les-Moulineaux), France. Title: Apprentissage profond (Deep Learning) et séries temporelles : Concepts et mise en oeuvre.
- C. Wolf was invited to a talk at the conference Journées Nationale de la Recherche en Robotique. November 8th-10th, 2017, Biarritz, France. Title: Learning human centered computing for vision and robotics.
- C. Wolf was invited as a Keynote at European and Nordic Symposium on Multimodal Communication. October 17th, 2017. Title: Learning human motion: gestures, activities, pose, identity.

### **10.1.5. Leadership within the Scientific Community**

- O. Simonin was elected in 2017 as member of the Board of AFIA, the French Association for Artificial Intelligence.
- C. Laugier is co-chair with Philippe Martinet and Christoph Stiller, of the IEEE RAS Technical Committee on “Autonomous Ground Vehicles and Intelligent Transportation Systems (AGVITS)”.
- C. Laugier is member of the Committee "safety of autonomous vehicles" (committee led by ARDI in the scope of the Innovation Regional Strategy).

### **10.1.6. Scientific Expertise**

- C. Laugier is member of the Advisory Board of ISR University of Coimbra. He visited ISR in March 2017.
- C. Laugier is Scientific Advisor for the ProbaYes SA.
- C. Laugier have written a report on the concept of “Robot Taxi” for Renault-Nissan.
- O. Simonin was a member of the 2017 ANR scientific committee, and a reviewer, for the Interaction and Robotics call.
- O. Simonin was a reviewer for ANRT, CIFRE PhD thesis grant.
- O. Simonin was a reviewer for ANR ASTRID project submissions.
- A. Martinelli served, in quality of reviewer, for ANR project submissions.

### **10.1.7. Research Administration**

- C. Laugier is a member of several Ministerial and Regional French Committees on Robotics and Autonomous Cars.
- O. Simonin is member of the Auvergne-Rhone-Alpes Robotics cluster (Coboteam), for Inria and INSA de Lyon entities.
- O. Simonin is member of the Scientific Council of the Digital League (Auvergne-Rhone-Alpes).
- A. Martinelli carried out the activity of leader for the ANR project VIMAD
- A. Martinelli carried out the activity of leader for the CARNOT project SEDIA
- F. Jumel is member of the board of IMAGINOVE cluster (digital content industry)
- F. Jumel is member of the Rhone-Alpes Robotics cluster (Coboteam)

## **10.2. Teaching - Supervision - Juries**

### **10.2.1. Teaching**

CPE Lyon Lyon 4-5th year : F. Jumel, resp. of the Robotics option, 400h M1/ M2, Dept. SN CPE Lyon France.

CPE Lyon Lyon 4-5th year : F. Jumel, 250h (robotic vision, cognitive science, Interface robot machine, deeplearning, Robotic frameworks, robotic platforms, Kalman Filter)

INSA Lyon 3rd year : Jilles S. Dibangoye, Algorithmique et programmation, 76h, L3, Dept. Telecom INSA de Lyon, France.

INSA Lyon 3rd year : Jilles S. Dibangoye, WEB, 42h, L3, Dept. Telecom INSA de Lyon, France.

INSA Lyon 3rd year : Jilles S. Dibangoye, Operating Systems, 56h, L3, Dept. Telecom INSA de Lyon, France.

INSA Lyon 4rd year : Jilles S. Dibangoye, Operating Systems, 16h, Master, Dept. Telecom INSA de Lyon, France.

INSA Lyon 5th year : Jilles S. Dibangoye, the Robotics option : AI for Robotics, Robotics projects, 8h, M2, Dept. Telecom INSA de Lyon, France.

M2R MoSIG: A. Martinelli, Autonomous Robotics, 12h, ENSIMAG Grenoble.

INSA Lyon 5th year : O. Simonin, resp. of the Robotics option : AI for Robotics, Software and Hardware for robotics, Robotics projects, 60h, M2, Dept. Telecom INSA de Lyon, France.

INSA Lyon 3rd year : O. Simonin, Algorithmique et programmation, 30h, L3, Dept. Telecom INSA de Lyon, France.

INSA Lyon 5th year : A. Spalanzani, Navigation en environnement humain, 2h, M2, INSA de Lyon, France.

Master : Laetitia Matignon, Multi-Agents and Self-\* Systems, 10h TD, M2 Artificial Intelligence, Lyon 1 University, France.

Master : Laetitia Matignon, Multi-Robot Systems, 20h TD, 5th year of engineer, Polytech Lyon Informatics Department, France.

Master: C. Laugier, "Bayesian Perception & Decision-making for Autonomous Vehicles and Mobile Robots", 3 hours, Beijing Institute of Technology, Beijing, Chine.

Doctorat: C. Laugier, "Embedded Perception, Situation Awareness and Decision-making for Autonomous Vehicles", 4 hours, Intelligent Vehicles International Summer School, ITEAM European H2020 MSCA-ITN project, Compiègne, France.

### 10.2.2. Supervision

PhD : Tiana Rakotovao Andriamahefa, Embedded Bayesian Perception on a Multi-core Architecture, Univ. Grenoble, 21/02/2017, C. Laugier and D. Ruspini (CEA LETI).

PhD in progress: David Sierra Gonzalez, Autonomous Driving (cooperation Toyota), 2014, C. Laugier, J. Dibangoye, E. Mazer (Inria Prima).

PhD in progress: Mathieu Barbier, Decision making for Intelligent Vehicles (cooperation Renault), 2015, C. Laugier, O. Simonin, E. Mazer (Inria Prima).

PhD in progress: Stefan Chitic, Middleware for multi-robot systems, 2013, O. Simonin, J. Ponge (CITI-Dynamid) (to be defended on March 2018).

PhD in progress: Mihai Popescu, Robot fleet mobility under communication constraints, 2015, O. Simonin, A. Spalanzani, F. Valois (CITI/Inria Agora).

PhD in progress: Pavan Vasishta, Situational Awareness of Autonomous Cars in Urban Areas, 2016, A. Spalanzani, Dominique Vaufreydaz (Inria Pervasive Interaction).

PhD in progress: Guillaume Bono, Global-local Optimization Under Uncertainty for Goods Distribution Using a Fleet of Autonomous Vehicles, 2016, O. Simonin, J. Dibangoye, L. Matignon.

PhD in progress: Remi Cambuzat, Robots de Téléprésence : Navigation Sociale et Interaction Verbale immersives, 2016, G. Bailly (CNRS GIPSA lab), A. Spalanzani, O. Simonin.

Starting PhD: Remy Grunblatt, Mobilité contrôlée dans les réseaux de drones autonomes", 2017, I. Guerrin-Lassous (Inria Dante), O. Simonin.

### 10.2.3. Juries

#### 1. PhD thesis juries

- C. Laugier was reviewer and member of the defense committee of the PhD thesis of Scott Drew Pendleton, NUS Singapore, April 2017.
- O. Simonin was a reviewer and a member of the defense committee of the PhD thesis of Ange Nizard, Université Blaise Pascal, Clermont-Ferrand, February 4th, 2017.
- O. Simonin was a reviewer and a member of the defense committee of the PhD thesis of Alexandre Lombard, UTBM (Univ. de Technologie de Belfort-Montbéliard), December 11, 2017.
- A. Spalanzani was a reviewer and a member of the defense committee of the PhD thesis of Harmish Khambhaita, Université Toulouse III Paul Sabatier, October 2017.

- Laetitia Maignon was a member of the defense committee of the PhD thesis of Nassim Kalde, Université de Lorraine, December 12th, 2017.
  - C. Wolf was reviewer and member of the defense committee of the PhD thesis of Enjie Ghorbel, Université de Normandie, October 10th, 2017.
  - C. Wolf was reviewer and member of the defense committee of the PhD thesis of Jorris Guerry, Ecole Polytechnique, November 20th, 2017.
  - C. Wolf was reviewer and member of the defense committee of the PhD thesis of Juan Manuel Perez Rua, Université de Rennes, December 4th, 2017.
  - C. Wolf was reviewer and member of the defense committee of the PhD thesis of Grigory Antipov, Télécom ParisTech, December 15th, 2017.
2. Member of committee for Professor, Associate Prof., Research Director or Researcher recruitment
- O. Simonin was a member of the jury of the Professor position at INSA Lyon, CITI Lab., on June 2017.

### 10.3. Popularization

- Laetitia Maignon participated to the « Fête de la Science » with a Turtlebot demonstration workshop (October 12th and 13th, Lyon, 2017).
- Olivier Simonin was invited by Université Populaire de Montelimar to give a talk about Autonomous Vehicles, on December 19.
- January 30, 2017, F. Jumel, Digital Summit, Hotel de Region Auvergne Rhone Alpes, Robotic Show
- February 2017, F. Jumel, FSM 2017, BU Sciences : Robotic Show : Dance with Baxter
- March 7, 2017, F. Jumel, J. Saraydaryan FSM 2017, BU Sciences, Robotic show, Baxter and Co. (with R. Leber)
- June 9, 2017, F. Jumel, AGERA, “service robots, review of the state”
- October 10, 2017, F. Jumel, Conference IESF Lyon-RA, Where Artificial Intelligence Is Now (with L. Chen)
- November 9, F. Jumel, 2017 Scientific event of Open University of Lyon : “Intelligent robotics, between myth and reality”
- November 14, 2017, F. Jumel, IA event, IPL, “Presentation of Challenges of robocup”, (with P. Dominey, R. Lucazeau)
- November 23, 2017, F. Jumel, “Exposition Hello robots”, IUT Lyon 1, “Smart robotic and Robocup”

## DEFROST Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Selection

#### 10.1.1.1. Member of the Conference Program Committees

Christian Duriez: World Haptic Conference 2017, Pacific Graphics 2017, Soft robotics conference 2018.

#### 10.1.1.2. Reviewer

Alexandre Kruszewski:

- ICRA
- ECC
- ACC
- CDC
- MED
- IFAC World Congress
- ICRA

Olivier Goury:

- IEEE Transactions on Automation Science and Engineering

Damien Marchal:

- Reviewer for VRIPHYS 2017 conference and the Computer & Graphics journal.

Christian Duriez:

- ICRA
- PacificGraphics
- Vriphys

### 10.1.2. Journal

#### 10.1.2.1. Member of the Editorial Boards

Christian Duriez: IEEE Transaction on Haptics

#### 10.1.2.2. Reviewer - Reviewing Activities

Kruszewski:

- IEEE TCST
- IEEE TFS
- Fuzzy Sets and Systems
- Automatica

Christian Duriez:

- SORO (Soft Robotic Journal)
- IEEE Transactions on Robotics
- IEEE Robotic and Automation Letters

### 10.1.3. Invited Talks

- Workshop on Computer Animation, Feb 2017, La Barbade
- Mechatronic Conference, Nov 2017, Paris
- Lagadic Seminar, Nov 2017, Rennes

### 10.1.4. Scientific Expertise

Kruszewski: IDEX project (Univ. Strasbourg)

Duriez:

- ANR project
- EPSRC project (UK)
- Habilitation evaluation (University of Luxembourg)
- IDEX project (Univ. Strasbourg)

### 10.1.5. Research Administration

A. Kruszewski and C. Duriez are members of the Laboratory council (CRISAL)

C. Duriez is vice-president of the "Commission des Emplois de Recherche" of Lille

## 10.2. Teaching - Supervision - Juries

### 10.2.1. Teaching

Ingénieur : Kruszewski, Automatique 1, 54h, niveau L3, Centrale Lille, France

Ingénieur : Kruszewski, Contrôle des systèmes dynamiques, 12h, niveau L4, Centrale Lille, France

Ingénieur : Kruszewski, Drone, 16h, niveau M1, Centrale Lille, France

Ingénieur : Kruszewski, Systèmes embarqués, 8h, niveau M1, Centrale Lille, France

Ingénieur : Kruszewski, Conception d'un système embarqué, 18h, niveau L3, Centrale Lille, France

Ingénieur : Kruszewski, Automatique 2, 12h, niveau M1, Centrale Lille, France

Ingénieur : Kruszewski, Automatique, 36h, niveau L3, Centrale Lille, France

Ingénieur : Kruszewski, Projets, 50h, niveau L3-M1, Centrale Lille, France

Ingénieur : Kruszewski, Projet recherche, 12h, niveau M1, Centrale Lille, France

Master : Damien Marchal, Reality-Virtual et Interaction, 24h, M2, University of Lille, France

Doctorat : Duriez, Modeling and Simulation, 2H, Summer school on surgical simulation, Montpellier, France

Master : Duriez, Interactive simulation, 24H, M2, University of Lille, France

### 10.2.2. Supervision

HdR: Kruszewski, Are polytopic control design methods suitable for the next robotic control challenges?, Université de Lille, 12/12/2017

PhD: Bieze, Contribution à la modélisation cinématique et au contrôle de manipulateurs déformables, fondée sur la mécanique numérique, Université de Lille, 24/10/2017

PhD in progress: Largillière, Conception de nouvelles interface déformables, contrôlés par une simulation éléments-finis temps-réel, 01/10/2013, C. Duriez, L. Grisoni

PhD in progress: Thieffry, Modélisation et contrôle de robots déformables à grande vitesse, 01/09/2016, C. Duriez, T.M. Guerra, A. Kruszewski

PhD in progress: Zhang, New methods of visual servoing for soft-robots, 01/10/2015, C. Duriez, J. Dequidt, A. Kruszewski

PhD in progress: Coevoet, Méthodes d'optimisation pour la robotique déformable, 01/05/2017, C. Duriez

PhD in progress: Eldiwiny, Modélisation, Simulation et Design de micro robots déformables, 01/09/2017, C. Duriez

### **10.2.3. Juries**

- Benoit Le Gouis, C. Duriez président du jury, Rennes, soutenance novembre 2017
- Renato Torres, C. Duriez rapporteur, Paris, soutenance prévue en janvier 2018

## **10.3. Popularization**

Mario Sanz Lopez, 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 and Bruno Carrez participated in the Numéric'elle event, which involved sensibilising female middle school students to pursue a career in the digital world. Mario Sanz Lopez installed a new demonstrator on Soft Robotics at Plateau Euratechnologies.

Our team has been highlighted in the medias this year: <https://team.inria.fr/defrost/media/>



## FLOWERS Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

#### 10.1.1.1. General Chair, Scientific Chair

- PY. Oudeyer has been general co-chair of the "Designing for curiosity" workshop at CHI 2017, Denver, Colorado, US;
- PY. Oudeyer has co-organized the 3rd International Symposium on Intrinsically Motivated Open-Ended Learning, Rome, Italy;
- PY. Oudeyer has co-organized the IEEE IJCNN 2017 Special Session on COGNITION AND DEVELOPMENT;
- D. Roy was general chair for the conference "Robotique et Education", Bordeaux, France.

#### 10.1.1.2. Member of the Organizing Committees

- PY. Oudeyer has been "Robotics Liaison" of IJCNN 2017, Anchorage, Alaska.

### 10.1.2. Scientific Events Selection

#### 10.1.2.1. Member of the Conference Program Committees

- PY. Oudeyer has been in the conference program committee of IEEE ICDL-Epirob conference.

#### 10.1.2.2. Reviewer

- David Filliat was reviewer for the IROS, ECMR, ICDL, HRI, ICRA conferences.
- Sébastien Forestier was reviewer for IEEE ICDL-Epirob, ICRA
- Natalia Díaz Rodríguez was reviewer for JAIR 2017 (Journal of AI Research) and Area Chair (meta-reviewer) for WIML 2017 (Women in Machine Learning Workshops at NIPS 2017).

### 10.1.3. Journal

#### 10.1.3.1. Member of the Editorial Boards

- PY. Oudeyer was associate editor of IEEE Transactions on CDS and Frontiers in Neurorobotics.

#### 10.1.3.2. Reviewer - Reviewing Activities

- David Filliat was reviewer for IEEE Transaction on Robotics, IEEE Transactions on Cognitive and Developmental Systems, Robotics and Automation Letters.
- O. Sigaud has been a reviewer for the Autonomous Robots journal and for the ICLR and the NIPS conferences
- PY. Oudeyer has been a reviewer for the journals IEEE Transactions on CDS and Child and Development Perspectives.

### 10.1.4. Invited Talks

- David Filliat gave an invited presentation "Autonomous Learning and AI for interactive Robotics" during the 50 years of Inria event on november 8th.
- O. Sigaud gave an invited presentation "Deep Learning for Robotics: Promises and Issues" at the Journées Nationales de la Recherche en Robotique on november 16th.
- O. Sigaud gave an invited presentation "Towards developmental discovery of objects in dynamical scenes" at the workshop on Intrinsically Motivated Open-Ended Learning, Rome, Italy, 9th october

- PY. Oudeyer gave an invited presentation "Intrinsically Motivated Goal Exploration Processes" at the workshop on Intrinsically Motivated Open-Ended Learning, Rome, Italy, 9th october;
- PY. Oudeyer gave an invited presentation "Computational Models of Human Cognitive Development" at the 29th Eleanor Gibson lecture, Cornell Univ., US, April,
- PY. Oudeyer gave an invited presentation "Models of curiosity-driven learning" at Univ. Rochester, US, April.
- PY. Oudeyer gave an invited presentation "Curiosity-driven learning and language acquisition" at the workshop on language acquisition at IEEE ICDL-Epirob, Lisbon, Portugal, Sept.;
- PY. Oudeyer gave an invited presentation "Robotique Pédagogique" at the Journées Nationales de la Recherche en Robotique on november 16th.
- PY. Oudeyer gave an invited presentation "Intrinsically motivated learning and curiosity in humans and robots" at the "Designing for curiosity" workshop at CHI 2017, Denver, US;

### **10.1.5. Leadership within the Scientific Community**

- Natalia Díaz Rodríguez attended and organized a workshop within the Heidelberg Laureate Forum Sept. 2017 on Machine learning and Human-Computer Interaction.
- PY. Oudeyer co-organized the "Designing for curiosity" workshop at CHI 2017 (Denver, US), the IMOL 2017 workshop (Rome, Italy), and was co-editor of the special issue on "Modeling play in early infant development" in Frontiers in Psychology.
- PY. Oudeyer has been editor of the IEEE CIS Newsletter on Cognitive and Developmental systems, organizing two interdisciplinary dialogs, see <https://openlab-flowers.inria.fr/t/ieee-cis-newsletter-on-cognitive-and-developmental-systems/129>.

### **10.1.6. Scientific Expertise**

- PY. Oudeyer has been a reviewer for the European Commission (FET program).

## **10.2. Teaching - Supervision - Juries**

### **10.2.1. Teaching**

License: Introduction to Matlab, 21 heures. L3, ENSTA - ParisTech (David Filliat).

Master: Robotique Mobile, 21 heures. M2, ENSTA - ParisTech (David Filliat).

Master: Perception pour la Robotique, 6 heures. M2, ENSTA - ParisTech (David Filliat).

Master: Perception pour la robotique, 12 heures. M2 Systemes Avances et Robotique, University Pierre et Marie Curie (David Filliat)

Master: Perception pour la Robotique Développementale, 3 hours, CogMaster (David Filliat)

Licence Informatique, 64h Bordeaux University (Sébastien Forestier)

Master: Perception pour les systemes autonomes (ROB313), 7.50 h. Natalia Díaz Rodríguez

Master: Projet Informatique (IN104), 18.25h. Natalia Díaz Rodríguez.

Master: Cours de robotique développementale, option robot, ENSEIRB (2h), PY. Oudeyer

### **10.2.2. Supervision**

PhD in progress: Cédric Colas, Algorithms for intrinsically motivated goal exploration (superv. P-Y. Oudeyer)

PhD in progress: Sébastien Forestier, Models of curiosity-driven learning of tool use and speech development, started in sept. 2015 (superv. P-Y. Oudeyer)

PhD in progress: William Schueller, Study of the impact of active learning and teaching in naming games dynamics, started in sept. 2015 (superv. P-Y. Oudeyer)

PhD in progress: Thibault Desprez, Design and study of the impact of educational robotic kits in computer science education, started in dec. 2016 (superv. P-Y. Oudeyer)

PY. Oudeyer supervised a team of computer and pedagogical engineers and researchers for the project Poppy Education (Didier Roy, Stéphanie Noirpoudre, Théo Segonds, Damien Caselli)

PhD in progress: Benjamin Clement, Intelligent Tutoring Systems, started oct 2015 (superv. Manuel Lopes and Pierre-Yves Oudeyer).

PhD: Thibaut Munzer, Learning from Instruction, defended (superv. Manuel Lopes).

PhD in progress: Baptiste Busch, Interactive Learning, started oct 2014 (superv. Manuel Lopes).

PhD in progress: Alexandra Delmas, Auto-Apprentissage Auto-Adaptable pour la compliance au traitement, started oct 2014 (superv. Manuel Lopes).

PhD: Yuxin Chen, Interactive learning of objects and names on a humanoid robot, defended 02/2017 (superv. David Filliat).

PhD: Celine Craye, Curiosity and visual attention for the guidance of an exploration robot, defended 04/2017 (superv. David Filliat).

PhD: Joris Guery, Robust visual recognition by artificial neural networks in robotic exploration scenarios, defended 11/2017 (superv. David Filliat and Bertrand Le Saulx (ONERA))

PhD in progress: Adrien Matricon : Task dependent visual feature selection for optimising and generalizing robotics skills (superv. David Filliat, Pierre-Yves Oudeyer).

PhD in progress: José Magno Mendes Filho, Planning and control of an autonomous AGV in environment shared with humans, started Oct. 2015 (superv. David Filliat and Eric Lucet (CEA))

PhD in progress: Timothée Lesort, Incremental Deep Learning for Detection and Classification in a Robotic Context. started june 2017 (superv. David Filliat and Jean-Francois Goudou (THALES)).

PhD in progress: Vyshakh Palli Thazha, Data fusion for autonomous vehicles. started sept 2017 (superv. David Filliat and Hervé Illy (Renault)).

### 10.2.3. *Juries*

David Filliat was in the jury of Houssein Nouri (20/04/2017, Examineur) : Affinement de relevés laser mobiles issus de Lidars multi-couches

David Filliat was in the jury of Quan Nguyen (06/10/2017, Rapporteur) : Mapping of a sound environment by a mobile robot

David Filliat was in the jury of Vijaya kumar Ghorpade (20/12/2017, Examineur) : 3D Semantic mapping for indoor navigation

PY. Oudeyer was in the PhD juries of Céline Craye (ENSTA), Gabriel Sulem (ENS), Arthur Prat-Carrabin (ENS), Miquel Cornudella (ENS)

PY. Oudeyer was in the HdR jury of Alexandre Pitti (Univ. Cergy Pontoise)

## 10.3. Popularization

### 10.3.1. *Duties*

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 will begin 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 "Didapro Didactic" Conference which will be held in Lausanne (Switzerland) on 2018 February.

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 2018 March.

D. Roy is project leader of Thymio Simulator for Classcode project. Specifications and coordination of work.

D. Roy is project leader of Thymio Scratch and Thymio Snap! development, with D. Sherman. Inria, EPFL and Mobsya collaboration.

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

### 10.3.2. Online content

Stephanie Noirpoudre. Atelier Poppy Ergo Jr au CERN. Description and feedback of a workshop on the construction and programming of the robotic arm Poppy Ergo Jr as part of the Coding Pi Science Event. [83]

Stephanie Noirpoudre. Robotic workshop at CERN. Description and feedback of a workshop on the construction and programming of the robotic arm Poppy Ergo Jr as part of the Coding Pi Science Event. [84]

Stephanie Noirpoudre, Kelian Schindowsky. Poppy Education présent à la journée EIDOS 64 : Le forum des pratiques numériques pour l'éducation. Description and feedback of the 9th edition of the EIDOS64 day (the digital practice forum for education). [85]

Sylvain Soulard, Kelian Schindowsky. Description of activity "Modeling of the Port of Rotterdam" using the robot arm Poppy Ergo Jr and created by Sylvain Soulard, middle school teacher in technology. He started the problem: how to optimize and secure the transport of containers in a commercial port? [88]

Kelian Schindowsky. Un projet étudiant : des mains pour Poppy Torso ! Utilisation de la plateforme Poppy pour un projet étudiant. A use of the Poppy platform for a student project: 4 Poppy Torso robots modified by the students of the Bordeaux-Talence campus clashed in the large amphitheater. A competition of a new kind including free figures and imposed figures. [87]

Kelian Schindowsky. Des roues pour le robot Poppy Torso : New Bachelor of Technology students from ENSAM (Talence) worked on the Poppy Torso robot, the goal this time was to equip it with a mobile platform. [86]

### 10.3.3. Teaching and Education

#### 10.3.3.1. Poppy Education

January 2017, meeting with partner teachers

March 2017, meeting with partner teachers

March 2017, training day with new teachers partners - Building and programming the robot Poppy Ergo Jr

May 2017, meeting with partner teachers

September 2017, meeting with partner teachers

June 2017, training day with workers from Cap'Metier and Cultures électroniques (for scientific mediation purpose) to initiate to robotic - Building and programming the robot Poppy Ergo Jr

#### 10.3.3.2. Inirobot

May 2017, Plan national de formation organised by La main à la pâte (Paris): D. ROY - Train future trainers to inirobot curriculum

April 2017, Training days organized by Main à la pâte for National Education (CEA Saclay): T. Desprez, S. Noirpoudre, D. Roy, Théo Segonds - Train a group of teachers to inirobot

### **10.3.4. Talks and Hands-on**

#### *10.3.4.1. KidBreath*

Ma Thèse en 180 secondes, March 2017, Bordeaux, France, A. Delmas (oral presentation),  
La nuit européenne des chercheurs, September 2017, Bordeaux, France, A. Delmas (oral presentation).

#### *10.3.4.2. Poppy Education*

January 2017, Eidos64 event - Le forum des pratiques numériques pour l'éducation (Lons): S. Noirpoudre, K. Schindowsky - Talk to present Poppy Education

Janvier 2017, Visit organized by Le Conseil Départemental des Jeunes (Inria Bordeaux Sud-Ouest): S. Noirpoudre - Programming workshops (for middle school students) to initiate in programmation with Poppy Ergo Jr robot

January 2017, Robotics training day organised by Maison pour la Science (Inria Bordeaux Sud-Ouest): S. Noirpoudre, T. Desprez - Programming workshop (for futur trainers) to initiate in programmation with Poppy Ergo Jr robot

January 2017, R2T2 AmeriCarabean (island of Martinique) : D. Roy - Co-organization with EPFL and ESPE of Martinique - International event (Mexico, Quebec, Guyane, Sainte Lucie) about robotics for education <http://www.reseau-espe.fr/actualites/espe-de-martinique-le-defi-r2t2-americaire-ete-releve>

March 2017, Education exhibition Eduspot (Paris): S. Noirpoudre - Exhibition stand to present the robotic platform Poppy and the use in Education

March 2017, Le printemps de la mixité event (Inria Bordeaux Sud-Ouest): S. Noirpoudre - Robotics workshops (for high school students) to initiate in programmation with Poppy Ergo Jr robot

April 2017, Training days organized by Main à la pâte for National Education (CEA Saclay): T. Desprez, S. Noirpoudre, D. Roy, Théo Segonds - Train a group of teachers to robotics and programmation with Poppy Ergo Jr robot

May 2017, Plan national de formation organised by La main à la pâte (Paris): S. Noirpoudre - Talk to present Poppy Education project and Poppy Ergo Jr

May 2017, Innorobo (Paris): S. Noirpoudre, K. Schindowsky, T. Segonds, D. Roy: Exhibition stand to present the robotics platform Poppy and the use in Education

May 2017, Innorobo Robotics and Education Forum (Paris): S. Noirpoudre - Talk to present Poppy Education and the robot Poppy Ergo Jr

May 2017, Robot makers'day (Talence): K. Schindowsky - Exhibition stand to present Poppy Education and Poppy robots

May 2017, RII Santiago (Santiago de Chile, Chile): T. Segonds - Exhibition stand to present Poppy Education and Poppy robots - Event organized by Inria Chile

May 2017, Bordeaux Geek Festival (Bordeaux): K. Schindowsky - Workshops to initiate in programming

May 2017, PY. Oudeyer gave an invited presentation on "Robotics and cognitive sciences" at Festival Filosofia, St. Emilion, France

June 2017, Internships: observation Sequence for Grade 3 Students (Inria Bordeaux Sud-Ouest - Welcomed two students from middle-school during a week to discover the working environment and to introduce them to robotics

June 2017, Robotics workshop for a primary class (Inria Bordeaux Sud-Ouest): S. Noirpoudre, T. Desprez - Poppy Education and inirobot workshops

June 2017, EIAH : Environnements informatiques pour l'apprentissage humain (Strasbourg): S. Noirpoudre, T. Desprez - Talk to present the article "Poppy Education : un dispositif robotique open source pour l'enseignement de l'informatique et de la robotique"

June 2017, EIAH : Environnements informatiques pour l'apprentissage humain (Strasbourg): T. Desprez, S. Noirpoudre - Exhibition stand to present the robotics platform Poppy and the use in Education

June 2017, Rencontre avenir numérique alsace (strasbourg): S. Noirpoudre - Talk in videoconference to present Poppy Education and the robot Poppy Ergo Jr

June 2017, Playback of "Poppy entre dans la danse" project (Le Cuvier, Artigues-près-Bordeaux): T. Deprez, T. Segonds - Technical assistance of a secondary school performance melting danse and robotics

July 2017, Symposium Education and Robotics (Bordeaux): D. Roy (coordinator) and Flowers Team Members - Organization of the colloquium

July 2017, Symposium Education and Robotics (Bordeaux): S. Noirpoudre - Talk to present Poppy Education project

July 2017, Symposium Education and Robotics (Bordeaux): P.Y. Oudeyer - Talk to present Flowers educational robotics projects

July 2017, Symposium Education and Robotics (Bordeaux): S. Noirpoudre - Exhibition stand to present the robotics platform Poppy and the use in Education

July 2017, 10th International Scratch conference (Bordeaux): D. Roy - Member of the Scratch organizing committee, member of the scientific committee - the conference organization begun on december 2017

July 2017, 10th International Scratch conference (Bordeaux): T. Segonds - Talk to present Poppy Education project

July 2017, 10th International Scratch conference (Bordeaux): S. Noirpoudre - Exhibition stand to present the robotics platform Poppy and the use in Education

August 2017, Fab13 Fabricating Society Conference (Santiago de Chile, Chile): T. Segonds - Talk on Poppy Education - Two days workshop on using and modifying Poppy robots

August 2017, Ludovia Conference (Ax-Les-Thermes): D. Roy - Partnership with Region Nouvelle Aquitaine and Académie of Bordeaux for an exhibition stand with Poppy Education - Exhibitions, demos, talks

October 2017, Coding Pi Science Days (CERN and Hepia engineering school at Geneva): T. Segonds, T. Desprez - Talk to present the robotics platform Poppy and the use in Education - Three days robotics workshops on building and programming a Poppy Ergo Jr robot

October 2017, Fête de la science (Inria Bordeaux Sud-Ouest): D. Roy - special event with a robotics workshop and several demos at Inria Center, with members of staff of Bordeaux Metropole and polotical actors

October 2017, Fête de la science (Inria Bordeaux Sud-Ouest): T. Segonds, T. Desprez - 8 programming workshop in 2 days (with middle school students) using Snap! and the robot Poppy Ergo Jr

November 2017, JNRR (National Days of Robotics Reseach, Biarritz): D. Roy (moderator), P.-Y. Oudeyer (speaker) - Talk on Educational Robotics -

December 2017, Digital Tech Rennes (Rennes): T. Segonds, B. Busch - Talk on Poppy Education - Poppy Ergo Jr programming workshop

December 2017, Aperobot Bordeaux (Bordeaux): T. Segonds - Poppy Ergo Jr programming workshop

December 2017, Internships: observation Sequence for Grade 3 Students (Inria Bordeaux Sud-Ouest) - Welcomed three students from middle-school during a week to discover the working environment and to introduce them to robotics

#### 10.3.4.3. Other

Members of the Flowers team participated to many interviews and documentaries for the press, the radio and television.

### 10.3.5. Popularizing inside Inria

- March 2017, training day with Inria workers from scientific mediation - Building and programming the robot Poppy Ergo Jr
- October 2017, DevDays (Inria Bordeaux Sud-Ouest): D. Caselli - Presentation of the hotspot tool used in Poppy Ergo Jr robot
- December 2017, Séminaire de la médiation Inria (CNAM, Paris): T. Segonds, S. Noirpoudre, D. Roy - Poppy Ergo Jr programming workshop for people involving in scientific outreach of Inria

### 10.3.6. Creation of Material for Popularization

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 [81].

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 [48] 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-IQHwTUxXZjF3OGxHVGM/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](http://www.poppy-education.org/activites/activites-lycee)
- Middle-school level :  
[www.poppy-education.org/activites/activites-college](http://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/>

### ***10.3.7. 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 is ending and Inria doesn't

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 will include Poppy robot ecosystem (hardware, software, community) from the beginning, will be a place of excellence to build future educational robots and to design pedagogical activities to teach computer science, robotics and Artificial Intelligence.



## HEPHAISTOS Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

#### 10.1.1.1. Member of the Organizing Committees

- J-P. Merlet is a member of the scientific committee of the European Conference on Mechanism Science (EUCOMES), chairman of the scientific Committee of the Computational Kinematics workshop, a member of the steering Committee of IROS
- Y. Papegay is a permanent member of the International Steering Committee of the International Mathematica Symposium conferences series. He is a member of the OpenMath Society, building an extensible standard for representing the semantics of mathematical objects

### 10.1.2. Scientific Events Selection

#### 10.1.2.1. Reviewer

- J-P. Merlet has been reviewing Editor for IROS 2017 and was a member of ICRA 2017 IPC.
- The members of the team reviewed numerous papers for numerous international conferences.

### 10.1.3. Journal

#### 10.1.3.1. Member of the Editorial Boards

- J-P. Merlet is board member of the Journal of Behavioral Robotics

### 10.1.4. Invited Talks

- J-P. Merlet was invited by the Royal Society of Edinburgh for a talk on robotics

### 10.1.5. Leadership within the Scientific Community

- J-P. Merlet is Inria representative to the PPP Eurobotics aisbl. He is a member of the IFToMM (International Federation for the Promotion of Mechanism and Machine Science) Technical Committees on History and on Computational Kinematics and has been re-elected as one of the 10 members of IFToMM Executive Council, the board of this federation. He is a member of the scientific committee of the CNRS GDR robotique.

### 10.1.6. Scientific Expertise

- J-P. Merlet was involved in project evaluations for several foreign funding agencies (Israel, Austria, Finland). He was also appointed as *Nominator* for the Japan's Prize.

### 10.1.7. Research Administration

- J-P. Merlet is an elected member of the Academic Council of UCA COMUE and member of the Research, Ethical Committees of UCA
- O. Pourtallier is a board member of SeaTech, an Engineering School of University of Toulon.

#### 10.1.7.1. Inria activities

- J-P. Merlet is an elected member of Inria Scientific Committee
- O. Pourtallier is responsible of the NICE committee (long term invited scientists and post-doctoral student selection).
- Y. Papegay is a member of the Inria CUMIR and of the ADT committee

## **10.2. Teaching - Supervision - Juries**

### **10.2.1. Teaching**

Master : O. Pourtallier lectured 6 hours on game theory to Master OSE (M2), at École des Mines de Paris, Sophia Antipolis, France.

### **10.2.2. Supervision**

PhD in Progress : A. Massein, Design of Smart Environment for Human Behaviour Recognition, 2013-2018, supervisors: D.Daney, Y.Papegay

### **10.2.3. Juries**

- J-P. Merlet has been a member of 5 PhD juries
- Y. Papegay has been a member of 1 PhD jury

## **10.3. Popularization**

- J-P. Merlet and A. Coulbois participated to Inorobot and several other events, exhibiting a cable-driven parallel robot for education
- J-P. is a member of the Scientific Committee managing the future permanent exhibition on robotics at the Cité des Sciences, Paris
- Y.Papegay is actively participating to the Math.en.Jeans initiative for Mathematics teaching for undergraduate students.
- Y.Papegay 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.

## LAGADIC Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

#### 10.1.1.1. General Chair, Scientific Chair

- Marie Babel was the Scientific Chair of the workshop “Serious game et réalité virtuelle : de la conception à l’utilisation” organized in Inria Rennes on December 15th 2017.

#### 10.1.1.2. Member of the Organizing Committees

- Marie Babel and Patrick Rives were in the Organizing Committee of JNRR 2017 (“Journées Nationales de la Recherche en Robotique”) held in Biarritz in November 2017
- Alexandre Krupa co-organized with Christoph Hennersperger (Technical University of Munich) and Danail Stoyanov (University College London) the Workshop on “Medical Imaging Robotics” at IROS 2017, Vancouver, Canada (<http://robotic-imaging.com>)
- Claudio Pacchierotti was the Publicity Chair of the 2017 IEEE World Haptics conference held in Munich, Germany. He also co-organized the workshop on “Wearable haptic systems: design, applications, and perspectives,” at this conference.
- Paolo Robuffo Giordano was Editor-in-Chief of the IEEE Int. Symposium on Multi-Robot and Multi-Agent Systems (MRS 2017)

#### 10.1.1.3. Chair of Conference Program Committees

- Julien Pettré was Program Chair for the 2017 ACM Motion in Games Conference, Barcelona, 8-10 November 2017

#### 10.1.1.4. Member of the Conference Program Committees

- François Chaumette: ICRA 2018 (Associate Editor)
- Claudio Pacchierotti: WHC 2017 (Associate Editor)
- Julien Pettré: Eurographics 2017, ACM SCA 2017
- Patrick Rives: ICINCO 2017 (Program Committee Membership)
- Paolo Robuffo Giordano: IROS 2018 (Associate Editor), ICRA 2018 (Associate Editor), RSS 2018, ISRR 2017

#### 10.1.1.5. Reviewer

- Marie Babel: ICRA 2017 (1)
- François Chaumette: CDC 2017 (1)
- Vincent Drevelle: IROS 2017 (1)
- Alexandre Krupa: IROS 2017 (1), Surgetica 2017 (1), ICRA 2018 (1)
- Eric Marchand: IROS 2017 (3), ICRA 2018 (2)
- Claudio Pacchierotti: WHC 2017, ICRA 2017, IROS 2017, Haptics 2018, also Senior Reviewer for IEEE Robotics & Automation Society Young Reviewers Program (from 2016)
- Julien Pettré: ACM SIGGRAPH (2), ACM SIGGRAPH Asia 2017 (2), Eurographics 2018 (1), IEEE VR 2018 (1), ACM SCA 2017 (2)
- Patrick Rives: ICRA 2017 (3), CVPR 2017 (2), ICCV 2017, Icinco 2017 (3), IV 2017 (1), PPINV 2017 (3)
- Paolo Robuffo Giordano: ACC 2017 (1), HFR 2017(2), ICRA 2018(2), IROS 2017(2)

- Paolo Salaris: ACC 2017 (1), RSS 2017 (2), IROS 2017 (1)
- Fabien Spindler: IROS 2017 (1)

### 10.1.2. Journal

#### 10.1.2.1. Member of the Editorial Boards

- François Chaumette: Editorial Board of the Int. Journal of Robotics Research, Funding Senior Editor of the IEEE Robotics and Automation Letters, Editorial Board of the Springer Tracts in Advanced Robotics, Board Member of the Springer Encyclopedia of Robotics, Senior Editor of the IEEE Trans. on Robotics (from December 2017).
- Alexandre Krupa and Eric Marchand are Associate Editors of the IEEE Robotics and Automation Letters.
- Julien Pettré: Editorial board of Collective Dynamics, Associate Editor for Computer Animation and Virtual Worlds

#### 10.1.2.2. Reviewer - Reviewing Activities

- Marie Babel: IEEE RAL (1), IEEE THMS (1)
- François Chaumette: Journal of Intelligent & Robotics Systems (1), Int. Journal of Robotics Research (1)
- Alexandre Krupa: Int. Journal of Robotics Research (1)
- Eric Marchand: Int. Journal of Robotics Research (1)
- Claudio Pacchierotti: TOH (5), RAL (8), TBME (1), TMECH(1), IJMRCAS(1), Plos One (1)
- Julien Pettré: Plos One (1), Wiley's Computer Animation and Virtual Worlds (1), Current Directions in Psychological Science (1), Elsevier's Computer and Graphics (1), IEEE TVCG (1), Journal of Motor Behavior (1).
- Patrick Rives: IEEE-Robotics and Automation Letters (1)
- Paolo Robuffo Giordano: L-CSS(1), RAL (1), TRO (1), TSMC (1)
- Paolo Salaris: IEEE-Robotics and Automation Letters (1), IEEE Trans. on Control, Systems Technology (1), Int. Journal of Robotics Research (1), Int. Journal of Control, Automation and Systems IJCAS (1)

### 10.1.3. Invited Talks

- Marie Babel:
  - “Assistance and Service Robotics in a Human Environment Workshop” at IEEE IROS 2017 workshop about “Smart wheelchairs: the tomorrow's vehicles?”.
  - “Navigation en milieu humain : comprendre pour mieux assister” at JNRR 2017
- François Chaumette: “Visual servoing with and without image processing”, University of Zhejiang, December 2017.
- Vincent Dreville: “Set-membership interval methods for observation robotics”, ENSTA Bretagne, Brest, France, October 2017.
- Eric Marchand: “The dense approach for visual servoing”, “Journées scientifiques” Inria, Sophia Antipolis, June 2017.
- Claudio Pacchierotti: “Wearable haptics for VR and AR”. Max-Planck Institute for Intelligent Systems, Stuttgart, Germany, 2017.
- Julien Pettré:
  - “Microscopic crowd modeling and simulation: an holistic approach”, Univ. Pompeu Fabra (Barcelona), May 2017

- “Pedestrian Dynamics: Modeling, Validation and Calibration”, Brown University ICERM workshop, August 2017
- “Velocity-based algorithms for crowd simulation”, workshop “Piétons et foules”, Univ. Orsay, December 2017
- Paolo Robuffo Giordano:
  - “A New Look at Shared Control for Complex Robotics Systems”. Ecole Normale Supérieure (ENS), Rennes, France, December 2017
  - “Blending Human Assistance and Local Autonomy for Advanced Telemanipulation”. Humanoids 2017 Workshop on Towards Robust Grasping And Manipulation Skills For Humanoids, November 2017
  - “Recent Results on Shared Control for Human- assisted Telemanipulation”. IROS 2017 Workshop on Human in-the-loop robotic manipulation: on the influence of the human role, September 2017
  - “Shared Control Architectures for Single and Multiple Robots”. LS2N, Nantes, France, July 2017
  - “Graph-Theoretical Tools for Sensor-based Multi-Robot Applications”. Robolog 2017 workshop, IRISA, France, June 2017
  - “Collective Control, State Estimation and Human Interaction for Quadrotors in Unstructured Environments”. ICRA 2017 Workshop on Human Multi-Robot System Interaction, June 2017
  - “Recent results in Collective Control, State Estimation and Human Interaction for Quadrotors in Unstructured Environments”. Aerial Robotics workshop, Paris, France, March 2017
- Fabien Spindler: “ViSP integration in ROS ecosystem”, “Journée technique : retour d’expériences autour de ROS” organized by “Réseau métier des roboticiens et mécatroniciens”, Cité Scientifique de l’Université de Lille, August 2017.

#### ***10.1.4. Leadership within the Scientific Community***

- François Chaumette is a 2016-2019 elected member of the Administrative Committee of the IEEE Robotics and Automation Society. He is also a member of the Scientific Council of the CNRS INS2I and vice-president of the Tremplin-ERC ANR program.
- Claudio Pacchierotti is the Chair of the IEEE Technical Committee on Haptics.
- Philippe Martinet is vice-president of the “GdR Robotique”. François Chaumette and Patrick Rives are members of its scientific council.

#### ***10.1.5. Scientific Expertise***

- Marie Babel served as an expert for the International Mission of the French Research Ministry (MEIRIES).
- François Chaumette served as a Panel member for the ERC PE7 consolidator grants. He also served in the selection committee for a Professor position at UTC (Compiègne). He was also involved in the evaluation of a research proposal submitted to the Research Foundation of Flanders, and for an Associate Prof. position at the City University of Hong Kong.
- Claudio Pacchierotti was a member of the jury for the EuroHaptics Best PhD thesis award, for the Robotics Made in Italy Video Contest, and served for Hans Fischer Senior Fellowship at the Institute for Advanced Study of the Technical University of Munich (TUM-IAS).
- Paolo Robuffo Giordano was reviewer of ERC Starting Grants and Consolidator Grants for the EU, of ANR projects, and of NWO projects (Dutch funding agency).
- Patrick Rives served as member of the “Comité d’Evaluation” of the ANR Challenge “Malin” and of the ANR Challenge “Rose”.

### 10.1.6. Research Administration

- François Chaumette serves as the president of the committee in charge of all the temporary recruitments (“Commission Personnel”) at Inria Rennes-Bretagne Atlantique and Irisa. He is also a member of the Head team of Inria Rennes-Bretagne Atlantique.
- Eric Marchand served as secretary in the board of the “Association Française pour la Reconnaissance et l’Interprétation des Formes” (AFRIF). He is also in charge of the Irisa Ph.D. students in the committee in charge of all the temporary recruitments (“Commission Personnel”) at Inria Rennes-Bretagne Atlantique and Irisa. He is in the board of the “Pôle Images et Réseaux” and in the board of “Ecole doctorale Matisse”.
- Alexandre Krupa is a member of the CUMIR (“Commission des Utilisateurs des Moyens Informatiques pour la Recherche”) of Inria Rennes-Bretagne Atlantique.
- Paolo Salaris is member of the “Comité de Suivi Doctoral (CSD)” of Inria Sophia Antipolis.

## 10.2. Teaching - Supervision - Juries

### 10.2.1. Teaching

Marie Babel:

Master INSA2: “Robotics”, 26 hours, M1, INSA Rennes  
 Master INSA1: “Architecture”, 30 hours, L3, INSA Rennes  
 Master INSA2: “Computer science project”, 30 hours, M1, INSA Rennes  
 Master INSA2: “Image analysis”, 18 hours, M1, INSA Rennes  
 Master INSA1: “Remedial math courses”, 50 hours, L3, INSA Rennes

François Chaumette:

Master ESIR3: “Visual servoing”, 8 hours, M2, Ecole supérieure d’ingénieurs de Rennes

Vincent Drevelle:

Master ESIR2: “Real-time systems and RTOS”, 24 hours, M1, Esir Rennes  
 Master GLA: “Terrain information systems”, 14 hours, M2, Université de Rennes 1  
 Master Info: “Artificial intelligence”, 24 hours, M1, Université de Rennes 1  
 Master Elec: “Connected and geolocalized embedded applications”, 24 hours, M2, Université de Rennes 1  
 Licence Info: “Computer systems architecture”, 24 hours, L1, Université de Rennes 1  
 Licence and Master Elec: “Electronics project”, 38 hours, L3 and M1, Université de Rennes 1  
 Portail Info-Elec: “Discovering programming and electronics”, 14 hours, L1, Université de Rennes 1  
 LabFab School Mobility: “Build your robot”, 30 hours, DU  
 Licence Miage: “Computer programming”, 78 hours, L3, Université de Rennes 1  
 Master Elec: “Instrumentation, localization, GPS”, 4 hours, M2, Université de Rennes 1  
 Master Elec: “Data fusion”, 20 hours, M2, Université de Rennes 1

Alexandre Krupa:

Master SIBM (Signals and Images in Biology and Medicine): “Medical robotics guided from images”, 4.5 hours, M2, Université de Rennes 1, Brest and Angers  
 Master FIP TIC-Santé: “Ultrasound visual servoing”, 6 hours, M2, Télécom Physique Strasbourg  
 Master INSA3: “Modeling and engineering for Biology and Health applications”, 12 hours, M2, INSA Rennes  
 Master ESIR3: “Ultrasound visual servoing”, 9 hours, M2, Esir Rennes

Eric Marchand:

Master Esir2: “Colorimetry”, 24 hours, M1, Esir Rennes

Master Esir2: “Computer vision: geometry”, 24 hours, M1, Esir Rennes

Master Esir3: “Special effects”, 24 hours, M2, Esir Rennes

Master Esir3: “Computer vision: tracking and recognition”, 24 hours, M2, Esir Rennes

Master MRI: “Computer vision”, 24 hours, M2, Université de Rennes 1

Master MIA: “Augmented reality”, 4 hours, M2, Université de Rennes 1

Julien Pettré:

INSA1: “Programmation Informatique”, 40 hours, INSA Rennes

### 10.2.2. Supervision

- Ph.D.: Renato José Martins, “Robust navigation and control of an autonomous vehicle”, defended in October 2017, supervised by Patrick Rives and Samuel Siqueira Bueno (CTI) [12]
- Ph.D.: Jason Chevie, “Flexible needle steering using ultrasound visual servoing”, defended in December 2017, supervised by Alexandre Krupa and Marie Babel [11]
- Ph.D. in progress: Fabrizio Schiano, “Collective control with onboard sensors for multiple quadrotor UAVs”, to be defended in January 2018, supervised by Paolo Robuffo Giordano
- Ph.D. in progress: Pedro Patlan-Rosales, “A robotic control framework for quantitative ultrasound elastography”, to be defended in January 2018, supervised by Alexandre Krupa
- Ph.D. in progress: Quentin Bateux, “Visual servoing from global descriptors”, started in October 2014, supervised by Eric Marchand
- Ph.D. in progress: Lesley-Ann Duflot, “Visual servoing using shearlet transform”, started in November 2014, supervised by Alexandre Krupa and Brahim Tamadazte (Minarob group at FEMTO-ST, Besançon)
- Ph.D. in progress: Firas Abi Farraj, “Shared Control Architectures for Visual Servoing Tasks”, started in October 2015, supervised by Paolo Robuffo Giordano
- Ph.D. in progress: Salma Jiddi, “Analyses géométrique et photométrique pour des applications de réalité mixte”, started in October 2015, supervised by Eric Marchand and Philippe Robert (Technicolor)
- Ph.D. in progress: Ide Flore Kenmogne Fokam, “Cooperative localization in multi-robot fleets using interval analysis”, started in October 2015, supervised Vincent Drevelle and Eric Marchand
- Ph.D. in progress: Bryan Penin “Model predictive visual servoing for UAVS”, started in October 2015, supervised by Paolo Robuffo Giordano and François Chaumette
- Ph.D. in progress: Guillaume Cortes, “Motion Capture”, started in October 2015, supervised Eric Marchand and Anatole Lécuyer (Hybrid group).
- Ph.D. in progress: Muhammad Usman, “Robust Vision-Based Navigation for Quadrotor UAVs”, started in October 2015, supervised by Paolo Robuffo Giordano
- Ph.D. in progress: Louise Devigne, “Contribution d’une aide technique robotique à l’évaluation de pathologies neurologiques : Application à la navigation d’un fauteuil roulant”, started in November 2015, supervised by Marie Babel and Philippe Gallien (Pôle Saint Hélier)
- Ph.D. in progress: Quentin Delamare, “Algorithmes d’estimation et de commande pour des quadrirotors en interaction physique avec l’environnement”, started in September 2016, supervised by Paolo Robuffo Giordano and Antonio Franchi (LAAS)
- Ph.D. in progress: Axel Lopez Gandia, “Data assimilation for synthetic vision-based crowd simulation algorithms”, started in October 2016, supervised by Julien Pettré and François Chaumette

- Ph.D. in progress: Aline Baudry, “Contribution à la modélisation des fauteuils roulants pour l’amélioration de leur navigation en mode semi-autonome”, started in October 2016, supervised by Marie Babel and Sylvain Guégan (Mechanical Engineering Dpt/LGCGM at Insa Rennes)
- Ph.D. in progress: Hadrien Gurnel, “Shared control of a biopsy needle from haptic and ultrasound visual feedback”, started in October 2016, supervised by Alexandre Krupa, Maud Marchal (Hybrid group at Inria Rennes-Bretagne Atlantique and Irisa) and Laurent Launay (IRT b<>com)
- Ph.D. in progress: Dayana Hassan, “Plate-forme robotisée d’assistance aux personnes à mobilité réduite”, started in November 2016, supervised by Paolo Salaris, Patrick Rives, and Frank Anjeaux (Axyn robotique)
- Ph.D. in progress: Agniva Sengupta, “Localization and characterization of objects with unknown shapes”, started in January 2017, supervised by Alexandre Krupa and Eric Marchand
- Ph.D. in progress: Xavier De Tinguy de la Giroulière, “Conception de techniques d’interaction multi-sensorielles pour la manipulation dextre d’objets en réalité virtuelle”, started in September 2017, supervised by Maud Marchal, Anatole Lécuyer (Hybrid group) and Claudio Pacchierotti
- Ph.D. in progress: Rahaf Rahal, “Mixed tactile-force feedback for safe and intuitive robotic teleoperation”, started in October 2017, supervised by Paolo Robuffo Giordano and Claudio Pacchierotti
- Ph.D. in progress: Nicolas Le Borgne, “Contrôle partagé et navigation assistée d’un fauteuil roulant en extérieur”, started in October 2017, supervised by Marie Babel
- Ph.D. in progress: Florian Berton, “Design of a virtual reality platform for studying immersion and behaviours in aggressive crowds”, started in November 2017, supervised by Julien Pettré

### 10.2.3. External Ph.D. and HdR Juries

- François Chaumette: Abed Malti (HdR, reviewer, Tlecem University, Algeria), Guillaume Laurent (HdR, reviewer, Femto ST, Besançon), Sylvain Lanneau (Ph.D., member, LS2N, Nantes)
- Eric Marchand: Angélique Loesch (Ph.D., reviewer, Univ. Clermont Auvergne, CEA), Pierre Rolin (Ph.D., reviewer, Univ. de Nancy), Hristina Hristova (Ph.D., president, Univ. de Rennes 1)
- Paolo Robuffo Giordano: Alexandre Boeuf (Ph.D., reviewer, LAAS, Toulouse), Valerio Modugno (Ph.D., reviewer, University of Rome La Sapienza, Italy), Mohamed Sorour (Ph.D., reviewer, LIRMM, Montpellier)

## 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>). This year there were among others, demonstrations organized for the new year’s lab greetings, for the Inria industry journey focused on data and applications in Paris, for the “Semaine de l’Informatique Graphique et de la Réalité virtuelle”, and for the Science and music journey.
- Marie Babel participated as a member in a panel discussion during the Digital Tech Conference organized in Rennes in December 2017.
- Julien Pettré wrote a vulgarization paper [68], explaining how crowd simulation is used in the field of visual effects for the movie and the video-game industries. The crowd simulation topic was presented during the “Pint of Science FR 2017” event, which organizes mini conferences animated by researchers in public places such as cafes and bars.



## LARSEN Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

#### 10.1.1.1. General Chair, Scientific Chair

- Co-organized an international workshop at IROS 2017 (*Micro-Data Learning: the next frontier of Robot Learning?*) [Jean-Baptiste Mouret].
- Co-organized an international workshop at ECAL'2017 (*Evolution in Physical System*) [Jean-Baptiste Mouret].
- Co-organized an international workshop at HUMANOIDS 2017 (*Human-Humanoid collaboration: the next industrial revolution?*) [Serena Ivaldi].
- Co-organized “Expressions, simulations, perceptions - Journées PsyPhINe 2017”, the third workshop of the PsyPhINe project (<http://poincare.univ-lorraine.fr/fr/manifestations/psyphine-2017>) [Amine Boumaza].

#### 10.1.1.2. Member of the Organizing Committees

- Serena Ivaldi was Publicity Chair of the international conferences HUMANOIDS 2017 (IEEE/RSJ International Conference on Humanoid Robots) and of ICDL 2017 (IEEE Conference on Development and Learning)

### 10.1.2. Scientific Events Selection

#### 10.1.2.1. Member of Conference Program Committees

- CEC 2017 (Congress on Evolutionary computation) [Amine Boumaza]
- CoRL (Conference on Robot Learning) [Serena Ivaldi, Jean-Baptiste Mouret]
- ECAL 2017 (European Conference on Artificial Life) [Amine Boumaza, Jean-Baptiste Mouret]
- EVO\* 2017 (EvoStar) [Jean-Baptiste Mouret]
- GECCO2017 (Genetic and Evolutionary Computation Conference) [Amine Boumaza, Jean-Baptiste Mouret]
- HFR 2017 (Human-Friendly Robotics Conference) [Serena Ivaldi]
- HUMANOIDS 2017 (IEEE/RSJ International Conference on Humanoid Robots) [Serena Ivaldi, associate editor]
- ICRA 2017 & ICRA 2018 (IEEE International Conference on Robotics and Automation) [Serena Ivaldi, associate editor]
- IROS 2017 (IEEE/RSJ International Conference on Intelligent Robots and Systems) [Serena Ivaldi, associate editor]
- JFPDA 2017 (Journée Francophones sur la Planification, la Décision et l'Apprentissage pour la conduite de systèmes) [Vincent Thomas]
- NIPS Bayesian Optimization Workshop [Jean-Baptiste Mouret]

#### 10.1.2.2. Reviewer for Peer-reviewed Conferences

- ICRA 2018 (2018 IEEE International Conference on Robotics and Automation) [Karim Bouyarmane, Francis Colas, Serena Ivaldi, Jean-Baptiste Mouret]
- IROS 2017 (IEEE/RSJ International Conference on Intelligent Robots and Systems) [Karim Bouyarmane, Francis Colas, Jean-Baptiste Mouret]

- HUMANOIDS 2017 (IEEE/RSJ International Conference on Humanoid Robots) [Jean-Baptiste Mouret, Karim Bouyarmane]
- ICDL-EPIROB 2017 (IEEE International Conference on Development and Learning and on Epigenetic Robotics) [Francis Colas]

### **10.1.3. Journal**

#### *10.1.3.1. Member of the Editorial Boards*

- Jean-Baptiste Mouret co-edited a special issue of the Artificial Life journal (MIT Press), called “Evolution in Physical Systems” [19]
- Serena Ivaldi was an Associate Editor of IEEE Robotics and Automation Letters (RAL) and an Editorial Board member for the Springer Journal of Intelligent Service Robotics

#### *10.1.3.2. Reviewer - Reviewing Activities*

- Frontiers in AI and Robotics [Amine Boumaza, Serena Ivaldi, Jean-Baptiste Mouret]
- Robotics and Automation Letters [Karim Bouyarmane, Francis Colas, Jean-Baptiste Mouret]
- Autonomous Robots [Francis Colas]
- IEEE Transactions on Robotics [Karim Bouyarmane, Serena Ivaldi]
- International Journal of Robotics Research [Karim Bouyarmane]
- IEEE Transactions on Systems, Man and Cybernetics [Karim Bouyarmane]

### **10.1.4. Invited Talks**

- Jean-Baptiste Mouret was invited to talk at as the Centre for BioRobotics – University of Southern Denmark (distinguished speaker), at the LIRIS (CNRS / Univ. Lyon) at the “Evolution in Cognition Workshop” (GECCO 2017), and at the GT8 (Robotique et Neurosciences) meeting of the GDR Robotique (CNRS).
- Serena Ivaldi was invited to talk at XEROX Research in Grenoble, at IHEST in Paris, at the GT Robotique Humanoïde in Montpellier, at the IEEE ICDL 2017 Workshop on Perception of Self, and at the the GT8 (Robotique et Neurosciences) meeting of the GDR Robotique (CNRS).
- Karim Bouyarmane was invited to give a presentation at the Seminaire Francilien de Geometrie Algorithmique et Combinatoire at Institut Henri Poincarre in Paris.

### **10.1.5. Leadership within the Scientific Community**

- Jean-Baptiste Mouret is the chair of the “evo-devo-robot” task force of the IEEE technical committee “Developmental and Cognitive Systems”.
- Serena Ivaldi is the co-chair of the web task force of the IEEE technical committee “Developmental and Cognitive Systems”.

### **10.1.6. Scientific Expertise**

- Serena Ivaldi was vice-president of the CES33 committee for evaluation of national projects for the ANR
- Francis Colas was member of the CES33 committee for evaluation of national projects for the ANR
- Serena Ivaldi is a member of the scientific experts committee for the upcoming Robots exhibition at the Cite de la Science in Paris.
- François Chappillet was member of the hiring committees:
  - CR2 Inria: Committee member (Bordeaux)
  - Maître de conférences: Committee member for jury (UTT)
  - Professeur des Universités: Committee member for jury PR 4036 “Traitement du signal, conception de méthodes de décision, fusion de données” (UTT)

### 10.1.7. Research Administration

- Amine Boumaza is a board member of the Évolution Artificielle association.

## 10.2. Teaching - Supervision - Juries

### 10.2.1. Teaching

Master [Vincent Thomas]

- “Modèles probabilistes et Apprentissage par renforcement”, 15h eq. TD, M2 “Informatique - Image Perception Raisonnement Cognition”, Univ. Lorraine, France.
- “Optimisation et méta-heuristiques”, 15h eq. TD, M1 “Informatique”, Univ. Lorraine, France.
- “Game Design”, 20h eq. TD, M1 “Sciences Cognitives”, Univ. Lorraine, France.
- “Agent intelligents et collectifs”, 20h eq. TD, M1 “Sciences Cognitives”, Univ. Lorraine, France.
- “Serious Game”, 12h eq. TD, M2 “Sciences Cognitives”, Univ. Lorraine, France.
- “Robotique Autonome”, 18h eq. TD, M2 “Systèmes Interactifs et Robotiques”, Centrale-Supélec, France.

Formation IHEST [Serena Ivaldi] “Robotique collaborative”, 2h.

Tutorial in an international conference [Jean-Baptiste Mouret] “Evolutionary Robotics”, GECCO 2017, Berlin, Germany [1h].

Engineering School [Karim Bouyarmane]:

- “Programmation et algorithmique Java”, Polytech Nancy School of Engineering
- Engineering school: Karim Bouyarmane, “Langages C et C++”, Polytech Nancy School of engineering
- Engineering school: Karim Bouyarmane, “Introduction to Computer Science”, Polytech Nancy School of engineering
- Engineering school: Karim Bouyarmane, “Operating Systems”, Polytech Nancy School of engineering

### 10.2.2. Supervision

- HDR: Francis Colas, “*Modélisation bayésienne et robotique*”, 17 May 2017 [7].
- PhD: Van Quan Nguyen, “*Mapping of a sound environment by a mobile robot*”, 3 Nov. 2017, Emmanuel Vincent (advisor), Francis Colas, François Charpillet.
- PhD: Nassim Kaldé, “*Exploration et reconstruction d’un environnement inconnu par une flottille de robots*”, 12 Dec. 2017, François Charpillet (advisor), Olivier Simonin.
- PhD: Iñaki Fernández Pérez, “*Apprentissage incrémental évolutionnaire*”, 19 Dec. 2017, F. Charpillet (advisor), Amine Boumaza.
- PhD: Vincent Samy, “*Humanoid fall control by postural reshaping and adaptive compliance*”, 13 Nov. 2017, Abderrahmane Kheddar (advisor), Karim Bouyarmane.
- PhD in progress: Yassine El Khadiri, “*Apprentissage automatique pour l’assistance à l’autonomie à domicile*”, started in June 2017, François Charpillet (advisor).
- PhD in progress: Adrien Malaisé, “*Capteurs porte’s dans la robotique collaborative : de l’apprentissage du mouvement humain à l’acceptabilité de cette technologie*”, started in January 2017, Francis Colas (advisor), Serena Ivaldi
- PhD in progress: Adam Gaier, “*Optimisation aerodynamic design through illumination of surrogate models*”, started in June 2017, Jean-Baptiste Mouret (advisor), Alexander Asteroth.

- PhD in progress: Rituraj Kaushik, “Fast adaptation to damage by exploiting trajectory data”, started in Oct. 2016, Jean-Baptiste Mouret (advisor).
- PhD in progress: Konstantinos Chatzilygeroudis, “*Diagnosis-free Damage Recovery in Robotics with Machine Learning*”, started in Oct. 2015, Jean-Baptiste Mouret (advisor).
- PhD in progress: Oriane Dermay, “*Learning to control the physical interaction of a humanoid robot with humans*”, started in Nov. 2015, François Charpillet (advisor), Serena Ivaldi.
- PhD in progress: Adrian Bourgaud, “*Multi-sensor Fusion and Active Sensing*”, started in Jul. 2015, François Charpillet (advisor).

### 10.2.3. Juries

- Jean-Baptiste Mouret was:
  - a reviewer of the PhD of Valerio Modugno (Univ. Sapienza, Rome, Italy);
  - the president of the jury for the PhD of Charles Rocabert (Univ. Lyon / Inria).
- Serena Ivaldi was
  - an examiner of the PhD of Ganna Pugach (Univ. Cergy-Pontoise);
  - a reviewer of the PhD of Oskar Palinko (IIT & Univ. Genoa, Italy);
  - an external reviewer in the VIVA / PhD exam of Valerio Ortenzi (Univ. of Birmingham, UK).
- François Charpillet was:
  - a reviewer of the PhD of Kabalan Chaccour (Tech. Univ. Belfort-Montbéliard);
  - a reviewer of the PhD of Alexis Brenon (Univ. Grenoble Alpes);
  - a reviewer of the PhD of Chu Xing (Ecole Centrale Lille);
  - a reviewer of the PhD of Viet-Cuong Ta (Univ. Grenoble Alpes);
  - an examiner of the HDR of Olivier Buffet (Univ. Lorraine).

## 10.3. Popularization

One of the main general audience event of the team has been the “Fête de la Science” on the 13th and 14th of October, 2017. The team hosted about 10 groups of 15-20 persons (150 to 200 visitors) over two days, with the following demonstrations:

- “smart apartment”, with the “smart tiles” and the Pepper Robot;
- AnDy project: activity recognition with the “inertial” motion capture suit, muscle sensing with EMG sensors;
- iCub robot: performing squats with the iCub robot and a whole-body motion controller; interactive demonstrations of iCub following a red-ball (given to a child) with the gaze and the head;
- ResiBots project: damage recovery with a damaged 6-legged robot.

The team also presented numerous videos of additional results with the robots. Involved members of the team: François Charpillet, Konstantinos Chatzilygeroudis, Brice Clément, Francis Colas, Oriane Dermay, Dorian Goepp, Waldez Gomes, Aurore Husson, Serena Ivaldi, Yassine El Khadiri, and Adrian Bourgaud, Adrien Malaisé, Jean-Baptiste Mouret, Kazu Otani and Olivier Rochel.

In addition:

- Vincent Thomas gave tutorials on “physics simulation” and “stochastic decision making” for teachers during “journées ISN-EPI” (30th of Mars 2017).
- Vincent Thomas participated in the preparation and reviewing of “Computer Science Exporoute” (conducted by Inria Nancy Grand-Est) presented in 2017.
- Vincent Thomas animated discussions and tutorials on “planning in mazes” for students from 6 to 20 years old during “fetes de la sciences” organized by Univ. Lorraine (13th of October 2017).
- Vincent Thomas presented “Bayesian reasoning” during “journées portes ouvertes” organized by Inria Nancy-Grand Est (14th of October 2017).
- Vincent Thomas accompanied computer science DUT students during the “Nancy accueille Google” event (20th of October 2017).
- Serena Ivaldi was panelist in public conferences/debates in Futur en Seine and 50 ans of Inria, both in Paris.
- Amine Boumaza is a member of the editorial board of “Interstice”.
- Karim Bouyarmane was the academic advisor for the Polytech School of Engineering students team of robotics that participated to the 2017 Coupe de France de Robotique.
- Francis Colas participated in a Sciences en Lumières event “Visages de la robotique” at RTE (14th of December 2017).

## PERSASIVE INTERACTION Project-Team

## 9. Dissemination

### 9.1. Promoting Scientific Activities

#### 9.1.1. Scientific Events Organisation

##### 9.1.1.1. General Chair, Scientific Chair

- Sabine Coquillart General co-chair, "Nouveaux Défis de l'Internet des Objets 2017 - Technique, Usage, Ethique", Fès-ESISA (Maroc), 17-18 mai 2017.

##### 9.1.1.2. Member of the Organizing Committees

- Dominique Vaufreydaz organised the workshop "Behavior, Emotion and Representation: Building Blocks of Interaction" (BER 2017) at the 5th International Conference on Human-Agent Interaction (HAI 2017), Bielefeld Germany, Oct 2017.
- Patrick Reignier is a member of the organizing committee for the workshop "Context in the Home", at conference Context 17 in Paris in June 2017.

#### 9.1.2. Scientific Events Selection

##### 9.1.2.1. Chair of Conference Program Committees

- James Crowley served as chairman of the awards committee for the 2017 International Conference on Multimodal Interaction.

##### 9.1.2.2. Member of Conference Program Committees

Patrick Reignier was a member of the program committee

- SmartObject 2017

Thierry Fraichard was a member of the international program committee

- the European Conference on Mobile Robots (ECMR 2017)

Sabine Coquillart has served as a member of the program committee for the following conferences.

- GRAPP 2017 - The 12nd International Conference on Computer Graphics Theory and Applications, Porto, Portugal, February 2017
- IEEE VR - IEEE Virtual Reality 2017, Los Angeles, USA, March 2017
- IEEE 3DUI - IEEE 3D User Interfaces 2017, Los Angeles, USA, March 2017
- WSCG 2017 - International Conferences in Central Europe on Computer Graphics, Visualization and Computer Vision, Plzen, Czech Republic, May 2017
- CENTRIC 2017 - The Tenth International Conference on Advances in Human-oriented and Personalized Mechanisms, Technologies, and Services, Athens, Greece, October 2017
- ICAT-EGVE 2017 - International Conference on Artificial Reality and Telexistence and Eurographics Symposium on Virtual Environments, Adelaide, Australia, November 2017
- VRST 2017 - 23rd ACM Symposium on Virtual Reality Software and Technology, Gothenburg, Sweden, November 2017

### 9.1.2.3. Reviewer

- James Crowley reviewed papers for ICCV 2017 - International conference on Computer Vision.
- James Crowley reviewed papers for CVPR 2017 - International conference on Computer Vision and Pattern Recognition.
- James Crowley reviewed papers for ICVS 2017 - International conference on Vision Systems.
- Dominique Vaufreydaz was in Program committee members and reviewed articles for seventh International Conference on Affective Computing and Intelligent Interaction (ACII2017), which will be held in San Antonio, Texas on October 23-26, 2017.
- Dominique Vaufreydaz reviewed articles for the Interactive Technology and Smart Education, 2017.
- Dominique Vaufreydaz reviewed articles for the 13th Annual ACM/IEEE International Conference on Human Robot Interaction (HRI)Chicago, IL, USA, March 5–8, 2018.

### 9.1.3. Journal

#### 9.1.3.1. Member of the Editorial Boards

- Patrick Reignier is a member of the editorial board of the Modeling and Using Context Journal (ISTE OpenScience)
- Sabine Coquillart is a member of the Scientific Committee of the Journal of Virtual Reality and Broadcasting.
- Sabine Coquillart is a member of the Advisory/Editorial Board for the International Journal of Computer Graphics – SERSC.
- Sabine Coquillart is a Member of the Academic Editors Board of “PeerJ Computer Science” – open access Journal in Computer Science.
- Sabine Coquillart is Review Editor for the “Frontiers in Virtual Environments” journal.
- Thierry Fraichard is serving as an Associate Editor for IEEE Robotics and Automation Letters. He also served as an Associate Editor for IEEE/RSJ Int. Conf. on Robots and Systems (IROS).
- Thierry Fraichard is an Associate Editor for IEEE Robotics and Automation Letters (RA-L).

#### 9.1.3.2. Reviewer - Reviewing Activities

- Thierry Fraichard reviewed articles for the Int. Journal of Aerospace Engineering, IEEE Trans. Intelligent Vehicles, and IEEE Trans. on Industrial Electronics.
- Thierry Fraichard reviewed articles for IEEE Trans. on Robotics (TRO) and IEEE Robotics and Automation Letters (RA-L).
- Patrick Reignier served as a reviewer for the 2 educational call for projects of the University Grenoble Alps Idex

### 9.1.4. Invited Talks

James Crowley gave the following invited talks in 2017

- "Câblé, connecté ou écologique : trois visions pour l'habitat de demain " Journées de l'habitat intelligent et innovation dans le logement social, Absise - Les Bailleurs Sociaux de l'Isere, Grenoble, 23 May 2017.
- "Interaction avec le monde, avec autrui et soi-même : trois facettes de l'intelligence", Ideas Day, Ideas Laboratory, Grenoble, 4 Jul 2017.

Sabine Coquillart gave the following invited talk

- "Pseudo-Haptique : Etat de l' Art et Challenges", LIMSI, December 1st, 2017

Thierry Fraichard gave an invited talk

- "Formal methods will not prevent self-driving cars from having accidents" at the Forum Méthodes Formelles in Toulouse (FR), October 2017.

Dominique Vaufreydaz gave the following invited talk in 2017

- "Pedestrian detection and behaviors modelling in Urban environment" at "Smart Mobility and Intelligent Vehicles" (SMIV2017), Vedecom Institute, 8/9 November 2017.

### **9.1.5. Leadership within the Scientific Community**

- James Crowley is a member of the Steering Committee for the ACM International Conference on Multimodal Interaction.
- Sabine Coquillart is serving as member of the steering committee for the ICAT conference – International Conference on Artificial Reality and Telexistence.
- Sabine Coquillart is chairing the steering committee for the EGVE Working Group – EUROGRAPHICS Working group on Virtual Environments.
- Sabine Coquillart is elected member of the EUROGRAPHICS Executive Committee.
- Sabine Coquillart is member of the EUROGRAPHICS Working Group and Workshop board.

### **9.1.6. Scientific Expertise**

- James L. Crowley served on the selection committee for the Institut Université de France (IUF)
- James L. Crowley served as Vice chairman for the selection panel for H2020 FET Open.
- James L. Crowley served on the selection panel for the H2020 ICT Robotics program
- James L. Crowley served on the ANR committee CE 33 Interaction, Robotics.
- Sabine Coquillart served as an expert reviewer for the Austrian Science Fund (FWF).
- Dominique Vaufreydaz served as evaluator pour l'ANR
- Thierry Fraichard served as an expert reviewer for the European Commission
- Patrick Reignier is a member of the Scientific Council of the Amiqua4Home Equipex

### **9.1.7. Research Administration**

- James Crowley is director for the Amiqua4Home Innovation Platform (EquipEx).
- James Crowley serves on the Administrative Committee (Bureau) for the Laboratoire Informatique de Grenoble.
- James Crowley served on the Scientific Committee (CoS) for the CRI Inria Grenoble-Rhone Alpes.
- James Crowley served on the orientation committee for the Competitivy Pole Minalogic
- Patrick Reignier is head of the engineering support group of the Laboratoire d'Informatique de Grenoble (13 members). He is currently supervising the moving of the Domus Living lab to a new site on Campus.
- Patrick Reignier serves on the Administrative Office (Bureau) for the Laboratoire Informatique de Grenoble.
- Patrick Reignier is a member of the comité de pilotage of the Domus Living Lab
- Patrick Reignier is a member of the Comité Executif of the Amiqua4Home Equipex

## **9.2. Teaching - Supervision - Juries**

### **9.2.1. Teaching**

#### **9.2.1.1. James Crowley**

James Crowley is co-director of the Master of Science in Informatics at Grenoble (MoSIG).

Master : Computer Vision, Course 27h EqTD, M2 year, Master of Science in Informatics at Grenoble

Master 1: Intelligent Systems, Cours 54h EqTD, ENSIMAG and UFRIM2AG



ENSIMAG 3 : Pattern Recognition and Machine Learning, Cours 27h EqTD, ENSIMAG

#### 9.2.1.2. Patrick Reignier

- Patrick Reignier has been elected member of the Conseil des Etudes et de la Vie Universitaire of Grenoble INP
- Patrick Reignier has been nominated as a member of the Conseil de la Formation Continue de Grenoble INP
- Patrick Reignier participated in the editing of an successful Idex Educational program proposal "FromLivingLab".
- Patrick Reignier is co-director of the "formation en apprentissage" of Ensimag (3 years program : 1 year for the Licence and 2 years for the Master)
- Patrick Reignier Supervises the industrial part of the "formation en apprentissage" of the Ensimag engineering school.
- Master: Patrick Reignier, Projet Genie Logiciel, 55h eqTD, M1, Ensimag/Grenoble INP, France.
- Master: Patrick Reignier, Développement d'applications communicantes, 18h eqTD, M2, Ensimag/Grenoble-INP, France
- Master: Patrick Reignier, Introduction aux applications reparties, 18h eqTD, M2, Ensimag/Grenoble-INP, France
- Master: Patrick Reignier, Applications Web et Mobiles , 27h eqTD, M1, Ensimag/Grenoble-INP, France
- Master: Patrick Reignier, Projet Systeme, 12h eq TD, M1, Ensimag/Grenoble-INP, France
- Licence: Patrick Reignier, Projet C, 20h eqTD, L3, Ensimag/Grenoble-INP, France.

#### 9.2.1.3. Dominique Vaufreydaz

- Co-responsibility of the Graphic, Vision and Robotics track of the MOSIG Master program.
- In charge of the transversal numerical competence courses at the Grenoble Faculty of Economics (Grenoble and Valence campuses)
- Licence: Compétences Numériques, 126h eq TD,L1, Université Grenoble Alpes, France.
- Licence: Informatique appliquée à l'économie et à la gestion, 32 h eq TD, enseignement à distance, Licence, Université Grenoble Alpes, France.
- Licence: Pratique avancée du Tableur, 72 h eq TD, L3, Université Grenoble Alpes, France.
- Licence Professionnelle: Enquêtes et traitement d'enquêtes avec le logiciel Sphinx, 12h eq TD, Licence pro Métiers de l'Emploi et de la Formation, Université Grenoble Alpes, France.
- Licence Professionnelle: Administration en environnement hétérogène, 20h eq TD, Licence pro Administration et Sécurité des Systèmes et des Réseaux, Université Grenoble Alpes, France.
- IUT année spéciale: Programmation C++, 18h eq TD, Année Spéciale IUT Informatique, Université Grenoble Alpes, France.
- Master: Pratique avancée du Tableur, 24 h eq TD, M1 économie internationale et stratégies d'acteurs, Université Grenoble Alpes, France.
- Master: Traitement des données du Web, 15h eq TD, M2 Mathématiques et Informatique Appliquées aux Sciences Humaines et Sociales, Université Grenoble Alpes, France
- Master: Développement Web Mobile, 15h eq TD, M2 Mathématiques et Informatique Appliquées aux Sciences Humaines et Sociales, Université Grenoble Alpes, France

#### 9.2.1.4. Thierry Fraichard

- Master: Thierry Fraichard, Autonomous Robotics, 22.5h eqTD, M2 MOSIG, Univ Grenoble Alpes.

### 9.2.2. Supervision - Doctoral theses completed in 2017

- PhD : Marvin Faix, Conception d'un ordinateur probabiliste, Univ Grenoble Alpes, Janvier 2017, Emmanuel Mazer and Laurent Fesquet
- PhD Jingtao Chen, "Biomechanical Analysis of Different Aspects in Virtual Reality. Application", PhD UGA, January 30th, 2017, Peter Mitrouchev, Franck Quaine and Sabine Coquillart
- PhD : Gregoire Nieto, Light Field Remote Vision, Univ Grenoble Alpes, 3 Oct 2017, Frederic Devernay and James Crowley
- PhD : Ta Viet Cuong, Smartphone-based indoor positioning using Wi-Fi, Inertial sensors and Bluetooth, Univ Grenoble Alpes, 15 Dec 2017, Dominique Vaufreydaz and Eric Castelli

### **9.2.3. Supervision - Current Doctoral Students**

- PhD in progress : Romain Bregier, Détection et estimation de pose d'instances d'objet rigide pour la manipulation robotisée, Octobre 2014, Frederic Devernay and James Crowley
- PhD in progress : Rémi Paulin, socially aware navigation, Octobre 2014, Patrick Reignier and Thierry Fraichard.
- PhD in progress : Etienne Balit, expressive social robot design, Octobre 2014, Patrick Reignier and Dominique Vaufreydaz.
- PhD in progress : Interaction-Aware Tracking and Lane Change Detection in Highway Driving, David Sierra Gonzales, Octobre 2014, Dizan Vasquez and Emmanuel Mazer
- PhD in progress : Minh-khoa Nguyen, Robotics-inspired methods for modeling and simulation of large nanosystems, Octobre 2014, Leonaard Jaillet and Emmanuel Mazer
- PhD in progress : Amr Alyafi, explanatory observation of energy usage, Octobre 2015, Stephane Ploix and Patrick Reignier.
- PhD in progress : Amine Awada, activity recognition for smart energy management, Octobre 2015, Stephane Ploix and Patrick Reignier.
- PhD in progress : Liliya Tsetanova, Social Robotics, Octobre 2015, Veronique Aubergé and Patrick Reignier.
- PhD in progress : Julien Cumin, Learning Patterns of Activities for Context Aware Services, Octobre 2015, James Crowley and Fano Ramparany
- PhD in progress : Sandra Nabil, Synthesis of Panoramic Videos, Octobre 2015, Frederic Devernay and James Crowley
- PhD in progress : Jose Grimaldo Da Silva Filho, "Human-Robot Motion, a Shared Effort Approach", Octobre 2015, Thierry Fraichard.
- PhD in progress : Thomas Guntz, Multimodal Observation of Subjects Engaged in Problem Solving, Octobre 2016, James Crowley and Dominique Vaufreydaz
- PhD in progress : Nashwa Abubakr, Observation of Kitchen Activities, Octobre 2016, James Crowley and Remi Ronfard
- PhD in progress : Raphael Frisch, conception de machine stochastique pour la localisation et la séparation de source sonore, Octobre 2016, Emmanuel Mazer
- PhD in progress: Matteo Ciocca, "Safe Robot Motion", Octobre 2016, Thierry Fraichard and Pierre-Brice Wieber.

### **9.2.4. Juries**

- James Crowley served as President of the Doctoral Jury for Tiana Rakotovao Andriamahefa, University Grenoble Alps, March 2017
- Patrick Reignier served as a jury member of the Doctoral Jury of Nadine Mandran (University Grenoble Alps)

- Patrick Reignier served as a president of the Doctoral Jury of Sarah Bouzit (University Grenoble Alps)
- Patrick Reignier served as a president of the Doctoral Jury of Manar Amayri (University Grenoble Alps)
- Patrick Reignier served as a president of the Doctoral Jury of Antoine Foulonneau (University Grenoble Alps)
- Sabine Coquillart served as reporter for the doctoral jury of B. Le Gouis at INSA Rennes
- Sabine Coquillart served as examiner for the doctoral jury of P. Isartel at LIMSI, Univ. Paris-Orsay.
- Thierry Fraichard served as an expert evaluator in the PhD Jury of Suhyeon Gim, Univ. of Toulouse (FR), May 2017.
- Thierry Fraichard served as an expert evaluator in the PhD Jury of Alexandre Boeuf, Univ. of Clermont-Ferrand (FR), July 2017.

## RITS Project-Team

## 9. Dissemination

### 9.1. Promoting Scientific Activities

#### 9.1.1. Scientific Events Organisation

##### 9.1.1.1. Member of the Organizing Committees

Mohammad Abualhoul and Fawzi Nashashibi organized a workshop within the framework of the European project AUTOCITS "Regulation Study for Interoperability in the Adoption of Autonomous Driving in European Urban Nodes". Date: 05/04/2017 - Inria Paris. <https://project.inria.fr/autocits/autoc-its-workshop-paris/>

#### 9.1.2. Scientific Events Selection

##### 9.1.2.1. Member of the Conference Program Committees

Fawzi Nashashibi: IEEE Intelligent Vehicles Symposium - IV 2017, IEEE 20th International Conference on Intelligent Transportation Systems - ITSC 2017.

##### 9.1.2.2. Reviewer

Carlos Flores: IEEE 20th International Conference on Intelligent Transportation Systems - ITSC 2017.

Francisco Navas: IEEE Intelligent Vehicles Symposium - IV 2017, IEEE 20th International Conference on Intelligent Transportation Systems - ITSC 2017.

Anne Verroust-Blondet: IEEE Intelligent Vehicles Symposium - IV 2017, IEEE 20th International Conference on Intelligent Transportation Systems - ITSC 2017.

#### 9.1.3. Journal

##### 9.1.3.1. Member of the Editorial Boards

Guy Fayolle: associate editor of the journal *Markov Processes and Related Fields*

Fawzi Nashashibi: associate editor of the journal *IEEE Transactions on Intelligent Vehicles* and of *IEEE Transactions on Intelligent Transportation Systems*.

Fawzi Nashashibi: guest editor with Erwin Schoitsch (AIT) of *ERCIM News* N°109 on "Autonomous Vehicles".

##### 9.1.3.2. Reviewer - Reviewing Activities

Guy Fayolle: *AAP*, *MPRF*, *PTRF*, *QUESTA*, *European Journal of Combinatorics*, *JSP*, *Physica A*, *Springer Science*.

Jean-Marc Lasgouttes: *IEEE Transactions on Knowledge and Data Engineering*, *IEEE Transactions on Intelligent Transportation Systems*.

Anne Verroust-Blondet: *IEEE Transactions on Pattern Analysis and Machine Intelligence*, *The Visual Computer*.

#### 9.1.4. Invited Talks

Raoul de Charette: Talk on "Computer Vision" at Adomik (artificial intelligence software company), Paris, November 29th.

Guy Fayolle was a keynote speaker at the conference at the ACMPT-2017 Conference <http://acmpt.moscow/>, (*Analytical and Computational Methods in Probability Theory and its Applications*), held in Moscow State University and in RUDN University, Moscow, 23-27th October 2017. His talk presented the substance of the article [21].

Fawzi Nashashibi was a keynote speaker at IEEE International Conference on Intelligent Vehicles Symposium - IV 2017, *Latest Advancements in Intelligent Vehicles Research in Europe*, held in June 2017.

Fawzi Nashashibi was a keynote speaker at IEEE International Conference on Vehicular Electronics and Safety (ICVES), *Automated vehicles in urban environments: challenges and technical solutions*, June 2017.

Fawzi Nashashibi was a keynote speaker at Convergence Technology Symposium 2017 (ConTech 2017) *Autonomous Driving, Future Mobility, Future Smart City with Autonomous Driving*, held in June 2017, at the AICT in Suwon, Korea.

Fawzi Nashashibi was a keynote speaker at IEEE International Conference on Intelligent Computer Communication and Processing (ICCP), *A functional architecture for the navigation of an autonomous vehicle*, held in September 2017.

### 9.1.5. Scientific Expertise

Guy Fayolle is scientific advisor and associate researcher at the *Robotics Laboratory of Mines ParisTech*.

Jean-Marc Lasgouttes is member of the *Conseil Académique* of Université Paris-Saclay.

Anne Verroust-Blondet is member of the COST-GTRI committee at Inria and of the "emploi scientifique" committee of Inria Paris.

### 9.1.6. Research Administration

Jean-Marc Lasgouttes is a member of the *Comité Technique Inria*.

Guy Fayolle is a member of the working group IFIP WG 7.3.

Fawzi Nashashibi is a member of the international Automated Highway Board Committee of the TRB (AHB30). He is a member of the Board of Governors of the VEDECOM Institute representing Inria and of the Board of Governors of MOV'EO Competitiveness cluster representing Inria.

Anne Verroust-Blondet is the scientific correspondent of the European affairs and of the International relations of Inria Paris.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Teaching

Licence: Fawzi Nashashibi, "Programmation avancée", 84h, L1, Université Paris-8 Saint-Denis, France.

Master: Raoul de Charette, "Computer Vision for Autonomous Driving", 32Hr, Master 2, University of Simon Bolivar, Venezuela, December 2017.

Master: Carlos Flores, "Control for Autonomous Driving", 10Hr, Master 2, University of Simon Bolivar, Venezuela, December 2017.

Master: Jean-Marc Lasgouttes, "Analyse de données", 54h, second year of Magistère de Finance (M1), University Paris 1 Panthéon Sorbonne, France.

Master: Luis Roldao Jimenez, "Point Cloud Processing for Autonomous Driving", 7Hr, Master 2, University of Simon Bolivar, Venezuela, December 2017.

Master: Carlos Flores and Anne Verroust-Blondet, "Le véhicule autonome. Présentation des recherches de l'équipe-projet RITS", 1.5 h, 2nd year, Ecole des Ponts ParisTech, France, September 2017.

Master: Fawzi Nashashibi, "Image synthesis and 3D Infographics", 12h, M2, INT Télécom Sud-Paris.

Master: Fawzi Nashashibi, "Obstacle detection and Multisensor Fusion", 4h, M2, INSA de Rouen.

Master: Fawzi Nashashibi, "Perception and Image processing for Mobile Autonomous Systems", 12h, M2, University of Evry.

Doctorat: Raoul de Charette, "Introduction, Data Visualization and Signal Processing in Python", 21Hr, class organized with Paris Science et Lettres, France, January 2017.

Doctorat: Jean-Marc Lasgouttes, "Analyse de données fonctionnelles", 31.5h, Mastère Spécialisé "Expert en sciences des données", INSA-Rouen, France

### 9.2.2. Supervision

PhD: David González Bautista, "Architecture fonctionnelle pour la planification des trajectoires des véhicules automatisés dans des environnements complexes", Mines ParisTech, April 2017, supervisor: Fawzi Nashashibi.

PhD in progress: Zayed Alsayed, "Système de localisation redondant en environnement extérieur ouvert pour véhicule urbain automatique", Télécom ParisTech, October 2014, supervisor: Anne Verroust-Blondet, co-supervisor: Guillaume Bresson.

PhD in progress: Pierre de Beaucorps, "Autonomous vehicle: behavior prediction and Interaction with road users", UPMC Paris, January 2016, supervisor: Anne Verroust-Blondet, co-supervisor: Fawzi Nashashibi.

PhD in progress: Carlos Flores, "Analysis and design of cooperative systems for trains of green cars", Mines ParisTech, December 2015, supervisor: Fawzi Nashashibi, co-supervisor: Vicente Milanés.

PhD in progress: Fernando Garrido, "Optimal trajectory generation for autonomous vehicles in urban environments", Mines ParisTech, November 2014, supervisor: Fawzi Nashashibi, co-supervisors: Vicente Milanés, Joshué Pérez.

PhD in progress: Farouk Ghallabi, "Environment modeling and simultaneous localization of a mobile vehicle on motorways: a multi-sensor approach", Mines ParisTech, October 2016, supervisor: Fawzi Nashashibi.

PhD in progress: Maximilian Jaritz, "Perception multi-capteur pour la conduite autonome grâce à l'apprentissage profond", Mines ParisTech, January 2017, supervisor: Fawzi Nashashibi, co-supervisor: Raoul de Charette.

PhD in progress: Francisco Navas, "Plug&Play control for highly non-linear systems: Stability analysis of autonomous vehicles", Mines ParisTech, October 2015, supervisor: Fawzi Nashashibi, co-supervisor: Vicente Milanés.

PhD in progress: Dinh-Van Nguyen, "Wireless sensor networks for indoor mapping and accurate localization for low speed navigation in smart cities", Mines ParisTech, December 2015, supervisor: Fawzi Nashashibi, co-supervisor: Eric Castelli.

PhD in progress: Danut-Ovidiu Pop, "Deep learning techniques for intelligent vehicles", INSA Rouen, May 2016, supervisor: Abdelaziz Bensrhair, co-supervisor: Fawzi Nashashibi.

Starting PhD: Imane Matout, "Estimation de l'intention des véhicules pour la prise de décision et le contrôle sans faille en navigation autonome", Mines ParisTech, October 2017, supervisor: Fawzi Nashashibi, co-supervisor: Vicente Milanés.

Starting PhD: Kaouther Messaoud, "Détermination des manoeuvres et des intentions des véhicules avoisinant un véhicule autonome", UPMC Paris, October 2017, supervisor: Anne Verroust-Blondet, co-supervisor: Fawzi Nashashibi, Itheri Yahiaoui.

Starting PhD: Luis Roldao Jimenez, "Modélisation 3D de l'environnement et de la manoeuvrabilité d'un véhicule", UPMC Paris, October 2017, supervisor: Anne Verroust-Blondet, co-supervisor: Raoul de Charette.

### 9.2.3. Juries

Guy Fayolle was a jury member of PhD thesis of Younes Bouchaala - *Handling Safety Messages in Vehicular Ad-Hoc Networks (VANETs)*, University of Versailles Saint-Quentin-en-Yvelines, 21 October 2017.

Fawzi Nashashibi was a reviewer of the PhD thesis of Ange Nizard - *Planification et commande pour véhicules à deux trains directeurs en milieu encombré* Université Blaise Pascal, Clermont-Ferrand, 31 March 2017.

Fawzi Nashashibi was an examiner of the PhD thesis of Bastien Béchadargue - *Mesure de distance et transmission de données intervéhicules par phares à LED*. University of Paris-Saclay, prepared at the University of Versailles Saint-Quentin, 10 November 2017.

Fawzi Nashashibi was the Jury President for the thesis of Viet-Cuong Ta - *Smartphone-based indoor positioning using WIFI, inertial sensor and Bluetooth*, under the co-supervision of Université Grenoble Alpes and Hanoi University of Science & Technology, 15 December 2017.

Anne Verroust-Blondet was a reviewer of the PhD thesis of Mathias Paget - *Optimisation discrète et indices de stabilité appliqués à la stéréoscopie en contexte routier*, Université Paris-Est, 13 December 2017.

### 9.3. Popularization

RITS team: press article on the research axes of Inria RITS team entitled "RITS Team at Inria", with participation of Fawzi Nashashibi, Anne Verroust-Blondet, Jean-Marc Lasgouttes and Raoul de Charette. IEEE Intelligent Transportation Systems Magazine, Vol 9, Issue 2. April 19th. (<http://ieeexplore.ieee.org/document/7904770/>).

Raoul de Charette: participation to the Hackathon round-table in collaboration with approximately 10 journalists and a handful of Inria researchers. Exchange on the implementation of future autonomous transportation in cities. It lead to several press article. June 7th, Paris.

Raoul de Charette: public conference "Voiture Autonomes: Où en est-on ?" at Futur en Seine, Paris, June 8th.

Raoul de Charette: exchange on upcoming challenges for autonomous driving for the web article "Véhicules Autonomes : Où En Est-On en France ?", journalist Mathilde Ragot. T.O.M. June 14th. (<http://www.tom.travel/2017/06/14/vehicules-autonomes-ou-en-est-on-en-france/>).

Raoul de Charette: exchange on upcoming challenges for autonomous driving for the web article "Véhicules autonomes : où en est-on réellement ?", journalist Benoit Fleuret. Microsoft RSLN. June 22th. (<https://rslnmag.fr/cite/vehicules-autonomes-ou-en-est-on-reellement/>).

Raoul de Charette: interview on current progress of autonomous driving and real upcoming challenges for the web article "Pourquoi la voiture 100 % autonome n'est pas près de rouler", journalist Reynald Fléchaux. Silicon. June 26th. ([https://www.silicon.fr/voiture-autonome-pas-prete-rouler-178787.html?inf\\_by=5a0c4d80681db858068b471e](https://www.silicon.fr/voiture-autonome-pas-prete-rouler-178787.html?inf_by=5a0c4d80681db858068b471e)).

Raoul de Charette: interview on the progress of computer vision and danger of artificial intelligence for the press article "Robots tueurs soudés pour déssouder", journalist Erwan Cario. Libération. August 24th. ([http://www.liberation.fr/futurs/2017/08/24/robots-tueurs-soudes-pour-dessouder\\_1591778](http://www.liberation.fr/futurs/2017/08/24/robots-tueurs-soudes-pour-dessouder_1591778)).

Gérard Le Lann: Interview published in *Journal of Internet Histories*, vol. 1, issue 1-2, pp. 188-196, (<http://tandfonline.com/doi/full/10.1080/24701475.2017.1301132>).

Gérard Le Lann: interview for Inria's 50 years "Networks, distributed algorithms and critical cyber-physical systems", (<https://50ans.inria.fr/en/gerard-le-lann-networks-distributed-algorithms-and-critical-cyber-physical-systems/>).

Fawzi Nashashibi: participation to the round-table on "L'Intelligence Artificielle pour le transport autonome" during the workshop "Journée de l'IA / Evenement Public #FranceIA" organized by SystemX at Nano-INNOV (Palaiseau), March 3rd.

Fawzi Nashashibi: participation to the round-table on "Transports et mobilité" during the workshop "Les Mystères du XXIème siècle" (<http://www.mysteres21.org/edition-2017/>), November 25th.

Fawzi Nashashibi: participation to the round-table on "les questions éthiques et juridiques en robotique" during the workshop on "Éthique de la recherche en numérique", organized by the CERNA, Paris (Institut Mines-Télécom), June 15th.

Fawzi Nashashibi: interview for "L'Esprit Sorcier" number 29 on "La voiture autonome", journalist: Melvin Martineau (<https://www.lespritsorcier.org/dossier-semaine/la-voiture-autonome/>).

Fawzi Nashashibi: interviewed by Tiffany Blandin for the book *Un Monde sans travail ?*, Paris: Seuil, 24 August 2017, (Chapter 7: la recherche sur les voitures autonomes).

Fawzi Nashashibi: interviewed by Coralie Baumard for the article "L'Intelligence Artificielle, Nouveau Moteur De l'Industrie Automobile", FORBES France, February 11th. (<https://www.forbes.fr/business/lintelligence-artificielle-nouveau-moteur-de-lindustrie-automobile/>).

Fawzi Nashashibi: interviewed by Jérôme Bonaldi (Science & Vie TV) for "Le Mag de la Science" on September 2017 (to be broadcasted in 2018).



## LINKMEDIA Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

#### 10.1.1.1. General Chair, Scientific Chair

Laurent Amsaleg was appointed general co-chair of ACM Intl. Conf. on Multimedia 2019.

Laurent Amsaleg was general chair of Intl. Conf. on Multimedia Modeling 2017.

Laurent Amsaleg and Vincent Claveau were general co-chairs of the Workshop on Computational Journalism collocated with EGC 2017.

Teddy Furon was general co-chair of IEEE Intl. Workshop on Information Forensics and Security 2017.

Teddy Furon was a co-chair of the GdR-ISIS national workshop “Comment concilier Big Data, identification des personnes, traçabilité des contenus et respect de la vie privée ?”, 2017.

Ewa Kijak and Vincent Claveau organized and chaired a special session on Social Networks and User-Generated Content Verification at the IEEE Intl. Workshop on Information Forensics and Security.

#### 10.1.1.2. Member of the Organizing Committees

Guillaume Gravier was special session chair at Intl. Conf. on Multimedia Modeling 2017.

Guillaume Gravier was nominated special session co-chair of IEEE Intl. Workshop on Content-Based Multimedia Indexing 2018.

### 10.1.2. Scientific Events Selection

#### 10.1.2.1. Chair of Conference Program Committees

Yannis Avrithis was area chair of the ACM Intl. Conf. on Multimedia 2017.

Yannis Avrithis was area chair of the European Signal Processing Conf 2017.

Guillaume Gravier was appointed area chair of ACM Intl. Conf. on Multimedia 2019.

#### 10.1.2.2. Member of Conference Program Committees

Laurent Amsaleg was a PC member of: Base de Données AvancéesA; IEEE Intl. Workshop on Content-Based Multimedia Indexing, IEEE Intl. Conf. on Multimedia and Exhibition; Intl. Conf. on Similarity Search and Applications; ACM Intl. Conf. on Multimedia Retrieval.

Yannis Avrithis was a PC member of: IEEE Conf. on Computer Vision and Pattern Recognition; Intl. Conf. on Computer Vision; ACM Intl. Conf. on Multimedia; European Signal Processing Conf.; IEEE Intl. Conf. on Multimedia and Expo; IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing.

Vincent Claveau was a PC member of: ACL demonstration track; EMNLP demonstration track; International Semantic Web Conference; Intl. Conf. on Multimedia Modeling; IEEE Intl. Workshop on Information Forensics and Security; Conférence en Recherche d'Information et Applications; TextMine workshop.

Teddy Furon was a PC member of ACM Information Hiding and Multimedia Security.

Guillaume Gravier was a PC member of: ACM Intl. Conf. on Multimedia; IEEE Intl. Conf. on Multimedia and Exhibition; ACM Intl. Conf. on Multimedia Retrieval; Annual Conf. of the Intl. Speech Communication Association; European Conf. on Information Retrieval; IEEE Intl. Conf. on Acoustics, Speech and Signal Processing; IEEE Intl. Symposium on Multimedia; Multimedia Modeling Conf.

Ewa Kijak was a PC member of: ACM Intl. Conf. on Multimedia; ACM Intl. Conf. on Multimedia Retrieval; Intl. Workshop on Content-Based Multimedia Indexing; IEEE Intl. Workshop on Information Forensics and Security.

Christian Raymond was a PC member of: Annual Conf. of the Intl. Speech Communication Association; IEEE Intl. Conf. on Acoustics Speech and Signal Processing; IEEE Intl. Conf. on Machine Learning And Applications; Conf. en Traitement Automatique des Langues Naturelles.

Pascale Sébillot was a PC member of: European Conf. on Information Retrieval; Annual Meeting of the Association for Computational Linguistics; Intl. Joint Conf. on Artificial Intelligence; Intl. Conf. on Multimedia Modeling; Conf. Traitement Automatique des Langues Naturelles; Traitement Automatique du Langage et Analyse de Documents.

#### *10.1.2.3. Reviewer*

Ewa Kijak reviewed for ACM Intl. Conf. on Multimedia.

### **10.1.3. Journal**

#### *10.1.3.1. Member of the Editorial Boards*

Laurent Amsaleg was guest editor for the special issue of the Multimedia tools and applications Journal, best papers from the MMM2017 conference.

Vincent Claveau is editor of the journal Recherche d'Information, Document, Web Sémantique

Vincent Claveau is member of the editorial board of the journal Traitement Automatique des Langues.

Guillaume Gravier is associate editor of IEEE Trans. on Multimedia.

Guillaume Gravier was editor of the Working Notes Proc. of the MediaEval Multimedia Benchmark.

Christian Raymond is member of the editorial board of the electronic Journal Discours.

Pascale Sébillot is editor of the Journal Traitement Automatique des Langues.

Pascale Sébillot is member of the editorial board of the Journal Traitement Automatique des Langues.

#### *10.1.3.2. Reviewer - Reviewing Activities*

Laurent Amsaleg was a reviewer for: IEEE Trans. on Circuits and Systems for Video Technology; IEEE Trans. on Multimedia, Pattern Recognition Letters; IEEE Trans. on Information Forensics & Security; IEEE Trans. on Image Processing; IEEE Trans. on Information Systems; IEEE Trans. on Knowledge and Data Engineering.

Yannis Avrithis was a reviewer for Multimedia Tools and Applications, Elsevier Neurocomputing.

Vincent Claveau reviewed for reviewed for Multimedia Tools and Applications, Elsevier Information Sciences, Traitement Automatique des Langues.

Teddy Furon reviewed for IEEE Trans. on Information Forensics and Security, IEEE Trans. on Image Processing, and IEEE Trans. on Signal Processing.

Guillaume Gravier reviewed for Information Science, Multimedia Tools and Applications, IEEE Trans. on Multimedia.

Christian Raymond was a reviewer for Multimedia Tools and Applications.

Pascale Sébillot reviewed for Traitement Automatique des Langues.

### **10.1.4. Invited Talks**

Laurent Amsaleg gave an invited talk at East China Normal University, Shanghai.

Yannis Avrithis gave an invited talk at Deep Learning in Vision, Language, and Multimedia Workshop on September 25 in Rennes.

Vincent Claveau gave an invited talk at Intelligence artificielle et Recherche d'Information : Journée commune AFIA - ARIA.

Guillaume Gravier gave an invited talk at Katholieke Universiteit Leuven.

Guillaume Gravier gave an invited talk at Universidad de Chile, Santiago de Chile.

Guillaume Gravier gave an invited talk at East China Normal University, Shanghai.

Pascale Sébillot gave an invited tutorial at symposium on Propriété intellectuelle et données dans l'environnement numérique, Rennes.

#### **10.1.5. Leadership within the Scientific Community**

Laurent Amsaleg is a member of the Steering Committee of SISAP for the 2016–2020 term.

Vincent Claveau is finance head of the Association pour la Recherche d'Informations et ses Applications (ARIA).

Guillaume Gravier is co-founder and general chair of the ISCA SIG Speech, Language and Audio in Multimedia.

Guillaume Gravier is member of the Community Council of the Mediaeval Multimedia Evaluation series.

Guillaume Gravier was president of the Scientific Evaluation Committee of the National Research Agency for the theme 'Knowledge, data, content, big data, HPC, simulation' up to July 2017.

Since September 2017, Guillaume Gravier is president of the Scientific Evaluation Committee of the National Research Agency for the theme 'Knowledge, data, content, big data - AI'.

Pascale Sébillot is a member of the permanent steering committee of Conf. Francophone en Traitement Automatique des Langues Naturelles.

#### **10.1.6. Scientific Expertise**

Laurent Amsaleg was an expert evaluator for the French National Research Agency (ANR).

Yannis Avrithis was an expert evaluator for the French National Research Agency (ANR).

Vincent Claveau was an expert for was an expert for the Idex UCA-Jedi

Teddy Furon is scientific adviser for the company LAMARK.

#### **10.1.7. Research Administration**

Vincent Claveau is deputy head of the GdR MaDICS, a CNRS inter-lab initiative to promote research about Big Data and Data Science.

Guillaume Gravier is a member of the Board of the technology cluster Images & Réseaux.

Guillaume Gravier is a member of the Board of the Comité des Projets of Inria - Rennes Bretagne Atlantique.

Pascale Sébillot is a member of the Conseil National des Universités 27th section (computer science).

Pascale Sébillot is the director of the Computer Science Laboratory, INSA Rennes.

Pascale Sébillot is the deputy director of the Scientific Advisory Committee of IRISA UMR 6074.

Pascale Sébillot is a member of the theses advisory committee of the MathSTIC doctoral school.

Pascale Sébillot is a member of the board of the MathSTIC doctoral school.

## **10.2. Teaching - Supervision - Juries**

### **10.2.1. Teaching**

For reseachers, all activities are given. For professors and assistant professors, only courses at the M. Sc. level are listed.

Licence: Teddy Furon, Probabilities, 40h, L1, Agrocampus Rennes, France

Licence: Guillaume Gravier, Databases, 30h, L2, INSA Rennes, France

Licence: Guillaume Gravier, Probability and statistics, 16h, L3, INSA Rennes, France  
 Licence: Guillaume Gravier, Natural Language Processing, 12h, L3 & M1, INSA Rennes, France  
 Master: Laurent Amsaleg, Multidimensional indexing, 13h, M2, University Rennes 1, France  
 Master: Yannis Avrithis, Deep Learning for Vision, 30h, M2, Univ. Rennes 1, France  
 Master: Vincent Claveau, Data-Based Knowledge Acquisition: Symbolic Methods, 20h, L3, INSA Rennes, France  
 Master: Vincent Claveau, Text Mining, 18h, M2, Univ. Rennes 1, France  
 Master: Vincent Claveau, Information Retrieval, 15h, M2, ENSSAT, France  
 Master: Vincent Claveau, Information Retrieval, 13h, M2, Univ. Rennes 1, France  
 Master: Teddy Furon, Rare events, 20h, M2, Insa Rennes, France  
 Master: Guillaume Gravier, Data analysis and probabilistic modeling, 30h, M2, University Rennes 1, France  
 Master: Ewa Kijak, Image processing, 67h, M1, ESIR, France  
 Master: Ewa Kijak, Supervised machine learning, 15h, M2R, University Rennes 1, France  
 Master: Ewa Kijak, Supervised machine learning, 45h, M1, ESIR, France  
 Master: Ewa Kijak, Image indexing, 17h, M2, University Rennes 1, France  
 Master: Ewa Kijak, Indexing and multimedia databases, 15h, M2, ENSSAT, France  
 Master: Ewa Kijak, Computer vision, 22h, M2, ESIR, France  
 Master: Ewa Kijak, Image and text mining, 12h, M2, ENSAI, France  
 Master: Simon Malinowski, Short-term time series prediction, 29h, M1, Univ. Rennes 1  
 Master: Simon Malinowski, Supervised Learning, 24h, M2, Univ. Rennes 1  
 Master: Christian Raymond, Dialogue, 4H, M2, University Rennes 1, France  
 Master: Christian Raymond, Dialogue, 5H, M1, INSA Rennes, France  
 Master: Pascale Sébillot, Advanced Databases and Modern Information Systems, 70h, M2, INSA Rennes, France  
 Master: Pascale Sébillot, Logic Programming, 12h, M1, INSA Rennes, France  
 Master: Pascale Sébillot, Natural Language Programming, 6h, M1, INSA Rennes, France

### 10.2.2. Supervision

PhD: Rémi Bois, Navigable directed multimedia hypergraphs: construction and exploitation, defended December 2017, Guillaume Gravier and Pascale Sébillot  
 PhD: Ahmet Iscen, Continuous memories for representing sets of vectors and image collections, defended September 2017, Teddy Furon  
 PhD: Raheel Kareem Qader, Phonology modeling for emotional speech synthesis, defended March 2017, Gwénolé Lecorvé and Pascale Sébillot (with EXPRESSION, IRISA team)  
 PhD: Vedran Vukotić, Deep neural architectures for automatic representation learning from multimedia multimodal data, defended September 2017, Guillaume Gravier and Christian Raymond  
 PhD in progress: Ricardo Carlini Sperandio, Unsupervised motif mining in multimedia time series, started August 2015, Laurent Amsaleg and Guillaume Gravier  
 PhD in progress: Clément Dalloux, Clinical text mining and indexing, started Dec. 2016, Vincent Claveau, Natalia Grabar (STL, Lille), Olivier Dameron (with DYLISS project-team)  
 PhD in progress: Mikail Demirdelen, User-adapted multi-document multimedia synthesis, started Oct. 2016, Guillaume Gravier and Pascale Sébillot

PhD in progress: Cheikh Brahim El Vaigh, Incremental content to data linking leveraging ontological knowledge in data journalism, started Oct. 2017, Guillaume Gravier, Pascale Sébillot and François Goasdoué (with CEDAR, Inria team)

PhD in progress: Mathieu Laroze, Active learning on adaptive representations for object detection in high-resolution imaging, started June 2016, Romain Dambreville, Chloe Friguet, Ewa Kijak and Sebastien Lefevre (with OBELIX, IRISA team)

PhD in progress: Cédric Maigrot, Detecting fake information on social networks, started October 2015, Laurent Amsaleg, Vincent Claveau and Ewa Kijak

PhD in progress: Antoine Perquin, Universal speech synthesis through embeddings of massive heterogeneous data, started Oct. 2017, Laurent Amsaleg, Gwénolé Lecorvé, Damien Lolive (with EXPRESSION, IRISA team)

PhD in progress: Oriane Simeoni, Invariance and supervision in visual learning, started Oct. 2016, Yannic Avrithis and Guillaume Gravier

PhD in progress: Hanwei Zhang, Deep learning in adversarial contexts, started Oct. 2017, Laurent Amsaleg, Teddy Furon, Ewa Kijak

### 10.2.3. *Juries*

Guillaume Gravier

PhD, reviewer, Aparna Nurani Venkitasubramanian, Katholieke Universiteit Leuven

PhD, reviewer, Heider Sanchez, Universidad de Chile

PhD, reviewer, Mateusz Budnik, Univ. Grenoble Alpes

PhD, reviewer, Nhi Tran, CNAM

PhD, president, Gaël Le Lan, Univ. du Maine

Ewa Kijak

PhD, member, Yanwei Cui, Université Bretagne Sud

Pascale Sébillot

PhD, reviewer, Dialekti Valsamou, Université Paris Sud

PhD, reviewer, Anaïs Ollagnier, Aix-Marseille Université

PhD, president, Joseph Lark, Université de Nantes

PhD, member, Yoann Dupont, Université Sorbonne Nouvelle - Paris 3

## 10.3. Popularization

Vincent Claveau

participated to the collective book "Les Big Data à découvert", CNRS éditions

got an interview published in CNRS - Le journal about detecting fake news and image forgeries (joint work with C. Maigrot and E. Kijak).

## **MAGRIT Project-Team**

# **10. Dissemination**

## **10.1. Promoting Scientific Activities**

### **10.1.1. Scientific Events Organisation**

#### *10.1.1.1. Member of the Organizing Committees*

- M.-O Berger co-organized with E. Marchand (IRISA) a one-day workshop on Augmented Reality in Paris in June 2017.

### **10.1.2. Scientific Events Selection**

#### *10.1.2.1. Member of the Conference Program Committees*

- M.-O. Berger was a member of the program committee of: International Conference on Robotic and automation (ICRA 2016), International Conference on Information Processing in Computer assisted interventions (IPCAI 2017), International Conference on Robotics and Automation (IROS 2017), International Symposium on Mixed and Augmented Reality (ISMAR 2017)
- E. Kerrien was a member of the program committee of the Medical Image Computing and Computer Assisted Interventions Conference (MICCAI 2017).
- G. Simon was a member of the program committee of IEEE Virtual Reality 2018
- P.-F Villard was a member of the program committee of IADIS Computer Graphics, Visualization, Computer Vision and Image Processing 2017, and of the Eurographics Workshop on Visual Computing for Biology and Medicine 2017.

### **10.1.3. Journal**

#### *10.1.3.1. Reviewer - Reviewing Activities*

The members of the team reviewed articles in IEEE Transactions on Pattern Analysis and Machine Intelligence, IEEE Transactions on Multimedia, Experimental Mechanics, Traitement du Signal, IEEE Transactions on Biomedical Engineering.

### **10.1.4. Invited Talks**

- Marie-Odile Berger was a keynote speaker at ISMAR'2017.
- Pierre-Frederic gave a seminar at the department of information technology of Uppsala University on August 30th. Title: 'Application in treatment planning, training simulators and on-line treatment' [http://user.it.uu.se/~maya/seminar\\_abstracts/sem\\_fall17/PFVillard](http://user.it.uu.se/~maya/seminar_abstracts/sem_fall17/PFVillard).
- Pierre-Frederic Villard gave a talk at the Harvard Biorobotics Lab on October 31st. Title: 'Automatic Reconstruction of Mitral Valve Chordae'.

### **10.1.5. Scientific Expertise**

- Marie-Odile Berger is the president of the Association française pour la reconnaissance et l'interprétation des formes (AFRIF)

### **10.1.6. Research Administration**

- Marie-Odile Berger is a member of the Inria evaluation committee.
- Gilles Simon is Chargé de Mission Loria to take part in an EIT's KIC (Knowledge and Innovation Communities) proposal on the topic of manufacturing (KIC Added-value Manufacturing).
- E. Kerrien and G. Simon were members of selection committees for Assistant Professor hiring.

## 10.2. Teaching - Supervision - Juries

### 10.2.1. Teaching

The four associate professors of the MAGRIT team actively teach at Université de Lorraine with an annual number of around 200 teaching hours in computer sciences, some of them being accomplished in the field of image processing. Inria researchers have punctual teaching activities in computer vision and shape recognition mainly in the computer science Master of Nancy and in several Engineering Schools near Nancy (ENSMN Nancy, SUPELEC Metz, ENSG). Our goal is to attract Master students with good skills in applied mathematics towards the field of computer vision.

The list of courses given by staff members which are tightly related to image processing and computer vision is detailed below:

- Licence: Graphic and haptic rendering, 30h, IUT Saint-Dié des Vosges (P.-F. Villard).
- Licence: Image processing, 30h, IUT Saint-Dié des Vosges (P.-F. Villard).
- Licence: 3D programming, 30h, IUT Saint-Dié des Vosges (P.-F. Villard).
- Game design with Unity3D, 15h, IUT Saint-Dié des Vosges (P.-F. Villard).
- Introduction to augmented reality, 6h, IUT Saint-Dié des Vosges (P.-F. Villard).
- Master: Signal analysis, 50 h, Université de Lorraine (F. Sur).
- Master: Augmented reality, 24 h, Télécom-Nancy, Université de Lorraine (G. Simon).
- Master : Introduction to computer vision, 12h, Université de Lorraine ((M.-O. Berger).
- Master : Shape recognition, 15 h, Université de Lorraine (M.-O. Berger).
- Master : Computer vision: foundations and applications, 15 h, Université de Lorraine (M.-O. Berger).
- Master : Introduction to image processing, 21 h, École des Mines de Nancy (M.-O. Berger, R. Kerrien)
- Master : Image processing for Geosciences, ENSG, 12h (M.-O. Berger).
- Master : Introduction to signal processing and applications, 21 h, Ecole des Mines de Nancy (F. Sur).
- Master : Augmented reality, 24h, M2 IHM Metz (G. Simon).
- Master : Augmented reality, 3 h, SUPELEC Metz (G.simon).
- Master : Virtual worlds, 10h, M2 Cognitive Sciences and Applications, UFR Math-Info, Université de Lorraine (P.-F. Villard).

Frédéric Sur is the head of the Industrial Engineering and Applied Mathematics department at Mines Nancy.

### 10.2.2. Supervision

PhD: Pierre Rolin, Calcul de pose par simulation de points de vue pour la réalité augmentée, octobre 2013, Marie-Odile Berger, Frédéric Sur. PhD defended in March 2017.

PhD: Charlotte Delmas, Reconstruction 3D des outils chirurgicaux en radiologie interventionnelle, avril 2013, Marie-Odile Berger, Erwan Kerrien. PhD defended in november 2017.

PhD in progress: Antoine Fond, Introduction de sémantique dans la modélisation urbaine dans un contexte de calcul du point de vue, octobre 2014, Marie-Odile Berger, Gilles Simon.

PhD in progress: Jaime Garcia Guevara, Vers une utilisation clinique de la réalité agmentée pour la chirurgie hépatique, octobre 2015, Marie-Odile Berger, Stéphane Cotin (MIMESIS).

PhD in progress: Raffaella Trivisonne, Image-guided real-time simulation using stochastic filtering, novembre 2015, Erwan Kerrien, Stéphane Cotin (MIMESIS).

PhD in progress: Vincent Gaudillière, Reconnaissance de lieux et d'objets pour la réalité augmentée en milieux complexes, décembre 2016, Marie-Odile Berger, Gilles Simon.

PhD in progress: Daryna Panicheva, Image-based Biomechanical Simulation of Mitral Valve Closure, octobre 2017, Marie-Odile Berger, Pierre-Frédéric Villard.

### 10.2.3. Juries

Marie-Odile Berger was external reviewer of the PhD of Canseng Jiang (Université de Bourgogne), Angélique Loesch (Université de Clarmont Auvergne) and Shaifali Parashar (Université de Clermont Auvergne).

### 10.3. Popularization

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

- Erwan Kerrien is Chargé de Mission for scientific mediation at Inria Nancy-Grand Est. As such, he is a member of the steering committee of “Maison pour la Science de Lorraine, and member of the IREM<sup>0</sup> steering council. He also serves as the academic referent of an IREM working group aiming at introducing computer science in middle and high school curricula. Among other activities, he was also an associate researcher to a MATH.en.JEANS workshop, and he 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.
- Gilles Simon participated to the “Fête de la science 2017” at the Faculté de 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.

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<sup>0</sup>Institut de Recherche sur l’Enseignement des Mathématiques - *Research Institute for Teaching Mathematics*



## MORPHEO Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Selection

#### 10.1.1.1. Member of the Conference Program Committees

- Franck Hétroy-Wheeler was a PC member for the Eurographics 2017 conference (short papers track).
- Edmond Boyer was area chair for BMVC and 3DV 2017.

#### 10.1.1.2. Reviewer

- Jean-Sébastien Franco reviewed for CVPR and ICCV 2017.
- Franck Hétroy-Wheeler reviewed for Eurographics 2017 (short papers), ACM Multimedia 2017 and 3DV 2017.
- Julien Pansiot reviewed for CVPR and MobiHealth 2017.
- Stefanie Wuhler reviewed for CVPR and ICCV 2017.
- Edmond Boyer reviewed for CVPR, ICCV, SIGGRAPH 2017.

### 10.1.2. Journal

#### 10.1.2.1. Member of the Editorial Boards

- Edmond Boyer is associate editor of the International Journal of Computer Vision (Springer).

#### 10.1.2.2. Reviewer - Reviewing Activities

- Franck Hétroy-Wheeler reviewed for Frontiers in Plant Science and Journal of Mathematical Imaging and Vision.

### 10.1.3. Invited Talks

- Julien Pansiot talked at the INNOVACS Conférence "L'Innovation et la recherche pour le Sport, la Santé et le Bien-être"
- Edmond Boyer gave invited talks at: Inria Sophia Antipolis (February) , Journées scientifiques Inria (June) , ICCV Workshop on people capture (October), IPTA Montreal (December) 2017.

### 10.1.4. Scientific Expertise

- Edmond Boyer reviewed research proposals for EPSRC (UK) and KAUST (Saudi Arabia) in 2017.
- Edmond Boyer was a member of the recruiting committee of Ecole Central Paris for a professor position in 2017.
- Edmond Boyer was a member of the Inria Grenoble Rhône-Alpes recruiting committee for postdocs and visiting researchers in 2017.

## 10.2. Teaching - Supervision - Juries

### 10.2.1. Teaching

Licence: Jean-Sébastien Franco, Introduction to Imperative Programming, 55h, Ensimag 1st year, Grenoble INP.

Licence: F. Hétroy-Wheeler, Algorithmics and data structures, 42h, Ensimag 1st year, Grenoble INP.

Master: Jean-Sébastien Franco, Introduction to Computer Vision, 27h, Ensimag 1st year, Grenoble INP.

Master: F. Hétroy-Wheeler, 3D graphics, 16h, Master of Science in Informatics, Université Grenoble Alpes.

Master: F. Hétroy-Wheeler, co-responsability of the Mathematical Modeling, Image and Simulation (MMIS) track of Ensimag, Grenoble INP.

Master: Edmond Boyer, 3D Modeling, 18h, M2R Mosig GVR, Grenoble INP.

Master: Edmond Boyer, Introduction to Visual Computing, 30h, M1 MoSig, Université Grenoble Alpes.

### 10.2.2. Supervision

PhD: Adnane Boukhayma, Surface Motion Capture Animation, Université de Grenoble, defended 06/12/2017, supervised by Edmond Boyer.

PhD in progress: Victoria Fernández Abrevaya, 3D Dynamic Human Motion Representations, Université de Grenoble Alpes, started 01/10/2016, supervised by Edmond Boyer and Stefanie Wuhler.

PhD in progress: Claude Goubet, Modeling of 3D Foot, Université de Grenoble Alpes, started 01/10/2017, supervised by Edmond Boyer and Julien Pansiot.

PhD in progress: Roman Klakov, Deep Learning for 3D Shape Modeling Environment, Université de Grenoble Alpes, started 01/10/2017, supervised by Edmond Boyer and Jakob Verbeek.

PhD in progress: Vincent Leroy, 4D shape reconstruction from photoconsistency cues, Université de Grenoble Alpes, started 01/10/2015, supervised by Edmond Boyer and Jean-Sébastien Franco.

PhD in progress: Abdullah-Haroon Rasheed, Cloth Modeling and Simulation, Université de Grenoble Alpes, started 01/11/2017, supervised by Florence Bertails-Descoubes, Jean-Sébastien Franco and Stefanie Wuhler.

PhD in progress: Romain Rombourg, Digital tree: from the acquisition to a high-level geometric model, Université Grenoble Alpes, started 01/10/2015, supervised by Franck Hétroy-Wheeler and Eric Casella.

PhD in progress: Nitika Verma, Deep Learning on Irregular Grids, Université de Grenoble Alpes, started 01/10/2017, supervised by Edmond Boyer and Jakob Verbeek.

PhD: Li Wang, Algorithms and criteria for volumetric Centroidal Voronoi Tessellations, Université Grenoble Alpes, defended 27/01/2017, supervised by Edmond Boyer and Franck Hétroy-Wheeler.

PhD in progress: Jinlong Yang, Learning shape spaces of dressed 3D human models in motion, Université de Grenoble Alpes, started 01/10/2015, supervised by Franck Hétroy-Wheeler and Stefanie Wuhler.

### 10.2.3. Juries

- Jean-Sébastien Franco was a member of the defense committee of Adnane Boukhayma (Univ. Grenoble Alpes).
- Franck Hétroy-Wheeler is a member of the PhD monitoring committee of Van Tho Nguyen (University of Lorraine, INRA Nancy and Office National des Forêts).
- Edmond Boyer was a member of the defense committee of Rodrigo Ortiz Cayon.

## PERCEPTION Project-Team

## 9. Dissemination

### 9.1. Promoting Scientific Activities

#### 9.1.1. Scientific Events Organisation

##### 9.1.1.1. General Chair, Scientific Chair

Xavier Alameda-Pineda was area chair of IEEE/CVF *International Conference on Computer Vision* 2017.

##### 9.1.1.2. Member of the Organizing Committees

Xavier Alameda-Pineda co-organized a special session at ACM *International Conference on Multimedia Retrieval* 2017, and a workshop at ACM *International Conference on Multimedia* 2017.

#### 9.1.2. Scientific Events Selection

##### 9.1.2.1. Reviewer

In 2017, Xavier Alameda-Pineda reviewed for IEEE Conference on *Computer Vision and Pattern Recognition* 2017, *Advances on Neural Information Processing Systems* 2017, IEEE *International Conference on Audio Speech and Signal Processing* 2018 and *International Conference on Learning Representations*.

Xavier was awarded with the CVPR 2017 **Outstanding Reviewer Award**.

#### 9.1.3. Journal

##### 9.1.3.1. Member of the Editorial Boards

Radu Horaud is a member of the following editorial boards:

- advisory board member of the *International Journal of Robotics Research*, Sage,
- associate editor of the *International Journal of Computer Vision*, Kluwer, and
- area editor of *Computer Vision and Image Understanding*, Elsevier.

##### 9.1.3.2. Reviewer - Reviewing Activities

Xavier Alameda-Pineda regularly acts as reviewer for IEEE *Transactions on Pattern Analysis and Machine Intelligence*, IEEE *Transactions on Audio, Speech, and Language Processing*, IEEE *Transactions on Multimedia*, IEEE *Transactions on Image Processing*, IEEE *Transactions on Affective Computing*, *International Journal on Computer Vision* and *Computer Vision and Image Understanding*.

#### 9.1.4. Invited Talks

- Xavier Alameda-Pineda gave an invited talk at GIPSA-Lab on Multi-speaker tracking with auditory data.
- Radu Horaud gave invited talks at two IEEE ICCV Workshops:  
<https://www.msf-workshop.com/>  
<https://mvr3d.github.io/>.

## 9.2. Teaching - Supervision - Juries

### 9.2.1. Supervision

PhD defended February 2017: Dionyssos Kounades-Bastian, October 2013, Radu Horaud, Laurent Girin, and Xavier Alameda-Pineda.

PhD defended in December 2017: Vincent Drouard, October 2014, Radu Horaud and Sileye Ba.

PhD in progress: Benoit Massé, October 2014, Radu Horaud and Sileye Ba.

PhD in progress: Stéphane Lathuilière, October 2014, Radu Horaud.

PhD in progress: Yutong Ban, October 2015, Radu Horaud and Laurent Girin

PhD in progress: Guillaume Delorme, September 2017, Radu Horaud and Xavier Alameda-Pineda

PhD in progress: Sylvain Guy, October 2017, Radu Horaud and Laurent Girin

## SIROCCO Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

#### 10.1.1.1. Member of the Conference Program Committees

- C. Guillemot has been a member of the VISAPP 2017 international program committee.
- C. Guillemot has been a member of the international program committee of the CVPR 2017 workshop on light fields for computer vision.
- O. Le Meur has been a member of technical program committees of international conferences: QoMEX 2017, Mutual Benefits of Cognitive and Computer Vision (MBCC) 2017 workshop in conjunction with ICCV 2017, IPTA 2017, ICMR 2017.
- A. Roumy has been a member of the technical program committee of the CVPR 2017 workshop on New Trends in Image Restoration and Enhancement.
- A. Roumy has been a member of the technical program committee of the (Groupement de Recherche en Traitement du Signal et des Images) GRETSI 2017 workshop.

#### 10.1.2. Journal

##### 10.1.2.1. Member of the Editorial Boards

- C. Guillemot is senior area editor of the IEEE Trans. on Image Processing.
- C. Guillemot is associate editor of the International Journal on Mathematical Imaging and Vision.
- O. Le Meur is member of the editorial board of the IET Image Processing Journal
- A. Roumy is associate editor of the Springer Annals of Telecommunications.

#### 10.1.3. Invited Talks

- C. Guillemot gave a seminar at IST-Lisboa on Light field image processing (10th May 2017).
- C. Guillemot gave an invited talk in the context of the IEEE distinguished lecturer program, at UPM Madrid on Light field image processing (29th June 2017).
- C. Guillemot gave an invited talk in the context of the IEEE distinguished lecturer program University Autonoma de Barcelona on Light field image processing (30th June 2017).
- C. Guillemot gave an invited talk in the context of the IEEE distinguished lecturer program on "Light field image processing: analysis, representation, compression and editing", at the VISVA 2017 summer school, Singapore (8th July 2017).
- C. Guillemot gave a Keynote ("Towards dense multi-view imaging") at the Hot3D workshop jointly held with IEEE-ICME, Hong Kong, 10 July 2017.
- C. Guillemot gave a seminar at MidSweden University in light field image processing (15th Nov. 2017).
- O. Le Meur gave an invited talk at the AFIG (Association Française d'informatique Graphique). The title of the presentation was: "un nouveau regard sur l'attention visuelle".
- O. Le Meur gave an invited talk at the NEUROSTIC workshop (GDR-ISI). The title of the presentation was: "Modèles de saillance visuelle et mouvements oculaires. Un nouveau départ?".
- O. Le Meur was a captstone speaker at EuroRV3 workshop. The title of the presentation was: "The computational modelling of visual attention : saliency model vs saccadic model"

- O. Le Meur gave an invited talk at ENSTA. The title of the presentation was: "Saccadic model, a promising framework for modelling overt visual attention".
- T. Maugey gave an invited talk at EPFL (Lausanne, Switzerland) on "Massive Random Access », May 2017.
- T. Maugey gave an invited talk at the scientific day of the L2TI (University Paris XIII), December 2017.
- A. Roumy gave an introductory talk on Interactive video compression at the Comité des projets, Rennes, May 2017.
- A. Roumy gave a talk on Challenges in data compression for the IoT, at the IoTsustain Workshop, UCL, London, July 2017.

#### **10.1.4. Leadership within the Scientific Community**

- C. Guillemot is member of the IEEE IVMSPP technical committee
- C. Guillemot is senior member of the steering committee of IEEE Trans. on Multimedia (2016-2018).
- C. Guillemot has been appointed member of the IEEE Signal Processing Society Nominations and Appointments Committee for a two year term (2018-2019).
- A. Roumy is a member of the Executive board of the National Research group in Image and Signal Processing (GRETSI).

#### **10.1.5. Scientific Expertise**

- C. Guillemot served in the HCERES panel which evaluated the CEDRIC laboratory at CNAM (Oct. 2017).

#### **10.1.6. Research Administration**

- C. Guillemot is a member of Inria's evaluation committee.
- C. Guillemot is member of the "bureau du Comité des Projets".
- A. Roumy served as a member of Board of Examiners (Comité de sélection) for an Associate Professor position (Maitre de Conférences) at ENSSAT-IRISA, Lannion (61MCF1758).
- A. Roumy served as a member of Board of Examiners (Comité de sélection) for an Associate Professor position (Maitre de Conférences) in Digital Communication at CentraleSupélec, Rennes.
- A. Roumy served as a jury member for the selection of Inria CR (researcher) candidates, March and May 2017, Inria, Rennes, France
- A. Roumy is a member of the technological development and technology transfer committee at Inria Rennes
- A. Roumy was a member of Inria's PhD grant committee (CORDI-S).

## **10.2. Teaching - Supervision - Juries**

### **10.2.1. Teaching**

- Master: C. Guillemot, Image and video compression, 10 hours, M2 SISEA, Univ. of Rennes 1, France.
- Undergraduate: L. Guillo, "Scientific programming ", 20 hours, University Rennes 1, "Physique, chimie et structure de la matière (PCSTM), 1st year", France.
- Master: O. Le Meur, Selective visual attention, 6 hours, M2, Univ. of Paris 8, France.
- Master: O. Le Meur, Acquisition/Image Processing/Compression, 22 hours, M2 MITIC, Univ. of Rennes 1, France.

- Engineer degree: O. Le Meur, Image Processing, video analysis and compression, 54 hours, ESIR2, Univ. of Rennes 1, France.
- Engineer degree: O. Le Meur, Visual communication, 65 hours, ESIR3, Univ. of Rennes 1, France.
- Professional training: O. Le Meur, Image Processing and OpenCV, 42 hours, Technicolor Rennes.
- Master: T. Maugey, course on 3D models in a module on "advanced video", 4 hours, M2 SISEA, Univ. of Rennes 1, France.
- Engineering degree: A. Roumy, Sparse methods in Image and Signal processing, 13 hours, INSA Rennes, 5th year, Mathematical engineering, France.
- Engineering degree: A. Roumy, Image processing, 28 hours, ECAM Rennes, 4th year, France.
- Master: A. Roumy, Foundations of Smart Sensing, 18 hours, ENSAI Bruz, Master of Science in Statistics for Smart Data, France.
- Master: A. Roumy, High dimensional statistical learning, 9 hours, University Rennes 1, Research in Computer Science (SIF) master, France.
- Master: A. Roumy, Information Theory, 15 hours, University Rennes 1, Research in Computer Science (SIF) master, France.

### 10.2.2. *Juries*

- C. Guillemot has been member (rapporteur) of the PhD committee of:
  - A. Purica, Telecom ParisTech, June 2017
  - G. Nieto, Univ. Grenoble-Alpes, Oct. 2017
- C. Guillemot has been member of the PhD jury of:
  - A. Aldahdooh, Univ. Nantes, Aug. 2017
  - C. Peyrard, Univ. Lyon, Sept. 2017
  - S. Puri, Univ. Nantes, Nov. 2017
  - B. Pasdeloup, IMT-Atlantique, Dec. 2017
- O. Le Meur has been member (rapporteur) of the jury of the PhD committee of:
  - Benoit Arbelot, Univ. Grenoble Alpes, Mar. 2017
  - Celine Craye, Univ. Paris-Saclay, Apr. 2017
  - Yashas Rai, Univ. of Nantes, Aug. 2017
- Thomas Maugey has been member of the jury of the PhD committee of:
  - A. Dricot TelecomParisTech, Mar. 2017
- A. Roumy has been member of the PhD jury of:
  - V. Gouldieff, CentraleSupelec, Rennes, October 2017.

## STARS Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

#### 10.1.1.1. Member of the Organizing Committees

François Brémond was a member of the Management Committee and COST Action IC1307 in 2017.

### 10.1.2. Scientific Events Selection

#### 10.1.2.1. Chair of Conference Program Committees

François Brémond was an Area and Session Chair of AVSS - 14th IEEE International Conference on Advanced Video and Signal-Based Surveillance, Lecce, Italy, August 29th - September 1st, 2017.

François Brémond was an Area Chair of ICIAP - 19th International Conference on Image Analysis and Processing; Area Chair; in Catania, Italy, September 11-15, 2017.

Antitza Dantcheva was program and session chair at the 17th International Conference of the Biometrics Special Interest Group, BIOSIG 2017

#### 10.1.2.2. Member of the Conference Program Committees

François Brémond was program committee member of the conferences and workshops: IWT4S 2017, COMSI17, SP-CROWD 2017, ICPRS-17, ICDP2017, AVSS17 and WACV17-18.

Antitza Dantcheva was program committee member of the conference International Conference on Biometrics (IJCB 2017).

Jean-Paul Rigault is a member of the *Association Internationale pour les Technologies à Objets* (AITO) which organizes international conferences such as ECOOP.

#### 10.1.2.3. Reviewer

François Brémond was reviewer for the conferences : CVPR2017-18, ICCV2017, VISION4HCI17, WACV 2017, SAV17, ICVS 17, ISG 18, BER17, BMVC17, IROS17.

### 10.1.3. Journal

#### 10.1.3.1. Member of the Editorial Boards

- François Brémond was handling editor of the international journal "Machine Vision and Application".

#### 10.1.3.2. Reviewer - Reviewing Activities

François Brémond was reviewer for IEEE Transactions on Circuits and Systems for Video Technology Editorial Office.

Monique Thonnat is a reviewer for the journals Artificial Intelligence in Medicine AIIM (Elsevier) and The Computer Journal (Oxford University Press).

Antitza Dantcheva reviewed for journals including IEEE Transactions on Information Forensics and Security (TIFS), The Visual Computer, Entropy, Pattern Recognition Letters.

### 10.1.4. Invited Talks

François Brémond was invited by Huawei Research, within Video Intelligence Event, on People Re-ID, Dublin, 21st November 2017.

Antitza Dantcheva: "Personalized facial expression and activity recognition during mnemotherapy-sessions for patients with major neurocognitive disorders", IBME, University of Oxford, UK, November 2017

Antitza Dantcheva: "New Advances in Soft Biometrics", Biometrics Congress, London, UK, November 2017

Antitza Dantcheva: "Can a smile reveal your gender?", Day of Biometrics, Caen, France, July 2017

Alexandra Koenig was invited by Dr. Dimitrios Kokkinakis to give a talk on ICT for monitoring dementia patients and in particular Automatic Speech analysis for the assessment of cognitive impairment, University of Gothenburg, Sweden, 18 September 2017.

Alexandra Koenig was invited by Dr Jessica Peter to give a talk on Automatic Analysis of the Semantic Verbal Fluency performance in elderly people, University of Bern, Swiss, 18 October 2017.

### **10.1.5. Leadership within the Scientific Community**

Monique Thonnat is President of the University Hospital Institute IHU Liryc in Bordeaux on cardiac electrical disorders since 2015.

Antitza Dantcheva serves in the Technical Activities Committee of the IEEE Biometrics Council 2017.

### **10.1.6. Scientific Expertise**

François Brémond was expert for a research program at the Campus for Research Excellence and Technological Enterprise (CREATE) from the National University of Singapore (NUS).

François Brémond was expert for the European CHIST-ERA ERA-NET Call 2016, for the project "SUPER CARE".

François Brémond was expert for the project call "Recherche - Enseignement Supérieur - Plateformes Mutualisées" de la Région Nouvelle-Aquitaine, March 2017.

François Brémond was expert for the "Revue Retraite et société", April 2017.

Monique Thonnat was an expert to review COFECUB research project (Scientific cooperation between Brasil and France) for the French government.

## **10.2. Teaching - Supervision - Juries**

### **10.2.1. Teaching**

Master: Annie Ressouche, Safety in Middleware for Internet of Things, 6h, niveau (M2), Polytech Nice School of Nice University.

Master : Inès Sarray, Safety in Middleware for Internet of Things, 6h, niveau (M2), Polytech Nice School of Nice University.

### **10.2.2. Supervision**

PhD: Minh Khue Phan Tran, Maintaining the engagement of older adults with dementia while interacting with serious game, Cote d'Azur University, 20th of April, François Brémond.

PhD: Michal Koperski, Detecting critical human activities using RGB/RGBD cameras in home environment, François Brémond.

PhD: Auriane Gros, Evaluation and Specific Management of Emotional Disturbances with Activity Recognition Systems for Alzheimer patient, 4th of December, François Brémond.

PhD in progress : Thi Lan Anh Nguyen, Complex Activity Recognition from 3D sensors, Dec 2014, François Brémond.

PhD in progress: Ines Sarray, Activity Recognition System Design, Oct 2015, Sabine Moisan.



PhD in progress: Farhood Negin, People Detection for Activity Recognition using RGB-Depth Sensors, Jan 2015, François Brémont.

PhD in progress: Ujjwal Ujjwal, Pedestrian Detection to Dynamically Populate the Map of a Crossroad, Sep 2016, François Brémont.

PhD in progress: Srijan Das, Activity Recognition in videos by combining an ontology based language with CNN networks, Dec 2017, François Brémont.

### **10.2.3. Juries**

François Brémont was jury member of Tenure Track Selection: committee member for permanent position, Mines School - ParisTech, September 2017

François Brémont was jury member of the mid-term review for 4 PhDs - UNED Doctoral Consortium, Mr. Artaso, Mr. Timón, Mr. Pérez, and Mr. Navares, Facultad de Informática, UNED, Madrid, 12 June 2017

François Brémont was jury member of the following PhD theses:

PhD, Andrews Sobral, Université La Rochelle, 11 mai 2017.

PhD, Athira Muraleedharan Nambiar, Electrical and Computer Engineering, Instituto Superior Técnico, Institute for Systems and Robotics, Lisboa, Portugal, 1st September 2017.

PhD, Enjie Ghorbel, Université de Rouen Normandie, 12 octobre 2017.

PhD, Bassem HadjKacem, École Nationale d'Ingénieurs de Sfax, Tunisie, 5 novembre 2017.

PhD, Nabila Mansouri, Université de Sfax et l'Université de Valenciennes, 20 novembre 2017.

Monique Thonnat was member of the final selection board (jury d'admission) of junior (CR) and senior (DR) research scientists of (Cérema, ENPC, ENTPE, IFSTTAR, IGN, Météo-France).

Monique Thonnat is the research representative of Ecole Polytechnique jury for delivering the Prize of best student scientific projects since June 2011.

Monique Thonnat is member of the scientific board of ENPC, Ecole Nationale des Ponts et Chaussées since June 2008.

Sabine Moisan was reviewer in the PhD jury of Hassan Loulou, ESTACA, Paris nov. 2017

## THOTH Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

#### 10.1.1.1. Member of the Organizing Committees

- C. Schmid. General Chair European Conference on Computer Vision (ECCV) 2020.
- C. Schmid. Co-organizer for Workshop on Frontiers of Video Technology, San Jose, 2017.
- J. Mairal. Member of the organizing committee of the Journées SMAI-MODE, which will take place in March 2018.
- G. Rogez. Co-organizer of the CVPR workshop on Observing and Understanding Hands in Action (HANDS 2017).

#### 10.1.2. Scientific Events Selection

##### 10.1.2.1. Member of the Conference Program Committees

- C. Schmid. Area chair for ICCV 2017, NIPS 2017, ICML 2018, and ECCV 2018.
- K. Alahari. Area chair for CVPR 2018.
- J. Mairal. Area chair for ICML 2017, NIPS 2017, and ICML 2018.
- J. Verbeek. Area chair for ECCV 2018.

##### 10.1.2.2. Reviewer

The permanent members of the team reviewed numerous papers for numerous international conferences in computer vision and machine learning: CVPR, ECCV, NIPS, ICML.

### 10.1.3. Journal

#### 10.1.3.1. Member of the Editorial Boards

- C. Schmid: Editor in Chief of the International Journal of Computer Vision, since 2013.
- C. Schmid: Associate editor for Foundations and Trends in Computer Graphics and Vision, since 2005.
- J. Mairal: Associate editor of the International Journal of Computer Vision (IJCV), since 2015.
- J. Mairal: Senior associate editor for IEEE Signal Processing Letters, since Feb 2015 (editor since Aug. 2014).
- J. Mairal: Associate editor of Journal of Mathematical Imaging and Vision (JMIV), since 2015.
- J. Mairal: Associate editor of the SIAM Journal of imaging science, since 2018.
- J. Verbeek: Associate editor for Image and Vision Computing Journal, since 2011.
- J. Verbeek: Associate editor for the International Journal on Computer Vision, since 2014.

#### 10.1.3.2. Reviewer - Reviewing Activities

The permanent members of the team reviewed numerous papers for numerous international journals in computer vision (IJCV, PAMI, CVIU), machine learning (JMLR, Machine Learning). Some of them are also reviewing for journals in optimization (SIAM Journal on Optimization, Mathematical Programming), image processing (SIAM Imaging Science).

#### 10.1.4. Invited Talks

- K. Alahari. Invited speaker at ETH Zurich Photogrammetry group retreat, Morzine, France, January 2017.
- G. Durif. Invited speaker at the “StatOmique” meeting, Paris. March 2017.
- J. Mairal. Seminar LIG. Grenoble, December 2017.
- J. Mairal. Invited speaker at Journées franco-chiliennes d’optimisation. Toulouse, July 2017.
- J. Mairal. Invited speaker at the large-scale and distributed optimization workshop, Lund, June 2017.
- J. Mairal. Invited speaker at Pattern recognition and computer vision colloquium, Prague, May 2017.
- J. Mairal. Invited speaker at the optimization and statistical learning workshop, Les Houches, April 2017.
- J. Mairal. Two seminars at Amazon Berlin. February 2017.
- G. Rogez. Invited speaker at Journées CNRS-GDR Isis, Telecom ParisTech, December 2017.
- J. Verbeek. Invited talk at Aalto University, Helsinki, Finland, June 2017.
- J. Verbeek. Invited talk at ATOS, Grenoble, January 2017.
- J. Verbeek. Invited talk at Technicolor, Rennes, January 2017.
- H. Lin. Invited talk in mini-symposium. SIAM Optimization conference. May 2017.
- H. Lin. Seminar at University of Washington, June 2017.
- R. Klovov. Invited talk at ICCV workshop Learning to See from 3D Data.
- C. Schmid: Keynote speaker at ECML-PKDD 2017, Skopje, September 2017.
- C. Schmid: Keynote speaker at Gresti 2017, Juan-les-Pins, September 2017.
- C. Schmid: Invited speaker at Workshop on YouTube-8M Large-Scale Video Understanding, in conjunction with CVPR’17, July 2017.
- C. Schmid: Invited speaker at Women in Computer Vision Workshop, in conjunction with CVPR’17, July 2017.
- C. Schmid: Invited speaker at 1st Workshop on Target Re-Identification and Multi-Target Multi-Camera Tracking, in conjunction with CVPR’17, July 2017.
- C. Schmid: Invited speaker at Chalearn Looking at People Workshop, in conjunction with CVPR’17, July 2017.
- C. Schmid: Invited speaker at Frontiers of Video Technology, July 2017.
- C. Schmid: Invited speaker at Korean Conference on Computer Vision, Seoul, June 2017.
- C. Schmid: Keynote speaker at Swedish Symposium on Deep Learning, Stockholm, June 2017.
- C. Schmid: Invited speaker at Russian Summit “Machines Can See”, Moscow, June 2017.
- C. Schmid: Seminar at Intel Network on Intelligent Systems, Munich, August 2017.
- C. Schmid: Seminar at Berkeley University, July 2017.
- C. Schmid: Seminar at Toyota Research Institute, July 2017.
- C. Schmid: Seminar at Google, Mountain View, July 2017.
- C. Schmid: Seminar at DeepMind, London, June 2017.
- C. Schmid: Speaker at Distinguished Seminar Series in Computing, Imperial College, London, June 2017.
- C. Schmid: Seminar at MPI, Tübingen, May 2017.
- C. Schmid: Seminar at “10 ans de l’ERC à Inria”, Paris, Mars 2017.

### 10.1.5. Scientific Expertise

- C. Schmid: Award committee member for Oréal-UNESCO award France for Women in Sciences 2017.
- K. Alahari: reviewer for ANR.
- J. Mairal: judge for the IBM Watson AI Xprize.
- J. Mairal: reviewer for ANR.
- J. Mairal: panel member of a funding agency for the 2018 call (confidential information at the moment).
- J. Mairal: member of the PGMO best PhD prize committee in 2017.
- G. Rogez: reviewer for ANR.
- J. Verbeek: reviewer for ERC.
- J. Verbeek: reviewer for ASF.

### 10.1.6. Research Administration

- C. Schmid: Member of the “Comité scientifique”, Inria Grenoble, since 2015.
- C. Schmid: Member of board of directors of the Computer Vision Foundation (CVF), since 2016.
- C. Schmid is member of the PAMI-TC awards committee, and the PAMI-TC executive committee.
- J. Verbeek: Scientific correspondent national project calls, Inria Grenoble.

## 10.2. Teaching - Supervision - Juries

### 10.2.1. Teaching

Doctorat: Karteek Alahari, Lecturer at the summer school on computer vision, IIIT Hyderabad, India.

Doctorat: J. Mairal, Lecturer at the SPARSA summer school, Lisbon.

Doctorat: J. Mairal, Lecturer at the CoSIP winter school, berlin.

Doctorat: J. Mairal, “Introduction to machine learning”, PSL-ITI program, 6H eq-TD, Paris.

Doctorat: J. Verbeek. Tutorial given at IPTA, Montreal.

Doctorat: J. Verbeek. Invited lecture Deep learning summer school, Univ. Côte D’Azur.

Doctorat: C. Schmid. Tutorial on action recognition at the Winter School in Computer Vision, Jerusalem, January 2017.

Master : C. Schmid, “Object recognition and computer vision”, 15H eqTD, M2, ENS Cachan, France.

Master : J. Verbeek and C. Schmid. “Machine Learning & Category Representation”, 27H eqTD, M2, Univ. Grenoble.

Master: K. Alahari, “Introduction to Discrete Optimization”, Ecole Centrale Paris, 27H eq-TD, M1, Paris, France.

Master: K. Alahari, “Discrete Inference and Learning”, Ecole Centrale Paris, M2, Paris, France.

Master: K. Alahari, “Understanding Big Visual Data”, Grenoble INP, 13.5H eq-TD, M2, Grenoble, France.

Master: K. Alahari, “Introduction to computer vision”, ENS Paris, M1, Grenoble, France.

Master: J. Mairal, “Kernel methods for statistical learning”, 27H eqTD, M2, Ecole Normale Supérieure, Cachan.

Master : J. Verbeek and J. Mairal, “Advanced Learning Models”, 27H eqTD, M2, ENSIMAG, Grenoble.

Master: A. Sablayrolles and P. Luc: Lecture at Ecole 42 on Convolutional Neural Networks as part of the Facebook AI Masterclass.

License: H. Lin, UE MAT206: Introduction à la biologie mathématique et à la dynamique des populations, 58H eqTD, L3, UGA, Grenoble.

### 10.2.2. Supervision

HdR: Julien Mairal, large-scale machine learning and applications, Univ. Grenoble Alpes, October 2017.

PhD: Hongzhou Lin, Generic acceleration schemes for gradient-based optimization in machine learning, November 2017. Supervision Julien Mairal and Zaid Harchaoui.

PhD: Thomas Dias-Alves, Modélisation du déséquilibre de liaison en génomique des populations par méthodes d'optimisation, Univ. Grenoble Alpes, December 2017. Supervision Julien Mairal and Michael Blum.

PhD: Mattis Paulin, Of Learning Visual Representations Robust to Invariances for Image Classification and Retrieval, March 2017, Univ. Grenoble-Alpes. Supervision Z. Harchaoui, C. Schmid, F. Perronnin, J. Mairal, and M. Douze.

PhD: Vicky Kalogeiton, Localising spatially and temporally objects and actions in videos, September 2017, Univ. Edinburgh, supervision V. Ferrari and C. Schmid.

### 10.2.3. Juries

K. Alahari: Raghudeep Gadde, 2017, jury member, these, Ecole des Ponts ParisTech, Paris.

K. Alahari: Lukas Neumann, 2017, rapporteur, these, Czech Technical University, Prague.

J. Mairal: Matthieu Carrière, novembre 2017, rapporteur, these, Université Paris-Saclay.

J. Mairal: Thomas Moreau, décembre 2017, rapporteur, these, Université Paris-Saclay.

J. Mairal: Olga Permiakova, novembre 2017, member of "comité de suivi de thèse", Univ. Grenoble Alpes.

J. Verbeek: Fabien Baradel, member of "comité de suivi de thèse", INSA Lyon.

J. Verbeek: Praveen Kulkarni, rapporteur, these, Univ. Caen.

J. Verbeek: Damien Fourure, Univ. Jean Monnet, Saint Etienne, France.

C. Schmid: Thibaut Durand, September 2017, examinateur, Université Pierre et Marie Curie.

C. Schmid: Christos Georgakis, June 2017, rapport these, Imperial College, London

C. Schmid: Pedro Oliveira Pinheiro, January 2017, rapport these, EPFL.

## 10.3. Popularization

- J. Mairal est intervenu lors du cycle de conférences ISN, à destination des professeurs de lycée.
- J. Mairal a co-publié un article dans ERCIM news, avec Gaël Varoquaux, Bertrand Thirion et Arthur Mensch.
- C. Schmid a co-publié un article "Extraction d'informations à partir des images". Les Big Data à Découvert. Editions du CNRS, 2017

## WILLOW Project-Team

# 10. Dissemination

## 10.1. Promoting Scientific Activities

### 10.1.1. Scientific Events Organisation

#### 10.1.1.1. General Chair, Scientific Chair

- I. Laptev will be program co-chair of IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2018.

#### 10.1.1.2. Member of the Organizing Committees

- M. Trager is an organizer of “Minisymposium” on “Algebraic Vision” at the SIAM conference on Applied Algebraic Geometry (Atlanta, July 31 – August 4, 2017).
- G. Varol is an organizer of “Women in Computer Vision Workshop” at IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2017.
- G. Varol is an organizer of “Multiview Relationships in 3D Data Workshop” at International Conference on Computer Vision (ICCV), 2017.

### 10.1.2. Scientific Events Selection

#### 10.1.2.1. Area chairs

- IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2018 (J. Sivic).
- International Conference on Computer Vision (ICCV), 2017 (J. Sivic).
- European Conference on Computer Vision (ECCV), 2018 (I. Laptev, J. Sivic).

#### 10.1.2.2. Member of the Conference Program Committees

- IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2017 (G. Cheron, I. Laptev, A. Osokin, J. Sivic).
- IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2018 (J.-B. Alayrac, M. Oquab, R. Rezende, I. Rocco, G. Varol).
- International Conference on Computer Vision (ICCV), 2017 (I. Laptev, A. Osokin).
- Neural Information Processing Systems (NIPS), 2017 (A. Osokin, J. Sivic).
- International Conference on Learning Representations (ICLR), 2017 (J. Sivic).
- International Conference on Machine Learning (ICML), 2017 (A. Osokin).
- IEEE International Conference on Robotics and Automation (ICRA), 2018 (A. Miech).

### 10.1.3. Journals

#### 10.1.3.1. Member of the editorial board

- International Journal of Computer Vision (I. Laptev, J. Ponce, J. Sivic).
- IEEE Transactions on Pattern Analysis and Machine Intelligence (I. Laptev, J. Sivic).
- Foundations and Trends in Computer Graphics and Vision (J. Ponce).
- I. Laptev co-edit a special issue on “Deep Learning for Computer Vision” in Computer Vision and Image Understanding.

#### 10.1.3.2. Reviewer

- International Journal of Computer Vision (G. Cheron, M. Trager, G. Varol).

- IEEE Transactions on Pattern Analysis and Machine Intelligence (J.-B. Alayrac, G. Cheron, A. Osokin, M. Trager, G. Varol).
- IEEE Transactions on Circuits and Systems for Video Technology (G. Varol).

#### 10.1.4. Others

- J. Sivic is senior fellow of the Neural Computation and Adaptive Perception program of the Canadian Institute of Advanced Research.
- A. Bursuc obtained the outstanding reviewer award at International Conference on Computer Vision (ICCV), 2017.

#### 10.1.5. Invited Talks

- I. Laptev, Seminar, Inria Rennes, December, 2017.
- I. Laptev, Invited talk, Chalearn Workshop on Action, Gesture, and Emotion Recognition, Venice, October, 2017.
- I. Laptev, Invited talk, The Joint Video and Language Understanding Workshop, Venice, October, 2017.
- I. Laptev, Invited talk, Rentrée ENS, Paris, September, 2017
- I. Laptev, Invited talk, ML Day, Pré-GDR IA, Paris, September 2017.
- I. Laptev, Invited talk, Frontiers of Video Technology workshop, Adobe, July, 2017.
- I. Laptev, Invited talk, Workshop on YouTube-8M Large-Scale Video Understanding, Honolulu, July, 2017.
- I. Laptev, Invited talk, Workshop on Visual Understanding Across Modalities, Honolulu, July, 2017.
- I. Laptev, Plenary talk, Iberian Conference on Pattern Recognition and Image Analysis, Faro, June, 2017.
- I. Laptev, Invited talk, Paris ML Meetup Spatio-temporal Series Hackathon, Paris, February, 2017.
- A. Miech, Invited Talk, Facebook AI Research, Paris, September 2017.
- A. Miech, Invited Talk, DGA TIM2017 Seminar, Paris, July 2017.
- A. Miech, Invited Talk, Paris ML Meetup, Paris, June 2017.
- J. Ponce, Keynote speaker, Korean Conference on Computer Vision, Seoul, June 2017.
- J. Ponce, Invited talk, BioVision, Lyon, April 2017.
- J. Ponce, Invited talk, Dept. of computer science of the University of Central Florida, Orlando, February 2017.
- J. Ponce, Invited talk, New York University, Center for Data Science, September 2017.
- J. Ponce, Invited talk, Facebook AI Research, New York, October 2017.
- J. Ponce, Invited talk, Amazon, Seattle, November 2017.
- J. Ponce, Invited talk, AEF conference, Paris, 2017.
- J. Ponce, Invited talk, BIOVISION, The World Life Sciences Forum, Lyon, April 2017.
- J. Ponce, Invited talk, DGSi, 2017.
- J. Ponce, Invited talk, DRM 20th Anniversary, 2017.
- J. Sivic, Seminar, KTH Stockholm, January, 2017.
- J. Sivic, Invited talk, ParisTech Telecom, January, 2017.
- J. Sivic, Invited talk, University of Amsterdam, March, 2017.
- J. Sivic, Invited talk, ORASIS, journées francophones des jeunes chercheurs en vision par ordinateur, June, 2017.
- J. Sivic, Invited talk, Visual Understanding for Interaction workshop, CVPR 2017, July, 2017.

- J. Sivic, Invited talk, Frontiers of Video Technology workshop, Adobe, July, 2017.
- J. Sivic, Invited talk, Inria Rennes, September, 2017.
- J. Sivic, Seminar, UC Berkeley, December, 2017.
- J. Sivic, Invited talk, the CIFAR workshop, Long Beach, December 2017.

#### **10.1.6. Leadership within the Scientific Community**

- Member of the advisory board for the IBM Watson AI Xprize (J. Ponce).
- Member of the steering committee of France AI (J. Ponce).
- Member, advisory board, Computer Vision Foundation (J. Sivic).

#### **10.1.7. Scientific Expertise**

- J. Sivic gave an overview of state-of-the-art in computer vision at the seminar on deep learning at Academie des Technologies, Paris, November 2017.

#### **10.1.8. Research Administration**

- Member, Bureau du comité des projets, Inria, Paris (J. Ponce)
- Director, Department of Computer Science, Ecole normale supérieure (J. Ponce)
- Member, Scientific academic council, PSL Research University (J. Ponce)
- Member, Research representative committee, PSL Research University (J. Ponce).
- Member of Inria Commission de developpement technologique (CDT), 2012- (J. Sivic).
- Member of the Hiring Committe for the tenure track position at CentraleSupélec (I. Laptev).
- Member of the Hiring Committee for Professor of Computer Vision at CentraleSupélec (I. Laptev).

### **10.2. Teaching - Supervision - Juries**

#### **10.2.1. Teaching**

- Master : M. Aubry, K. Alahari, I. Laptev and J. Sivic "Introduction to computer vision", M1, Ecole normale superieure, 36h.
- Master : I. Laptev, J. Ponce and J. Sivic (together with C. Schmid, Inria Grenoble), "Object recognition and computer vision", M2, Ecole normale superieure, and MVA, Ecole normale superieure de Cachan, 36h.
- Master : I. Laptev and J. Sivic, Cours PSL-ITI - Informatique, mathematiques appliques pour le traitement du signal et l'imagerie, 20h.

#### **10.2.2. Supervision**

PhD in progress : Thomas Eboli, started in Oct 2017, J. Ponce.

PhD in progress : Zongmian Li, "Learning to manipulate objects from instructional videos", started in Oct 2017, I. Laptev, J. Sivic and N. Mansard (LAAS/CNRS, Toulouse).

PhD in progress : Yana Hasson, started in Nov 2017, I. Laptev and C. Schmid.

PhD in progress : Dmitry Zhukov, "Learning from instruction videos for personal assistants", started in Oct 2017, I. Laptev and J. Sivic.

PhD in progress : Ignacio Rocco, "Estimating correspondence between images via convolutional neural networks", started in Jan 2017, J. Sivic, R. Arandjelovic (Google DeepMind).

PhD in progress : Antoine Miech, "Understanding long-term temporal structure of videos", started in Oct 2016, I. Laptev, J. Sivic, P. Bojanowski (Facebook AI Research).

PhD in progress : Gul Varol, "Deep learning methods for video interpretation", started in Oct 2015, I. Laptev, C. Schmid.



PhD in progress : Julia Peyre, “Learning to reason about scenes from images and language”, started in Oct 2015, C. Schmid, I. Laptev, J. Sivic.

PhD in progress : Jean-Baptiste Alayrac, “Structured learning from video and natural language”, started in 2014, I. Laptev, J. Sivic and S. Lacoste-Julien (Inria SIERRA / U. Montreal).

PhD : Rafael Sampaio de Rezende, “New methods for image classification, image retrieval and semantic correspondence”, graduated in 2017, J. Ponce.

PhD in progress : Guilhem Cheron, “Structured modeling and recognition of human actions in video”, started in 2014, I. Laptev and C. Schmid.

PhD in progress : Theophile Dalens, “Learning to analyze and reconstruct architectural scenes”, starting in Jan 2015, M. Aubry and J. Sivic.

PhD in progress : Vadim Kantorov, “Large-scale video mining and recognition”, started in 2012, I. Laptev.

PhD in progress : Maxime Oquab, “Learning to annotate dynamic scenes with convolutional neural networks”, started in Jan 2014, L. Bottou (Facebook AI Research), I. Laptev and J. Sivic.

PhD in progress : Matthew Trager, “Projective geometric models in vision”, started in 2014, J. Ponce and M. Hebert (CMU).

PhD in progress : Tuang Hung VU, “Learning functional description of dynamic scenes”, started in 2013, I. Laptev.

### 10.2.3. *Juries*

PhD thesis committee:

- Ahmet Iscen, University of Rennes, France, 2017, (J. Sivic, rapporteur).
- Edouard Oyallon, ENS, France, 2017, (I. Laptev, examinateur).
- Juan Manuel PÉREZ RÚA, Inria Rennes, France, 2017, (I. Laptev, examinateur).
- Ali Razavian, KTH Stockholm, Sweden, 2017 (J. Sivic, reviewer).
- Francisco Suzano Massa, ENPC, France, 2017, (J. Sivic, examinateur).
- Mattis Paulin, Université de Grenoble, France, 2017 (J. Sivic, rapporteur).

## 10.3. Popularization

- Interview with Science et Vie, June 2017 (J. Ponce).
- Interview with Forbes Russia, June 2017 (J. Ponce).
- Interview "Science et Vie Junior", July 2017 (J. Ponce).
- Interview for "Le jaune et le rouge", Oct. 2017 (J. Ponce).
- Interview for the "les 100 français de l'IA" dossier of Usine Nouvelle, Dec. 2017 (J. Ponce).
- Two articles in "Binaires" for the newspaper Le Monde (J. Ponce).