



RESEARCH CENTER

FIELD

Activity Report 2013

Section Dissemination

Edition: 2014-03-19

1. ABS Project-Team	9
2. ABSTRACTION Project-Team	10
3. ACES Project-Team	16
4. ADAM Project-Team	17
5. ALEA Project-Team	22
6. ALF Project-Team	24
7. ALGORILLE Project-Team	27
8. ALICE Project-Team	30
9. ALPAGE Project-Team	33
10. ALPINES Team	37
11. AMIB Project-Team	39
12. ANGE Team	44
13. AOSTE Project-Team	47
14. APICS Project-Team	50
15. ARAMIS Team	52
16. ARIC Project-Team	56
17. ARLES Project-Team	60
18. ASAP Project-Team	62
19. ASCLEPIOS Project-Team	66
20. ASCOLA Project-Team	70
21. ASPI Project-Team	74
22. ATEAMS Project-Team	76
23. ATHENA Project-Team	80
24. ATLANMOD Project-Team	82
25. AVALON Team	85
26. AVIZ Project-Team	90
27. AXIS Project-Team	94
28. AYIN Team	99
29. BACCHUS Team	102
30. BAMBOO Project-Team	105
31. BANG Project-Team	107
32. BEAGLE Project-Team	110
33. BIGS Project-Team	115
34. BIOCORE Project-Team	116
35. BIPOP Project-Team	120
36. BONSAI Project-Team	122
37. CAD Team	125
38. CAGIRE Team	126
39. CAIRN Project-Team	128
40. CALVI Project-Team	133
41. CAMUS Team	135

42. CAMEL Project-Team	137
43. CARMEN Team	141
44. CARTE Project-Team	143
45. CASCADE Project-Team	146
46. CASSIS Project-Team	150
47. CASTOR Team	155
48. CELTIQUE Project-Team	157
49. CEPAGE Project-Team	160
50. CIDRE Project-Team	162
51. CLASSIC Project-Team	171
52. CLIME Project-Team	173
53. COATI Project-Team	175
54. COFFEE Project-Team	181
55. COMETE Project-Team	183
56. COMMANDS Project-Team	186
57. COMPSYS Project-Team	187
58. CONTRAINTES Project-Team	190
59. CONVECS Project-Team	193
60. COPRIN Project-Team	197
61. CORIDA Project-Team	199
62. CORTEX Team	200
63. CQFD Project-Team	202
64. CRYPT Team	205
65. DAHU Project-Team	206
66. DANTE Team	208
67. DEDUCTEAM Exploratory Action	211
68. DEFI Project-Team	214
69. DEMAR Project-Team	217
70. DIANA Team	219
71. DICE Team	221
72. DIONYSOS Project-Team	223
73. DISCO Project-Team	230
74. DOLPHIN Project-Team	233
75. DRACULA Project-Team	239
76. DREAM Project-Team	242
77. DREAMPAL Team	244
78. DYLISS Project-Team	246
79. DYOGENE Project-Team	250
80. E-MOTION Project-Team	252
81. ESPRESSO Project-Team	254
82. EXMO Project-Team	255

83. FLOWERS Project-Team	257
84. FLUMINANCE Project-Team	262
85. FOCUS Project-Team	264
86. FORMES Team	268
87. FUN Project-Team	269
88. GALAAD Project-Team	271
89. GALEN Project-Team	273
90. GALLIUM Project-Team	276
91. GAMMA3 Project-Team	279
92. GANG Project-Team	280
93. GECO Project-Team	282
94. GENSCALE Project-Team	283
95. GEOMETRICA Project-Team	286
96. GEOSTAT Project-Team	291
97. GRACE Project-Team	293
98. GRAND-LARGE Project-Team	296
99. GRAPHIK Project-Team	297
100. HIEPACS Project-Team	301
101. HIPERCOM2 Team	305
102. HYBRID Project-Team	308
103. Hycomes Team	312
104. I4S Project-Team	313
105. IBIS Project-Team	314
106. IMAGINE Project-Team	319
107. IMARA Project-Team	323
108. IN-SITU Project-Team	327
109. INDES Project-Team	331
110. IPSO Project-Team	335
111. KERDATA Project-Team	338
112. LAGADIC Project-Team	341
113. LEAR Project-Team	346
114. LFANT Project-Team	349
115. LINKS Team	352
116. LOGNET Team	354
117. M3DISIM Team	355
118. MADYNES Project-Team	356
119. MAESTRO Project-Team	362
120. MAGIQUE-3D Project-Team	369
121. MAGNET Team	372
122. MAGNOME Project-Team	374
123. MAGRIT Project-Team	375

124. MAIA Project-Team	377
125. MANAO Team	382
126. MARELLE Project-Team	385
127. MASAIE Project-Team	387
128. MATHRISK Project-Team	388
129. MAVERICK Project-Team	393
130. Maxplus Project-Team	395
131. MC2 Project-Team	399
132. MCTAO Project-Team	401
133. MESCAL Project-Team	403
134. MEXICO Project-Team	405
135. MICMAC Project-Team	408
136. MIMETIC Project-Team	415
137. MINT Project-Team	420
138. MISTIS Project-Team	424
139. MNEMOSYNE Team	427
140. MOAIS Project-Team	429
141. MODAL Project-Team	432
142. MODEMIC Project-Team	434
143. MOISE Project-Team	437
144. MOKAPLAN Exploratory Action	441
145. MORPHEME Project-Team	442
146. MORPHEO Team	445
147. MUTANT Project-Team	447
148. MYRIADS Project-Team	450
149. NACHOS Project-Team	455
150. NANO-D Team	456
151. NECS Project-Team	457
152. NEUROMATHCOMP Project-Team	459
153. NEUROSYS Team	461
154. NON-A Project-Team	463
155. NUMED Project-Team	466
156. OAK Project-Team	468
157. OASIS Project-Team	471
158. OPALE Project-Team	474
159. ORPAILLEUR Project-Team	476
160. PANAMA Project-Team	478
161. PAREO Project-Team	480
162. PARIETAL Project-Team	483
163. PARKAS Project-Team	485
164. PAROLE Project-Team	487

165. PARSIFAL Project-Team	492
166. PERCEPTION Team	494
167. PHOENIX Project-Team	495
168. PI.R2 Project-Team	498
169. POEMS Project-Team	503
170. POLSYS Project-Team	510
171. POMDAPI Project-Team	514
172. Popix Team	516
173. POTIOC Team	518
174. Prima Project-Team	521
175. PRIVATICS Team	526
176. PROSECCO Project-Team	528
177. RAP Project-Team	530
178. REALOPT Project-Team	531
179. REGAL Project-Team	533
180. REGULARITY Project-Team	538
181. REO Project-Team	539
182. REVES Project-Team	546
183. RMOD Project-Team	548
184. ROMA Team	551
185. RUNTIME Project-Team	553
186. SAGE Project-Team	556
187. SCIPORT Team	559
188. SCORE Team	560
189. SECRET Project-Team	563
190. SECSI Project-Team	567
191. SELECT Project-Team	571
192. SÉMAGRAMME Project-Team	573
193. SequeL Project-Team	576
194. SERPICO Project-Team	581
195. SHACRA Project-Team	584
196. SIERRA Project-Team	587
197. SIMPAF Project-Team	592
198. SIROCCO Project-Team	593
199. SISYPHE Project-Team	596
200. SMIS Project-Team	597
201. SOCRATE Project-Team	599
202. SPADES Team	602
203. Specfun Team	603
204. STARS Project-Team	605
205. STEEP Team	607

206. SUMO Team	608
207. TAO Project-Team	610
208. TASC Project-Team	614
209. TEXMEX Project-Team	618
210. TITANE Team	623
211. TOCCATA Team	625
212. TOSCA Project-Team	631
213. TRIO Team	636
214. TRISKELL Project-Team	638
215. TYREX Team	643
216. URBANET Team	645
217. VEGAS Project-Team	648
218. VERIDIS Project-Team	650
219. VIRTUAL PLANTS Project-Team	653
220. VISAGES Project-Team	656
221. WILLOW Project-Team	659
222. WIMMICS Project-Team	663
223. ZENITH Project-Team	670

ABS Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Organization of Schools and Courses

- **(Winter school Algorithms in Structural Bio-informatics)** Together with J. Cortès from LAAS / CNRS (Toulouse) and C. Robert (IBPC/CNRS), F. Cazals organized the winter school *Algorithms in Structural Bio-informatics*⁴. The goal of this winter school is to present state-of-the-art concepts, algorithms and software tools meant to model the flexibility of proteins, with a focus on methodological developments. The audience consisted of 30 PhD students and post-docs from all over the world.
- **(Statistical Learning Theory: a Short Course)** F. Cazals organized a mini-course by P. Grunwald, from the CWI. The details can be found at <https://team.inria.fr/abs/statistical-learning-theory-a-short-course/>.

8.1.2. Conference Program Committees

– F. Cazals was member of the following PC:

- Symposium on Geometry Processing.
- Computer Graphics International
- ACM Conference on Bioinformatics, Computational Biology and Biomedical Informatics
- International Conference on Pattern Recognition in Bioinformatics
- Computational Intelligence Methods for Bioinformatics and Biostatistics

8.1.3. Appointments

– F. Cazals was appointed as Panel expert for the 7th Framework Programme 7 from the EU, Information and Communication Technologies /

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master: F. Cazals, *Geometric and topological modeling with applications in biophysics*, 24h, Ecole Centrale Paris, France, 3rd year of the engineering curriculum in applied mathematics.

Master: F. Cazals, *Algorithmic problems in computational structural biology*, 24h, Master of Science in Computational Biology from the University of Nice Sophia Antipolis, France. (<http://cbb.unice.fr>)

Graduate level: F. Cazals and C. Robert, *Analyzing conformational landscapes, with applications to the design of collective coordinates*, 6h, Winter school *Algorithms in Structural Bio-informatics*.

8.2.2. Supervision

(PhD thesis, ongoing) C. Roth, *Modeling the flexibility of macro-molecules: theory and applications*, University of Nice Sophia Antipolis. Advisor: F. Cazals.

(PhD thesis, ongoing) A. Lheritier, *Scoring and discriminating in high-dimensional spaces: a geometric based approach of statistical tests*, University of Nice Sophia Antipolis. Advisor: F. Cazals.

(PhD thesis, ongoing) D. Agarwal, *Towards nano-molecular design: advanced algorithms for modeling large protein assemblies*, University of Nice Sophia Antipolis. Advisor: F. Cazals.

(PhD thesis, ongoing) S. Marillet, *Modeling antibody - antigen complexes*, Univ. of Nice Sophia Antipolis. The thesis is co-advised by F. Cazals and P. Boudinot (INRA Jouy-en-Josas).

⁴<http://algosb.sciencesconf.org/>

ABSTRACTION Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Academy Members, Professional Societies

Patrick Cousot is a member of the [Academia Europaea](#).

Patrick Cousot is member of the IFIP working group WG 2.3 on programming methodology.

Patrick Cousot is a member of the Board of Trustees and of the Scientific Advisory Board of the [IMDEA](#) (Instituto madrileño de estudios avanzados—Research Institute in Software Development Technology), Madrid, Spain and of the Asian Association for Foundations of Software (AAFS).

9.1.2. Collective Responsibilities

Jérôme Feret and Xavier Rival are members of the lab council of the Laboratoire d'Informatique de l'École normale supérieure.

Jérôme Feret was a member of the *comité de sélection* (hiring committee) to hire an assistant professor at the Université de Lille 1.

Antoine Miné was a member of the *comité de sélection* (hiring committee) to hire an assistant professor at the École normale supérieure (Paris).

9.1.3. Editorial Boards and Program Committees

— Patrick Cousot is member of the advisory board of the [Higher-Order Symbolic Computation](#) journal (HOSC, Springer) and of the [Journal of Computing Science and Engineering](#) (JCSE, Kiise).

Patrick Cousot is member of the steering committees of the Static Analysis Symposium (SAS) and the Verification, Model-Checking and Abstract Interpretation (VMCAI) international conference.

— Radhia Cousot is member of the advisory board of the [Higher-Order Symbolic Computation](#) journal (HOSC, Springer) and the [Central European Journal of Computer Science](#) (CEJCS, Versita & Springer).

Radhia Cousot is member of the steering committees of the Static Analysis Symposium (SAS), the Workshop on Numerical and Symbolic Abstract Domains (NSAD), the Workshop on Static Analysis and Systems Biology (SASB) and the Workshop on Tools for Automatic Program Analysis (TAPAS).

Radhia Cousot was the program committee chair of the 40th ACM SIGACT-SIGPLAN Symposium on Principles of Programming Languages (POPL 2013), Rome, Italy, January 23-25, 2013 [25].

Radhia Cousot was member of the program committee of the 5th NASA Formal Methods Symposium (NFM 2013), May 13-16, 2013, NASA Ames Research Center, California, USA.

— Jérôme Feret is a member of the editorial board of the [Frontiers in Genetics](#) journal and the [Open Journal of Modelling and Simulation](#)

Jérôme Feret is a member of the steering committee of the Workshop on Static Analysis and Systems Biology (SASB).

Jérôme Feret was co-program committee chair of the 4th International Workshop on Static Analysis and Systems Biology (SASB 2013), Seattle, USA, June 19, 2013.

Jérôme Feret was member of the program committees of the 40th ACM SIGPLAN Symposium on Principles of Programming Languages (POPL 2013 ERC), Rome, Italy, January 23-25, 2013; the 5th International Conference on Bioinformatics, Biocomputational Systems and Biotechnologies (BIOTECHNO 2013), Lisbon, Portugal, March 24-29, 2013; the 4th International Workshop on Computational Models for Cell Processes (CompMod 2013), Turku, Finland, June 11, 2013; the 11th Conference on Computational Methods in Systems Biology (CMSB 2013), Klosterneuburg, Austria, September 23-25, 2013; the 2nd International Conference on Biomedical Engineering and Biotechnology (ICBEB 2013), 2013; the 15th International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI 2014), San Diego, USA, January 19-21, 2014. He is member of the program committees of the 6th International Conference on Bioinformatics, Biocomputational Systems and Biotechnologies (BIOTECHNO 2014), Chamonix, France, April 20-24, 2014; the 10th International Workshop on Developments in Computational Models (DCM 2014), Vienna, Austria, July 13, 2014; the International Workshop on Verification of Molecular Devices and Programs (VEMDP 2014), Vienna, Austria, July 17, 2014; the 8th IFIP Theoretical Computer Science Conference (IFIP TCS 2014), Rome, Italy, September 1-3, 2014; the 5th International Workshop on Static Analysis and Systems Biology (SASB 2014), Munich, Germany, September 10, 2014; the 9th International Workshop on Formal Methods for Industrial Critical Systems (FMICS 2014), Florence, Italy, September 11-12, 2014; the 3rd International Conference on Biomedical Engineering and Biotechnology (ICBEB 2014), Beijing, China, September 19-21, 2014.

— Jonathan Hayman was a member of the program committees of the 40th ACM SIGPLAN Symposium on Principles of Programming Languages (POPL 2013 ERC), Rome, Italy, January 23-25, 2013; the 4th International Workshop on Static Analysis and Systems Biology (SASB 2013), Seattle, USA, June 19, 2013.

— Antoine Miné is a member of the editorial boards of The Scientific World Journal in Computer Science and of the journal Conference Papers in Computer Science.

Antoine Miné was a member of the program committee of the 20th International Static Analysis Symposium (SAS 2013), Seattle, WA, USA, June 20–22, 2013, and the 3rd International Workshop on Safety and Security in Cyber-Physical Systems (SSCPS 2013), Washington, D.C, USA., June, 18–20, 2013. He is a member of the program committee of the 11th School on Modelling and Verifying Parallel Processes (MOVEP 2014), Nantes, France, July 7–11, 2014, the 8th International Symposium on Theoretical Aspects of Software Engineering (TASE 2014), Changsha, China, 1–3 September, 2014, the 11th International Conference on Integrated Formal Methods (iFM 2014), Bertinoro, Italy, September 9–11, 2014, and of the external review committee of the 42nd ACM SIGPLAN Symposium on Principles of Programming Languages (POPL 2015 ERC), Mumbai, India, January 11–18, 2015.

— Xavier Rival is member of the steering committee of the Workshop on Tools for Automatic Program Analysis (TAPAS).

Xavier Rival is Co-Chair of the program committee of the 15th International Conference on Verification, Model Checking and Abstract Interpretation (VMCAI 2014, San Diego, USA, January 19-21, 2014 [26]).

Xavier Rival was member of the extended review committee of the 40th ACM SIGPLAN Symposium on Principles of Programming Languages (POPL 2013 ERC), Rome, Italy, January 23-25, 2013; the program committee of the program committee the European Symposium On Programming (ESOP 2013), Rome, Italy, March 2013; the program committee of the 41st ACM SIGPLAN Symposium on Principles of Programming Languages (POPL 2014), San Diego, USA, January 22-24, 2014;

9.1.4. Participation in Conferences

Luminy workshop: Workshop on Modelisation, Optimisation, and Static Analysis (Luminy, France, January 6–10, 2013).

Jérôme Feret attended the workshop and gave a talk on model reduction of Kappa models.

VMCAI: 14th International Conference on Verification, Model Checking, and Abstract Interpretation (Roma, Italy, January 20–22, 2013).

Antoine Miné, Xavier Rival, Antoine Toubhans and Caterina Urban attended the conference. Antoine Toubhans presented an article [20].

- POPL: 40th ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages, (Roma, Italy, January 23–25, 2013).
Xavier Rival and Caterina Urban attended the conference.
- Bytecode: Eighth Workshop on Bytecode Semantics, Verification, Analysis, and Transformation (Rome, Italy, March 23, 2013).
Mehdi Bouaziz attended the workshop and gave a talk on [11].
- CC: Twenty-second International Conference on Compiler Construction (Rome, Italy, March 21–22, 2013).
Mehdi Bouaziz attended the conference.
- ESOP: Twenty-second European Symposium on Programming (Rome, Italy, March 19–22, 2013).
Mehdi Bouaziz attended the conference.
- FASE: Sixteenth International Conference on Fundamental Approaches to Software Engineering (Rome, Italy, March 20–22, 2013).
Mehdi Bouaziz attended the conference.
- POST: Second Conference on Principles of Security and Trust (Rome, Italy, March 18–19, 2013).
Mehdi Bouaziz attended the conference.
- TACAS: Nineteenth International Conference on Tools and Algorithms for the Construction and Analysis of Systems (Rome, Italy, March 18–21, 2013).
Mehdi Bouaziz attended the conference.
- RBMW: Rule-Based Modelling Workshop (Paris, France, April 15–16, 2013).
Wassim Abou-jaoudé, Ferdinanda Camporesi, Jérôme Feret, and Norman Ferns attended the workshop. Jérôme Feret gave a talk on [12]. Norman Ferns gave a talk on backward bisimulation.
- In'Tech: In'Tech Seminar on Formal validation of industrial critical systems (Grenoble, France, April 18, 2013).
Jérôme Feret attended the workshop and gave a talk on the **ASTRÉE** analyzer.
- Dagstuhl 13162: Workshop on Pointer Analysis (Dagstuhl, Germany, April 14–19, 2013).
Xavier Rival attended the workshop and gave a talk on the modular construction of shape analyzers.
- SASB: Fourth International Workshop on Static Analysis and Systems Biology (Seattle, USA, June 19, 2013).
Jérôme Feret and Jonathan Hayman attended the workshop. Jérôme Feret chaired the workshop and chaired half of the sessions. Jérôme Feret gave a talk on [12] and Jonathan Hayman gave a talk on [15].
- SAS: 21th International Static Analysis Symposium (Seattle, WA, USA, June 20–22, 2013).
Jérôme Feret and Caterina Urban attended the conference, and Caterina Urban presented a paper [24].
- ForumMF: Deuxième Forum Méthodes Formelles, Laboratoire d'Analyse et d'Architecture des Systèmes (LAAS-CNRS, Toulouse, France, June 28, 2013).
Mehdi Bouaziz attended the workshop and gave a talk on Specification and verification of programs with CodeContracts.
- WST: 13th International Workshop on Termination (Bertinoro, Italy, 29–31 August, 2013).
Caterina Urban attended the workshop and presented an article [23].
- DSS2013: Dave Schmidt Symposium (Festschrift for Dave Schmidt, Manhattan, Kansas, September 18–19, 2013).
Xavier Rival attended the symposium and presented an article [13].
- In'Tech: In'Tech Seminar on Formal validation of industrial critical systems (Aix en Provence, France, October 1, 2013).
Jérôme Feret attended the workshop and gave a talk on the **ASTRÉE** analyzer.

CMSB: Computational Methods in Systems Biology (Klosterneuburg, Austria, September 23-25, 2013). Ferdinanda Camporesi, Jérôme Feret, and Norman Ferns attended the conference. Jérôme Feret chaired a session and gave a talk on [12].

RAIM: 6ème Rencontres Arithmétiques de l’Informatique Mathématique (Paris, France, 18–20 November, 2013).

Antoine Miné attended the conference and gave a talk on generic and specific abstract domains for the static analysis of programs with floating-point arithmetic.

AVDCPS: Workshop on Analysis and Verification of Dependable Cyber Physical Software (Changsha, November 23-24, 2013).

Mehdi Bouaziz, Tie Cheng, Jérôme Feret, Xavier Rival, and Caterina Urban attended the conference. Jérôme Feret chaired a session. Mehdi Bouaziz, Tie Cheng, Jérôme Feret, Xavier Rival, and Caterina Urban gave talks.

9.1.5. Invitations and Participation in Seminars

— Arlen Cox gave a talk at LIAFA (Paris 7) about “QUIC Graphs: Relational Invariant Generation for Containers”.

— Jérôme Feret gave a talk at IRIT (Toulouse, France) on the 28th of May, 2013 about model reduction in Kappa. He gave a talk on the **OPENKAPPA** platform at a meeting of the ANR BIOTEMPO project on the 30th of January, 2013 and a talk on context sensitive model reduction [12] at another meeting of the ANR BIOTEMPO project in Paris on the 10th of April, 2013. He gave a talk on context sensitive model reduction [12] at ETH Zürich on the 5th of June, 2013. He gave on talk on the analysis of digital filters [55], [56] at a meeting of the ANR VERASCO on the 16th of September, 2013.

— Norman Ferns gave two talks on the Kantorovich metric at the Computer Science Seminar of the University of Liège, Belgium, on the 5th of April 2013 and at the Technical Talk Seminar of the TU Dortmund University, Germany, on the 5th of July 2013.

— Antoine Miné gave a talk on “Constraint solving using numeric abstract domains” at the LIAFA Seminar “Vérification” (Paris, France) on April the 8th, 2013 and at the CEA LSL/LMeasi Seminar (Palaiseau, France) on June the 4th, 2013.

— Caterina Urban gave a talk on “The abstract domain of segmented ranking functions” at University of Udine (Italy) in March 2013.

— Xavier Rival gave a talk on the combination of memory abstractions at the IFIP 2.4 Working Group (Mysore, India, March 2013). He gave a talk on hierarchical shape abstract domains at IBM (Bangalore, India, March 2013). He gave a talk on the modular construction of shape analyzers at LIAFA (Université Paris 7, May 2013), at Cambridge University (Cambridge, UK, September 2013), at Seoul National University (Seoul, South Korea, October 2013), at KAIST (Daejeon, South Korea, November 2013), at Hanyang University (Ansan, South Korea, November 2013), at the Institute of Software of the Chinese Academy of Sciences (Beijing, November 2013). He gave a talk on the static analysis of safety critical embedded systems at Seoul National University (Seoul, South Korea, October 2013) and at KAIST (Daejeon, South Korea, November 2013). He gave a talk on hierarchical shape abstract domains at Seoul National University (Seoul, South Korea, November 2013).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence :

- Medhi Bouaziz, Introduction to Programmation and Computer Sciences (Practical Works), 36ETD, L1, Université Paris-Diderot, France.
- Mehdi Bouaziz, Intensive course of algorithm, 35h ETD, Epita, Le Kremlin-Bicêtre, France.

- Mehdi Bouaziz, Preparation to the International Olympiad in Informatics, 40h ETD, Epita, Le Kremlin-Bicêtre, France.
- Mehdi Bouaziz took the French team to the International Olympiad in Informatics at Brisbane, Australia.
- Tie Cheng, Introduction to algorithmics, 42h ETD, L3, École Polytechnique, Palaiseau, France.
- Jérôme Feret, and Caterina Urban, Mathematics, 40h ETD, L1, Licence Frontiers in Life Sciences (FdV), Université Paris-Descartes, France.
- Xavier Rival, Introduction to algorithmics, 40h ETD, L3, École Polytechnique, Palaiseau, France.
- Arnaud Spiwack, Introduction to recursive programming, 42h ETD, Université Pierre et Marie Curie (Paris 6), Paris, France.
- Antoine Toubans, Mathematics, 40hETD, L2, Université de Jussieu, Paris, France.

Master :

- Jérôme Feret, Computational Biology, 9h ETD, M1. Interdisciplinary Approaches to Life Science (AIV), Master Program, Université Paris-Descartes, France.
- Jérôme Feret, Antoine Miné, and Xavier Rival, Abstract Interpretation: application to verification and static analysis, 72h ETD, M2. Parisian Master of Research in Computer Science (MPRI). École normale supérieure. France.
- Xavier Rival, 20h ETD, M1, École Polytechnique, Palaiseau, France.
- Mehdi Bouaziz, Tie Cheng, Jérôme Feret, Antoine Miné, Xavier Rival, Caterina Urban, Abstract Interpretation, 30h ETD, M1-M2. East China Normal University, Shanghai, China.

Doctorat :

- Jérôme Feret, Abstract interpretation of intracellular signaling pathways, 4.5h ETD, CNRS Summer School on Formal modeling of Biological Regulatory Networks, Porquerolles, France.
- Antoine Miné, Inferring affine program invariants by abstract interpretation, 4.5h ETD, Spring School on Polyhedra Code Analysis and Optimization, Saint Germain au Mont d'Or, France, May 13–17, 2013.

9.2.2. Supervision

HdR : Antoine Miné, Static analysis by abstract interpretation of concurrent programs, École normale supérieure, 28 May 2013.

PhD in progress:

- Mehdi Bouaziz, Static analysis of security properties by abstract interpretation. November 2011, Patrick Cousot and Jérôme Feret, École Normale Supérieure.
- Ferdinanda Camporesi, Abstraction of Quantitative Semantics of Rule-based models, January 2009, Radhia Cousot and Jérôme Feret (co-directed thesis with Maurizio Gabrielli, University of Bologna).
- Arlen Cox, Representing dynamic languages heaps using parametric, modular, container abstract domains, 2013, Xavier Rival, École Normale Supérieure (co-directed thesis with Bor-Yuh Evan Chang, University of Colorado at Boulder).
- Tie Cheng, Static analysis of spreadsheet macros, October 2011, Xavier Rival, École Polytechnique.
- Vincent Laviron, Static Analysis of Functional Programs by Abstract Interpretation, October 2009, Patrick Cousot, École Normale Supérieure.

- Jiangchao Liu, Verification of the memory safety of a micro-kernel, December 2013, Xavier Rival, École Normale Supérieure
- Antoine Toubhans, Combination of shape abstract domains, October 2011, Xavier Rival, École Doctorale de Paris Centre
- Caterina Urban, Static Analysis of Functional Temporal Properties of Programs by Abstract Interpretation, November 2011, Radhia Cousot and Antoine Miné, École Normale Supérieure.

9.2.3. Juries

— Jérôme Feret reviewed the PhD thesis of Tatjana Petrov (ETH Zürich, Switzerland, June 6, 2013). He was also in the jury of Geoffroy Andrieux PhD thesis (Université Rennes 1, France, July 18, 2013).

— Antoine Miné reviewed the PhD thesis of Yassamine Seladji (CEA, Palaiseau, France, October 31, 2013). He was also in the jury of the PhD theses of Ramakrishna Upadrasta (Université Paris Sud, March 13, 2013) and Zhoulai Fu (Université Rennes 1, July 22, 2013).

— Xavier Rival reviewed the PhD theses of Valentin Perelle (Verimag, Université Joseph Fourier, Grenoble, February 22, 2013) and of Gideon Smeding (Inria Rhône-Alpes, Université Joseph Fourier, Grenoble, December 19, 2013).

9.3. Popularization

Xavier Rival gave an interview about the verification of safety critical embedded softwares to the “Inriality” online magazine, in July 2013.

ACES Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Program committees

- PC member for SCW 2013: Spatial Computing Workshop, 2013, M. Banâtre.
- PC member for SCW 2014: Spatial Computing Workshop, 2014, M. Banâtre.
- PC member for ruSMART 2013: The 5th conference on Smart Spaces, M. Banâtre.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

L2/L3: network computing (lectures, tutorials, labs), 250 hours, F. Weis, University Rennes 1 / IUT Saint-Malo

Master : Ambient Computing and Mobile Communications, F. Weis, 6 hours, M2, university of Rennes, France

Master : Wireless LANs, F. Weis, 8 hours, M2, Telecom Bretagne, France

Master : Mobile communications and ambient computing, M. Banâtre, 4 hours, M1, Ecole Centrale de Paris, France

8.2.2. Supervision

PhD: M. Dominici, Context Management in Smart Homes, 01/11/09, M. Banâtre and F. Weis, defended in June 2013

PhD: B. Pietropaoli, Proximate interactions and data fusion in Smart Homes, 01/10/10, M. Banâtre and F. Weis, defended in December 2013

PhD: Minh Ho, Indoor localization mechanisms for ambient computing systems, 01/11/08, M. Banâtre and F. Weis, defended in December 2013

PhD in progress: Arnab Sinha, Pervasive control systems for smart waste management solutions, 14/12/10, M. Banâtre and P. Couderc, to be defended in April 2014

PhD in progress: Francisco Javier Acosta Padilla, Auto-adaptation for IoT, 31/01/13, Frédéric Weis and Johann Bourcier

8.2.3. Juries

Michel Banâtre was in the following PhD examination committees:

B. Pietropaoli, Proximate interactions and data fusion in Smart Homes, University Rennes 1, (director)

Minh Ho, Indoor localization mechanisms for ambient computing systems, University Rennes 1, (director)

Frédéric Weis was in the following PhD examination committees:

M. Dominici, Context Management in Smart Homes, University Rennes 1, (co-director)

B. Pietropaoli, Proximate interactions and data fusion in Smart Homes, University Rennes 1, (co-director)

Minh Ho, Indoor localization mechanisms for ambient computing systems, University Rennes 1, (co-director)

Paul Couderc was in the following PhD examination committees:

PhD, Tony Ducrocq, Auto-organisation des réseaux sans-fil multi-sauts dans les villes intelligentes, University of Lille 1, (examiner)

ADAM Project-Team

9. Dissemination

9.1. Scientific Animation

Laurence Duchien served in the following scientific animations actions:

- Chair of the 5ème Journées du GDR CNRS GPL, Nancy, April 2013,
- Member of the Editorial Board of Lavoisier TSI,
- Member of the Editorial Board of Special Issue "Advanced Architectures for the Future Generation of Software-Intensive Systems" in the Elsevier journal Future Generation Computer Systems,
- Member of the following PC committees:
 - 8th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS), San Francisco, USA, San Francisco, May 2013,
 - 7th European Conference on Software Architecture (ECSA), Montpellier, France, July 2013,
 - 17th European Conference on Software Maintenance and Reengineering (CSMR), Genova, Italy, March 2013,
 - 6th Day Lignes de Produits, Paris, November 2013,
 - Joint Workshop of MAPLE 2013 – 5th International Workshop on Model-driven Approaches in Software Product Line Engineering and SCALE 2013 – 4th Workshop on Scalable Modeling Techniques for Software Product Lines at the 17th Software Product Lines Conference, Tokyo, Japan, August 2013,
 - International Workshop on Software Engineering for Systems-of-Systems (SESoS) at the 7th European Conference on Software Architecture (ECSA), Montpellier, France, 2013,
 - 29th IEEE International Conference on Software Maintenance (ICSM), Eindhoven, the Netherlands, September 2013.

Philippe Merle served in the following scientific animation actions:

- Member of the steering committee of the Conférence en Ingénierie du Logiciel (CIEL),
- Member of the following PC committees:
 - 2nd Conférence en Ingénierie du Logiciel (CIEL), April 2013,
 - 12th International Workshop on Adaptive and Reflective Middleware (ARM), December 2013,
- Member of the Evaluation Committee for the special issue on Ingénierie du Logiciel of the TSI Journal,
- Reviewer for IEEE Computer Magazine, and both ECSA and DAIS conferences.

Romain Rouvoy served in the following scientific animations actions:

- Member of the steering committee of the IFIP International Conference on Distributed Applications and Interoperable Systems,
- Member of the following PC committees:
 - 28th International ACM Symposium on Applied Computing (SAC) - 7th Track on Dependable and Adaptive Distributed Systems (DADS), March 2013,
 - 28th International ACM Symposium on Applied Computing (SAC) - 1st Track on Software Engineering Aspects of Green Computing (SEGC), March 2013,
 - 1st International Workshop on Green in Software Engineering, Green by Software Engineering (GIBSE), March 2013
 - 10th International USENIX Conference on Autonomic Computing (ICAC) - 2nd Track on Self-Aware Internet of Things (Self-IOT), June 2013,
 - 10th International Conference on Services Computing (SCC) - Industry track, June 2013,
 - 15th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC), September 2013,
 - 2nd Nordic Symposium on Cloud Computing & Internet Technologies (NordiCloud), September 2013,
 - 8th International Workshop on Middleware for Next Generation Internet Computing Workshop (MW4NG), December 2013,
 - 5th International IEEE Conference on Cloud Computing Technology and Science (Cloud-Com), December 2013,
 - 12th International Workshop on Adaptive and Reflective Middleware (ARM), December 2013,
 - 3rd International Workshop on Adaptive Services for the Future Internet (WAS4FI), September 2013,
- Reviewer for the following journals: Springer Journal of Internet Services and Applications, Journal of Ambient Intelligence and Smart Environments, IEEE Transactions on Computers.

Lionel Seinturier served in the following scientific animations actions:

- Guest co-guest editor of a special issue of the Springer Journal of Internet Services and Applications on Greening Distributed Systems,
- Member of the editorial board of the ISTE-Wiley series of books on Computer Science and Information Technology and editor for the Software Engineer domain of this series,
- co-PC Chair of the special session on Self-Adaptive Networked Embedded Systems (SANES) at the 3rd International Conference on Pervasive Embedded Computing and Communication Systems, Barcelona, February 2013,
- Member of the following PC committees:
 - Workshop on Patterns Promotion & Anti-patterns Prevention (PPAP) at the 17th European Conference on Software Maintenance and Reengineering, Genova, March 2013,
 - 7ème Conférence francophone sur les architectures logicielles (CAL), Toulouse, May 2013,
 - 13th IFIP International Conference on Distributed Applications and Interoperable Systems (DAIS), Florence, June 2013,
 - International Workshop of Security and Dependability for Resource Constrained Embedded Systems (S& D4RCES) at the 13th International Conference on Software Reuse, Pisa, June 2013,

- 16th ACM SIGSOFT International Symposium on Component-Based Software Engineering (CBSE), Vancouver, June 2013,
- 39th Euromicro Conference on Software Engineering and Advanced Applications (SEAA), MOCS Track, Santander, Spain, September 2013,
- 6th IEEE International Conference on Service-Oriented Computing and Applications (SOCA), Hawaii, December 2013.
- Reviewer for the following journals: Elsevier Science of Computer Programming, Elsevier Information and Software Technology, Elsevier Journal of System and Software, Lavoisier TSI.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Permanent members teach the following courses.

Laurence Duchien heads the **research program** in Master of Computer Science at University Lille 1. She heads the Carrières et Emplois service and is referent for the professional insertion in the PhD program in Computer Science at PRES University Lille Nord de France. She is also Director of Doctoral Studies for Computer Science in Doctoral School Engineering Science (SPI) - PRES Lille Nord de France. She teaches the following courses:

- Software Project Management, 50h, Level M2, Master MIAGE, University Lille 1,
- Design of distributed applications, 42h, Level M1, Master of Computer Science, University Lille 1,
- Software Product Lines, 8h, Level M2, Master of Computer Science, University Lille 1,
- Research and Innovation Initiation, 22h, Level M2, Master of Computer Science, University Lille 1,
- Tutoring Internship, 16h, Level M2, Master of Computer Science, University Lille 1.

Martin Monperrus teaches at the University Lille undergraduate and graduate courses. In particular:

- Introduction to programming, 48h, Level L1, Licence of Computer Science, UFR IEEA, University Lille 1,
- Object-oriented design, 39h, Level L3, Licence of Computer Science, UFR IEEA,
- Automated software engineering, 40h, Level M2, Master of Computer Science speciality IAGL, UFR IEEA, University Lille 1.

Romain Rouvoy heads the **IAGL** specialty of the Master of Computer Science at the University Lille 1. He supervises the **Agil-IT** Junior Enterprise and gives the following courses at the University Lille 1:

- Initiation à la Programmation, 48h, Level L1, Licence of Computer Science, UFR IEEA, University Lille 1,
- Conception d'Applications Réparties, 42h, Level M1, Master of Computer Science, UFR IEEA, University Lille 1,
- Qualité du Logiciel, 30h, Level M2, Master of Computer Science speciality MIAGE, UFR IEEA, University Lille 1,
- Infrastructures et Frameworks Internet, 8h, Level M2, Master of Computer Science speciality IAGL, UFR IEEA, University Lille 1,
- Innovation & Initiation à la Recherche, 14h, Level M2, Master of Computer Science speciality IAGL, UFR IEEA, University Lille 1,
- Intergiciels Orienté Services, 50h, Level M2, Master of Computer Science speciality IPI-NT, UFR IEEA, University Lille 1,
- Suivi de projets, 60h, Level M2, Master of Computer Science, UFR IEEA, University Lille 1,
- Suivi d'alternants, 60h, Level M2, Master of Computer Science, UFR IEEA, University Lille 1.

Lionel Seinturier has headed the **E-Services** specialty of the Master of Computer Science at the University Lille 1 until August 2013. He gives the following graduate courses at the University Lille 1:

- Conception d'Applications Réparties, 18h, M1, University Lille 1,
- Infrastructures et Frameworks Internet, 6h, M2, University Lille 1.

9.2.2. Supervision

- PhD: Rémi Druilhe, Power Efficiency of Services in Dynamic and Heterogeneous Dynamic Systems, 5 December 2013, Laurence Duchien & Lionel Seinturier.
- PhD: Russel Nzekwa, Building Manageable Autonomic Control Loops for Large Scale Systems, 5 July 2013, Lionel Seinturier & Romain Rouvoy.
- PhD in progress: Maxime Colmant, Amélioration de l'efficacité énergétique des logiciels dans les systèmes multi-coeurs, October 2013, Lionel Seinturier & Romain Rouvoy.
- PhD in progress: Benoit Cornu, Automated Runtime Software Repair, October 2012, Lionel Seinturier & Martin Monperrus.
- PhD in progress: Alexandre Feugas, Maintien de la qualité de service au cours de l'évolution d'applications orientées services, October 2010, Laurence Duchien & Sébastien Mosser (Lab. I3S, University Nice-Sophia-Antipolis).
- PhD in progress: Maria Gomez Lacruz, Self-Optimization of Software Systems Driven by Wisdom of the Crowds, October 2013, Lionel Seinturier & Romain Rouvoy.
- PhD in progress: Nicolas Haderer, AntDroid: Opportunistic Mobile Sensing of User Activities, October 2010, Lionel Seinturier & Romain Rouvoy.
- PhD in progress: Geoffrey Hecht, Auto-optimisation des architectures orientées services : Application aux applications mobiles et Cloud, October 2013, Laurence Duchien & Romain Rouvoy.
- PhD in progress: Matias Martinez, Automated Program Repair at Development and Runtime, October 2011, Laurence Duchien & Martin Monperrus.
- PhD in progress: Vincenzo Musco, Etude de la topologie et de l'évolution des graphes logiciels, October 2013, Philippe Preux (Inria SequeL) & Martin Monperrus.
- PhD in progress: Adel Noureddine, Towards a Better Understanding of the Energy Consumption of Software Systems, October 2010, Defense planed on 19 March 2014, Lionel Seinturier & Romain Rouvoy.
- PhD in progress: Fawaz Paraïso, Interopérabilité des environnements middleware de cloud computing, October 2011, Lionel Seinturier & Philippe Merle.
- PhD in progress: Clément Quinton, Migration d'applications dans les environnements middleware de cloud computing, October 2011, Laurence Duchien.
- PhD in progress: Marc Sango, Composants logiciels, boucle de contrôle et adaptation pour applications safety critical dans le domaine ferroviaire, October 2012, Laurence Duchien & Christophe Gransart.
- PhD in progress: Amal Tahri, Evolution logicielle multi-vues : des réseaux domestiques au Cloud, March 2013, Laurence Duchien & Jacques Pulou (Orange).
- PhD in progress: Bo Zhang, Elasticité spontanée des services et infrastructures dans le Cloud, October 2013, Lionel Seinturier & Romain Rouvoy.

9.2.3. Juries

Laurence Duchien was in the following HDR examination committee:

- Vasile-Marian Scuturici, INSA Lyon, University Claude Bernard Lyon1, December 2013 (referee)

Laurence Duchien was in the following PhD examination committees:

- Pengfei Liu, University of Bordeaux, January 2013, (referee),
- Mehdi Chouiten, University of Evry-Val d'Essone, January 2013, (co-referee),
- Diana Guadalupe Moreno-Garcia, University of Grenoble, February 2013 (referee),
- Jimmy Lauret, University of Toulouse, April 2013, (referee),
- Thibaut Possompès, University of Montpellier, October 2013 (referee),
- Julie Hamon, University Lille 1, November 2013 (chair),
- Rémi Druilhe, University Lille 1, December 2013 (co-director),
- Sylvain Frey, Paris-Tech, December 2013 (referee),
- Aurélien Favarelon, University of Grenoble, December 2013 (referee).

Romain Rouvoy was in the following PhD examination committees:

- Mehdi Chouiten, University of Evry-Val d'Essone, January 2013, (co-referee),
- Russel Nzekwa, University Lille 1, July 2013 (co-director).

Lionel Seinturier was in the following HDR examination committee:

- Tomas Bures, Charles University, Prague, March 2013 (referee).

Lionel Seinturier was in the following PhD examination committees:

- François Fouquet, University Rennes 1, February 2013 (referee),
- Gérard Nicolas, Telecom Paris, June 2013 (referee),
- Russel Nzekwa, University Lille 1, July 2013 (co-director),
- Ali Ghaddar, University of Nantes, July 2013 (referee),
- Elmedhi Damou, University Grenoble 1, October 2013 (referee),
- Joao Americo, University Grenoble 1, November 2013 (referee),
- Olga Melekhova, University Paris 6, November 2013 (referee),
- Filip Křikava, University of Nice, November 2013 (referee),
- Yacine Kessaci, University Lille 1, November 2013 (president),
- Rémi Druilhe, University Lille 1, December 2013 (co-director),
- Miruna Stoicescu, University Toulouse, December 2013 (referee),
- Petr Spacek, University Montpellier 2, December 2013 (referee),
- Sana Fathallah, University of Nice, December 2013 (referee).

9.3. Popularization

Christophe Ribeiro gave several demonstrations of the APISSENSE platform (see Section 5.1), especially for the Recherche, Innovation, Creation (RIC) day that was held on 1 October 2013 in Lille and that targets graduate students from the M.Sc and Computer Engineering programs. He also participated to the Forum des PME innovantes organized the PICOM competitiveness cluster on 16 October 2013. The APISSENSE platform has been the subject of some popularization articles in ERCIM News [24] and L'Usine Nouvelle [51].

The PowerAPI library (see Section 5.3) has been the subject of some popularization articles in ERCIM News [23], GreenIT.fr [49] and 01 Business & Technologies [50].

ALEA Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Editorial Board

P. Del Moral is currently associate editor/editor for the following journals

- Associate editor : Applied Mathematics and Optimization, since 2009.
- Associate editor Revista de Matematica: Teoria y Aplicaciones, since 2009.
- Associate editor : Stochastic Analysis and Applications, since 2001.

P. Legrand is currently associate editor/editor for the following publications

- EA artificial evolution, LNCS volume, Springer (biennial).

9.1.2. Responsibilities

B. Bercu is an assistant director of the Institut de Mathématiques de Bordeaux (IMB). He is a member of the CNU section 26.

B. Bercu is co-responsible of the specialty "Modélisation Statistique et Stochastique" of the Master MIMSE.

P. Legrand is a member of "bureau de l'association Evolution artificielle".

P. Legrand is in charge of the learning management system MOODLE of the UFR sciences et modélisation (University of Bordeaux II).

9.1.3. Organization of Conferences

- **International Conference Evolve 2013**: P. Legrand, P. Del Moral (with A.A. Tantar, E. Tantar, P. Bouvry, O. Schütze)
- **International conference EA 2013**: P. Legrand (general chair)

9.1.4. Reviewing

- Journals: Annals of Statistics, IEEE TPAMI, Journal of the Royal Statistical Society B, Computational Statistics and Data Analysis, Statistics and Computing, Journal de la Société Française de Statistiques, Signal Processing.
- Conferences: UAI, NIPS, ICML, AISTATS, GECCO, CEC, EA

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence :

- B. Bercu, Mathématiques générales, Analyse et Algèbre SVE, 36h, L1, University of Bordeaux, France
- P. Legrand, Espaces Euclidiens, 54h, L2, University of Bordeaux, France
- P. Legrand, Traitement du Signal, 18h, L3, University of Bordeaux, France
- P. Legrand, Informatique pour les mathématiques, 36h, L1, University of Bordeaux, France
- P. Legrand, Algèbre, 72h, L1, University of Bordeaux, France

- P. Legrand, Technologies de l'information, de la communication pour l'éducation, 42h, University of Bordeaux, France
- A. Richou, Probabilités et statistiques, 32h, L3, University of Bordeaux, France
- A. Richou, Probabilités et statistiques, 32h, L1, University of Bordeaux, France

Master :

- A. Richou, Probabilité, 32h, M1, University of Bordeaux, France
- B. Bercu, Séries chronologiques, 48h, M2, University of Bordeaux, France
- B. Bercu, Processus aléatoires à temps discret, 30h, M1, University of Bordeaux, France
- B. Bercu, Probabilités, 30h, L3, University of Bordeaux, France
- F. Caron, Bayesian Methods, 33h, M2, University Bordeaux II, France
- F. Caron, Statistical Methods in Robotics, 25h, M2, IPB, France
- F. Caron, Advanced estimation tools in signal and image processing, 30h, M2, University Bordeaux I, France
- P. Legrand, Traitement du signal, 15h, M2, IPB, France

Other:

- P. Del Moral, Professeur chargé de cours (1/3 temps), Monte Carlo methods and Stochastic models, and introduction to probability calculus, Ecole Polytechnique, France.
- P. Del Moral, Mean field particle simulation for Monte Carlo integration, 10h, Lectures INLN-CNRS of the University of Nice Sophia Antipolis.
- P. Legrand, Course on Matlab, 42H

9.2.2. Supervision

PhD:

- François Giraud, Méthodes particulières adaptatives pour l'estimation non linéaire, may 2013, P. Del Moral
- Vassili Blandin, Processus autorégressifs à bifurcation, june 2013, B. Bercu
- Frédéric Proia, Processus autorégressifs stables, nov. 2013, B. Bercu, P. Del Moral
- Philippe Fraysse, Algorithmes stochastiques pour la régression semi-paramétrique, july 2013, B. Bercu
- Laurent Vézard, Réduction de dimension en apprentissage supervisé. Application à l'étude de l'activité cérébrale, dec 2013, M. Chavent, F. Faïta, P. Legrand

PhD in progress:

- Paul Lemaitre, Analyse de sensibilité et analyse de risques, Sept. 2010, P. Del Moral
- Nicolas Antunès, Etude du modèle GARP pour la prédiction de niches écologiques, Sept. 2011, P. Del Moral and P. Legrand
- Antoine Campi, Filtrage particulière de fluides turbulents, 2012, P. Del Moral
- Christelle Vergé, Méthodes particulières pour la propagation d'incertitudes dans des codes numériques, 2012, P. Del Moral
- Paula Craciun, Méthodes de filtrage multi-objets en analyse d'image, 2012, P. Del Moral
- Emigdio Zeta Flores, Genetic Programming and EEG.
- Marie Du Roy de Chaumaray, Grandes déviations pour des processus de diffusion, 2013, B. Bercu, A. Richou

9.2.3. Juries

- Raphael Coudret, P. Legrand
- Zoe Siegrist, P. Legrand
- Xiequan Fan, B. Bercu
- Francois Portier, B. Bercu

ALF Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Service to the research community

- Erven Rohou was a member of the program committees of DITAM-PARMA 2014, CC 2014, WPEA 2013.
- Erven Rohou served as an expert for “Région Aquitaine”
- Isabelle Puaut is a member of the program committees of ECRTS 2013, RTNS 2013, RTCSA 2013, RTAS 2014, SIES 2014.
- Isabelle Puaut is member of the Executive Committee (EC) of the IEEE Technical Committee on Real-Time Systems (TCRTS). She is in the steering committee of the ECRTS, RTNS conferences and the WCET workshop.
- Isabelle Puaut is in the management committee of the COST Action TACLe - Timing Analysis on Code-Level (<http://www.tacle.eu>). She is responsible of Short Term Scientific Missions (STSM) within TACLe. Damien Hardy and Isabelle Puaut participate to TACLe.
- Damien Hardy is a member of the committees of RTNS 2014 and WCET 2014. He was a member of the program committee of WCET 2013, SIES 2013 WIP session and PACT 2013 where he was also the submission chair.
- Pierre Michaud was a member of the program committee of the HPCC 2013 conference.
- André Seznec is a member of the MICRO 2014 top picks committee and a member of SAMOS 2014 program committee.
- André Seznec is a member of the editorial board of the IEEE Micro.
- André Seznec was the Program co-chair of HiPEAC 2013, January 2013
- André Seznec and François Bodin were Program co-chairs of PACT 2013, September 2013.
- François Bodin was a member of ASPLOS 2014, CC 2013, SC 2013 tutorials program committees.
- François Bodin is a member of "Comité de Prospective Scientifique" of the ANR.
- François Bodin is a member of "Conseil Scientifique d’Orap”.

9.1.2. Dissemination

- Erven Rohou presented the ANR project W-SEPT at the bi-annual meeting of the “Communauté Française de Compilation”.
- Emmanuel Riou and Nabil Hallou presented the Padrone tool at the HiPEAC Computing Systems Week.
- I. Puaut has presented a seminar on "WCET estimation for multi-core architectures" at LIP6, Paris, in September 2013.
- Damien Hardy, has presented a lesson on "Estimation de pires temps d’exécution (WCET - Worst-Case Execution Times)" at the "école d’été temps-réel" Toulouse, August 2013
- André Seznec presented a keynote entitled "Faster unicones are still needed" at SAMOS XIII in Samos, Greece, July 2013.
- André Seznec presented an invited presentation at Intel Braunschweig in January 2013.
- François Bodin presented invited presentations at the EPOPPEA workshop associated with the HIPEAC 2013 conference, to the CSCI (Comité Stratégique pour le Calcul Intensif), at the HTPC workshop at University of Delaware and at Forum ORAP.

- François Bodin presented a keynote at the HPC languages workshop in Lyon, July 2013
- François presented a lesson at EU ComplexHPC Spring School in Uppsala, June 2013.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master research : A. Seznec, E.Rohou, I. Puaut, F. Bodin, Performance et Microarchitecture, 30 hours, M2, Université de Rennes I, France

Master: A. Seznec, P. Michaud, A. Perais, Architecture des processeurs, 36 hours, M1, Ecole Supérieure d'Ingénieurs de Rennes, France

Master: A. Seznec, P. Michaud, A. Perais, Architecture avancée, 36 hours, M2, Ecole Supérieure d'Ingénieurs de Rennes, France

Master research: I. Puaut, E. Rohou, Rédaction d'articles scientifiques, 28 hours, M2, Université de Rennes I, France

Master research: I. Puaut, Analyse et test formel, 6 hours, M2, Université de Bretagne Occidentale, France

Master: I. Puaut, D. Hardy, Operating systems - process management, 130 hours, M1, Université de Rennes I, France

Master: I. Puaut, Système d'exploitation gestion mémoire, 39 hours, M1, Université de Rennes I, France

Master: I. Puaut, D. Hardy, Systèmes temps-réel, 69 hours, M1, Université de Rennes I, France

Master: F. Bodin, Parallel programming and code optimization, 50 hours, M1, Ecole Supérieure d'Ingénieurs de Rennes, France

Master: F. Bodin, Innovation and technology, 20 hours, M1, Ecole Supérieure d'Ingénieurs de Rennes, France

Master: F. Bodin, Innovation and technology, 40 hours, M1, Université de Rennes I, France

Master: D. Hardy, Systèmes d'exploitation, 44 hours, M1, Université de Rennes I, France

Licence: D. Hardy, Informatique temps-réel, 40 hours, L3, Université de Rennes I, France

9.2.2. Supervision

PhD : J. Lai, Modèle analytique de performance orienté débit d'évaluation de performance des accélérateurs programmables, Université de Rennes I, February 2013. Advisor A. Seznec

PhD : R. Velasquez, Behavioral Application-dependent Superscalar Core Modeling, Université Rennes 1, April 2013. Co-advisors A. Seznec and P. Michaud

PhD : B. Lesage, Architecture multi-coeurs et temps d'exécution au pire cas, Université Rennes 1, May 2013. Co-advisors I. Puaut and A. Seznec

PhD : N. Prémillieu, Améliorer la performance séquentielle à l'ère des processeurs massivement multicoeurs, Université Rennes 1, December 2013. Advisor A. Seznec

PhD in progress: Nabil Hallou, Université Rennes 1, Feb 2013, co-advisors E. Rohou and P. Clauss (EPI Camus Inria Strasbourg)

PhD in progress: Sajith Kalathingal, Université Rennes 1, Dec 2012, co-advisors S. Collange and A. Seznec

PhD in progress: Surya Khizakanchery Natarajan, Université Rennes 1, Jan 2012, advisor A. Seznec

PhD in progress: Hanbing Li, Université Rennes 1, Oct 2012, co-advisors E. Rohou and I. Puaut

PhD in progress: Andrea Mondelli, Université Rennes 1, Oct 2013, co-advisors P. Michaud and A. Seznec

PhD in progress: Bharath Narasimha Swamy, Université Rennes 1, Sept 2011, advisor A. Seznec

PhD in progress: Arthur Perais, Université Rennes 1, Sept 2012, advisor A. Seznec

PhD in progress: Aswinkumar Sridharan, Université Rennes 1, Oct 2013, advisor A. Seznec

PhD in progress: Arjun Suresh , Université Rennes 1, Dec 2012, co-advisors E. Rohou and A. Seznec

9.3. Popularization

- Erven Rohou gave a talk at the SFGP (Société Française du Génie des Procédés): “Stratégies d’augmentation des performances de calcul des logiciels”
- Isabelle Puaut and Erven Rohou gave a lecture at Lycée Descartes: “Les mathématiques au service de la performance des ordinateurs”.

9.4. Miscellaneou

- Erven Rohou co-advised a MSc. student at the Egypt-Japan University of Science and Technology.
- Erven Rohou was a member of the working group GTInria2020 whose mission was to produce the next “Plan Stratégique”.
- Erven Rohou is a member of the Inria CDT (Commission du Développement Technologique)
- As “correspondant scientifique des relations internationales” for Inria Rennes Bretagne Atlantique, Erven Rohou is a member of the Inria COST GTRI (Groupe de Travail "Relations Internationales" du Comité d’Orientation Scientifique et Technologique).
- Erven Rohou served as an expert for “Région Aquitaine”
- A. Seznec is an elected member of the scientific committee of Inria.
- A. Seznec has been nominated by ACM for 3 years 2011-2013 on the selection committee for the ACM-IEEE Eckert-Mauchly award.
- F. Bodin has participated to the Allistene committee on "Préparation de la Stratégie Nationale de Recherche pour le Numérique".
- F. Bodin is a member of the Advisory board of the LPGPU European Project.

ALGORILLE Project-Team

8. Dissemination

8.1. Scientific Animation

Since October 2001, J. Gustedt is Editor-in-Chief of the journal *Discrete Mathematics and Theoretical Computer Science* (**DMTCS**). He is member of the recruiting committee for PhDs and postdocs of Inria research center and has been member in a recruitment committee for a position at university of Franche Comté in 2013. For the French evaluation organization AERES, J. Gustedt has been one of the evaluators of the LRI Lab near Paris.

For SUPÉLEC, S. Vialle is now leader of the IDMaD research group (focussed on distributed computing and big data) inside the IMS team.

Since 2010, J. Gossa serves as expert for the French ministry of science and education and is in charge of reviewing industrial R&D expenses and *Credit Impôt Recherche* reports. He is also a member of the following boards: IUT Robert Schuman, ICube laboratory computer science department, and University of Strasbourg.

Since march 2013, S. Genaud is dean of the ENSIIE engineering school in Computer Science.

Since 2013, S. Contassot-Vivier is director of the Computer Science Department of the Faculty of Science at Université Lorraine. Since 2011, he also serves as an expert for the French ministry of education and research in the DGRI/MEI mission and is in charge of reviewing academic projects between French and foreign teams.

L. Nussbaum is appointed as an expert on production facilities by the direction of the Inria Nancy–Grand Est center.

M. Quinson has served as program committee member of the 28th ACM/IEEE International Parallel & Distributed Processing Symposium (IPDPS'14), of the 4th International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH, co-organized with ACM SIGSIM), of the 2013 ACM SIGSIM Conference on Principles of Advanced Discrete Simulation (PADS'13), and of the 4th International Workshop on Analysis Tools and Methodologies for Embedded and Real-time Systems (WATERS'13).

M. Quinson served as a member of the recruitment committees for associate professor in computer science at University of Lorraine and for junior researcher at Inria Nancy.

M. Quinson is elected of the AM2I board, in charge of voting the budget for 6 laboratories at Université de Lorraine (450 researchers in computer science, mathematics and control theory).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

IUT Charlemagne: Lucas Nussbaum, Installation of Linux, 20 ETD, Licence pro ASRALL (L3), Université de Lorraine, France

IUT Charlemagne: Lucas Nussbaum, Outils Libres, 16 ETD, Licence pro ASRALL (L3), Université de Lorraine, France

IUT Charlemagne: Lucas Nussbaum, Administration des infrastructures avancées, 12 ETD, Licence pro ASRALL (L3), Université de Lorraine, France

Licence: Sylvain Contassot-Vivier, “Informatique graphique”, 42 ETD, Licence informatique (L1), Université de Lorraine, France

Licence: Sylvain Contassot-Vivier, “Algorithmique 3”, 12 ETD, Licence informatique (L2), Université de Lorraine, France

Licence: Sylvain Contassot-Vivier, “Algorithmique 4”, 32 ETD, Licence informatique (L3), Université de Lorraine, France

Licence, Stephane Vialle, “modèle de programmation”, 21 TD, L1, SUPELEC, France

MIAGE Nancy: Marion Guthmuller, “Réseaux”, 50 ETD, M1, Université de Lorraine, France

Master: Sylvain Contassot-Vivier, “Algorithmique répartie et systèmes distribués”, 45 ETD, M1, Université de Lorraine, France

Telecom Nancy: Sylvain Contassot-Vivier, “Algorithmique des systèmes parallèles et distribués”, 32 ETD, 2ème année (M1), université de Lorraine, France

Telecom Nancy : Martin Quinson, “Algorithmique et Programmation,”, 48 ETD, 1ere année (L3), Université de Lorraine, France.

Telecom Nancy : Martin Quinson, “Programmation Système,”, 24 ETD, 2ème année (M1), Université de Lorraine, France.

ESSTIN Nancy: Sylvain Contassot-Vivier, “Calcul haute performance”, 42 ETD, 4ème année (M1), université de Lorraine, France

Master, Stephane Vialle, “systèmes d’information”, 39 TD, M1, SUPELEC, France

Master, Stephane Vialle, “calcul haute performance”, 62 TD, M2, SUPELEC, France

Engineering School, Stéphane Genaud, “systèmes informatiques et réseaux”, 72 TD, niveau L3, ENSIIE, France

Engineering School, Stéphane Genaud, “middleware”, 32 TD, niveau M1, ENSIIE, France

Master, Stéphane Genaud, “parallélisme, systèmes distribués et grilles”, 21 TD, M2, University of Strasbourg, France

Master, Stephane Vialle, “parallélisme, systèmes distribués et grilles”, 21 TD, M2, University of Strasbourg, France

Master, Stephane Vialle, “systèmes distribués et grilles”, 28 TD, M2, University of Strasbourg, France

8.2.2. Supervision

PhD in progress: Tomasz Buchert, *Orchestration of experiments on distributed systems*, since Oct 2011, Jens Gustedt & Lucas Nussbaum

PhD in progress: Marion Guthmuller, *Dynamic verification of distributed applications, using a model-checking approach*, since Oct 2011, Sylvain Contassot-Vivier & Martin Quinson

PhD stopped: Thomas Jost, *Solveurs linéaires creux sur GPU*, started in Jan 2010, Bruno Lévy & Sylvain Contassot-Vivier

PhD: Soumeya Hernane, *Models and algorithms for consistent data sharing in high performance parallel and distributed computing*, defense Jul 2013, Jens Gustedt & Mohamad Benyettou

PhD in progress: Mariem Saied, *Ordered Read-Write Locks for Multicores and Accelerators*, since Nov 2013, Jens Gustedt & Gilles Muller

8.2.3. Juries

Jens Gustedt was reviewer and member of the jury of the thesis of Lilia Ziane Khodja at Franche-Comté university.

Martin Quinson was a member of the jury of the thesis of Rafael Ferreira Da Silva at INSA-Lyon.

Stéphane Genaud was a member of the jury of thesis of Imen Chakroun at Lille 1 university.

8.3. Popularization

Jens Gustedt is regularly blogging about efficient programming in particular the [C programming language](#). He also is an active member of the [stackoverflow community](#) a technical Q&A site for programming and related subjects.

L. Nussbaum currently serves as the (elected) Debian Project Leader since April 2013.

M. Quinson develops a pedagogic platform in collaboration with G. Oster (Score team of Inria Nancy Grand Est). This tool aims at providing an environment that is both appealing for the student, easy to use for the teacher, and efficient for the learning process. It is available from [its page](#).

M. Quinson is co-leading a working group on the teaching of computer science in the LORIA laboratory. He served both as a program chair and a local chair for a nation-wide two-days workshop gathering about hundred people involved in the introduction of computer science in the French secondary education: university lecturers in charge of teaching to the prospective CS teachers, regional heads of the Education minister accompanying this reform and producer of teaching resources. He also served both as a program chair and local chair for a regional gathering of CS teachers of the secondary wanting to exchange their good practices. This initiative, initiated in Nancy, will spread in several other French cities in 2014.

M. Quinson participated to several events toward the popularization of computer science (either as a speaker or as a co-organizer), targeting either kids and pupils (Telecom Nancy in November), students (Inria in March), maths teachers (APMEP Lorraine in March), CS teachers (SIF-ISN day in June), or all public (Fête de la science in November).

M. Quinson serves on the editorial board of the Interstices website of Inria for the popularization of computer science.

ALICE Project-Team

7. Dissemination

7.1. Scientific Animation

7.1.1. Program Committee

Sylvain Lefebvre: Eurographics 2014 (Full papers, and co-chair for State of the Art Reports) and SIGGRAPH Asia.

Bruno Lévy: ACM SIGGRAPH 2014, Eurographics 2013 & 2014 (co-chair), ACM/Eurographics Symp. on. Geom. Proc. 2013, Discr. Geom. for Comp. Imagery 2013, Comput. Graphics. Intl. 2013, Pacific Graphics 2013 (chair), CAD Graphics 2013 (co-chair).

Nicolas Ray: Pacific Graphics 2013 and Eurographics 2014 (Full papers).

Rhaleb Zayer: Pacific Graphics 2013 and Eurographics 2014 (Full papers).

Xavier Antoine: Waves 2013 (International Conference on Mathematical and Numerical Aspects of Waves).

7.1.2. Reviewing

Laurent Alonso: *ACM Transaction on Algorithms, Information Processing Letter, Theoretical Computer Science*.

Dobrina Boltcheva: *IEEE Transaction on Visualization & Computer Graphics*.

Samuel Hornus: *ACM Transactions on Graphics, Eurographics 2014*, *Revue Française d'Informatique Graphique*.

7.1.3. Organization

Dobrina Boltcheva co-organized the “**Journées Informatique & Géométrie**”, that took place on November 14 and 15 in LORIA, Nancy.

7.1.4. Other

Since 2013, Xavier Antoine is “scientific delegate” at ANR, in charge of mathematics & interactions.

Since 2013, Xavier Antoine is in charge of the “Accueil de Chercheuses et Chercheurs de Haut Niveau” at ANR (Attractivité de la France et Espace Européen de la Recherche).

Since 2013, Xavier Antoine is associate editor for ISRN Applied Mathematics.

Bruno Lévy is associate editor of TVCG (IEEE) and Graphical Models (Elsevier).

B. Lévy was president of the hiring committee for Inria junior researchers (“concours Chargé de Recherche”).

B. Lévy is vice head of the Charles Hermite federation (that regroups the laboratories in CS, mathematics and control theory in the Lorraine region).

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Sylvain Lefebvre was involved in the following courses:

- Cours École Centrale (9h)
- Cours École de Géologie: introduction to parallelism (3h TP) and introduction to computer graphics (3h cours, 6h TP)
- OpenCL, master M2, avec Dmitry Sokolov.
- Course on Video Game programming at “École des Mines de Nancy”. Taught with Guillaume Bonfante.

Samuel Hornus was involved in the following courses:

- "Functional programming with OCaml" at ÉPITECH Nancy (private school training programmers, <http://nancy.epitech.eu/>). Lecture: 9h. Lab work: 18h. 3 student projects.

Dmitry Sokolov was involved in the following courses:

- Algorithmique avancée, 28h, M2 Math de l'UL, France
- Géométrie et représentation dans l'espace, 35h, L2 Informatique de l'UL, France
- Logiques et Modèles de calcul, 30h, M1 Informatique de l'UL, France
- Infographie 76h, M1 Informatique de l'UL, France
- Modèles de perception et raisonnement, 56h, M1 Informatique de l'UL, France
- Parallélisme de données, 15h, M1 Informatique de l'UL, France

Dobrina Boltcheva had 200 hours teaching duty:

- Licence ISN, IUT Saint-Dié-des-Vosges
- 2A DUT INFO, IUT Saint-Dié-des-Vosges
- 1A DUT INFO, IUT Saint-Dié-des-Vosges

Xavier Antoine gave the following invited courses:

6 hours course on numerical methods for Schrödinger equations, Workshop "Non-linear optical and atomic systems: deterministic and stochastic aspects" – January 2013, Lille, France.

3 hours course at 7th Montréal Scientific Computing Days, CRM, Montréal, QC, Canada, May 2013.

Bruno Lévy taught:

- "Numerical Geometry" (15 h) in the National School of Geology and in Nancy School of Mines.
- "initiation to computer programming" in collaboration with the Microtel association (1h per week, 10 kids aged between 7 and 12 years old).

7.2.2. Supervision

7.2.2.1. Master 2

- Jean Hergel, advised by Sylvain Lefebvre.
- Aytac Kanaci, co-advised by Sylvain Lefebvre and Amaury Habrard (St Étienne, Université Jean Monnet).

7.2.2.2. PhD thesis defended

- Sergey Podkorytov (Université de Bourgogne, co-advised by Dmitry Sokolov), "Tangent subspace of self-similar shapes". Defended on December 20 2013.
- Romain Duboscq, co-advised by Xavier Antoine, with Renaud Marty (équipe probabilité IECL).
- Romain Merland, "Generation of finite volume grids accounting for structural, petrophysical and dynamic information", advised by Guillaume Caumon and Bruno Lévy. Defended on April 18, 2013.

7.2.2.3. PhD thesis in preparation

- Kun Liu (now post-doc in London), "Modèle discret guidé par l'acquisition pour les objets déformables", Started August 2010, Rhaleb Zayer and Bruno Lévy. Kun should defend his PhD in 2014.
- Alejandro Patricio Galindo, "Traitement de l'image et video tracking pour l'extraction d'informations pertinentes", Rhaleb Zayer and Bruno Lévy.
- Arnaud Botella, "Génération de maillages non-structurés hex-dominants conformes aux domaines géologiques", Started January 2013, Guillaume Caumon and Bruno Lévy.
- Jeanne Pellerin, "Hybrid meshing for geosciences", Guillaume Caumon and Bruno Lévy.

- David Lopez, “Dynamic meshing of free surfaces in fluid simulation”, Bruno Lévy.
- Jean Hergel, “Approches pour la prise en compte conjointe de la fonctionnalité des objets modélisés et des contraintes du procédé de fabrication additive”, Started February 2013, Bruno Lévy.
- Jérémie Dumas, “By-example shape synthesis for 3D printing”, Started September 2013, Sylvain Lefebvre and Bruno Lévy.

7.2.3. *Juries*

Sylvain Lefebvre was *examineur* during the PhD defense of Matthias Holländer, who was supervised by Tamy Boubekeur (Telecom ParisTech). Title: Real-time Geometry Synthesis.

Bruno Lévy participated to the following Ph.D. and habilitation juries:

- Hunbin Li (Ph.D., Centrale Lyon)
- Kenneth Vanhoey (Ph.D, ICube, Strasbourg)
- Lionel Untereiner (Ph.D., ICube, Strasbourg)
- Alexandre Derouet-Jourdan (Ph.D., Inria Grenoble)
- Yuan Zhan (Ph.D., Hong-Kong University)
- David Salinas (Ph.D., Gipsa Lab, Grenoble)
- Guillaume Lavoué (Habilitation thesis, LIRIS, Lyon)

7.3. Popularization

Sylvain Lefebvre is a member of the *commission de médiation scientifique* and of the *comité espace transfert*.

ALPAGE Project-Team

9. Dissemination

9.1. Scientific Animation

- Alpage members were involved in many Program, Scientific or Reviewing Committees for other journals and conferences. For example, Éric Villemonte De La Clergerie participated to the program committees of IWPT'13, LGC'13, HMGE'13, DepLing'13, EPIA'13 TeMA, AAAI'13 Student workshop, plus reviewing for ACL'13, NAACL'13, and TALN'13; Djamé Seddah was a PC member of SPMRL'13, EMNLP, IJCNLP, CICLing, TALN, IWPT; Laurence Danlos was a reviewer for ACL, the Generative Lexicon Workshop, TALN, and the TAL journal; Benoît Crabbé was a reviewer for Formal Grammar, CSSP, TALN, RECITAL, Dependency Linguistics, Journal of Language Modelling, Language Ressources and Evaluation; Benoît Sagot was a Program Committee member or reviewer for the LRE and for the TAL journal (vol. 54:1 and 54:2), as well as for the conferences TALN, ACL, SFCM, IJCNLP and SPMRL
- Participation of Éric Villemonte De La Clergerie to the editorial board of French journal T.A.L. as “Redacteur en chef” (chief editor)
- Benoît Sagot is elected board member of the French NLP society (ATALA) and was its Secretary until June 2013.
- Benoît Sagot is a member of the scientific board of the consortium Corpus Écrits, which belongs to the TGIR Huma-Num
- Benoît Sagot represents Alpage at the board of the Institut de Linguistique Française, a CNRS federation (Alpage is a member of the Institut de Linguistique Française since June 2013)
- Laurence Danlos is a member of the Permanent Committee of the TALN conference organized by ATALA.
- Laurence Danlos is a member of the Scientific Committee of the UFR of Linguistics of University Paris Diderot.
- Benoît Crabbé and Laurence Danlos are members of the Administrative board of the UFR of Linguistics of University Paris Diderot.
- Benoît Crabbé co-organized the research seminar : lectures in experimental linguistics (Univ P7)
- Benoît Crabbé is responsible for the L3 computational linguistics (Univ Paris Diderot)
- Benoît Sagot is a member of the Governing Board and of the Scientific Board of the **LabEx EFL**, as head of the research strand on language resources; he is also in charge of several reserach operations; Benoît Crabbé is deputy-head of the research strand on experimental grammar; Marie-Hélène Candito and Laurence Danlos are in charge of one research operation each. Laurence Danlos is a member of the Scientific Board, representing Alpage.
- Djamé Seddah is one of the founders of the statistical parsing of morphologically rich language initiative (**SPMRL**) that started during IWPT'09. He was the program co-chair of the successful SPMRL 2010 NAACL-HLT Workshop and of its 2011 (at IWPT) and 2012 (at ACL) editions. In 2013, he was chair of the Shared Task that was organized together with this year's edition of SPMRL, for which he, Marie-Hélène Candito, Benoît Crabbé and Benoît Sagot were member of the program committee. Finally, Alpage is a major sponsor of this series of workshops.
- Marie-Hélène Candito organized the Alpage research seminar.
- Benoît Sagot served as a project reviewer for the National Research Agency (ANR), calls “bilatéraux SHS” and “STIC”.
- Djamé Seddah is the “Responsable pédagogique” for the C2I courses for Université Paris-Sorbonne

- Benoît Crabbé taught an invited course on Experimental Grammar at the Summer School on Empirical Linguistics at the Berder island (France), organized by the LabEx EFL (international audience)
- Benoît Sagot was an invited speaker at the workshop on Computational Approaches to Morphological Complexity organized by the Surrey Morphology Group in Paris
- many members of the team were invited to give talks in France and abroad, as for example in Geneva (Marie-Hélène Candito), Düsseldorf (Djamé Seddah, Benoît Sagot), Montreal (Djamé Seddah, Rosa Stern), Columbia University (Benoît Sagot).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Laurence Danlos, Introduction to NLP, 28h, L3, Université Paris-Diderot, France
 Laurence Danlos, Discourse, NLU and NLG, 28h, M2, Université Paris-Diderot, France
 Marie-Hélène Candito, Information retrieval, 12h, M2, Université Paris-Diderot, France
 Marie-Hélène Candito, Clustering and Classification, 12h, M2, Université Paris-Diderot, France
 Marie-Hélène Candito, Automatic semantic analysis, 12h, M2, Université Paris-Diderot, France
 Marie-Hélène Candito, Machine translation, 48h, M1, Université Paris-Diderot, France
 Benoît Crabbé, Linguistic data analysis, 24h, M2, Université Paris-Diderot, France
 Benoît Crabbé, Introduction to computer science, 24h, L3, Université Paris-Diderot, France
 Benoît Crabbé, Introduction to Statistics and Probability, 24h, L3, Université Paris-Diderot, France
 Benoît Crabbé, Probabilistic methods for NLP, 48h, M1, Université Paris-Diderot, France
 Benoît Crabbé, Introduction to Computational Linguistics, 24h, L3, Université Paris-Diderot, France
 Benoît Sagot, Natural Language Parsing, 28h, M2, Université Paris-Diderot, France
 Djamé Seddah, Linguistic Models and Computational Linguistics, 38h, M1, Université Paris-Sorbonne, France
 Djamé Seddah, Machine Translation, 30h, M2, Université Paris-Sorbonne, France
 Djamé Seddah, C2I, 30h, L2, Université Paris-Sorbonne, France

9.2.2. Supervision

Charlotte Roze, *Vers une algèbre des relations de discours*, Université Paris-Diderot, May 22, PhD thesis supervised by Laurence Danlos, co-supervised by Philippe Muller
 Enrique Henestroza Anguiano, *Efficient Large-Context Dependency Parsing and Correction with Distributional Lexical Resources*, Université Paris-Diderot, June 27, PhD thesis supervised by Laurence Danlos, co-supervised by Alexis Nasr and Marie-Hélène Candito
 Rosa Stern, *Identification automatique d'entités pour l'enrichissement de contenus textuels*, Université Paris-Diderot, June 28, PhD thesis supervised by Laurence Danlos, co-supervised by Benoît Sagot
 Pierre Magistry, *Unsupervised Word Segmentation and Wordhood Assessment: the case for Mandarin Chinese*, Université Paris-Diderot, December 19, PhD thesis supervised by Sylvain Kahane, co-supervised by Benoît Sagot and Marie-Claude Paris
 Corentin Ribeyre, *vers la syntaxe profonde pour l'interface syntaxe-sémantique*, started in November 2012, supervised by Laurence Danlos, co-supervised by Djamé Seddah and Éric Villemonte De La Clergerie.
 Isabelle Dautriche, *Exploring early syntactic acquisition: a experimental and computational approach*, started in September 2012, co-supervised by Benoît Crabbé.

Marion Baranes, *Correction orthographique contextuelle de corpus multilingues et multicaux*, started in January 2012, supervised by Laurence Danlos, co-supervised by Benoît Sagot, in collaboration with the *viavoo* company.

Marianne Djemaa, *Création semi-automatique d'un FrameNet du français, via interface syntaxe-sémantique*, started in October 2012, supervised by Laurence Danlos, co-supervised by Marie-Hélène Candito

Chloé Braud, *Développement d'un système complet d'analyse automatique du discours à partir de corpus annotés, bruts et bruités*, started in September 2011, supervised by Laurence Danlos, co-supervised by Pascal Denis

Valérie Hanoka, *Construction semi-automatique de réseaux lexicaux spécialisés multilingues*, started in January 2011, supervised by Laurence Danlos, co-supervised by Benoît Sagot

Emmanuel Lassalle, *Résolution automatique des anaphores associatives*, started in September 2010, supervised by Laurence Danlos, co-supervised by Pascal Denis

9.2.3. Juries

We do not mention in this section participations to PhD defense committees as supervisor or co-supervisor.

- Laurence Danlos served in the PhD defense committee of Noémie-Fleur Sandillon-Rezer. Field: computer science. Title: *Acquisition de grammaires catégorielles à partir de corpus annotés*. Other members of the committee: Christian Rétoré (U. Bordeaux, supervisor), Richard Moot (CNRS, co-supervisor), Mark Steedman (University of Edinburgh, reviewer), Annie Forêt (U. Rennes, reviewer), Alexis Nasr (U. de la Méditerranée), Géraud Sénizergues (U. Bordeaux), Tim van de Cruys (CNRS).
- Marie-Hélène Candito served in the PhD defense committee of Assaf Urieli. Field: linguistics. Title: *Robust French syntax analysis: reconciling statistical methods and linguistic knowledge in the Talismane toolkit*. Other members of the committee: Ludovic Tanguy (CNRS, supervisor), Alexis Nasr (U. de la Méditerranée, reviewer), Éric Wehrli (LATL, reviewer), Nabil Hathout (CNRS).
- Djamel Seddah served in the PhD defense committee of Anthony Sigogne. Field: computer science. Title: *Intégration de ressources lexicales riches dans un analyseur syntaxique probabiliste*. Other members of the committee: Eric Laporte (U. Paris-Est, supervisor), Matthieu Constant (U. Paris-Est, co-supervisor), Alexis Nasr (U. de la Méditerranée, reviewer), Thierry Poibeau (CNRS, reviewer), Isabelle Tellier (U. Sorbonne-Nouvelle).
- Benoît Sagot and Laurence Danlos served in the PhD defense committee of Rosa Stern, as PhD supervisors. Field: linguistics. Title: *Identification automatique d'entités pour l'enrichissement de contenus textuels*. Other members of the committee: Adeline Nazarenko (LIPN, reviewer), Frédéric Béchet (U. de la Méditerranée, reviewer), Éric Charton (U. Polytechnique de Montréal), Denis Teyssou (AFP, CIFRE industrial supervisor)
- Laurence Danlos served in the PhD defense committee of Charlotte Roze, as PhD supervisor. Field: linguistics. Title: *Vers une algèbre des relations de discours*. Other members of the committee: Philippe Muller (IRIT, co-supervisor), Francis Corblin (U. Paris Sorbonne, reviewer), Owen Rambow (Columbia University, reviewer), Liesbeth Degand (U. Catholique de Louvain), Laure Vieu (CNRS).
- Laurence Danlos (supervisor) and Marie-Hélène Candito (co-supervisor) served in the PhD defense committee of Enrique Henestroza Anguiano. Field: computer science. Title: *Efficient Large-Context Dependency Parsing and Correction with Distributional Lexical Resources*. Other members of the committee: Alexis Nasr (U. de la Méditerranée, co-supervisor), Matthieu Constant (U. Paris-Est, reviewer), Joakim Nivre (Uppsala University, reviewer), Bernd Bohnet (University of Birmingham).
- Sylvain Kahane (supervisor) and Benoît Sagot (co-supervisor) served in the PhD defense committee of Pierre Magistry. Field: linguistics. Title: *Unsupervised Word Segmentation and Wordhood Assessment: the case for Mandarin Chinese*. Other members of the jury: Marie-Claude Paris (U. Paris-Diderot, co-supervisor), Hsieh Shukai (National Taiwan University, reviewer), Yves Lepage (Waseda University, reviewer), Pierre Zweigenbaum (CNRS).

9.3. Popularization

- Benoît Sagot has given in December 2013 a tutorial about the MElt POS-tagger for approx. 20 linguists, as part of the activities of the Corpus Écrits consortium, which belongs to the TGIR Hum-Num.
- General NLP presentation at the ISN day (for Math teachers, computer science option, December 4th)
- Interventions at Digilinguo (organized by DGLFLF) on April 15th and June 5th, in particular for the promotion of Mgwiki
- Intervention at the Inria I-Match day, organized during the "Futur en Seine" event (June 14th)

ALPINES Team

9. Dissemination

9.1. Scientific Animation

Xavier Claeys reviewed articles for the following journals:

- American Mathematical Society
- Comptes Mathématiques de l'Académie des Sciences
- BIT Numerical Mathematics
- Numerical Methods for Partial Differential Equations
- Differential Equations and Applications

Laura Grigori's scientific animation activities are:

- Area Co-chair, Algorithms, IEEE/ACM SuperComputing 2013.
- Area editor for Parallel Computing Journal, Elsevier, since June 2013.
- Member of Program Committee of IEEE International Parallel and Distributed Processing Symposium, IPDPS 2013.

Frederic Hecht's scientific animation activities are:

- Organization of FreeFem++ days, December 2013, UPMC. There were around 60 participants from different countries (France, Italy, Spain, Slovenia).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master : Xavier Claeys, MM009: Informatique de base, 72 hrs de travaux pratiques en programmation C++, niveau M1, Université Pierre et Marie Curie, France

Master : Xavier Claeys, NM406: Résolution des EDP par la méthode des éléments finis, 18 hrs de travaux pratiques en programmation C++, niveau M2, Université Pierre et Marie Curie, France

Master : Xavier Claeys, MM031: Informatique Scientifique, 44 hrs de de cours magistral, niveau M1, Université Pierre et Marie Curie, France

Master : Laura Grigori, High performance computing, 12 hours, Master Université Paris XI, France

Master : Laura Grigori, Course on Parallel Computing, 30 hours IFIPS, Ingenieurs 3, Polytech, Université Paris XI, France

Master : Frederic Hecht, Tutorials of practical C++ programming for the course *Informatique de Base*, 36 hours, Master 1 Mathématiques et Applications, UPMC, France

Master : Frederic Hecht, Course on Numerical methods for fluid mechanics, 30 hours, Master 2 Mechanics, UPMC, France.

Master : Frederic Hecht, From PDEs to their resolution by finite element methods, 36 hours per year, Master 2 UPMC, France.

Master : Frederic Nataf, Course on Domain Decomposition Methods, 30 hours, Master 2, UPMC, France.

Master : Frederic Nataf, Course on Domain Decomposition Methods, 15 hours, Master 2, ENSTA, France.

9.2.2. Supervision

PhD : Amal Khabou, Dense matrix computations : communication cost and numerical stability, University Paris-Sud 11, February 2013, advisor Laura Grigori

PhD in progress : Sebastien Cayrols, since October 2013 (funded by Maison de la simulation), advisor L. Grigori.

PhD in progress : Pierre Jolivet, since October 2011 (funded by University of Grenoble), advisors F. Nataf, C. Prudhome and F. Hecht

PhD in progress : Sophie Moufawad, since October 2011 (funded by Inria), advisor L. Grigori

PhD in progress : Nicole Spillane, since December 2010 (funded by Michelin), co-advisor F. Nataf

PhD in progress : Ryadh Haferssas, since October 2013 (funded by Ecole Doctorale, UPMC), co-advisor F. Nataf

PhD in progress : Sylvain Auliac, since October 2009 (funded by UPMC), advisor F. Hecht

PhD in progress : Pierre-Henri Tournier, since October 2011 (funded by UPMC), advisor F. Hecht and M. Comte

9.2.3. Juries

- Laura Grigori: Phd thesis of Soleiman Youssef, UPMC, December 2013, Invited member.
- Laura Grigori: HDR habilitation of Stef Graillat, UPMC, December 2013, Examineur.
- Laura Grigori: PhD thesis Mouraid Gouicem, defended on 14 October 2013, LIP6, Paris 6, examinatrice, president of the jury.
- Frederic Nataf : PhD thesis of Paul-Marie Berthe, defended on 18 December 2013, University Paris XIII.
- Frédéric Hecht: Phd thesis Charles Dapogny, defended on 29 december 2013, Univ Rouen, examinateur
- Frédéric Hecht: HDR BENNIS Chakib , defended on 29 november 2013, UMPC, examinateur.
- Frédéric Hecht: Phd thesis Charles Dapogny, defended on 4 december 2013, UMPC, Président.
- Frédéric Hecht: Phd thesis Nicolas Kowalski, defended on 5 december 2013, UMPC, examinateur.
- Frédéric Hecht: Phd thesis Brahim Yahoui, defended on 17 december 2013, UTT, Rapporteur.

9.3. Popularization

Xavier Claeys dedicated an afternoon to participation to the "fête de la science".

AMIB Project-Team

7. Dissemination

7.1. Scientific Animation

7.1.1. French Community

Participants: Patrick Amar, Jérôme Azé, Julie Bernauer, Sarah Cohen-Boulakia, Alain Denise, Christine Froidevaux, Sabine Pérès, Yann Ponty, Mireille Régnier, Jean-Marc Steyaert.

The whole team is involved in GDR-BIM (Molecular Bioinformatics, <http://www.gdr-bim.u-psud.fr/>). J. Azé is the webmaster. A. Denise is a member of the Scientific Committee. Y. Ponty is animator of the *Structure et interactions des macromolécules* scientific axis. C. Froidevaux and S. Cohen-Boulakia participate to the subdomain *Knowledge Representation, Ontologies, Data Integration and Grids*.

A. Denise, Y. Ponty and M. Régnier participate into the subdomain Sequence Analysis and to COMATEGE subgroup of GDR- IM (Informatique Mathématique, <http://www.gdr-im.fr/>)

A. Denise, Y. Ponty, J.-M. Steyaert, and M. Régnier are involved in the ALEA working group (<http://igm.univ-mlv.fr/~nicaud/webalea/>) of the GDR-IM (Informatique Mathématique, <http://www.gdr-im.fr/>).

7.1.2. Seminars and visits

7.1.2.1. Amib seminars

We received in our weekly seminar: D. Saakian (A. Sinica, Taiwan), V. Reinharz (McGill), L. Tchertanov (ENS Cachan), H. Babou (Nantes), P. Ballarini (ECP), Nicolas Ferey (LIMSI), Van Du TRAN Thong (IGM), Ulf Leser (Humboldt U.), A. Zinoviev (Institut Curie, Paris), H.K. Hwang (Taipeh U.).

7.1.2.2. Other seminars

J. Bernauer presented her works at *International Conference on Biomolecular Dynamics: Experiment Meet Computation, KAUST, Saudi Arabia*.

R. Fonseca gave a talk at the Inria@SiliconValley Workshop BIS2013 in May in Stanford.

D. Iakovishina gave two talks at Institut Curie : at the weekly seminar of NGSand during the “Structural variants day” in december 2013.

7.1.2.3. International exchanges

J. Bernauer visited H. van den Bedem at SSRL (SLAC) and M. Levitt at Stanford University (USA). She visited the Huang group at HKUST (Hong-Kong).

M. Régnier and D. Iakovishina visited IoGene (Moscow).

7.1.3. Program Committee

P. Amar was a member of the steering committee and chair of the organizing committee for aSSB workshop, advances in Systems and Synthetic Biology, Nice (2013).

J. Bernauer was a member of ICBD 2013 program committee.

S. Cohen-Boulakia was member of the DILS 2013, SWEET 2013 and BDA 2013 program committees and she is member of the editorial board of the Journal on Data Semantics.

Ch. Froidevaux is a member of the editorial board of 1024, Bulletin de la Société Informatique de France, SIF.

Y. Ponty, M. Régnier, and J.-M. Steyaert served as PC members for BICOB 2013 (5th International Conference on Bioinformatics and Computational Biology, Honolulu, USA).

Y. Ponty served as PC member for ISMB/ECCB 2013 (21st International conference on Intelligent Systems for Molecular Biology/12th European Conference on Computational Biology).

M. Régnier co-organized MCCMB'13 <http://mccmb.belozersky.msu.ru/2013/>.

F. d'Alché-Buc, Ch. Froidevaux and Y. Ponty were members of JOBIM 2013 program committee.

J. Bernauer organized IAMB workshop (Integrative Approaches for Modeling Biomolecular Complexes) in Nice in collaboration with McGill University (Canada) and Nice University.

A one day meeting on Cancer and Metabolism was organized at LIX by J.-M. Steyaert on October 4th.

7.1.4. Research administration

- J. Bernauer is member of the IDEX Paris - Saclay Groupe de travail Sciences du Vivant.
- J. Bernauer and C. Froidevaux are member of the Comité de Pilotage of the IDEX Paris - Saclay Institut transverse de Modélisation des Sciences du Vivant.
- A. Denise is a member of the Scientific Commission of the Inria-Saclay research center. He is deputy director of the computer science department at University Paris-Sud. He is member of the Academic Senate of the Paris-Saclay University.
- Ch. Froidevaux is the head of the Bioinfo group at LRI. She was a member of a hiring committee for a Full Professor position at Polytech Paris Sud, Orsay.
- Y. Ponty is an elected member of the *Comité national du CNRS* (6th section – Foundations of Computer Science and CID 51 –Bioinformatics).
- M. Régnier is a deputy-member of DIGITEO program committee.
- J.-M. Steyaert is a member of the Board of Administrators of Polytechnique.
- J.-M. Steyaert has contributed to the organization of a workshop in July 2013 to present currently running projects between AP-HP and Polytechnique. He serves in the selection committee of a MD from HP-HP for a yearly funded research position in the Polytechnique Research Center.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

We have and we will go on having trained a group of good multi-disciplinary students both at the Master and PhD level. Being part of this community as a serious training group is obviously an asset. Our project is also very much involved in two major student programs in France: the Master BIBS (Bioinformatique et Biostatistique) at Université Paris-Sud/École Polytechnique and the parcours d'Approfondissement en Bioinformatique at École Polytechnique. We are also involved in a student partnership with McGill University (partenariat France Quebec offering French and Canadian students co-supervised internships (short term -3 to 6 months- or long term -part of the PhD studies-). J.-M. Steyaert is involved in the development of an interdisciplinary cooperation between Polytechnique and AP-HP that will favor interships of Polytechnicians and Masters students in AP-HP operational services.

Ch. Froidevaux is a member of the Scientific Committee of the Computer Science Doctoral School of Paris-Sud University.

J.-M. Steyaert organizes BIBS (M1 and M2) at Ecole Polytechnique. Ch. Froidevaux is co-heading the Master (M1 and M2) at the University Paris Sud. Most team members are teaching in this master.

J. Bernauer was appointed *Chargé d'enseignement* in the Computer Science Department of École Polytechnique (DIX) in 2013.

Master BIBS: J. Bernauer, Informatique théorique et Programmation Python, 20h, M2, Université Paris-Sud, France

Cycle Ingénieur Polytechnicien: J. Bernauer, Modal Bioinformatique, 18h, 2ème année, École Polytechnique, France

Cycle Ingénieur Polytechnicien: J. Bernauer, Algorithmes et Programmation INF421, 36h, 2ème année, Ecole Polytechnique, France

Cycle Ingénieur Polytechnicien: J. Bernauer, Modal Web Tablette INF441a, 36h, 2ème année, Ecole Polytechnique, France

Cycle Ingénieur Agro Paris Tech: J. Bernauer, Module AAB, cours invité, 3ème année, Agro Paris Tech, France

Master BIBS: Y. Ponty, M. Regnier, J.-M. Steyaert, Combinatoire, Algorithmes, Séquences et Modélisation (CASM), 32h, M2, Université Paris-Sud, France

Master : J.-M. Steyaert, X cycle ingénieur INF582- Datamining, 35h, M1, Ecole Polytechnique, France

Master : J.-M. Steyaert, X cycle ingénieur BioINF588- Algorithms for Bioinformatics, 35h, M1, Ecole Polytechnique, France

Licence : J.-M. Steyaert, X cycle ingénieur Modal-BioInformatique, 45h, L3, Ecole Polytechnique, France

Master : J.-M. Steyaert, BIBS Algorithmique avancée et optimisation, 25h, M2, X-Orsay, M2, Ecole Polytechnique, France

Data Bases, 48h, M1 BIBS (Bioinformatics and BioStatistics), Paris-Sud University, France (C. Froidevaux)

Advanced Algorithmics, 48h, M1 BIBS (Bioinformatics and BioStatistics), Paris-Sud University, France (C. Froidevaux)

Integration and Analysis of heterogeneous data from the Web, 24h, M2 BIBS (Bioinformatics and BioStatistics), Paris-Sud University/École Polytechnique, France (J. Azé, S. Cohen Boulakia, C. Froidevaux)

Advanced Data Bases and Data Mining, 42h, M2 BIBS (Bioinformatics and BioStatistics), Paris-Sud University/École Polytechnique, France (S. Cohen Boulakia, C. Froidevaux).

Initiation to Research, 6h, M2 BIBS (Bioinformatics and BioStatistics), Paris-Sud University, France (C. Froidevaux)

Software Engineering for Bioinformatics, 48h, M2 BIBS (Bioinformatics and BioStatistics), Paris-Sud University/École Polytechnique, France (P. Amar)

Modelling and Simulation of Biological Processes, 24h, M2 BIBS (Bioinformatics and BioStatistics), Paris-Sud University/École Polytechnique, France (P. Amar)

Biological Networks and Systems Biology, 9h, M1 BIBS (Bioinformatics and BioStatistics), Paris-Sud University/École Polytechnique, France (P. Amar)

RNAomics and RNA Bioinformatics, 12h, M2 BIBS (Bioinformatics and BioStatistics), Paris-Sud University/École Polytechnique, France (A. Denise)

Theoretical Computer Science, 30h, M2 BIBS (Bioinformatics and BioStatistics), Paris-Sud University/École Polytechnique, France (A. Denise)

7.2.2. Supervision

HdR : Patrick Amar, Contributions à l'étude de la dynamique des systèmes biologiques et aux systèmes de calcul en biologie synthétique, Paris Sud University, 19/12/2013

PhD : Jiuqiang Chen, Designing scientific workflows following a structure and provenance -aware strategy, Université Paris Sud, Defended on 10/10/2013, S. Cohen-Boulakia and C. Froidevaux.

PhD in progress : Mélanie Boudard, Game theory and stochastic learning for predicting the three-dimensional structure of large RNA molecules , 15/10/2012, D. Barth (Univ. Versailles), J. Cohen (CNRS, LRI) and A. Denise.

PhD in progress : Marc Bouffard, Étude de circuits logiques moléculaires et détection de portes logiques dans un réseau métabolique, Université Paris Sud, 01/10/2013, P. Amar and F. Molina.

PhD in progress : Bryan Brancotte, Ranking biological and biomedical data: algorithms and applications, Université Paris Sud, 01/10/2012, S. Cohen-Boulakia and A. Denise.

PhD in progress: Adrien Guilhot-Gaudeffroy, Modelling and scoring of protein-RNA complexes, 01/10/2011, J. Azé, J. Bernauer, C. Froidevaux.

PhD in progress: Daria Iakovishina, A Combinatorial Approach to Assembly Algorithms, 01/11/2011, M. Régnier.

PhD in progress : Adrien Rougny, Raisonnements sur des connaissances biologiques pour la construction et l'analyse des réseaux de signalisation, 01/10/2013, C. Froidevaux.

PhD in progress : Antoine Soulé, Evolutionary study of RNA-RNA interactions in yeast, 01/09/2013, J.-M. Steyaert and J. Waldspühl (University McGill, Canada).

PhD in progress : Bo Yang, Bioinformatics approaches for studying the relations between RNA structure and pre-messenger RNA splicing, 01/10/2011, A. Denise and Fu Xiangdong (Wuhan University, China)

PhD in progress : Cong Zeng, Identification of structural motifs in messenger RNAs, 01/10/2011, A. Denise

7.2.3. Juries

- HDR
 - Ch. Froidevaux was a reviewer for an HDR (Montpellier).
 - J.-M. Steyaert served as a jury member for Hubert Lincet HDR defence (Caen).
- PhD
 - P. Amar served as a referee for Laurent Crepin's PhD defence (Brest University).
 - Ch. Froidevaux served as a referee for a PhD thesis in Rennes and was a member of the committee for J. Leblay.
 - M. Régnier served as a referee for O. Abdou Arbi's PhD defence (Rennes University).
- Funding agencies
 - ANR 2012-2013, SIMI2, J. Bernauer and S. Cohen-Boulakia
 - UEFISCDI 2011-2013 (Research Council Romania), Y. Ponty
- Selection committees
 - Cnrs CR/DR: *comité national* (Section 6 and CID 51), Y. Ponty.
 - Inria CR2/CR1 committee: Saclay, J. Bernauer;
 - Maître de conférence: Paris-Sud, Computer science department, S. Cohen-Boulakia and J. Azé.
 - Maître de conférence: Bordeaux I, A. Denise.
 - Ingénieur de recherche: LIP6 UPMC (Paris), Y. Ponty.

- Chargés d’enseignement et Professeur : Ecole Polytechnique, M. Régnier et J.-M. Steyaert.

7.3. Popularization

- Outreach seminar at *Lycée Blaise Pascal* (Orsay, France) – Yann Ponty – Popular science seminar (2h), jointly organised by INRIA (Saclay) and Académie de Versailles.
- Unite ou café, Inria Saclay Popularization seminar, *Les briques de construction de la vie*, see: <https://intranet.saclay.inria.fr/vie-du-centre/unithe-cafe/rencontres-2013/briques-construction-vie>.

We also had the opportunity to be part of a few valorization related events. RNA structural studies were presented at the Rencontres Inria Industrie - Modélisation, simulation et calcul intensif in June 2013 <http://www.inria.fr/centre/saclay/innovation/rii-modelisation-simulation-calcul-intensif/presentation>. This led to an invitation at Sanofi Pharmacometry and Bioinformatics day in December 2013.

ANGE Team

9. Dissemination

9.1. Scientific Animation

11/01/13: Y. Penel was involved in the organisation of the second Forum for Jobs in Mathematics held at CNAM Paris.

27-31/05/13: Y. Penel was a member of the organising committee of the biannual congress of the French society for applied and industrial mathematics which gathered more than 400 mathematicians.

09/09/13: A. Mangeney and J. Sainte-Marie organised a workshop Mathematics & Geophysics in the framework of the Tarantola action proposed by Univ. Pierre et Marie Curie Paris 6 (Laboratoire Jacques-Louis Lions) and Univ. Denis Diderot Paris 7 (Institut de Physique du Globe).

E. Godlewski is also a member of the board of AMIES (see § 7.2).

A. Mangeney is a member of the scientific committees of the Institut de Physique du Globe de Paris (Univ. Paris 7), of Observatory of Côte d'Azur, of the Bureau de Recherches Géologiques et Minières and of the CNRS Institut National des Sciences de l'Univers "Natural Hazards". She is also a member of the management committee of the IPGP center of parallel computing and data processing.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master's degree E. Godlewski and J. Sainte-Marie, (*Not so*) *Hyperbolic models for complex flows. Application to sustainable energies*, nombre d'heures en équivalent TD, 20 hours (lectures), M2, Univ. Pierre et Marie Curie Paris 6

Engineering school E. Audusse, *Finite Elements*, 30 hours (practical works), 2nd year (~ M1), SupGalilee

Engineering school E. Audusse, *Optimisation*, 27 hours (exercise sessions), 2nd year (~ M1), SupGalilee

Engineering school E. Audusse, *Introduction to scientific computing*, 36 hours (lectures), (~ L2), SupGalilee

Engineering school Y. Penel, *Partial Differential Equations*, 15 hours (exercise sessions), 1st year (~ L3), Ecole Centrale Paris

Engineering school Y. Penel, *Numerical Analysis*, 10 hours (lectures) + 15 hours (exercise sessions), 2nd year (~ M1), EFREI

We also mention that E. Godlewski is the head of the "Mathematics for Industry" M.Sc. program of Univ. Pierre et Marie Curie Paris 6. E. Audusse is the deputy director of the "Applied Mathematics and Scientific Computing" program of the SupGalilee engineering school.

9.2.2. Supervision

HdR Nicole Goutal, *Modélisation et simulation des écoulements à surface libre pour les eaux continentales*, Univ. Paris Est Marne-la-Vallée, 06/12/13

PhD Anne-Céline Boulanger, *Modélisation, simulation et assimilation de données autour d'un problème de couplage hydrodynamique-biologie*, Univ. Pierre et Marie Curie Paris 6, supervised by J. Sainte-Marie (in collaboration with B. Perthame), 13/09/13

PhD Saïda Sari, *Modélisation mathématique et numérique de transport de sédiment dans les écoulements d'eau en zone côtière*, Univ. Paris 13, supervised by E. Audusse (in collaboration with F. Benkhaldoun), 08/07/13

M2 internship Dena Kazerani, *Ondes de gravité et effets non-hydrostatiques*, Univ. Pierre et Marie Curie Paris 6, supervised by J. Sainte-Marie, Spring 2013

M2 internship Clément Mifsud, *Méthodes variationnelles et hyperboliques appliquées aux systèmes mécaniques sous contrainte*, Univ. Pierre et Marie Curie Paris 6, supervised by N. Seguin (in collaboration with J.-F. Babadjian and B. Després), Spring 2013

PostDoc in progress Aude Bernard-Champmartin, *Stabilité locale et montée en ordre pour la reconstruction de quantités volumes finis sur maillages coniques non structurés*, Univ. Pierre et Marie Curie Paris 6 (CEA grant), supervised by N. Seguin (in collaboration with P. Hoch), from Nov. 2013

PostDoc in progress Minh Lê, Univ. Paris 13 (IRSN grant), supervised by E. Audusse (in collaboration with F. Benkhaldoun and M. Bourgeois), from June 2013

PostDoc in progress Clara Levy, *Spatio-temporal analysis of gravitational activity using generated seismic signals*, Institut de Physique du Globe (Univ. Paris 7), supervised by A. Mangeny, from 2012

PhD in progress Nora Aïssiouene, *Derivation and analysis of a non-hydrostatic Shallow water type model*, Univ. Pierre et Marie Curie Paris 6 (Inria grant), supervised by E. Godlewski and J. Sainte-Marie, from Nov. 2013

PhD in progress Tim Borikov, *Physical processes at play in Martian landslides*, Institut de Physique du Globe (Univ. Paris 7), supervised by A. Mangeny (in collaboration with D. Mège), from 2012

PhD in progress Maxime Farin, *Analysis of the seismic signal generated by laboratory granular flows*, Institut de Physique du Globe (Univ. Paris 7), supervised by A. Mangeny (in collaboration with R. Toussaint and J. de Rosny), from 2011

PhD in progress Khalil Haddaoui, *Couplage interfacial de systèmes hyperboliques. Application aux écoulements diphasiques*, Univ. Pierre et Marie Curie Paris 6 (ONERA grant), supervised by E. Godlewski (in collaboration with F. Coquel and F. Renac), from Oct. 2012

PhD in progress Dena Kazerani, *Simulation et modélisation de problèmes à frontière libre*, Univ. Pierre et Marie Curie Paris 6, supervised by N. Seguin (in collaboration with P. Frey and C. Audiard), from Oct. 2013

PhD in progress Jannes Kinscher, *Analysis of seismicity in quarries*, Institut de Physique du Globe (Univ. Paris 7), supervised by A. Mangeny (in collaboration with P. Bernard and I. Contrucci), from 2011

PhD in progress Clément Mifsud, *Analyse et approximation des systèmes de Friedrichs : application à la modélisation de l'élastoplasticité*, Univ. Pierre et Marie Curie Paris 6, supervised by N. Seguin (in collaboration with J.-F. Babadjian and B. Després), from Oct. 2013

PhD in progress Laurent Moretti, *Modelling of seismic waves generated by landslides*, Institut de Physique du Globe (Univ. Paris 7), supervised by A. Mangeny (in collaboration with Y. Capdeville), from 2010

PhD in progress Amandine Sergeant-Boy, *Detection and characterization of seismic sources generated by glaciers: numerical modelling and analysis of seismic waves*, Institut de Physique du Globe (Univ. Paris 7), supervised by A. Mangeney (in collaboration with J.-P. Montagner, E. Stutzmann and O. Castelnau), from 2013

PhD in progress Philippe Ung, *Simulation, modélisation et analyse numérique pour le transport sédimentaire*, Univ. Orléans (EDF-CNRS grant), supervised by E. Audusse (in collaboration with S. Cordier), from Nov. 2012

9.2.3. Juries (PhD)

12/03/13 N. Seguin (referee) : Céline Sarazin-Desbois (Univ. Nantes, *Méthodes numériques pour des systèmes hyperboliques avec terme source provenant de physiques complexes autour du rayonnement*)

04/06/13 N Seguin (referee) : Marie Martin (Univ. Nice, *Modélisations fluides pour les plasmas de fusion : approximation par éléments finis C^1 de Bell*)

03/07/13 N. Seguin (co-supervisor) : Magali Tournus (UPMC Paris 6, *Modèles d'échanges ioniques dans le rein. Théorie, Analyse asymptotique et Applications numériques*)

08/07/13 E. Audusse (co-supervisor) : Saïda Sari (Univ. Paris 13, *Modélisation mathématique et numérique de transport de sédiment dans les écoulements d'eau en zone côtière*)

13/09/13 E. Godlewski, J. Sainte-Marie (supervisor), N. Seguin : Anne-Céline Boulanger (UPMC Paris 6, *Modélisation, simulation et assimilation de données autour d'un problème de couplage hydrodynamique-biologie*)

28/10/13 E. Audusse, E. Godlewski (referee) : Manel Tayachi (UJF Grenoble, *Couplage de modèles de dimensions hétérogènes et application en hydrodynamique*)

26/11/13 E. Godlewski : Sophie Gérald (UPMC Paris 6, *Méthode de Galerkin Discontinue et intégrations explicites-implicites en temps basées sur un découplage des degrés de liberté. Applications au système des équations de Navier-Stokes*)

13/12/13 E. Godlewski (president) : François McKee (Univ. Nantes, *Etude et mise à l'échelle des écoulements diphasiques en milieux poreux hétérogènes par une approche d'optimisation*)

19/12/13 J. Sainte-Marie (referee) : Christelle Lusso (univ. Paris-Est, *Modélisation numérique des écoulements gravitaires viscoplastiques avec transition fluide/solide*)

22/01/14 J. Sainte-Marie (referee) : David Benoit (Univ. Paris-Est, *Divers problèmes théoriques et numériques liés à la simulation de fluides non newtoniens*)

9.3. Popularization

08/01/13 J. Sainte-Marie together with O. Bernard (Inria BIOCORE) and B. Sialve (Nasceo) published a short article named "Un zeste de mathématiques pour les biocarburants de demain" on the french Mathematics for Planet Earth website.

30/05-02/06/13 N. Seguin participated to the "Salon de la culture et des jeux mathématiques" at the UPMC stand. This forum aims at explaining the job of researcher in Mathematics to pupils and high school students.

10-11/10/13 E. Audusse gave a talk for high school students at "Savante Banlieue".

10-12/10/13 E. Audusse, E. Godlewski, R. Hamouda, Y. Penel and J. Sainte-Marie run the Inria stand at the 2013 edition of the "Fête de la Science". They presented animations of past tsunamis to a general public.

2013 E. Audusse intervened in a secondary school (Pontault Combault) for "Maths en Jeans".

2013-2014 E. Audusse, R. Hamouda and J. Sainte-Marie implemented a software ("Tsunamath") for simulating tsunamis in the context of a worldwide exhibition for Mathematics of Planet Earth. The first stage will be held in Berlin in March 2014.

AOSTE Project-Team

9. Dissemination

9.1. Scientific Animation

Robert de Simone

General Chair: RTNS 2013.

Technical Program Committee: EmSoft 2013, MEMOCODE2013, FDL2013, CSDM 2013.

Board of Administrators: CIM PACA Design Platform association

Yves Sorel

Technical Program Committee: RTNS 2013, DASIP 2013

Editorial Board: Traitement du Signal Journal

Steering Committee: OCDS/SYSTEM@TIC Paris-Region Cluster

Liliana Cucu-Grosjean

Inria Evaluation Commission: elected member

Technical Program Committee: IEEE RTSS 2013, IEEE ETFA 2013, DATE 2013 and IEEE SIES'2013.

Steering Committee and co-chair: RTSOPS2013, WMC2013 (workshops)

Dumitru Potop Butucaru

Technical Program Committee: Memocode 2013, ACSD 2013, EsISyn 2013, APRES 2013

Julien Deantoni

General Chair: organizer and chair: First international workshop on globalization of modeling languages (GeMoC)

Technical Program Committee: CIEL2013, GlobalDSL2013, Journal of System and Software

Laurent George

General Chair: ECRTS 2013

Program Committee Chair: ReTiMiCS 2013

Scientific Co-chair: ACTRISS group, supported by GDR ASR (CNRS, France) (<http://www.actriss.org/>).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Julien Deantoni, Computer Environnement, 30 h, L2 level, Polytech engineering school of University Nice/Sophia-Antipolis (UNS EPU) France.

Master: Julien Deantoni, Model Driven Engineering, 22 h, M2, UNS EPU.

Master : Julien Deantoni, C++ and Object Oriented Programming, 54 h, M1, UNS EPU.

Master: Julien Deantoni, Embedded Software and systems, 7 h, M2, UNS EPU.

Master: Julien Deantoni, VHDL, 40 h, M1, UNS EPU.

Licence: Sid-Ahmed-Ali Touati, Assembleurs et jeux d'instructions, 52h, L3, UNS Licence info.

Licence: Sid-Ahmed-Ali Touati, Systèmes informatiques, 30h, L1, UNS Licence info.

Master: Sid-Ahmed-Ali Touati, Programmation efficaces pour programmes embarqués et hautes performances, 16h, M1 Master ISI.

Master: Sid-Ahmed-Ali Touati, Systèmes d'exploitation avancés, 39h, M1, UNS Master ISI.

Master: Sid-Ahmed-Ali Touati, Programmation efficace et Optimisation de code, 16h, M1, UNS Master ISI.

Master: Sid-Ahmed-Ali Touati, Architecture des Processeurs, 15h, M1, UNS EPU.

Licence : Frédéric Mallet, Introduction à la Programmation Objet, 45h, L1, UNS.

Licence: Frédéric Mallet, Architecture des ordinateurs, 45h, L3, UNS.

Master: Frédéric Mallet, Programmation Avancée et Design Patterns, 93h, M1, UNS.

Master: Frédéric Mallet, Java pour l'Informatique Industrielle, 24h, M1, UNS.

Master: Frédéric Mallet, Architectures des ordinateurs, 12h, M1, UNS.

Master: Frédéric Mallet, Formal Models for Network-On-Chips, 3h, M2, UNS.

Licence : Marie-Agnes Peraldi-Frati, Algorithms and programming 60h,L1, UNS Institute of technology.

Licence : Marie-Agnes Peraldi-Frati, System and Networks administration 80h, L2, UNS Institute of technology .

Licence :Marie-Agnes Peraldi-Frati, Web Programming 50 h , L2, UNS Institute of technology.

Master : Robert de Simone, Formal Models for Networks-on-Chip, 24h , M2, UNS.

Master : Robert de Simone, Semantics of Embedded and Distributed Systems, 24 h, M1, UNS.

Master: Yves Sorel, Optimization of distributed real-time embedded systems, 24H, M2, University Paris Sud.

Master: Yves Sorel, Distributed real-time systems, 26H, M2, University Paris Est

Master: Yves Sorel, Specification and formal models for embedded systems, 28H, M2, ENSTA Engineering School Paris

Master: Yves Sorel, Correct by construction design of reactive systems, 18H, M2, ESIEE Engineering School Noisy-Le-Grand

Master: Dumitru Potop and Thomas Carle, Programmation synchrone des systèmes temps-réel, 8h, M1, EPITA Engineering School Paris

Licence: Laurent George, Java and Shell programming 48h, L1, IUT RT UPEC

Master: Laurent George, Distributed Real-Time Systems, 24h, M2, UPEC

9.2.2. Supervision

PhD: Carlos Ernesto Gomez-Cardenas, *Environnement multi-vues pour la métamodélisation sémantique formelle de systèmes embarqués*, UNS, defended Dec 20th 2013, supervised by Frédéric Mallet, co-supervised by Julien deAntoni.

PhD in progress: Matias Vara-Larsen, *Toward a formal and hierarchical timed model for concurrent heterogeneous model*, ANR/CNRS, started November 2012, supervised by Frédéric Mallet, co-supervised by Julien Deantoni.

PhD in progress: Ameni Khecharem, *High-Level modeling of hierarchical power management policies in SoCs*, UNS, started October 2012, supervised by Robert de Simone.

PhD in progress: Ying Lin, *Formal Analysis of polychronous models with MARTE/CCSL*, East China Normal University, started September 2011, supervised by Jing Liu (ECNU), co-supervised by Frédéric Mallet.

PhD in progress: Emilien Kofman, *Conception Haut Niveau Low Power d'objets mobiles communicants*, UNS, started Oct 2013, supervised by Robert de Simone, co-supervised by François Verdier (UMR CNRS/UNS LEAT).

PhD in progress: Amin Oueslati, *Modélisation conjointe d'applications et d'architectures parallèles embarqués en pratique*, UNS, started Jan 2014, supervised by Robert de Simone.

PhD in progress: Falou Ndoye, *Multiprocessor real-time scheduling taking into account preemption cost*, started January 2011, supervised by Yves Sorel.

PhD in progress: Manel Djemal, *Distributed real-time scheduling onto NoC architectures*, EDITE/UPMC, started Nov. 2010, co-supervised by Alix Munier (UPMC/Lip6) and D. Potop-Butucaru.

PhD in progress: Thomas Carle, *Real-time implementation of embedded control applications with conditional control onto time-triggered architectures*, EDITE/UPMC, started Sep. 2011, supervised by D. Potop-Butucaru.

PhD : Dorin Maxim, Probabilistic Real-Time Systems, University of Lorraine, December 10th, 2013, co-supervised by Liliana Cucu-Grosjean and Françoise Simonot-Lion

9.2.3. Juries

Robert de Simone

PhD reviewer: Adnan Bouakaz (U. Rennes 1), Jagadish Suryadevara (Malardalen U., Sweden)

HDR reviewer: Sébastien Gérard (U. Paris 11 Orsay).

Frédéric Mallet

PhD reviewer: Xin An (U. Grenoble 1), Clément Guy (U. Rennes 1)

PhD examiner: João Claudio Rodrigues Américo (U. Grenoble 1), Jair Gonzalez (Mines-Telecom)

Laurent George

PhD reviewer: Xiaoting Li (ENSEEIH), Ahmed Daghsen (UTC Compiègne)

Yves Sorel

PhD reviewer: Yassine Ouhammou (ENSMA Poitiers)

PhD examiner: Pierre Courbin (U. Paris Est)

Dumitru Potop Butucaru

PhD reviewer: Léonard Gérard (U. Paris Sud)

9.3. Popularization

We held a thematic Spring School in late April in Shanghai, based on the topics of the DAESD associated-team 8.4.1.1 . It was open to students from all over China, and we invited also chinese speakers (but the attendance of around sixty students was mostly from several universities in and around Shanghai).

APICS Project-Team

9. Dissemination

9.1. Scientific Animation

- F. Seyfert was invited to give a talk at the department "Optimization and System Theory" of KTH University (Stockholm, Sweden), on "Generalized Nevanlinna-Pick interpolation on the boundary"
- J. Leblond and D. Ponomarev gave communications at the *11th International Conference on Mathematical and Numerical Aspects of Wave Propagation (WAVES 2013)*, Tunis, June (<http://www.lamsin.tn/waves13/>). J. Leblond was invited to give a communication at the *Workshop on Control and Observation of Nonlinear Control Systems with Application to Medicine (CONCSAM)*, Honolulu, Hawaii, Sept. (<http://math.hawaii.edu/control2013/>).
- M. Olivi gave a talk at the SSSC 2013 conference in Grenoble (France) [25] and presented a poster at the ERNSI 2013 conference in Nancy (France).
- E. Pozzi gave communications at the *Spring School in Functional and Harmonic analysis and Operator theory*, Lens (may), at the *Workshop in Operator Theory, Harmonic and Complex Analysis*, Lille (may), and at the seminar of the Lab. J.-A. Dieudonné, Université Nice-Sophia Antipolis.
- L. Baratchart was an invited speaker at the workshop "Inverse Problems and Nonlinear Equations", May, Palaiseau. He was an invited speaker at the workshop "Frames and Bases in Banach Spaces of Holomorphic Functions", October, Bordeaux. He was an invited speaker at the conference in honor of A.A. Gonchar, November, Steklov Institute, Moscow. He was a speaker at CMFT 2013 (Shantou, China). He was an invited speaker at the seminar in Guangzhou University (China), the University of Bordeaux (LMB) and of Grenoble (Laboratoire J. Kuntzmann). He was a visitor at the University of Macao, MIT, and the University of Cyprus.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master, PhD: J. Leblond, Inverse source problems, 3h, Franco-German summer school for inverse problems and PDE, Univ. Brême, All.

9.2.2. Supervision

PhD: S. Chaabi, Analyse complexe et problèmes de Dirichlet dans le plan : équation de Weinstein et autres conductivités non-bornées, defended Dec.2d, 2013 (advisors: L. Baratchart, A. Borichev).

PhD in progress: D. Ponomarev, Inverse problems for planar conductivity and Schrödinger PDEs, since Nov. 2012 (advisors: J. Leblond, L. Baratchart).

PhD in progress: M. Caenepeel, A hierarchical framework for design oriented modeling, since Feb. 2013 (advisors: Y. Rolain, M. Olivi, F. Seyfert).

9.2.3. Juries

- L. Baratchart was a referee of the PhD. manuscript of J. Vayssettes (Univ. Poitiers).
- J. Leblond was a member of the hiring committee for a professor in applied mathematics, Univ. Lorraine, and of the PhD jury of A. Blandinières (Univ. Lyon), R. Tytgat (Aix-Marseille University), and A. Abdelmoula (Univ. Rennes, reviewer).
- M. Olivi was a member (reviewer) of the HdR jury of Sylvie Icart (Université de Nice-Sophia Antipolis, March).

9.3. Popularization

- J. Leblond is a member of the Committee MASTIC. She gave a communication within the “Café-in” of the Research Center (Sept.).
- M. Olivi is co-president with I. Castellani of the Committee MASTIC (Commission d’Animation et de Médiation Scientifique) <https://project.inria.fr/mastic/>. She is responsible for Scientific Mediation. She held a booth at the APMEP conference 2013 in Marseille (France).
- E. Pozzi was a member of the Committee MASTIC.
- S. Chevillard published a popularization blog post on the website “Mathématiques de la planète Terre 2013” (<http://mpt2013.fr/>) about the problem of inverse magnetization of rocks (cf. Section 4.3)

9.4. Community services

- L. Baratchart is a member of the Editorial Boards of *Constructive Methods and Function Theory* and *Complex Analysis and Operator Theory*. He is Inria’s representative at the “conseil scientifique” of the Aix-Marseille University.
- S. Chevillard is representative at the “comité de centre” and at the “comité des projets” (Research Center Inria-Sophia). He was a member of the work-group “Books” whose assignment was to propose different scenarios regarding the future of the books currently stored at the library of the research center.
- J. Leblond is an elected member of the “Conseil Scientifique” of Inria. She is one of the two researchers in charge of the mission “Conseil et soutien aux chercheurs” within the Research Center. She is a member of the “Comité de Suivi National PRPS - QVT” (Prévention des Risques Psycho-Sociaux et la Qualité de Vie au Travail).
- M. Olivi is responsible for scientific mediation and co-president of the committee MASTIC.
- F. Seyfert is a member of CUMIR at Inria Sophia-Antipolis-Méditerranée.

ARAMIS Team

9. Dissemination

9.1. Scientific Animation

O. Colliot acts as a reviewer for NeuroImage, NeuroImage: Clinical, IEEE TMI, Human Brain Mapping, Neurobiology of Aging and MICCAI.

O. Colliot is a member of the Editorial Board of the ISTE-Wiley-Hermes "Neural Engineering" book series.

O. Colliot acts as an expert for the Canada Foundation for Innovation (CFI), Fonds National de la Recherche Scientifique (Belgium), Alzheimer Nederland, and the FCS Sciences et Technologies pour l'Aéronautique et l'Espace.

O. Colliot gave an invited presentation at the National Academy of Medicine (title: "Biomarqueurs IRM de la maladie d'Alzheimer: apport du traitement des images"), October 2013.

O. Colliot gave invited talks at the meeting of the French Society of Neurology (October 2013), at University College London (may 2013) and at the CERCO CNRS Toulouse (may 2013).

S. Durrleman gave an invited presentation at the Rank Prize Funds symposium "Medical Imaging meets Computer Vision" (march 2013)

S. Durrleman gave an invited presentation at the imaging seminar of Université Paris Dauphine (April 2013)

S. Durrleman was organizer of the MICCAI Workshop "Mathematical Foundation of Computational Anatomy" (MFCA) together with X. Pennec, S. Joshi, M. Nielsen, T. Fletcher and S. Sommer, which was held in Nagoya, Japan in September 2013.

S. Durrleman was part of the scientific committee of the conference "Geometric Science of Information" (GSI) held in August 2013 in Paris.

S. Durrleman acts as reviewer for Medical Image Analysis (MedIA), NeuroImage, NeuroImage: Clinical, International Journal on Computer Vision (IJCV), and for the conferences Medical Image Computing and Computer Aided Intervention (MICCAI) and Information Processing in Medical Imaging (IPMI).

M. Chavez co-organized the CNRS school "Graphical models for the characterisation of information flow in complex networks: Application in neuroimaging", which took place in June 2013 at the l'Institut National Polytechnique de Grenoble, France

M. Chavez is Associated Editor of the physics journal "Chaos, Solitons and Fractals"

M. Chavez acts as an expert for the French "Agence National de la Recherche (ANR)" and the "Fond National Suisse de la Recherche Scientifique (FNSRS)"

M. Chavez currently acts as reviewer for different journals such as P Natl Acad Sci USA; Phys Rev Lett; Phys Rev E; J. Neurosci Methods and Clin Neurophysiol.

D. Dormont is member of the board of the French Society for Neuroradiology.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: Olivier Colliot coordinates the module "Méthodes d'imagerie médicale" of the Master 2 in Computer Science of Université Pierre et Marie Curie.

Master: Olivier Colliot, Master in Computer Science, 12 hours (eqTD), Université Pierre et Marie Curie

Master: Stanley Durrleman, Master in Computer Science, 8 hours (eqTD), Université Pierre et Marie Curie

Master: Olivier Colliot, Master in Cognitive Science, 4.5 hours (eqTD), Ecole Normale Supérieure (Ulm)

Master: Stanley Durrleman, Master in Applied Mathematics, 2 hours (eqTD), Ecole Normale Supérieure (Cachan)

Master: Marie Chupin, Master in Computer Science, 3 hours (eqTD), Université Pierre et Marie Curie

Master: Dominique Hasboun, Master in Biology, 4 hours, Ecole Normale Supérieure (Ulm)

Master: Dominique Hasboun, Master in Cognitive Science, 12 hours, Ecole Normale Supérieure (Ulm)

Master: Dominique Hasboun, Master in Biology, 15 hours, Université Pierre et Marie Curie

Master: Dominique Hasboun, Master in Medical Physics, 7 hours, Université Paris-Sud

Master: Fabrizio De Vico Fallani, Master in "Méthodologies et applications en imagerie médicale", 3 hours (eqTD), Université Pierre et Marie Curie

Master: Damien Galanaud, Master in Medical Physics, 4 hours, Université Paris-Sud

Engineering school: Olivier Colliot, 4.5 hours (eqTD), Telecom ParisTech

Engineering school: Dominique Hasboun, 3 hours, ENSEA

Medical school: Didier Dormont is the Director of the University Diploma (DIU) "Diagnostic and Therapeutic Neuroradiology", Université Pierre et Marie Curie

Medical school: Didier Dormont, Courses for Medical Students, Université Pierre et Marie Curie

Medical school: Dominique Hasboun, Courses for Medical Students, Université Pierre et Marie Curie

Medical school: Damien Galanaud, Courses for Medical Students, Université Pierre et Marie Curie

Medical school: Didier Dormont organizes and participates to the practical teaching of Neuroradiology for Medical Students in the Department of Diagnostic Neuroradiology of Pitié Salpêtrière University Hospital

Medical school: Didier Dormont organizes and participates to the practical teaching of Neuroradiology for Radiology Specializing Residents in the Department of Diagnostic Neuroradiology of Pitié Salpêtrière University Hospital

Medical school: Didier Dormont, Courses to the university diplomas (DU) : "Maladie d'Alzheimer", and "Imagerie Vasculaire non Invasive"

Medical school: Damien Galanaud, courses to the University Diploma (DIU) "Diagnostic and Therapeutic Neuroradiology", Université Pierre et Marie Curie

Medical school: Dominique Hasboun, courses to the University Diploma (DIU) "Diagnostic and Therapeutic Neuroradiology", Université Pierre et Marie Curie

Paramedical studies: Dominique Hasboun, Psychomotricity, 50 hours, Université Pierre et Marie Curie

9.2.2. Supervision

HdR : Fabrizio de Vico Fallani, Université Pierre et Marie Curie, Oct 7th, 2013

PhD : Thomas Samaille, Segmentation automatique des anomalies de la substance blanche du sujet âgé, Université Pierre et Marie Curie, June 4th 2013, advisor: Didier Dormont, co-advisors: Marie Chupin, Olivier Colliot

PhD in progress : Claire Cury, Approches morphométriques pour les grandes bases de données - Application à l'imagerie génétique, Université Pierre et Marie Curie, Started in 2011, advisor: Olivier Colliot

PhD in progress : Takoua Kaaouana, Détection automatique et analyse des micro-saignements cérébraux : Application à des séquences d'imagerie cliniques et à de grandes populations de sujets, Université Pierre et Marie Curie, Started in 2012, advisor: Didier Dormont, co-advisors: Marie Chupin, Ludovic de Rochefort

PhD in progress: Pietro Gori, Statistical analysis of neuronal connectivity in patients with Gilles de la Tourette syndrome based on anatomical structures extracted from both structural and diffusion images, Université Pierre et Marie Curie, Started in 2012, advisors: N. Ayache, O. Colliot and S. Durrleman

PhD in progress: Jean-Baptiste Schiratti, Méthodes et algorithmes pour l'analyse statistique de données anatomiques longitudinales – application à la caractérisation des phases pré-symptomatiques des maladies neurodégénératives, Ecole Polytechnique, Started in 2013, advisors: S. Allassonnière and S. Durrleman

PhD in progress: Barbara Gris, Approche modulaire des méthodes de grandes déformations pour l'appariement de formes, Ecole Normale Supérieure de Cachan, Started 2013, advisors: A. Trounev and S. Durrleman

Master 2: Lorraine Hamelin, Morphométrie des sillons cérébraux dans la maladie d'Alzheimer, Université Pierre et Marie Curie, Feb-Sept 2013, advisors: Olivier Colliot and Marie Sarazin

Master 2: Pauline Bezivin, Etude comparative de biomarqueurs longitudinaux dans la maladie d'Alzheimer, Université de Rennes, Mar-Aug 2013, advisors: Olivier Colliot, Stanley Durrleman and Grégory Operto

Internship: Fanny Cohen, Morphométrie dans une forme génétique de démence fronto-temporale, Telecom Bretagne, July 2012-June 2013, advisor: Olivier Colliot

Internship Master 1: Andrei Besedin, Evaluation de métriques pour le recalage iconique - application au ciblage pré-opératoire en stimulation cérébrale profonde, February 2013 - August 2013), Master Bioengineering, Université Paris Descartes, advisors: S. Durrleman, E. Bardinet and S. Fernandez-Vidal

Master 2: Margherita Tringali, Mise en oeuvre d'un protocole expérimental pour la détection des patterns d'activité cérébrale par une Interface Cerveau Machine, Université Pierre et Marie Curie, Feb-Sept 2013, advisors: Mario Chavez and Fabrizio De Vico Fallani

Master 1: Boris Tchangang, Réalisation d'une interface graphique pour l'analyse de signaux EEG sous le logiciel Matlab, Institut Supérieur des Bio-Sciences, Université Paris Est, Créteil, Feb-Sept 2013, advisors: Mario Chavez

Internship: Martina Corazzol, Hierarchy of neural organisation in the zebra fish spinal cord: causality analysis of in-vivo calcium imaging data, April-August 2013, advisor: Fabrizio De Vico Fallani

9.2.3. *Juries*

Olivier Colliot participated, as referee, to the PhD committee of Jean-Baptiste Fiot (Université Paris-Dauphine, CEREMADE), entitled "Mathematical methods of image analysis for cross-sectional and longitudinal population studies", defended on Sep 17th, 2013 (supervisor: Laurent D. Cohen).

Olivier Colliot participated, as examiner, to the HDR committee of Fabrizio de Vico Fallani (Université Pierre et Marie Curie), defended on Oct 7th, 2013.

Stanley Durrleman participated, as examiner, to the PhD committee of Olivier Mirat (Université Paris Descartes), entitled "Analyse haut-débit du comportement spontané d'un organisme modèle "simple"", defended on Sept 25, 2013 (supervisor: Claire Wyart).

Stanley Durrleman participated, as examiner, to the PhD committee of Alexandre Imperiale (Université Pierre et Marie Curie), entitled "Imaged-based data assimilation methods for the personalization of mechanical models", defended on Dec 11, 2013 (supervisors: D. Chapelle and Ph. Moireau).

Stanley Durrleman participates to the PhD committees of James Fishbaugh and Anuja Sharma, PhD students at the University of Utah under the supervision of professor Guido Gerig.

Fabrizio De Vico Fallani participates to the PhD committee of Jonas Chatel Goldman, PhD student at the Université Joseph Fourier (Genoble) under the supervision of Marco Congedo.

Didier Dormont participated as examiner (he was also the Supervisor of the PhD with Marie Chupin) to the PhD committee of Thomas Samaille entitled “Segmentation automatique des anomalies de la substance blanche du sujet âgé.”, defended on June the 4th of 2013.

Didier Dormont participated as examiner to the committee of the Medical Thesis (Paris-Sud University) of Gersende Favé entitled “Apport du tenseur de diffusion et de la spectroscopie comme outil pronostic de l’évolution neurologique des patients atteints d’hémorragie méningée grave », defended on June the 17th of 2013.

Didier Dormont participated as examiner to the committee of the Medical Thesis (Paris VI University) of Raphael Dautry, defended on June the 24th of 2013.

Didier Dormont participated as examiner to the committee of the Medical Thesis (Paris-Sud University) of Nadya Pyatigorskaya entitled “Mesure de la charge en fer par IRM dans les formes génétiques de la maladie de Parkinson », defended on September the 12th of 2013.

Didier Dormont participated as examiner to the committee of the Medical Thesis (Paris V University) of Marie Lémery Magnin entitled “Etude de la perfusion des gliomes de bas grade de l’enfant», defended on September the 30th of 2013.

9.3. Popularization

The team is involved in the BrainCatalogue project (coordinator: Roberto Toro, Institut Pasteur) dedicated to the popularization of neuroanatomical knowledge. The project features MRI scans and 3D reconstructions for various vertebrates species (bear, mouse, macaque, dolphin, leopard, rhinoceros, human, squirrel ...).

The team has participated to the ICM "Donor days".

ARIC Project-Team

9. Dissemination

9.1. Scientific Animation

- Florent de Dinechin is an associate editor of the journal *IEEE Transactions on Computers*. He was a member of the Program Committees of the conferences CompAs (Grenoble, January 2013), Applied Reconfigurable Computing (Los Angeles, March 2013), Highly Efficient Accelerators and Reconfigurable Technologies (Edinburgh, June 2013), Field-Programmable Logic (Porto, September 2013), Field-Programmable Technology (Kyoto, December 2013), ReConfig 2013 (Cancun, December 2013). He also organized a tutorial half-day on arithmetic core generation using the FloPoCo framework at HiPEAC 2013 (Berlin, January 2013).
- Guillaume Hanrot has been deputy director of the LIP (laboratoire d'informatique du parallélisme) since 01/01/13. He has also been in charge of the computer science master at ENS de Lyon for the academic year 2012-2013. He has been a member of hiring committees for an assistant professor position at Caen IUT, for an assistant professor position at Saint-Étienne IUT, for a professor position at ENSIIE Strasbourg, and of the national committee for "Prime d'excellence scientifique". He is a member of the scientific council of ENSIIE (Évry). He chairs a working group in charge of making recommendations concerning general teaching and training policy at ENS de Lyon.
- Claude-Pierre Jeannerod is a member of the scientific committee of "Journées Nationales de Calcul Formel".
- Fabien Laguillaumie has been member of an hiring committee for an assistant professor position at Université Lyon 1. He was member of ProvSec 2013 program committee. He is responsible for the second year "Ingénierie des Risques" of the Master SAFIR.
- Vincent Lefèvre and Nicolas Louvet were in the scientific committee of the CNRS thematic school *Précision et reproductibilité en calcul numérique* (Fréjus, France, March, 2013).
- Jean-Michel Muller co-chairs the Groupement de Recherche (GDR) *Informatique Mathématique* of CNRS. He is an associate editor of the journal *IEEE Transactions on Computers*. He participated to the evaluation committee of the LIRMM laboratory (Montpellier) in November 2013. He is a member of the scientific councils of CERFACS (Toulouse) and ENS de Lyon. He was a member of the Program Committees of the conferences IEEE ARITH 21 (Austin, Texas, April 2013) and IEEE ASAP'2013 (Washington DC, June 2013).
- Nathalie Revol was in the hiring committee for junior researchers (CR) of Inria Grenoble - Rhône-Alpes. She is a member of the CES (Commission des Emplois Scientifiques), the hiring committee for postdocs at Inria Grenoble - Rhône-Alpes. She was the chair of the organization committee and took charge of the "gender aspects" of the Forum 2013 des Jeunes Mathématicien-ne-s, 13-15 November, Lyon. She is a member of the "comité de diffusion" of the MILyon labex. She belongs to the steering committee for the MMI (Maison des Mathématiques et de l'Informatique). She is a member of the selecting committee of CapMaths.
- Bruno Salvy is a member of the editorial boards of the "Journal of Symbolic Computation", of the "Journal of Algebra" (section Computational Algebra) and of the collections "Texts and Monographs in Symbolic Computation" (Springer) and "Mathématiques et Applications" (SMAI-Springer). He is organizing the working group Computer Algebra of the CNRS GDR IM. This year, he has been in the program committees of ISSAC 2013 (Boston, Mass., June 2013) and Analco 2013 (New Orleans, Louisiana, January 2013).

- Damien Stehlé has been deputy director and Erasmus coordinator of the ENS de Lyon Computer Science department from 01/01/13 until 30/06/13. He has been the director of the Computer Science department since 01/07/13. He is a member of the steering committee of the Cryptography and Coding CNRS working group (GdT C2 du GDR IM). He is a member of the steering committee of the PQCrypto conference series. In 2013, he served in the program committees of the PQCrypto (Limoges, France, June 2013) and Asiacrypt (Bengalore, India, December 2013) conferences.
- Gilles Villard is chair of LIP laboratory and a member of the editorial board of the “Journal of Symbolic Computation.”

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Nicolas Louvet, *Computer Architecture*, 74h, L2, Univ. Lyon 1.

Licence : Nicolas Louvet, *Algorithms and Data Structures*, 30h, L3, Univ. Lyon 1.

Licence : Nicolas Louvet, *Operating Systems*, 50h, L3, Univ. Lyon 1.

Master: Nicolas Brisebarre and Bruno Salvy, *Approximations: from symbolic to numerical computation, and applications*, 24h, ENS de Lyon.

Master: Guillaume Hanrot and Jean-Michel Muller, *Computer Algebra*, 24h, ENS de Lyon.

Master: Claude-Pierre Jeannerod, Nicolas Louvet, Nathalie Revol, *Numerical Algorithms*, 48h, Univ. Lyon 1.

Master: Fabien Laguillaumie, *Cryptography, Error Correcting Codes*, 150h, Univ. Lyon 1.

Master: Vincent Lefèvre, *Computer Arithmetic*, 14h, Univ. Lyon 1.

Master: Jean-Michel Muller, *Floating-Point Arithmetic and Formal Proof* (8h + coordination of the 24h course), ENS de Lyon.

Master: Bruno Salvy, *Computer Algebra*, 12h, MPRI.

Master: Damien Stehlé, *Cryptography*, 24h, ENS de Lyon.

Doctorat: Nicolas Brisebarre, *Lattices in computer arithmetic*, 3h, École de Printemps d’Informatique Théorique, Autrans, March 21.

Doctorat: Florent de Dinechin, *Arithmétique flottante*, 1h30, École CNRS *Précision et reproductibilité en calcul numérique*, Fréjus, March 25-29.

Doctorat: Guillaume Hanrot, *Introduction to lattice algorithms*, 3h, École de Printemps d’Informatique Théorique, Autrans, March 18.

Doctorat: Vincent Lefèvre, *Arithmétique flottante en précision arbitraire*, 3h, École CNRS *Précision et reproductibilité en calcul numérique*, Fréjus, March 25-29.

Doctorat: Jean-Michel Muller, *Arithmétique flottante*, 2h, École CNRS *Précision et reproductibilité en calcul numérique*, Fréjus, March 25-29.

Doctorat: Jean-Michel Muller, *Arithmétique flottante*, 2h, École HPC, Lyon, September 3.

Doctorat: Nathalie Revol and Philippe Théveny, *Arithmétique flottante et intervalles*, 3h, École CNRS *Précision et reproductibilité en calcul numérique*, Fréjus, March 25-29.

Doctorat: Nathalie Revol and Philippe Théveny, *Précision et arithmétique flottante : outils, bibliothèques*, 3h30, JDEV : Journées du Développement Logiciel, École Polytechnique, 4-6 September.

Doctorat: Nathalie Revol and Philippe Théveny, *Introduction à l’arithmétique par intervalles*, 3h, professional training entitled “Contrôler et améliorer la qualité numérique d’un code de calcul industriel”, Collège de l’X, Paris, 21-22 November.

Doctorat: Damien Stehlé, *Introduction to lattices*, 3h, École de Printemps d’Informatique Théorique, Autrans, March 18.

9.2.2. Supervision

PhD: Julien Devigne, *Protocoles de re-chiffrement pour le stockage de données*, September 2011 - December 2013 (Orange Labs - Univ. Caen); co-supervised by Fabien Laguillaumie (together with Sébastien Canard and Brigitte Vallée).

PhD in progress: Nicolas Brunie, *Architecture et réalisation d'un accélérateur reconfigurable à couplage fort pour processeurs parallèles*, since September 2010 (CIFRE Kalray from April 2011); co-supervised by Florent de Dinechin (and Renaud Ayrignac).

PhD in progress: Louis Dumont, *Algorithmique efficace pour les diagonales*, since September 2013, co-supervised by Bruno Salvy (together with Alin Bostan).

PhD in progress: Silviu Filip, *Filtroptim : tools for an optimal synthesis of numerical filters*, since September 2013, co-supervised by Nicolas Brisebarre and Guillaume Hanrot.

PhD in progress: Pierre Lairez, *Algorithmique efficace pour la création télescopique et ses applications*, since September 2011, co-supervised by Bruno Salvy (together with Alin Bostan).

PhD in progress: Adeline Langlois, *Foundations of lattice-based cryptography*, since September 2010, supervised by Damien Stehlé.

PhD in progress: Vincent Neiger, *Multivariate interpolation in computer algebra: efficient algorithms and applications*, since September 2013, co-supervised by Claude-Pierre Jeannerod and Gilles Villard (together with Éric Schost).

PhD in progress: Marie Paindavoine, *Méthodes de calculs sur des données chiffrées*, since October 2013 (Orange Labs - UCBL), co-supervised by Fabien Laguillaumie (together with Sébastien Canard).

PhD in progress: Philippe Théveny, *Numerical quality and high performance in scientific computing on emerging architectures*, since September 2011, supervised by Nathalie Revol.

PhD in progress: Serge Torres, *Some tools for the design of efficient and reliable function evaluation libraries*, since September 2010, co-supervised by Nicolas Brisebarre and Jean-Michel Muller.

9.2.3. Juries

- Nicolas Brisebarre was a member of the PhD committee of Răzvan Bărbulescu (Nancy, December 2013).
- Guillaume Hanrot was an external referee for the PhD of Md Mohammed Haque (Macquarie U., Australia, sept. 2013) and for the PhD of Mariya Georgieva (Caen, 2013-12-09). He was a member of the committee for the PhD of Léo Ducas (ENS Paris, 2013-11-12) and Yuanmi Chen (ENS Paris, 2013-11-13).
- Fabien Laguillaumie was an external referee for the PhD of Léo Ducas (ENS Paris, 2013-11-12) and Viet Cuong Trinh (Univ. Paris 8, 2013-12-19). He was a member of the PhD committees of Mario Stefler (2013-09-26, ENS Paris), Nicolas Estibals (2013-10-30), Mariya Georgieva (Caen, 2013-12-09), and Aurore Guillevic (ENS Paris, 2013-12-20).
- Jean-Michel Muller was a referee for the habilitation of Stef Graillat (U. Paris 6, 2013-12-2).
- Nathalie Revol was the external referee for the PhD of Bingzhou Zheng (U. McMaster, Hamilton, Canada, 2013-12-10).
- Bruno Salvy was a member of the PhD committee of Fabien Monfreda (Toulouse, July 2013).
- Damien Stehlé was an external referee for the PhD of Romar Basillaje Dela Cruz (Nanyang Technological U., Singapore, March 2013) and of Zhenfei Zhang (U. of Wollongong, Australia, October 2013).

9.3. Invited Conferences

- Florent de Dinechin gave invited talks or lectures at the CERN/Intel OpenLab workshop at CERN, at the LIF seminar in Luminy, at the Intel Summer School in Nizhniy Novgorod, and at the Journées Développement Logiciel (JDEV) in Palaiseau.
- Jean-Michel Muller gave an invited talk *Proof of Properties in Floating-Point Arithmetic* at the conference *Continuity, Computability, Constructivity - From Logic to Algorithms* (CCC 2013), Swansea University/Gregynog, UK, June 26–30, 2013.
- Nathalie Revol gave talks about numerical reproducibility, with a focus on interval computations, at PPAM'2013 (Warsaw, Poland, 2013/09/8-11), at RAIM 2013 (Paris, France, 2013/11/18-20), at McMaster University (Hamilton, Ontario, Canada, 2013-12-10), and at University of Toronto (Ontario, Canada, 2013-12-13).
- Bruno Salvy was invited to give a talk *Implicit Species at the basis of Analytic Combinatorics* at the 24th International Meeting on Probabilistic, Combinatorial and Asymptotic Methods for the Analysis of Algorithm (AofA 2013, Menorca, Spain, May 27–31) and on *Newton iteration in computer algebra and combinatorics* at the *Journées d'Informatique Fondamentale de Paris Diderot* (April 22–26).
- Damien Stehlé gave an invited lecture talk at *Journées Nationales du Calcul Formel* (Luminy, France, May 13–17, 2013), invited plenary talks at the conferences *SIAM Conference on Applied Algebraic Geometry (AG13)* (Fort Collins, Colorado, USA, August 1–4, 2013) and *ICISC* (Seoul, Korea, November 25–29, 2013) and at the *Microsoft Research India Workshop on Lattice-Based Cryptography* (Bengalore, India, November 30, 2013).

9.4. Popularization

- Nathalie Revol gave talks for pupils at collèges and lycées, as an incentive to choose scientific careers: lycée Jeanne d'Arc (Cessy, Ain), lycée Rosa Parks (Neuville, Rhône). During the “Week of mathematics”, she gave a 2-hour talk at lycée de la Plaine de l'Ain (Ambérieu-en-Bugey, Ain). She was present, took part in speed-meetings, and gave talks for the “Mondial des Métiers” (Eurexpo Lyon, Chassieu, Rhône) and for “Science au Carré(e)” (Forum des Halles, Paris). For the Science Fair, she gave 8 talks at ENS de Lyon. She was invited to “Interacadémiques” in Lyon, for an audience of inspecteurs d'académie. She supervised the internship of Quentin Chopinet (1e S, one week) and hosted Elsa Courtais (spé TSI, one day).
- Damien Stehlé was interviewed for an article in *La Recherche*, published in September 2013.

ARLES Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Programme Committees of Conferences and Workshops

- Nelly Bencomo is PC chair of SEAMS'13;
- Nelly Bencomo is PC member of the following international conferences: MODELS'13, CibSE'13, Poster track at RE'13, SANES session at PECCS'13, SBES'13;
- Nelly Bencomo is PC member of the VAMOS'13 international workshop;
- Nikolaos Georgantas is PC member of the following international conferences: CloudCom'13, Aml'13, DATA'13, ICSOFT-EA'13, ICSOFT-PT'13, SCC'13, ANT'13, SOSE'13;
- Nikolaos Georgantas is PC member of the following international workshops: MW4NG'13, ARM'13;
- Valérie Issarny is PC member of the following international conferences: CBSE'13&14, Coordination'14, ECSA'13, ESSOS'14, FASE'13&15, FSE'14, ICDCS'13, ICSE'13, ICSE-SEIP'14, IFIPTM'13, ISARCS'13, Middleware'13&14, MobiCASE'13, SEAMS'13&14;
- Valérie Issarny is PC member of the following international workshops: SESO@ICSE'13, SERENE'13;
- Animesh Pathak is PC member of the following international conferences: S-Cube'13, EWSN'14, and Sensornets'14; and
- Animesh Pathak is PC member of the GeoHCI'13 international workshop.

8.1.2. Leadership Services in Academic Events and Edited Journals

- Nikolaos Georgantas is associate editor of the International Journal of Ambient Computing and Intelligence (IJACI);
- Nikolaos Georgantas is associate editor of the International Journal of Advances in Human-Computer Interaction;
- Valérie Issarny is member of the Steering Committee of the ESEC/FSE conference;
- Valérie Issarny is associate editor of the Springer JISA Journal of Internet Services and Applications;
- Valérie Issarny is the general chair of the ESSoS 2013, the International Symposium on Engineering Secure Software and Systems; and
- Animesh Pathak is the Production Chair of HiPC 2013, and Publicity Chair of DCOSS 2014.

8.1.3. Other Academic Services

- Nikolaos Georgantas is member of the PhD monitoring committee at Inria Paris-Rocquencourt;
- Valérie Issarny is scientific leader of the EC FP7 ICT IP CHOReOS;
- Valérie Issarny is member of the IFSTTAR Scientific Council & "Commission d'évaluation des chercheurs";
- Valérie Issary is member of the GDR GPL scientific council;
- Valérie Issarny is member of the evaluation committee of ANR Blanc JCJC'13, and of the Swedish Research Council subcommittee for Computer Science'2013.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Nikolaos Georgantas gives a 12 hours lecture on “Pervasive Service Oriented Computing” as part of the SWAS lecture of the M2 COSY of the University of Versailles Saint-Quentin en Yvelines;

Animesh Pathak co-taught a M2 COSY level course on “Web sémantique, contenus et usages” at University of Versailles Saint-Quentin-en-Yvelines in Spring 2013; and

Animesh Pathak gave two three-hour guest lectures at CNAM, Paris as part of a M2 level course on embedded systems in Spring 2013.

8.2.2. Supervision

In 2013, the following students successfully defended their PhD:

- Amel Bennaceur, *Dynamic Synthesis of Connectors in Pervasive Environments*, UPMC-EDITE, defended in July 2013, advised by V. Issarny
- Pankesh Patel, *Enabling High-Level Application Development for the Internet of Things*, UPMC-EDITE, defended in November 2013, advised by A. Pathak and V. Issarny

Additionally, the following PhD theses are currently in progress at the ARLES project-team:

- Emil Andriescu, *Synthèse et déploiement dynamiques de protocoles de médiation pour l'interopérabilité dans les environnements collaboratifs nomades*, started October 2012, UPMC-EDITE, CIFRE Inria-Ambientic, advised by Valérie Issarny and Roberto Speicys-Cardoso (Ambientic).
- Benjamin Billet, *Self-adaptive Streaming Middleware for the Internet of Things*, started October 2012, UVSQ-EDSTV, advised by Valérie Issarny
- Sara Hachem, *Middleware pour l'Internet des objets intelligents*, started October 2012, UVSQ-EDSTV, advised by Valérie Issarny and Animesh Pathak.
- Georgios Bouloukakis, *Runtime adaptation of middleware connectors for emergent mobile systems*, started October 2013, UPMC-EDITE, advised by Nikolaos Georgantas and Valérie Issarny.

Also, Valérie Issarny is co-advising with Ansgar Radermacher from CEA-LISE, the PhD thesis of Amel Belaggoun on *Adaptabilité et reconfiguration des systèmes temps-réel embarquées*; this is a PhD from UPMC-EDITE with the research being undertaken at CEA-LISE.

8.2.3. Juries

- Valérie Issarny served on the HDR committee of Marc-Olivier Killijian (Université Paul Sabatier, Toulouse).
- Animesh Pathak served on the PhD committee of Miruna Stoicescu (CNRS-LAAS & INP, Toulouse).

8.3. Popularization

- Benjamin Billet was invited to speak at a one-day Android tutorial event organized by the ARAMIS business network at Lyon.
- Animesh Pathak attended the “India-France Technology Summit” in New Delhi, India as part of the Inria delegation, where he was part of a panel on urban rail, and also presented a technology showcase of “TravelDashboard: Smart Mobility for Urban Travelers”.
- Animesh Pathak was invited to be part of a panel on the “Chronique marché des applications mobiles” television programme on the French TV channel TVFIL78.
- Emil Andriescu, Sara Hachem, Kim Hwa Khoo, Georgos Mathioudakis Animesh Pathak, and George Rosca represented Inria at the “Futur en Seine” technology expo in Paris.

ASAP Project-Team

9. Dissemination

9.1. Scientific animation

- Antoine Boutet was a member of the shadow program committee of *ACM Eurosys'13*, Prague, Czech Republic, Apr. 2013.
- Davide Frey was a program co-chair of the *International Conference on Distributed Computing and Networking (ICDCN), Distributed Computing Track*, Mumbai, India, Jan. 2013.
- Davide Frey was a program committee member of the conferences:
 - *IEEE International Parallel & Distributed Processing Symposium (IPDPS)*, Boston, Massachusetts USA, May 2013.
 - *IEEE International Conference on Peer-to-Peer Computing (P2P)*, Trento, Italy, Sep. 2013.
 - *ACM/IFIP/USENIX International Conference on Middleware (Middleware)*, Beijing, China, Dec. 2013.
 - *IFIP International Conference on Distributed Applications and Interoperable Systems (DAIS)*, Florence, Italy, June 2013.
- George Giakkoupis was a program committee member of the *International Workshop on Foundations of Mobile Computing (FOMC)*, Jerusalem, Israel, Oct. 2013.
- Anne-Marie Kermarrec is a member of the *Academia Europea* since 2013.
- Anne-Marie Kermarrec is a member of the scientific committee of the *Société Informatique de France*.
- Anne-Marie Kermarrec is a member of the *Inria scientific board (Bureau du comité des projets)* in Rennes.
- Anne-Marie Kermarrec was a member of *ASF 2013*.
- Anne-Marie Kermarrec is the chair of the *ACM Software System Award Committee* in 2014.
- Anne-Marie Kermarrec is a member of the *ACM Software System Award Committee* since 2009.
- Anne-Marie Kermarrec is a member of the *ERC panel for Consolidator Grants* since 2013.
- Anne-Marie Kermarrec was the chair of the hiring committee for the position of *Assistant Professor at ENS Lyon (Chaire Inria/ENS)*.
- Anne-Marie Kermarrec was a member of the 2013 hiring committees of: Inria CR, Max Planck Institute for Software Systems, University of Lugano.
- Anne-Marie Kermarrec is a member of the *IEEE Internet Computing Editorial Board*.
- Anne-Marie Kermarrec is the vice-chair of *ACM Eurosys* since Apr. 2013.
- Anne-Marie Kermarrec is/was a program committee member of the conferences:
 - *ACM/IFIP/USENIX International Conference on Middleware (Middleware)*, China, Dec. 2013.
 - *International Conference on Very Large Data Bases (VLDB)*, Trento, Italy, Aug. 2013.
 - *International Conference on Networked Systems (NETYS)*, Marrakech, May 2013.
 - *ACM International Conference on Data Management (SIGMOD)*, NYC, USA, June 2013.
 - *International Conference on Distributed Computing Systems (ICDCS)*, Philadelphia, USA, July 2013.

- *International Conference on Peer-to-peer systems (P2P)*, Trento, Italy, Sep. 2013.
- *International Conference on Distributed Computing Systems (ICDCS)*, Madrid, July 2014.
- *International Conference on Extending Database Technology (EDBT)*, Athens, Greece, Mar. 2014.
- *ACM Eurosys*, Amsterdam, Apr. 2014.
- *ACM International Systems and Storage Conference (SYSTOR)*, Haifa, Israel, June 2014.
- *International Conference on Networked Systems (NETYS)*, Marrakech, May 2014.
- Anne-Marie Kermarrec is a member of the steering committees of *ACM Eurosys*, *Middleware*, and the *Winter School on Hot Topics in Distributed Systems*.
- Anne-Marie Kermarrec is a member of the technical committee of the *ACM Conference on Online Social Networks*.
- Anne-Marie Kermarrec co-organized the *Workshop Inria/Technicolor on Distributed Storage Systems*, Rennes, Nov. 2013.
- Michel Raynal was in the editorial board of the journals: *IEEE Transactions on Computers*, *Journal of Parallel and Distributed Computing*, *Journal of Computer Systems Science and Engineering*, *Foundations of Computing and Decision Sciences*.
- Michel Raynal was a program co-chair of the *International Conference on Distributed Computing and Networking (ICDCN)*, *Distributed Computing Track*, Mumbai, India, Jan. 2013.
- Michel Raynal was a steering committee member of the conferences:
 - *IEEE International Conference on Distributed Computing Systems (ICDCS)*, Philadelphia, USA, July 2013.
 - *International Conference on Distributed Computing and Networking (ICDCN)*, Mumbai, India, Jan. 2013.
- Michel Raynal was a program committee member of the conferences:
 - *ACM Symposium on Principles of Distributed Computing (PODC)*, Montreal, QC, Canada, July 2013.
 - *International Symposium on Distributed Computing (DISC)*, Jerusalem, Israel, Oct. 2013.
- Michel Raynal was an *Adjunct Professor* of the Polytechnic University (PolyU), Hong-Kong.
- Michel Raynal was a *European Representative in the IEEE Technical Committee on Distributed Computing*.
- Michel Raynal was an international liaison co-chair of *ICDCS 2013*.
- François Taïani was as program committee co-chair of the *IFIP International Conference on Distributed Applications and Interoperable Systems (DAIS)*, Florence, Italy, June 2013.
- François Taïani was a program committee member of the conferences:
 - *International Conference on Distributed Computing Systems (ICDCS)*, Philadelphia, USA, July 2013.
 - *Latin-American Symposium on Dependable Computing (LADC)*, Rio de Janeiro, Brazil, Apr. 2013
 - *Dependable and Adaptive Distributed Systems (DADS) Track of the ACM Symposium on Applied Computing*, Coimbra, Portugal, Mar. 2013
- Juan Manuel Tirado was a Program Committee Member of the *Workshop on Middleware for Next Generation Internet Computing (MW4NG)*, Beijing, China, Dec. 2013.

9.2. Invited talks

- George Giakkoupis. *Rumor spreading on dynamic graphs*. CS Theory Seminar, University of Calgary, Canada, Nov. 29 2013.
- George Giakkoupis. *Gossip protocols for information dissemination and other tasks*. Workshop on Storage and Cloud Computing (WOS3), Rennes, France, Nov. 22 2013.
- George Giakkoupis. *Tight bounds for rumor spreading with graph expansion*. PODC Social Network Workshop, Montreal, Canada, Jul. 21 2013.
- George Giakkoupis. *Randomized loose renaming in $O(\log \log n)$ time*. ASAP Workshop on Distributed Computing, Rennes, France, Jun. 28 2013.
- George Giakkoupis. *Rumor spreading and graph expansion*. 3rd Pacific Northwest Theory Days Workshop, University of Victoria, Canada, May 5 2013.
- George Giakkoupis. *Rumor spreading and vertex expansion*. Workshop on Epidemic Algorithms and Processes: From Theory to Applications, Dagstuhl, Germany, Jan. 21 2013.
- Mathieu Goessens. *P2P technologies for the Web: Challenges and perspectives*. Mozilla Summit 2013, Brussels, Belgium, Oct. 5 2013.
- Anne-Marie Kermarrec. Tutorial: *Systems support for news recommendation: From P2P to hybrid architectures*. Transform Summer School on Research Directions in Distributed Computing. Heraklion, Crete. June 10-14, 2013.
- Anne-Marie Kermarrec. *Privacy-aware micro-blogging*. University of Sydney and NICTA, Australia, Jan. 2014.
- Michel Raynal. Tutorial: *Checkpointing and debugging in distributed computing*. Latin-American Conference on Dependable Computing (LADC), Rio de Janeiro, Brazil, Apr. 2013.
- Michel Raynal. *Concurrency-related distributed recursion*. International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS), Osaka, Japan, Nov. 2013.
- Michel Raynal. *Hybrid concurrent objects*. DISC workshop on Software Transactional memory, Jerusalem, Israel, Oct. 2013.
- François Taïani. *Deconstructing complex distributed platforms: A report from the trenches*. International Workshop on Automated Specification and Verification of Web Systems (WWV), Florence, Italy, June 2013.
- François Taïani. Workshop La politique des données personnelles: Big data ou contrôle individuel? Institut Rhône-Alpin des Systèmes Complexes (IXXI) and ENS Lyon, Lyon, Nov. 2013.

9.3. Teaching, supervision, and juries

9.3.1. Teaching

- Licence (bachelor) courses:
 - François Taïani, Introduction to Operating Systems, 16h, L3, ESIR / Université of Rennes I, France.
 - Davide Frey, Invited lectures at ENS Cachan, Paris, and ENS Cachan Antenne de Bretagne.
- Master courses:
 - Davide Frey, Scalable Distributed Systems, 10h, M2, Université de Rennes I, France.
 - François Taïani, Synchronization and Parallel Programming, 62h, M1, ESIR / Université de Rennes I, France.
 - François Taïani, Distributed Systems, 48h, M2, ESIR / Université de Rennes I, France.
 - François Taïani, Programming Technologies for the Cloud, 32h, M2, Université de Rennes I, France.
- Doctoral courses:

- Anne-Marie Kermarrec, Large-scale Systems and Applications, EPFL, Switzerland.

9.3.2. Supervision

- PhD: Mohammad Alaggan. *Private Peer-to-peer similarity computation in personalized collaborative platforms*. Dec 2013. Supervised by Anne-Marie Kermarrec (and Sébastien Gambs).
- PhD: Antoine Boutet. *Décentralisation des systèmes de personnalisation*. Mar 2013. Supervised by Anne-Marie Kermarrec.
- PhD: Tyler Crain. *Faciliter l'utilisation des mémoires transactionnelles logicielles*. Mar 2013. Supervised by Michel Raynal.
- PhD: Konstantinos Kloudas. *Leveraging Content Properties to Optimize Distributed Storage Systems*. Mar 2013. Supervised by Anne-Marie Kermarrec.
- PhD: Alexandre Van Kempen. *Optimiser l'utilisation de la bande passante dans les systèmes de stockage distribué*. Mar 2013. Supervised by Anne-Marie Kermarrec.
- PhD in progress: Fabien André. *Calcul incrémental sur des plates-formes à large échelle*. Started Nov 2013. Supervised by Anne-Marie Kermarrec.
- PhD in progress: Resmi Ariyattu Chandrasekharannair. *Towards Decentralized Federations for Plug-based Decentralized Social Networks*. Started Dec 2013. Supervised by François Taïani.
- PhD in progress: Stéphane Delbruel. *Towards a Decentralized Embryomorphic Storage System*. Started Oct 2013. Supervised by François Taïani.
- PhD in progress: Ali Gouta. *Caching et distribution adaptatifs dans les réseaux de contenus de grande échelle*. Started Dec 2011. Supervised by Anne-Marie Kermarrec.
- PhD in progress: Arnaud Jégou. *Explicit and implicit social networks, harnessing their power through decentralisation*. Started Oct 2010. Supervised by Anne-Marie Kermarrec and Davide Frey.
- PhD in progress: Nupur Mitall. *Infrastructure et algorithmes pour la recommandation de contenus cross application*. Started Dec 2013. Supervised by George Giakkoupis and Anne-Marie Kermarrec.
- PhD in progress: Javier Olivares. *Web-Alter Ego Platform : A Peer-sourcing infrastructure for personalized privacy-aware event processing*. Started Oct 2013. Supervised by Anne-Marie Kermarrec.
- PhD in progress: Julien Stainer. *Calculabilité distribuée*. Started Oct 2011. Supervised by Michel Raynal.
- PhD in progress: Antoine Rault. *Privacy Through Decentralization*. Started Oct 2012. Supervised by Anne-Marie Kermarrec and Davide Frey.

9.3.3. Juries

- Davide Frey was a member of the PhD jury for Konstantinos Kloudas. *Leveraging Content Properties to Optimize Distributed Storage Systems*. Université de Rennes I, March 6, 2013. (examinateur)
- François Taïani was a member of the following PhD juries:
 - Konstantinos Kloudas *Leveraging Content Properties to Optimize Distributed Storage Systems*. Université de Rennes I / Inria Rennes, March 6, 2013. (examinateur)
 - François Fouquet. *Kevooree : Model@Runtime pour le développement continu de systèmes adaptatifs distribués hétérogènes*. Université de Rennes I / Inria Rennes, March 6, 2013. (examinateur)
 - Jimmy Lauret. *Prévention et détection des interférences inter-aspects : méthode et application à l'aspectisation de la tolérance aux fautes*. Institut National Polytechnique de Toulouse (INP Toulouse) / LAAS-CNRS, May 15, 2013. (rapporteur)
 - Yousri Kouki. *Approche dirigée par les contrats de niveaux de service pour la gestion de l'élasticité du "nuage"*. École nationale supérieure des mines de Nantes, LINA, Dec. 12, 2013. (rapporteur)

ASCLEPIOS Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Journal editorial boards

- N. Ayache is the co-founder and the Co-Editor in Chief with J. Duncan (Professor at Yale) of *Medical Image Analysis*⁷. This scientific journal was created in 1996 and is published by Elsevier.
- N. Ayache is Associated Editor of *IEEE Transactions on Medical Imaging*⁸ and a member of the editorial board of the following journals: *Medical Image Technology* (Japanese journal) and *Journal of Computer Assisted Surgery* (Wiley).
- H. Delingette is a member of the editorial board of the journal *Medical Image Analysis* (Elsevier).
- I. Stobant is editorial coordinator for *Medical Image Analysis*, Elsevier (since october 2001) and editorial assistant for *IEEE Transactions on Medical Image Analysis*, (since october 2001).
- X. Pennec is a member of the editorial board of the journal *Medical Image Analysis* (Elsevier), of the *International Journal of Computer Vision* (Springer) and of the *SIAM Journal on Imaging Sciences (SIIMS)*.

8.1.2. Participation in the organization of conferences

- H. Delingette was area chair of the MICCAI 2013 conference held in Nagoya, program committee member of the International Symposium on Biomedical Imaging (ISBI'12), the conference on Virtual Reality Interactions and Physical Simulation (VRIPHYS'13), the MICCAI Workshop on Mesh Processing in Medical Image Analysis (MeshMed'13), the conference on Functional Imaging and Modeling of the Heart (FIMH'13).
- X. Pennec was the general chair of the MICCAI workshop MFCA'13 (Mathematical Foundations of Computational Anatomy), which was held at Nagoya (JP) on Sept. 22; area chair of the MICCAI 2013 conference held in Nagoya (JP), Sept. 23-25; member of the paper selection committee of IMPI 2013 (Information processing in Medical Images), Asilomar, CA, USA, June 28, July 3rd, 2013; member of the program committees of: MICCAI 2013; GSI 2013 (Geometric Science of Information), Paris, FR, August 28-30, 2013; Workshop on computational diffusion MRI (CDMRI'13).
- M. Sermesant was a co-organizer of the MICCAI 2013 Workshop on Statistical Atlases and Computational Models of the Heart and the medInria hands-on workshop.

8.1.3. Scientific animation

- Nicholas Ayache is member of the Aviesan national alliance on biosciences. He is also a member of the "Comité de la Recherche Biomédicale en Santé Publique (CRBSP)" of the Nice hospitals since 2008. He was invited to Fukuoka, Japan in February 2012 to evaluate a national program on "Computational Anatomy" funded by the MEXT.
- Xavier Pennec has been a member of the MICCAI Society Board of Directors for the period 2012-2016 and of the Doctoral follow-up Committee (CSD) at Inria Sophia Antipolis since 2010. In 2013, he was an evaluator for the European Research Council (math panel), the Council of Physical Science of the Netherlands Organisation for Scientific Research (NWO), for several project proposals submitted to the French research agency ANR.

⁷http://www.elsevier.com/wps/find/journaleditorialboard.cws_home/620983/editorialboard

⁸<http://www.ieee-tmi.org/>

H. Delingette is a member of the local committee in charge of the scientific selection of visiting scientists (Comité Nice) and the local committee on the immersive platform. He was an evaluator for the integrated European project ARTREAT, for the Austrian center of excellence ACMIT, for several project proposals submitted to the French research agency ANR, to the National Commission for Scientific and Technological Research of the Government of Chile (CONICYT). He was involved in the redaction of the report for the evaluation of Inria Sophia Antipolis research center by the national evaluation agency (AERES). He was the coordinator for the national evaluation of the Inria theme "Computational Medicine and Neuroscience" by the Inria evaluation committee and a panel of experts.

M. Sermesant acted as an evaluator for the ANR, CNRS and the Dutch and UK Research Councils. He is a member of the Medical Simulation Working Group of Aviesan, CUMIR (local committee representing the users of computer services) and of the CCC (local committee in charge of the selection of funding for courses and conferences organisation). He also participates in scientific animation in high schools, presenting research and medical imaging (2 times in 2013).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master 2 MVA and École Centrale de Paris. H. Delingette and X. Pennec are jointly responsible for 2 modules on medical imaging (formation and analysis of medical images) (45 hours of lectures) at the Master MVA of ENS Cachan "Mathématiques, Vision et Apprentissage". The second module is common to the 3rd year of Ecole Centrale Paris.

Master CBB - Computational Biology and Biomedicine, Univ. Nice-Sophia-Antipolis. X. Pennec is responsible for a 21h module on Computational Anatomy and Physiology, with the participation of H. Delingette (9h)

Diplôme Inter Universitaire - Radiothérapie externe Haute Technicité, Univ. Nice-Sophia-Antipolis. X. Pennec gave a 1 h course.

8.2.2. Supervision

8.2.2.1. PhD defended in 2013

1. Marine Breuilley, *Imagerie TEMP 4D du petit animal - Estimation du Mouvement Respiratoire et de la Biodistribution de l'Iode*. Nice Sophia-Antipolis University, November 2013, [1].
2. Ezequiel Geremia, *Spatial random forests for brain lesions segmentation in MRIs and model-based tumor cell extrapolation*. Nice Sophia-Antipolis University, January 2013, [2].
3. Stephanie Marchesseau *Simulation de modèles personnalisés du coeur pour la prédiction de thérapies cardiaques*. Ecole des Mines de Paris, January 2013, [3].
4. Kristin Mc Leod, *Modeling of Cardiac Growth and Deformation from Medical Images*. Nice-Sophia Antipolis University, November 2013.
5. Adityo Prakosa, *Analysis and simulation of multimodal cardiac images to study the heart function*. Nice-Sophia Antipolis University, January 2013, [5].

8.2.2.2. Current PhDs

1. Chloé Audigier, *Modeling radio-frequency ablation for the planning of abdominal tumors resection*, Nice Sophia-Antipolis University. Started in April 2012.
2. Thomas Benseghir, *3D/2D Coronary Registration for Interventional Cardiology Guidance*, Nice Sophia-Antipolis University. Started in March 2012.
3. Rocio Cabrera Lozoya, *Radio frequency ablation planning for cardiac arrhythmia treatment through biophysical modelling and machine learning approaches*, Nice Sophia-Antipolis University. Started in February 2012.

4. Nicolas Cordier, *Simulation and Analysis and Simulation of Brain Tumors Images*, University of Lille. Started in February 2012.
5. Vikash Gupta, *Diffusion tensor imaging of the brain: towards quantitative clinical tools*, Nice Sophia-Antipolis University. Started in November 2011.
6. Mehdi Hadj-Hamou, *Biophysical modeling of the anatomical evolution of the brain*, Nice Sophia-Antipolis University. Started in September 2012.
7. Bishesh Khanal, *Modeling the atrophy of the brain in Alzheimer's disease*, Nice Sophia-Antipolis University. Started in November 2012.
8. Loic Le Folgoc, *Biophysical Personalization of Cardiac Models based on Machine Learning*, Nice Sophia-Antipolis University. Started in June 2012.
9. Jan Margeta, *Indexation of time-series 4D cardiac MR images*, Ecole des Mines de Paris. Started in March 2011.
10. Nina Miolane, *Geometric Statistics in Computational Anatomy: Template Estimation and Subspace Learning in Manifolds, Lie groups and Stratified Spaces*, Nice-Sophia Antipolis University. Started in November 2013.
11. Erin Stretton, *Modelling and simulation of brain tumor growth from time-series of 3-D MR images to improve diagnosis and therapy*, Ecole des Mines de Paris. Started in June 2010.
12. Hugo Talbot, *Simulation of Radiofrequency ablation of cardiac cells*, University of Lille. Started in September 2010.
13. Anant Vemuri, *Augmented reality for image-guided surgery*, Nice-Sophia Antipolis University. Started in 2012.

8.2.2.3. Masters Students

1. Nina Miolane: *Defining a mean on Lie groups*. MSc Quantum Fields and Fundamental Forces, Theoretical Physics Dept, Imperial College London, UK. 2013. From July 2013 to August 2013.

8.2.3. Juries

N. Ayache was supervisor of the PhD thesis of Ezequiel Geremia (University of Nice-Sophia Antipolis), co-supervisor of the PhD theses of S. Marchesseau (École des Mines de Paris) and A. Prakosa (University of Nice-Sophia Antipolis), reviewer of the PhD thesis of R. Prevost (Univ. Paris Dauphine).

Hervé Delingette was supervisor of the PhD theses of S. Marchesseau (École des Mines de Paris) and A. Prakosa (University of Nice-Sophia Antipolis), co-supervisor of the PhD thesis of Ezequiel Geremia (University of Nice-Sophia Antipolis), reviewer of the PhD thesis committee of P-Y. Baudin (Ecole Centrale de Paris).

X. Pennec was a member of the HDR jury of Stéphanie Allassionnière, Ecole Normale Cachan (Reviewer) and to the PhD juries of Kevin Sol, U. Montpellier (Reviewer); Aymeric Stamm, U. Rennes; Fabrice Michel, U. ParisTech (Ecole Centrale) (Reviewer); Jean-Baptiste Fiot, U. Dauphine (Reviewer); Barthelemy Serres, U. Tours (President of the jury); Kristin McLeod, University of Nice-Sophia Antipolis, (Advisor).

Maxime Sermesant was co-supervisor of the PhD theses committee of S. Marchesseau (École des Mines de Paris), A. Prakosa (University of Nice-Sophia Antipolis) and Kristin McLeod (University of Nice-Sophia Antipolis). He was external examiner for the PhD viva of Robert Xi (Oxford University, UK) and Mikael Wallman (Oxford University, UK), and part of the PhD committee of Hubert Cochet MD in Radiology (Bordeaux University).

8.2.4. Invited Lectures

We only list invited talks here. Please refer to general references for regular participation in conferences with a submission process.

- **Nicholas Ayache** gave the following invited lectures:

- at the *French-Japanese symposium on the future of surgery* in Strasbourg on December 20th 2012.
- at the *Rank Prize Fund Symposium* on March 21th 2013 on the topic "Medical Imaging meets Computer Vision".
- at the symposium organized for the 15th anniversary of the Imaging Science Center at Johns Hopkins University on May 18th 2013.
- at the Ecole Centrale Paris on November 5th 2013 during the session organised around the challenges in Healthcare and Biotechnologies.
- **Hervé Delingette** gave the following invited lectures:
 - at the *MICI international workshop* held in Tokyo (Japan).
 - at the *MICCAI Workshop on Mesh Processing in Medical Image Analysis 2013* in Nagoya (Japan).
 - at the *10th VRIPHYS Workshop on Virtual Reality Interaction and Physical Simulation* in Lille, France.
 - at the session on cardiac imaging organized by the GRIC (Groupe de Recherche en Imagerie Cardiaque) during the Journées Française de radiologie in Paris.
 - at the *ORASIS conference* in Cluny (France).
- **Xavier Pennec** gave the following invited lectures:
 - **IMA Annual Program Year Workshop on Topological Structures in Computational Biology**, Minneapolis, US, December 9-13, 2013.
 - **Advances in Matrix Functions and Matrix Equations (FUN13)**, Manchester, UK, April 10-12, 2013.
 - **Distinguished seminar series, SCI institute**, Salt-Lake City, February 13 2013.
 - **Geometric Mechanics and Shape, NZMRI workshop 2013**, Ohope beach, New Zealand, January 13-19, 2013.
 - Hamiltonian Dynamics Seminar, Chair of Geometric Analysis Section de Mathématiques, EPFL, Lausanne, October 9, 2013.
 - Thematic day on initial stress for geomechanical models at IFP Energies nouvelles (IFPEN), Rueil-Malmaison, Sept. 19, 2013.
- **Maxime Sermesant** was invited to give the closing lecture on "Mathematics for Healthcare" at the 34th Paediatric Cardiology Seminar organised by Necker Hospital, and gave an invited lecture on congenital cardiopathies at the "Printemps de la Cardiologie" in Marseille and an invited lecture on real-time simulation of ablation at the Atrial Fibrillation meeting in London.

8.2.5. Nominations and Prizes

- **Nicholas Ayache** received the MICCAI 2013 "Enduring Impact Award" for his scientific contributions since the inception of the conference in 1998. This award was established four years ago and was previously awarded to Ron Kikinis (Harvard Medical School), Russ Taylor (Johns Hopkins), Chris Taylor (Manchester Univ.) and Jerry Prince (Johns Hopkins). Nicholas took the opportunity to thank the team and all his collaborators.
- **Nicholas Ayache** was elected at the Collège de France to the Chair "Informatics and Computational Sciences" for the academic year 2013-2014. He will teach a course entitled "The Personalized Digital Patient: Images, Medicine and Informatics". The course will be completed by seminars (2 of them being delivered by H. Delingette and X. Pennec), and an international Colloquium. More details to appear on the web site of the Collège de France: <http://www.college-de-france.fr/site/nicholas-ayache/>.
- **Tom Vercauteren** won the Young Scientist Publication Impact Award 2013 of the MICCAI Society (Oct 2012) for the paper "Symmetric log-domain diffeomorphic Registration: a demons-based approach", published at MICCAI 2008 co-authored by X. Pennec, A. Perchant, N. Ayache.

ASCOLA Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Event organization, animation of scientific community

9.1.1.1. International

Board memberships

- **AITO:** P. Cointe is a member of this international organization that manages the ECOOP conference series.
- **AOSD-Europe:** M. Südholt is a member of the governing board of AOSD-Europe, the European Network of Excellence in AOSD, which provides financial support and organizes scientific events on Modularity.
- **Aspect-oriented Software Association (AOSA):** M. Südholt is a member of this international organization (headquartered in California) that manages the international conference on Modularity and provides support for scientific and industrial events on modularity in a large sens. He has been its chair for two years until April 2013.
- **COST Action:** J.-M. Menaud has been a management committee member of the European COST Action IC0804: Energy efficiency in large scale distributed systems from 2009 to 2013.
- **OW2:** Jean-Marc Menaud has been a member of the OW2 board committee since 2010.
- **Transactions of AOSD.** M. Südholt is a member of the editorial board of this Springer journal.

Events

- **REM 2013:** M. Südholt has been a general co-chair of the International Workshop on Reactivity, Events and Modularity, collocated with the ACM SPLASH conference in Indianapolis. <http://soft.vub.ac.be/REM13>
- **VTDC 2013:** A. Lèbre has been the general chair of the 7th edition of the International Workshop on Virtualization Technologies in Distributed Computing, collocated with the ACM HPDC conference in New York <http://www.grid-appliance.org/wiki/index.php/VTDC13>.

9.1.1.2. National

Board memberships

- **CominLabs laboratory of excellence:** P. Cointe is a member of its management board. J.-M. Menaud has been the co-coordinator of the focus on Energy and resource efficiency in ICT since 2011 of this regional excellence cluster in research. M. Südholt has been co-coordinating its security focus since 2011.
- **Green Lab Center:** T. Ledoux and J.-M. Menaud are members of the board of the Green Lab Center association. This association promotes and disseminates Green IT practices and research prototypes to the world of education, research and companies <http://www.greenlabcenter.fr>.
- **Innovation cluster Images & Réseaux:** P. Cointe is a member of the management board of this cluster. M. Südholt serves on its board for the selection and validation of industrial and academic projects.

Events

- **Eco-conception of software.** J.-M. Menaud has co-organized two events on GreenIT, *HPC & Cloud : Are they green ?* in Lille and *What else / what next ?* in Luxembourg.
- **Regional Doctoral School STIM:** T. Ledoux has co-organized JDOC, an event promoting contact between PhD students of the Doctoral School (Apr. 11, 2013).
- **Workshop on SLA Management in Cloud computing:** T. Ledoux has been the main coordinator of first workshop on SLA management in the Cloud organized with both industrial and research speakers <http://compas2013.inrialpes.fr/evenements-satellites/ateliers/slacloud>.
- **Workshop on Software Quality.** The Ascola team has co-organized a workshop on Software Quality in June 2013, which has been attended by 60 participants. <http://www.lina.sciences.univ-nantes.fr/apcb/JSQ2013>

9.1.2. Committee participations, reviewing activities, collective duties, etc.

- **P. Cointe:** He is the head of the LINA computer science laboratory (UMR 6241) <http://www.lina.univ-nantes.fr/>.

He was a member of the ECOOP 2013 program committee. He served the French programming language community as member of the GDR GPL “Phd Thesis” prize committee

This year he was a member of the AERES visiting evaluation committee for the LTCI laboratory and a member of the PES national committee for computer sciences (CNRS section 27).

He is a member of the board of the Doctoral School MATISSE in Rennes. He is also the chair of the STIC-MATHS committee working for the Pays de la Loire Council (CCRRDT) and the PRES L’UNAM.

- **A. Lèbre** has been the general chair of the 7th international workshop on “Virtualization Technologies in Distributed Computing” (VTDC 2013) co-located with HPDC 2013 in New York, USA. He also was a member of the program committee of the ACM/IEEE International Conference on Cluster, Cloud and Grid Computing (CCGRID 2013), the International ACM SuperComputing Conference (SC 2013), the IEEE International Conference on Cloud and Green Computing (CGC 2013), the IEEE International Conference on Big Data (BigData 2013), the Euro-Par Conference (Euro-Par 2013), and the International Conference on P2P, Parallel, Grid, Cloud and Internet Computing (3PG-CIC 2013). He served as Publicity Chair for the International Conference on Network and Parallel Computing (NPC 2013). He also served as external reviewers for the Austrian Starting Grant Program and the European FP7 Program. He represented Inria during the Post Consultation Workshop on Cloud Computing and Services for H2020 at Brussels.

He is a member of the architect board of the G5K consortium and also acts the local contact point for the Nantes site. He is also member of the directory board of the CNRS/GDR ASR System group since 2012. He leads the Discovery Initiative, an open-source collaborative action, which aims at providing a fully distributed IaaS Cloudkit <http://beyondtheclouds.github.io>. He presented this initiative at the Summer School of Cloud Computing at Telecom SudParis, Evry France and at the Inria Alumni Jam Session on Cloud Computing.

- **T. Ledoux** has been a member of the program committees of the following conferences: the 4th International Workshop on Green and Cloud Computing Management (GCM’13), the 12th Workshop on Adaptive and Reflective Middleware (ARM’13), the 1st International Workshop on Green In Software Engineering - Green By Software Engineering (GIBSE’13) the 28th Symposium On Applied Computing (SAC’13) - track Software Engineering Aspects of Green Computing.
- **J.-M. Menaud** has served on the program committee of the 9th French Conference on Operating Systems (CFSE-9), the 8th Workshop on Virtualization in High-Performance Cloud Computing (VHPC’13) the ninth Advanced International Conference on Telecommunications (AICT 2013), the second Workshop on Collaborative and Autonomic Green computing (CAGing 2013), the third Green Communications and IT Energy-aware Technologies (ENERGY 2013), the IEEE/ACM Inter.

Conference on Green Computing and Communications (GreenCom2013), the 1st Conference on Energy Efficiency on Large Scale Distributed Systems (EE-LSDS 2013), the third IEEE International Conference on Cloud and Green Computing (GCG 2013), the 6th International Conference on Contemporary Computing (IC3 2013), the International Workshop on Cloud Computing Systems, Networks, and Applications (Globecom 2013), and the second International Conference on Smart Grids and Green IT Systems (SMARTGREENS 2013).

J.-M. Menaud is a management committee member of the european COST Action IC0804 : Energy efficiency in large scale distributed systems since 2009, the co-animator of the focus Energy and resource efficiency in ICT, in the Labex COMIN Labs since June 2011, the animator of the CNRS/GDR ASR System group since June 2009, member of the OW2 board committee from 2010 and a member of the (RenPar/CFSE/Sympa) steering committee since 2008.

- **J. Noyé** has been a program committee member of the International Conference on Software Composition (Budapest Hungary, June 2013). He is a program committee member of the 13 International Conference on Modularity (Modularity'14), which will take place in Lugano, Switzerland, in April 2014.
- **J.-C. Royer:** He has been a member of the program committees of CAL 2013, CIEL 2013, WETICE 2013, SNPD 2013, ICIS 2013, MULTIPLE 2013, and SERA 2013 and did a review for the TSI journal. He participated in the evaluation of a project for Israel Science Foundation.
- **M. Südholt** has been a member of the management board of the *Aspect-Oriented Software Association* since 2006 and management board of **AOSD-Europe** since 2008.

He has been a member of the the steering committees of the internal conference on Modularity since 2006 and has chaired it for two years until 2013. He has been a member of the steering committee of the international conference on Software Composition since 2008.

In 2013, he was a member of the program committees of the international conferences CloudCom'13 and Modularity:aosd'13 as well as of 1 international and 1 national workshop.

He is a coordinator of the security domain within the CominLabs laboratory of excellence.

He is a member of the council of the *Laboratoire Informatique de Nantes Atlantique* (LINA, UMR 6241). He also serves on the selection and evaluation committee of the competitiveness cluster Images & Réseaux. Finally, he has served on the evaluation committee for startup proposals of Atlanpole, a regional innovation body.

- **N. Tabareau** was a member of the program committees of the Journées Francophones des Langages applicatifs (JFLA'13) and Foundations of Aspect Languages (FOAL'13).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

The team is involved in the following undergraduate and graduate-level programs at EMN (the institution all of eaching staff belongs to):

- The team is a main contributor to the **engineering program of EMN**.
- Within this engineering program, the team is steering, chairing and the main contributor to a final-year **graduate-level informatics specialization**.
- Since 2009 our team has defined and set up a new three-year **engineering program on software engineering**

The team has also been involved in the following three MSc programs that have been carried out with partners from French and foreign universities:

- The team participates in the **MSc program “Alma”** on software architecture and distributed systems, a joint program steered by colleagues from University of Nantes. In this context, we are responsible for a 48-hour module on advanced software composition and take part in the program’s governing board.
- Members of the team have taught different **courses at different study levels in Rennes** mainly organized by University of Rennes and the research institutes IRISA and Inria.

m members have taught each for about 195 hours on average in 2013 (hours of presence in front of students). Hereby, we have taken into account that researchers and some professors have not taught at times. In addition, a significant part of the program is taught by temporary staff, whose participation is managed by ASCOLA members.

9.2.2. Supervision

The team has been supervising 16 PhD thesis in 2013, of which four have been co-supervised with external partners (three with foreign partners from U. Chile; TU Darmstadt, Germany; Lancaster U., U.K.) and one with the French TASC team from Mines Nantes.

Several PhD have been defended this year: In Feb., Flavien Quesnel defended his thesis on “Toward Cooperative Management of Large-scale Virtualized Infrastructures: the Case of Scheduling”. In April, Frederico Alvares defended his thesis on “Multi Autonomic Management for Optimizing Energy Consumption in Cloud Infrastructures”. In Sep., Akram Ajouli defended his thesis on views and program transformations for software modularity. In Dec., Yousri Kouki defended his thesis on “SLA-driven Cloud Elasticity Management approach”.

Two members of the team have been preparing an HDR in 2013 for a defense in 2014.

9.2.3. Juries

- **A. Lèbre** was a member of a selection committee for an Associate Professor position in the Telecom school in Nancy.
- **T. Ledoux** was member of the PhD committee of Erwan Daubert at Université Rennes 1.
- **J.-M. Menaud** was member of the PhD committees of Damien Borgetto at University of Toulouse, Rémi Druilhe at University of Lille, and Flavien Quesnel in Nantes.
- **J.-C. Royer** was member of the PhD committees of Akram Ajouli and Valerio Cosentino at Mines de Nantes.
- **M. Südholt** was part of a selection committee for a position of Associate Professor at University of Rennes. He was also a member of the PhD evaluation committees of Eline Philips at Vrije Universiteit Brussel and Zhoulai Fu at University of Rennes.

ASPI Project-Team

8. Dissemination

8.1. Scientific animation

François Le Gland is a member of the organizing committee of the *46èmes Journées de Statistique*, to be held in Rennes in June 2014.

Florent Malrieu has coordinated the spring semester of the Labex Henri Lebesgue on *perspectives in analysis and probability*, from April to September 2013, and he has co-organized the workshop on *piecewise deterministic Markov processes* in May 2013. He is also the coordinator of the ANR project PIECE (programme Jeunes Chercheuses et Jeunes Chercheurs), see 7.1.1. He is the coordinator, with Tony Lelièvre (CERMICS, ENPC, Marne-la-Vallée and EPI MICMAC, Inria Paris—Rocquencourt), of the SMAI meeting series *EDP / Probabilités*. He is a member of the scientific and organizing committee of the conference in honour of the 60th birthday of Dominique Bakry, to be held in Toulouse in December 2014.

Valérie Monbet has co-organized with Pierre Ailliot (université de Bretagne occidentale, Brest) two workshops *Space-Time Data Analysis in Oceanography and Meteorology I* held in Berder in May 2013 and *Space-Time Data Analysis in Oceanography and Meteorology II* held in Landéda in November 2013.

François Le Gland is a member of the “conseil d’UFR” of the department of mathematics of université de Rennes 1.

Valérie Monbet is a member of the “comité de direction” and of the “conseil” of IRMAR (institut de recherche mathématiques de Rennes, UMR 6625). She is also a member of the “conseil scientifique” of the department of mathematics of université de Rennes 1.

8.2. Teaching, supervision, thesis committees

8.2.1. Teaching

Arnaud Guyader is a member of the committee of “oraux blancs d’agrégation de mathématiques” for ENS Cachan at Ker Lann.

François Le Gland gives a course on *Kalman filtering and hidden Markov models*, at université de Rennes 1, within the SISEA (signal, image, systèmes embarqués, automatique, école doctorale MATISSE) track of the master in electrical engineering and telecommunications, a 3rd year course on *Bayesian filtering and particle approximation*, at ENSTA (école nationale supérieure de techniques avancées), Paris, within the systems and control module, a 3rd year course on *linear and nonlinear filtering*, at ENSAI (école nationale de la statistique et de l’analyse de l’information), Ker Lann, within the statistical engineering track, and a 3rd year course on *hidden Markov models*, at Télécom Bretagne, Brest.

Florent Malrieu has given a doctoral course on piecewise deterministic Markov processes (PDMP) proposed as a complementary scientific training to PhD students of école doctorale MATISSE. He has also contributed to a *pedagogical article* in the *Revue de Mathématiques Spéciales*.

Valérie Monbet gives several courses on data analysis, on time series, and on mathematical statistics, all at université de Rennes 1 within the master on statistics and econometrics. She is also the director of the master on statistics and econometry at université de Rennes 1.

8.2.2. Supervision

François Le Gland has been supervising one PhD student

- Paul Bui Quang, title: *Particle approximation and the Laplace method for Bayesian filtering*, université de Rennes 1, defense in July 2013, funding: ONERA grant, co-direction: Christian Musso (ONERA, Palaiseau).

and he is currently supervising two PhD students

- Alexandre Lepoutre, provisional title: *Detection issues in track-before-detect*, universit  de Rennes 1, started in October 2010, expected defense in 2014, funding: ONERA grant, co-direction: Olivier Rabaste (ONERA, Palaiseau).
- Damien-Barth l my Jacquemart, provisional title: *Rare event methods for the estimation of collision risk*, universit  de Rennes 1, started in October 2011, expected defense in 2014, funding: DGA / ONERA grant, co-direction: J r me Morio (ONERA, Palaiseau).

Florent Malrieu is currently supervising one PhD student

- Florent Bouguet, provisional title: *Coupling methods for PDMP*, universit  de Rennes 1, started in October 2013, co-direction : Jean-Christophe Breton (universit  de Rennes 1),

Val rie Monbet is currently supervising one PhD student

- Julie Bessac, provisional title: *Space time modelling of wind fields*, universit  de Rennes 1, started in October 2011, co-direction : Pierre Ailliot (universit  de Bretagne Occidentale),

and she is a member of the PhD thesis advisory committee of

- J r me Weiss, provisional title: *Modelling of extreme storm surge series*, funding : CIFRE grant with EDF R&D, direction : Michel Beno t (Laboratoire d'Hydraulique Saint-Venant).

8.2.3. Thesis committees

Fran ois Le Gland has been a member of the committees for the PhD thesis of Mathieu Chouchane (universit  de la M diterran e, advisors: Mustapha Ouladsine and S bastien Paris) and for the habilitation thesis of J r me Morio (universit  de Rennes 1) and he has been a reviewer for the PhD thesis of M lanie Bocquel (University of Twente, advisors: Arunabha Bagchi and Hans Driessen).

Florent Malrieu has been a member of the committees for the PhD theses of Bertrand Cloez (universit  Paris-Est Marne-la-Vall e, advisor: Djilil Chafa ) and Alexandre Genadot (universit  Pierre et Marie Curie, advisor: Mich le Thieullen) and he has been a reviewer for the PhD thesis of David Godinho Pereira (universit  Paris-Est Cr teil, advisor: Nicolas Fournier).

Val rie Monbet has been a member of the committees for the PhD theses of Paul Bui Quang (universit  de Rennes 1, advisors: Fran ois Le Gland and Christian Musso) and S bastien B you (universit  de Rennes 1, advisor:  tienne M min).

8.3. Participation in workshops, seminars, lectures, etc.

In addition to presentations with a publication in the proceedings, which are listed at the end of the document in the bibliography, members of ASPI have also given the following presentations.

Arnaud Guyader has been invited to give a talk on simulation and estimation of rare events and extreme quantiles, at the ESSEC working group on *Risk*, in October 2013 and at the universit  Pierre et Marie Curie working group on *Extreme Value Theory*, in December 2013. He has also given a talk on estimation of mutual nearest neighbors, at the *45 mes Journ es de Statistique*, held in Toulouse in May 2013.

Fran ois Le Gland has been invited to give a talk on the ensemble Kalman filter, at the department of applied mathematics of the University of Twente, in October 2013.

Val rie Monbet has given a talk on dynamical partitioning of directional ocean wave spectra, at the workshop on *Space-Time Data Analysis in Oceanography and Meteorology I*, held in Berder in May 2013 and a talk on stochastic weather generators with non-homogeneous hidden Markov switching, at the workshop on *Space-Time Data Analysis in Oceanography and Meteorology II*, held in Land da in November 2013. She has given a talk on stochastic weather generators, at the **MODNAT** workshop on *Modelling of Natural Events*, held at ONERA Palaiseau in October 2013, and at the *5 me  cole Interdisciplinaire de Rennes sur les Syst mes Complexes — Stochasticit  dans les Syst mes Complexes : D sordre, Hasard, Incertitudes*, held in October 2013, and a talk on stochastic weather generators and switching auto-regressive models, and application to temperature series, at the **PEPER** workshop on *Extreme Value Theory and Risk Assessment in Climate Sciences*, held in Aussois in December 2013.

ATEAMS Project-Team

7. Dissemination

7.1. Scientific Animation

- Jan van Eijck : Member of the NWO committee “Vrije Competitie” for Computer Science.
- Jan van Eijck : Member of the Advisory Board (‘Raad van Advies’) of the Artificial Intelligence Curriculum, University of Groningen (since Summer 2013).
- Jan van Eijck : Program committee Tenth International Conference on Computational Semantics (IWCS) University of Potsdam, Germany, March 2013
- Jan van Eijck : Program committee LORI-4 (4th International Workshop on Logic, Rationality and Interaction),
- Jan van Eijck : Program committee TTNLS-2014 (Type Theory for Natural Language Semantics)
- Jan van Eijck : Editor of Journal of Logics and their Applications (new IfCoLog journal with open access, to be published by College Publications).
- Jan van Eijck : Reviewer Artificial Intelligence
- Jan van Eijck : Reviewer ESSLLI
- Jan van Eijck : Reviewer Journal of Semantics,
- Jan van Eijck : Reviewer Journal of Logic and Computation
- Jan van Eijck : Reviewer Fundamenta Informaticae
- Jan van Eijck : Reviewer Synthese,
- Jan van Eijck : Reviewer Journal of Philosophical Logic
- Jan van Eijck : Reviewer Journal of Logic Language and Information
- Jan van Eijck : Reviewer Cambridge University Press
- Jan van Eijck : Reviewer Studia Logica.
- Mark Hills : Program committee Working Conference on Reverse Engineering (WCRE/CSMR) Tool-track
- Mark Hills : Reviewer International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC)
- Mark Hills : Program committee CALCO Tools
- Paul Klint : Editor Science of Computer Programming
- Paul Klint : Editor Springer Service Science Book Series
- Paul Klint : Visiting Professor University of London, Royal Holloway
- Paul Klint : Treasurer European Association for Programming Languages and Systems (EAPLS)
- Paul Klint : Steering committee member ETAPS
- Paul Klint : Board member Instituut voor Programmatuur en Architectuur (IPA)
- Paul Klint : External advisor PlanComps project (UK)
- Paul Klint : Full Professor at UvA, Software Engineering Chair
- Paul Klint : Director Master Software Engineering, UvA
- Paul Klint : Program committee Software Language Engineering (SLE)
- Paul Klint : Program committee Scalable Language Specifications (SLS 2013)
- Paul Klint : Program committee WasDETT 2013

- Paul Klint : Program committee CSMR WCRE ERA 2014
- Paul Klint : EAPLS PhD Awards 2013
- Atze van der Ploeg : Reviewer Journal of Universal Computer Science
- Tijs van der Storm : Program committee International Workshop on Advanced Software Development Tools and Techniques - (WASDeTT)
- Tijs van der Storm : Program committee International Conference on Generative Programming: Concepts & Experiences (GPCE)
- Tijs van der Storm : Program committee Working Conference on Reverse Engineering (WCRE/CSMR) Tool-track
- Tijs van der Storm : Reviewer ACM Conference on Object-Oriented Programming Systems, Languages and Applications (OOPSLA)
- Tijs van der Storm : Reviewer ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages (POPL)
- Tijs van der Storm : Member working group IFIP TC2 WGLD 2.16: Working Group on Language Design
- Tijs van der Storm : Reviewer Science of Computer Programming
- Tijs van der Storm : Reviewer Journal of Systems and Software
- Tijs van der Storm : Co-organizer Lorentz Workshop on Language Interaction Design (LIXD)
- Tijs van der Storm : Co-organizer 1st Dutch Conference on Software Development Automation (SDA'13)
- Tijs van der Storm : Co-organizer CWI Scientific Meetings
- Tijs van der Storm : Organizer Normalized Systems Seminar
- Jurgen Vinju : Member steering committee IEEE International Workshop on Source Code Analysis and Manipulation (SCAM)
- Jurgen Vinju : General Chair IEEE International Workshop on Source Code Analysis and Manipulation (SCAM)
- Jurgen Vinju : Observer IFIP TC2 Working Group 2.3 Programming Methodology
- Jurgen Vinju : Program chair International Workshop on Advanced Software Development Tools and Techniques - (WASDeTT)
- Jurgen Vinju : Program committee International Conference on Model Transformation - (ICMT)
- Jurgen Vinju : Program committee chair WCRE/CSMR Tool Track
- Jurgen Vinju : Organizer International Workshop on Parsing@SLE
- Jurgen Vinju : Program committee WCRE/CSMR ERA track
- Vadim Zaytsev : Steering committee Seminar Series on Advanced Techniques & Tools for Software Evolution (SATToSE)
- Vadim Zaytsev : Program committee Software Quality Management (SQM)
- Vadim Zaytsev : Program committee IEEE International Workshop on Source Code Analysis and Manipulation (SCAM)
- Vadim Zaytsev : Program committee Extreme Modeling Workshop (XM)
- Vadim Zaytsev : Judging committee ACM Student Research Competition
- Vadim Zaytsev : Program committee co-chair Working Conference on Reverse Engineering (WCRE/CSMR) Tool-track
- Vadim Zaytsev : Reviewer Science of Computer Programming
- Vadim Zaytsev : Workshop co-chair Open and Original Problems in Software Language Engineering (OOPSLE)

- Vadim Zaytsev : Social media co-chair ACM/IEEE 17th International Conference on Model Driven Engineering Languages and Systems (MoDELS)
- Vadim Zaytsev: Colloquium organiser of Programming Environment Meetings (PEM)

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Master : Jurgen Vinju, Paul Klint, Software Evolution, 6 EC, Universiteit van Amsterdam, The Netherlands

Master : Tijs van der Storm, Jurgen Vinju, Software Construction, 6 EC, Universiteit van Amsterdam, The Netherlands

Master : Jan van Eijck, Bert Lissers, Vadim Zaytsev, Software Testing, 6 EC, Universiteit van Amsterdam, The Netherlands

Master : Jan van Eijck, Functional Algorithm Specification, 6 EC, Universiteit van Amsterdam, The Netherlands

7.2.2. Supervision

PhD in progress : Paul Griffioen, Next Generation Computational Auditing, started 2011, supervisors Paul Klint, Philip Elsas

PhD in progress : Anastasia Izmaylova, A General Language Parametric Framework for Software Refactoring, started 2011, supervisors Paul Klint, Jurgen Vinju

PhD in progress : Jeroen van den Bos, Digital Forensics Software Engineering, started 2010, supervisors Paul Klint, Tijs van der Storm

PhD in progress : Atze van der Ploeg, Rapid Language Parametric Prototyping of Software Visualization and Exploration, started 2011, supervisor Paul Klint, Tijs van der Storm

PhD in progress : Davy Landman, Recovery and Synthesis of Domain Specific Language Design, started 2011, supervisors Jurgen Vinju, Paul Klint, supervisors Jurgen Vinju .

PhD in progress : Riemer van Rozen, Software Engineering Principles for the Gaming Domain, started 2011, supervisor Paul Klint, Tijs van der Storm

PhD in progress : Ali Afrozeh, Ambiguity and Disambiguation for Context-free Grammars, started 2012, supervisor Jurgen Vinju

PhD in progress : Pablo Inostroza Valdera, Rich UIs for Domain-Specific Languages, started 2013, supervisor Tijs van der Storm

PhD in progress : Ashim Shahi, Principled Quality Assessment of Software, started 2012, supervisor Paul Klint, Jurgen Vinju

PhD in progress : Michael Steindorfer, Scaling meta-programming to data-programming, started 2012, supervisor Paul Klint, Jurgen Vinju

Paul Klint, Jurgen Vinju, Tijs van der Storm, Mark Hills, Jeroen van den Bos and Jan van Eijck together also supervised more than 30 master thesis projects for Universiteit van Amsterdam in 2013.

7.2.3. Juries

- Jan van Eijck, PhD: Arno Bastenhof, Universiteit Utrecht, The Netherlands
- Jan van Eijck, PhD: Frédéric Moisan, Université de Toulouse, France
- Paul Klint, PhD: Romulo Goncalvez, Universiteit van Amsterdam, The Netherlands
- Jurgen Vinju, PhD: C.P.T. de Gouw, Universiteit Leiden, The Netherlands.

7.3. Popularization

- Jan van Eijck : “Why Learn Haskell?”, Talk for UvA Programming Summer School, Amsterdam, July 2, 2013.
- Paul Klint, Davy Landman: “Hoe ontstond de eerste computer?” (“The origin of the first computer”), Public lecture for broad audience, NEMO, Amsterdam.
- Paul Klint, “How to test a meta-program?”, invited talk at the Workshop on Scalable Language Specification (SLS 2013).
- Paul Klint, “BaMa: Key to the Future?”, invited talk at IW1010: 10 Years of UvA Information Sciences, Amsterdam
- Paul Klint, “Understanding the Quality of Open Source Projects”, invited talk at SATToSe, Bern
- Davy Landman : “What Does Control Flow Really Look Like? Eyeballing the Cyclomatic Complexity Metric”, poster and presentation at ICT.OPEN (NWO networking event).
- Michael Steindorfer : “Object Redundancy Profiling in Java”, poster and presentation at ICT.OPEN (NWO networking event).
- Tijs van der Storm : “Domain-specific languages”, Guest lecture Bachelor Computer Science, Universiteit van Amsterdam
- Tijs van der Storm : “Opportunities and Risks of MDD – The case of Derric: a DSL for digital forensics”, Presentation at CodeGeneration 2013.
- Tijs van der Storm : “Implementing Domain-specific languages using Rascal”, Invited Presentation at Sioux: Source of your technology.
- Tijs van der Storm, Kevin van der Vlist, Jimi van der Woning : “Questionnaires in Rascal”, participation Language Workbench Challenge 2013 (LWC’13).
- Tijs van der Storm, Alex Loh, “Questionnaires in Ensō”, participation Language Workbench Challenge 2013 (LWC’13).
- Tijs van der Storm : “QL: a language for questionnaires”, assignment description LWC’13.
- Tijs van der Storm : “Software Development Automation Research: Collaboration with Industry”, presentation at the 1st Dutch conference on Software Development Automation (SDA’13).
- Jurgen Vinju : “Modularity”, Guest lecture Bachelor Computer Science, Universiteit van Amsterdam
- Jurgen Vinju : “Software Analysis and Transformation with Rascal” , Presentation NBIC BioAssist meeting (BioAssist)
- Jurgen Vinju, Tijs van der Storm, Atze van der Ploeg, Anastasia Izmaylova, Ali Afroozeh : CWI Open Day, demonstration of NAO robot programming to children using dedicated DSL “Marvol”.
- Jurgen Vinju, Tijs van der Storm, Atze van der Ploeg : “CWI In Bedrijf” (CWI and Industry) , demonstration of Rascal language workbench using the NAO robot DSL “Marvol”.
- Vadim Zaytsev : “A Snappy Introduction to Metaprogramming in Rascal”, RedDevCon’13.
- Vadim Zaytsev : “Modeling Software Structures with GrammarLab”, Tutorial at MoDELS’13.

ATHENA Project-Team

9. Dissemination

9.1. Scientific Animation

- R. Deriche is Adj. Director at the Doctoral School EDSTIC (<http://edstic.i3s.unice.fr/index.html>)
- R. Deriche is member of 4 Scientific Councils: University of Nice Sophia Antipolis, ITMO ITS (Institut des Technologies pour la Santé), OLEA MEDICAL Company (<http://www.olea-medical.com/>) and the GIS UNS-ENSL-CNRS-Inria.
- R. Deriche is member of the Administration Council of AFRIF (Association Française pour la Reconnaissance et l'Interprétation des Formes) and of GRETSI (Groupe d'Etudes du Traitement du Signal et des Images).
- R. Deriche is member of the Editorial Board of the Journal of Neural Engineering, Associate Editor of SIAM Journal on Imaging Sciences (SIIMS) and editorial board member at Springer for the book series entitled Computational Imaging and Vision.
- R. Deriche has served for many years as area-chair and/or as program committee member for International Conferences as ICCV, MICCAI, ECCV, CVPR, ISBI and national conferences as AFRIF-AFIA RFIA and serves several international journals and conferences (NeuroImage, IEEE Transactions on Medical Imaging, Magnetic Resonance in Medicine, JMIV, Medical Image Analysis Journal, ISBI, ISMRM, HBM..).
- R. Deriche has co-organised MICCAI 2013 Workshop on Mathematical Methods for Brain Connectivity.
- R. Deriche has organised the "Computational diffusion MR imaging" session of the BASP: international biomedical and astronomical signal processing (BASP) Frontiers held in Villars-sur-Ollon (Jan. 27, Feb.1, 2013).
- M. Clerc is on the Editorial Board of Biomedical Engineering Online, and of the ISTE-Wiley book series (Neural Engineering committee).
- T. Papadopoulo served as a referee for the international conferences MICCAI 2013, ICVS 2013, NER 2013 and ISBI 2013 and 2014. He was area chair for the national conference GRETSI 2013. In 2013, he has been reviewer for the journals Image and Vision Computing and Signal, Image and Video Processing.
- T. Papadopoulo has reviewed a BPI proposal and a Futur & Rupture de l'Institut Mines-Télécom proposal.
- T. Papadopoulo (since september 2011) is the coordinator of the Master of Science in Computational Biology and Biomedicine from University of Nice Sophia Antipolis (Website: <http://cbb.unice.fr>). The scientific goal of this program is to focus on the human being from different perspectives (understanding and modeling functional aspects or interpreting biomedical signals from various devices) and at different scales (from molecules to organs and the whole organism).
- T. Papadopoulo is a member of the local (Sophia Antipolis) committees for software development (CDT) and for Sustainable development. He is also member of the piloting committee for the platform dtk.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: R. Deriche, *Variational approaches and Geometrical Flows for Brain Imaging*, 36 ETD, M2 "Computational Biology and Biomedicine", University of Nice Sophia Antipolis, France.

Master: M. Clerc and T. Papadopoulo, *Inverse Problems in Brain Functional Imaging*, 36 ETD, M2 "Computational Biology and Biomedicine", University of Nice Sophia Antipolis, France.

Master: T. Papadopoulo, *3D Computer Vision*, 36 ETD, M2, SSTIM/VIM/MAM5 option at Polytechnic Engineering School, University of Nice Sophia Antipolis, France.

Master: T. Papadopoulo, *Inverse problems for brain functional imaging*, 24 ETD, M2, Mathématiques, Vision et Apprentissage, ENS Cachan, France.

Doctorat: M. Clerc *Inverse Problems in Brain Imaging*, 6 ETD, OIPE Doctoral Course, Ghent University, Belgium.

9.2.2. Supervision

PhD: Sylvain Merlet, "Compressive Sensing in dMRI", Université Nice Sophia Antipolis, Sept. 11, 2013. Supervisor : Rachid Deriche

PhD: Anne-Charlotte Philippe, "MEG inverse problem regularization via Diffusion MRI", Université Nice Sophia Antipolis, Dec. 19th, 2013. Supervisors: Rachid Deriche and Maureen Clerc.

PhD in progress: Brahim Belaoucha, "Using diffusion MR information to reconstruct networks of brain activations from MEG and EEG measurements", Université Nice Sophia Antipolis, started October 2013, Supervisor: Theo Papadopoulo.

PhD in progress: Kai Dang, "Conductivity models for optimizing cochlear implant stimulation", started December 2013, Supervisor: Maureen Clerc.

PhD in progress: Rutger H.J. Fick, "Microstructure Recovery via dMRI", started Oct. 2013, Université Nice Sophia Antipolis. Supervisor: Rachid Deriche.

PhD in progress: Gabriel Girard, "fMRI & dMRI", started Sept. 2012, Supervisors: Rachid Deriche & Maxime Descoteaux (University of Sherbrooke, CA).

PhD in progress: Sebastian Hitziger, "MEEG signal processing", started Nov. 2011, Supervisors: Théodore Papadopoulo & Maureen Clerc.

PhD in progress: Mouloud Kachouane, "Invariants and biomarqueurs in dMRI", started Oct. 2012, Supervisors: Rachid Deriche & L. Boumghar (USTHB, Algiers).

PhD in progress: Thinhinane Megherbi, "HARDI & High Order Tensors", started Sept. 2011, Supervisors: Rachid Deriche & L. Boumghar (USTHB, Algiers).

PhD in progress: Marco Pizzolato, "Diffusion & Perfusion MRI : From bench to bedside" started Dec. 2013, Université Nice Sophia Antipolis. Supervisor: Rachid Deriche.

PhD in progress: Romain Trachel, "A Brain Machine Interface for enhancing human performance", started Oct. 2010. Supervisors: Maureen Clerc & Thomas Brochier.

9.2.3. Juries

- M. Clerc participated in the PhD juries of Maxime Rio (Université de Lorraine), Janis Hofmanis (Université de Lorraine) and Anne-Charlotte Philippe (UNS, Nice).
- M. Clerc participated in a jury for CR2 recrutement at Inria Nancy Grand Est.
- R. Deriche participated in the PhD juries of Alexandre Chapoulie (UNS, Nice), Lihui Wang (INSA, Lyon), Gonzalo Vegas Sanchez Ferrero (Valladolid University, Spain), Yacine Morsli (EMP, Algiers), Nicolas Bourdis (Télécom ParisTech, Paris), Sylvain Merlet (UNS, Nice), Stamm Aymeric (Université de Rennes 1) and Anne-Charlotte Philippe (UNS, Nice).
- R. Deriche participated in the HDR juries of Iasonas Kokkinos (Université Paris Est) and Olivier Coulon (Université d'Aix-Marseille).
- T. Papadopoulo participated in the PhD juries of Carolina Saavedra à Inria Nancy (Université de Lorraine).

ATLANMOD Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Organization

In 2013, the AtlanMod team has coorganized the following events:

- J. Cabot has coorganized the OCL and Textual Modeling Workshop (OCL'13)⁸ co-located with the MoDELS conference.
- J. Cabot was tutorials co-chair for the MoDELS conference.

9.1.2. Editorial Boards

Participation to editorial boards of scientific journals:

- Jordi Cabot: Journal of Object Technology, International Journal of Information System Modeling and Design, Software and Systems Modeling

9.1.3. Reviewing of International Journals

AtlanMod members have collaborated in the reviewing process for the following journals this year

- Hugo Bruneliere: Elsevier Advances in Engineering Software (ADES)
- Jordi Cabot: IEEE Software, IEEE Transactions on Software Engineering Journal, Journal of Systems and Software, Information and Software Technology Journal, Software and Systems Modeling Journal, Data and Knowledge Engineering Journal, Science of Computer Programming journal, Journal of Web Engineering journal
- Javier Canovas: Software and Systems Modeling Journal, Journal of Object Technology.
- Massimo Tisi: IEEE Software, Science of Computer Programming journal, Journal of Software: Practice and Experience, Information and Software Technology Journal, Software and Systems Modeling Journal, Journal of Object Technology.
- Gerson Sunyé: IBM Journal of Research and Development, Journal of System and Software, Distributed Computing Journal, Software: Practice and Experience Journal

9.1.4. Program Committee members

Participation to conference program committees:

- Jordi Cabot:
 - International: World Wide Web Conference, International Conference on Model-Driven Engineering Language and Systems, Software Language Engineering conference, European Conference on modeling foundations and applications, International Conference on Web Engineering, Transformation Tool Contest, International Conference on Conceptual Modeling, International Conference on Advanced Information Systems Engineering, Model Driven Web Engineering Workshop.
 - National: French national conference on MDE, Spanish national conference on MDE.
- Javier Canovas:

⁸<http://ocl2013.inf.mit.bme.hu/>

- International: International Conference on Cyber, Physical and Social Computing, ACM European Computing Research Congress, International Conference on Web Engineering, Model-Driven Web Engineering workshop, International Conference on Model Driven Engineering Languages and Systems, Workshop on Modeling Social Media, International Conference on Knowledge Management and Knowledge Technologies.
- Massimo Tisi:
 - International: International Conference on Engineering of Complex Computer Systems, International Conference on Current Trends in Theory and Practice of Computer Science, International Conference on Software Engineering and Advanced Applications, International Conference on Web Information Systems and Technologies, International Conference on Model Transformation, Transformation Tool Contest, Workshop on Domain-Specific Modeling, Extreme Modeling Workshop, Academics Modelling with Eclipse Workshop.
- Gerson Sunye:
 - International: 25th International Conference on Software Engineering and Knowledge Engineering (SEKE 2013), 2nd International Workshop on Large-Scale Testing (LT 2013), 1st International Workshop on Testing The Cloud (TTC 2013).

9.1.5. Research Evaluation Committees

- Jordi Cabot: Reviewer for Spanish CICYT Research Projects Call

9.1.6. Steering Committees

Participation in Steering Committees of Research Conferences:

- Jordi Cabot: International Conference on Model Transformation

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- License: M. Tisi, Projet IPIPIP, 8h, L2, Ecole des Mines de Nantes
- License: M. Tisi, Projet Integrateur PRIME, 12h, L3, Ecole des Mines de Nantes
- License: M. Tisi, Programmation, 40h, L2, Ecole des Mines de Nantes
- License: M. Tisi, Bases de Données, 33h, L3, Ecole des Mines de Nantes
- License: M. Tisi, Interaction Homme-Machine, 14h, L3, Ecole des Mines de Nantes
- License: S. Martínez, Bases de Données, 33h, L3, Ecole des Mines de Nantes
- License: S. Martínez, Interaction Homme-Machine, 14h, L3, Ecole des Mines de Nantes
- License: J. Cabot, Projet IPIPIP, 8h, L2, Ecole des Mines de Nantes
- License: J. Cabot, Model-driven Engineering, 45h, L1, Ecole des Mines de Nantes
- Master: J. Cabot, Master MIAGE - Object Constraint Language, 4h, M1, Université de Nantes
- Master : G. Sunyé, Genie logiciel, 90h, M1, Université de Nantes
- Master : G. Sunyé, Verification et tests, 56h, M1, Université de Nantes
- Master : G. Sunyé, Nouveaux usages de l'informatique pour l'entreprise, 23h, M1, Université de Nantes
- Master : G. Sunyé, Developpement du logiciel, 44h, M1, Université de Nantes
- Master: J. Canovas, Master MIAGE - Domain Specific Languages, 6h, Université de Nantes.
- License: J. Canovas, Projet IPIPIP, 8h, L2, Ecole des Mines de Nantes

9.2.2. Supervision

PhD : Valerio Cosentino, Extraction and refactoring of Business Logic from Legacy Applications, December 19th, 2013, Jordi Cabot, Patrick Albert

PhD : Tam Le Nham, Model-Driven Software Engineering for Virtual Machine Images Provisioning in Cloud Computing, Université de Rennes 1, December 10th 2013, Jean-Marc Jézéquel, Gerson Sunyé

PhD in progress : Carlos A. González, Pragmatic Model Verification, Jordi Cabot

PhD in progress : Salvador Martínez Pérez, Automatic reconstruction and analysis of semantic network security policies from deployed security components, Jordi cabot and Frédéric Cuppens

PhD in progress : Olivier Finot, Oracles du test de transformation de modeles, Université de Nantes, Septembre 2010, Christian Attiogbé (Directeur), Jean-Marie Mottu, Gerson Sunyé

9.2.3. Juries

Jordi Cabot was a member of the jury of the thesis of Thang Quyet Pham (Telecom Bretagne), Jad MATAR (Ecole Centrale Nantes) and Aymeric Hervieu (Inria/IRISA)

9.3. Popularization

In June 2013, the team participated to the organization of the seminar “Logiciels de qualité : modélisation et vérification” at “Journées scientifiques de l’Université de Nantes”. The seminar had more than 50 participants, from industry and academia.

Moreover, since several years, the AtlandMod team is already very involved in the open source community, notably via its constant activity within the context of the Eclipse Foundation. This activity actually takes different forms: creation and leading/development of Eclipse projects (under *Eclipse.org* or *Eclipse Labs*), participation to the major worldwide community events (i.e.; EclipseCon North America and EclipseCon Europe), organization of events targeting the local community (i.e. Eclipse DemoCamps), etc.

This year again, the team has been active and visible in terms of concrete contributions to the community. The main remarkable items are the following ones:

- Leading of the MDT MoDisco project (Hugo Bruneliere), the Eclipse reference project concerning model-driven reverse engineering;
- Commitment to other projects directly under *Eclipse.org*: MMT ATL and EMFT EMF Facet (Hugo Bruneliere);
- Commitment to other projects under *EclipseLabs*: EMFToCSP (Jordi Cabot, Carlos Gonzalez) and Virtual EMF (Caue Clasen, Jordi Cabot);
- Creation and development of a new incubation project under *Eclipse Labs*: Collaboro (Javier Canovas);
- Organization of an official Eclipse DemoCamp in Nantes, on the 28th of June 2012, for locally promoting the Eclipse Juno release including the MoDisco, ATL and EMF Facet team’s projects (Hugo Bruneliere, in collaboration with the Obeo company);
- Publication of a paper on MoDisco in the European ERCIM NEWS Journal 88, dedicated to Software Evolution (Hugo Bruneliere and Jordi Cabot, in collaboration with the Mia-Software company);
- Presentation of talks during the two main Eclipse events (Hugo Bruneliere): at EclipseCon North America 2012 about EMF Facet, at EclipseCon Europe 2012 about Collaboro.

Generally, the team visible presence under Eclipse is also an efficient way to continue active collaborations with industrial partners, such as Mia-Software (Sodifrance) on MoDisco - EMF Facet, and Obeo on ATL.

AVALON Team

8. Dissemination

8.1. Scientific Animation

- Eddy Caron
 - Co-Organization of Inria Booth in SuperComputing 2013, Denver, USA, November 16-22, 2013
 - Local Arrangements Co-Chairs of ICPP 2013 : 42th International Conference on Parallel Processing, Lyon, October 1-4, 2013
 - Program Committee Member: IPDPS 2013, HCW 2013, CLOSER 2013, CloudCom 2013, The First International Workshop Federative and Interoperable Cloud Infrastructures, (FedICI'2013) and CGCIC'13.
 - Reviews: Journal of Grid Computing, JPDC (Journal of Parallel and Distributed Computing), CPE (Concurrency and Computation: Practice and Experience), TPDS (Transactions on Parallel and Distributed Systems)
- Frédéric Desprez
 - General chair of the VTDC'13 workshop (within HPDC'13), Co-chair of Closer'13, Co-chair of BigDataCloud'2013 (within EuroPAR'13)
 - Program Committee Member: CCGRID'2013, IPDPS'13, CGC2013, NPC2013, Big-Data'13, BDSE'2013
 - Reviews: Journal of Grid Computing, Parallel Processing Letters, Future Generation Computing Systems
 - Project Evaluation: Appel à Projets Recherche 2013 du Conseil régional d'Aquitaine, Région Languedoc-Roussillon, appel à projets "Chercheur(se)s d'avenir" 2013
 - Member of the selection committee for an associate professor at Université Joseph Fourier (Grenoble)
- Gilles Fedak
 - Member of Editorial Board of Springer Cloud Computing Journal, 2013
 - "Special Issue: Combined Special Issue of MapReduce and its Applications & Advanced topics on wireless sensor networks" Concurrency and Computation: Practice and Experience Issue edited by: Gilles Fedak, Keqiu Li, Kai Lin Volume 25, Issue 1 January 2013
 - Program Committee Member: 9th IEEE International Conference on e-Science, (e-Science 2013), 5th IEEE International Conference on Cloud Computing Technology and Science (CloudCom2013), 25th International Symposium on Computer Architecture and High-Performance Computing (SBAC-PAD), The First International Workshop Federative and Interoperable Cloud Infrastructures, (FedICI'2013), IEEE International Conference on Big Data and Distributed Systems (BDDS 2013), 10th IFIP International Conference on Network and Parallel Computing (NPC 2013), 15th IEEE International Conference on High Performance Computing and Communications (HPCC 2013), 22nd ACM International Symposium on High-Performance Parallel and Distributed Computing (HPDC 2013), 13th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGRID 2013), International Workshop on High Performance Data Intensive Computing (HPDIC2013), 17th Workshop on Job Scheduling Strategies for Parallel Processing (JSSPP 2013).
- Jean-Patrick Gelas

- PC member (Cloud and Distributed Computing), AICCSA 2013 : 10th ACS/IEEE International conference on computer systems and applications, Fes, Morocco, May 27-30, 2013
- PC member, ExtremeGreen: Extreme Green and Energy Efficiency in Large Scale Distributed Systems , Delft, The Netherlands, May 13-16, 2013
- Reviews : ExtremGreen2013, Euro-Par2013, EnA-HPC 2013, CGC2013.
- Olivier Glück
 - Organization: local organization committee of ICPP
 - PC member: ExtremeGreen, International Conference on Cloud and Green Computing
 - Reviews: Cluster Computing, Euro-Par
 - University committee: Member of the CEVU (Conseil des Etudes et de la Vie Universitaire) of University Lyon 1, Member of the UFR Faculte des Sciences et Technologies faculty council of University Lyon 1, Member of the computer science department council of University Lyon 1
- Laurent Lefèvre
 - Co-organizer of the Green Days @ Lille event: "HPC & Clouds : are they green ?", Lille, November 28-29, 2013
 - Co-Organization of Inria Booth in SuperComputing 2013, Denver, USA, November 16-22, 2013
 - Co General chair of ICPP 2013 : 42th International Conference on Parallel Processing, Lyon, October 1-4, 2013
 - Co-Program chair of CGC 2013 : Third International Conference on Cloud and Green Computing ,Karlsruhe, Germany, September 30- October 2, 2013
 - Co-Workshop chair of ExtremeGreen 2013 : Extreme Green & Energy Efficiency in Large Scale Distributed Systems , Delft, The Netherlands, May 2013
 - Co-organizer of the Green Days @ Luxembourg event: "Energy efficiency : what else / what next ?", Luxembourg, January 28-29, 2013
 - Associate editor of IEEE Transactions on Cloud Computing (TCC)
 - Member of the selection committee for an associate professor position at Université Antilles Guyane (Pointe à Pitre)
- Christian Perez
 - Co-organization of the The Ninth Workshop of the Inria-Illinois Joint Laboratory on Petascale Computing, Lyon, France, June 12-14, 2013.
 - Programm committee member of the International Conference on Parallel Computing 2013 (ParCo), the 11th International Conference on Service Oriented Computing (IC-SOC2013).
 - Reviewing for IEEE Transactions on Parallel and Distributed Systems, Future Generation Computer Systems, Parallel Computing, and Technique et Science Informatique.
 - Member of the selection committee for an associate professor position at University Lyon I/LIP.
- Frédéric Suter
 - Organization: 3rd edition of the SIMGRID Users Days.
 - Project Evaluation: Comité d'Evaluation ANR SIMI2, Israel Science Foundation.
 - PC member: CLOSER, VTDC, IPDPS, SYNASC, VECPAR, EuroMPI.
 - Reviews: JPDC, Parallel Computing, TPDS, CCGrid

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Licence: Olivier Glück, Initiation Réseaux, 2x9h, niveau L2, Université Lyon 1, France
- Licence: Olivier Glück, Réseaux, 2x70h, niveau L3, Université Lyon 1, France
- Licence: Eddy Caron, Architecture, Système et Réseaux, 36h, niveau L3, Ecole Normale Supérieure de Lyon, France
- Master: Eddy Caron, Systèmes Distribués, 36h, niveau M1, Ecole Normale Supérieure de Lyon, France
- Master: Eddy Caron, Projet Intégré, 36h, niveau M1, Ecole Normale Supérieure de Lyon, France
- Master: Frédéric Desprez, Parallélisme, 30h, niveau M1, Université Lyon 1, France
- Master: Olivier Glück, Services et Protocoles Avancés sur Internet, 40h, niveau M2, Université Lyon 1, France
- Master : Olivier Glück, Administration des Systèmes et des Réseaux, 16h, niveau M2, Université Lyon 1, France
- Master: Jean-Patrick Gelas, Réseaux, 48h, niveau M2 (CCI), Université Lyon 1, France
- Master: Jean-Patrick Gelas, Système d'exploitation, 30h, niveau M2 (CCI), Université Lyon 1, France
- Master: Jean-Patrick Gelas, Architecture des routeurs, 6h, niveau M2, Université Lyon 1, France
- Master: Jean-Patrick Gelas, Nouvelles Technologies, 85h, niveau M2, Université Lyon 1, France
- Master: Jean-Patrick Gelas, Routage et IPv6, 45h, niveau M2, Université Lyon 1, France
- Master: Eddy Caron, Gilles Fedak, Christian Perez and Jonathan Rouzaud-Cornabas Grid and Cloud Computing, 36h, niveau M2, Ecole Normale Supérieure de Lyon, France
- Master/Doctorat : Gilles Fedak, MapReduce Environments: Design, Performance, Optimizations, II Escola Regional de Alto Desempenho - Região Nordeste, Salvador de Bahia, Brazil, October 22, 2013
- Master : Laurent Lefèvre is responsible of training periods for Research Master in ENS-Lyon

8.2.2. Supervision

- HdR: Laurent Lefèvre, *Contributions à la flexibilité et à l'efficacité énergétique des systèmes distribués à grande échelle*, Ecole Normale Supérieure de Lyon, 14 Novembre 2013. [2]
- PhD: Mohammed El Mehdi Diouri, *Efficacité énergétique dans le calcul très haute performance : application à la tolérance aux pannes et à la diffusion de données*, ENS LYON, September 27 2013, Isabelle Guerin-Lassous and Laurent Lefèvre and Olivier Glück. [1]
- PhD: Ghislain Landry Tsafack Chetsa, *System Profiling and Green Capabilities for Large Scale and Distributed Infrastructures*, Ecole Normale Supérieure de Lyon, December 3rd, 2013. [3]
- PhD: Rafaël Silva (Creatis, INSA Lyon), *A science-gateway for workflow executions: online and non-clairvoyant self-healing of workflow executions on grids*, Frédéric Desprez (dir), Tristan Glatard (Creatis, CNRS, co-dir), November 13, 2013.
- PhD in progress: George Markomanolis, *Performance evaluation and prediction of parallel applications*, 12/2009, Frédéric Desprez (dir), Frédéric Suter (co-dir).
- PhD in progress: Maurice Djibril Faye, *Déploiement auto-adaptatif d'intergiciel sur plateforme élastique*, Eddy Caron (dir), Ousmane Thiaré (Université Gaston Berger, St Louis, Sénégal, co-dir)
- PhD in progress: Sylvain Gault, *Ordonnancement de tâches avec le modèle MapReduce*, 11/2010, Frédéric Desprez (dir), Frédéric Suter (co-dir)

PhD in progress, Vincent Lanore, *Adaptation et dynamique dans les modèles à composants logiciels pour les applications scientifiques*, C. Pérez.

PhD in progress, Arnaud Lefray, *Mission fonctionnelle et de sécurité dans une informatique en nuage*, Eddy Caron (dir), Christian Toinard (ENSIB, co-dir)

PhD in progress : Anthony Simonet, *Exécution efficace d'applications de traitement intensif de données sur des infrastructures distribuées hybrides*, 10/2011, Gilles Fedak.

PhD in progress: Jonathan Pastor (Nantes), *Conception d'un système de gestion autonome, coopérative et distribué pour les centrales numériques à large échelle*, 11/2012, Frédéric Desprez, Adrien Lèbre (Ascola, Nantes, co-dir).

8.2.3. Juries

- Eddy Caron
 - Ndye Massata NDIAYE, *Technique de gestion des défaillances dans les grilles informatiques tolérantes aux fautes*, PhD, Université Pierre et Marie Curie, France, September 2013, Reviewer
 - Sébastien Fourestier, *Redistribution dynamique parallèle efficace de la charge pour les problèmes numériques de très grandes tailles*, PhD, Université de Bordeaux I, Juin 2013, Reviewer
- Frédéric Desprez
 - Flavien Quesnel, *Vers une gestion coopérative des infrastructures virtualisées à grande échelle : le cas de l'ordonnancement*, PhD, Université de Nantes, February 2013, Reviewer
 - Thierry Coupaye, *Architecture dynamique des systèmes répartis – Expériences avec les composants logiciels*, HDR, Université Joseph Fourier, March 2013, Reviewer
 - Laurent Lefèvre, *Contributions à la flexibilité et à l'efficacité énergétique des systèmes distribués à grande échelle*, HDR, Ecole normale supérieure de Lyon, November 2013, Jury member
 - Ghislain Tsafack Chetsa, *System Profiling and Green Capabilities for Large Scale and Distributed Infrastructures*, PhD, Ecole normale supérieure de Lyon, December 3rd, 2013, Jury member
- Laurent Lefèvre
 - Yacine Kessaci, *Ordonnancement multi-critère sur Clouds*, PhD, Université Lille1, France, November 2013, Jury member
 - Remigiusz Modrzejewski, *Distribution and Storage in Networks*, PhD, Université de Nice, France, October 2013, Jury member
 - Anton Beloglazov, *Energy and Performance Efficient Dynamic Consolidation of Virtual Machines in Cloud Data Centers*, PhD, University of Melbourne, Australia, March 2013, Reviewer
- Christian Perez
 - Chen Wang, *Chemistry-Inspired Middleware for Flexible Service Composition and Adaptation*, PhD, Insa Rennes, May 28th, 2013, Reviewer.
 - Stefania Costache, *Market-based Autonomous Resource and Application Management in the Cloud*, PhD, University of Rennes I, July 3rd, 2013, Reviewer.
 - Joseph Emeras, *Workload Traces Analysis and Replay in Large Scale Distributed Systems*, PhD, University of Grenoble, France, October 1st, 2013, Reviewer.
 - Cyril Bordage, *Ordonnancement dynamique, adapté aux architectures hétérogènes, de la méthode multipôle pour les équations de Maxwell en électromagnétique*, PhD, Université de Bordeaux I, France, December 20th, 2013, Reviewer.

8.3. Popularization

- Laurent Lefèvre
 - Interview extract in Blog "Web developpement durable" : Internet & Data Center : bilan énergétique positif ou négatif , July 17, 2013
 - Interview for La Vie Journal, "Using Internet with less energy", June 13, 2013
 - Interview for Liberation News Paper, "Datacenters : la donnée écolo", April 15, 2013
 - Participant in the Panel on Green Computing, GDR GPL, Nancy, April 2013
 - Co-Editor for the Future Internet Assembly (FIA) Book 2013 : Validated Results and New Horizons, Alex Galis editor, LNCS, Volume 7858, Springer, May 2013
- Jean-Patrick Gelas :
 - Invited speaker to Ecocity 2013, "Greening Clouds and High Performance Computing: Challenges and Initiatives", Nantes, France, September 23, 2013
 - Invited speaker to JDN2013 (Journée sur le décisionnel dans le Nuage), "Energy monitoring framework for high-performance cloud infrastructure", Bron, France, May 16, 2013
 - Invited speaker to JSF2013 (Journée Scientifique) about Energy, "Propositions to improve Data Centers and Clouds Energy Efficiency", Lyon, France, June 26, 2013

AVIZ Project-Team

9. Dissemination

9.1. Scientific Animation

AVIZ members are active worldwide in the domains of Visualization, Visual Analytics, HCI, and computer graphics.

9.1.1. Keynotes and Invited Talks

- Jean-Daniel Fekete: Panel “Dataviz, pour quel buzz ?” at Ouverture des données massives scientifiques. Quels risques, quels bénéfices ?, ISCC, CNRS, Paris, Dec. 6, 2013
- Jean-Daniel Fekete: Advanced Interaction for Information Visualization, Bergen, Norway, Nov. 21, 2013
- Jean-Daniel Fekete: ANF - Fréjus 2013 La carte, le territoire et l’explorateur : où est la visualisation ?, Fréjus, 23 Sep. 2013 Ecole d’été de Lille en Méthodes Quantitatives des Sciences Sociales,
- Jean-Daniel Fekete: “Visualisation pour l’exploration de données relationnelles”, Lille, July 4, 2013,
- Jean-Daniel Fekete: Invited talk for the 25th anniversary of Fraunhofer IGD: Visual Analytics of Large Social Networks, Darmstadt, Germany, Nov. 14, 2013
- V. Puig and Samuel Huron: “La visualisation comme vecteur de contribution”, CEA Saclay, November 2013.

9.1.2. Scientific Associations

- 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 the president of the French-Speaking HCI Association.
- Tobias Isenberg is a member of the Steering Committee of the Expressive conference.

9.1.3. Conference Organization

- Jean-Daniel Fekete is a member of the ACM SIGCHI Conference Management Committee, in charge of Data Analysis.
- Jean-Daniel Fekete co-organized the International Workshop on Interactive, Ultra-High-Resolution Displays.
- Petra Isenberg was workshop co-chair for IEEE VIS.
- Tobias Isenberg was tutorials and workshops co-chair for ACM Interactive Tabletops and Surfaces (ITS).

9.1.4. Conference Program Committees

- Pierre Dragicevic was a member of the program committee for CHI 2013,
- Pierre Dragicevic was a member of the program committee for VIS 2013,
- Pierre Dragicevic was a member of the doctoral consortium for IHM 2013,
- Jean-Daniel Fekete was a member of the program committee for Interact 2013,
- Jean-Daniel Fekete was a member of the program committee for IEEE InfoVis 2013,

- Jean-Daniel Fekete was a member of the program committee for IEEE VAST 2013,
- Petra Isenberg was a member of the program committee for the BLEND 2013 workshop,
- Petra Isenberg was a member of the program committee for the CMI 2013 workshop,
- Petra Isenberg was a member of the program committee for the EuroRVVV 2013 workshop,
- Petra Isenberg was a member of the program committee for the ITS 2013 workshop on collaboration meets interactive surfaces,
- Petra Isenberg was a member of the program committee for EuroVA 2013,
- Petra Isenberg was a member of the program committee for EuroVis 2013,
- Petra Isenberg was a member of the program committee for CHI 2013,
- Petra Isenberg was a member of the program committee for IEEE InfoVis 2013,
- Petra Isenberg was a member of the program committee for ACM ITS 2013,
- Tobias Isenberg was a member of the program committee for ISIS3D 2013,
- Tobias Isenberg was a member of the program committee for ACM/Eurographics Expressive 2013,
- Tobias Isenberg was a member of the program committee for IEEE InfoVis 2013,
- Tobias Isenberg was a member of the program committee for the EuroRVVV 2013 workshop,
- Tobias Isenberg was a member of the program committee for ACM SUI 2013,
- Tobias Isenberg was a member of the program committee for EuroVis full papers 2013,
- Tobias Isenberg was a member of the program committee for EuroVis short papers 2013,
- Wesley Willett was a member of the program committee of CHI 2013 Works-in-Progress.

9.1.5. Journal Editorial Board

- Jean-Daniel Fekete is associate editor of IEEE Transactions on Visualization and Computer Graphics.
- Tobias Isenberg is associate editor of Elsevier Computers & Graphics.
- Tobias Isenberg was a guest editor of a special issue of Sage Publishing's Information Visualization on visualization evaluation.

9.1.6. Conference Reviewing

- 3DUI IEEE Symposium on 3D User Interfaces: Tobias Isenberg
- BioVis IEEE Symposium on Biological Data Visualization: Tobias Isenberg
- CAe International Symposium on Computational Aesthetics in Graphics, Visualization, and Imaging: Tobias Isenberg
- CGI Computer Graphics International: Tobias Isenberg
- CHI ACM Conference on Human Factors in Computing System: Benjamin Bach, Pierre Dragicevic, Jean-Daniel Fekete, Petra Isenberg, Tobias Isenberg, Welsey Willet
- CHI-WIP ACM Conference on Human Factors in Computing Systems—Work in Progress: Petra Isenberg
- CSCW ACM Conference on Computer Supported Cooperative Work: Petra Isenberg, Welsey Willet
- EG Annual Conference of the Eurographics Association: Tobias Isenberg
- EuroVA EuroVis Workshop on Visual Analytics: Jean-Daniel Fekete, Petra Isenberg
- EuroVis Eurographics/IEEE Conference on Visualization: Jean-Daniel Fekete, Petra Isenberg, Tobias Isenberg, Welsey Willet
- GD Graph Drawing: Pierre Dragicevic
- IHM Conférence Francophone sur l'Interaction Homme-Machine: Pierre Dragicevic, Tobias Isenberg

InfoVis IEEE Information Visualization Conference: Benjamin Bach, Pierre Dragicevic, Petra Isenberg, Tobias Isenberg, Welsey Willet

Interact IFIP Conference on Human-Computer Interaction: Petra Isenberg

ITS ACM Conference on Interactive Tabletops and Surfaces: Petra Isenberg, Tobias Isenberg

NPAR ACM Symposium on Non-Photorealistic Animation and Rendering: Tobias Isenberg

PacificVis IEEE Pacific Visualization Symposium: Tobias Isenberg

Pervasive IEEE Conference on Pervasive Computing: Welsey Willet

SciVis IEEE Scientific Visualization Conference: Tobias Isenberg

SIGGRAPH ACM Conference on Computer Graphics and Interactive Techniques: Tobias Isenberg

SIGGRAPH Asia ACM Conference on Computer Graphics and Interactive Techniques in Asia: Tobias Isenberg

SUI ACM Symposium on Spatial User Interaction: Tobias Isenberg

UbiComp ACM International Joint Conference on Pervasive and Ubiquitous Computing: Welsey Willet

UIST ACM Symposium on User Interface Software and Technology: Petra Isenberg, Welsey Willet

VR IEEE Virtual Reality: Tobias Isenberg

9.1.7. Journal Reviewing

C&G Elsevier Computers and Graphics: Petra Isenberg, Tobias Isenberg

IJHCS : Pierre Dragicevic, Petra Isenberg

InfoVis Journal Palgrave's InfoVis Journal: Petra Isenberg

IWC Journal Interacting with Computers: Petra Isenberg

JOCCH ACM Journal on Computing and Cultural Heritage: Tobias Isenberg

PUC Journal of Personal and Ubiquitous Computing: Petra Isenberg

ToCHI ACM Transactions on Computer-Human Interaction: Pierre Dragicevic, Petra Isenberg, Tobias Isenberg

TVCG IEEE Transactions on Visualization and Computer Graphics: Benjamin Bach, Pierre Dragicevic, Tobias Isenberg

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Module “Interactive Information Visualization” of Univ. Paris-Sud (M2, 24h, taught by Pierre Dragicevic, Jean-Daniel Fekete, Petra Isenberg, Wesley Willett, Charles Perin), Master course
- “Innovative Interactive Systems” taught by Tobias Isenberg at the University of Groningen, the Netherlands
- “Non-Photorealistic Rendering” taught by Tobias Isenberg at the University of Granada, Spain
- “Interaction with 3D visualizations” taught by Tobias Isenberg at the summer school of the EU Data Intensive Visualization and Analysis project at Göteborg (Gothenburg), Sweden

9.2.2. Supervision

- PhD in progress: Yvonne Jansen, Physical and Tangible Information Visualization, Pierre Dragicevic, Jean-Daniel Fekete (will defend on 10 March 2014)
- PhD in progress: Benjamin Bach, Visualization of Dynamic Networks, Emmanuel Pietriga, Jean-Daniel Fekete (will defend May 2014)
- PhD in progress: Charles Perin, Visualization and interaction with Multidimensional and Temporal Data, Jean-Daniel Fekete & Frédéric Vernier

- PhD in progress: Jeremy Boy, Visualization for the People, Jean-Daniel Fekete & Françoise Detienne
- PhD in progress: Nicolas Heulot, Visualization and Interaction of High-Dimensional Data, Jean-Daniel Fekete & Michael Aupetit
- PhD in progress: Pascal Goffin, From Individual to Collaborative Work, Petra Isenberg, Jean-Daniel Fekete

9.2.3. Juries

- Pierre Dragicevic was external examiner for Raphaël Hoarau's PhD defense: "Interaction et visualisation avec des liens de dépendances," Université de Toulouse, Aug. 2013
- Jean-Daniel Fekete was external examiner for Cyprien Pindat, "A Content-Aware Design Approach to Multiscale Navigation," Univ. Paris-Sud, Dec. 20, 2013
- Jean-Daniel Fekete was external examiner for Çağatay Turkyay, "Integrating Computational Tools in Interactive and Visual Methods for Enhancing High-dimensional Data and Cluster Analysis", Univ. of Bergen, Nov. 22, 2013
- Tobias Isenberg was external examiner for Tiffany Inglis, "Pixelating Vector Art," University of Waterloo, Canada, December 2013
- Tobias Isenberg was external examiner for Hua Li, "Perception-Motivated High Quality Stylization," Carleton University, Canada, January 2013

9.3. Popularization

Samuel Huron: 9.3. News Paper and press cover : 04/2013, "Zeitgeist Borders shows a world of Google searches", NewScientist, Hal Hodson 11/2013, "Les flux de données visualisés en temps réel", La Recherche, Samuel Huron, Romain Vuillemot, Jean Daniel Fekete

AXIS Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Organization of Workshops and Conferences

Participation to Innovative City Convention Organisation (June 18th): this event ICC 2013 has attracted more than 2500 people from enterprises and territories.

- B. Trousse organised one workshop Inria-France Living Labs at Innovative City Convention on "Co-create with Users digital services of the territories of tomorrow" with around 100 attendants. At Innovative city convention 2013 (2500 attendants, June 18th, Nice), Inria and Fing has awarded several participants for their user involvement (idea production, viral marketing, questionnaires, sensor management). Two special winners being involved in many experiments received as awards one tablet offered by FING. The awarded citizen have expressed during this workshop their satisfaction related to MyGreenServices in producing IoT data, in being informed about the pollution where they live or when they move or in exchanging with others.

See the article on Atelier.net (the disruptive innovation BNP Paribas journal) ([here](#))

- Co-redaction of a flyer (English version) related to the PACALABS ECOFFICES project for the ICC conference in Nice distributed by "Chambre de Commerce et industrie" (Enterprise/Environment/Energy Department) ISGAN - CCI.

8.1.2. Editorial Boards and Reviewing

Axis members participate in the **editorial boards** of various journals:

Yves Lechevallier

- MODULAD (electronic journal) as co-editor
- BIT (Behaviour & Information Technology)
- ADAC (Advances in Data Analysis and Classification)

Dominique Scapin

- BIT (Behaviour & Information Technology) (Associate Editor)
- UAIS -International Journal of Universal Access in the Information Society)
- IJHCS - International Journal of Human-Computer Studies
- IWC - Interacting with Computers
- IJPOP - International Journal of People-Oriented Programming
- International Journal On Advances in Intelligent Systems
- JMUI - Journal of Mutimodal User Interfaces
- JIPS - "Journal d'Interaction Personne-Système"

Brigitte Trousse

- Journal of Symbolic Data Analysis
- IJDST - International Journal of Design Sciences & Technology (Europia Productions)
- Co-Design, International Journal of CoCreation in Design and the Arts Journal (Taylor Francis online)

AxIS members are very regularly **reviewers** for various major journals: ADAC "Advances in Data Analysis and Classification", BIT (Behavior and Information Technology), ADAC "Advances in Data Analysis and Classification", IJHCS (International Journal of Human-Computer Studies), JMUI (Journal of Multimodal User Interfaces), "Le Travail Humain", UAIS, IwC in 2012. Thierry Despeyroux was reviewer for a book: Advances in Knowledge Discovery and Management Vol. 4 to be published. B. Senach reviewed a paper for the BIT journal

8.1.3. Conferences - Workshops Scientific Program Committees

Y. Lechevallier and B. Trousse are members of the **supervising committee** of the association EGC (<http://www.egc.asso.fr/>).

AxIS permanent members are involved in the following program committees of conferences and workshops:

Thierry Despeyroux

- EGC 2013, January 29th - February 1st 2013, Toulouse, France.
- EGC 2014, 27-31 January 2014, Rennes, France.

Yves Lechevallier

- EGC 2013, January 29th - February 1st 2013, Toulouse, France.
- EGC 2014, 27-31 January 2014, Rennes, France.

Dominique Scapin

- EGC 2013, January 29th - February 1st 2013, Toulouse, France.
- HCII 2013, 21-26 July 2013, Las Vegas, Nevada, USA.
- SETIT 2014, 6th International Conference Sciences of Electronics, Technologies of Information and Telecommunications, 11-13 October 2013, Chongqing, China.
- INTERACT 2013, 2-6 September 2013, Cape Town, South Africa.
- CENTRIC 2013, October 27th - November 1st, 2013, Venice, Italy.
- IHM 2013, 12-15 November 2013, Bordeaux, France.
- ICMI, 5th ACM International Conference on Multimodal Interaction, December 9-13th, 2013, Sydney, Australia.
- PhyCS, 1st. International Conference on Physiological Computing Systems, January 7-9, 2014, Lisbon, Portugal.
- EGC 2014, 27-31 January 2014, Rennes, France.
- ACHI 2014, 23-27 March 2014 - Barcelona, Spain.
- SETIT 2014, 7th International Conference Sciences of Electronics, Technologies of Information and Telecommunications, March 24-28 2014, Kuala Lumpur, Malaysia.
- CHI 2014, April 26 - May 1, Toronto, Canada.
- HCII 2014, 22-27 June 2014, Heraklion, Crete, Greece.
- ErgoIA 2014, 15-17 October 2014, Bidart, France.

Brigitte Trousse

- EGC 2013, January 29th - February 1st 2013, Toulouse, France.
- CSCWD 2013, the 2013 17th IEEE International Conference on Computer Supported Cooperative Work in Design, June 27-29, Whistler, BC, Canada (sponsored by IEEE SMC Society).
- RAPC 2013?, 21th French Workshop on Case-based Reasoning.
- H2PTM 2013, 16-18 October, International Conference "Hypertextes et Hypermedia, Produits, Outils et méthodes, Usages et pratiques numériques", 2013 CNAM - Paris.
- IJCAI 2013, 3-9 August, 23rd International joint Conference on Artificial Intelligence, Beijing, China (reviewer).
- EGC 2014, 27-31 January 2014, Rennes, France.
- CSCWD 2014, 21-24 May 2014, the 2014 IEEE 18th International Conference on Computer Supported Cooperative Work, National Tsing Hua University, Taiwan in Design.
- DCC 2014, 23-25 June 2014, Sixth International Conference on design Computing and Cognition, University College London, London, UK.
- ICC 2014, 25-26 June 2014, Innovative City Convention, Nice, France.
- ICE 2014, 23-25 June 2014, 20th International Conference ICE on Engineering, Technology and Innovation, IEEE TMC Europe Conference, Bergamo, Italy.

8.1.4. Invited talks or participations**Yves Lechevallier**

- Conference ECDA 2013: Y. Lechevallier gave an **invited talk** "Partitioning Methods On Dissimilarity Matrices Set" related to this publication [20] at the First European Conference on Data Analysis (ECDA 2013) (with around 300 participants) jointly hosted by the two Classification Societies (GkKI in Germany and SFC in France) in July at Luxembourg.

B. Trousse

- BIOVISION 2013, The World Life Sciences Forum (Lyon, March): B. Trousse as President of France Living Labs was invited to be panelist in the prospective session "eHealth: a coming medical revolution?".
- Conference of Ladies in mobility at Ever Monaco (Monaco, March 29): B. Trousse made an invited talk on "Innovative Services in Mobility (User Experience, Living Lab Approach)".
- 2030 Prospective ADEME workshop (2 days) organised by ADEME and Chronos firm, Sophia Antipolis.

8.1.5. Other actions

Local Dissemination to Citizen within ELLIOT project which has required a huge effort, both in terms of citizen workshop reporting, recruitment for our two 16 days experiments related to MyGreenServices in 2013 (February and June), community management within the forum, maintenance of a Scoop-it page on green services and finally MyGreenServices reporting for large audience. We realized for citizen recruitment a flyer on ELLIOT project and a call for participation for the workshops we published on various web sites: ICT Usage Lab, GreenCode, WebTimeMedias and Local networks such as the local JCI chapter. In addition to the recruitment we have prepared various packages for citizen related to the use of each citizen IoT stations. Finally for ELLIOT experiments we have recruited 48 participants from the idea generation until the experimentation.

Participation to other events:

B. Trousse participated in several events or meetings disseminating AxIS results:

- Workshop "Design & Living Labs: L'apport du design et des SHS dans les démarches d'innovation centrée usagers ?", January 16th, Marseille (France)
- R2DS Conference: "Dispositifs d'activation de l'innovation pour la ville durable: Espace coworking, fablab, living lab et Smart Cities", organised by Fondaterr and the Regional Council of "Ile de France", at Hémicycle - Regional Council Ile de France (Paris 7e),
- International Biennale of Design, Forum Design et Innovation, March, St Etienne (France).
- General Assembly of France Living Labs, March, St Etienne (France),
- Meeting of the Strategical Orientation Committee of Pacalabs (evaluation of the past Pacalabs four years, done by EDATER and PacaLabs Operational Committee) June, Marseille (France)
- Innovative City Convention (ICC 2013), June, Nice (France),
- European Summer School on Living Labs, August, Manchester (UK),
- Final ELLIOT Review at EU, August, Brussels (Belgium),
- LIFT 2013 "Produire autrement!", 15 October, Marseille (France),
- Innovation & Territories - City of Antibes organised by Telecom valley (Innovation Committee), November 14th, Campus SophiaTech.

B. Senach participated in several scientific events:

- International Biennale of Design, Forum Design et Innovation, Saint-Etienne, March, St Etienne (France). Participation in the Workshop : "Passage de l'économie de la propriété à l'économie de l'usage".
- Conférence "L'intégration de la mobilité durable dans les villes intelligentes", Monaco, March, 29.
- Innovative City Convention (ICC 2013), June, Nice (France).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

8.2.1.1. Teaching Activities

Y. Lechevallier

- Master 2 Recherche *Systèmes intelligents* (resp: S. Pinson), University at Paris IX-Dauphine, France. Yves Lechevallier taught a course on "Du data mining au knowledge mining" (24h).
- ENSG: Yves Lechevallier taught a course on Clustering (12h).

8.2.2. Supervision

B. Trousse is involved in the supervision committee of two PhD in progress:

- **E. L. Moukhtar Zemmouri**, Ontology-based model for Multi-View KDD process, PhD student at ENSAM, Mathematics-Computer Science Departmenté Moulay Ismaël - Ecole Nationale Supérieure d'Arts et Métiers - Meknès (Morocco), supervision committee: H. Behja, A. Marzark, B. Trousse, B. Ouhbi and Y. Benghabrit
- **Dié Diya**, LIMOS, Université de Clermont Ferrand, supervisors Yannick Loiseau, Olivier Raynaud

8.2.3. Juries

AxIS researchers were members of the following Ph.D. committees in 2013:

Yves Lechevallier

- **Djamal Adboul Nasser Seck**, Ph.D, Arbres de décision symboliques, outils de validation et d'aide à l'interprétation, January, Dauphine University
- **Wafia Parr Bouberrima**, Ph.D, Modèles de mélange de Von Mises-Fisher, October, University Paris 5 and Sétif University

Brigitte Trousse

- **Malek Alaoui**, Ph.D., Application d'une démarche Living Lab au développement de services de TV sociale dédiée aux personnes âgées, December, Technology University of Troyes (UTT)
- **E.L. Moukhtar Zemmouri**, Ph.D., "Représentation et gestion des connaissances dans un processus d'Extraction de Connaissances à partir de Données multi-points de vue", December, Université Moulay Ismaël - Ecole Nationale Supérieure d'Arts et Métiers - Meknès (Morocco) [75] .

AYIN Team

9. Dissemination

9.1. Scientific Animation

- Ikhlef Bechar participated in “Journées Envol-Recherche EADS” in Paris on 14/02/2013.
- Aurélie Boisbunon, Seong-Gyun Jeong, and Yuliya Tarabalka attended the “Methodological Aspects of Hyperspectral Imaging” (MAHI) workshop in Nice (France) in October.
- Paula Craciun gave a seminar at ASTRIUM EADS in Toulouse, in January. She gave a seminar at the West University of Timisoara, Romania, in February. She gave a presentation at Inria in Bordeaux, in May. Also in May, she obtained a grant from the Centre for Stochastic Geometry and Advanced Bioimaging (CSGB), Denmark, to attend a summer school on “Topics on space-time modeling and inference”, in Aalborg, Denmark. She presented a paper at ICIP’13 in Melbourne, Australia, in September. Paula Craciun visited Dr. Ba-Ngu Vo at Curtin University, Perth, Australia, from 20/09/2013 to 25/09/2013. She attended meetings with ASTRIUM EADS in Paris and Toulouse in December.
- Seong-Gyun Jeong attended the workshop GeoStoch’13 in Grenoble in April. He was a reviewer for the journal JVCi (Journal of Visual Communication and Image Representation).
- Zhao Liu presented a paper at EUSIPCO’13 in Marrakech, Morocco, in September, and another paper at ACPR’13 in Okinawa, Japan, in November. She gave talks to the LIRA Consortium during the LIRA workshop in Sophia Antipolis in February, and at the workshop in Berlin in May. She presented her work to CHU Nice at the hospital l’Archet 2 in May, and to Galderma R&D in Sophia Antipolis in July.
- Claudio Price presented a paper at the LARS conference in Santiago, Chile in October.
- Yuliya Tarabalka presented a paper at the IEEE IGARSS conference in Melbourne, Australia, and a paper at the BMVC conference in Bristol, UK. She also presented a paper of A. Gamal Eldin *et al.* at the SPIE Computational Imaging Conference in Burlingame, USA. In June, she presented the Ayin team and her work to students visiting Inria from SupCom-Tunis. She presented the Ayin team at the India-France Technology Summit in New Delhi, India in October. She visited and gave a seminar at the Indian Institute of Space Science and Technology in Trivandrum, India in October. She gave a seminar at the MAP5 laboratory of the University Paris Descartes in Paris in December. Yuliya Tarabalka is a co-editor of the special issue “Analysis of Remote Sensing Image Data” for the journal Remote Sensing. She was a reviewer for the journals IEEE TIP, IEEE TGRS, IEEE GRSL, IEEE Trans. on Neural Networks and Learning Systems, Computer Vision and Image Understanding, Remote Sensing, IEEE JSTARS, Journal of Applied Remote Sensing, and for the conferences GRETSI’2013, IEEE ICIP’2013, IEEE ICASSP’2013, IEEE IGARSS’2013 and OSA Imaging Systems and Applications’2013. She was a part of the program committee for the OSA Imaging Systems and Applications conference. She chaired a session at the conference IEEE IGARSS’2013.
- Ian Jermyn was a reviewer for the conferences EMMCVPR, ICIP, IDEAL; for the Journal of Mathematical Imaging and Vision; and of proposals for the UK Engineering and Physical Sciences Research Council and the Israel Science Foundation.
- Josiane Zerubia is an IEEE Fellow. She was a reference proposal reviewer for CRC Press. She was a reviewer for SFPT (Revue Française de Photogrammétrie et de Télédétection). She was a reviewer (and also a program committee member for some of these conferences) for ICASSP’13, ISBI’13, ICIP’13, and for EMMCVPR’13, MICCAI’13, TAIMA’13, SPIE-ISPRS’13 (“Image and Signal Processing for Remote Sensing”), ICPRAM’13 and GRETSI’13. She was a member of the

Image, Video and Multidimensional Signal Processing (IVMSP) Technical Committee of the IEEE Signal Processing Society until December 2013. She was a member of the Editorial Board of IJCV until March 2013. She is an Associate Editor of the collection “Foundation and Trends in Signal Processing” [<http://www.nowpublishers.com/>]. She is a member of the Editorial Board of the “Revue Française de Photogrammétrie et de Télédétection of SFPT”. She is an Associate Editor of the electronic journal Earthzine [<http://www.earthzine.org/>].

Josiane Zerubia visited Astrium EADS Toulouse in January. She participated in the CNES Research and Technology day in Toulouse in February. In February, she also organized at Inria-SAM the LIRA skincare workshop. In April, she attended a dermoscopy workshop organized by CHU Nice (Faculty of Medicine), and presented the work of Ayin in dermato/cosmetology at the L’Oreal R&D center in Aulnay. She also attended the IGN Research Days in Marne la Vallée in April. She was a member of the CR2 selection committee at Inria-SAM in May. In May, she gave a talk at l’Archet 2 hospital, CHU Nice (Dept of Dermatology), a talk in Berlin at the Fraunhofer Institute during a LIRA skincare workshop, and a third talk at the international KAL’Haiti meeting organized by CNES at the Ministry of Foreign Affairs in Paris. Finally, in May she took part in a one-day meeting with EPI Alea and Astrium EADS at Inria Bordeaux. In June she presented Ayin’s research in dermatology at Galderma R&D and gave a talk on Ayin’s research in remote sensing at the University of Tunis El Manar. She also presented the activities of Inria-SAM and of the international Masters UBINET and BIOCAMP of UNS to Tunisian Masters students. In September, she gave an invited talk at the “Imaging in Geospatial Applications” workshop at the Institute of Mathematics and Applications (IMA) at University of Minneapolis, and presented a paper at GRETSI in Brest. In November she gave an invited talk at the Remote Sensing Days organized by the University of Bordeaux I. In December, she went to Toulouse for meetings with Astrium EADS and with CNES. In December, she also attended the annual meeting of the Astrium/Inria PhD committee organized at EADS in Suresnes.

Josiane Zerubia is a deputy of Frederic Alexandre on the Executive Committee of the LIRA Consortium (Philips, CWI, Fraunhofer, Inria). She is a member of the ORFEO group (CNES). She is a consultant for Galderma R&D in Sophia-Antipolis. She is also a member of the Program Committee of the Master 2 in Computational Biology and Biomedicine (CBB) at the University of Nice Sophia Antipolis, in charge of sponsoring.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Masters: Yuliya Tarabalka, Spaceborne sensors and their applications, 4.5h eq. TD (3h of lectures), Master PPM, École Nationale des Sciences Géographiques, France.
- Masters: Yuliya Tarabalka, Digital imaging, 15h eq. TD (2h of lectures + 12h of TD), M2 SVS ISAB, Université de Nice Sophia-Antipolis, France.
- Masters: Josiane Zerubia, Deconvolution and denoising in confocal microscopy, 18h eq. TD (12h of lectures), M2 IFI BCC, Université de Nice Sophia-Antipolis, France. Josiane Zerubia is also director of this course (total: 24h of lectures).
- Masters: Josiane Zerubia, Advanced techniques in signal and image processing, 30h eq. TD (20h of lectures), ISAE/SUPAERO, France. Josiane Zerubia is also director of this course (total: 30h of lectures and 10h of TD). This course was given to third-year students at ISAE/SUPAERO and was also validated by the Master 2 of Applied Mathematics at the University Paul Sabatier in Toulouse.
- Masters: Josiane Zerubia, Introduction to image processing, 4.5h eq. TD (3h of lectures), M2 SVS ISAB, Université de Nice Sophia-Antipolis, France. Josiane Zerubia is also director of the course “Digital imaging” at UNS, Master 2 SVS ISAB, UE3 (total: 25h of lectures and 25h of TD).

9.2.2. Supervision

PhD in progress: Paula Craciun, Automatic object tracking on a sequence of images taken from a geostationary satellite, University of Nice-Sophia Antipolis, started in December 2012, Josiane Zerubia and Pierre Del Moral.

PhD in progress: Ihsen Hedhli, Change detection methods for multisensor and multiresolution remote sensing images for applications to environmental disaster management, University of Genova and University of Nice-Sophia Antipolis, started in January 2013, Gabriele Moser and Josiane Zerubia.

PhD in progress: Seong-Gyun Jeong, New image processing methods for skin condition evaluation, University of Nice-Sophia Antipolis, started in December 2012, Josiane Zerubia and Yuliya Tarabalka.

9.2.3. Juries

- Yuliya Tarabalka was a reviewer of one PhD thesis for the AFIA prize.
- Josiane Zerubia was a member of two PhD committees in April and October 2013. She was a reviewer of one PhD thesis at the University of Tunis El Manar in Tunisia, in July 2013.

9.3. Popularization

- Paula Craciun and Josiane Zerubia have published an article in ERCIM News'95 [19]. They have also written a blog article for MPT2013 in French [<http://mpt2013.fr/les-ports-vus-du-ciel/>] and MPE2013 in English [<http://mpe2013.org/2013/10/29/boat-extraction-in-harbors-from-high-resolution-satellite-images/>].
- Yuliya Tarabalka gave an interview to the LISA journal in January 2013 [<https://lisa.sophia.inria.fr/yuliya-tarabalka-888.html>]. She participated in the conference of the Young Academy of Science in Ukraine, presenting the Ayin team and her research work to the 12-16 year-old attendees of the Academy.
- Yuliya Tarabalka and Guillaume Charpiat (STARS EPI) published an article in the Earthzine journal "Exploiting Temporal Coherence for Fire Mapping from MODIS Spaceborne Observations" in September 2013 [20].
- Josiane Zerubia took part in a debate on the topic "Les TIC, une révolution pour les femmes?" organized at the SKEMA Business School in Sophia-Antipolis by three associations (Femmes & Sciences, Femmes 3000 and Telecom Valley) on November 26, 2013 (for more detail see <http://www.femmesetsciences.fr/actualites/les-tic-une-revolution-pour-les-femmes-conference-debat-261113-sophia-antipolis/>)

BACCHUS Team

8. Dissemination

8.1. Scientific Animation

R. Abgrall is co-chief editor of the International Journal on Numerical Methods in Fluids, associate editor of the Journal of Computational Physics, mathematics of Computation, Computers and Fluids, the Journal of Scientific Computing, and Advances in Applied Mathematics and Mechanics. He is responsible of the SMAI-GAMNI group, and Treasurer of ECCOMAS. He is member of the Scientific committee of CERFACS. He is scientific advisor at ONERA and William Penny Fellow of the AWE (Atomic Weapon Agency, UK).

Cécile Dobrzynski was one of the organizers of the seminar "Modélisation et Calcul" of the Institut de Mathématiques de Bordeaux. She is member of the board of the GAMNI group of SMAI and she is secretary.

Heloise Beaugendre, Cécile Dobrzynski, and Mario Ricchiuto have participated to the organization of the second ECCOMAS Young Investigators Conference (<http://yic2013.sciencesconf.org>) in Bordeaux, counting 120 participants attending talks in the domains of modeling and simulation in Mechanics. Cécile Dobrzynski has also been conference chairwoman.

R. Abgrall, C. Dobrzynski, P. Congedo, H. Beaugendre and M Ricchiuto have organized the EUROPEAN WORKSHOP on High Order Nonlinear Numerical Methods for Evolutionary PDEs (HONOM 2013) , March 18-22, 2013, with more than 70 participants and less than a third from France. There was 8 invited speakers. A proceeding is being processed. This has been mainly funded by ADDECCO, see <http://honom2013.bordeaux.inria.fr/>.

Pietro Congedo and Remi Abgrall have organized the International Workshop on Uncertainty Quantification in fluids Simulation, December 16-18, 2013 <http://boquse2013.bordeaux.inria.fr/>. This workshop was intended to be an exchange forum for scientists working on innovative and efficient techniques for uncertainty quantification and robust design in Fluid Mechanics. There was 9 invited talks in 3 sessions and more than 70 participants. This workshop has been funded by the CPU center d'excellence de l'Université de Bordeaux, Inria and ADDECCO.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence : Cécile Dobrzynski, Langages en Fortran 90, 54h, L3, ENSEIRB-MATMÉCA, FRANCE

Licence : Cécile Dobrzynski, Analyse numérique, 24h, M1, ENSEIRB-MATMÉCA, FRANCE

Licence : Cécile Dobrzynski, Outils informatiques pour le calcul scientifique, 65h, formation Structures Composites, ENSCBP, FRANCE

Licence : Mario Ricchiuto, Fundamentals of Numerical Analysis, 24h, ENSEIRB-MATMÉCA, France.

License : Héloïse Beaugendre, Responsable des projets TER de première année, 10h, L3, ENSEIRB-MATMÉCA, FRANCE

License : Héloïse Beaugendre, Encadrement TER, 16h, L3, ENSEIRB-MATMÉCA, FRANCE

Licence : Pietro Marco Congedo, Fundamentals of Numerical Analysis II, 24h, ENSEIRB-MATMÉCA, France.

Licence : Pietro Marco Congedo, Fundamentals of Fluid Mechanics II, 20h, ENSEIRB-MATMÉCA, France.

Master : Pietro Marco Congedo, Simulation Numérique des écoulements fluides, 20h, M2, ENSEIRB-MATMÉCA, France

- Master : Cécile Dobrzynski, Projet fin d'études, 6h, M2, ENSEIRB-MATMÉCA, FRANCE
- Master : Cécile Dobrzynski, TER, 18h, M1, ENSEIRB-MATMÉCA, FRANCE
- Master : Mario Ricchiuto, Simulation Numérique des écoulements fluides, 16h, M3, ENSEIRB-MATMÉCA, France
- Master : Mario Ricchiuto, Post-graduate course on introduction to CFD, 18h, M2 IAS (Master Spécialisé Ingénierie Aéronautique et Spatiale, http://www.ensam.fr/fr/formation_initiale/masteres_specialises/ingenierie_aeronautique_et_spatiale), ENSAM, France
- Master : Héloïse Beaugendre, Approximation numérique et problèmes industriels, 52h, M1, ENSEIRB-MATMÉCA, France
- Master : Héloïse Beaugendre, Outils informatiques pour l'insertion professionnelle, 9h, M2, Université de Bordeaux, France
- Master : Héloïse Beaugendre, Calcul Parallèle (OpenMP-MPI), 40h, M1, ENSEIRB-MATMÉCA et Université de Bordeaux, France
- Master : Héloïse Beaugendre, Calcul Haute Performance (MPI), 36h, M2, ENSEIRB-MATMÉCA, France
- Master : Héloïse Beaugendre, Calcul Haute Performance et décomposition de domaine, 36h, M2, ENSEIRB-MATMÉCA et Université Bordeaux, France

8.2.2. Supervision

- HDR: Pietro Congedo, Contributions to the reliability of numerical simulations in fluid mechanics. Application to the flow simulation of thermodynamically complex gases [1], HDR Defense, December 6 2013, Université de Bordeaux I
- PhD: Dante De Santis, High order residual distribution methods for turbulent steady flows [2], PhD defense December 3 2013, Université de Bordeaux I (supervisors : Rémi Abgrall and Mario Ricchiuto)
- PhD: Gianluca Geraci, Multi-resolution inspired methods for uncertainty quantification, PhD defense December 5 2013, Université de Bordeaux I (supervisors : Rémi Abgrall and Pietro Marco Congedo)
- PhD : Sébastien Fourestier, Redistribution dynamique parallèle efficace de la charge pour les problèmes numériques de très grandes tailles [3], PhD defense June 2013, Université de Bordeaux I (supervisor : F. Pellegrini)
- PhD: Cédric Lachat, Partitionnement et adaptation parallèles de maillages pour des simulations dans les tokamaks [4], PhD defense December 2013, Université de Nice (supervisors : F. Pellegrini and C. Dobrzynski)
- PhD in progress : Damien Genêt, Design of a parallel object oriented platform for computational fluid dynamics (supervisors : F. Pellegrini and M. Ricchiuto)
- PhD in progress : Léo Nouveau, Adaptation de maillage non structurés anisotropes pour les méthodes de pénalisation en mécanique des fluides compressibles (supervisors : R. Abgrall, H. Beaugendre and C. Dobrzynski)
- PhD in progress : Quentin Viville, Etude sur les méthodes de pénalisation adaptées aux maillages non-structurés fortement anisotropiques et utilisation de l'adaptation de maillage (supervisors : R. Abgrall, H. Beaugendre and C. Dobrzynski)
- PhD in progress : Stevan Bellec, Discrete asymptotic PDEs for non-hydrostatic wave propagation (supervisors : M. Colin and M. Ricchiuto)
- PhD in progress : Andrea Filippini, Adaptive finite element discretizations of nonlinear non-hydrostatic depth averaged wave models (supervisors : M. Ricchiuto and P. Bonneton)
- PhD in progress : Gregory Perrot, Two-dimensional image-based modeling of self-healing ceramic matrix composite materials (supervisors : G. Vignoles and M. Ricchiuto)

PhD in progress : Francesca Fusi, Development of efficient numerical techniques for the optimization under uncertainty of morphing helicopter rotor blade (supervisors : A. Guardone, P.M. Congedo)

8.2.3. *Juries*

PhD : Emilie Sauvage, Patient-specific blood flow modelling, université catholique de Louvain, Belgique, Cécile Dobrzynski : jury

PhD : Mario Falese, A study of the effects of bifurcations in swirling flows using LES and mesh adaptation, Cerfacs, Cécile Dobrzynski : jury

PhD: Koen Hillewaert, DG methods for industrial CFD, Université Catholique de Louvain, Belgium, R. Abgrall: referee

PhD: H. Lundt, Relaxation models for two-phase flow with applications to CO2 transport, NTNU, Trondheim, Norway, R. Abgrall: referee

PhD: Steven Diot, High order WENO like methods for CFD, Université de Toulouse, R. Abgrall: referee.

HDR: R. Duvigneau, Optimisation methods, Université de Nice, R. Abgrall: referee

PhD: Gauthier Folzan, Modélisation multi-matériaux multi-vitesse en dynamique rapide, Ecole Polytechnique, R. Abgrall: referee.

PhD: Karim Grimish, Méthodes de résidu d'ordre élevé, ENSAM Paris, R. Abgrall: referee.

PhD: Jonathan Jung, Méthodes numériques d'écoulements multiphasiques tridimensionnels sur GPU, Université de Strasbourg, R. Abgrall: referee.

BAMBOO Project-Team

8. Dissemination

8.1. Scientific Animation

- Hubert Charles: He is director of studies of the “Bioinformatique et Modélisation (BIM)” track at the Insa-Lyon, co-director of the Biosciences Department of the Insa-Lyon, and co-director of the Doctoral School E2M2 of the Université Lyon 1.
- Marie-France Sagot: She is, since 2010, member of the Board of Directors of the ACM Special Interest Group on Bioinformatics, Computational Biology, and Biomedical Informatics (SIGBio). She is, since 2011, a member of the Scientific Advisory Board (“Conseil Scientifique (COS)”) for the Inria Grenoble Rhône-Alpes Research Center. She is, since 2012, member of the Scientific Board of the French Society of Computer Science (SIF). She is, since 2012, in the Steering Committee of the Labex Ecofect of the University of Lyon.
- Fabrice Vavre: He was elected in 2012 member of the Section 29 of the CoNRS. He is, since 2012, in the Steering Committee of the Labex Ecofect of the University of Lyon.
- Alain Viari: Since 2011, he is a member of the Scientific Advisory Board (“Conseil Scientifique (COS)”) for the Inria Grenoble Rhône-Alpes Research Center. Since 2012, he is Deputy Scientific Director at Inria responsible for the ICST for Life and Environmental Sciences. He thus represents Inria at several national instances related to Life Sciences and Health and is member of a number of scientific advisory boards (IMMI (Institut de Microbiologie et Maladies Infectieuses / Aviesan); IRT (Institut de Recherche Technologique) BioAster; Genopôle-Evry). Since 2013 he is also the French coordinator of the Bioinformatics working group in the U.S.-France Joint Commission on Science and Technology Cooperation.
- Cristina Vieira: She is director of the GDRE “Comparative genomics” since the GDRE was renewed in 2010.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

The members of BAMBOO teach both at the Department of Biology of the University of Lyon (in particular within the MIV (Mathematics and Computer Science for the Life Sciences) specialty) and at the department of Bioinformatics of the Insa (National Institute of Applied Sciences). Cristina Vieira is responsible for the Evolutionary Genetics and Genomics academic career of the Master Ecosciences-Microbiology. She was awarded an IUF (Institut Universitaire de France) distinction and teaches genetics 64 hours per year at the University and École Normale Supérieure. Hubert Charles is responsible for the Master of Modelling and Bioinformatics (BIM) at the Insa of Lyon. He teaches 192 hours per year in statistics and biology. Vincent Lacroix is responsible for several courses both at the University (L2 Bioinformatics, L3 Advanced Bioinformatics) and at the Insa (M1: Gene Expression, M2: Introduction to Bioinformatics for Biochemists). He teaches 192 hours per year, except in 2012-2013 where he taught 96 hours as he had a partial sabbatical funded by Inria (through the ERC AdG Sisyphé grant) for one semester. He teaches bioinformatics and statistics.

Two PhD students in BAMBOO were able to teach by applying to a monitorat (mentoring program – 64 hours per year). Cecilia Klein taught 64 hours in 2012-2013 at the Department of Biology (L2: Bioinformatics). Two other PhD students taught more occasionally in 2012-2013: Gustavo Sacomoto taught 12 hours of graph algorithms at the Department of Biology (M1: Bioinformatics), and Mariana Ferrarini taught 23 hours at the Department of Biology (L3: Bioinformatics). The postdocs are also involved in teaching. Blerina Sinimeri thus taught 8 hours of graph algorithms, Lilia Brinza 40 hours of bioinformatics at the Insa, and Christian Baudet taught 12 hours of bioinformatics at the University.

All members of the BAMBOO team are affiliated to the doctoral school E2M2 (Ecology-Evolution-Microbiology-Modelling). Hubert Charles is the vice-director of the school.

8.2.2. Supervision

The following is the PhD defended in BAMBOO in 2013.

PhD: Cecilia Klein, University of Lyon 1, November 12, supervisors A. T. Vasconcelos and M.-F. Sagot.

8.2.3. Juries

M.-F. Sagot: Reviewer of the HDR of Andrei Zinovyev (ENS Paris), and of the PhD of Kalle Karhu (University of Helsinki, Finland).

C. Vieira: Reviewer of the PhD of Jonathan Grandaubert (University Paris 11), member of the PhD committee of Eugenia Pessia (University of Lyon), reviewer of the HDR of Karine Alix (AgroParisTech).

BANG Project-Team

8. Dissemination

8.1. Scientific Animation

B. Perthame is editor in various journals (CALCOLO, CPDE, DCDS(B), Mathematical Medicine and Biology).

D. Drasdo is in the editorial board of TheScientificWorldJOURNAL and ISRN Biophysics. He is a member of the leadership team of the large scale grant project Virtual Liver Network (VLN) and was invited speaker to the European Association for Study in Liver Conference 2013 (Luxembourg, Feb 2013).

M. Doumic represents Inria at the expert group of the Aviesan Institute “Molecular and structural bases of the living” (ITMO Bases moléculaires et structurales du vivant, head Thierry Meinzel) and was a plenary speaker at the SMB annual conference (Texas, June 2013).

J. Clairambault represents Inria at the expert group of the Aviesan Cancer Institute (ITMO Cancer, head Fabien Calvo) and is also a member of the “Conseil des Partenaires de l’IUC” (Institut Universitaire de Cancérologie, UPMC, founded November 2012) as (nominated) representative of UPMC.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence: Jean Clairambault, 2 h “Croissance tissulaire” lecture to P2-L2 students at CHU St Antoine, January

Master: Jean Clairambault, (1) 1 h lecture Toulouse, April; (2) 9h lectures M2 mathbio, UPMC, September

Master: Marie Doumic, Méthode des Éléments Finis, M1 ENSTA, Paris: 12 h (TD, professeur en cours magistral: P. Ciarlet et S. Fliss)

Master: Dirk Drasdo, M2, Mathematical Biology, UPMC: “Towards systems biology of multicellular tissues.”: 24h

International schools: Jean Clairambault, 2 h tutorial “PK-PD models for chronotherapeutic optimisation in cancer treatments”, Systems Medicine of Multifactorial Disorders workshop and tutorial, CASyM, Ljubljana, June

8.2.2. Supervision

HDR: Marie Doumic, Etudes de modèles de croissance et fragmentation et applications en biologie, Habilitation thesis, UPMC, June [2]

PhD in progress: Aurora Armiento, Inverse Problems for aggregation models, since September 2013, supervision by M. Doumic and P. Moireau

PhD in progress: François Bertaux (since September 2011), supervision by Dirk Drasdo and Gregory Batt

PhD in progress: Noémie Boissier, “Flows in organs on histological scales” (since November 2013), supervision by Dirk Drasdo and Irene Vignon-Clémentel

PhD in progress: Youssef Bourfia, UPMC (since September 2011), supervision by Jean Clairambault, Mostafa Adimy (Dracula team, Lyon) and Hassan Hbid (UCAD, Marrakech)

PhD in progress: Thibault Bourgeron, UPMC, since September 2012, supervision by M. Doumic and B. Perthame

PhD in progress: Tanguy Cabana, started in 2013, supervision by Jonathan Touboul and Raphaël Krikorian

PhD in progress: Géraldine Cellière, UPMC (since October 2011), supervision by Dirk Drasdo, Andrei Zinovyev and Emmanuel Barillot (Institut Curie)

PhD in progress: Ján Eliaš, UPMC (since September 2012), supervision by Jean Clairambault and Benoît Perthame

PhD in progress: Casimir Emako-Cazianou, UPMC (since December 2012), supervision by Luís Almeida and Nicolas Vauchelet

PhD in progress: Sarah Eugène, Stochastic Models for Nucleated Polymerization, since September 2013, supervision by M. Doumic and P. Robert

PhD in progress: Adrian Friebel (since June 2011), supervision by Dirk Drasdo and Stefan Hoehme

PhD in progress: Luis Carlos García del Molino, “Heterogeneous networks and their dynamics”, supervision by J. Touboul and K. Pakdaman

PhD in progress: Hadjer Wafaâ Haffaf, UPMC (since September 2011), supervision by Marie Doumic

PhD in progress: Tommy Heck, on development of cell models and interaction with ECM. (since April 2013), co-supervised by Paul Van Liedekerke

PhD in progress: Johannes Neitsch, Univ. Leipzig (since June 2011), supervision by Dirk Drasdo and Stefan Hoehme

PhD in progress: Tim Odenthal (KULeuven), computational framework for individual cell-based models. Degree obtained December 2013. Co-supervision by Paul Van Liedekerke

PhD in progress: Adélaïde Olivier, Univ. Paris Dauphine, since September 2012, supervision by M. Doumic and M. Hoffmann

PhD in progress: Cristóbal Quiñinao, “McKean-Vlasov equations and neurosciences”, supervision by J. Touboul and S. Mischler

PhD in progress: Karina Vilches, (since September 2010), supervision by C. Conca and B. Perthame

8.2.3. *Juries*

Luís Almeida: Member of the Interdisciplinary Committee 51 of the Comité National de la Recherche Scientifique.

Luís Almeida: as PhD thesis jury president: Magali Tournus (UPMC).

Luís Almeida: as member of a University position application jury: Lyon 1 - 26 MCF 2626/4178, May-June

Jean Clairambault: as PhD thesis examiner: Jonathan Pascalie (Toulouse), October

Jean Clairambault: as PhD thesis reporter and examiner: (1) Marc Sturrock (Dundee), May; (2) Tommaso Lorenzi (Turin), June; (3) Anne-Cécile Lesart (Grenoble), November

Jean Clairambault: as president of a University position application jury: MC UPMC 1244/4178, April-May

Marie Doumic: selection committee member for the CR2 position at Inria Paris-Rocquencourt (2013). PhD thesis examiner: Peipei Shang (supervision by J-M. Coron), Erwan Hingant.

Dirk Drasdo: as PhD thesis reporter and examiner: Kevin Alessandri (Inst. Curie, 2.12.2013), Physics

Dirk Drasdo: as PhD thesis reporter, examiner and President of jury: Julien Delile, Univ. Paris VI, 14.2.2013, Computer Science

Dirk Drasdo: as PhD thesis reporter and examiner: Tim Odenthal, Univ. Leuven, 13.12.2013, Engineering.

Jonathan Touboul: selection committee member for the NSF-ANR call on computational neurosciences (CRCNS).

8.3. Popularization

- Jean Clairambault: (1) 1 h Forum des métiers UPMC, September; (2) 2 h Exposé “Animath” lycée St Laurent, Lagny, November
- Marie Doumic: movie on the ERC grants for "Horizon 2020", <http://www.horizon2020.gouv.fr/cid75865/video-lancement-horizon-2020-decembre-2013.html>

BEAGLE Project-Team

8. Dissemination

8.1. Scientific Animation

- Guillaume Beslon is a member of the “Comité National de la Recherche Scientifique” (CoNRS), in 6th section (Computer Science) and in the 51st section (interdisciplinary section in bioinformatics, biomathematics and biophysics).
- Guillaume Beslon is co-director of the Institut Rhône-Alpin des Systèmes Complexes (IXXI) since 2007 (the institute is directed by two persons from different disciplines – G. Beslon and P. Jensen – who exchange their roles between director and vice-director every two years. G. Beslon was vice-director for the 2011-2013 period. He was director for the previous period).
- Guillaume Beslon served as an expert for the AERES evaluation of a laboratory and a master program
- Guillaume Beslon served as an expert for the University of Windsor (Canada)
- Guillaume Beslon is a member of the Institut de Génomique Fonctionnelle de Lyon Scientific Advisory Board since 2011.
- Guillaume Beslon is member of the “Conseil de Laboratoire” of the UMR CNRS 5205 LIRIS.
- Guillaume Beslon is a member of the scientific committee of the 2014 EMBO conference “Experimental Approaches in Ecology and Evolution using Yeast and Other Species”.
- Guillaume Beslon was chairman of the 2013 edition of Evolyon.
- Carole Knibbe and Guillaume Beslon are members of the program committee of the “Alife’14” Conference.
- Hugues Berry is a member of Inria’s Evaluation Committee (CE).
- Hugues Berry was a member of hiring committees for Inria researcher positions, 2013 (Inria Centers of Lille and Sophia-Antipolis).
- Hugues Berry is a member of the steering committee of IXXI, the Rhône-Alpes Institute for Complex Systems.
- Hugues Berry co-organized, with V. Calvez, (EPI Numed) the conference “Mathematical modeling in cell biology” in Lyon, March 25-29, 2013 (<http://mathbio2013.sciencesconf.org/resource/page?id=3>), mainly funded by the “laboratoire d’excellence” MILYON (“Mathématique et Informatique Fondamentale de Lyon”).
- Hugues Berry was a member of the Evaluation committee for the INSERM call for funding on Cancer (“Plan Cancer”), subfield: Systems Biology.
- Hugues Berry was a member of the organization committee of the annual CNRS-INRA thematic school “EIEFB: Ecole interdisciplinaire d’échanges et de formation en biologie”, Berder Island (Morbihan, France), since 2008 (<http://biophysique.mnhn.fr/berder2013/>).
- Hugues Berry is editor for the "Journal of Complex Systems" (<http://www.hindawi.com/journals/jcs/>).
- Hugues Berry was reviewer for the conferences ISBI (IEEE International Symposium on Biomedical Imaging) 2014, UCNC (Unconventional Computation and Natural Computation) 2013 and HPCS (International Conference on High Performance Computing and Simulation) 2013.
- Hugues Berry was a member of the SPECIF committee, that awards each year the Gilles Kahn award, for the best French PhD in Computer Science, 2013.
- Christophe Rigotti is member of the Scientific Council (C.S.) of INSA Lyon.

- Christophe Rigotti co-chaired and co-organized the EGC satellite workshop FOSTA on spatiotemporal data mining, January 2012, Toulouse.
- Christophe Rigotti was a member of the Program Committee of the EGC satellite workshop FST/CERGEO on spatial and temporal data, January 2014, Rennes.
- Eric Tannier co-organized the international conference “RECOMB Comparative Genomics” in October 2013, in Lyon.
- Eric Tannier co-organized the international conference “Models and Algorithms for Genome Evolution” in August 2013 in Montreal, Canada and co-edited a book published in the "Computational biology" series of Springer [37].
- Eric Tannier and Guillaume Beslon are members of the committee of the Semovi Rhône-Alpes regular seminars.
- Eric Tannier was a member of the Program Committee of Recomb satellite workshop on comparative genomics, Lyon 2013.
- Eric Tannier was a member of the Program Committee of SeqBio-13, Paris 2013.
- Eric Tannier was a member of the Program Committee of WABI 2013.
- Eric Tannier was reviewer for the conferences BSB 2013, ICCT 2013 and LATIN 2014.
- In 2013, the members of the team were reviewers for several journals including *Theoretical Computer Science*, *SIAM Journal on Discrete Mathematics*, *Bull Math Biol*, *J Theor Biol*, *Mol Syst Biol*, *BMC Syst Biol*, *Communications in Nonlinear Science and Numerical Simulation*, *ISRN Computational Biology*, *Journal of Bioinformatics and Computational Biology*, *BioSystems*, *Journal of Biodiversity and Conservation*, *Frontiers in Synaptic Neuroscience*, *Data Mining and Knowledge Discovery*, *Knowledge and Information Systems*, *Data and Knowledge Engineering*.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Note that due to his sabbatical stay in Berkeley, Hédi Soula had no teaching assignment in 2012-2013.

Licence: Guillaume Beslon, Computer Architecture, 100h, L3, Computer Science Department of INSA-Lyon.

Licence: Guillaume Beslon, Project Management, 20h, L3 and M1, Computer Science Department of INSA-Lyon.

Licence: Guillaume Beslon, Backstage management and organization, 20h, L3, Humanities Department of INSA-Lyon.

Licence: Carole Knibbe ⁵, Procedural Programming, 133h, L2

Licence: Christophe Rigotti, Imperative Programming, 39h L1 and 47h L2, Département 1er cycle of INSA-Lyon.

Licence: Christophe Rigotti, Object-Oriented Programming, 47h, L2, Département 1er cycle of INSA-Lyon.

Licence: Christophe Rigotti, Computer Simulation, 24h, L2, Département 1er cycle of INSA-Lyon.

Master: Guillaume Beslon, Bio-inspired computing, 30h, M2, Computer Science Department of INSA-Lyon and Artificial Intelligence master program of Université Lyon 1.

Master: Guillaume Beslon, Computational Biology, 10h, M2, Bioinformatics and Modeling Department of INSA-Lyon.

Master: Guillaume Beslon, Digital genetics, 2h, M2, Interface Physics-Biology master program at Ecole Normale Supérieure de Lyon (ENS-Lyon).

⁵Carole Knibbe has a “délégation Inria” for the 2013-2014 period. The teaching indicated here is for the 2012-2013 period.

Master: Guillaume Beslon, Introduction to Modeling, 20h, M2, Master of Complex Systems at Ecole Normale Supérieure de Lyon (ENS-Lyon).

Master: Carole Knibbe, Scientific methodology, 24h, M2, Artificial Intelligence master program of Université Lyon 1.

Master: Carole Knibbe, Bio-inspired computing, 14h, M2, Artificial Intelligence master program of Université Lyon 1.

Master: Carole Knibbe, Modeling and simulation in Biology and Medicine, 12h, M2, Complex Systems master program of Ecole Normale Supérieure de Lyon.

Master: Eric Tannier, Computational Biology, 24h, M2, Ecole Normale Supérieure de Lyon.

Master: Eric Tannier, Discrete Mathematics, 8h, M1, Bioinformatics and Modeling Department of INSA-Lyon.

Master: Eric Tannier, Mathématiques et Informatique pour le génome, 26h, M1, Bioinformatics and Modeling Department of INSA-Lyon.

Master: Eric Tannier, Bioinformatique, 24h, M1, ISBM Monastir, Tunisie.

Master: Christophe Rigotti, Data Mining, 25h, M1, Bioinformatics and Modeling Department of INSA-Lyon.

8.2.2. Supervision

PhD: Gaël Kaneko, Analyse et modélisation de la stochasticité de l'expression génique dans des cellules eucaryotes, INSA de Lyon, defended on September 26th, 2013, co-supervised by G. Beslon and O. Gandrillon (CGPhiMC, UMR CNRS 5534, Lyon).

PhD: Stephan Fischer, Modélisation de l'évolution de la taille des génomes et de leur densité en gènes par mutations locales et grands réarrangements chromosomiques, INSA de Lyon, defended on December 2nd, 2013, co-supervised by C. Knibbe, G. Beslon and S. Bernard (Inria Dracula team and Institut Camille Jordan, UMR CNRS 5208, Lyon).

PhD in progress: Bérénice Batut, Study of reductive evolution of bacterial genomes using bioinformatic analyses and in silico evolutionary experiments, INSA de Lyon, started in October 2011, co-supervised by C. Knibbe, G. Beslon and G. Marais (LBBE, UMR CNRS 5558, Lyon).

PhD in progress: Charles Rocabert, Modélisation de l'évolution des microorganismes bactériens par des approches de simulation informatique, INSA de Lyon, started in Novembre 2013, co-supervised by G. Beslon and C. Knibbe.

PhD in progress: Yoram Vadee Le Brun, Evolution expérimentale in silico de réseaux de régulation génétique, INSA de Lyon, started in September 2013, supervisor by G. Beslon.

PhD in progress: Magali Semeria, Biologie évolutive des systèmes, Université Lyon 1, started in September 2012, co-supervised by E. Tannier and L. Gueguen (LBBE, UMR CNRS 5558)

PhD in progress: Jules Lallouette, Transport dans les réseaux complexes : le cas des réseaux mixtes neurones-cellules gliales, INSA de Lyon, started in October 2011, supervised by H. Berry.

PhD in progress: Ilia Prokin, Computational Systems Biology of Signal Transduction in Living Cells: Synaptic Plasticity of Basal Ganglia Neurons, INSA de Lyon, started in October 2013, supervised by H. Berry.

Master internship: Ewy Yang, Détection phylogénétique de co-évolution de gènes, March-August 2013, supervised by E. Tannier

Master internship: Charles Rocabert, Evolution de la stochasticité de l'expression génique, from February 2013 to June 2013, supervised by G. Beslon

Master internship: Sylvain Devaux, Development of a computer game to teach evolution of antibiotic resistance, from October 2013 to February 2014, supervised by G. Beslon

Master internship: Maxence Dolle, Simulation of biochemical reactions in non-homogeneous media, from May 2013 until Aug 2013, co-supervised by G. Beslon and H. Berry

Master internship: Osama Khalil, Computational systems biology of signal transduction in living cells, from Feb 2013 until May 2013, supervised by H. Berry

Master internship: Amanda Lo Van, Modélisation basée sur l'individu de circuits génétiques simples, from Feb 2013 until Jun 2013, supervised by H. Berry

Master internship: Alvaro Mateos Gonzalez, Analysis of a Jump-Renewal Equation for Intracellular Subdiffusion, from Apr 2013 until Aug 2013, supervised by V. Calvez (Inria Numed) 66% and H. Berry 33%

Master internship: Duc Thanh Phan, Clustering of DNA intervals based on descriptors computed from epigenetic profiles, from Feb 2013 until Jul 2013, co-supervised by C. Rigotti and Marion Leleu (Ecole Polytechnique Fédérale de Lausanne).

8.2.3. *Juries*

- Guillaume Beslon reviewed the HDR manuscript and participated to the HDR defense committee of Philippe Lopez, Univ. Paris 6 Pierre et Marie Curie, December 2013.
- Guillaume Beslon participated to the PhD defense committee of Guenola Drillon, Univ. Paris 6 Pierre et Marie Curie, March 2013.
- Guillaume Beslon reviewed the PhD manuscript and participated to the PhD defense committee of Guillaume Chérel, Univ. Paris 6 Pierre et Marie Curie, 2013.
- Guillaume Beslon reviewed the PhD manuscript and participated to the PhD defense committee of Thomas Garcia, Ecole Normale Supérieure de la rue d'Ulm, Paris, December 2013.
- Guillaume Beslon reviewed the PhD manuscript and participated to the PhD defense committee of Jean-Marc Montanier, Univ. Paris Sud, 2013.
- Hugues Berry reviewed the PhD manuscript and participated to the PhD defense committee of G. Detorakis, "Cortical Plasticity, Dynamic neural fields and self-organisation", Nancy, October 2013.
- Hugues Berry reviewed the PhD manuscript and participated to the PhD defense committee of Visou ADY, "Développement et plasticité des connexions des cellules de Purkinje", Paris Descartes University, November 2013.
- Eric Tannier reviewed the PhD manuscript and participated to the PhD defense committee of Thi Hau NGuyen from the University of Montpellier 2, on October 3, 2013.
- Eric Tannier reviewed the PhD manuscript and participated to the PhD defense committee of Guenola Drillon from the University of Paris 6, on March 25, 2013.
- Eric Tannier participated to the HDR defense committee of Nicolas Thierry-Mieg, from University of Grenoble 1, January 25, 2013.
- Christophe Rigotti reviewed the PhD manuscript and participated to the defense committee of Winn Voravuthikunchai, PhD, Univ. Caen Basse Normandie, 2013.
- Christophe Rigotti participated to the HDR defense committee of Nicolas Méger, HDR, Univ. de Savoie, Annecy, 2013.

8.2.4. *Invited talks*

- Guillaume Beslon was an invited speaker at the workshop "Games in evolution", Ecole Normale de la rue d'Ulm, Paris, December 2013.
- Guillaume Beslon was an invited speaker of the Dyliss/Genscales groups, May 2013, Rennes, France.
- Hugues Berry was an invited speaker at the workshop "Complex Network Dynamics", March 25-26, 2013, Montpellier, France.

- Hugues Berry was an invited speaker at the workshop "Control of Self-Organizing Nonlinear Systems", August 28-30, Wittenberg (Berlin), Germany.
- Hugues Berry was an invited speaker at the workshop "BioImage Informatics", 8-9 July 2013, Curie Institute, Paris, France.
- Carole Knibbe was an invited speaker at the Evolyon workshop, November 21st 2013, Lyon.
- Carole Knibbe was an invited speaker at a FINOVI mini-symposium, June 20th 2013, Lyon.
- Christophe Rigotti gave an invited talk on "Spatiotemporal data mining" during "The Meetings of Digital Technologies" organized by ANR at the Cité des Sciences et de l'Industrie, April 2013, Paris. Work in collaboration with N. Meger, C. Pothier, R. Andreoli, F. Lodge, M.-P. Doin, C. Lasserre and R. Jolivet.
- Christophe Rigotti gave an invited talk on "GFS-pattern extraction in satellite image time series: application to the monitoring of Mount Etna", Atelier Mesure de Déformations par Imagerie Spatiale, October 2013, Autrans. Work in collaboration with F. Lodge, N. Meger, L. Gueguen, C. Pothier, R. Andreoli, M.-P. Doin and M. Datcu.
- Hédi Soula was invited an invited speaker in the Seminar Sessions of ETHOS Rennes in December 2013.
- Eric Tannier was a keynote speaker at the IBC (Computational Biology Institute) in Montpellier in 2013.
- Eric Tannier was invited by the "Laboratoire d'Informatique Fondamentale" in Marseille for a talk in March 2013.

8.3. Popularization

- E. Tannier participated to large audience conferences at the Université Populaire de Lyon in February 2013, giving three lectures on scientific revolutions.
- E. Tannier is a co-author of an article to the large audience journal "Pour la science" [32].

BIGS Project-Team

9. Dissemination

9.1. Scientific Animation

- Journée Identification de systèmes biologiques, 11 April 2013, within the framework of the MACS network. Organizer: Thierry Bastogne.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

BIGS is a team whose composition includes University staff only. All members teach numerous courses, ranging from L1 to M2 levels.

- Samy Tindel (192h, University)
- Thierry Bastogne (192h, University).
- Sandie Ferrigno (192h, Engineering schools)
- Céline Lacaux (192h, Engineering schools)
- Jean-Marie Monnez (192h, IUT and University)
- Aurélie Muller-Gueudin (192h, Engineering schools)
- Pierre Vallois (192h, University)
- Sophie Wantz-Mézières (192h, IUT)

Note: An innovative teaching program specialized in Biocybernetics (L3,M1,M2) has been proposed by Thierry Bastogne and started in Sep. 2013 at the Faculté des Sciences et Technologies.

9.2.2. Supervision

PhD: Jean Baptiste Tylcz, Identification et contrôle de systèmes biologiques. Application à la thérapie photodynamique, Université de Lorraine, 4 décembre 2013. Advisors: T. Bastogne and E. Bullinger (U. de Liège).

PhD : Romain Bar, Développement de méthodes d'analyse de données en ligne, Université de Lorraine, 29 novembre 2013. Advisor : J-M. Monnez.

PhD : Benoît Lalloué, Méthodes d'analyse de données et modèles bayesiens appliqués au contexte des inégalités socio-territoriales de santé et des expositions environnementales, Université de Lorraine, 6 décembre 2013. Advisors : J-M. Monnez and S. Deguen.

PhD: Rémi Bonidal, Sélection de modèle par chemin de régularisation pour les machines à vecteurs support à coût quadratique, Université de Lorraine, 19 juin 2013. Advisors: Y. Guermeur and S. Tindel.

9.2.3. Juries

- PhD : Ilham Ben Abbes, Développement d'un nouveau modèle dédié à la commande du métabolisme glucidique appliqué aux patients diabétiques de type 1, Supélec Rennes, 28 juin 2013. Referee: T. Bastogne.
- HDR: Landy Rabehasaina, Contribution à quelques problèmes de premier passage et de ruine multidimensionnels; Lien avec les réseaux de files fluides, Université de Franche Comté, 3 décembre 2013. Referee: P. Vallois.

BIOCORE Project-Team

9. Dissemination

9.1. Scientific Animation

J.-L. Gouzé is a member of the scientific committee for the conference BIOMATH ; also for the conference for E. Benoit (La Rochelle 2013). He is in the Inria committee supervising the doctoral theses, and a member of the scientific committee of Labex SIGNALIFE of the University of Nice-Sophia-Antipolis, and of COREBIO PACA. He is a member of the board of the SFBT (French Speaking Society for Theoretical Biology).

M. Chaves is the coordinator of ANR project GEMCO. Since September 2011, she is a member of the COST-GTRI (the Working Group on International Relations in Inria's Council for Scientific and Technological Orientation). The Group is charged with evaluating Inria's Associated Teams as well as some project proposals (EuroMed 3+3), and ERCIM post-docs.

O. Bernard is in the technical committee of the Computer Applied to Biotechnology (CAB) conferences. He is in the scientific committee of the French conference "Stic et Environnement". He is a member of the scientific comity of the competitiveness pole "Trimatec". O. Bernard represents Inria at the ANCRE (Alliance Nationale de Coordination de la Recherche pour l'Energie), in the biomass committee. He is member of the ADT (Technological Development Actions) at Inria.

F. Grogard is a member of the NICE committee, which allocates post-doctoral grants and fundings for visiting scientists at Inria Sophia Antipolis. He is a member of the scientific committees of the doctoral school "Sciences de la Vie" at the University of Nice-Sophia Antipolis.

P. Bernhard is a member of the scientific committees of the doctoral school "Sciences fondamentales et appliquées" at the University of Nice-Sophia Antipolis.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

O. Bernard (9h ETD), "Mathematical models in Biology". Master on biological oceanography in Villefranche-sur-Mer (M2), Universit Pierre et Marie Curie, France.

O. Bernard (4.5 ETD), "Bioenergy from microalgae", Master International Energy Management : alternatives pour l'énergie du futur, Ecole Nationale Supérieure des Mines de Paris, France.

O. Bernard (18h ETD), "Modelling biotechnological processes", Ecole Centrale de Paris, France.

F. Grogard (45.5h ETD) and L. Mailleret (26h ETD), "Equations différentielles ordinaires et systèmes dynamiques", 1st year Engineering in Modeling and Applied Mathematics (eq. L3), Polytech'Nice, Université of Nice Sophia Antipolis, France.

F. Grogard (21h ETD) and L. Mailleret (21h ETD), "Bio-Mathématiques", 2nd year Engineering in Modeling and Applied Mathematics (eq. M1), Polytech'Nice, Université of Nice Sophia Antipolis, France.

J.-L. Gouzé (9h ETD), M. Chaves (4.5h ETD), "Discrete and continuous approaches to model gene regulatory networks", Master of Science in Computational Biology (M2), University of Nice - Sophia Antipolis. M. Chaves and J.-L. Gouzé have participated in a book chapter entitled "Modeling and analysis of gene regulatory networks" on the topics taught in this course [62].

J.-L. Gouzé (18h ETD), M. Chaves (9h ETD), A. Carta (6h ETD), "Modelling biological networks by ordinary differential equations", 4th year students, Génie Biologie, Ecole Polytechnique University of Nice - Sophia Antipolis

O. Bernard supervised two projects for engineer school students. The first project involved 6 students of Ecole Nationale Supérieure des Mines de Paris (last year of engineering school, 1 week ("Using thermal flux to agitate microalgae cultures") and the second project involved 4 students from the Ecole Centrale de Paris (first year of engineering school), 4 months, to design biofilm for microalgae.

9.2.2. Supervision

PhD : M. Teixeira-Alves, “Modélisation de réseaux écologiques dans un cadre de protection des cultures: applications à la lutte biologique”, UNS, defended January 25, 2013. Supervisors: F. Grognard and L. Mailleret.

PhD : M. Castel “Modélisation des trajectoires évolutives des pathogènes de plantes dans les écosystèmes agricoles”, University of Rennes, defended November 12, 2013. Supervisors : F. Hamelin and D. Andrivon (Agrocampus Ouest) and L. Mailleret.

PhD in progress : P. Hartmann, "Development of a model for microalgal photoadaptation", since september 2010, UNS. Supervisor: O. Bernard.

PhD in progress : A. Carta, “Analysis and Control of models of biological regulatory systems. Application to growth control in *E. coli*”, since december 2010, UNS. Supervisors: J.-L. Gouzé and M. Chaves.

PhD in progress : C. Baroukh, “Modeling the coupling of microalgae with anaerobic digestion”, since September 2011, University of Montpellier 2. Supervisors: J.-P. Steyer and O. Bernard.

PhD in progress : A. Lebon, “Modélisation couplée plantes-ravageurs-ennemis naturels dans un contexte de lutte biologique”, since October 2011, University of Montpellier 2. Supervisors : Y. Dumont (CIRAD), F. Grognard and L. Mailleret.

PhD in progress : I. Belgacem “Control de systèmes de régulation génétique”, since November 2011, UNS. Supervisor: J.-L. Gouzé.

PhD in progress : H. Bonnefond, "Experimental development of selection oriented photobioreactors", since september 2012, UPMC. Supervisors: A. Sciandra and O. Bernard

PhD in progress : C. Combe, "Response of microalgae to fluctuating light", since september 2012, UPMC. Supervisors: A. Sciandra and S. Rabouille.

PhD in progress : G. Grimaud, "Controlled competition for the selection of microalgal species of interest", since September 2012, UNS. Supervisors: O. Bernard and S. Rabouille.

PhD in progress : T. Morel Journel, “Où, quand, combien? Stratégies d’introduction d’organismes dans un environnement spatialement structuré”, since October 2012, UNS. Supervisors: T. Guillemaud, E. Vercken and L. Mailleret.

PhD in progress : E. Rousseau, “Plant viruses adaptation to quantitative resistance: from the study of their impact on within-host viral evolutionary dynamics to their durable management in agroecosystems”, since November 2012, UNS. Supervisors: F. Grognard, L. Mailleret, B. Moury, and F. Fabre (INRA Avignon).

PhD in progress : D. Demory, "Impact of virus dynamics on microalgae mortality ", since September 2013, UPMC. Supervisor: A. Sciandra and O. Bernard

PhD in progress : N. Bajoux, "Influence d’une densité dépendance dans les modèles impulsifs de dynamiques des populations", since October 2013, UNS. Supervisor: O. Bernard.

PhD in progress : S. Casagrande. “Analysis and control of cell growth models”, since November 2013, UNS. Supervisor: J.-L. Gouzé.

9.2.3. Juries

O. Bernard was referee for the HDR of J. Morchain, Nov. 19, Title: "Bioreactor modelling by coupling fluid mechanics and population balance" Toulouse University

O. Bernard was in the PhD jury of A. Besson, Dec. 9. Title: "Multi scale study of the harvesting of *Dunaliella salina*"

O. Bernard was in the PhD jury of B. Sialve, Jul 15. Title: “Coupling microalgal cultivation with anaerobic digestion”, INSA Lyon

O. Bernard was in the PhD jury of A.-C. Boulanger, Sep.13. Title: "Modelling, simulation and data assimilation for a hydrodynamics-biology coupling problem", University Pierre et Marie Curie.

M. Chaves was in the PhD thesis jury of Luca Grieco, May 3. Title: "Integrative modelling and analysis of MAPK network deregulations in human cancers," University of Marseille and TAGC (INSERM U928).

J.L. Gouzé was referee for the PhD thesis of Radhouane Fekih-Salem, Sept. 30. Title: "Modèles Mathématiques pour la Compétition et la Coexistence des Espèces Microbiennes dans un Chemo-stat", UM2 Montpellier

J.L. Gouzé was in the PhD thesis jury of Olivier Borkowski, Feb. 19. Title: "Growth-rate-dependent protein production in bacteria". Univ. Paris Descartes.

J.L. Gouzé was referee for the PhD thesis of Mohamed Amin Ben Sassi, Apr. 15. Title: "Analyse et contrôle des systèmes dynamiques polynomiaux". UJF Grenoble.

J.L. Gouzé, F. Grognard and L. Mailleret were in the PhD thesis jury of Mickael Teixeira Alves, Jan. 25. Title: "Des interactions indirectes entre les proies : modélisation et influence du comportement du prédateur commun". UNS.

J.L. Gouzé was in the HDR jury of Madalena Chaves, Oct. 24. Title: "Predictive analysis of dynamical systems: combining discrete and continuous formalisms", UNS.

L. Mailleret was in the PhD thesis jury of Magda Castel, Nov. 12. Title: "Écologie et évolution théoriques des parasites de plantes annuelles", Université de Rennes.

J.-L. Gouzé is in the thesis committee of C. Baroukh (University of Montpellier).

M. Chaves is in the thesis committee of F. Fourré (University of Luxembourg).

O. Bernard is in the thesis committee of S. Bellini (University of Montpellier), G. Bougaran (University of Nantes), Valeria Villanova (University of Grenoble) and Sofiane Mazeghrane (University of Montpellier).

9.3. Popularization and media

The activities related to microalgae have generated many articles in national newspapers (Le Monde.fr, Libération, Le Point.fr, ...), and broadcasts on national TV. Several articles were written by the team members to explain the hurdles and potential of microalgae [36], [70]. A book [65] was also written with C. Gudin (formerly at CEA Cadarache) on the potential of microalgae. We also developed a Java applet for the simulation of microalgae growth and biological pest control. The aim of the applet is for the general public to understand the goals and difficulties of controlling such systems.

We have also made a short movie to explain the advantages of our supervision software ODIN.

P. Bernhard has given conferences in high schools in the framework of the program "Sciences et culture au lycée".

9.4. Conferences, invited conferences

Conferences cited in the bibliography are not repeated here.

O. Bernard was invited to give a conference on microalgae at Ecole Centrale de Paris ("Défi biotechnologie") "Use of microorganisms for biofuel production" (November 8, 2013).

O. Bernard and J.-L. Gouzé gave two keynote lectures at the CAB2013 conference, Mumbai, India.

F. Grognard was invited to give a talk entitled "Commande des systèmes proies-prédateurs: rétroactions et impulsions" at the workshop "Des dynamiques singulièrement perturbées aux dynamiques de populations" in honour of Eric Benoît (La Rochelle, December 16-18, 2013)

P. Bernhard gave a talk on the handicap paradox at the International Workshop on Biodiversity and Environment at the Mathematical Research Center of Montreal.

E. Rousseau gave a talk on " Sustainable plant resistance management in agricultural landscapes" at the Réunions de Virologie Vegetale (RVV) at Aussois, France (January 13-17, 2013). She presented a poster on the "Impact of quantitative plant resistance on within-host viral demo-genetic dynamics" at the "Workshop Bridging theoretical and experimental evolution" in La Fouly, Switzerland (June 12-15, 2013) and at the "5èmes Journées de Rencontre des Doctorants du Département SPE" in Montpellier, France (June 26-28, 2013).

BIPOP Project-Team

9. Dissemination

9.1. Scientific Animation

- B. Brogliato member of IPC of the IFAC Nonlinear Systems Conference NOLCOS 2013, Toulouse, September 2013. Reviewer for IEEE Trans. Automatic Control, SIAM J. Control Optimization, Multibody System Dynamics, European J. of Mechanics A/Solids, Automatica, IMA J. Applied Mathematics, etc.
- F. Bertails-Descoubes was a member of the international technical Program Committee of ACM SIGGRAPH 2013, and a member of the international technical Program Committee of Eurographics 2014. She has been a reviewer in 2013 for ACM Transactions on Graphics and Computer Aided Geometric Design.
- V. Acary is co-animator (with R. Leine ETH Zurich) of the European network for nonsmooth dynamics. Member of the ENOC (EUROMECH Nonlinear Oscillations Conference) committee. Reviewer in 2013 for Math reviews, Computer Methods in Applied Mechanics and Engineering, International Journal for Numerical Methods in Engineering, ASME Journal of Computational and Nonlinear Dynamics, Applied numerical Mathematics, American Control Conference, 52st IEEE Conference on Decision and Control (CDC 2013)

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: Bernard Brogliato, Nonsmooth Dynamical Systems, 15 h. TD, M2, universit  de Limoges, France

Master: F. Bertails-Descoubes, Optimisation num rique, 30h equiv. TD, niveau M1, ENSIMAG, Grenoble INP

Master: J. Malick, Optimisation num rique, 60h equiv. TD, niveau M1, ENSIMAG, Grenoble INP

Master: Vincent Acary, Simulation of Nonsmooth Dynamical Systems, 9 h. TD, M2, universit  de Limoges, France

9.2.2. Supervision

PhD : Alexandre Derouet-Jourdan, *Inversion statique de fibres : de la g om trie de courbes 3d   l' quilibre d'une assembl e de tiges m caniques en contact frottant*, Grenoble University, 7 novembre 2013, Florence Bertails-Descoubes et Jo lle Thollot

PhD in progress : Mounia Haddouni, 01 mai 2012, Vincent Acary et Bernard Brogliato

PhD in progress : Olivier Huber, 01 octobre 2011, Vincent Acary et Bernard Brogliato

PhD in progress : Narendra Akahdkar, 01 d cembre 2012, Vincent Acary et Bernard Brogliato

PhD in progress : Sofia Zaourar, 01 octobre 2011, J r me Malick et Bernard Brogliato

PhD in progress : Romain Casati, 01 octobre 2011, Florence Bertails-Descoubes et Bernard Brogliato

PhD in progress : Alejandro Blumentals, 01 octobre 2013, Florence Bertails-Descoubes et Bernard Brogliato

PhD in progress : Gilles Daviet, 01 octobre 2013, Florence Bertails-Descoubes, Bruno Raffin (LIG) et Pierre Saramito (LJK)

PhD in progress : Federico Pierucci, 01 octobre 2012, Jérôme Malick et Zaid Harchaoui et Anatoli Ioudilski

PhD in progress : Saed al Homsy, 01 octobre 2012, Pierre-Brice Wieber et Bernard Brogliato

PhD in progress : Jory Lafaye, 01 octobre 2012, Pierre-Brice Wieber et Bernard Brogliato

PhD in progress : Jose Eduardo Morales Morales, *Travelling pulses in spatially discrete excitable media*, 15 november, 2013, Arnaud Tonnelier and Guillaume James

9.2.3. Juries

- B. Brogliato, jury HdR de J. Bastien, Université Lyon 1, rapporteur
- B. Brogliato, jury de thèse de A. Thorin, LMSX, rapporteur
- B. Brogliato, jury HdR de A. Girard, Grenoble Université, président
- V. Acary, jury de thèse de H. Rammal, Université de Limoges, examinateur

BONSAI Project-Team

8. Dissemination

8.1. Scientific Animation

- The team actively participates in the national GDR *Bioinformatique moléculaire*. H. Touzet has been a member of the executive committee since 2007. In this context, she coorganized a two-day workshop, called Seqbio, in Montpellier in November 2013
- We organize a regular pluridisciplinary seminar on bioinformatics, whose audience is composed of researchers in biology and bioinformatics. In the last twelve months, we proposed three events: *Metagenomics* (110 participants), *Phylogenomics* (52 participants) and *Structural bioinformatics* (30 participants)
- We organized in Lille, with our collaborator Tilmann Weber from Universität Tübingen, an international workshop on "Bioinformatics tools for NRPS discovery" in July. The schedule included introducing lectures by invited speakers which are key scientists in the field and practical sessions. It gathered 30 scientists from all the continents.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Our research work finds also its expression in a strong commitment in pedagogical activities at the University Lille 1. For several years, members of the project have been playing a leading role in the development and the promotion of bioinformatics (more than 400 teaching hours per year). We are involved in several graduate diplomas (research master degree) in computer science and biology (*master biologie-santé*, *master génomique et protéomique*, *master biologie-biotechnologie*) in an Engineering School (Polytech'Lille), as well as in permanent education (for researchers, engineers and technicians).

- M. Pupin, M. Salson, *Introduction to programming (OCaml)*, 96h, L1 (licence "Computer science", univ. Lille 1)
- M. Salson, *Coding and information theory*, 36h, L2 (licence "Computer science", univ. Lille 1)
- J.-S. Varré *Programming with Caml*, 55h, L2 (licence "Sciences for Engineers", univ. Lille 1)
- J.-S. Varré *Algorithms and Data structures*, 50h, L2 (licence "Computer science", univ. Lille 1)
- L. Noé, *Networks*, 36h, L3 (licence "Computer science", univ. Lille 1)
- L. Noé, *System*, 36h, L3 (licence "Computer science", univ. Lille 1)
- M. Pupin, *Databases*, 36h, L3 (licence "Computer science", univ. Lille 1)
- M. Pupin, *Professional project*, 18h, L3 (licence "Computer science", univ. Lille 1)
- M. Salson, *C programming*, 42h, L3 (licence "Computer science", univ. Lille 1)
- S. Janot, *Introduction to programming*, 50h, first year of engineering school (L3) (Polytech'Lille, univ. Lille1)
- S. Janot, *Introduction to databases*, 30h, first year of engineering school (L3) (Polytech'Lille, univ. Lille1)
- L. Noé, *Bioinformatics*, 54h, M1 (master "Génomique Protéomique", univ. Lille 1)
- L. Noé, *Individual project*, organiser, M1 (master "Computer science", univ. Lille 1)
- M. Pupin, *Introduction to programming (JAVA)*, 30h, M1 (master "Mathématiques et finance", univ. Lille 1)

- M. Salson, J.-S. Varré, *Bioinformatics*, 100h, M1 (master “Biology and Biotechnologies”, univ. Lille 1)
- S. Blanquart, *Algorithms and applications in bioinformatics*, 24h, M1 (master “Computer Science”, univ. Lille 1)
- S. Janot, *Databases*, 12h, second year of engineering school (M1) (Polytech’Lille, univ. Lille1)
- S. Janot, *Introduction to artificial intelligence*, 25h, second year of engineering school (M1) (Polytech’Lille, univ. Lille1)
- M. Pupin, J.-S. Varré *Computational biology*, 30h, M2 (master “Modèles complexes, algorithmes et données”, univ. Lille 1)
- M. Pupin, *Practical bioinformatics*, 35h, M2 (master “Génomique Protéomique”, univ. Lille 1)
- S. Blanquart, *Methods in phylogenetics*, 4h, M2 (master “Ecology Environment”, univ. Lille 1)
- J.-S. Varré, *ISN - Computer science for secondary school*, 30h, second-level teachers.

8.2.2. Supervision

- HDR: *Maude Pupin*, Modèles bio-informatiques pour les peptides non-ribosomiques et leurs synthèses. Defense in December 2013 [2].
- PhD : *Evguenia Kopylova*, New algorithmic and bioinformatic approaches for the analysis of data from next-generation sequencing, Université Lille 1, co-directed by H. Touzet and L. Noé. Thesis defended in December 2013 [1].
- PhD in progress : *Christophe Vroland*, microRNA repertoire and target evolution: developing efficient indexing techniques and comparison between close plant species, Université Lille 1, co-directed by H. Touzet, M. Salson from BONSAI and V. Castric (“Genetics and evolution in plants” laboratory).
- PhD in progress : *Pierre Péricard*, high-throughput sequencing : taxonomic assignation of meta-omic sample reads, Université Lille 1, co-directed by H. Touzet and S. Blanquart.
- PhD in progress : *Yoann Dufresne*, Models and algorithms to analyse and predict non-ribosomal peptides, Université Lille 1, co-directed by M. Pupin and L. Noé.

8.2.3. Juries

- Member of the thesis committee of Natalia Golenetskaya (Université Bordeaux 1, J.-S. Varré)
- Member of the habilitation committee of F. Jossinet (Université de Strasbourg, H. Touzet) and C. Lhoussaine (Université Lille 1, H. Touzet)

8.2.4. Administrative activities

- National representative (*chargée de mission*) for the Institute for Computer Sciences (INS2I) in CNRS⁹. She is more specifically in charge of relationships between the Institute and life sciences (H. Touzet)
- Member of the Inria evaluation committee (M. Giraud)
- Member of the Inria local committee for scientific grants (H. Touzet)
- Member of the Gilles Kahn PhD award committee (H. Touzet)
- Member of ITMO Genetics, Genomics and Bioinformatics of AVIESAN (H. Touzet)
- Member of CSS MBIA (mathematics, bioinformatics and artificial intelligence) at INRA (H. Touzet)
- Member of the executive council of the IFB (Institut Français de Bioinformatique)
- Head of PPF bioinformatics – University Lille 1 (H. Touzet)
- Head of Bilille, Lille bioinformatics platform (M. Pupin)

⁹CNRS: National Center for Scientific Research

- Head of IFB-NE (pôle Nord-Est de l'Institut Français de Bioinformatique), a cluster of 4 bioinformatics platforms (M. Pupin)
- Member of UFR IEEA council (M. Pupin)
- Head of the GIS department (Statistics and Computer Sciences) of Polytech'Lille (S. Janot)
- Member of the LIFL Laboratory council (L. Noé, H. Touzet)
- We made two public science presentations (leukemia and high-throughput sequencing, M. Duez, M. Giraud, M. Salson, and transcript comparisons, A. Ouangraoua)
- This year, we did not have a significant activity in high schools due to schedule constraints during the "week of science". We plan to relaunch this activity in 2014.

CAD Team

8. Dissemination

8.1. Teaching - Supervision - Juries

The permanent members teach in the computer Graphics and in the Mathematics Department. Pr. Jean-Claude Paul and Pr. Jun-Hai Young give several lectures around the world every year.

CAGIRE Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Review activity

The team members have been invited to review for the following journals:

- Advances in Mechanical Engineering (RM)
- Combustion and Flame [PB]
- Computational Thermal Science [PB]
- Computer and Fluids [RM][VP]
- Experiments in Fluids [RM]
- Fluid Dynamics Research [RM]
- Flow, Turbulence and Combustion [RM]
- Int J Heat and Fluid Flow [RM]
- International Journal of Computational Methods [YM]
- Journal of Computational and Applied Mathematics [YM]
- Journal of Computational Physics [VP]
- Mathematical Modelling and Numerical Analysis (M2AN) [VP]
- Physics of Fluids [RM]

8.1.2. Participation in Congress organising committees

- Turbulent shear flow phenomena (TSFP-8) held in Poitiers (France) [RM].
- European Workshop on High Order Nonlinear Numerical -Methods for Evolutionary PDE: Theory and Applications (HONOM 2013) held in Bordeaux (France) [VP]
- European Community on Computational Methods in Applied Sciences (ECCOMAS) for Young Investigators Conference (ECCOMAS YIC 2013) held in Bordeaux (France) [VP]

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Master : [PB], An introduction to the numerical simulation of reacting flows, 15h, ISAE-Supaéro and University of Toulouse, France.
- Master : [RM], Turbulence Modelling, 40h, École centrale de Lille/ENSI Poitiers/ISAE-ENSMA, Poitiers, France.
- Master : [EF], Simulations industrielles, Fluides compressibles, Combustion industrielle, 100h, ENSGTI, Pau, France.
- Master: [TK], Condensation/Ebullition, 40h, ENSGTI, Pau, France.
- Master: [TK], Exergoéconomie, 20, ENSGTI, Pau, France.
- Master: [TK], Réseaux Fluides, 16h, ENSGTI, Pau, France.

8.2.2. Supervision

- PhD : Simon Delmas, Simulation d'écoulements pariétaux génériques à bas nombre de Mach pour l'amélioration du refroidissement des chambres de combustion : développement et mise en œuvre de schémas de type Galerkin discontinu adaptés, University of Pau, started January 2013, Dir.: [PB] and Co-dir.: [VP].
- PhD : Juan-Luis Florenciano Merino, Étude de la réponse d'un écoulement avec transfert pariétal de masse à un forçage acoustique, University of Pau, defended on July 12, 2013, Dir.: [PB] and Co-dir.: [TK]
- PhD : Jean-François Wald, Modélisation de la turbulence avec traitement adaptatif des parois prenant en compte la thermique active ou passive, started October 2013, Dir.: [RM]
- PhD : Nurtoleu Shakhan, Modelling and simulation of coal combustion, University of Almaty (Kazakhstan), started October 2013, Dir.: Altyn Naïmanova and Co-dir.: [PB]
- PhD : Tran Thanh Tinh, Développement d'une méthode hybride RANS-LES temporelle pour la simulation de sillages d'obstacles cylindriques, University of Poitiers, 28 March 2013, Dir.: [RM]

8.2.3. *Juries*

Several team members participated in the following thesis or HdR juries ("referee" in a French doctoral thesis jury is more or less equivalent to an external opponent in an Anglo-Saxon like PhD jury):

- + PhD : Julien Apeloig, Étude expérimentale de la phase liquide dans les instabilités thermo-acoustiques agissant au sein des turbomachines diphasiques, University of Toulouse, 13 September 2013, [PB, referee]
- + PhD : Guillaume Cottin, Contribution à la modélisation thermique d'une paroi multiperforée, University of Toulouse, 18 October 2013, [PB, referee]
- + PhD : Mario Falese, A study of the effects of bifurcations in swirling flows using large-eddy simulations and mesh adaptation, University of Toulouse, October 7, 2013, [PB]
- + PhD : David Vanpouille, Développement de modèles de turbulence adaptés à la simulation des écoulements de convection naturelle à haut nombre de Rayleigh, University of Toulouse, December 6, 2013 [RM, referee]
- + HdR : Mathieu Fénot, Refroidissement aérothermique, University of Poitiers, 29 November 2013 [PB]

8.3. Popularization

One presentation in Unithé ou Café and presence to the "Inria-Industrie" days [VP]. Participation in the "Visage des Sciences 2013" [PB].

CAIRN Project-Team

8. Dissemination

8.1. Scientific Animation

O. Berder was General Chair of the 3rd Workshop on Ultra Low Power Systems (WUPS), Prague, Czech Republic, February 2013.

D. Chillet was member of the technical program committee of HiPEAC RAPIDO, HiPEAC WRC, DCIS, and DASIP.

M. Gautier was a member of the technical program committee of IEEE WCNC 2013, IEEE PIMRC 2013, IEEE Percom 2013 (Workshop on Cognitive Computing and Communications), IEEE ICCVE 2013 and IARIA COCORA 2013.

A. Tisserand was a member of technical program committee of the following conferences: IEEE ARITH'21, IEEE Reconfig 2013, DASIP 2013, IEEE NEWCAS 2013. He is a member of the editorial board of the International Journal of High Performance Systems Architecture, Inderscience.

C. Wolinski was a member of the technical program committee of IEEE ASAP and DSD.

F. Charot, O. Sentieys and A. Tisserand are members of the steering committee of a CNRS spring school for graduate students on embedded systems architectures and associated design tools (ARCHI).

O. Sentieys and A. Tisserand are members of the steering committee of a CNRS spring school for graduate students on low-power design (ECOFAC).

A. Tisserand co-organized the ARCHI 2013 école thématique CNRS Architectures des systèmes matériels enfouis et méthodes de conception associées, March 25-29 Col-de-Porte. Details on <http://tima-sls.imag.fr/archi13>

A. Tisserand was Editor of a special issue in Journal TSI (Technique et Science Informatique) [81].

O. Sentieys was a member of technical program committee of the following conferences: IEEE/ACM DATE, IEEE FPL, ACM/IEEE MEMOCODE IEEE VTC, IEEE DDECS, ACM SBCCI, FTFC. He was Track Chair at IEEE NEWCAS. He is on the editorial board of Journal of Low Power Electronics, American Scientific Publishers, and of ISRN Sensor Networks.

O. Sentieys is a member of the steering committee of the GDR SOC-SIP. He is the chair of the IEEE Circuits and Systems (CAS) French Chapter. In 2013, he was an expert for some scientific organizations (ANR, AERES).

O. Berder is an elected member of IRISA Lab Council. He is the moderator of the Embedded Systems area in the Scientists Interest Group on Intelligent Transportation Systems.

E. Casseau was an expert for the ANR INS program (Agence Nationale de la Recherche).

8.2. Seminars and Invitations

A. Tisserand gave an invited lecture at the CNRS ARCHI 2013 spring school on FPGA circuits.

A. Tisserand gave an invited lecture at the ARIC team of LIP Laboratory, ENS Lyon, on Arithmetic Level Countermeasures for ECC Cryptoprocessors Against Side Channel Attacks.

8.3. Teaching - Supervision - Juries

8.3.1. Teaching Responsibilities

There is a strong teaching activity in the CAIRN team since most of the permanent members are Professors or Associate Professors.

C. Wolinski is the Director of ESIR.

P. Quinton is the director of Ecole Normale Supérieure de Rennes.

D. Chillet is the Director of Academic Studies of ENSSAT.

P. Scalart is the Head of the Electronics Engineering department of ENSSAT.

S. Derrien is the responsible of the first year of the master of computer science at ISTIC since Sep. 2012.

O. Sentieys is responsible of the "Embedded Systems" branch of the SISEA Master of Research (M2R).

D. Chillet is the co-responsible of the Embedded System speciality of the ICT Master of University of Science and Technology of Hanoi.

ENSSAT stands for "*École Nationale Supérieure des Sciences Appliquées et de Technologie*" and is an "*École d'Ingénieurs*" of the University of Rennes 1, located in Lannion.

ISTIC is the Electrical Engineering and Computer Science Department of the University of Rennes 1.

ESIR stands for "*École supérieure d'ingénieur de Rennes*" and is an "*École d'Ingénieurs*" of the University of Rennes 1, located in Rennes.

M2R stands for Master by Research, second year.

D. Chillet is member of the French National University Council since 2009 in signal processing and electronics (Conseil National des Universités en 61e section).

D. Chillet is member of the Permanent Committee of the French National University Council since november 2011 in signal processing and electronics (Commission Permanente du Conseil National des Universités en 61e section).

A. Tisserand is member of the French National University Council since 2011 in computer science (Conseil National des Universités en 27e section).

8.3.2. Teaching

O. Berder: introduction to signal processing, 38h, ENSSAT (L3)

O. Berder: microprocessors and digital systems, 30h, ENSSAT (L3)

O. Berder: wireless communications, 23h, ENSSAT (M2)

O. Berder: ad hoc networks, 58h, ENSSAT (M1-M2)

O. Berder: signal processing, 12h, IUT Lannion (L2)

E. Casseau: signal processing, 16h, ENSSAT (L3)

E. Casseau: low power design, 6h, ENSSAT (M1)

E. Casseau: real time design methodology, 24h, ENSSAT (M1)

E. Casseau: computer architecture, 36h, ENSSAT (M1)

E. Casseau: system on chip and verification, 10h, Master by Research and ENSSAT (M2)

E. Casseau: reconfigurable architectures, 25h, USTH (M2)

S. Derrien: component and system synthesis, 16h, Research Master (MRI ISTIC) (M2)

S. Derrien: computer architecture, 12h, ENS Cachan (L3)

S. Derrien: introduction to operating systems, 8h, ISTIC (M1)

F. Charot: specification of applications with the signal synchronous language, 24h, ESIR (M1)

F. Charot: virtual prototyping of multiprocessor system-on-chip, 24h, ESIR (M1)

F. Charot: design of embedded systems, 28h, ESIR (M1)

A.Courtay: Processor Architecture, 24h, ENSSAT (L3)

A.Courtay: Digital Electronics, 32h, ENSSAT (L3)

A.Courtay: Digital System Design, 12h, ENSSAT (L3)

A.Courtay: Digital Electronics Communication Interfaces, 68h, ENSSAT (M1)

- A.Courtay: Processor Architecture, 25h, USTH (M1)
- D.Chillet: Basic processor architecture, 20h, ENSSAT (L1)
- D.Chillet: Design methodology of real-time systems, 32h, ENSSAT (L2)
- D.Chillet: Advanced processor architectures, 24h, ENSSAT (M2)
- D.Chillet: Multimedia processor architectures, 24h, ENSSAT (M2)
- D.Chillet: Multi-processor systems, 20h, ENSSAT (M2)
- D. Chillet: advanced processors architectures, 24h, Master by Research and ENSSAT (M2)
- D. Chillet: low-power digital CMOS circuits, 6h, Telecom Bretagne and University of Occidental Brittany (UBO) (M2)
- D. Chillet: Digital system design, 25h, University of Science and Technology of Hanoi (M1)
- D. Chillet: Advanced Multiprocessor system , 25h, University of Science and Technology of Hanoi (M2)
- M.Gautier, electronics, 42h, IUT Lannion (L1)
- M.Gautier, telecommunications, 114h, IUT Lannion (L1)
- M.Gautier, digital communications, 28h, IUT Lannion (L2)
- C. Killian, digital electronics, 74h, IUT Lannion (L1)
- C. Killian, digital electronics, 28h, IUT Lannion (L2)
- C. Killian, electricity, 60h, IUT Lannion (L1)
- C. Killian, signal processing, 40h, IUT Lannion (L2)
- R. Rocher: electricity, 16h, IUT Lannion (L1)
- R. Rocher: electronics, 44h, IUT Lannion (L1)
- R. Rocher: telecommunications, 82h, IUT Lannion (L1)
- R. Rocher: signal processing, 12h, IUT Lannion (L2)
- R. Rocher: digital communications, 48h, IUT Lannion (L2)
- P. Scalart: non-linear optimisation, 18h, Master by Research and ENSSAT (M2)
- P. Scalart: Parametric modelisation, optimal and adaptive Filters, 24h, Master by Research and ENSSAT (M2)
- P. Scalart: source coding, 14h, Master by Research and ENSSAT (M2)
- P. Scalart: cellular networks, 24h, ENSSAT (M2)
- P. Scalart: digital communication systems, 32h, ENSSAT (M1)
- P. Scalart: random signals and systems, 12h, ENSSAT (M1)
- O. Sentieys: digital signal processing, 40h, ENSSAT (M1)
- O. Sentieys: VLSI integrated circuit design, 40h, ENSSAT(M1)
- A. Tisserand: multiprocessor architectures and programming, 20h, ENSSAT and Master by Research, Univ. Rennes 1(M2)
- A. Tisserand: hardware computer arithmetic operators, 6h, Master by Research, Univ. Rennes 1 (M2)
- C. Wolinski: architecture 1, 64h, ESIR (L3)
- C. Wolinski: architecture 2, 28h, ESIR (L3)
- C. Wolinski: design of embedded systems, 48h, ESIR (M1)
- C. Wolinski: signal, image, architecture, 26h, ESIR (M1)
- C. Wolinski: programmable architectures, 10h, ESIR (M1)
- C. Wolinski: component and system synthesis, 10h, Master by Research (MRI ISTIC) (M2)

8.3.3. Supervision

PhD: Mahtab Alam, Power Aware Adaptive Techniques for Wireless Sensor Networks, Univ. Rennes 1, Jan. 2013, O. Sentieys, O. Berder, D. Menard.

PhD: Robin Bonamy, Power Consumption Modelling and Optimisation for Heterogeneous Reconfigurable Platform, Univ. Rennes 1, Jul. 2013, D. Chillet.

PhD: Thomas Chabrier, Arithmetic recodings for ECC cryptoprocessors with protections against side-channel attacks, Univ. Rennes 1, Jun. 2013, A. Tisserand, E. Casseau.

PhD: Hervé Yviquel, From dataflow-based video coding tools to dedicated embedded multi-core platforms, Univ. Rennes 1, Oct. 2013, E. Casseau.

PhD: Antoine Morvan, Polyhedral Model for High-Level Synthesis of Pipelined Architectures, Univ. Rennes 1, Jun. 2013, P. Quinton, S. Derrien.

PhD: Vivek D. Tovinakere, Ultra-Low Power Reconfigurable Controllers for Wireless Sensor Networks, Univ. Rennes 1, Feb. 2013, O. Sentieys.

PhD in progress: Florent Berthier, Study and Design of an Ultra Low Power Asynchronous Core for Sensor Networks, Oct. 2013, O. Sentieys, P. Vivet, E. Beigne.

PhD in progress: Karim Bigou, RNS Hardware Units for ECC, Oct. 2011, A. Tisserand.

PhD in progress: Franck Bucheron, Secure Virtualization for Embedded Systems, Oct. 2011, A. Tisserand.

PhD in progress: Aymen Chakhari, Analytical approach for decision errors in fixed-point digital communication systems, Oct. 2010, R. Rocher, P. Scalart.

PhD in progress: Gaël Deest, Computing with Errors: Error-Tolerant Machine Code Generation for Unreliable Embedded Hardware, Oct. 2013, S. Derrien, O. Sentieys.

PhD in progress: Amine Didioui, Reconfigurable Radio Front-End for Energy-Harvesting Wireless Sensor Networks, Nov. 2010, O. Sentieys, C. Bernier.

PhD in progress: Ali Hassan El-Moussawi, Performance/Accuracy Trade-Off in Automatic Parallelization for Embedded Many-Core Platforms, Nov. 2012, S. Derrien.

PhD in progress: Christophe Hurliaux, Embedded reconfigurable hardware accelerators with efficient dynamic reconfiguration management, Oct. 2012, O. Sentieys, A. Courtay.

PhD in progress: Quang-Hai Khuat, Real-Time Spatio-Temporal Task Scheduling on 3D Architectures, Oct. 2011, D. Chillet.

PhD in progress: Trong-Nhan Le, Global power management system for self-powered autonomous wireless sensor nodes, Jan. 2011, O. Sentieys, O. Berder.

PhD in progress: Quang-Hoa Le, Virtualized dynamic reconfiguration for 3D SoC, Oct. 2012, E. Casseau, A. Courtay.

PhD in progress: Xuan Chien Le, Indirect Monitoring in Self-Powered Wireless Sensor Networks for Smart Grid and Building Automation, Oct. 2013, O. Sentieys, O. Berder.

PhD in progress: Jérémie Métairie, Reconfigurable Arithmetic Units for Secure Cryptoprocessors, Oct. 2012, A. Tisserand, E. Casseau.

PhD in progress: Van Thiep Nguyen, Energy-efficient MAC protocols for cooperative strategies in Wireless Sensor Networks, Oct. 2013, O. Berder, M. Gautier.

PhD in progress: Viet-Hoa Nguyen, Energy-efficient cooperative techniques for Wireless Body Area Sensor Networks, Nov. 2012, O. Berder, jointly with C. Langlais from Telecom Bretagne.

Ganda-Stéphane Ouedraogo, Automatic synthesis of hardware accelerator from high-level specifications in flexible radios, Oct. 2011, M. Gautier, O. Sentieys.

PhD in progress: Rengarajan Ragavan, Ultra-Low Power Reconfigurable Architectures for Computing and Control in Wireless Sensor Networks, Oct. 2013, O. Sentieys, C. Killian.

PhD in progress: Mai-Thanh Tran, Hardware Synthesis of Flexible and Reconfigurable Radio from High-Level Language Dedicated to Physical Layer of Wireless Systems, Oct. 2013, E. Casseau, M. Gautier.

PhD in progress: Pramod P. Udupa, Sampling, synchronising, digital processing and FPGA implementation of 100Gbps optical OFDM signals, Jan. 2011, O. Sentieys.

PhD in progress: Zhongwei Zheng, Short-range geolocation algorithms based on distributed multi-sensor processing, Nov. 2012, P. Scalart, jointly with C. Roland from Lab-STICC.

8.4. Popularization

A popularisation paper on energy efficiency has been published in [80]
15 members of the team participated in the national science festival (Fête de la Science) in Plemeur-Bodou in October (demonstrations on wireless sensor networks, cryptology and digital integrated circuits).

A letter was published in Inria Emergences on "improving energy efficiency of embedded processors": http://emergences.inria.fr/lettres2013/newsletter-n28/L28_GECOS

CALVI Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Invitations at conferences and schools

- S. Labrunie gave the invited talk «Singular Solutions and Large Solutions to some Nonlinear Elliptic Equations in Polygonal Domains», Journées Singulières Augmentées en l'honneur de Martin Costabel, Rennes, 2013. <http://jsa2013.sciencesconf.org/>
- G. Manfredi gave the invited talk «Non-relativistic limits of Maxwell's equations» at the Workshop Asymptotic and Multiscale methods, Ile de Porquerolles, 9-15 June 2013, <http://www.math.univ-toulouse.fr/~cnegules/WAMs2013.html>
- E. Frénod gave
 - the invited talk « Sand transport in coastal ocean waters submitted to tide » at the Workshop Asymptotic and Multiscale methods, Ile de Porquerolles, 9-15 June 2013.
 - the invited course «Two-Scale Convergence and Two-Scale Numerical Methods », at “École de mécanique des fluides numérique”, Ile de Porquerolles, 3-8 June 2013, <http://ecolemf.n.limsi.fr/doku.php?id=programme>.
 - the invited talk « The Geometrical Gyro-Kinetic Approximation » at the Institute of Natural Sciences, Shanghai Jiao Tong University, China, 8–27 May 2013.
 - the invited course « Two-Scale Convergence and Two-Scale Numerical Methods » at the Institute of Natural Sciences, Shanghai Jiao Tong University, China, 8–27 May 2013.
- M. Bostan, N. Crouseilles, P. Helluy, S. Hirstoaga and M. Mehrenberger gave invited talks at NumKin 2013, 2-6 September 2013, Garching, Germany, <http://www.ipp.mpg.de/ippcms/eng/for/veranstaltungen/konferenzen/2013/numkin2013/>.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence :

A. Hamiaz, Analyse numérique, 28h, L3, Université de Strasbourg, France.
 P. Helluy, Analyse numérique, 50h, L3, Université de Strasbourg, France.
 S. Hirstoaga, Analyse numérique, 42h, L3, Université de Strasbourg, France.
 S. Labrunie, Mathématiques générales en DUT génie civil, 100h, L1, Université de Lorraine, France
 S. Labrunie, Mathématiques générales en DUT génie civil, 20h, L2, Université de Lorraine, France
 M. Mehrenberger, Optimisation non linéaire, 39h, L3, Université de Strasbourg, France.
 M. Mehrenberger, Analyse numérique, 36h30, L2, Université de Strasbourg, France.
 M. Mehrenberger, Méthodes d'Analyse Numérique, 39h, L3, ENSIIE (ecole d'ingenieur, antenne de Strasbourg), France.
 Jean R. Roche, Mathématiques, 162h, L2, ESSTIN, Univ. de Lorraine, France.

Master :

A. Hamiaz, Mathématiques, 20h, Agrégation, Université de Strasbourg, France.
 M. Mehrenberger, Modélisation : Option Calcul Scientifique, 20h, M2, Université de Strasbourg, France.
 Jean R. Roche, Optimization, 30h, M1, ESSTIN, Univ. de Lorraine, France.
 Jean R. Roche, Décomposition de domaines , Cours 15h, Univ. de Hamman Sousse, Tunisie.

9.2.2. Supervision

PhD in Progress : Pierre Glanc, Méthodes numériques pour Vlasov par remapping conservatif, Université de Strasbourg, Advisors: Philippe Helluy, Michel Mehrenberger.

PhD in Progress : Nhung Pham, Méthodes numériques pour Vlasov, Université de Strasbourg, Advisors: Philippe Helluy, Laurent Navoret.

PhD in Progress : Michel Massaro, Résolution numérique de lois de conservation sur architectures multicores, Université de Strasbourg, Advisors: Philippe Helluy, Vincent Loechner (EPI CAMUS).

PhD in progress : Mohamed Ghattassi, Analyse et Contrôle d'un Four, Université de Lorraine, Advisor: Jean R. Roche

PhD in progress : Takashi Hattori, Full wave modeling of lower hybrid current drive in tokamaks, Université de Lorraine, Advisors: Simon Labrunie and Jean R. Roche.

PhD in progress : Christophe Steiner, Résolution numérique de l'opérateur de gyromoyenne, schémas d'advection et couplage. Applications à l'équation de Vlasov. Université de Strasbourg Advisors: Michel Mehrenberger.

PhD in progress : Thomas Strub, Résolution des équations de maxwell tridimensionnelles instationnaires sur calculateur massivement multicoeur. Université de Strasbourg Advisors: Philippe Helluy.

9.2.3. Juries

N. Besse (advisor) and S. Labrunie participated in the PhD defense committee of David Coulette, Université de Lorraine, 6 December 2013.

E. Frénod participated in the following PhD defense committees :

Céline Caldini-Queiros, PhD at Université de Besançon, 15 November 2013. E. Frénod was referee.

Mathieu Lutz, PhD at Université de Strasbourg, 24 October 2013. E. Frénod was advisor.

G. Manfredi participated in the following PhD and HdR defense committees :

Philippe Coche, PhD at Université de Toulouse, 23 May 2013.

Stephen Jowan GALLAGHER, PhD at Warwick University (Royaume Uni), 2 October 2013.

Nicolas Lemoine, HdR at Université de Lorraine, 10 December 2013.

P. Helluy participated in the following PhD and HdR defense committees :

Clément Durochat, PhD at Inria Sophia Antipolis, 30 January 2013.

Jean-Baptiste Laurent, PhD at ONERA Toulouse, July 2013.

Yu Jie, PhD at EDF Chatou, 11 September 2013.

Sophie Gerald, PhD at ONERA Chatillon. November 2013.

Mathieu Lutz, PhD at Université de Strasbourg, October 2013.

9.3. Popularization

C. Caldini-Queiros wrote the popularization paper "Les schémas numériques : les mathématiques au service de la physique", published in "Presses universitaires de Franche-Comté", rewarded with Prix A'Doc de la jeune recherche en Franche-Comté 2013.

E. Frénod wrote the following popularization papers

- Mon littoral, c'est de la dynamique. Brève pour : 2013 - Mathématiques pour la planète Terre - <http://mpt2013.fr/mon-littoral-cest-de-la-dynamique/>.
- Aquaculture en milieux confinés : le cas de l'étang de Thau. Brève pour : 2013 Mathématiques pour la planète Terre. - <http://mpt2013.fr/aquaculture-en-milieus-confinés-le-cas-de-letang-de-thau/>.
- Un exemple d'application des mathématiques à l'environnement littoral : La dynamique à long terme des dunes marines dans les zones soumises à la marée. Modélisation, Analyse, Homogénéisation et Simulation. Matapli (Smai), No 100, pp 129–140.

CAMUS Team

9. Dissemination

9.1. Scientific Animation

Philippe Clauss, Cédric Bastoul and Vincent Loechner have been part of the program committee of IMPACT 2013 and IMPACT 2014 workshops (International Workshop on Polyhedral Compilation Techniques), held in conjunction with the international conferences HiPEAC 2013 and HiPEAC 2014.

Cédric Bastoul has been co-organizing the HIP3ES 2014 workshop (High Performance Energy Efficient Embedded Systems) held in conjunction with the international conference HiPEAC 2014. Vincent Loechner has been part of its program committee.

Cédric Bastoul is part of the program committee of PARMA+DITAM 2014 (5th Workshop on Parallel Programming and Run-Time Management Techniques for Many-core Architectures 3rd Workshop on Design Tools and Architectures for Multicore Embedded Computing Platforms), Vienna, Austria.

Cédric Bastoul has been part of the program committee of PACT 2013 (International Conference on Parallel Architecture and Compilation Techniques), Edinburg, Scotland.

Cédric Bastoul has been part of the program committee of PARMA 2013 (Workshop on Parallel Programming and Run-Time Management Techniques for Many-core Architectures), Berlin, Germany.

Philippe Clauss has been part of the program committee of the MSPC 2013 workshop (Memory Systems Performance and Correctness) held in conjunction with the international conference PLDI 2013, Seattle, USA.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Philippe Clauss did not teach in 2013 since he was detached at Inria during the whole year (*délégation*). Alain Ketterlin had teaching activities during the first semester of 2013, while he was detached in the Inria team ALF in Rennes during the second semester.

Licence : Cédric Bastoul, Operating Systems, 30h, L2, Paris-Sud University, France

Licence : Cédric Bastoul, Information Security, 8h, L3, Paris-Sud University, France

Licence : Cédric Bastoul, Networks, 60h, L2, Paris-Sud University, France

Licence : Cédric Bastoul, System Programming, 28h, L2, Strasbourg University, France

Licence : Cédric Bastoul, Network Programming, 42h, L2, Strasbourg University, France

Master : Cédric Bastoul, Compilation, 72h, M1, Strasbourg University, France

Master : Cédric Bastoul, Parallelism, 13h, M2, Strasbourg University, France

Licence : Éric Violard, Functional Programming, 42h, L2, Strasbourg University, France

Licence : Éric Violard, Computer Architectures, 21h, L2, Strasbourg University, France

Licence : Éric Violard, Algorithms and Data Structures, 37h, L2, Strasbourg University, France

Master : Éric Violard, Compiler Design, 57h, M1, Strasbourg University, France

Master : Éric Violard, Semantics, 48h, M1, Strasbourg University, France

Licence : Vincent Loechner, System Programming, 15h, L2, Strasbourg University, France

Licence : Vincent Loechner, Operating Systems, 28h, L2, Strasbourg University, France

Master : Vincent Loechner, Python Programming, 42h, M1, Strasbourg University, France

Master : Vincent Loechner, Real-time Programming, 22h, M1, Strasbourg University, France

Master : Vincent Loechner, Parallelism, 41h, M1, Strasbourg University, France

Master : Vincent Loechner, Parallel Programming, 52h, M2, Strasbourg University, France

Master : Vincent Loechner, Embedded Systems, 32h, M2, Strasbourg University, France

9.2.2. Supervision

PhD in progress : Aravind Sukumaran-Rajam, Enlarging the scope of polyhedral speculative parallelization, November 2012, Philippe Clauss and Alain Ketterlin

PhD in progress : Juan Manuel Martinez Caamaño, Dynamic and flexible generation of parallel loops using a dedicated intermediate representation, November 2013, Philippe Clauss and Philippe Helluy (IRMA lab., University of Strasbourg)

PhD in progress : Jean-François Dollinger, Heterogeneous speculative parallelization, September 2010, Vincent Loechner and Philippe Clauss

PhD in progress : Imen Fassi, Multifor for Multicore, June 2013, Philippe Clauss and Yosr Slama (University El Manar, Tunisia)

PhD in progress : Nabil Hallou, Dynamic binary optimizations, January 2013, Erven Rohou (ALF team) and Philippe Clauss

PhD in progress : Lénaïc Bagnères, Automatic parallelization and optimization for manycore architectures, November 2012, Christine Eisenbeis and Cédric Bastoul

PhD in progress : Alexander Zinenko, Interactive program manipulation, September 2013, Stéphane Huot and Cédric Bastoul

9.2.3. Juries

Philippe Clauss participated to the following HDR jury in 2013:

Date	Candidate	Place	Role
Oct. 11	Fabien Coelho	École des Mines de Paris	Reviewer

Philippe Clauss participated to the following PhD juries in 2013:

Date	Candidate	Place	Role
Oct. 17	Alexandre Carbon	Univ. Pierre et Marie Curie, Paris	Reviewer
June 28	Antoine Morvan	ENS Cachan	Reviewer
June 12	Damien Hedde	Institut polytechnique de Grenoble	Examiner

Cédric Bastoul participated to the following HDR jury in 2013:

Date	Candidate	Place	Role
Oct. 11	Fabien Coelho	École des Mines de Paris	Examiner

Cédric Bastoul participated to the following PhD juries in 2013:

Date	Candidate	Place	Role
March 13	Ramakrishna Upadrasta	Paris-Sud University	Examiner
November 27	Dounia Khaldi	École des Mines de Paris	President

Alain Ketterlin participated to the following PhD jury in 2013:

Date	Candidate	Place	Role
Dec. 3	Nathanaël Premilieu	Université de Rennes 1	Examiner

9.3. Popularization

- Cédric Bastoul participated to the *Rencontres Inria-Industrie* in June 2013
- Cédric Bastoul participated to *Fête de la Science* at University of Paris-Sud in October 2013

CAMEL Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Caramel seminar

Sixteen speakers were invited to our seminar in 2013: Pierre-Jean Spaenlehauer, Maike Massierer, Emmanuel Jeandel, Jérémy Parriaux, Adeline Langlois, Antoine Joux, François Morain, Mourad Gouicem, Hamza Jeljeli, Svyatoslav Covanov, Alice Pellet-Mary, Bastien Violla, Julia Pieltant, Clément Pernet, Cécile Pierrot, and Luca De Feo.

9.1.2. Joint security seminar with the university master in informatics

The team is involved with other teams and the university master in informatics in the organization of the security seminar which started in 2013. Six speakers were invited during the last months of 2013: Olivier Heen, Frédéric Raynal, Stéphanie Lacour, Alexandre Dulaunoy, Vincent Strubel and Cédric Blancher.

9.1.3. Committees memberships

- Jérémie Detrey
 - was a member of the program committee of the International Conference on Pairing-Based Cryptography (Pairing 2013).
- Pierrick Gaudry
 - was a member of the program committee of the ASIACRYPT 2013 conference,
 - was in a hiring committee (Comité de Sélection) in Université de Lorraine.
- Emmanuel Thomé
 - is an elected member of the Inria Evaluation Committee for the period 2011-2014,
 - is an elected member of the Inria Nancy *Comité Hygiène, Sécurité, et Conditions de Travail*,
 - is an appointed member of the Inria Nancy *Comité de développement durable*,
 - is a member of the *Bureau du département de formation doctorale* in computer science at Université de Lorraine,
 - was in a hiring committee (Comités de Sélection) in Université de Lorraine,
 - was in the hiring committee for the Inria *Chargé de recherches* positions both in Bordeaux and Rocquencourt.
- Marion Videau
 - is a member of the scientific committee of the CCA seminar (*Codage, Cryptologie, Algorithmes*),
 - is a member of the program committee of the *Symposium sur la sécurité des technologies de l'information et des communications* (SSTIC 2013),
 - was a member of the program committee of the 16th annual International Conference on Information Security and Cryptology (ICISC 2013),
 - is an elected member of the LORIA laboratory council,
 - is a member of the *Commission des développements technologiques* (CDT) of the Inria-NGE research center.
- Paul Zimmermann

- is an elected member of the Inria Scientific Board,
- is (from September) “délégué scientifique” of the Nancy Grand Est center, and as a consequence member of the Inria Evaluation Committee.

9.1.4. Invited Conferences

- Pierrick Gaudry was invited to give a talk at the Workshop on Elliptic Curve Cryptography (ECC 2013) in Leuven, Belgium and to give two lectures at the Summer School that preceded it; he was invited to give a talk at the Pairing 2013 conference in Beijing, China; he was also invited to give a talk at the Workshop on Emerging Applications of Finite Fields at Linz, Austria.

9.1.5. Calcul mathématique avec Sage

Together with nine other colleagues, Paul Zimmermann wrote a book about doing mathematics with Sage [18]. This book is available in electronic version under a Creative Commons license, and is also available in paper form from Amazon under a very low price.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Jérémie Detrey:
 - Security of websites: 2 hours (lecture), L1, IUT Charlemagne, Nancy, France.
- Pierrick Gaudry
 - Algorithmic Number Theory: 5 hours (lectures), M2, University Paris 7 (Master Parisien de Recherche en Informatique), Paris, France.
- Emmanuel Thomé:
 - Cryptology: 24 hours, M1, ESIAL, Nancy, France.
 - Introduction to cryptology: 3 hours (lecture), M2, École des Mines de Nancy, France.
 - Training for “Informatique et Sciences du Numérique”, Cryptology, Networks: 9 h, Université de Lorraine, Nancy, France. (Training for high school teachers who intend to teach this topic in high school).
- Marion Videau, teaching at the faculty of technology and sciences, Université de Lorraine, Nancy, France:
 - Introduction to algorithmic and programming: 40 hours (lectures and tutorial sessions), 20 hours (practical sessions), L1.
 - Programming methodology in C: 21 hours (lectures and tutorial sessions), L1.
 - Students supervisor for about 12 L1 students: 12 hours, L1.
 - Introduction to information system security: 15 hours (lectures), 15 hours (tutorial sessions), M1.
 - Information System Security: 21 hours (lectures and tutorial sessions), M2, IGA, Maroc
 - Information System Security: 12 hours (lectures and tutorial sessions), M2
 - Software Validation, Verification and Certification: 12 hours (lectures and tutorial sessions), M2
 - Supervision of two M1 students for their *Introduction to research* practical course throughout one semester
 - Supervision of M2 students projects: 15 hours
 - Supervision and jury of M2 students internships: 10 hours.
 - Responsibility of the M2 *parcours Services, Sécurité des Systèmes et des Réseaux / Sécurité des Architectures Web*

9.2.2. Internships

- Svyatoslav Covanov, École Polytechnique, “Fürer’s integer multiplication algorithm”, Apr–July 2013, supervised by Emmanuel Thomé.
- David Lucas, Télécom Nancy, “Recherche de bitcoins : implémentation et accélération sur le MPPA-256 de Kalray”, May–Jul 2013, supervised by Jérémie Detrey.
- Fabien Nollet, Télécom Nancy, “Parallelization of the multiplication of polynomials over $GF(2)$ ”, May–Jul 2013, supervised by Emmanuel Thomé.
- Alice Pellet Mary, ÉNS Lyon, “Test rapide de cubicité modulaire”, Jun–Jul 2013, supervised by Pierrick Gaudry.
- Alexandre Talon, ÉNS Lyon, “Non linear polynomial selection for NFS”, Jun–Jul 2013, supervised by Paul Zimmermann.
- Sébastien Vandeneckhoutte, Télécom Nancy, “Énumération efficace des polynômes irréductibles sur un corps fini” Feb–Jun, 2013, supervised by Marion Videau and Pierrick Gaudry.

9.2.3. Supervision

Defended PhDs:

- Nicolas Estibals, “Algorithmes et arithmétique pour l’implémentation de couplages cryptographiques”, started in 2009, co-supervised by Jérémie Detrey and Pierrick Gaudry [9]. Defended on 2013/10/30.
- Răzvan Bărbulescu, “Number and function field sieve for discrete logarithm”, started in 2011, supervised by Pierrick Gaudry [8]. Defended on 2013/12/04.

PhD in progress:

- Hamza Jeljeli, “Using graphics accelerators for problems arising in the Number Field Sieve and Function Field Sieve algorithms”, started in 2011, supervised by Jérémie Detrey and Emmanuel Thomé.
- Cyril Bouvier, “Integer Factoring on High-Performance Architectures”, started in 2012, supervised by Paul Zimmermann.
- Laurent Grémy, “Analysis and optimization of sieves arithmetic algorithms” started in oct. 2013, co-supervised by Pierrick Gaudry and Marion Videau.
- Hugo Labrande, “Explicit computation of isogenies between Jacobians of curves using a complex analytic method”, started in sep. 2013, cotutelle supervision between Emmanuel Thomé and Michael J. Jacobson, University of Calgary.

9.2.4. Juries

- Jérémie Detrey
 - was a member of the jury of the Polytechnique/ÉNS competitive entrance exam,
 - was a member of the PhD thesis jury of Nicolas Estibals (Université de Lorraine).
- Pierrick Gaudry was a member of the PhD thesis jury of Razvan Barbulescu (Université de Lorraine), Nicolas Estibals (Université de Lorraine), Jean-Gabriel Kammerer (Université de Rennes 1), Aurore Guillevic (École Normale Supérieure), Louise Huot (Université de Paris 6).
- Emmanuel Thomé was a member of the PhD thesis jury of Kisoon Yoon (Université de Caen Basse-Normandie).
- Marion Videau was president of one of the scientific baccalaureate juries in Nancy in July 2013.

9.3. Popularization

- Jérémie Detrey gave a presentation on the Enigma machine and its cryptanalysis to high-school teachers as part as the “journée EPI-ISN”.

- Pierrick Gaudry gave a presentation at the “journée de l’Association francophone des spécialistes de l’investigation numérique”.
- Marion Videau:
 - gave a talk for the awards ceremony of the *Olympiades de maths* in Lorraine.
 - gave a practical session of cryptography and information security for students from *lycées* taking part in an immersion day at the faculty.
 - participated to events on information about university studies for pupils and students (Clés de la réussite, Portes ouvertes de la faculté des sciences, Oriaction).
- Paul Zimmermann takes part in the “Maths-en-Jeans” program, with about 20 students in “troisième” at the Collège Pierre Brossolette in Réhon.

CARMEN Team

9. Dissemination

9.1. Scientific Animation

- The members of the team are regular reviewers for international journals and conferences in applied mathematics, biomedical engineering, cardiac electrophysiology, and electrocardiography.
- N. Zemzemi was a member of the Inria delegation at the India-France technology summit, New delhi, October 23-24th, 2013.
- Y. Coudière did participate to the organization of the First Scientific Workshop of the LIRYC, October, 24-25th, 2014.
- Y. Coudière is a member of the Scientific Committee of the international conference on « Finite Volume for Complex Application », to be held in Berlin, June, 2014, www.wias-berlin.de/workshops/fvca7.
- Y. Coudière is a member of CAIMS, The Canadian Applied and Industrial Mathematics Society, and presented the work of Carmen during the CAIMS conference in Québec, June, 2013.
- Y. Coudière is the scientific coordinator of the ANR research project HR-CEM.
- S. Labarthe presented the work of Carmen based on HPC solvers at the PlaRim day, April, 2014, LABRI, Bordeaux.
- S. Labarthe presented his work at the « Printemps de la Cardiologie », the national conference of the French Cardiologist Society, held in April 2013 in Marseille, and was invited to the symposium “AF: Clinical challenges for biophysical modelling” in London, June, 2013.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : S. Labarthe, *Probabilities and statistics, introduction to databases*, 64 h eqTD, IUT HSE U Bordeaux 1.

Engineering school: S. Labarthe, *Scientific computing with Fortran 90*, 96h eqTD, ENSEIRB-MATMECA, IPB.

Engineering school: N. Zemzemi, *Scientific computing project: finite elements method application to cardiac electrophysiology*, 2nd year, 28h eqTD, ENSEIRB-MATMECA, IPB.

Engineering school: F. Caro, *TER* 2nd year, 6h eqTD, ENSEIRB-MATMECA, IPB.

Engineering school: F. Caro, *Finite elements, variational formulation and Sobolev spaces*, 36h eqTD, Institut Galilée, Univ. Paris 13.

Engineering school: Y. Coudière, *TER* 2nd year, 6h eqTD, ENSEIRB-MATMECA, IPB.

Cursus Ingénieur: Y. Coudière, *project in scientific computing, F90* 1st year, 16h eqTD, ENSEIRB-MATMECA, IPB.

Master : Y. Coudière, « *Analyse numérique approfondie* », 36h eqTD, M2, Univ. Bordeaux 1.

9.2.2. Supervision

PhD : S. Labarthe, « *Modélisation de l'activité électrique des oreillettes et des veines pulmonaires* », Université Bordeaux Segalen, December, 13th, 2013, supervised by Y. Coudière and J. Henry.

PhD in progress : A. Davidovic, *Modelling the cardiac ventricular structural heterogeneities*, started on October 2012, supervised by Y. Coudière and C. Poignard.

PhD in progress : G. Ravon, An inverse problem for cardiac optical mapping, started on October 2012, supervised by Y. Coudière and A. Iollo.

PhD in progress : J. Lassoued, « Construction de methodes de reduction de modèle pour le problème d'estimation de parametres en electrophysiologie cardiaque », co-supervized by N. Zemzemi with Moncef Mahjoub, École Nationale d'Ingénieur de Tunis (Tunisia).

PhD in progress : W. Mbarki, « Etudes théorique et numérique du couplage purkinje-myocarde en electrophysiologie cardiaque », co-supervised by N. Zemzemi with Saloua Aouadi, Faculté des sciences de Tunis (Tunisia).

9.2.3. *Juries*

- Y. Coudière was a member of the jury for defense of the PhD of V. Desveaux, « Contribution à l'approximation numérique des systèmes hyperboliques », Université de Nantes, November 26th, 2013.
- Y. Coudière was a member of the jury for defense of the PhD of S. Labarthe, « Modélisation de l'activité électrique des oreillettes et des veines pulmonaires », Université Bordeaux Segalen, December, 13th, 2013

9.3. Popularization

- S. Labarthe, Forum Emploi Maths 2013, invited for an intervention to the round table « Témoignages : métiers du secteur santé », 01/2013, Paris.
- S. Labarthe and G. Ravon welcomed two secondary school pupils for a week dedicated to the observation of research work in our team and the Inria research center.
- N. Zemzemi, recieved 4 groups of pupils in final year of high school, that were following a special option on computer, numerical sciences. He animated a workshop on modelling for health sciences.
- The team was represented by N. Zemzemi at the « Rencontre Inria-Industrie » (meeting Inria – Industry) on: Modelling, simulation, and high-performance computing, Paris, June 11th, 2013.
- A. Davidovic presented herself and her work during a meeting with the public called « Visages de sciences », organized at « Cap Sciences », Bordeaux, Spring 2013.

CARTE Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Conference organization and program committee

Mathieu Hoyrup was in the Program Committee of **Computability, Complexity and Randomness (CCA) 2013**. He is guest editor for the post-proceedings of CCA 2013, special issue of Logical Methods in Computer Science. He has been invited to organize the special session **Algorithmic Randomness** of the conference Computability in Europe (CiE) 2013.

Simon Perdrix is a member of the Program Committee of the first Workshop on **Parallel Quantum Computing (ParQ)**.

Guillaume Bonfante was in the Program Committee of **Malware 2013** and **Symposium on Foundations & Practice of Security (FPS) 2013**.

The Carte Team has organized a few conferences and workshops in Nancy this year:

- **Journées Calculabilités 2013**, April
- **Analysis, Randomness and Applications (ARA) 2013**, June.
- **Computability and Complexity in Analysis (CCA) 2013**, July.
- **Journées Informatique Quantique**, October.

9.1.2. Talks

Emmanuel Jeandel gave an invited Talk at the conference (**Computability, Complexity and Randomness (CCR) 2013**) on entropy of Turing machines. He also presented his work on multidimensional symbolic dynamics in the **PIMS Workshop on Automata Theory and Symbolic Dynamics**.

Guillaume Bonfante was invited to present his work to workshop “Proof Theory and Rewriting” (Kanazawa, february) and “Journées Francophones d’Investigation Numérique” (Neuchâtel, october).

Guillaume Bonfante, Hugo Férée and Jean-Yves Marion were invited to workshop “Advances in implicit computational complexity” in Shonan Village in november.

Mathieu Hoyrup, Emmanuel Hainry, Emmanuel Jeandel, were invited to present their work to (**workshop DySyCo**) in Lyon, december 2013.

Emmanuel Hainry presented *Complexité d’ordre supérieur, de l’Analyse Réursive aux Basic Feasible Functionals* at the Séminaire d’algorithmique et de complexité du plateau de Saclay (<http://www.lix.polytechnique.fr/~bodirsky/seminaire/>) in LIX, Palaiseau in June 2013.

9.1.3. Referees

Emmanuel Hainry reviewed articles for the journal *Computability*, for *SIAM Journal on Computing*, and for the *STACS 2014* conference.

Emmanuel Jeandel reviewed articles for the *LICS 2013* and the *STACS 2014* conference.

Romain Péchoux reviewed articles for the *WORDS 2013* conference

Mathieu Hoyrup reviewed articles for the CiE 2013, STACS 2014, STOC 2014 conferences and the journals Logical Methods in Computer Science and Theory of Computing Systems.

9.1.4. Others

Isabelle Gnaedig is member of the scientific mediation committee of Inria Nancy Grand-Est and researcher social referee at Inria Nancy-Grand Est.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Unless specified otherwise, all teaching is done at Université de Lorraine, France.

Licence :

- Guillaume Bonfante
 - Java, L3, Mines Nancy
- Emmanuel Hainry
 - Operating Systems, 60 hours, L1, IUT Nancy Brabois
 - Algorithms and Programs, 60 hours, L1, IUT Nancy Brabois
 - Object Oriented Programming, 24 hours, L1, IUT Nancy Brabois
 - Databases, 24 hours, L2, IUT Nancy Brabois
 - Complexity, 28 hours, L1, IUT Nancy Brabois
 - Algorithmics, 12 hours, DU PFST (eq. L1), IUT Nancy Brabois
- Emmanuel Jeandel
 - Statistics for Computer Science, 46 hours, L3 Informatique
 - Linear Programming, 46 hours, L3 Informatique
 - Algorithmics and Programming 1, 60 hours, L1 Maths-Info
 - Algorithmics and Programming 4, 30 hours, L3 Informatique
 - Networking, 20 hours, L2 and L3 Informatique
- Romain Péchoux
 - Introduction to OO programming, 55 hours, L3 MIASHS parcours MIAGE.
 - Databases, 42 hours, L3 SG, ISAM-IAE
 - Propositional logic, 35 hours, L1 MIASHS
 - Algorithmic complexity, 30 hours, L3 MIASHS parcours MIAGE, IGA Casablanca, Marocco.

Master

- Guillaume Bonfante
 - Modelling and UML, M1, Mines Nancy
 - Video Games, M1, Mines Nancy
 - Semantics, M1, Mines Nancy
 - Safety of Software, M2, Mines Nancy
- Isabelle Gnaedig
 - Design of Safe Software, Coordination of the module, M2, Telecom-Nancy
 - Rule-based Programming, 20 hours, M2, Telecom-Nancy
- Emmanuel Jeandel
 - Algorithmics and Complexity, M1 Informatique and M1 ENSEM, 60 hours
 - Combinatorial Optimization, M1 Informatique, 30 hours.
- Romain Péchoux
 - Mathematics for computer science, 20 hours, M1 SC
 - Advanced Java, 52 hours, M1 MIAGE
- Simon Perdrix
 - Pépites Algorithmiques — Informatique Quantique, 14 hours, M1/M2, Ecole des Mines de Nancy.

9.2.2. Supervision

PhD : Joan Calvet, Analyse Dynamique de Logiciels Malveillants, Université de Lorraine and Ecole Polytechnique de Montreal, defended August 23rd, supervised by Jean-Yves Marion and José M. Fernandez.

PhD in progress: David Cattaneo, Combinatorial Modelization in Quantum Computation and Generalized Cover Problems, started sept. 2012, Pablo Arrighi (director), Simon Perdrix (co-advisor)

PhD in progress: Hugo Férée, Computational Complexity in Analysis, defense planned in December 2014, Jean-Yves Marion (director) and Mathieu Hoyrup (co-advisor).

PhD in progress: Hubert Godfroy, Semantics of Self-modifying Programs, Jean-Yves Marion

PhD in progress: Jérôme Javelle, Quantum Cryptography: Protocols and Graphs, started Jan. 2011, Pablo Arrighi (director), Mehdi Mhalla (co-advisor), Simon Perdrix (co-advisor)

PhD in progress: Thanh Dinh Ta, Malware Algebraic Modeling and Detection, started Sept. 2010, Jean-Yves Marion (director) and Guillaume Bonfante (co-advisor)

PhD in progress: Aurélien Thierry, Morphological Analysis of Malware, started Oct. 2011 supervised by Jean-Yves Marion.

9.2.3. Juries

Isabelle Gnaedig:

- participation to the Telecom-Nancy admission committee.

Emmanuel Jeandel

- Selection committee for a research assistant position in Nice (MCF 1114).
- Jury of Razvan Barbulescu's PhD Defense on "Algorithmes de logarithmes discrets dans les corps finis", defended in Université de Lorraine, December 5th.

9.3. Popularization

Isabelle Gnaedig is member of the scientific vulgarization committee of Inria Nancy Grand-Est. This committee is a choice and guidance instance helping the direction of the center and the person in charge of popularization events, to elaborate a strategy, to realize events and to help researchers to get involved in various actions aiming at popularizing our research themes, and more generally computer science and mathematics.

This year, in particular, the center participated to organization of mathematics competitions and projects for high school students, to conferences for computer science high school teachers, to the "Fête de la Science", to the "Moments d'invention" exhibition of the "Nancy Renaissance" event, and received several high school classes in various research teams of Inria Nancy Grand-Est. Details can be found at <https://iww.inria.fr/NanSciNum/#.UsGBEWTuKY8>.

CASCADE Project-Team

6. Dissemination

6.1. Editorial Boards

Editor-in-Chief

- of the *International Journal of Applied Cryptography (IJACT)* – Inderscience Publishers: David Pointcheval

Associate Editor

- of *Security and Communication Networks*: David Naccache (editor)
- of *Journal of Cryptographic Design*: David Naccache (editor)
- of *Encyclopedia of Cryptography and Security*: David Naccache (editor)
- of *Journal of Computer Security, IOS Press*: David Naccache (associate editor)
- of *Open Journal of Information Security and Applications, SOP*: David Naccache (editor)
- of *Cryptologia* – Taylor & Francis: David Naccache (editor)
- of *Information Processing Letters* – Elsevier: David Pointcheval
- of *IEEE Transactions on Information Forensics and Security*: Michel Abdalla
- of *IET Information Security*: Michel Abdalla

Columnist (in charge of the bi-monthly CryptoCorner)

- of the *IEEE Security and Privacy Magazine*: David Naccache

6.2. Program Committees

- FIC - January, Lille, France: David Naccache
- ComManTel - January, Ho Chi Minh City, Vietnam: David Naccache
- PKC - February, Nara, Japan: David Naccache
- CT-RSA - February, San Francisco, USA: Michel Abdalla
- IIT - March, Al Ain, UAE: David Naccache
- WAHC - April, Okinawa, Japan: David Naccache
- LightSec - May, Gebze, Turkey: David Pointcheval
- Eurocrypt - May, Athens, Greece: Vadim Lyubashevsky
- ASIACCS - May, Hangzhou, China: David Naccache
- HOST - June, Austin, Texas, US: David Naccache
- ACISP - July, Brisbane, Australia: Michel Abdalla
- SECRYPT - July, Reykjavik, Iceland: David Naccache
- Indocrypt - July, Mumbai, India: David Naccache
- Crypto - August, Santa Barbara, USA: Vadim Lyubashevsky
- ICACCI (SSCC) - August, Mysore, India: David Naccache
- CHES - August, Santa Barbara, CA, USA: David Naccache
- SPACE - October, Kharagpur, India: David Naccache
- IWSEC - November, Okinawa, Japan: Damien Vergnaud
- RIVF - November, Hanoi, Vietnam: David Naccache

- ICICS - November, Beijing, China: David Pointcheval, David Naccache
- Pairing - November, Beijing, China: Damien Vergnaud
- ISC - November, Dallas, Texas: David Naccache
- SBSeg - November, Manaus, Brazil: Michel Abdalla (Program Chair)
- ACM CCS - November, Berlin, Germany: David Naccache
- CANS - November, Paraty, Brazil: Michel Abdalla (Program Chair), Damien Vergnaud
- CARDIS - November, Berlin, Germany: David Naccache
- Asiacrypt - December, Bengaluru, India: Michel Abdalla, David Pointcheval, Hoeteck Wee
- IMACC - December, Oxford, UK: David Naccache
- Botconf - December, Nantes, France: David Naccache

6.3. Teaching - Supervision - Juries

6.3.1. Teaching

- Licence: David Naccache, Introduction to computer science, L1, Univ. Paris II
- Master: David Naccache, Scientific programming through practice, M1, ENS
- Master: David Naccache, Jacques Stern, Damien Vergnaud, Introduction to Cryptology, M1, ENS
- Master: Michel Abdalla, David Pointcheval, Vadim Lyubashevsky, Cryptography, M2, MPRI
- Master: David Naccache, Computer Security, M2, Univ. Paris II
- Master: David Naccache, Computer Security, M2, Beijing Jiaotong University
- Master: David Naccache, Risk Management, M2, Univ. Paris II
- Master: David Naccache, Computer Forensics, M2, Univ. Paris II
- Master: David Naccache, Computer Security, M2, University of Luxembourg
- Master: David Pointcheval, Cryptography, M2, ESIEA

6.3.2. Supervision

- PhD: Jérémy Jean, Cryptanalyse de primitives symétriques basées sur le chiffrement AES, September 24th 2013, Pierre-Alain Fouque
- PhD: Mario Strefer, Diffusion chiffrée avec traçage de traîtres, ENS, September 26th 2013, David Pointcheval
- PhD: Léo Ducas, Signatures fondées sur les réseaux euclidiens: attaques, analyses et optimisations, Univ. Paris 7, November 12th 2013, Phong Nguyen
- PhD: Patrick Derbez, Attaques par rencontre par le milieu sur l'AES, ENS, December 9th 2013, Pierre-Alain Fouque
- PhD: Aurore Guillevic, Étude de l'arithmétique des couplages sur des courbes algébriques pour la cryptographie, ENS, December 20th 2013, Phong Nguyen & Damien Vergnaud
- PhD in progress: Tancrede Lepoint, Lattice-based cryptography, 2011, Vadim Lyubashevsky & David Pointcheval
- PhD in progress: Sylvain Ruhault, Randomness in cryptography, 2011, David Pointcheval & Damien Vergnaud
- PhD in progress: Sonia Belaid, Leakage-resilient cryptography, 2012, Michel Abdalla
- PhD in progress: Fabrice Ben Hamouda, Leakage of information in cryptography, 2012, Michel Abdalla & David Pointcheval
- PhD in progress: Diana Maimut, Fully Homomorphic Encryption, 2012, David Naccache

- PhD in progress: Thomas Prest, Lattice-based cryptography, 2012, Vadim Lyubashevsky & David Pointcheval
- PhD in progress: Olivier Sanders, Delegation of computations, 2012, David Pointcheval
- PhD in progress: Mario Cornejo, Security for the cloud, 2013, Michel Abdalla
- PhD in progress: Alain Passelègue, Security against related-key attacks, 2013, Michel Abdalla
- PhD in progress: Adrian Thillard, Counter-measures against side-channel attacks and secure multi-party computation, 2013, Damien Vergnaud
- PhD in progress: Houda Ferradi, Biometric protocols and mobile security, 2013, David Naccache
- PhD in progress: Simon Cogliani, Authenticated Encryption, 2013, David Naccache

6.3.3. Juries

- PhD: Maria Christofi *Preuves de sécurité outillées d'implémentations cryptographiques* Univ. Versailles – Saint-Quentin, February 15th 2013: David Naccache
- PhD: Alfredo Rial, *Privacy-Preserving E-Commerce Protocols*, KU Leuven, Belgium, March 28th 2013: David Pointcheval
- HDR: Jessy Clédière *Treize années au Centre d'Evaluation de la Sécurité des Technologies de l'Information du CEA-Grenoble (CESTI-Léti)* Institut Néel (CNRS), Grenoble, June 19th 2013: David Naccache
- PhD: Alex Ruiz, *Contributions to Secret Sharing and Other Distributed Cryptosystems*, Univ. Politècnica de Catalunya, July 22nd 2013: Michel Abdalla
- PhD: David Oswald *Implementation Attacks: From Theory to Practice* Univ. Bochum, Germany, August 1st 2013: David Naccache
- HDR: Valérie Nacheff *Cryptographie, Attaques génériques, Authentification* Univ. Cergy-Pontoise, September 25th 2013: David Naccache
- PhD: Mario Strefler, *Diffusion chiffrée avec traçage de traîtres*, ENS, September 26th 2013: David Pointcheval (supervisor), David Naccache
- PhD: Léo Ducas, *Signatures Fondées sur les Réseaux Euclidiens: Attaques, Analyses et Optimisations*, Univ. Paris 7, November 12th 2013: David Pointcheval, Vadim Lyubashevsky
- PhD: Jannik Dreier, *Formal Verification of Voting and Auction Protocols: From Privacy to Fairness and Verifiability*, Univ. Grenoble, November 25th 2013: David Pointcheval (chair)
- PhD: Sébastien Tiran *Side Channels in the Frequency Domain* Univ. Montpellier 2, December 11th 2013: David Naccache
- PhD: Patrick Derbez, *Attaques par Rencontre par le Milieu sur l'AES*, ENS, December 9th 2013: David Pointcheval
- PhD: Julien Devigne, *Protocoles de re-chiffrement pour le stockage de données*, Univ. de Caen – Basse-Normandie, December 13th 2013: Damien Vergnaud
- PhD: Viet Cuong Trinh, *Sécurité et efficacité des schémas de diffusion de données chiffrés*, Univ. Paris 8, December 19th 2013: Michel Abdalla, David Pointcheval
- PhD: Aurore Guillevic, *Étude de l'arithmétique des couplages sur les courbes algébriques pour la cryptographie*, ENS, December 20th 2013: David Pointcheval, Damien Vergnaud (advisor)

6.4. Invited Talks

6.4.1. At Conferences

- Vadim Lyubashevsky: “The LPN Problem in Cryptography” at the 14th IMA International Conference on Cryptography and Coding. Oxford, UK, December 2013

- David Naccache (common work with Roman Korkikian and Guilherme Ozari de Almeida): “Instantaneous Frequency Analysis” at SECRYPT 2013, the 10th International Conference on Security and Cryptography. Reykjavik, Iceland, July, 2013
- David Naccache (common work with Eric Brier and Li-yao Xia): “How to Sign Paper Contracts? Conjectures & Evidence Related to Equitable & Efficient Collaborative Task Scheduling” at Open Problems in Mathematical and Computational Sciences Conference, Istanbul, Turkey, September 2013.
- David Naccache (common work with Hervé Chabanne, Jean-Michel Cioranescu, Vincent Despiegel and Jean-Christophe Fondeur) “Using Hamiltonian Totems as Passwords” at SantaCrypt 2013, Prague, Czech Republic, November 2013

6.4.2. At Organized Schools

- Vadim Lyubashevsky: “Lattice-Based Cryptography” at the Ecole de Printemps d’Informatique Theorique. Autrans, France, March 2013
- Vadim Lyubashevsky: “Lattice Cryptography” (5 hour course) at the Summer School on Lattices and FHE at Chongqing University. Chongqing, China, July 2013
- Vadim Lyubashevsky: “Lattice-Based Digital Signatures” at the Workshop on Lattice-Based Cryptography. Bangalore, India, December 2013

6.5. Scientific Animation

6.5.1. Organisation of Events

- a weekly seminar is organized: <http://www.di.ens.fr/CryptoSeminaire.html>

6.5.2. Steering Committees of International Conferences

- steering committee of CANS: David Pointcheval
- steering committee of PKC: David Pointcheval, David Naccache
- steering committee of FDTC: David Naccache (chair)
- steering committee of PROOFS: David Naccache
- steering committee of LATINCRYPT: Michel Abdalla
- steering committee of PAIRING: Michel Abdalla

6.5.3. Board of International Organizations

- Board of the *International Association for Cryptologic Research* (IACR): Michel Abdalla (2013 – 2015), David Pointcheval (2008–2016)

6.5.4. French Research Community

- Recruitment committee at Université of Rennes (PR 27): David Pointcheval
- Recruitment committee at Université of Versailles (MCF 27): Damien Vergnaud
- Recruitment committee at Université Paris 1 (PR 27): David Naccache
- Recruitment committee at Université Paris 2 (MCF 27): David Naccache
- Recruitment committee at Université Paris 2 (MCF 26): David Naccache
- Recruitment committee at École normale supérieure (MCF 27): Damien Vergnaud
- Recruitment committee at École normale supérieure (MCF 27): Damien Vergnaud
- Appointed member of the *Conseil National des Universités* (CNU): Damien Vergnaud
- Scientific board member, Agence pour les mathématiques en interaction avec l’entreprise et la société: David Naccache
- Scientific board member, Conseil supérieur de la formation et de la recherche stratégiques (CSFRS, a French government body): David Naccache
- Qualified Appointee, Banque de France’s Payment Security Observatory: David Naccache

CASSIS Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Editorial board

- Information & Computation (Véronique Cortier)
- Journal of Computer Security (Véronique Cortier)

9.1.2. Conferences

- FroCoS 2013, 9th Symposium on Frontiers of Combining Systems, 18–20 September 2013, Nancy, France, (Christophe Ringeissen, conference chair)

9.1.3. Program committees

- Fabrice Bouquet: ICST 2013 (Publicity Chair), MoDeVVA 2013
- Véronique Cortier: CSF 2013 (PC Chair), CCS 2013, LICS 2013, POST 2013
- Frédéric Dadeau : CSTVA'2013 (PC Chair), QSIC'2013.
- Abdessamad Imine: AICCSA 2013 (co-chair), CIIA 2013, DEXA 2013, DEXA 2014
- Steve Kremer: ACNS 2014, POST 2014 (PC Chair), Security Track of ACM SAC 2014 (PC Chair), ESORICS 2013, ICICS 2013, ISPEC 2013, POST 2013, RV 2013
- Christophe Ringeissen: CADE-24, FroCoS 2013, UNIF 2013, UNIF 2014 (co-chair)
- Michael Rusinowitch: LATA 2013, CRISIS 2013, ESSOS DS 2013, GRSRD 2013.
- Laurent Vigneron: UNIF 2013.

9.1.4. Steering committees

- Véronique Cortier: FCS (Chair), CSF
- Steve Kremer: CSF, ETAPS, POST

9.1.5. Spring school

- Spring School on Trusted and Secure Composite Services, 27–31 May 2013, Malaga, Spain, (Abdessamad Imine, Lecturer)
- JDEV'2013 National Day for Software development, 4–6 September 2013, Ecole polytechnique (Palaiseau), France (Bouquet F., Gauthier J.-M. and Enderlin I., 5 tutorials and 1 Lecturer) - 500 participants.
- School of INRA on the Testing for Software Development, in PEPI IDL 2013 ("*Partage d'Expérience et de Pratiques en Informatique*" visant l'"*Ingénierie Développement Logiciel*"), 9–12 December 2013, Ecully (69) France (Bouquet F., Gauthier J.-M. and Enderlin I., 3 days of tutorials) - 30 participants.
- 13th International School on Foundations of Security Analysis and Design, 2–7 September 2013, Bertinoro, Italy (Mathieu Turuani, Tutorial).
- AFADL'2013 ("*Approches Formelles dans l'Assistance au Développement de Logiciels*"), during the GDR - GPL - CIEL - AFADL Days, 2–5 april 2013, Nancy, France (Mathieu Turuani, Tutorial) - 135 participants.

9.1.6. Working groups

- GT-Verif, Verification, GDR IM Working Group (Véronique Cortier, chair)

- IFIP WG-1.7 Foundations of Security Analysis (Véronique Cortier, vice-Chair)
- IFIP WG-1.6 - Term Rewriting (Michael Rusinowitch, Laurent Vigneron)
- MTV2, Testing Methods for Verification and Validation, GDR GPL Working Group (Frédéric Dadeau, co-chair)
- FORWAL, Formalisms and Tools for Verification and Validation, GDR GPL Working Group (Pierre-Cyrille Héam, co-chair)

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Licence :
 - Frédéric Dadeau, Programming, 37 hours (ETD), L1, Université de Franche-Comté
 - Frédéric Dadeau, Databases, 39 hours (ETD), L1, Université de Franche-Comté
 - Frédéric Dadeau, Web Languages, 24 hours (ETD), L2, Université de Franche-Comté
 - Frédéric Dadeau, Object-Oriented Modelling and Design, 44 hours (ETD), L3, Université de Franche-Comté
 - Alain Giorgetti, Logics and Deduction, 52 hours (ETD), L2, Université de Franche-Comté, France.
 - Alain Giorgetti, Formal Methods, 81 hours (ETD), L3, Université de Franche-Comté, France
 - Olga Kouchnarenko, Formal Languages, 65 hours (ETD), L3, Université de Franche-Comté, France
 - Olga Kouchnarenko, Languages, Specification and Proof, 25 hours (ETD), L3, Université de Franche-Comté, France
 - Olga Kouchnarenko, Parsing Algorithms and XML, 30 hours (ETD), L3, Université de Franche-Comté, France
- Master :
 - Fabrice Bouquet, Artificial Intelligence (also in e-learning), 53 hours (ETD), M2, Université de Franche-Comté
 - Fabrice Bouquet, Compilation, 54 hours (ETD), M2, Université de Franche-Comté
 - Fabrice Bouquet, Testing (also in e-learning), 71 hours (ETD), M2, Université de Franche-Comté
 - Frédéric Dadeau, Testing, 13 hours (ETD), M2, Université de Franche-Comté
 - Alain Giorgetti, Program Proofs, 58 hours (ETD), M1, Université de Franche-Comté, France.
 - Alain Giorgetti, Decision Procedures, 13 hours (ETD), M2, Université de Franche-Comté, France.
 - Steve Kremer, Security Theory, 24 hours (ETD), M2 Computer science, Lorraine University, France.
 - Christophe Ringeissen, Decision Procedures for Software Verification, 24 hours (ETD), M2 Computer science, Lorraine University, France.
 - Laurent Vigneron, Security of information systems, 15 hours (ETD), M2 Computer science, Lorraine University, France.
 - Laurent Vigneron, Formal methods, 24 hours (ETD), M2 MIAGE, Lorraine University, France.

- Pierre-Cyrille Héam, Calculability, 23 hours (ETD), M2 Computer science, Université de Franche-Comté, France.
- Pierre-Cyrille Héam, Introduction to Büchi Automata, 18 hours (ETD), M2 Computer science, Université de Franche-Comté, France.
- Abdessamad Imine, Security for XML Documents, 12 hours (ETD), M1, University of Lorraine, France.
- Olga Kouchnarenko, Specification, Verification and Validation, 12 hours (ETD), M2, Université de Franche-Comté, France.
- Olga Kouchnarenko, Compositional approaches in verification, 18 hours (ETD), M2, Université de Franche-Comté, France.
- Olga Kouchnarenko, Security and Components, 10,5 hours (ETD), M2, Université de Franche-Comté, France.
- Doctorat:
 - Steve Kremer, Les protocoles de sécurité : modélisation et vérification, 4,5 hours (ETD), École jeunes chercheurs en programmation (EJCP), Rennes, France

9.2.2. Supervision

- PhD :
 - Kalou Cabrera Castillos, Automated Test Scenario Generation from Property Patterns and Behavioral Models, November 28, Frédéric Dadeau and Jacques Julliand
 - Jérôme Cantenot, Management of consistence in verication conditions in the test generation context, Université de Franche Comté, 13 November, Fabrice Ambert and Fabrice Bouquet.
 - Vincent Hugot, Approximations and Constraints: Application to the Verification of Embedded Systems, Université de Franche Comté, September 27, Pierre-Cyrille Héam and Olga Kouchnarenko
 - Elena Tushkanova, Specification and formal certification of (combinations of) decision procedures, Université de Franche Comté, July 19, Alain Giorgetti, Olga Kouchnarenko and Christophe Ringeissen
- PhD in progress :
 - Hadrien Bride, Validation and Reconfiguration of Modal Petri Nets within Constraint Logic Programming, started in October 2013, Olga Kouchnarenko and Fabien Peureux
 - Rémy Chrétien, Decision procedures of equivalence properties, started in October 2012, Véronique Cortier and Stéphanie Delaune
 - Aloïs Dreyfus, Efficient approches for systems validation, started in November 2010, Pierre-Cyrille Héam and Olga Kouchnarenko
 - Ivan Enderlin, Test Data Generation for Unit Testing in PHP, started in October 2011, Fabrice Bouquet, Frédéric Dadeau and Alain Giorgetti
 - Jean-Marie Gauthier, Method for validation and simulation of SysML model: Applied on micro-systems, started in October 2012, Fabrice Bouquet, Fabien Peureux and Ahmed Hammad
 - Richard Genestier, Formal specification and verification of programs generating structured data, started in October 2012, Alain Giorgetti and Olga Kouchnarenko
 - Bao-Thien Hoang, Secure Collaboration in Social Networks, started in April 2011, Abdessamad Imine and Christophe Ringeissen
 - Jean-Luc Joly, Randomized approaches for validation and verification procedures, started in December 2011, Pierre-Cyrille Héam
 - Robert Künnemann, Verification of Security APIs, started in October 2010, Steve Kremer and Graham Steel

Éric Le Morvan, Secure composition of cryptographic protocols, started in October 2013, Véronique Cortier

Houari Mahfoud, Access Control Models for XML Documents, started in September 2010, Abdessamad Imine and Michaël Rusinowitch

Guillaume Scerri, Symbolic and automatic security proofs in computational models, started in September 2011, Hubert Comon-Lundh and Véronique Cortier

Cyrille Wiedling, Formal analysis of E-voting protocols, started in September 2011, Véronique Cortier

Hiep Nguyen Huu, Secure Collaboration in Mobile Social Networks, started in November 2013, Abdessamad Imine and Michaël Rusinowitch

9.2.3. *Juries*

Inria evaluation committee (Véronique Cortier, Michaël Rusinowitch)

Jury starting/advanced Inria positions and jury international chair Inria 2013 (Véronique Cortier)

Jury Junior Research Position Inria Nancy Grand Est (Michaël Rusinowitch)

Referee for David Cadé's PhD, December 2013: Proved Implementations of Cryptographic Protocols in the Computational Model (Véronique Cortier)

Referee for Matthijs Melissen's PhD, October 2013: Game Theory and Logic for Non-repudiation Protocols and Attack Analysis (Steve Kremer)

Referee for Jannik Dreier's PhD, November 2013: Formal Verification of Voting and Auction Protocols: From Privacy to Fairness and Verifiability (Steve Kremer)

Referee for Naipeng Dong's PhD, November 2013: Enforced Privacy: from Practice to Theory (Michaël Rusinowitch)

Referee for Mohamed Iguernelala's PhD, June 2013: Renforcement du Noyau d'un Démonstrateur SMT (Michaël Rusinowitch)

Referee for Sarah Nait Bahloul's PhD, December 2013: Inférence de règles de contrôle d'accès pour assurer la confidentialité des données au niveau des vues matérialisées (Michaël Rusinowitch)

Referee for Robert Guduvan's PhD, April 2013, A model driven Development of tests for avionics embedded systems (Fabrice Bouquet)

Referee for Taha Triki's PhD, October 2013, Filtering and reduction techniques combinational tests (Fabrice Bouquet)

Examiner for Florent Pompigne's PhD, December 2013, Nancy: Modélisation logique de la langue et Grammaires Catégorielles Abstraites (Laurent Vigneron).

Examiner for Asma Tafat's PhD, September 2013, Orsay: Preuves par raffinement de programmes avec pointeurs. (Alain Giorgetti).

Committee chair for Lilia Zian Khodja's PhD, May 2013, Besançon: Résolution de systèmes linéaires et non linéaires creux sur grappes de GPU's (Pierre-Cyrille Héam).

9.3. Popularization

Invited conference of Véronique Cortier at the conference "Sciences et Société", Nancy, January 17th, 2013. "Vote par internet", popularization science paper on e-voting. In *Interstices*, January 2013. Véronique Cortier and Steve Kremer.

Fête de la Science 2013: Science popularization action during one week on a workshop "a cryptographic treasure hunting". Véronique Cortier, David Galindo, Stéphane Glondu, Steve Kremer, Éric Le Morvan, Cyrille Wiedling.

Video gaming month at the “Fabrikà Science”, University of Franche-Comté, December 2013. Popularization of computer science using the topic of video games. Frédéric Dadeau.

CASTOR Team

9. Dissemination

9.1. Popularization

- With Maria Vittoria Salvetti of the University of Pisa, Hervé Guillard has written a popularization article "Des mathématiciens à la rescousse des lagunes méditerranéennes" [29] for the journal *Accromath*.
Accromath is a journal of the "Centre de recherches mathématiques de l'Université de Montréal" whose aim is to popularize Mathematics and their applications for secondary school pupils and their professors.
- Redaction of the short note "Les vagues et les rivages, une question de changement de variables" <http://mpt2013.fr/changement-de-variable-et-comment-les-vagues-montent-a-lassaut-des-rivages/> in the framework of Mathematics of Planet Earth 2013 (MPE2013) published 04/10/2013 (Hervé Guillard).
- Redaction of the short note "Retour vers le futur" <http://mpt2013.fr/retour-vers-le-futur/> in the framework of Mathematics of Planet Earth 2013 (MPE2013) published 16/10/2013 (Jacques Blum & Didier Auroux).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Ecole d'ingénieur: D. Auroux, Optimisation, 66h, M1, Polytech Nice, Université de Nice Sophia Antipolis, France

Master: D. Auroux, Optimisation, 45h, M1, Université de Nice Sophia Antipolis, France

Ecole d'ingénieur: D. Auroux, Méthodes numériques, 36h, M1, Polytech Nucei Sophia, Université de Nice Sophia Antipolis, France

Master: J. Blum, Optimization, 30h, M1 Erasmus Mundus, Université de Nice Sophia Antipolis, France

Master: J. Blum, Optimisation et controle, 30h, M2, Université de Nice Sophia Antipolis, France

Ecole d'ingénieur: J. Blum, Commande Optimale, 37.5h, M2, Polytech Nice Sophia, Université de Nice Sophia Antipolis, France

Ecole d'ingénieur: C. Boulbe, Analyse, 68h, L2, Polytech Nice Sophia Antipolis, France

Ecole d'ingénieur: C. Boulbe, Analyse Numérique, 71.5h, L3, Polytech Nice Sophia Antipolis, France

Ecole d'ingénieur: C. Boulbe, Méthodes numérique - EDP, 66h, M1, Polytech Nice Sophia Antipolis, France

Ecole d'ingénieur: B. Faugeras, Analyse, 39h, L2, Polytech Nice Sophia Antipolis, France

Master: B. Nkonga, Finites volumes/Finites differences, 90h, M1, Université de Nice Sophia Antipolis, France

Master: B. Nkonga, Algorithmique, 35h, M1, Université de Nice Sophia Antipolis, France

Master: B. Nkonga, Calcul Parallèle, 24h, M2, Université de Nice Sophia Antipolis, France

Licence: A. Sangam, Analyse, 40h, L1, Université de Nice Sophia Antipolis, France

Licence: A. Sangam, Mathématiques Appliquées, 50h, L3, Université de Nice Sophia Antipolis, France

Master: A. Sangam, Introduction to Finite Element, 25h, M1, Université de Nice Sophia Antipolis, France

9.2.2. Supervision

PhD : C. Lachat, Conception et validation d'algorithme de remaillage parallèles à mémoire distribuée basés sur un remaillleur séquentiel", University of Nice Sophia Antipolis 13 décembre 2013, Hervé Guillard, Laurent Hascoet.

PhD : M. Martin, Modélisation fluide pour les plasmas de fusion : approximation par éléments finis de Bell, University of Nice Sophia Antipolis, 4 juin 2013, Boniface Nkonga

PhD in progress: K. Bashtova, modelling of abrasive waterjet and focused ion beam, 1st September 2013, Didier Auroux

PhD in progress : Pierre Cargemel, "Déraffinement adaptatif de maillages non structurés pour une simulation efficace des procédés EOR", September 1st 2012, Hervé Guillard.

PhD In progress : J. Costa, Modeling of Elms, Sep 2012 - July 2015, B. Nkonga

PhD in progress: A. Drogoul, Détection de structures fines en imagerie par analyse asymptotique topologique, 1st september 211, Didier Auroux, Gilles Aubert (UNS)

PhD in progress : E. Estibals, "MHD réduite: Modélisation et Simulation numérique utilisant des éléments finis stabilisés d'ordre élevés sur un maillage courbe non-structuré. Application à l'injection de glaçons et de masse dans ITER", 15th october 2013, Hervé Guillard, Afeintou Sangam.

PhD in progress: V. Groza, control and identification of etching rate function in abrasive waterjet, 1st september 2013, Didier Auroux

PhD in progress : C. Le Touze, "Etude du couplage entre modèles à phase séparée et modèles à phase dispersée pour la simulation de l'atomisation primaire en combustion cryotechnique", September 1st 2011, Hervé Guillard.

PhD in progress : J. Vides, Numerical Modeling in toroidal geometries, Oct. 2012 - July 2014, Boniface Nkonga and Hervé Guillard

9.2.3. Juries

Hervé Guillard acted as referee in the PhD thesis jury of Samuel Richard, Aix Marseille Université

Hervé Guillard was in the PhD thesis jury of Clément Surville, Aix Marseille Université

Hervé Guillard acted as referee in the PhD thesis jury of Sophie Gérald: Paris VI

Jacques Blum was referee in the PhD thesis jury of David Coulette , Université de Nancy

Jacques Blum was referee in the HdR jury of Frederic Parrenin, Université de Grenoble

Jacques Blum was in the HdR jury of Maelle Nodet, Université de Grenoble

Richard Pasquetti was president of the PhD thesis jury of A. Parades, Aix-Marseille université

Boniface Nkonga was referee in the PhD thesis jury of

- Mathias Malandain, INSA Rouen,
- Laurent Dastugue, Université Pierre-et-Marie-Curie :Paris VI
- Nicolas Kowalski, Université Pierre-et-Marie-Curie :Paris VI
- Carine Moussaed, Université Montpellier II
- Alejandro Paredes, Aix-Marseille Université

Boniface Nkonga was in the PhD thesis jury of

- Alexandre Carabias: Université de Nice Sophia Antipolis (president)
- Sébastien Le Martelot, Aix-Marseille Université

CELTIQUE Project-Team

8. Dissemination

8.1. Scientific Animation

Sandrine Blazy and David Pichardie co-chaired and organized in Rennes the international conference ITP 2013 and its 2 related workshops. Sandrine Blazy is a member of the steering committee of the ITP conference. Sandrine Blazy served on the organizing committee of the international conferences VMCAI 2013 and LPAR 2013. Sandrine Blazy was scientific director of the “Languages and software engineering department” of IRISA until September 2013. Sandrine Blazy gave an invited talk at the VSTTE 2013 conference in Menlo Park, USA. David Pichardie served on the external reviewing committee of the international conference PLDI 2013 and the organizing committee of the international workshops BYTECODE 2013, PxTP 2013 and Coq Workshop 2013. David Pichardie is chair of the department of Computer Science at ENS Rennes. Alan Schmitt co-chaired and organized the International Symposium on Database Programming Languages, co-located with VLDB, in Trento, Italy (<http://dbpl2013.inria.fr/>). He also participated in the organization of the Programming Languages Mentoring Workshop, co-located with POPL, in Roma, Italy (<http://www.doc.ic.ac.uk/~gds/PLMW/index.html>). Alan Schmitt is a member of the steering committee of the Journées Francophones des Langages Applicatifs. Thomas Jensen and Alan Schmitt organized the École Jeunes Chercheurs en Programmation (EJCP 2013).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Master : Frédéric Besson, Compilation, 68h, level M1, Insa Rennes, France
- Licence : Sandrine Blazy, Programmation fonctionnelle, 30h, L3, Rennes 1, France
- Master : Sandrine Blazy, Méthodes Formelles pour le développement de logiciels sûrs, 53h, M1, Rennes 1, France
- Master : Sandrine Blazy, Software vulnerabilities, 26h, M2, Rennes 1
- Master : Sandrine Blazy, Mechanised semantics, 15h, M2, Rennes 1, France
- Licence : David Cachera, Formal Languages and Computability, 24h, L3, ENS Rennes
- Licence : David Cachera, Logics, 24h, L3, ENS Rennes
- Licence : David Cachera, Algorithmics, 12h, L3, ENS Rennes
- Master : David Cachera, Programming Language Semantics, 24h, M1, Rennes 1
- Licence : Delphine Demange, Algorithmique et Programmation Fonctionnelle, 80h, level L1, Université de Rennes 1 / Istic, France
- Master : Delphine Demange, Sémantique, 8h, level M1, Université de Rennes 1 / Istic / ENS Cachan Antenne Bretagne, France
- Licence : Thomas Genet, Programmation fonctionnelle, 32h, niveau L3, Université de Rennes 1 / Istic, France
- Master : Thomas Genet, Conception et vérification formelle, 90h, niveau M1, Université de Rennes 1 / Istic, France
- Master : Thomas Genet, Protocoles cryptographiques, 24h, niveau M2, Université de Rennes 1 / Istic, France
- Master : Thomas Jensen, Program analysis, 14h, M2, Rennes
- Master : Thomas Jensen, Software security, 20h, M2, Rennes

Licence : David Pichardie, Algorithms, 60h, L3, ENS Rennes

Master : David Pichardie, Mechanised semantics, 15h, M2, Rennes 1, France

Master : David Pichardie, Program analysis, 6h, M2, Rennes

Licence : Alan Schmitt, Programmation Fonctionnelle, 37h, niveau L3, Insa Rennes, France

8.2.2. Supervision

PhD : Pierre-Emmanuel Cornilleau, Certification of static analysis in many-sorted first-order logic, ENS Cachan - antenne de Bretagne, 25 march 2013, Thomas Jensen and Frédéric Besson

PhD in progress : Pierre Wilke, Retro-engineering of auto-modifying code by static analysis, 1st august 2013, Sandrine Blazy and Frédéric Besson

PhD in progress : Valérie Murat, Automatic Verification of infinite state systems by tree automata completion, 1st august 2011, Thomas Genet

PhD in progress : Yann Salmon, Reachability for Term Rewriting Systems under Strategies, 1st august 2012, Thomas Genet

PhD in progress: Andre Oliveira Maroneze, Compilation vérifiée et calcul de temps d'exécution au pire cas, septembre 2010, Sandrine Blazy, David Pichardie and Isabelle Puaut

PhD in progress: Stéphanie Riaud, Transformations de programmes pertinentes pour la sécurité du logiciel, septembre 2011, Sandrine Blazy

PhD in progress: Vincent Laporte, Formal verification of static analyses for low level languages, septembre 2012, Sandrine Blazy and David Pichardie

PhD in progress: David Bühler, Communication between analyses by deductive verification and abstract interpretation, November 2013, Sandrine Blazy and Boris Yakobowski (CEA)

PhD in progress : Martin Bodin, Certified Analyses of JavaScript, 1st september 2012, Thomas Jensen and Alan Schmitt

PhD in progress : Oana Andreescu, Proof reusability in the formal modeling of secure operating systems, 1st September 2013, Thomas Jensen and Stephane Lescuyer (Prove & Run)

PhD in progress : Pauline Bolignano, Formal methods for minimizing a trusted computing base in an operating system, 1st October 2013, Thomas Jensen and Vincent Siles (Prove & Run)

8.2.3. Juries

Frédéric Besson, jury member for the PhD defense of Mohamed Iguernelala, July 10th 2013

Sandrine Blazy, jury member (reviewer) for the PhD defense of Cédric Auger, February 2013, University Paris Sud

Sandrine Blazy, jury member (reviewer) for the PhD defense of Suman Saha, March 2013, University Paris 6

Sandrine Blazy, jury member (president) for the PhD defense of Benjamin Lesage, May 2013, University Rennes 1

Sandrine Blazy, jury member (reviewer) for the PhD defense of Xiaomu Shi, July 2013, Grenoble University

Sandrine Blazy, jury member for the PhD defense of Pierre Néron, October 2013, École Polytechnique

Sandrine Blazy, jury member (reviewer) for the PhD defense of Jean Fortin, October 2013, University Paris East

Thomas Jensen, jury member (examiner) for the PhD defense of Andreas lundblad, March 2013, Royal Technological University, Stockholm, Sweden.

Thomas Jensen, jury member (reviewer) for the PhD defense of Michal Terepeta, October 2013, Technical University, Denmark.

Thomas Jensen, jury member (president) for the PhD defense of Yassamine Seladji, November 2013, Ecole Polytechnique.

Thomas Jensen, jury member (reviewer,president) for the PhD defense of Quentin Sabah, December 2013, University of Grenoble.

David Pichardie, jury member (president) for the PhD defense of Sebastien Chédor, December 2013, University Rennes 1

8.3. Popularization

Frédéric Besson and Nataliia Bielova have presented their approach for quantifying web-fingerprinting in the "Du côté de la recherche" section of the November issue of Ouest Inria.

David Pichardie organised the third edition of the french Castor Informatique contest. This contest promotes Computer Science in secondary schools and high schools. It is organised by Inria, ENS Cachan and the France IOI association and supported by CNRS, Pascaline, the SIF and API associations. In 2013, there was about 170.000 participants.

CEPAGE Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Editorial Work

- Ralf Klasing is Associate Editor for
 - Algorithmic Operations Research (since May 2007),
 - Parallel Processing Letters (since August 2007),
 - Networks (since September 2007),
 - Computing and Informatics (since January 2008),
 - Theoretical Computer Science (since December 2009),
 - Fundamenta Informaticae (since January 2010),
 - Discrete Applied Mathematics (since February 2010),
 - Wireless Networks (since May 2010),
 - Journal of Interconnection Networks (since November 2010).
- Olivier Beaumont is Associate Editor for
 - IEEE Transactions on Parallel and Distributed Systems (since June 2010).

8.1.2. Steering Committees

- Ralf Klasing is a member of the Steering Committee of the *International Colloquium on Structural Information and Communication Complexity (SIROCCO)*.

8.1.3. Program Committees

- Olivier Beaumont: ICPP 2013 (Chair, Algorithm Track), IPDPS 2013, HCW 2013, ISCIS 2013, IPDPS 2014, EuroPar 2014.
- Ralf Klasing: SSS 2013 (Co Chair, Ad-hoc, sensor, robot and opportunistic networks Track) WALCOM 2015, IWOCA 2014, ADHOC-NOW 2014, ALGOSENSORS 2013, ADHOC-NOW 2013, FCT 2013, IWOCA 2013, vSEA 2013.
- David Ilcinkas: SIROCCO 2013, ADHOC-NOW 2013, AlgoTel 2013.
- Lionel Eyraud-Dubois: IPDPS 2013, HiPC 2013, IPDPS 2014, HiPC 2014.
- Adrian Kosowski: COCOA 2013, SSS 2013, DISC 2013, ADHOC-NOW 2013, FCT 2015 (PC co-chair).
- Sofian Maabout: DaWAK 2013, DOLAP 2013, BDA 2013, EDA 2013, DaWAK 2014. PC co-chair of MEDI 2013.
- Cyril Gavoille: WG 2014, PODC 2014, IPDPS 2014, PODC 2013, ICALP 2013, IPDPS 2013, SODA 2013.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master : Communication and Routing (last year of engineering school ENSEIRB, 2012) O. Beaumont, N. Bonichon, L. Eyraud, N. Hanusse, R. Klasing, A. Kosowski (16h)

Master : Communication Algorithms in Networks (2nd year MASTER "Algorithms and Formal Methods", University of Bordeaux, 2012) R. Klasing (24h)

Master : Search Engines (2nd year of engineering school ENSEIRB, 2012) O. Beaumont (20h)

Master : Distributed Computing (2nd year MASTER "Réseaux, Systèmes et Mobilité"), (24h) C. Gavaille

8.2.2. Supervision

HdR : Nicolas Bonichon, Université de Bordeaux 1, 2013

HdR : Adrian Kosowski, Université de Bordeaux 1, 2013

PhD : Ahmed Wade, Université de Bordeaux, 2014

PhD : Przemyslaw Uznanski, Université de Bordeaux 1, 2013

PhD : Pierre Halftermeyer, Université de Bordeaux 1, 2013

PhD : Quentin Godfroy , Université de Bordeaux 1, 2013

PhD : Christian Glacet , Université de Bordeaux 1, 2013

CIDRE Project-Team

9. Dissemination

9.1. Scientific Animation

Frédéric Tronel and Nicolas Prigent are members of the organization and program committees of the French symposium SSTIC about security of information and communications technologies (Symposium sur la Sécurité des Technologies de l'Information et de la Communication). This symposium is held each year in Rennes and gathers more than 400 people coming from academic, industrial and governmental sectors.

Emmanuelle Anceaume served as a reviewer for the following conferences:

- IEEE/ACM International Conference on Ubiquitous Computing and Communications (IUCC). 2013 (Australia).
- International Symposium on Security and Multimodality in Pervasive Environments (SMPE). 2013 (Spain).
- International Conference on Secure and Trust Computing, data management, and Applications (STA). 2013 (Japan).
- International Conference on Pervasive and Embedded Computing and Communication Systems (PECCS), 2013 (Spain).

Christophe Bidan is a member of the Selection and Validation Committee (CSV - Comité de Sélection et de Validation) of the Images & Réseaux cluster, of the advisory board the security activities of the DGA-MI (Direction Générale de l'Armement - Maîtrise de l'Information). Christophe Bidan served as a reviewer for the following conferences:

- SecureComm - International Conference on Security and Privacy in Communication Networks 2013.
- SETOP - International Workshop on Autonomous and Spontaneous Security 2013.
- IIT - International Conference on Innovations in Information Technology 2013.

Sébastien Gambs acts as:

- member of the editorial board of International Journal of Data Mining, Modelling and Management (<http://www.inderscience.com/browse/index.php?journalID=342#board>).
- member of the editorial board of International Journal of Privacy and Health Information Management (<http://www.igi-global.com/journal/international-journal-privacy-health-information/41027>).
- member of the program committee of the « 5th International Workshop on SEcurity and SOCIAL Networking (SESOC 20123) » held in March 2013 in San Diego, USA.
- member of the program committee of the « Workshop on Privacy and Anonymity for the Digital Economy (PADE 2013) » held in June 2013 in Sydney, Australia (http://pade-lcn2013.conference.nicta.com.au/?page_id=14).
- member of the program committee of the « 11th International Conference on Privacy, Security and Trust (PST 2013) » held in July 2013 in Tarragona, Spain (<http://unescoprivacychair.urv.cat/pst2013/>).
- member of the program committee of the « 14th Conference on Communications and Multimedia Security (CMS 2013) » held in September 2013 in Magdeburg, Germany (<http://www.cms2013.de/>).
- member of the program committee of the « 8th International Workshop on Data Privacy Management (DPM 2013) » held in September 2013 in Egham, UK (<http://research.icbnet.ntua.gr/DPM2013/>).

- member of the program committee of the « 6th Symposium on Foundations and Practice of Security (FPS 2013) » held in October 2013 in La Rochelle, France (<http://conferences.telecom-bretagne.eu/fps/2013/>).
- member of the program committee of the « 8th International Conference on Risks and Security of Internet and Systems (CRISIS 2013) » held in October 2013 in La Rochelle, France (<http://secinfo.msi.unilim.fr/crisis2013/>).
- member of the program committee of the « 4th International Conference on Emerging Ubiquitous Systems and Pervasive Networks (EUSPN 2013) » held in October 2013 in Niagara Falls, Canada (<http://cs-conferences.acadiau.ca/euspn-13/>).
- external reviewer for PETS 2013 (13th Privacy Enhancing Technologies Symposium), Transactions on Mobile Computing, IEEE Transactions on Parallel and Distributed Systems, Journal of Parallel and Distributed Computing, Journal of Systems and Software and Information Systems.

Gilles Guette is member of the program committee of the symposium SSTIC. He also served as a reviewer for the following conferences:

- National conference SARSSI 2013.
- National conference SSTIC 2013.

Ludovic Mé is a member of the steering committee of RAID (International Symposium on Research in Attacks, Intrusions and Defenses, ex-Recent Advances in Intrusion Detection), of the French conference SARSSI, and of the conference C&ESAR organized by the DGA. He served from 2011 to 2013 the scientific board of the CSFRS ("High Council for Strategic Education and Research"). He served this year as a reviewer for the ANRT organization, and for a few journals.

Guillaume Piolle served as a reviewer for the Internal Journal of Information Security. He is a member of CERNA, the ethics committee of Allistene, serving as a common reference point for French institutions undertaking research in information technologies. He also served as a reviewer for the following conferences:

- IIT - International Conference on Innovations in Information Technology 2013;
- SARSSI - National conference on Security of Information Systems and Network Architectures 2013.

Nicolas Prigent served as a reviewer for the SSTIC 2013 conference. He also was the PC chair of SAR-SSI 2013.

Frédéric Tronel served as a reviewer for the following conferences:

- International conference Principles of Distributed Computing (PODC 2013) (as an external reviewer).
- National conference SSTIC 2013.

Valérie Viet Triem Tong served as a reviewer for the following conferences:

- International journal Science of Computer Programming.
- International conference ICC 2014.

Guillaume Hiet served as a reviewer for the following organizations :

- Fonds de recherche du Québec – Nature et technologies
- ANRT
- ANR (INS)

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Christophe Bidan is Professor at Supélec :

Licence : “Models and programming languages”, lab work (8h), L3 - first year of the engineer degree, Supélec, France

Licence : “Foundations of computer science, data structures and algorithms.”, lectures (18h), tutorial (6h) and lab work (12h), L3 - first year of the engineer degree, Supélec, France

Licence: “Software engineering”, tutorial (6h) and lab work (12h), L3 - first year of the engineer degree, Supélec.

Licence: “Information System”, tutorial (6h), M1 - second year of the engineer degree, Supélec.

Master : “Introduction to security”, lab work (4h30), M2 - third year of the engineer degree, Supélec, France

Master : “Applied / Advanced Cryptography”, lectures (12h) and lab work (24h), M2 - third year of the engineer degree, Supélec, France.

Master : “Supervision of student project”, 4 projects, M1 - second year of the engineer degree, Supélec, France

Master : “Supervision of student project”, 1 project, M2 research degree of University of Rennes I.

Sébastien Gambs is Associate Professor at Université de Rennes I:

Master: “Protection of Privacy”, 32 hours including 16 hours of lectures, M2 - Master Pro SSI, Université de Rennes I, France.

Master: “Topics on Authentication”, 16 hours of lectures, M2 - Master Pro SSI, Université de Rennes I, France.

Gilles Guette is Associate Professor at University of Rennes I :

Master : “Network Architecture and Security”, 48 hours including 16 hours of lecture, M1 - second year of the engineer degree, ESIR, France

Master : “Network Administration”, 42 hours including 14 hours of lecture, M1 - second year of the engineer degree, ESIR, France

Master : “Network and System Tools”, 24 hours including 4 hours of lecture, M1 - second year of the engineer degree, ESIR, France

Master : “Access Network”, 6 hours including 2 hours of lecture, M1 - second year of the engineer degree, ESIR, France

Master : “Network and System Security”, 18 hours including 6 hours of lecture, M2 - third year of the engineer degree, ESIR, France

Master : “Network Security”, 12 hours including 12 hours of lecture, M2 - third year of the engineer degree, ESIR, France

Master : “Infrastructure Network”, 20 hours including 4 hours of lecture, M2 - third year of the engineer degree, ESIR, France

Master : “Supervision of student project”, 1 projects, M1 - Master in Computer Science, ISTIC, France

Master : “Supervision of student project”, 1 projects, M1 - second year of the engineer degree, ESIR, France

Master : “Supervision of student project”, 1 project, M2 - third year of the engineer degree, ESIR, France

Ludovic Mé is Professor at Supélec:

Licence: “Software Engineering”, 15h, L3 - first year of the engineer degree, Supélec, France

Master: “Introduction to Computer Security and Privacy”, 6.75 hours, M1 - second year of the engineer degree, Supélec, France

Master: “Information systems”, 6 hours, M1 - second year of the engineer degree, Supélec, France

Master: “Supervision of student project”, 1 project, M1 - second year of the engineer degree, Supélec, France

Master: “Supervision of student project”, 1 project, M2 - third year of the engineer degree, Supélec, France

Master: Ludovic Mé is responsible for the module “Secured information systems”, M2 - third year of the engineer degree, Supélec, France

Doctorat: “Introduction to Information Systems Security”, 18 hours, Université de Rennes I, France

Guillaume Hiet is Assistant-Professor at Supélec:

Licence: “Models and programming languages”, 11 hours, L3 - first year of the engineer degree, Supélec, France

Licence: “Foundations of computer science, data structures and algorithms”, 15 hours, L3 - first year of the engineer degree, Supélec, France

Master: “Computer security and privacy for the engineer”, 10 hours including 4,5 hours of lecture, M1 - second year of the engineer degree, Supélec, France

Master: “Buffer overflow vulnerabilities”, lab work (16h), M2 - third year of the engineer degree, Supélec.

Master: “Pentest”, lab work (9h00), M2 - third year of the engineer degree, Supélec, France

Master: “Introduction to Linux”, lab work (3h), M2 - master CS (Cyber Security), Supélec, France

Master: “Java Security”, lecture (3h), M2 - master CS (Cyber Security), Supélec, France

Master: “Linux Security”, lab work (6h), M2 - master CS (Cyber Security), Supélec, France

Master: “Linux Security”, lecture (3h) and lab work (3h), third year of the engineer degree, Supélec, France

Master: “Intrusion Detection”, lecture (6h) and lab work (6h), M2 - master CS (Cyber Security), Supélec, France

Master: “Intrusion Detection”, lecture (3h) and lab work (6h), M2 - third year of the engineer degree, M2 research degree of University of Rennes I, Supélec

Master: “Intrusion Detection”, lecture (8h) and lab work (12h), M2 - master 2 degree, University of Rennes I, France

Master: “Intrusion Detection”, lecture (4h) and lab work (6h), M2 - third year of the engineer degree, ESIR, France

Master: “Intrusion Detection”, 6 hours of lecture, M2, Université de Limoges, France

Master: “Firewall”, lecture (4h), M2 - master 2 degree, University of Rennes I, France

Master: “Supervision of student project”, 4 projects, M1 - second year of the engineer degree, Supélec, France

Master: “Supervision of student project”, 1 project, M2 - third year of the engineer degree, Supélec, France

Guillaume Piolle is Assistant Professor at Supélec:

Licence: “Programming models and languages”, 14 hours, L3 - first year of the engineer degree, Supélec, France

Licence: “Foundations of computing, data structures and algorithms”, 15 hours, L3 - first year of the engineer degree, Supélec, France

Licence: “Logical systems and electronics”, 16 hours, L3 - first year of the engineer degree, Supélec, France

Licence: “Software engineering”, 22 hours, L3 - first year of the engineer degree, Supélec, France

Master: “Modelling, algorithms and programming”, 17 hours including 9 hours of lecture, M1 - second year of the engineer degree, Supélec, France

Master: “Computer security and privacy for the engineer”, 10,5 hours including 7,5 hours of lecture, M1 - second year of the engineer degree, Supélec, France

Master: “Security policies”, 3 hours of lecture, M2 - third year of the engineer degree, Supélec, France

Master: “Network access protection”, 6 hours, M2 - third year of the engineer degree, Supélec, France

Master: “Network supervision in Java”, 3 hours, M2 - third year of the engineer degree, Supélec, France

Master: “Symbolic artificial intelligence”, 3 hours of lecture, M2 - third year of the engineer degree, Supélec, France

Master: “C++/Qt”, 15 hours, M2 - third year of the engineer degree, Supélec, France

Master: “Privacy protection”, 3 hours of lecture, M2 - third year of the engineer degree, Supélec, France

Master: “Introduction to privacy protection”, 4 hours of lecture, M2, joint degree between University of Saint-Étienne, École Nationale Supérieure des Mines de Saint-Étienne, France, and University of Alicante, Spain

Master: “Legal aspects of computing”, 1 hour of lecture, course for computing high school teachers, Académie de Rennes, France

Master: “Law and computing”, 4 hours of lecture, M2, master in Cybersecurity, joint degree between Supélec and École Nationale Supérieure des Télécommunications de Bretagne, France

Nicolas Prigent is Assistant Professor at Supélec:

Master: “Operating systems”, lectures (10h30), M2 - third year of the engineer degree, Supélec.

Master: “Automatic reasoning”, lectures (3h00) and lab work (1h30), M2 - third year of the engineer degree, Supélec.

Master: “Python for security”, lectures (3h00) and lab work (3h00), M2 - third year of the engineer degree, Supélec.

Master: “Advanced Java”, lectures (3h00) and lab work (3h00), M2 - third year of the engineer degree, Supélec.

Master: “Pentest”, lab work (9h00), M2 - third year of the engineer degree, Supélec.

Master: “MS-Windows”, lectures (6h00) and lab work (6h00), M2 - third year of the engineer degree, Supélec.

Master: “Preparation to iCTF, operational security”, lab work (20h00), M2 - third year of the engineer degree, Supélec.

Licence: “Programming models and languages”, 14 hours, L3 - first year of the engineer degree, Supélec.

Master: “Supervision of student project”, 4 projects, M1 - second year of the engineer degree, Supélec, France.

Master: “Supervision of student project”, 3 projects, M3 - third year of the engineer degree, Supélec, France.

Eric Totel is Professor at Supélec :

Licence : “Models and programming languages”, 19.5 hours including 10.5 hours of lecture, L3 - first year of the engineer degree, Supélec, France

Licence : “Foundations of computer science, data structures and algorithms”, 6 hours, L3 - first year of the engineer degree, Supélec, France

Master : “Computer systems’ architecture”, 30 hours, M1 - second year of the engineer degree, Supélec, France

Master : “C language”, 24 hours including 6 hours of lecture, M2 - master CS (Cyber Security), Supélec, France

Master : “C language and C++ language”, 12 hours including 6 hours of lecture, M2 - third year of the engineer degree, Supélec, France

Master : “Dependability”, 9 hours including 7.5 hours of lecture, M2 - third year of the engineer degree and master research, Supélec, France

Master : “Dependability”, 3 hours of lecture, M2 - third year of the engineer degree (ingénierie des systèmes automatisés), Supélec, France

Master : “Dependability”, 4.5 hours of lecture, M2 - post-graduate training (master Architecture des Réseaux de Communication), Supélec, France

Master : “Intrusion Detection”, 6 hours of lecture, M2 - M2 - master CS (Cyber Security), Supélec, France

Master : “Intrusion Detection”, 8 hours of lecture, M2 - master 2 degree, University of Rennes I, France

Master : “Intrusion Detection”, 4 hours of lecture, M2 - master 2 degree, University of Rennes I, France

Master : “Supervision of student project”, 4 projects, M1 - second year of the engineer degree, Supélec, France

Master : “Supervision of student project”, 1 project, M2 - third year of the engineer degree, Supélec, France

Frédéric Tronel is Associate Professor at Supélec:

Licence: “Software engineering”, lectures (15h), tutorial (6h) and lab work (12h), L3 - first year of the engineer degree, Supélec.

Master: “Operating systems”, lectures (10h30), M2 - third year of the engineer degree, Supélec .

Master: “Compilers”, lectures (9h), lab work (12h), M2 - third year of the engineer degree, Supélec.

Master: “Automatic reasoning”, lectures (4h30) and lab work (1h30), M2 - third year of the engineer degree, Supélec.

Master: “Buffer overflow vulnerabilities (theory and practice)”, lecture (3h) and lab work (12h), M2 - third year of the engineer degree, Supélec.

Master: “Buffer overflow vulnerabilities (theory and practice)”, lectures (3h) and lab work (3h), M2 - third year of the engineer degree, Telecom Bretagne.

Master: “Firewall”, tutorial (3h), lab work (3h), M2 - third year of the engineer degree, Supélec.

Master: “Calculability in distributed systems”, lecture (6h), M2 research degree jointly with University of Rennes I and Supélec.

Valérie Viet Triem Tong is associate Professor at Supélec :

Licence : “Models and programming languages”, Lab work (10h), L3 - first year of the engineer degree, Supélec, France

Licence : “Foundations of computer science, data structures and algorithms.”, tutorial (3h) and lab work (6h), L3 - first year of the engineer degree, Supélec, France

Licence : “Programming with Java”, Lectures and lab work (12h), M1- International student in second year of the engineer degree (NplusI program), Supélec, France

Master: “Game Theory”, Lectures and lab work (20h), M1 - second year of the engineer degree, Supélec.

Master: “Projects in computer science ”, coordination of the projects for all students second year of the engineer degree (60 students at Rennes), Supélec.

Master: “Supervision of student project”, 4 projects, M1 - second year of the engineer degree, Supélec, France

Master : “Applied / Advanced Cryptography”, lectures (3h) and lab work (3h), M2 - third year of the engineer degree, Supélec, France.

Master: “Intrusion Detection”, Lectures (3h), M2 - third year of the engineer degree, M2 research degree of University of Rennes I, Supélec.

Master: “Automatic reasoning”, lectures (4h30), M2 - third year of the engineer degree, Supélec.

Master: “Security of program using proof assistants”, Lectures and lab work (10h30), M2 - third year of the engineer degree, Supélec.

9.2.2. Supervision

PhD: Christophe Hauser, “Détection d'intrusions dans les systèmes distribués par propagation de teinte au niveau noyau – A basis for intrusion detection in distributed systems using kernel-level data tainting”, Université de Rennes I (France) and Queensland University of Technology (Brisbane, Australia) joint PhD, June 2013, 19th, supervised by Ludovic Mé (20%) and Frédéric Tronel (80%).

PhD in progress: Radoniaina Andriatsimandefitra, “Protection de l'information dans l'environnement Android”, started in October 2011, supervised by Ludovic Mé (20%) and Valérie Viet Triem Tong (80%).

PhD in progress: Mounir Assaf, “Vérification de propriétés de sécurité par analyse statique sur des programmes C de grande taille”, started in November 2011, supervised by Ludovic Mé (20%), Eric Totel (40%), and Frédéric Tronel (40%).

PhD in progress: Simon Boche, “Réputation et respect de la vie privée dans les réseaux auto-organisé”, started in October 2012, supervised by Christophe Bidan(30%), Gilles Guette (35%) and Nicolas Prigent (35%).

PhD in progress: Georges Bossert, “Méthodologie d'évaluation des systèmes de détection d'intrusions”, started in October 2010, supervised by Ludovic Mé (20%) and Guillaume Hiet (80%).

PhD in progress: Thomas Demongeot, “Protection des données utilisateur dans les web services”, Telecom Bretagne, started in September 2008, supervised by Eric Totel (50%) and Valérie Viet Triem Tong (50%). The Phd was defended with success on the 19th of December 2013.

PhD in progress: Stéphane Geller, “Administration de politiques de sécurité reposant sur le contrôle des flux d'information”, started in October 2009, supervised by Ludovic Mé (20%) and Valérie Viet Triem Tong (80%).

PhD in progress: Erwan Godefroy, “Corrélation d'alertes dirigée par la connaissance de l'environnement”, started in November 2012, supervised by Michel Hurfin (20%), Ludovic Mé (30%) and Eric Totel (50%).

PhD in progress: Geoffroy Guéguen, “Métamorphisme viral et grammaires formelles”, université de Rennes I, started in March 2011, supervised by Sébastien Josse (50% - DGA-MI) and Ludovic Mé (50%).

PhD in progress: Antoine Guellier, “Utilisation de la cryptographie homomorphe pour garantir le respect de la vie privée”, started in October 2013, supervised by Christophe Bidan (50%) and Nicolas Prigent (50%).

PhD in progress: Mouna Hkimi “, Détection d’intrusion dans les systèmes distribués: Application au cloud computing”, started in October 2013, supervised by Eric Totel (50%) and Michel Hurfin (50%).

PhD in progress: Christopher Humphries, “Visualisation d’évènements de sécurité”, started in December 2011, supervised by Christophe Bidan (20%) and Nicolas Prigent (80%).

PhD in progress: Paul Lajoie-Mazenc, “Privacy preserving reputation system in large scale and self organizing systems”, started in October 2012, supervised by Emmanuelle Anceaume (50%) and Valérie Viet Triem Tong (50%).

PhD in progress: Julien Lolive, “Entwining identification and privacy mechanisms”, Télécom-Bretagne, started in December 2012, supervised by Caroline Fontaine (50% - Télécom-Bretagne) and Sébastien Gambs (50%).

PhD in progress: Regina Marin, “Privacy protection in distributed social networks (Protection de la vie privé dans les réseaux sociaux distribués”, started in November 2011, supervised by Christophe Bidan (20%) and Guillaume Piolle (80%).

PhD in progress: Pierre Obame, “Dependability issues in large scale systems”, started in February 2012, supervised by Emmanuelle Anceaume (50%) and Frédéric Tronel (50%).

PhD in progress: Deepak Subramanian, “Multi-level Information Flow Monitoring”, started in January 2013, supervised by Christophe Bidan (20%) and Guillaume Hiet (80%).

Some members of the team also participate to the supervision of external PhD students. Sébastien Gambs is co-supervising Raghavendran Balu (PhD student for Texmex, Inria Rennes), Mohammad Nabil Al-Aggan (PhD student from ASAP, Inria Rennes, who defended his thesis on December 2013), Miguel Nunez del Prado Cortez (PhD student from LAAS-CNRS, Toulouse, who defended his thesis on December 2013), and Moussa Traore (PhD student from LAAS-CNRS, Toulouse). Emmanuelle Anceaume is co-supervising Romaric Ludinard (PhD student from the Inria project Dionysos, Rennes). Valérie Viet Triem Tong participates to the "supervision committee" of Quentin Jerome Phd Student from the University of Luxembourg. Christophe Bidan is supervising Kun He (PhD student from the IRT B-Com).

9.2.3. Juries

- Ludovic Mé was a member of the mid-term PhD committees for a PhD student at Ecole des Mines de Nantes (Florent de Kerchove). Ecole des Mines de Nantes, June 2013.
- Ludovic Mé was a member of the PhD committee (reviewer) for the PhD of Gabriel Serme entitled “Modularisation de la sécurité informatique dans les systèmes distribués”, Télécom Paris Tech, November 2013.
- Ludovic Mé was a member of the PhD committee (president of the jury) for the PhD of Mohammad Alaggan entitled “Private peer-to-peer similarity computation in personalized collaborative platforms”, Université de Rennes I, December 2013.
- Ludovic Mé was a member of the PhD committee (examinateur) for the PhD of Gustavo Gonzalez Granadillo entitled “Optimization of Cost-based Threat Response for Security Information and Event Management Systems”, Télécom SudParis et Université Pierre et Marie Curie, December 2013.
- Christophe Bidan was a member of the PhD committee (president of the jury) for the PhD of Aude Plateaux entitled “Solutions opérationnelles d’une transaction électronique sécurisée et respectueuse de la vie privée”, Université de Caen Basse-Normandie, November 2013.

- Christophe Bidan was a member of the PhD committee (examiner) for the PhD of Ludovic Jacquin entitled “Compromis performance/sécurité des passerelles très haut débit pour Internet”, Université de Grenoble, November 2013.
- Christophe Bidan was a member of the PhD committee (reviewer) for the PhD of Mohamed Amine Riahlia entitled “Contributions au routage et l’anonymat des échanges dans les réseaux dynamiques”, Université de Limoges, March 2013.

9.3. Popularization

[17] represents an effort to communicate to the community of engineers and company officials the reflexions and evolutions taking place in academia in the domain of personal data protection, in the fields of both computer science and law. The adopted perspective is to shed some light on the evolutions of the requirements, procedures and policies applying to public or private organizations, putting them in correspondence with the evolution of technical and legal risks, societal motivations and computing tools.

CLASSIC Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Conference organization

G rard Biau co-organized a one-day workshop on “High-dimensional clustering” at Ecole normale sup rieure (September 2013).

8.1.2. Organization of seminars

We (co-)organized the following seminars:

- Statistical machine learning in Paris – SMILE (G rard Biau, Gilles Stoltz; see <http://sites.google.com/site/smileinparis/>);
- Parisian seminar of statistics at IHP (Vincent Rivoirard; see <https://sites.google.com/site/semstats>).

8.1.3. Editorial activities, reports written on articles

G rard Biau is (co-)Editor-in-Chief of *ESAIM: Probability and Statistics* and serves as an Associate Editor for the journals *Annales de l'ISUP* and *International Statistical Review*.

Vincent Rivoirard serves as an Associate Editor for *ESAIM: Probability and Statistics*.

All permanent members of the team reviewed several journal papers during the year.

8.1.4. Participation to national or local evaluation or recruitment committees, to scientific societies

Vincent Rivoirard is the General Secretary of SFdS and G rard Biau is the Vice-President of this society.

G rard Biau is a member of the national board of French universities (CNU) within the applied mathematics section (number 26).

Olivier Catoni is a member of the doctoral commission in mathematics of University Pierre et Marie Curie.

All permanent members of the team participated in several recruitment committees for assistants or full professors in universities.

8.1.5. Honors and distinctions

G rard Biau is a member of the Institut Universitaire de France (IUF).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence : Vincent Rivoirard, Statistiques, 39h, niveau L2, Universit  Paris-Dauphine, France

Licence : Olivier Catoni, Apprentissage, 10h, niveau L3, Ecole normale sup rieure, France

Licence : Gilles Stoltz, Statistiques pour citoyens d’aujourd’hui et managers de demain, 60h, niveau L3, HEC Paris, France

Master : G rard Biau and Olivier Catoni, Groupe de travail Statistique, 20h, niveau M1, Ecole normale sup rieure, France

Master : G rard Biau, Statistique math matique, 30h, niveau M1, Ecole normale sup rieure, France

Master : Vincent Rivoirard, Le ons de math matiques, niveau M1, 10h, Ecole normale sup rieure, France

Master : Vincent Rivoirard, Statistique non-paramétrique, 8h, niveau M1, Ecole normale supérieure, France

Master : Vincent Rivoirard, Statistique non-paramétrique, 35h, niveau M1, Université Paris-Dauphine, France

Master : Vincent Rivoirard, Classification et statistique en grandes dimensions, 18h, niveau M2, Université Paris-Sud, France

Master : Vincent Rivoirard, Méthodes pour les modèles de régression, 21h, niveau M2, Université Paris-Dauphine, France

Master : Vincent Rivoirard, Statistique bayésienne non-paramétrique, 21h, niveau M2, Université Paris-Dauphine, France

Master : Gilles Stoltz, Examineur à l'oral de probabilités et statistiques de l'agrégation de mathématiques, France

8.2.2. Supervision

We only indicate the on-going PhD theses of members of our team.

PhD in progress : Thomas Mainguy, Statistical learning in computational linguistics, since September 2010, supervised by Olivier Catoni

PhD in progress : Emilien Joly, Phase transition of optimal risk and detection of contamination, since September 2011, supervised by Gábor Lugosi and co-supervised by Gilles Stoltz

PhD in progress : Pierre Gaillard, Aggregation of specialized predictors for the forecasting of electricity consumption, since September 2011, supervised by Gilles Stoltz

PhD in progress : Ilaria Giulini, Dimension free PAC-Bayes bounds for the Gram matrix and unsupervised clustering on the sphere of a Reproducing Kernel Hilbert space, since September 2012, supervised by Olivier Catoni

PhD in progress : Paul Baudin, Robust aggregation of predictors for the forecasting of air quality, with measures of uncertainties, since October 2012, supervised by Gilles Stoltz and co-supervised by Vivien Mallet

8.2.3. Juries

Gérard Biau, Olivier Catoni and Vincent Rivoirard participated in different PhD/HdR defense juries, sometimes as external reviewers.

8.3. Popularization

Gilles Stoltz

- wrote a blog post for MPT2013 and an article for The Huffigton Post, in the researchers' blog;
- gave a conference for high school teachers in Orléans;
- gave a mini-course on statistics to "classes préparatoires" professors at ENS Paris and a mini-course of game theory at ENS Rennes, targeted to inspectors of high-school-teachers.

CLIME Project-Team

9. Dissemination

9.1. Scientific Animation

- Marc Bocquet is a member of the INSU/LEFE MANU scientific committee.
- Marc Bocquet is a member of the Scientific Council of the CERFACS institute in Toulouse, France.
- Marc Bocquet is Associate Editor of the Quarterly Journal of the Royal Meteorological Society.
- Marc Bocquet co-organised the LEFE-MANU workshop “Que peuvent attendre les modélisateurs de l’assimilation de données ?” with Frédéric Chevallier and Jacques Verron, 12 February 2013, Inria, Paris, France.
- Marc Bocquet co-organised the symposium “Open session on Data Assimilation” with Jacques Blum, and Olivier Talagrand. MCPIT 2013, GDRE ConEDP, Institut Henri Poincaré, Paris, France, 19 November 2013.
- Isabelle Herlin is a member of the Scientific Council of CSFRS (High Council for Strategic Education and Research in France).
- Isabelle Herlin is a member of the program committee of DIGITEO, french research cluster in science and technology of information.
- Isabelle Herlin is a member of the Scientific Council of OSU-EFLUVE.
- Isabelle Herlin is a member of Evaluation Committee at Inria.
- Isabelle Herlin co-organised a session on operational oceanography in the European Geosciences Union General Assembly 2013 (EGU2013), 07-12 April 2013, Vienna, Austria.
- Isabelle Herlin is a member of the scientific committee of the conference “Image Sequence Analysis for Object and Change Detection”, organized by the International Society for Photogrammetry and Remote Sensing (ISPRS).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master OACOS/WAPE: Marc Bocquet, Vivien Mallet; Introduction to Data Assimilation for Geophysics; 30 hours; M2; UPMC, X, ENS, ENSTA ParisTech, École des Ponts ParisTech; France.

Master "Nuclear Energy": Marc Bocquet, Vivien Mallet; 12 hours; M2; École des Ponts ParisTech; France.

Master SGE and École des Ponts ParisTech: Vivien Mallet; Air Pollution; 6 hours; M2; École des Ponts ParisTech, Paris 7-Diderot, Paris Est; France.

Master in applied mathematics and scientific computing: Vivien Mallet; Introduction to Data Assimilation and Uncertainty Quantification in Geosciences; 11 hours; M2; Sup'Galilée, University Paris 13, École centrale Marseille; France.

Training: Vivien Mallet; Uncertainty Quantification: Ensembles and Data Assimilation – Application to Climate and Geosciences; 5.25 hours; CERFACS; France.

9.2.2. Supervision

PhD : Karim Drifi, “Reduced models for image assimilation”, University Paris Centre, July 1st, 2012, Isabelle Herlin.

PhD : Yiguo Wang, "Une nouvelle approche de modélisation de la qualité de l'air à l'échelle régionale par assimilation de mesures lidar", École Polytechnique, 20 December 2013, Marc Bocquet, Karine Sartelet, Patrick Chazette.

PhD in progress : Paul Baudin, "Agrégation séquentielle de prédicteurs appliquée à la prévision de la qualité de l'air", September 2012, Vivien Mallet and Gilles Stoltz.

PhD in progress : Jean-Matthieu Haussaire, "Méthodes variationnelles d'ensemble pour la modélisation inverse en géosciences. Application au transport et la chimie atmosphérique", University Paris-Est, October 2013, Marc Bocquet.

PhD in progress : Yann Lepoittevin, "Tracking of image structures", University Paris Centre, October 2012, Isabelle Herlin.

PhD in progress : Jean Thorey, "Prévision d'ensemble du rayonnement solaire pour la production photovoltaïque du parc EDF", November 2013, Vivien Mallet.

PhD in progress : Victor Winiarek, "Dispersion atmosphérique en milieu urbain et modélisation inverse pour la reconstruction de sources", University Paris Est, October 2009, Marc Bocquet.

9.2.3. Juries

- Bocquet, M., member, PhD thesis, Benjamin Gaubert, "Assimilation des observations pour la modélisation de la qualité de l'air", Paris Diderot University, 8 July 2013, Créteil, France.
- Bocquet, M., member, PhD thesis, Bertrand Bonan, "Assimilation de données pour l'initialisation et l'estimation de paramètres d'un modèle d'évolution de calotte polaire", 15 November 2013, Grenoble University, Grenoble, France.
- Bocquet, M., member, PhD thesis, Yiguo Wang, "Une nouvelle approche de modélisation de la qualité de l'air à l'échelle régionale par assimilation de mesures lidar", 20 December 2013, University Paris-Est, Champs-sur-Marne, France.
- Herlin, I., reviewer, PhD thesis, Anastase Charantonis, "Méthodologie d'inversion de données océaniques de surface pour la reconstitution de profils verticaux en utilisant des chaînes de Markov cachées et des cartes auto-organisatrices", January 24th 2013, Paris, France.

9.3. Popularization

- Marc Bocquet made a presentation on employment in the environment sector at the second "Forum Maths Emploi", January 2013, Paris.
- Marc Bocquet wrote a paper [32] on "Modélisation numérique de la dispersion atmosphérique accidentelle des radionucléides : l'état de l'art de la recherche" in the journal "Revue du Centre de Défense NBC".
- Isabelle Herlin and Vivien Mallet wrote an introduction to air quality simulation [33] for a special issue on Mathematics for Planet Earth dedicated to teachers in french "collèges" and "lycées" and an internet contribution [35] "Votre air, votre santé": <http://mpt2013.fr/votre-air-votre-sante/>
- Vivien Mallet introduced numerical simulation of air pollution at the 2013 edition of "Mathématiques en mouvement".
- Vivien Mallet and Anne Tilloy took part to the festival "Futur en Seine" and presented, during four days, research advances in air quality simulation at urban scale.

COATI Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Participation in Committees

- J-C. Bermond: Expert for DRTT, and various projects outside France (Canada, Italy,...); Member of the Ph.D. committee of the University of Marseille;
- D. Coudert: Member of the *comité du suivi doctoral* of Inria Sophia Antipolis (since January 2009); Member of the scientific board of the GIS ENSL-UNS (CNRS, ENSL, Inria, UNS) since 2011; Expert for the Future and Emerging Technologies Open Scheme (FET-Open) European program, and the ANR;
- F. Giroire: Member of the *conseil de laboratoire I3S*;
- F. Havet: Responsable of the Pôle ComRed of I3S (since September 2013); Expert for the ANR and its Czech analogues; Member of the *conseil de l'Ecole Doctorale I2S* (Montpellier);
- M. Syska: Member of the commission ad-hoc ATER 27 UNS; Member of *Comité Permanent de Ressources Humaines* (CPRH) UNS 27e; Member of the *conseil de département* (Department Committee) of IUT Nice; Expert for DRTT PACA.

9.1.2. Editorial Boards

- J-C. Bermond: Combinatorics Probability and Computing, Computer Science Reviews, Discrete Mathematics, Discrete Applied Mathematics, Journal of Graph Theory, Journal of Interconnection Networks (Advisory Board), Mathématiques et Sciences Humaines, Networks, Parallel Processing Letters, SIAM book series on Discrete Mathematics, Transactions on Network Optimization and Control, Discrete Mathematics, Algorithms and Applications;
- D. Coudert: Discrete Applied Mathematics (Elsevier); Networks (Wiley);
- F. Havet: Discrete Mathematics and Theoretical Computer Science;

9.1.3. Steering Committees

- D. Coudert: Pôle ResCom du GDR ASR du CNRS (since 2005); Rencontres francophones sur les aspects algorithmiques des télécommunications (AlgoTel);
- F. Havet: GT Graphes du GDR IM du CNRS; Journée Combinatoire et Algorithmes du Littoral Méditerranéen;

9.1.4. Conference Organization

- ALGO'13: this scientific event comprises the *European Symposium on Algorithms* (ESA), the *Workshop on Algorithms for Bioinformatics* (WABI), the *International Symposium on Parameterized and Exact Computation* (IPEC), the *Workshop on Approximation and Online Algorithms* (WAOA), the *International Symposium on Algorithms for Sensor Systems, Wireless Ad Hoc Networks and Autonomous Mobile Entities* (ALGOSENSORS), the *Workshop on Algorithmic Approaches for Transportation Modeling, Optimization, and Systems* (ATMOS), and the *Workshop on Massive Data Algorithmics* (MASSIVE). Sophia Antipolis, France (September 2-6, 2013); D. Coudert and J. Moulierac were members of the organizing committee.
- OPODIS'13: 17th International Conference On Principle Of DIstributed Systems; Conference Chair: N. Nisse; Organization Committee: A. Kodjo, B. Li.

9.1.5. Participation in Program Committees

- D. Coudert: IEEE ICC – Green Communications and Networks Track, Budapest, Hungary (June 9-13, 2013); IEEE GLOBECOM – Green Networks and Communication Systems Track, Atlanta, GA, USA (December 9-13, 2013); 17th International Conference on Optical Network Design and Modeling (ONDM'13), Brest, France (April 16-19, 2013);
- F. Havet: 15emes Journées Graphes et Algorithmes, Orsay, France (November 13-15, 2013);
- N. Nisse: PC Chair of the 15th Rencontres francophones sur les aspects algorithmiques des télécommunications (AlgoTel) (May 28-31, 2013);

9.2. Participation in Conferences and Workshops

9.2.1. Invited Talks

- J-C. Bermond: DIMACS Workshop on Algorithms for Green Data Storage, DIMACS, Rutgers University USA (December 18, 2013);
- D. Coudert: Bell labs - NIST Workshop on Large-Scale Networks, Murray Hill, NJ, USA (October 25, 2013); AIDyNet Workshop on Algorithms and Randomness, Santiago, Chile (November 21, 2013);
- F. Havet: School on Graph Theory, Oléron, France (June 17-21, 2010), five hour lecture on “Orientations and colorings of graphs”;
- N. Nisse: AIDyNet Workshop on Algorithms and Randomness, Santiago, Chile (November 21, 2013);

9.2.2. Participation in Scientific Meetings

- ADR Network Science: Meeting of ADR Network Science of the Alcatel-Lucent / Inria Joint lab, Paris, France (February 28, 2013) Attended by D. Coudert (speaker) and N. Nisse (speaker); Sophia-Antipolis, France (December 5) Attended by D. Coudert;
- COMRED: Journée du pôle COMRED (December 3-4, 2013). Attended by all members of COATI;
- DIMAGREEN: Journées de l'ANR - Rencontres du numérique (April 17-18, 2013). Attended by F. Giroire;
- EULER: Plenary meeting of FP7 STREP EULER, Antwerp, Belgium (September 23-25, 2013). Attended by D. Coudert and A. Lancin.
- GDL: GreenDay@Lille, Lille, France (November 28-29, 2013). Attended by K. Phan;
- JFRO: 29e Journée Francilienne de Recherche Operationnelle, Paris, France (June 4, 2013). Attended by J. Araújo, B. Li, N. Nisse;
- JGA: 15èmes Journées Graphes et Algorithmes, Orsay, France (November 13-15, 2013). Attended by J. Araújo, F. Havet, A. Maia (speaker);
- JIF: Journées D'informatique fondamentale de Paris Diderot (April 24, 2013). Attended by N. Nisse;
- Journées REP: Journées Scientifiques and Journée REP of Inria, Rennes, France (June 25-27, 2013). Attended by D. Coudert;
- Inria- Alcatel Lucent Bell Labs: Kick off meeting Phase 2 of the Common Lab Inria-Alcatel Lucent Bell Labs, Nozay, France (March 27, 2013). Attended by J-C. Bermond;
- POC: Polyèdres et Optimisation Combinatoire: Journée sur l'Optimisation Robuste et la programmation mathématique Paris, France (December 6th, 2013). Attended by A. Kodjo;
- SEAT: meeting for preparing submission of ANR SEAT (October 2nd, 2013). Attended by D. Coudert and N. Nisse;
- Struco: Meeting on Combinatorics and Distributed Computing, Pont-à-Mousson, (November 12-15, 2013). Attended by F. Havet;
- TREND: NoE TREND Plenary Meeting, Catania, Italy (February 6-8, 2013). Attended by F. Giroire;

9.2.3. Participation in Conferences

- AIDyNet: AIDyNet Workshop on Algorithms and Randomness, Santiago, Chile (November 21, 2013). Attended by D. Coudert (speaker), B. Li (speaker), F. Moataz (speaker), N. Nisse (speaker);
- ALGO: Sophia Antipolis, France (September 2-6, 2013). Attended by all members of COATI;
- Algotel: 15èmes Rencontres Francophones pour les Aspects Algorithmiques des Telecommunications, Pornic, France (May 28-31, 2013). Attended by F. Moataz (speaker), N. Nisse, D. Coudert, G. Ducoffe (speaker), I. Tahiri, A. Lancin, R. Soares (speaker) and F. Giroire;
- DIMACS: Working group and Workshop on Algorithms for Green Data Storage, DIMACS, Rutgers University USA (December 16-18, 2013). Attended by J-C. Bermond (speaker);
- DRCN: the 9th International Conference on Design of Reliable Communication Networks, Budapest, Hungary (March 4-7, 2013). Attended by F.Z. Moataz (speaker);
- EURO: 26th European Conference on Operational Research, Roma, Italy (July 2-4, 2013). Attended by C. Molle-Caillouet (speaker), D. Coudert and N. Nisse (speaker);
- GIIS: Global Information Infrastructure and Networking Symposium, Trento, Italy (October 28-31, 2013). Attended by A. Kodjo (speaker);
- Globe: 6th International Conference on Data Management in Cloud, Grid and P2P Systems, Prague, Czech Republic (August 28-29, 2013). Attended by R. Modrzejewski (speaker);
- Globecom: IEEE Global Communications Conference, Atlanta, United States (December 9-13, 2013). Attended by F. Giroire (speaker);
- GROW: 6th workshop on Graph Classes, Optimization, and Width Parameters, Santorini Island (October 09-11, 2013). Attended by F. Havet (speaker) and N. Nisse;
- ICC: IEEE International Conference on Communications, Budapest, Hungary (June 9-12, 2013). Attended by R. Modrzejewski (speaker);
- ICGCC: IEEE International Conference on Green Computing and Communications, Beijing, China (August 20-23, 2013). Attended by K. Phan (speaker);
- INOC: 6th International Network Optimization Conference, Tenerife, Spain (May 20-22, 2013). Attended by I. Tahiri (speaker);
- LAGOS: VII Latin-American Algorithms, Graphs and Optimization Symposium, Playa del Carmen, Mexico (April 22-26, 2013). Attended by J. Araújo (speaker), A. Maia (speaker), P. Moura (speaker), R. Soares (speaker);
- OPODIS: 17th International Conference On Principle Of Distributed Systems, Nice, France (December 16-18, 2013). Attended by B. Li, A. Kodjo and N. Nisse
- SIROCCO: 20th International Colloquium on Structural Information and Communication Complexity, Ischia, Italy (July 1-3, 2013). Attended by F. Giroire (speaker) and N. Nisse (speaker);
- WLSN: Bell labs - NIST Workshop on Large-Scale Networks, Murray Hill, NJ, USA (October 25, 2013). Attended by D. Coudert;

9.2.4. Participation in Schools

- CSP: School on Constraint Satisfaction problems, ENS Lyon, France (January 21-25, 2013). Attended by F. Moataz;
- EULERSS: Summer School on Graph and Routing Dynamics: Models and Algorithms, Barcelona, Spain (July 1-5, 2013). Attended by F. Moataz, B. Li and A. Lancin;
- JCALM13: 13es Journées Combinatoire et Algorithmes du Littoral Méditerranéen, Marseille, France (June 10-11, 2013). Attended by J. Araújo, G. Ducoffe, F. Giroire, A. Maia, N. Nisse;
- JCALM14: 14es Journées Combinatoire et Algorithmes du Littoral Méditerranéen, Barcelona, Spain (October 14-15, 2013). Attended by F. Havet (speaker), A. Maia
- NetOpt: Winter School on Network Optimization, Estoril, Portugal (January 14-18, 2013). Attended by B. Li and A. Kodjo;

ResCom: Summer school ResCom 2013 of GDR ASR of CNRS on Content Centric Networks, Porquerolles, France (May 13-17, 2013). Attended by J-C. Bermond, D. Coudert, F. Giroire, R. Modrzejewski;

SGT: Summer School on Graph Theory, île d'Oléron, France (June 17-21, 2013). Attended by J. Araújo, F. Havet, B. Li, A. Maia, F. Moataz, N. Nisse;

TREND: The TREND PhD School in Green Networking, Turin, Italy (July 1-5, 2013). Attended by K. Phan;

9.3. Teaching - Supervision - Juries

9.3.1. Teaching

Licence: A. Kodjo, Algorithmme-Programmation Objet-Python, 40h ETD, L2, Networks, 15h ETD, L2, IUT Nice Côte d'Azur, Informatique pratique, 36h ETD, L1, Univ. Nice Sophia Antipolis;

Licence: F. Moataz, Systèmes Informatiques, 40h ETD, L1, Univ. Nice Sophia Antipolis;

Licence: C. Molle-Caillouet, IT Tools, 53h, L1, Database and advanced information system, 36h, L2, Operations Research, 81h, L2, Delivery Optimization, 30h, L3, IUT Nice Côte d'Azur, Univ. Nice Sophia Antipolis;

Licence: J. Moulhierac, Algorithms and Programming, 100h ETD, L1, ASR5 - Networks, 30h ETD, L1, IUT Nice Côte d'Azur, Univ. Nice Sophia Antipolis;

Licence: N. Nisse, informatique, 30h ETD, 1ère année classes préparatoires (L1), CIV, Sophia Antipolis, France;

Licence: I. Tahiri, Introduction to networks, 96h ETD, L1, IUT Nice Côte d'Azur, Univ. Nice Sophia Antipolis;

Licence: M. Syska, Introduction to Operating Systems, 40h ETD, L1, Operating Systems : Advanced Programming, 60h ETD, L2, Bash Scripting, 20h ETD, L3, Introduction to Algorithms, 30h ETD, L3, Linux Systems Administration, 40h ETD, L3, IUT Nice Côte d'Azur, Univ. Nice Sophia Antipolis.

Master: D. Coudert, Algorithms for Telecommunication 2, 30 ETD, M2 Ubinet of Master IFI, Univ. Nice Sophia Antipolis;

Master: F. Giroire, 16h ETD, Introduction to Probabilities and Statistics, International track of the Master 1 IFI, Univ. Nice Sophia Antipolis;

Master: F. Giroire and N. Nisse, Algorithms for Telecommunications, 30h ETD, M2 Ubinet of Master IFI, Univ. Nice Sophia Antipolis;

Master: F. Giroire and N. Nisse, Algorithms for Telecommunications, 36h ETD, M2, Master MDFI, Univ. Marseille;

Master: F. Havet, Discharging Method, 6h, M2, Simon Fraser University, Canada.

Master: A. Kodjo, Réseaux, 15h ETD, M1, Univ. Nice Sophia Antipolis;

9.3.1.1. Administration

Collaboration Inria-Lycée International de Valbonne: N. Nisse is co-responsible of the Computer Science course of MPSI;

IUT Nice Côte d'Azur: J. Moulhierac is Directrice d'études of Semestre 2 décalé at IUT Nice Côte d'Azur, Computer Science Department since september 2013;

M. Syska is responsible of the Computer Science Department of IUT since september 2011;

Ubinet, Master IFI: J.-C. Bermond is member of the scientific committee;

F. Giroire is responsible of the Internships within international stream Ubinet, Master IFI (<http://ubinet.unice.fr>), since October 2011;

International Master 1: J.-C. Bermond is member of the scientific committee of the international track of the M1 (<http://computerscience.unice.fr/master1>).

9.3.2. Supervision

PhD:

R. Modrzejewski, *Systèmes pair-à-pair de partage de données*, October 24, 2013, S. Pérennes and F. Giroire.

R. Pardo Soares, *Routing reconfiguration in WDM networks*, November 8, 2013, D. Coudert, C. Linhares Sales and N. Nisse.

PhD in progress:

I. Tahiri, *Optimisation dans les réseaux de collecte IP sans fils*, since November 2009, D. Coudert.

4th year:

S. Félix, *Smart transports : optimisation du trafic dans les villes*, since January 2011, J.-C. Bermond and J. Galtier.

A. Lancin, *Study of network properties for efficient routing algorithms*, since January 2011, D. Coudert.

3rd year:

M. A. Bergach, *GPGPU Graphics Processing Units for signal processing*, since September 2011, M. Syska.

A. Kodjo, *Design and optimization of multi-operators wireless backhaul networks*, since October 2011, D. Coudert.

B. Li, *Tree-decomposition and applications to routing*, since October 2011, D. Coudert and N. Nisse.

A. K. Maia, *Partitions of directed graphs*, since September 2011, F. Havet.

T. K. Phan, *Design and Management of networks with low-power Consumption*, since October 2011, D. Coudert and J. Moulierac.

2nd year:

F. Z. Moataz, *Conception et optimisation de réseaux robustes aux pannes et variations de capacités*, since October 2012, D. Coudert.

9.3.2.1. Internships

D. Coudert: supervised the internship of Guillaume Ducoffe (ENS Cachan, Paris, France) on "Computation in Large Graphs with Applications to Gromov Hyperbolicity", March-September 2013 (6 months);

F. Havet: supervised the internship of Mathieu Schmitt (École Normale Supérieure de Lyon, France) on backbone colouring, May-August 2013 (3 months).

N. Nisse: supervised the internship of Christos Papageorgakis (University of Thessaly, Volos, Greece) on implementation of Cops and Robber games, February-July 2013 (6 months);

N. Nisse and S. Pérennes: supervised the internship of Ioannis Lamprou (University of Athens, Greece) on fractional games in graphs, March-August 2013 (6 months);

9.3.3. Juries

J.-C. Bermond: member of the PhD jury of Remigiusz Modrzejewski, Univ. Nice Sophia Antipolis (October 24, 2013);

D. Coudert: Member of the PhD jury of Valentin Weber, Université de Grenoble, France (July 8, 2013); Referee and member of the PhD jury of Jiyai Liu, Télécom Bretagne, Rennes, France (November 4, 2013); Member of the PhD jury of Ronan Soares, Univ. Nice Sophia Antipolis, France (November 8, 2013); Member of the PhD jury of Christian Glacet, Université de Bordeaux 1, Bordeaux, France (December 6, 2013);

F. Giroire: member of the PhD jury of Ngo Hoang Giang, Univ. Nice Sophia Antipolis (December 16, 2013); member of the PhD jury of Remigiusz Modrzejewski, Univ. Nice Sophia Antipolis (October 24, 2013);

F. Havet: external referee of the PhD of S. Simonsen, University of Southern Denmark (November 7 2013); external referee of the PhD of A. Maddaloni, University of Southern Denmark (November 8 2013);

N. Nisse: member of the PhD jury of Ronan Soares, Univ. Nice Sophia Antipolis (November 8, 2013);

9.4. Popularization

Attractiveness: J-C. Bermond is in charge of the attractiveness of the center Inria Sophia Antipolis Méditerranée. Among other activities he corganized The "Mediterranean days" (January 23-25) (25 foreign students invited) and co-organized the valorization afternoon on February 2, 2013 (100 students);

Fête de la Science: F. Giroire presented the stand "Magie et jeux mathématiques" at the Centre International de Valbonne, France (October 8, 2013); F. Moataz assisted the stand "Drone/Unmanned Aerial Vehicle" at Sophia Antipolis, France (October 12-13, 2013);

Formation EDSTIC: J. Araújo has given lectures on Graph Theory and Algorithms to PhD students, 20h;

Mathématiques et Internet: J-C. Bermond gave a vulgarization talk at the Centre Culturel of La Grande Motte, Hérault France (April 16, 2013);

Optimisation dans les réseaux: J-C. Bermond gave 3 talks to investors on the future of optimization in networks, Paris (March 28, 2013);

Science culture au lycée, Inria/PACA: N. Nisse explains graph to a Lycée class at Marseille, France (December 19th, 2013);

COFFEE Project-Team

8. Dissemination

8.1. Scientific Animation

- R. Masson: Workshop Multiphase flows Oct. 2013, co-organized with Danielle Hilhorst, Magdalena Dymitrowska, Olivier Le Maitre.
- R. Masson: Minisymposium SIAM Geoscience, July 2013, Padova
- T. Goudon: “Mathematics for Planet Earth: Waves and geophysics”, 2013.
- M. Ribot: “Models for bacterial biofilms formation : mathematical, physical and biological perspectives”, June 2014, Nice.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

As said above, the members of the team, but one, are faculties of the Math. Department of the University of Nice Sophia Antipolis. The individual teaching duties are as high as 196h/year, with lectures ranging from 1st to 5th year. It is worth pointing out that S. Junca and S. Krell are affiliated to ESPE/IUFM with quite specific teaching duties for the formation of teachers, ranging from K-grades to pre-university. Their duties include visiting classes and mentoring students in the preparation of memoirs with a high professional content. We indicate below the most advanced lectures in which we have been involved:

- F. Berthelin is in charge of the preparation to “agrégation” a national competition to hire teachers in mathematics. This is the most selective competition for teachers. With M. Ribot, F. Berthelin manages specifically the lectures in Analysis and Scientific Computing.
- F. Berthelin: “Kinetic and hyperbolic PDEs”, master 2 lecture (2012-13)
- R. Masson: “Finite volumes”, master 2 lecture (2012-13)
- M. Ribot, T. Goudon, with P. Raphaël, D. Chiron, L. Michel will be in charge in 2015 of the M2 lectures of Analysis and Numerical Analysis, with a joint program devoted to various aspects of PDEs for fluid mechanics.

We are also at the initiative of creating a “Numerical Working Session” in the laboratory, which can be included in the doctoral formation. The session is based on the invitation of leading experts, with lectures completed by implementation exercises in order to learn new numerical methods (in 2014, the invited speakers are F. Boyer and F. Coquel).

Furthermore, team members have been invited for a couple of lectures abroad:

- R. Masson: “Discretization for diphasic flows in porous media”, master lecture jointly with ENSG Nancy and Almaty Kazakhstan.
- T. Goudon and M. Ribot with F. Coquel (CNRS-Ecole Polytechnique): “Numerical methods for conservation laws”, Summer School on Numerics and Control of PDEs, Indian Institute of Sciences, 2013.
- T. Goudon: “From kinetic equation to conservation laws, hydrodynamic limits and kinetic schemes”, French-Mexican Meeting on Industrial and Applied Mathematics, 2013.

8.2.2. Supervision

- Aude Champmartin, post-doc 2012-2013, funded by Inria, currently post-doc CEA-Univ. Pierre et Marie Curie, labo. J.-L. Lions.
- Walid Kheriji, Post-doc funded by Total
- Nathalie Ayi, PhD UNS, advised by F. Berthelin and L. Saint Raymond (ENS)
- Pierre Castelli, PhD UNS, advised by S. Junca (PhD thesis under the wage-earning student regime)
- Mayya Groza, PhD GdF-Suez, advised by R. Masson
- Bastien Polizzi, PhD UNS, advised by M. Ribot and T. Goudon
- Arthur Vavasseur PhD Ec. Normale Sup. Lyon, advised by T. Goudon
- Yumeng Zhang, PhD Inria/Andra advised by R. Masson and T. Goudon

8.3. Popularization

- R. Masson: Talk “mathematics in geosciences” for the prize-giving of the Olympiads of Mathematics 2013 at UNS
- R. Masson: Article on the role of mathematics in petroleum engineering, in “L’énergie à découvert”, CNRS Editions, 2013.
- T. Goudon: “Modelling and simulation of spacecraft charging”, European Success Stories in Industrial Mathematics, Springer 2012.
- During the international program “2013, Mathematics of the Planet Earth”, supported by UNESCO, T. Goudon, with M. Andler, L. Bel, S. Benzoni, C. Imbert, A. Rousseau has animated the website mpt2013.fr with a daily short notice describing a mathematical activity in connection to the Planet Earth. This operation will be followed by a book, to be edited in 2014.
- T. Goudon: “Mathématiques de la Planète Terre”, Textes et Documents pour la Classe (TDC), Scérén, CNDP-CRDP, 2013.
- T. Goudon, with C. Calgaro and E. Creusé “Modélisation et simulation des avalanches de neige”, Matapli n. 100, 2013.
- T. Goudon: Working session for teachers on “mathematics of the planet earth”, during the national meeting of the APMEP (national society of teachers in math), with F. Boyer, G. Chapuisat and J. Charrier from Marseille; this will be completed with talks in classes, with S. Krell.

COMETE Project-Team

8. Dissemination

8.1. Scientific Animation

Note: In this section we include only the activities of the permanent internal members of Comète.

8.1.1. Editorial activity

Catuscia Palamidessi is/has been:

Member of the Editorial Board of **Mathematical Structures in Computer Science**, published by the Cambridge University Press.

Member of the Editorial Board of the **Electronic Notes of Theoretical Computer Science**, Elsevier Science.

Co-editor (with Franck van Breughel, Elham Kashefi and Jan Rutten) of a festschrift dedicated to Prakash Panagaden. Special issue of **Lecture Notes in Computer Science**.

Co-editor (with Geoffrey Smith) of the special issue of **Mathematical Structures in Computer Science** dedicated to Quantitative Information Flow.

Co-editor (with Mark Ryan) of the proceedings of TGC 2012, Trustworthy Global Computing. [27]

Frank D. Valencia has been:

Co-editor of the special issue of **Mathematical Structures in Computer Science** dedicated to the 18th International Workshop on Expressiveness in Concurrency.

Co-editor of the special issue of **Mathematical Structures in Computer Science** dedicated to the 17th International Workshop on Expressiveness in Concurrency.

Konstantinos Chatzikokolakis and Catuscia Palamidessi have been:

Co-editors (with Sebastian Mödersheim and Jun Pang) of the special issue of the **Journal of Computer Security** dedicated to selected papers of **TOSCA 2011** and **SecCo 2011**.

8.1.2. Steering Committees

Catuscia Palamidessi is member of:

The Council of EATCS, the European Association for Theoretical Computer Science. Since 2005.

The Steering Committee of ETAPS, the European Joint Conferences on Theory and Practice of Software. Since 2006.

The IFIP Technical Committee 1 – Foundations of Computer Science. Since 2007.

The IFIP Working Group 2.2 – Formal Description of Programming Concepts. Since 2001.

The IFIP Working Group 1.7 – Theoretical Foundations of Security Analysis and Design. Since 2010.

Frank D. Valencia member of:

The steering committee of the International Workshop in Concurrency EXPRESS. Since 2010.

8.1.3. Invited Talks

Catuscia Palamidessi has given invited talks at the following conferences and workshops:

Workshop on Logic, Language, Information and Computation. TU Darmstadt, Germany. August 2013.

Forum des jeunes mathématiciennes. ENS Lyon. Novembre 2013.

8.1.4. Organization of workshops and conferences

Catuscia Palamidessi is serving as PC co-chair (together with Erika Ábrahám) of **FORTE 2014**: the 34th IFIP International Conference on Formal Techniques for Distributed Objects, Components and Systems. Berlin, Germany, 3-6 June 2014. Co-located with **DisCoTec 2014**.

8.1.5. Participation in program committees

Catuscia Palamidessi is/has been a member of the program committees of the following conferences:

QUEST 2014. The 11th International Conference on Quantitative Evaluation of Systems. Florence, Italy, 8-12 September 2014.

POST 2014. The 3rd Conference on Principles of Security and Trust. Grenoble, 5-13 April 2014.

TGC 2013. The 8th International Symposium on Trustworthy Global Computing. Buenos Aires, Argentina, 30-31 August 2013.

ICALP 2013 Track B. The 40th International Colloquium on Automata, Languages and Programming. Riga, Latvia, 8-12 July 2013.

CSF 2013. The 26th IEEE Computer Security Foundations Symposium. Tulane University, New Orleans, Louisiana, USA, 26-28 June 2013.

LICS 2013. The Twenty-Eighth Annual ACM/IEEE Symposium on Logic in Computer Science. Tulane University, New Orleans, Louisiana, USA, 25-28 June 2013.

FOSSACS 2013. The 16th Int.l Conf. on Foundations of Software Science and Computation Structures. (Part of ETAPS 2013.) Rome, Italy, March 2013.

SOFSEM 2013. 39th International Conference on Current Trends in Theory and Practice of Computer Science. Špindlerův Mlýn, Czech Republic, January 26–31, 2013.

Frank D. Valencia is/has been a member of the program committees of the following conferences and workshops:

CONCUR 2013. The 24th International Conference on Concurrency Theory. Buenos Aires, Argentina, 27-30 August 2013.

Konstantinos Chatzikokolakis is/has been a member of the program committees of the following conferences and workshops:

ICFEM 2014: The 6th International Conference on Formal Engineering Methods.

PETS 2014: The 14th Privacy Enhancing Technologies Symposium.

HotPETs 2014: 7th Workshop on Hot Topics in Privacy Enhancing Technologies.

QAPL 2014: 12th Workshop on Quantitative Aspects of Programming Languages.

ISPEC 2013: 9th International Conference on Information Security Practice and Experience.

QAPL 2013: 11th Workshop on Quantitative Aspects of Programming Languages.

HotPETs 2013: 6th Workshop on Hot Topics in Privacy Enhancing Technologies.

8.1.6. Participation in other committees

Catuscia Palamidessi has been serving in the following committees:

Member of the Swedish Research Council Committee for Computer Science, 2013. The main duty of this committee is to evaluate and select the grant applications.

Member of the committee for the ACM SIGSAC 2014 Doctoral Dissertation Award for Outstanding PhD Thesis in Computer and Information Security.

Member of the committee for the **Ackermann Award 2013**: The EACSL outstanding dissertation award for logic in Computer Science.

President of the selection committee for the **EATCS Best Paper Award** at the ETAPS conferences. Since 2006.

Member of the **EAPLS PhD Award** committee. Since 2010.

8.1.7. Organization of seminars

Frank D. Valencia, Luis Fernando Pino Duque, and Nicolás Bordenabe are the organizer of the **Comète-Parsifal Seminar**. This seminar takes place weekly at LIX, and it is meant as a forum where the members of Comète and Parsifal present their current works and exchange ideas.

8.1.8. Service

Catuscia Palamidessi serves as:

Member of the Comité d'Orientation Scientifique et Technique, Groupe de travail Relation Internationales (COST-GTRI). Since November 2007.

Directrice adjointe du LIX, le Laboratoire d'Informatique de l'Ecole Polytechnique. Since April 2010.

Member of the Comité de These for Mathematics and Computer Science at the École Polytechnique. Since October 2007.

Reviewer for the projects proposal for the program PRIN, sponsored by the Italian MIUR ("Ministero dell'Istruzione, dell'Università e della Ricerca"). Since 2004.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master: Konstantinos Chatzikokolakis has been teaching the course "Concurrence" at the "Master Parisien de Recherche en Informatique" (MPRI) in Paris. Level M2. Total 12 hours.

Master: Frank D. Valencia has been teaching the course "Concurrence" at the "Master Parisien de Recherche en Informatique" (MPRI) in Paris. Level M2. Total 12 hours.

Master: Frank D. Valencia has been teaching an advanced course on Process Modeling at the Master Program in Computer Science of the Pontificia Universidad Javeriana de Cali, Colombia. Total 30 hours. A.Y. 2012-13.

8.2.2. Supervision

PhD (2010-2013) **Sophia Knight**. Ecole Polytechnique. Grant Inria/CORDIS. Title of the thesis: *The Epistemic Dimension of Concurrency Theory*. Defended on 20 Sep 2013. Co-supervised by Catuscia Palamidessi and Frank D. Valencia.

PhD (2009-2013) **Ivan Gazeau**. Ecole Polytechnique. Grant ANR. Title of the thesis: *Safe Programming in finite precision: Controlling the errors and information leaks*. Defended on 14 Oct 2013. Co-supervised by Catuscia Palamidessi and Dale Miller.

PhD in progress (2012-) **Marco Stronati**. Ecole Polytechnique. Grant EDX Monge. Co-supervised by Catuscia Palamidessi and Konstantinos Chatzikokolakis.

PhD in progress (2011-) **Lili Xu**. Ecole Polytechnique and Chinese academy of Science, Beijing, China. Co-supervised by Catuscia Palamidessi and Huimin Li.

PhD in progress (2011-) **Nicolás E. Bordenabe**. Ecole Polytechnique. Grant Inria/DGA. Co-supervised by Catuscia Palamidessi and Konstantinos Chatzikokolakis.

PhD in progress (2011-) **Luis Fernando Pino Duque**. Ecole Polytechnique. Grant Inria/DGA. Co-supervised by Catuscia Palamidessi and Frank D. Valencia.

PhD in progress (2013-) **Salim Percy**. Ecole Polytechnique. Grant Digiteo-Digicosme. Co-supervised by Frank D. Valencia and Stefan Haar.

8.2.3. Other didactical duties

Catuscia Palamidessi is:

- Co-responsible of the Master 2 course on Concurrency since 2003, first at the DEA in Theoretical Computer Science (Paris) and then at the MPRI.
- External member of the scientific council for the PhD in Computer Science at the University of Pisa, Italy. Since 2012.
- Member of the advising committee for the PhD of Andrea Margheri, University of Florence, Italy.

COMMANDS Project-Team

8. Dissemination

8.1. Scientific Animation

- F. Bonnans is Corresponding Editor of “ESAIM:COCV” (Control, Optimization and Calculus of Variations), and Associate Editor of “Applied Mathematics and Optimization”, “Optimization, Methods and Software”, and “Series on Mathematics and its Applications, Annals of The Academy of Romanian Scientists”.
- F. Bonnans is chairman of the SMAI-MODE group (the optimization group of the French Applied Mathematics Society) until June 2013.

8.2. Teaching - Supervision - Juries

- F. Bonnans: Optimal control, 7h, M2, Ensta, France.
- F. Bonnans: Continuous Optimization, 18h, M2, Ecole Polytechnique and U. Paris 6, France.
- F. Bonnans: Numerical analysis of partial differential equations arising in finance and stochastic control, 24h, M2, Ecole Polytechnique and U. Paris 6, France.
- H. Zidani: Optimal control, 14h, M2, Ensta, France.
- H. Zidani: Numerical methods for front propagation, 21h, M2, Ensta France

PhD: Xavier Dupuis, Optimal control with or without memories. ended Nov. 2013, F. Bonnans.

PhD : Laurent Pfeiffer, Sensitivity analysis for optimal control problems; Stochastic optimal control with probability constraints. ended Nov. 2013, F. Bonnans.

PhD: Zhiping Rao, Hamilton-Jacobi equations with discontinuous coefficients. Ended Dec. 2013, H. Zidani and N. Forcadel.

PhD in progress : Imène Ben-Latifa, Optimal multiple stopping and valuation of swing options in jump models. Oct. 2010, F. Bonnans and M. Mnif (ENIT, Tunis).

PhD in progress: Athena Picarelli, First and Second Order Hamilton-Jacobi equations for State-Constrained Control Problems. Nov. 2011, O. Bokanowski and H. Zidani

PhD in progress: Cristopher Hermosilla, Feedback controls and optimal trajectories. Nov. 2011, H. Zidani.

PhD in progress: Mohamed Assellaou, Reachability analysis for stochastic controlled systems. Oct. 2011, O. Bokanowski and H.Zidani.

PhD in progress: Benjamin Heymann, Dynamic optimization with uncertainty; application to energy production. Oct. 2013, F. Bonnans.

8.3. Popularization

Pierre Martinon presented an “Unithé ou Café” talk about optimal control on November 8th, entitled “Quand le mieux n’est pas l’ennemi du bien”.

COMPSYS Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Program Committees, Editorial Boards, and Reviewing Activities

- Christophe Alias was a member of the steering committee of IMPACT 2013 (International Workshop on Polyhedral Compilation Techniques, Berlin, Germany).
- Christophe Alias, Alain Darte, and Paul Feautrier were members of the program committees of IMPACT 2013 and IMPACT 2014 (Vienna, Austria).
- Christophe Alias was member of the program committee of ODES 2013 (i.e., ODES-10, 10th Workshop on Optimizations for DSP and Embedded Systems, Shenzhen, China).
- Fabrice Rastello was member of the program committees of CGO 2014 (International Symposium on Code Generation and Optimization, Orlando, Florida) and CRI 2013 (Conférence de Recherche en Informatique, Yaoundé, Cameroun).
- Alain Darte was member of the program committees of DATE 2013 (Design, Automation, and Test in Europe, Grenoble, France) and DATE 2014 (Dresden, Germany), IPDPS 2013 (International Parallel and Distributed Processing Symposium, Boston, Massachusetts) and IPDPS 2014 (Phoenix, Arizona).
- Alain Darte was member of the editorial board of IEEE TECS (Transactions on Embedded Computing Systems) until end of 2013.
- Christophe Alias was a reviewer for the journals JPDC (Journal of Parallel and Distributed Computing), MICPRO (Microprocessors and Microsystems), PPL (Parallel Processing Letters), ACM TRETTS (Transactions on Reconfigurable Technology and Systems), TSI (Technique et Science Informatique), CDT (IET Computers and Digital Techniques), IPL (Information Processing Letters).
- Paul Feautrier was a reviewer for ACM TECS, IJPP, IEEE TPDS, ACM TOPLAS, DATE14, IMPACT 2014.
- Alain Darte was a reviewer for DATE'14, IPDPS'14, IMPACT'14, Parallel Computing, ACM TACO, and ACM TECS.
- Laure Gonnord was a reviewer for MSR'13, DAC'13 and AMT'13.

9.1.2. Thematic Quarter on Compilation

Compsys is part of the Labex MILYON, which regroups Institut Camille Jordan, and the mathematics and computer science labs of ENS-Lyon. One of its goal is “to strengthen our international relationships, in particular by organizing thematic quarters which will allow world experts of a subject to gather in Lyon and work together in a stimulating environment.” In this context, Alain Darte, helped by Alexandre Isoard and Laetitia Lecot, organized, from April to July 2013, a thematic quarter on compilation techniques (<http://labexcompilation.ens-lyon.fr>), with a special focus on the interactions with languages and architectures for high performance computing. This thematic quarter (with a total budget of 100 Keuros), consisted, in addition to the “french compilation days” organized separately in Annecy by Laure Gonnord and Fabrice Rastello (April 4-7, 2013), in three international scientific events organized in Lyon or the vicinity.

- A **spring school on polyhedral code analysis and optimizations** (<http://labexcompilation.ens-lyon.fr/polyhedral-school>), May 13-17, 2013, in Domaine des Hautannes in St Germain au Mont d'Or, the first international school on the polyhedral model and related optimizations. The school covered scheduling theory, algorithms and modeling with integer sets and relations, abstract interpretation, compilation for distributed platforms, array region analysis, vectorization and SIMD optimizations,

through courses given by S. Rajopadhye (Colorado State Univ.), P. Feautrier (Compsys, ENS-Lyon), L.-N. Pouchet (UCLA), S. Verdoolaege (ENS Paris), A. Miné (ENS Paris), U. Bondhugula (IIS Bangalore), A. Darte (Compsys, CNRS), B. Creusillet (Silkan), P. Sadayappan (Ohio State Univ.), N. Vasilache (Reservoir Labs, New York). The school attracted 56 participants, half from France, but also from Germany, the USA, England, Belgium, Spain, China, India, Ireland, and Italy and, interestingly, also from groups that are not familiar with polyhedral optimizations. Roughly half of the participants were PhD students.

- **A dive in languages for high-performance computing** (<http://labexcompilation.ens-lyon.fr/hpc-languages>), June 29-July 2, 2013 in Résidence Villemanzy in Lyon, organized as a set of long keynotes on CAF (Coarray Fortran), UPC (Unified Parallel C), X10, Chapel, OpenACC & OpenHMPP, Liquid Metal, OmpSs, OpenStream, and some DSL approaches. The keynotes were given by a panel of international experts on compilation for high-performance computing: J. Mellor-Crummey and V. Sarkar (Rice), K. Yelick (Berkeley), R. Schreiber (HP Labs), B. Chamberlain (Cray), D. Grove and R. Rabbah (IBM Watson), A. Cohen (Inria, ENS Paris), R. Badia (UPC Barcelona), F. Bodin (Univ. Rennes, previously Caps Entreprise), Y. Orlarey (Grame), K. Knobe (Intel, Massachusetts), P. Sadayappan (Ohio State Univ.). This event regrouped 71 participants, including speakers, and, as we hoped, also attracted people from industry, and not only computer industry.
- **CPC'13, the 17th international workshop on compilers for parallel computing** (<http://labexcompilation.ens-lyon.fr/cpc2013>), July 3-5, 2013, in Musée Gadagne, in (old) Lyon, a venue that is held every 18 months in Europe since 1989 and that encompasses all areas of parallelism and optimization linked to compilers. The program consisted in 29 talks, from the international community on compilers for HPC (from Japan & Taiwan to the USA, and of course Europe), with 47 participants.

During this compilation thematic quarter, Paul Feautrier and Alain Darte gave the following talks:

- “Array Dataflow Analysis for Polyhedral X10 Programs” (Paul Feautrier) and “Modèles et algorithmes: comprendre de quoi on parle” (Alain Darte) at the French Compiler Community meeting (April 2-4, 2013),
- “The Care and Feeding of Polyhedra” (Paul Feautrier) and “Array Contraction with Lattice-Based Memory Allocation” (Alain Darte) at the Spring School on Polyhedral Code Analysis and Optimizations (May 13-17, 2013),
- “Determinacy Analysis of Polyhedral X10 Programs” (Paul Feautrier), paper with Alain Ketterlin and Eric Violard, at the CPC Workshop (July 3-5, 2013),

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence:

- Laure Gonnord, Algorithmique et programmation C (60h), L3, Université de Lille 1, Polytech'Lille.
- Laure Gonnord, Architecture des ordinateurs (25h), L3, Université de Lille 1, Polytech'Lille.
- Laure Gonnord, Algorithmique et programmation fonctionnelle et récursive (42h), L1, Université Lyon 1 Claude Bernard.
- Guillaume Iooss, LIF3: algorithmique et programmation fonctionnelle et récursive (28h), L1, Université Lyon 1 Claude Bernard.
- Guillaume Iooss, Programmation 1 (12h), L3, ENS-Lyon.
- Christophe Alias, Architecture des ordinateurs (21h TP), Université Lyon 1.

- Christophe Alias, Compilation (6h CM, 6h TP), ENSI Bourges.
- Christophe Alias, Correction de copies, concours E3A, épreuve informatique MPSI.
- Alexandre Isoard, LIF12: Système et Réseau (32h TP), L3, Université Lyon 1 Claude Bernard.

Master:

- Laure Gonnord, Compilation (24h), M1, Université Lyon 1 Claude Bernard.
- Laure Gonnord, Introduction aux systèmes et réseaux (52h), M2 Pro, Université Lyon 1.
- Christophe Alias, Compilation (24h CM), M1, ENS-Lyon.
- Christophe Alias, Compilation avancée (8h CM), M2, ENS-Lyon.
- Fabrice Rastello, Compilation avancée (6h CM), M2, ENS-Lyon.
- Fabrice Rastello, SSA-based compiler design (2 days), CRI Cameroun.
- Alexandre Isoard, Compilation (24h TP), M1, ENS-Lyon.
- Guillaume Iooss, Image (24h TP), M1, ENS-Lyon.
- Laure Gonnord also organized, for the Computer Science Department of ENS Lyon, a *research school* for Master students, on synchronous programming. The program can be found at the url: http://laure.gonnord.org/pro/research/sync_research_school.html.

9.2.2. Supervision

- PhD in progress: Guillaume Iooss, “Semantic Tiling”, started on September 2011, advisors: Christophe Alias and Sanjay Rajopadhye (Associate Professor, Colorado State University).
- PhD in progress: François Gindraud, started on January 2013, advisors Fabrice Rastello, Albert Cohen (Parkas Inria team)
- PhD in progress: Duco Van Amstel, started on January 2013, advisors Fabrice Rastello, Benoit Dupont-de-Dinechin (Kalray)
- PhD in progress: Diogo Nunes Sampaio, started on October 2013, advisor Fabrice Rastello
- PhD in progress: Alexandre Isoard, started in September 2012, advisor Alain Darté

9.2.3. Juries

- Laure Gonnord participated to the Jury of Clement Guy’s PhD defense (in Rennes) entitled “Facilités de typage pour l’ingénierie des Langages”. This PhD was supervised by J.M. Jézéquel (Professor, Rennes University), and B. Combemale (Assistant Professor, Rennes University) and S. Derrien (Professor, Rennes university).
- Christophe Alias participated to the Jury of Antoine Morvan’s PhD defense (in Rennes) entitled “Utilisation du modèle polyédrique pour la synthèse d’architectures pipelinées”. This PhD thesis was supervised by S. Derrien (Professor, Rennes University), and P. Quinton (Professor, Rennes University).
- Fabrice Rastello participated to the jury of Alexandre Carbon’s PhD defense, entitled “Accélération matérielle de la compilation à la volée pour les systèmes embarqués”.
- Paul Feautrier was a reviewer for the HDR of Stephane Mancini (Grenoble) and for the PhD of Amira Mensi (Paris).
- Alain Darté was a reviewer for the PhD thesis of Cupertino Miranda (Paris 11), entitled “Erbium: Reconciling languages, runtimes, compilation and optimizations for streaming applications” and supervised by Albert Cohen (DR Inria, Parkas team).

CONTRAINTE Project-Team

9. Dissemination

9.1. Scientific Animation

- Grégory Batt's invited seminars:
 - Long-term model predictive control of gene expression, in *Bison seminar*, ETHZ, Zurich, March 2013
 - Modeling intrinsic and extrinsic variability: models, model identification methods and noise conversion, *Haredhol seminar*, ENS Paris, Paris, April 2013
 - Comprendre et contrôler le fonctionnement des cellules: apport de la biologie computationnelle, *Seminar Groupement de recherche interdisciplinaire sur les systèmes biologiques (Grisbi)*, Montpellier, Oct 2013
 - Comprendre et contrôler le fonctionnement des cellules: apport de la biologie computationnelle, *Symposium franco-britannique sur la biologie de synthèse*, London, Oct 2013
 - Cells driven by computers. *Pharmacometry and Bioinformatics Day*, Sanofi, Paris, Dec 2013

He has been a member of the EraSynBio evaluation committee (Lisbon), judge at iGEM competition (Lyon), and animator of the axis "Modélisation des réseaux biologiques, biologie systémique et synthétique" of the Groupement de Recherche "Bioinformatique moléculaire" (GdR BIM). He was member of the PhD advisory committees of Adrien Henry (laboratoire de génétique végétale du Moulon, Orsay) and of Géraldine Célière (Bang group, Inria Paris-Rocquencourt). He was a reviewer for Integrative Biology, PLoS Computational Biology, ACS Synthetic Biology, European Conference on Control, and Computational Methods in Systems Biology conference

- Xavier Duportet's invited seminar and contributed poster presentations:
 - Keystone Symposia on Precision Genome Engineering and Synthetic Biology, Colorado, USA, March 17-22
 - Synthetic Biology conference (SB6.0), London, July 9-12

He has been involved in technological transfer activities:

- Provisional patent application: High-throughput discovery of recombinase sites towards the engineering of recombinase specificity
- Consulting on mammalian synthetic circuit design for Lung LLC, USA

Xavier is also the President of a non-profit organization to promote science and technology entrepreneurship among European students and scientists and organizing the Hello Tomorrow Challenge, a European startup competition.

- François Fages is a member of
 - Editorial Board of **RAIRO Operations Research**,
 - Steering Committee of the International Conference series on Computational Methods in Systems Biology (CMSB).
 - Scientific Advisory Board of the Doctorate School Frontières du Vivant of the University Paris Descartes
 - "Comité de pilotage" of the OSEO BioIntelligence project, coordinated by Dassault-Systemes
 - "Comité scientifique du LIFO", University of Orléans

- “Commission de spécialistes”, University of Lille.

He was member of the program committees of CHR’13 (Tenth International Workshop on Constraint Handling Rules Berlin, Germany – July 13th, 2013), CMSB’13 (Eleventh Conference on Computational Methods in Systems Biology, IST Klosterneuburg, Austria, September 2013), FroCoS’13 (Frontiers of Combining Systems, co-located with Tableaux 2013, Nancy, France, September 18-20, 2013), HSB’13 (Second International Workshop on Hybrid Systems and Biology associated to ECAL 2013, Taormina, Italy, September 2, 2013), ICLP’13 (29th International Conference on Logic Programming 24 - 29 August 2013, Istanbul, Turkey), WCB’13 (Workshop on Constraint-Based-Methods for Bioinformatics, Budapest, Hungary, co-located with CP’13, Uppsala, Sweden September 16-20, 2013), ICORES’13 (second International Conference on Operations Research and Enterprise Systems, held in conjunction with ICAART 2013 and ICPRAM 2013, Barcelona, Spain, Feb 2013).

He has reviewed articles for the following journals: ACM Transactions on Computational Logics, Artificial Intelligence, Journal of Logic and Computation, PLOS Computational Biology, Annals of Operations Research, Information and Computation, Journal of Mathematical Biology, Constraints, BMC Systems Biology,

François Fages was reviewer of research grants for

- the Netherlands Organisation for Scientific Research (NWO),
- the Research Foundation Flanders (FWO)

Invited talks:

- BRICS-CCI, 1st BRICS Countries Conference on Computational Intelligence, Recife, Brazil, October 2013.
- Symposium Biointelligence, Sophia-Antipolis, July 2013.
- Interdisciplinary Symposium on Signals and Systems for Medical Applications, Paris, 3-4 Jun 2013.
- Thierry Martinez was member of the Program Committee of CHR’13. He acted as reviewer for the journal Constraints, and for the conferences Concur’13, FRODOS’13 and ICLP’13.
- Sylvain Soliman acted as reviewer for LICS’13, and CMSB’13, and as member of the Program Committees of WLPE’13, JFPC’13 and SASB’13. He was also reviewer for the Austrian Science Fund (FWF) stand alone project proposals.
- Denis Thiéffry is currently
 - member of the INSERM CSS2 evaluation/recruitment commission;
 - member of the board of the PhD Program Complexity in Post-Genomic Biology of the University of Torino;
 - member of the program committees for ISMB, JOBIM, CMSB, and SASB;
 - Editor of BioSystems;
 - Associated Editor of PLoS Computational Biology; as well as of BMC Systems Biology;
 - Adviser for the PLoS Biology Education series.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Contraintes is affiliated to the Doctoral school of Mathematical Science of the University Paris Diderot, and to the interdisciplinay Doctoral school “Frontières du Vivant” of the University Paris Descartes.

The following courses have been given by members of Contraintes:

Ecole thématique CNRS “Biologie des Réseaux”, Ile de Porquerolles, François Fages (6h), Denis Thieffry (4h).

Master M2 course C2-19 on *Computational Methods for Systemic and Synthetic Biology*, Master Parisien de Recherche en Informatique (MPRI) François Fages (responsable, 12h), Grégory Batt (12h), Denis Thieffry (12h).

Interdisciplinary Master in Life Science at the Ecole Normale Supérieure, Paris. Denis Thieffry (coordinator).

Master M2 course C2-35-1 on *Constraint Programming*, Master Parisien de Recherche en Informatique (MPRI) Sylvain Soliman (responsable, 24h) [beginning of the 2013-2014 academic year].

Master M1 course on *Computational Biology*, Master Approches Interdisciplinaires du Vivant (AIV), Grégory Batt (coordinator, 48h).

Master M2 course *Dynamical Modelling of Cellular Regulatory Networks*, Master of Biology of Cellular Systems, Grégory Batt (6h).

9.2.2. Supervision

PhD : Faten Nabli, “Approches de programmation par contraintes pour l’analyse des propriétés structurelles des réseaux de Petri et application aux réseaux biochimiques”, Université Paris Diderot, Paris, 10/07/2013, Dir. François Fages and Sylvain Soliman

PhD : Jannis Uhlendorf, “Real-time feedback control of gene expression”, Paris Diderot University, Paris, 19/04/2013, Dir. Grégory Batt and Pascal Hersen (MSC)

PhD in progress : François Bertaux, Université Pierre et Marie Curie, Paris, Sept 2011, Dir. Dirk Drasdo (EPI BANG) and Grégory Batt

PhD in progress : Xavier Duportet, Université Paris Descartes, Paris, Oct 2010, Dir. Grégory Batt, François Fages and Ron Weiss (MIT)

PhD in progress : Steven Gay, Université Paris Diderot, Paris, Oct 2009, Dir. François Fages and Sylvain Soliman,

PhD in progress : David Fournier, Université Paris Diderot, Paris, Oct 2011, Dir. François Fages and Denis Mulard (General Electric),

PhD in progress : Jean-Baptiste Lugagne, Université Paris Diderot, Paris, Oct 2012, Dir. Grégory Batt, François Fages and Pascal Hersen (MSC)

PhD in progress : Artemis Llamosi, Université Paris Diderot, Paris, Nov 2012, Dir. Grégory Batt, Jean-Marc di Meglio and Pascal Hersen (MSC)

PhD in progress : Pauline Traynard, Université Paris Diderot, Paris, Oct 2012, Dir. François Fages and Denis Thieffry (ENS)

PhD in progress : Luma Vittorino, Université Paris Diderot, Paris, Oct 2012, Dir. François Fages,

9.2.3. Juries

HDR of Cédric Lhoussaine, University of Lille. Dec 2013. Reviewer François Fages.

HDR of Nicolas Le Novère, University of Bordeaux. Nov 2013. Reviewer François Fages and Denis Thieffry.

PhD Thesis defense of Geoffrey Andrieux. University of Rennes. Jul 2013. François Fages.

PhD Thesis defense of Sucheendra Palaniappan, NUS, Singapore. June 2013. Reviewer Grégory Batt.

PhD Thesis defense of Andreas Miliadis-Argeitis, ETHZ. March 2013. Reviewer Grégory Batt.

MSc Thesis defenses of Lakshmeesh Maruthi and Yifan Pan, TU Delft. September 2013. Grégory Batt.

CONVECS Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Software Dissemination and Internet Visibility

The CONVECS project-team distributes several software tools: the CADP toolbox (see § 5.1), the TRAIAN compiler (see § 5.2), the PIC2LNT translator (see § 5.3), and the PMC model checker (see § 5.4). In 2013, the main facts are the following:

- We prepared and distributed 11 successive versions (from 2013-a to 2013-l “Zurich”) of CADP.
- We were requested to grant CADP licenses for 934 different computers in the world.
- We released version 3.0 of the PIC2LNT translator from an applied π -calculus to LNT in May 2013.
- We released version 1.0 of the PMC partial model checker for networks of automata in May 2013.

The CONVECS Web site ¹⁴ was updated with scientific contents, announcements, publications, etc.

By the end of December 2013, the CADP forum ¹⁵, opened in 2007 for discussions regarding the CADP toolbox, had over 270 registered users and over 1400 messages had been exchanged.

Other research teams took advantage of the software components provided by CADP (e.g., the BCG and OPEN/CAESAR environments) to build their own research software. We can mention the following developments:

- Formal verification of BPMN models with the Alvis modeling language [64], [65], [66]
- The DFTCalc tool for efficient fault tree analysis [29], [28]
- Efficient modeling, generation, and analysis of Markov automata [67]
- Modeling and verification techniques for the incremental development of UML architectures [63]
- Model based design of complex embedded systems [27]
- Model extraction approach to verifying concurrent C programs [40]
- Model checking based approach to automatic test suite generation for Web services and BPEL [73]
- The VIP Design graphical language for the design of image and video processing embedded systems [74], [75]
- Active learning of extended finite state machines [69]
- Incremental construction and interoperability analysis of critical systems [56], [55], [62]
- Modeling robot behavior with CCL [54]
- Behavioural verification of distributed components [52]
- Efficient property preservation checking of model refinements [71]
- Efficient operational semantics for EB3 for verification of temporal properties [70]
- Multilevel contracts for trusted components [59]

Other teams also used the CADP toolbox for various case studies:

- Formally reasoning on a reconfigurable component-based system [48]
- Assisting refinement in system-on-chip design [60]
- Formal development of control software in the medical systems domain [61]
- Model-driven approach supporting formal verification for Web service composition protocols [38]
- Scalably verifiable cache coherence [72]
- Improved test case generation from UML statecharts [34], [33]

¹⁴<http://convecs.inria.fr>

¹⁵<http://cadp.inria.fr/forum.html>

9.1.2. Program Committees

In 2013, the members of CONVECS took on the following responsibilities:

- H. Garavel is an editorial board member of STTT (*Springer International Journal on Software Tools for Technology Transfer*).
- F. Lang is an editorial board member of the Scientific World Journal in the Computer Science subject area.
- G. Salaün is an editorial board member of SOCA (*Springer International Journal on Service Oriented Computing and Applications*).
- G. Salaün is a steering committee member of FACS (*International Symposia on Formal Aspects of Component Software*).
- G. Salaün is a steering committee member of FOCLASA (*International workshops on Foundations of Coordination Languages and Self-Adaptive Systems*).
- G. Salaün was a program committee member for MODELSWARD'2013 / MODA'2013 (*1st International Conference on Model-Driven Engineering and Software Development, Special Session on Model-Driven Software Adaptation*), Barcelona, Spain, February 19–21, 2013.
- G. Salaün was a program committee member for SAC'2013 (*28th Annual ACM Symposium on Applied Computing, Track on Service-Oriented Architectures and Programming*), Coimbra, Portugal, March 18–22, 2013.
- G. Salaün and W. Serwe were program committee members for FSEN'2013 (*5th International Conference on Fundamentals of Software Engineering*), Tehran, Iran, April 24–26, 2013.
- G. Salaün was a program committee member for CBSE'2013 (*16th International ACM Sigsoft Symposium on Component-Based Software Engineering*), Vancouver, Canada, June 18–20, 2013.
- G. Salaün was a program committee member for QASBA'2013 (*2nd International Workshop on Quality Assurance for Service-based Applications*), Lugano, Switzerland, July 15, 2013.
- F. Lang was a program committee member for ETR'2013 (*Ecole d'été Temps-réel*), Toulouse, France, August 26–30, 2013.
- F. Lang was a program committee member for ESOC'2013 (*European Conference on Service-Oriented and Cloud Computing*), Málaga, Spain, September 11–13, 2013.
- F. Lang and R. Mateescu were program committee members for FMICS'2013 (*18th International Workshop on Formal Methods for Industrial Critical Systems*), Madrid, Spain, September 23–24, 2013.
- G. Salaün was a program committee member for FACS'2013 (*10th International Symposium on Formal Aspects of Component Software*), Nanchang, China, October 28–30, 2013.

9.1.3. Awards and Distinctions

H. Garavel is an invited professor at Saarland University (Germany) as a holder of the Gay-Lussac Humboldt Prize.

9.1.4. Lectures and Invited Conferences

- H. Garavel attended the Dagstuhl Seminar #13051 on “*Software Certification: Methods and Tools*” (Schloss Dagstuhl, Germany, January 27 – February 1st, 2013). He gave a lecture entitled “*A Naive Look at Software Certification Practices – and Proposals for Enhancement*” on January 30, 2013.
- G. Salaün visited the University of Málaga (Spain) from February 2 to March 8, 2013. He gave a talk entitled “*Formal Methods for Cloud Computing Environments*” on February 6, 2013 and a talk entitled “*Verification of Contract-based Communicating Systems*” on February 13, 2013.
- H. Garavel visited RWTH Aachen (Germany) on February 25–28, 2013. He gave a talk entitled “*CAESAR Nets, NTIF, and FIACRE: Better than Slim, and also Faster?*”.

- G. Salaün gave a keynote lecture entitled “*Verification of Contract-based Communicating Systems*” at GRAPHITE’2013 (Rome, Italy) on March 24, 2013.
- H. Garavel was invited to the seminar “*25 Years of Combining Compositionality and Concurrency*” (Königswinter, Germany, August 7–9, 2013). He gave a lecture entitled “*25 Years of Compositionality Issues in CADP: An Overview*”.
- F. Lang gave a lecture entitled “*CADP: A Toolbox for the Construction and Analysis of Distributed Processes*”, followed by a lab session on CADP at ETR’2013 (Toulouse, France) on August 28, 2013.
- F. Lang gave a keynote lecture entitled “*Langage de nouvelle génération pour la modélisation et vérification formelle de systèmes asynchrones*” at JDEV’2013 (Palaiseau, France) on September 4, 2013.
- H. Garavel gave a lecture entitled “*25 Years of Combining Compositionality and Concurrency*” at Saarland University on December 20, 2013.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

CONVECS is a host team for the computer science master entitled “*Mathématiques, Informatique, spécialité : Systèmes et Logiciels*”, common to Grenoble INP and University Joseph Fourier.

In 2013, we carried out the following teaching activities:

- G. Salaün is co-responsible for the ISI (*Ingénierie des Systèmes d’Information*) department of ENSIMAG since September 1, 2011.
- H. Evrard served as a teaching assistant in a course on “*Algorithmique et structures de données*”, given by Frédéric Wagner to the first year computer science engineering students of ENSIMAG (36 hours).
- H. Evrard served as a teaching assistant in a course on “*Introduction aux réseaux de communication*”, given by Roland Groz to the first year computer science engineering students of ENSIMAG (18 hours).
- H. Evrard served as a teaching assistant in a course on “*Systèmes d’exploitation et programmation concurrente*”, given by Yves Denneulin to the second year computer science engineering students of ENSIMAG (18 hours).
- A. Kriouile served as a teaching assistant in a course on “*Conception de circuits et architectures des ordinateurs*”, given by Frédéric Pétrot to the first year computer science engineering students of ENSIMAG (27 hours).
- A. Kriouile served as a teaching assistant in a course on “*Introduction aux réseaux de communication*”, given by Roland Groz to the first year computer science engineering students of ENSIMAG (36 hours).
- A. Kriouile served as a teaching assistant for a student project “*Projet logiciel en C*”, proposed by François Broquedis and Matthieu Chabanas to the first year computer science engineering students of ENSIMAG (20 hours).
- F. Lang and W. Serwe gave a course on “*Spécification et vérification de systèmes concurrents et temps-réel*” to the third year computer science engineering students of ENSIMAG (18 hours).
- G. Salaün gave a course on “*Algorithmique parallèle et orientée-objet*” to the second year computer science engineering students of ENSIMAG (36 hours).
- L. Ye gave a course on “*Théorie des langages*” to the first year computer science engineering students of ENSIMAG (10 hours).

9.2.2. Juries

- R. Mateescu was a panel member for Syed Hussein Syed Alwi's PhD thesis, entitled "*Vérification compositionnelle pour la conception sûre de systèmes embarqués*", defended at Université Pierre et Marie Curie, Paris, France, on July 11, 2013.
- G. Salaün was a panel member for Huu Nghia Nguyen's PhD thesis, entitled "*A Symbolic Approach for the Verification and the Testing of Service Choreographies*", defended at Université Paris Sud, Orsay, France, on October 30, 2013.

9.3. Popularization

H. Garavel participated to the committee in charge of organizing the Aerospace Valley series of industrial conferences on formal methods. The second conference^{16 17}, devoted to static analysis, held on June 28, 2013 in Toulouse and retransmitted by video-conference in Grenoble, attracted 95 participants from industry and academia.

R. Mateescu was in charge of the scientific organization of the In'Tech seminar entitled "*Formal Validation of Industrial Critical Systems*" held on April 18, 2013 at the Inria Grenoble – Rhône-Alpes research center in Montbonnot. The seminar attracted about 100 participants from academia and industry. F. Lang gave a public demonstration of the CADP tools and R. Mateescu gave a talk entitled "*Formal Modeling and Verification of Concurrent Systems using CADP*".

9.4. Miscellaneous Activities

H. Evrard is a member of the council of the MSTII doctoral school.

H. Evrard and G. Salaün are members of the council of the LIG laboratory.

H. Garavel is a member of the LIG commission in charge of preparing candidates selected for recruitment interviews at CNRS.

H. Garavel is a member of the operational committee of the EMSOC cluster ("Embedded System on Chip") within the "*pôle de compétitivité*" Minalogic.

H. Garavel was a reviewer for various ongoing ANR (*Agence Nationale de la Recherche*) projects evaluated in 2013.

F. Lang is a member of the "*commission du développement technologique*", which is in charge of selecting R&D projects for Inria Grenoble - Rhône-Alpes.

E. Léo and W. Serwe are members of the "*comité de centre*" of Inria Grenoble - Rhône-Alpes.

R. Mateescu is the correspondent of the "*Département des Partenariats Européens*" for Inria Grenoble - Rhône-Alpes.

G. Salaün is a member of the scientific council of Grenoble INP (*Conseil scientifique de l'institut*).

H. Garavel is "*chargé de mission*" of the LIG laboratory and responsible for the liaison with Minalogic.

W. Serwe is "*chargé de mission*" of the LIG laboratory for the scientific axis "*Formal Methods, Models, and Languages*".

¹⁶<http://www.inria.fr/centre/grenoble/agenda/forum-methodes-formelles>

¹⁷<http://www.inria.fr/centre/grenoble/actualites/fiabilite-des-logiciels-pas-uniquelement-pour-les-avions>

COPRIN Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. International activities

- D. Daney has presented a paper in Computational Kinematic 2013, Barcelona, ICRA 2013 Karlsruhe and IROS 2013, Tokyo.
- D. Daney has organized and has been a member program committee of IROS 2013 workshop on Assistance and Service Robotics in a Human Environment
- 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 and board member of the Journal of Behavioral Robotics. He was also a board member of 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 is one of the 10 members of IFToMM Executive Council, the board of this federation.
- Y. Papegay is a permanent member of the International Steering Committee of the International Mathematica Symposium conferences serie.

9.1.2. National activities

- Laurent Blanchet and Rémy Ramadour organized the JJCR (Journée des Jeunes Chercheurs en Robotique) in October 2013, and attended the JNRR (Journées Nationales de la Recherche en Robotique) in October 2013.
- D. Daney is a member of the scientific committee of the CNR SDA (Centre National de Référence Santé à Domicile et Autonomie) and of the evaluation committee of the ANR TecSan.
- D. Daney has presented the large scale initiative action PAL to JNRR 0213, Journée Nationale de la Recherche en Robotique, Annecy, to Journée Scientifique de Inria, Rennes and to the 2nd Workshop of Centre Expertise National en Robotique, Evry.
- J-P. Merlet is a member of the scientific committee of the CNRS GDR robotique

9.1.3. Inria activities

- K. Bakal is chair of the PhD students association of Inria Sophia
- D. Daney is coordinator of the Large Scale Initiative Personally Assisting Living (PAL)
- J-P. Merlet is a member of the "Bureau du Comité des Projets" of the Sophia-Antipolis Inria center.
- O. Pourtallier is a member of the CSD (doctoral students monitoring), and is responsible of the NICE committee (long term invited scientists and post-doctoral student selection).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence :D. Daney gave a lecture on industrial control systems (L3), ITII, Polytech Nice (48h ETP).

Master : D. Daney gave a lecture on medical robotics, Master of Bio-Medical (M2), Univ. Nice Sophia Antipolis (22h ETP)

Master : O. Pourtallier lectured 6 hours on game theory to Master OSE (M2), at École des Mines de Paris, Sophia Antipolis, France

9.2.2. Supervision

PhD : J. Alexandre dit Sandretto, Calibration of large parallel robots, 2013, supervisors: D. Daney, G. Trombettoni

PhD :T. Gayral, Calibration of parallel telescope, 2013, supervisors: D. Daney, J-P. Merlet

PhD in progress :K. Bakal, Indices biomécaniques globaux de capacité de génération de forces, supervisor: P. Gorce (Handibio), J-P. Merlet

PhD in progress :A. Berti, Analysis of cable-driven parallel robots, 2012-2015, supervisor: M. Carricato (U. Bologna), J-P. Merlet supervisor: P. Gorce (Handibio), J-P. Merlet

PhD in progress :L. Blanchet, Design of large scale wire-driven parallel robots, 2012-2016, supervisor: J-P. Merlet supervisors: J-P. Merlet

PhD in progress :H. Lamine, Analysis of cable-driven parallel robots, 2013-2016, supervisor: L. Romdhane (ENI Sousse), J-P. Merlet

PhD in progress : R. Ramadour, Manipulation for assistance, 2011-2014, supervisors: F. Chaumette, J-P. Merlet

9.2.3. Juries

- David Daney has participated in in the following thesis defense committees : Jorgé Alberto Rios Martinez, January 8, University of Grenoble, France, Julien Alexandre Dit Sandretto, September 11, University of Nice, France, Thibault Gayral, November 29, University of Nice, France
- J-P. Merlet has been the member of the jury of 5 PhD defense and of one HdR

9.3. Popularization

- A short breve entitled “How Much for My Ton of CO2 ?” coauthored by Mireille Bossy (Inria TOSCA) , Nadia Maizi (CMA ENSMP) and Odile Pourtallier was published on the daily blog of MPE2013 (Mathematics for Planet Earth 2013). <http://mpe2013.org/2013/07/04/how-much-for-my-ton-of-co2/>
- we extensively use the MARIONET-SCHOOL robots for pedagogy and teaching at all level [13]. It has been exhibited at the BAUMA fair (Munich) by german colleagues, at INNOROBO (Lyon), at the JNRR (Annecy) and during the APMEP (association of mathematics professors) workshop (Marseille)
- 95

CORIDA Project-Team

7. Dissemination

7.1. Scientific Animation

Most of the members of our team have regular editorial activities in the leading journals and conferences of the field.

For instance, Marius Tucsnak is a member of the editorial boards of ESAIM COCV, Journal of Mathematical Fluid Mechanics, Mathematical Reports and Revue Roumaine de Mathématiques Pures et Appliqués.

The notable changes with respect to 2012 are

- Xavier Antoine joined the editorial board of ISRN Applied Mathematics in 2013. He also became “délégué scientifique” in charge of the department “Mathematical sciences and Interactions” of the national funding agency ANR and was nominated head of the program “Accueil de Chercheuses et Chercheurs de Haut Niveau” in 2013.
- Thomas Chambriion joined the IFAC Technical Chair for control of PDE’s in 2013.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Most of the members of the team have a teaching position (192 hours a year) in Université de Lorraine.

- Fatiha Alabau has a full time full professor position (Metz site);
- Xavier Antoine has a full time full professor position at École des Mines and ENSEM;
- Thomas Chambriion has a full time associate professor position at ESSTIN;
- Antoine Henrot has a full time full professor position at École des Mines;
- Bruno Pinçon has a full time associate professor position at Telecom Nancy;
- Lionel Rosier has a full time full professor position at ESSTIN;
- Jean-François Scheid has a full time associate professor position at Telecom NancyL;
- Marius Tucsnak has a full time full professor position at (Nancy site);
- Julie Valein has a full time associate professor position at ESSTIN.

7.2.2. Supervision

PhD in progress : Chi Ting Wu, “Approximations des problèmes de contrôle optimal”, from 2012, Supervisor: Marius Tucsnak, co-supervisor: Julie Valein.

PhD in progress : Tatiana Manrique, “commande robuste de systèmes à commutations”, from 2011, Supervisor: Gilles Millerioux (Université de Lorraine), co-supervisor: Thomas Chambriion.

PhD in progress : Ibrahim Zambre, “méthodes numériques hybrides en diffraction haute-fréquence”, Supervisors: Xavier Antoine and Christophe Guezaine (University of Liege).

7.2.3. Juries

Jean-François Scheid has been a PhD examiner for the thesis of S. Flotron - EPFL (Switzerland), april 2013.

Karim Ramdani has been member of the PhD juries Giovanni Migliorati (Ecole Polytechnique and Politecnico di Milano, april 2013) and of Alexandre Impériale (Paris 6 University, december 2013).

Marius Tucsnak was president of the PhD jury of Sarah MECHHOUD (Grenoble), referee for the PhD jury of Morgan MORANCEY (Ecole Polytechnique) and a member of the PhD jury of Pierre Lissy (Paris 6).

7.3. Popularization

In December 2013, Karim Ramdani organized with Estelle Carciofi a [workshop dealing with issues related to scientific edition](#).

CORTEX Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Responsibilities

- Head of the Complex systems and AI department of the LORIA laboratory (B. Girau)
- Organization of a talk series on Image, Perception, Action & Cognition on a monthly basis at the Inria-Nancy Grand Est laboratory (<http://ipac.loria.fr/>), Y. Boniface with researchers of other teams).

8.1.2. Review activities

- Reviewing for journals and conferences: Artificial Intelligence in Medicine journal (P. Hénaff), International Journal of Advanced Robotic Systems (P. Hénaff), Progress in Artificial Intelligence (B. Girau)
- Member of program committees: Reconfig (B. Girau), IEEE 34th International Conference on Electronics and Nanotechnology ELNANO-2014 (P. Hénaff)
- Evaluation of ANR Blanc SIMI 3 projects (B. Girau)

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Many courses are given in universities and schools of engineers at different levels (LMD) by most team members, in computer science, in applied mathematics and in cognitive science. Moreover, several members of the team are implied in various kinds of academic responsibilities: Laurent Bougrain is head of the IPAC speciality of the Master In Computer Science, Bernard Girau is member of the Conseil de Collegium Science et Technologie of the University of Lorraine, as well as of the Conseil de Secteur Scientifique MIAE.

8.2.2. Supervision

PhD: Maxime Rio, Modèles bayésiens pour la détection de synchronisations au sein de signaux électro-corticaux, Université de Lorraine, 16/07/2013, B. Girau and A. Hutt (work in relation with the Neurosys team)

PhD: Georgios Detorakis, Plasticité corticale, champs neuronaux dynamiques et auto-organisation, Université de Lorraine, 23/10/2013, N. Rougier

PhD: Carolina Saavedra, Méthodes d'analyse et de débruitage multicanaux à partir d'ondelettes pour améliorer la détection de potentiels évoqués sans moyennage, Université de Lorraine, 14/11/2013, B. Girau and L. Bougrain (work in relation with the Neurosys team)

PhD in progress: Carlos Carvajal-Gallardo, Faisabilité d'une Rétine Artificielle pour la Vision Humaine : Étude Critique des Solutions Électroniques et Contre-Solutions, from 23/02/12, F. Alexandre

PhD in progress: Benoît Chappet, Champs neuronaux dynamiques impulsions aléatoires, from october 2012, B. Girau

PhD in progress: Artem Melnyk, Perfectionnement des algorithmes de contrôle-commande des robots manipulateur électriques en interaction physique avec leur environnement par une approche bio-inspirée, from january 2010, co-supervision between Donetsk Technical University (Ukraine) and University of Cergy Pontoise, P. Hénaff

8.2.3. Juries

PhD: Maxime Rio , Modèles bayésiens pour la détection de synchronisations au sein de signaux électro-corticaux, Université de Lorraine, 16/07/2013 (B. Girau, as advisor)

PhD: Carolina Saavedra, Méthodes d'analyse et de débruitage multicanaux à partir d'ondelettes pour améliorer la détection de potentiels évoqués sans moyennage, Université de Lorraine, 14/11/2013 (B. Girau, as advisor)

HDR: Slim Ouni, Parole multimodale : de la parole articulatoire à la parole audiovisuelle, Université de Lorraine, 29/11/2013 (B. Girau, president)

PhD: Nicolas Estibals, Algorithmes et arithmétique pour l'implémentation de couplages cryptographiques, Université de Lorraine, 30/10/2013 (B. Girau, president)

PhD: Julie Busset, Inversion acoustique articulatoire à partir de coefficients cepstraux, Université de Lorraine, 25/03/2013 (B. Girau, president)

PhD: Srikishna Bhat, Mots visuels pour le calcul de pose, Université de Lorraine, 22/01/2013 (B. Girau, president)

PhD: Hoda Sbaiti, Optimisation sur un modèle de comportement pour la thérapie en oncologie, Université de Versailles St Quentin en Yvelynes, 30/09/2013 (P. Hénaff as referee)

PhD: Gatean André, Modélisation oscillatoire de l'écriture manuscrite, Université de Toulouse, 11/12/2013 (P. Hénaff as referee)

CQFD Project-Team

9. Dissemination

9.1. Scientific Animation

The team CQFD organized a *journée SMAI maths-industrie* on dependability and safety in Bordeaux in April 2013.

The CQFD team organized the workshop Statlearn'13 on the challenging problems in Statistical Learning in Bordeaux on April 8-9, 2013.

F. Dufour is associate editor of the journal: SIAM Journal of Control and Optimization since 2009.

J. Saracco is an associate editor of the journal Case Studies in Business, Industry and Government Statistics (CSBIGS) since 2006.

All the member of the team are regular reviewers for the most important journals in applied probability and statistics.

F. Dufour is member of the scientific council of the engineering school ENSEIRB-MATMECA.

F. Dufour is member of the scientific council of the Institute of Mathematics of Bordeaux.

F. Dufour was vice-president of the Inria Project Committee.

B. de Saporta is president of the "Congress and Colloquium" commission of the Inria Bordeaux Sud-Ouest.

B. de Saporta is in charge of the seminar of the team *Statistics and Probability* of the Institute of Mathematics of Bordeaux (IMB).

B. de Saporta is a member of the council of the Institute of Mathematics of Bordeaux (IMB).

A. Gégout-Petit was elected member of the CEVU of University Bordeaux Segalen

A. Gégout-Petit was member of the Mathematical Institute of Bordeaux council

A. Gégout-Petit was general secretary and elected member of the council of the Société Française de Statistique.

J. Saracco is member of the commission Inria "Jeunes Chercheurs".

J. Saracco is member of the council of ENSC

J. Saracco is the leader of the team "Statistics and Probability" of the Institute of Mathematics of Bordeaux (IMB).

B de Saporta, J. Saracco and M. Chavent are elected members of the CNU 26.

J. Saracco is the head of the engineering department of ENSC.

F. Dufour is the head of the second year cursus engineering school MATMECA.

M. Chavent is co-director of the cursus *Modélisation Statistique et Sochastique* of the master MIMSE *Ingénierie Mathématique, Statistique et Economique* of the University of Bordeaux.

H. Zhang is director of the cursus *Ingénierie Mathématique* of the Licence de Mathématiques of the University of Bordeaux.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : F. Dufour, Probabilités et statistiques, 16 heures, niveau L3, Institut Polytechnique de Bordeaux, école ENSEIRB-MATMECA, France.

Licence : F. Dufour, Probabilités 10,6 heures, niveau L3, Institut Polytechnique de Bordeaux, école ENSEIRB-MATMECA, France.

Master : F. Dufour, Méthodes numériques pour la fiabilité, 24 heures, niveau M1, Institut Polytechnique de Bordeaux, école ENSEIRB-MATMECA, France.

Master : F. Dufour, Probabilités, 20 heures, niveau M1, Institut Polytechnique de Bordeaux, école ENSEIRB-MATMECA, France.

Licence : A. Gégout-Petit, Etudes de cas en statistique, 28h, L3 MASS (applied mathematics), Université Bordeaux Segalen, France.

Licence : A. Gégout-Petit, Econométrie et séries chronologiques, 24h, L3 MASS (applied mathematics), Université Bordeaux Segalen, France.

Master : A. Gégout-Petit, Analyse de variance, 36h, M1, université Bordeaux, France.

Licence : M. Chavent, Statistique descriptive, 36 ETD ,L1, university Bordeaux Segalen, France

Master : M. Chavent, Analyse des données 2, 25 ETD, niveau M2, university Bordeaux Segalen, France

Master : M. Chavent, Scoring, 21 ETD, niveau M2, university Montesquieu Bordeaux 4, France

Licence: J. Saracco, Descriptive statistics, 10.5h, L3, First year of ENSC, France

Licence: J. Saracco, Mathematical statistics, 20h, L3, First year of ENSC, France

Licence: J. Saracco, Data analysis (multidimensional statistics), 20h, L3, First year of ENSC, France

Licence: J. Saracco, Mathematics (complement of linear algebra), 20h, L3, First year of ENSC, France

Master: J. Saracco, Statistical modeling, 20h, M1, Second year of ENSC, France

Master: J. Saracco, training project, 20h, M1, Second year of ENSC, France

Master : B. de Saporta, Processus aléatoires en finance 30h ETD, M1, université de Bordeaux, France

Master : B. de Saporta, Finance en temps continu, 10h ETD, M2, université de Bordeaux, France

Master : B. de Saporta, Finance en temps discret, 29h ETD, M2, université de Bordeaux, France

Master : B. de Saporta, Processus de Markov, 25h ETD, M2, université de Bordeaux, France

9.2.2. Supervision

HdR : B. de Saporta, Contribution à l'estimation et au contrôle de processus stochastiques, Univ. Bordeaux I, July 2013

PhD in progress : Christophe Nivot, Optimisation de la chaîne de montage du futur lanceur européen, sept. 2013, B. de Saporta and F. Dufour

PhD completed : Azaïs Romain, Inférence des processus Markoviens déterministe par morceaux , juillet 2013, supervised by François Dufour and Anne Gégout-Petit

PhD completed : Camille Baysse, Analyse et optimisation de la fiabilité d'un équipement opto-électronique équipé de HUMS, novembre 2013, supervised by Anne Gégout-Petit and Jérôme Saracco

PhD completed : Laurent Vezard, Classification de signaux EEG et synthèse de paramètres musicaux par algorithme évolutionnaire, december 2013, supervised by M. Chavent and P. Legrand.

PhD completed : Raphaël Coudret, Modélisation statistique de données acquises à haute fréquence : application en environnement et génétique, september 2013, supervised by J. Saracco and G.Durrieu.

PhD in progress : Karim Claudio, Un outil d'aide à la maîtrise des pertes dans les réseaux d'eau potable : mise en place d'un modèle de fuite multi-état en secteur hydraulique instrumenté , supervised by J. Saracco and V. Couallier.

PhD in progress : Amaury Labenne, Approche Statistique du diagnostic territorial par la notion de qualité de vie, supervised by M. Chavent, J. Saracco and V. Kuentz.

PhD in progress : Adrien Todeschini, Elaboration et validation d'un système de recommandation bayésien, supervised by F. Caron and M. Chavent.

PhD in progress : Isabelle Charlier, Optimal quantization applied to conditional quantile estimation, University of Bordeaux 1 and Université Libre de Bruxelles, supervised by J. Saracco and D. Paindaveine.

9.2.3. Juries

B. de Saporta was a member of the PhD jury of Camille Baysse. B. de Saporta is an elected member of CNU 26.

9.3. Popularization

B. de Saporta took part in a speed mediation event at Inria Bordeaux Sud Ouest (dec. 2013).

CRYPT Team

6. Dissemination

6.1. Scientific Animation

6.1.1. Editorial Boards

- Advances in Mathematics of Communications: Xiaoyun Wang
- Journal of Cryptology: Phong Nguyen and Xiaoyun Wang
- Journal of Mathematical Cryptology: Phong Nguyen
- Natural Science Review: Xiaoyun Wang

6.1.2. Program Committees of International Conferences

- EUROCRYPT '13 - May, Athens, Greece: Phong Nguyen (Program co-chair)
- ASIACRYPT '13 - December, Bengaluru, India: Phong Nguyen and Xiaoyun Wang

6.2. Teaching - Supervision - Juries

6.2.1. Teaching

PhD: Phong Nguyen, Advanced Cryptanalysis and Lattice Algorithms, 12h, CAS, China

6.2.2. Supervision

PhD: Léo Ducas, Signatures fondées sur les réseaux euclidiens: attaques, analyses et optimisations, Univ. Paris 7, November 12th 2013, Phong Nguyen

PhD: Yuanmi Chen, Réduction de réseau et sécurité concrète du chiffrement complètement homomorphe, Univ. Paris 7, November 13th 2013, Phong Nguyen

PhD: Aurore Guillevic, Étude de l'arithmétique des couplages sur les courbes algébriques pour la cryptographie, ENS, December 20th 2013, Damien Vergnaud and Phong Nguyen

PhD: Yupeng Jiang, CAS, Summer 2013, Yingpu Deng

6.2.3. Juries

PhD: Léo Ducas, Signatures fondées sur les réseaux euclidiens: attaques, analyses et optimisations, Univ. Paris 7, November 12th 2013, Phong Nguyen (supervisor)

PhD: Yuanmi Chen, Réduction de réseau et sécurité concrète du chiffrement complètement homomorphe, Univ. Paris 7, November 13th 2013, Phong Nguyen (supervisor)

6.3. Popularization

Phong Nguyen gave several invited talks:

- [17] at the Workshop on Number Theory, Geometry and Cryptography in UK.
- [16] at the Workshop on Algebraic Aspects of Cryptography in Japan.

DAHU Project-Team

7. Dissemination

7.1. Scientific Animation

Organization of workshops and conferences.

- Serge Abiteboul, Pierre Senellart and Victor Vianu organized the Final Workshop for Web data management (nicknamed Webdone) in Paris 2013.

Program Committees.

- Cristina Sirangelo: 16th Intl. Conf. on Database Theory (ICDT 2013). ICDT 2013 Test of Time Award.
- Luc Segoufin: Intl. Conf. on Logic in Computer Science (LICS'13).

Responsibilities.

- Luc Segoufin is since 2010 part of the “bureau du comité des projets” à l’Inria Saclay. Since 2011 he is part of the scientific board of Inria. Since 2010 he is responsible of the groupe de travail “Complexité et Modèles Finis” du GDR “Mathématique et Informatique” (<http://www.gdr-im.fr/>).
- S. Abiteboul is the principal investigator of the European Research Council Grant Webdam on Web Data Management.

As a member of the Sciences Academy, S. Abiteboul wrote a report on "L'enseignement de l'informatique en France - Il est urgent de ne plus attendre".

S. Abiteboul is since 2013 a member of the Conseil national de la recherche. As a member, he participated in 2013 in reports on Net neutrality, Computer science education, and digital inclusion.

S. Abiteboul is chairman of the Inria Awards committee.

S. Abiteboul is chairman of the Scientific Board of Société d'Informatique de France.

S. Abiteboul is a member of the Academic Senat of the University Paris-Saclay.

S. Abiteboul is a member of the Academia Europea.

Larger audience. In 2013, S. Abiteboul gave talks to Entretiens de la Cité in Lyon, Conférence cultures numériques, éducation aux médias et à l'information in Lyon, Conférences Science et société in Nancy, Congrès de la Société informatique de France in Nice, Forum régionaux des Savoirs in Rouen. Journée Economie de la connaissance et économie numérique at IHEST, Saclay.

In particular, S. Abiteboul gave talks on Big data in insurances at Journée SCOR sur les Big data et les assurances, and Journée Ifpas de l'assurance in Paris; on Big data and health at Open data et santé, Congrès Health IT. He also discussed the place of fiction in the Web at Séminaire Vérification, CNAM, Paris, 2013.

S. Abiteboul a été également auditionné à l'Assemblée nationale par la commission des affaires économiques, Mission d'information sur l'économie numérique; et par l'Office parlementaire d'évaluation des choix scientifiques et technologiques, sur le Risque numérique. 2013.

S. Abiteboul gave interviews to Le Monde, Famille Chrétienne, and 01Net.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Master : Cristina Sirangelo, Complexité avancée, 18 hours ETD, M1, MPRI, France

Master : Cristina Sirangelo, Algorithms, 15 hours ETD, Préparation à l'agrégation, École Normale Supérieure de Cachan, France

Licence : Cristina Sirangelo, Bases de données, 30 hours ETD, L3, École Normale Supérieure de Cachan, France

Doctorat : Cristina Sirangelo, Bases de données et sites Web dynamiques, 18 hours ETD, École Normale Supérieure de Cachan, France

Doctorat : Cristina Sirangelo, Création de sites Web, 18 hours ETD, École Normale Supérieure de Cachan, France

Licence : Serge Abiteboul, Base de données , ENS Cachan and ENS Paris

Master : Serge Abiteboul, Web data management, MPRI Paris

Master : Luc Segoufin, Finite Model Theory and Descriptive Complexity, MPRI.

Licence : Émilien Antoine, Algorithmique et complexité, 32h, L3, Université de Paris-Sud, France

7.2.2. Supervision

PhD: Wojciech Kazana, Query Evaluation with Constant Delay, 16/09/2013, Luc Segoufin

PhD in Progress: Nadime Francis, graph databases, 01/09/2011, Cristina Sirangelo and Luc Segoufin

PhD : Émilien Antoine, Data management in social network, 05/12/2013, Serge Abiteboul

7.2.3. Juries

- Luc Segoufin was reviewer for the PhD thesis of Stefan Mengel, Paderborn, Germany.
- Luc Segoufin was reviewer for the PhD thesis of Johann Brault-Baron, Université de Caen, France.

7.3. Popularization

Serge Abiteboul participated to a popularization book on mathematics, « Mathématiques, l'explosion continue », with an article, Chercher sur le Web : juste un point fixe et quelques algorithmes.

Serge Abiteboul wrote with Pierre Senellart an article on “ Un déluge de données”, in Pour la science sur le Big bang numérique, 2013.

DANTE Team

9. Dissemination

9.1. Scientific Animation

- Éric Fleury is President of the expert committee for the ANR INFRA call
- Éric Fleury is Co-chair of the Networking group ResCom of the CNRS GDR ASR. He is also a member of the scientific committee of the GDR ASR.
- Éric Fleury is in the steering committee of the IXXI – Rhône-Alpes Complex Systems Institute.
- Éric Fleury has been an expert for the Fund for Scientific Research - FNRS.
- Éric Fleury was PC member of 4th Workshop on Complex Networks (CompleNet 2013)
- Éric Fleury is Vice-Chairman of the projects committee of Inria Grenoble Rhône-Alpes research center
- Éric Fleury was president of the AERES visiting committee of the PRISM laboratory.
- Paulo Gonçalves is scientific correspondent of the International Relations for Inria Grenoble - Rhône-Alpes
- Paulo Gonçalves is scientific correspondent of the International Relations for the Computer Science Department at ENS Lyon.
- Paulo Gonçalves is officer of the local liaison board of EURASIP
- Paulo Gonçalves was organiser of the 4th Workshop on High Speed Network and Computing Environments (COMPSAC 2013, Kyoto)
- Paulo Gonçalves is PC member of IWCMC - TRAC 2014.
- Thomas Begin is PC member of ACM PE-WASUN 2013.
- Thomas Begin was an expert for ANR on program INFRA.
- Isabelle Guérin Lassous is a member of the editorial board of: Computer Communications (Elsevier), Ad Hoc Networks (Elsevier) and Discrete Mathematics & Theoretical Computer Science.
- Isabelle Guérin Lassous is program co-chair of ACM PE-WASUN 2013.
- Isabelle Guérin Lassous is a member of the following program committees in 2013: IPDPS, MSWiM, ITC, ICC, Globecom, ISCC, IWCMC.
- Isabelle Guérin Lassous is member of the CNRS National Committee for section 06 (Computer Science).
- Christophe Crespelle is in the steering committee of the IXXI – Rhône-Alpes Complex Systems Institute.
- Christophe Crespelle was PC member of AlgoTel 2013
- Christophe Crespelle was an expert for ANR on program JCJC - SIMI 2 Information Science and Applications.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

9.2.1.1. Teaching by Paulo Gonçalves

Master : Responsible for the teaching axis "Models and Optimization for Emergent Infrastructure". M1/M2 of the Department of Computer Sciences at ENS Lyon (*Informatique fondamentale*)

Eng. school : Signal processing, lab classes (4th year), CPE Lyon, France

9.2.1.2. Teaching by Thomas Begin

Thomas Begin is an Assistant Professor at Université Claude Bernard Lyon 1 in the Computer Science since 2009. He mostly lectures at the University, though he has a teaching activity at ENS Lyon as well.

Licence : "Networks" (L3), University Lyon 1, France

Master : "Networking" (M1), University Lyon 1, France

Master : "Advanced Networks" (M2), University Lyon 1, France

Master : "Computer Networks" (M1), ENS de Lyon, France

9.2.1.3. Teaching by Isabelle Guérin Lassous

Master 2 Computer Science, University Lyon 1: Responsible of the speciality Réseaux.

Professor at the computer science department of University Lyon 1, teaching in Master 1 and Master 2, Networking, Quality of Service, Wireless Networks, Multimedia networking applications.

9.2.1.4. Teaching by Christophe Crespelle

Christophe Crespelle is an Assistant Professor at Université Claude Bernard Lyon 1 (UCBL) in the Computer Science department since 2010. He mostly lectures at UCBL, though he has a teaching activity at ENS Lyon as well.

Master : "Calculability and Complexity" (M1), UCBL, France

Master : "Network Security Architecture" (M2), UCBL, France

Master : "Security" (M2), UCBL, France

Master : "Future Networks" (M2), UCBL, France

Master : "Complex Networks" (M2), ENS Lyon, France

9.2.1.5. Teaching by Eric Fleury

Eric Fleury is a full professor at ENS de Lyon. He was the head of the Computer Science Department until July 2013. ENS de Lyon is one of the four Écoles normales supérieures in France.

Licence : "Introduction to Algorithm" (L3), ENS de Lyon, France

9.2.2. Supervision

PhD in progress : Lucie Martinet, iBird: Individual Based Investigation of Resistance Dissemination, September 2011, Éric Fleury & Christophe Crespelle

PhD in progress : Benjamin Girault, Ondelettes et graphe d'interactions dynamique : échelle temporelle et spatiale, September 2012, Éric Fleury & Paulo Gonçalves

PhD in progress : Thiago Abreu, Integration of Traffic Awareness in Substitution Networks, March 2011, Isabelle Guérin Lassous & Thomas Begin

PhD in progress : Roy Shubhabrata, Measurements in the framework of Virtual Networks Development, October 2010, Paulo Gonçalves & Thomas Begin

PhD in progress: Marina Sokol, Clustering and learning techniques for traffic / users classification, October 2010, Philippe Nain (Inria MAESTRO) and Paulo Gonçalves. M. Sokol has interrupted her PhD and is currently on maternity leave (until October 2013).

PhD in progress: Elie Rotenberg, Complex Network Metrology, September 2010, Matthieu Latapy and Christophe Crespelle

PhD in progress: Anh Tuan GIANG, Modeling and Improving the Capacity of Vehicular Ad hoc network, April 2011, Anthony Busson (registered at University Paris XI).

PhD in progress: Sabrina Naimi, Mobility metrics in wireless mobile networks, September 2010, Véronique Vèque and Anthony Busson (registered at University Paris XI).

PhD in progress : Laurent Reynaud, Optimized mobility strategy in wireless networks for reliability and energy consumption, March 2013, Isabelle Guérin Lassous.

PhD in progress : Yannick Léo, Diffusion Processes and Community Structures in Dynamic Complex Networks, September 2013, Éric Fleury & Christophe Crespelle

9.2.3. Juries

- Paulo Gonçalves was member of the Ph.D. jury of Maude Pasquier (Université de Grenoble, Inria).
- Isabelle Guérin Lassous was a member of the following Ph.D. juries: Frédéric Besse (Université de Toulouse, ISAE, reviewer), Ichrak Amdouni (Université Pierre et Marie Curie, Inria, reviewer), Muhammad Yousaf (University of Engineering and Technology, Taxila, Pakistan, reviewer), Nicolas Gouvy (Université Lille 1, reviewer), Ana Bildea (Université de Grenoble, reviewer), Karen Miranda (Université Lille 1, president).
- Isabelle Guérin Lassous was a member of the following HDR jury: Céline Robardet (Université Lyon 1, INSA de Lyon, member).
- Éric Fleury was member of the following Ph.D. juries : Jury of Tony Ducrocq (Université des Sciences et technologies de Lille, reviewer); Jury of Robin Lamarche-Perrin (Université de Grenoble, Reviewer); Jury of Anh Dung Nguyen (Université de Toulouse, ISAE, reviewer).

DEDUCTEAM Exploratory Action

8. Dissemination

8.1. Scientific Animation

- Guillaume Burel has been a PC member of IWIL.
- David Delahaye has been a PC member of PxTP 2013. He is a member of the steering committee of Calculemus since 2010.
- Gilles Dowek has been a PC member of RTA, ICECCS, NFM and eMooc.
- Gilles Dowek is a member of the Cerna.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Bachelor: Ali Assaf, Les bases de la programmation et de l'algorithmique, 36 hours, third year, École Polytechnique, France

Bachelor: Ali Assaf, Algorithmique et programmation, 36 hours, third year, École Polytechnique, France

Bachelor: Alejandro Díaz-Caro, Mathématiques 1: Calcul et fonctions, 72 hours, 1st year, Université Paris X, France

Bachelor: Alejandro Díaz-Caro, Statistiques et probabilités, 6 hours, second year, Université Paris X, France

Bachelor: Alejandro Díaz-Caro, Mathématiques 2, 24 hours, first year, Université Paris X, France

Bachelor: Alejandro Díaz-Caro, Méthodologie de la mesure en sciences humaines, 48 hours, first year, Université Paris X, France

Bachelor: Ronan Saillard, Programmation Orientée Objet en Java, 27 hours, Telecom ParisTech, France

Bachelor: Guillaume Burel, Programmation avancée, 25,5 hours, third year, ENSIIE, France

Bachelor: Guillaume Burel, Logique, 10,5 hours, third year, ENSIIE, France

Bachelor: Guillaume Burel, Projet informatique, 22,75 hours, third year, ENSIIE, France

Master: Guillaume Burel, Systèmes et langages formels, 21 hours, first year, ENSIIE, France

Master: Guillaume Burel, Compilation, 36,75 hours, first year, ENSIIE, France

Master: Guillaume Burel, Sémantique des langages de programmation, 21hours, second year, ENSIIE, France

Master: Pierre Halmagrand, Sureté fonctionnelle, 12,5 hours, second year, CNAM Saint-Denis, France

Master: Olivier Hermant, Méthodes formelles, 21 hours, second year, ISEP, France

Master: Olivier Hermant, Algorithmique, 9 hours, second year, ISEP, France

Master: Olivier Hermant, Complétude et élimination des coupures, 1,5 hours, second year, Université Paris Diderot, France

Master: Gilles Dowek, Fondement des systèmes de preuves, 27 hours, second year, MPRI.

Guillaume Burel is in charge of the 4th, 5th, and 6th semesters of the engineering degree at ENSIIE.

David Delahaye has taught at *Cnam* courses in the following topics: Algorithmics, Object-Oriented Programming Languages, Safety and Security, Formal Proofs and Automated Deduction.

8.2.2. Supervision

PhD in progress : Ali Assaf, Interoperability of proof systems, September 2012, Gilles Dowek and Guillaume Burel

PhD in progress: Raphaël Cauderlier, Mécanismes orientés objets pour le raffinement de données et d'algorithmes dans les systèmes de preuve, September 2013, Catherine Dubois

PhD in progress : Simon Cruanes, Automated reasoning modulo theories, August 2012, Gilles Dowek and Guillaume Burel

PhD in progress : Kailiang Ji, Model checking and automated theorem proving, September 2012, Gilles Dowek

PhD in progress: Kim-Quyen Ly, automated formal verification of termination certificates, October 2011, Frédéric Blanqui

PhD in progress: Pierre Halmagrand, Dédution automatique modulo, November 2013, David Delahaye and Olivier Hermant and Damien Doligez

PhD in progress: Vivien Maisonneuve, Préservation de preuve de système lors de la compilation sur micro-contrôleur, October 2011, François Irigoien and Olivier Hermant

PhD: Pierre Néron: A Quest for Exactness: Program Transformation for Reliable Real Numbers, December 2013, Gilles Dowek.

PhD in progress: Ronan Saillard, Dedukti: un vérificateur de preuves universel, October 2012, Pierre Jouvelot and Olivier Hermant

- David Delahaye, Olivier Hermant, and Damien Doligez have supervised the Master internship of Pierre Halmagrand.
- Catherine Dubois has supervised the undergrad internship of Frédéric Lang.

8.2.3. PhD and Habilitation juries

- Catherine Dubois has been a member of the PhD juries of Mounira Kezadri and Asma Tafat.
- Gilles Dowek has been a member of the PhD juries of Jianhua Gao, Maël Pégny, Alberto Naibo, and to the HDR jury of Benjamin Nguyen.

8.3. Popularization

- **Seminars in international workshops without peer review**
 - Alejandro Díaz-Caro. Identifying isomorphic propositions. In *First Workshop of ANR-NSFC project LOCALI*. Beijing, China. November 4–6.
 - Pierre Halmagrand. Proof compression and certification in Zenon Modulo. In *Third Workshop of the Amadeus Project for Proof Compression*. Nancy, France. September 16.
 - Gilles Dowek has participated to the workshop Locali in Beijing where he has given a talk.
- **Seminars in national workshops without peer review**
 - Alejandro Díaz-Caro. Identifying isomorphic propositions. In *Journées LAC*. Créteil, France. November 28–29.
 - Alejandro Díaz-Caro. Vectorial types, non-determinism and probabilistic systems: Towards a computational quantum logic. In *Quantum Computing in Nancy*. Nancy, France. March 21.
 - Gilles Dowek has participated to the workshop Rochebrune 2013 *La preuve et ses moyens*, where he has given a talk.
 - Gilles Dowek has given several talks on Computer Science in Education, at the congrès de la SIF, the workshop EPI in Nancy, the workshop UPS in Luminy, the journée ISN in Orsay, the journée Pascaline in Paris, etc.

- Gilles Dowek has given several popular science talks: in Paris for the young kangaroos, in Athens, and in the Lycée Raoul Folleraux.
- **Other seminars**
 - Alejandro Díaz-Caro. Hacia una lógica computacional cuántica. FCEIA, Universidad Nacional de Rosario. Rosario, Argentine. August 9.
 - Alejandro Díaz-Caro. Vectorial types, non-determinism and probabilistic systems: Towards a quantum computational logic. PPS, Université Paris-Diderot. Paris, France. May 7.
 - Alejandro Díaz-Caro. Vectorial types, non-determinism and probabilistic systems: Towards a quantum computational logic. LIAFA, Université Paris-Diderot. Paris, France. April 16.
 - Alejandro Díaz-Caro. Non determinism (and probabilities) through type isomorphism. LIP, École Normale Supérieure. Lyon, France. February 21.
 - Alejandro Díaz-Caro. Quantum computing, non-determinism, probabilistic systems...and the logic behind. Modal'X. Université Paris X. Nanterre, France. January 31.
 - Pierre Halmagrand. Zenon Modulo: When Achilles outruns the tortoise using Deduction modulo. Mines ParisTech laboratory CRI. Fontainebleau, France. October 30.

DEFI Project-Team

9. Dissemination

9.1. Scientific Animation

- Grégoire Allaire is the President of SMAI (Société de Mathématiques Appliquées et Industrielles). Until November 2013 he was also the director of the Gaspard Monge program on optimization (PGMO) at the Jacques Hadamard Mathematical Foundation. He is a board member of Institut Henri Poincaré (IHP). He is a member of the following editorial boards: book series "Mathématiques et Applications" of SMAI and Springer, ESAIM/COCV, Structural and Multidisciplinary Optimization, Discrete and Continuous Dynamical Systems Series B, Computational and Applied Mathematics, Mathematical Models and Methods in Applied Sciences (M3AS), Annali dell'Università di Ferrara, OGST (Oil and Gas Science and Technology).
- Houssem Haddar is a guest editor (jointly with Fioralba Cakoni) of a special issue of Inverse problems on transmission eigenvalues.
- Jing-Rebecca Li is an Associate Editor of the SIAM Journal on Scientific Computing.

9.1.1. Conference / school organization

- H. Haddar was co-organizing chair of the Waves 2013 conference, June 3-7, Gammath, Tunisia <http://www.lamsin.tn/waves13/>
- H. Haddar is co-organizer of the conference "International Conference on Novel Directions in Inverse Scattering", Honoring David Colton, July 29 - August 2, 2013 University of Delaware, Newark DE, USA <http://www.cmap.polytechnique.fr/~colton/>.
- H. Haddar is co-organizer of the Franco-German Summer School "Inverse Problems and Partial Differential Equations" University of Bremen, October 7-11, 2013 <http://www.math.uni-bremen.de/zetem/ip-school2013>
- J.-R. Li is a co-organizer of the mini-symposium "Simulation and modeling applied to diffusion magnetic resonance imaging" at the SIAM Computational Science and Engineering Conference Feb 2013.

9.1.2. Conference attendance

- H. Haddar
 - Oberwolfach Conference on "Computational Electromagnetics and Acoustics", Oberwolfach, Jan 20 - 26, 2013
 - Conference "Inverse Problems: Scattering, Tomography and Identification Problems" on the occasion of Andreas Kirsch's 60th birthday, Karlsruhe, Apr 6 - 11, 2013.
 - IFIP TC7.2 Workshop: "Electromagnetics — Modelling, Simulation, Control and Industrial Applications", Berlin, May 13 – 17, 2013.
 - International Conference on "Mathematical and Numerical Aspects of Waves" (Waves 2013), Gammath, Tunisia, June 3 - 7, 2013.
 - International Conference on "Novel Directions in Inverse Scattering", Honoring David Colton, July 29 - August 2, 2013 University of Delaware, Newark DE.
 - Workshop "Journées d'Analyse Numérique et d'Optimisation" (JANO10), Essaouira, Oct 31 - Nov 02, 2013.
- G. Allaire

- Workshop on Numerical Methods for Optimal Control and Inverse Problems, Munich, (march 2013).
- Interpore conference, Prague (may 2013).
- Conference in the honor of M. Vogelius, Luminy (may 2013)
- SMAI conference, Seignosse (june 2013).
- Conference Waves, Tunis (june 2013).
- Workshop "New trends in Shape Optimization", Erlangen (september 2013).
- 1st French-Mexican Meeting on Industrial and Applied Mathematics, Villahermosa, Mexique (novembre 2013).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: O. Pantz, Tutorial Classes in "Numerical analysis et Optimization", 64h, L3, École Polytechnique.

Licence: H. Haddar, Tutorial Classes in "Numerical analysis et Optimization", 64h, L3, École Polytechnique.

Licence: Grégoire Allaire teaches a semester course on numerical analysis and optimization in the second year (senior undergraduate level). See the web page: http://www.cmap.polytechnique.fr/~allaire/cours_X_annee2.html

Master: Grégoire Allaire teaches a course on optimal design of structures in the third year (first year of a Master program). See the web page: http://www.cmap.polytechnique.fr/~allaire/cours_X_majeure.html

Master: Grégoire Allaire teaches together with François Golse a course on transport and diffusion in the third year (first year of a Master program). See the web page: http://www.cmap.polytechnique.fr/~allaire/cours_map567.html

Master: Grégoire Allaire teaches together with François Alouges a course on homogenization in the fourth year (second year of a Master program). See the web page: <http://www.cmap.polytechnique.fr/~allaire/homogenization.html>

Master: Housseem Haddar teaches together with Laurent Bourgeois a course on "Inverse problems: mathematical analysis and numerical algorithms" (M2, AN&EDP, Paris 6 and Ecole Polytechnique).

9.2.2. Supervision

PhD in progress: L. Azem, Fracture and damage: Modeling and Simulation, Olivier Pantz (with Zorgati).

PhD in progress: H. T. Nguyen, Simplified models and inverse problems for diffusion MRI, 2011, Jing-rebecca Li (with Denis Grebenkov and Cyril Poupon).

PhD in progress: D. V. Nguyen, Efficient finite-element method to solve PDE problems in diffusion MRI, 2011, Jing-Rebecca Li (with Denis Grebenkov).

PhD in progress: G. Michailidis, On topology optimization with feasibility constraints, 2010, Grégoire Allaire (with F. Jouve)

PhD in progress: Z. Jiang, Eddy current probing of axisymmetric tubes, 2010, Housseem Haddar.

PhD in progress: M. Chamaillard, Effective boundary conditions for thin periodic coatings, Ecole Polytechnique, 2011, Housseem Haddar (with P. Joly).

PhD in progress : L. Audibert, Non-destructive testing of concrete like materials, 2012, Housseem Haddar.

PhD in progress : T. Mercier, data assimilation for temprature estimates of nuclear fuel powerplant, 2012, Housseem Haddar.

Ph.D. in progress: Gabrielle Fournet, Inclusion of blood flow in micro-vessels in a new dMRI signal model, 2013, Jing-Rebecca Li (with Luisa Ciobanu).

Ph.D. in progress: Simona Schiavi, Homogenized models for Diffusion MRI, 2013, Housseem Haddar and Jing-Rebecca Li.

Ph.D. in progress: Thi-Phong Nguyen, Inverse scattering for perturbed periodic media, 2013, Housseem Haddar.

Ph.D. in progress: Mohamed Lakhel, Radar Imaging of buried mines, 2013, Housseem Haddar.

PhD: G. Migliorati, Electrostatic Imaging with uncertain backgrounds, April 2013, H. Haddar and F. Nobile.

PhD: F. Ouaki, On multi-scale numerical methods for multiphasic transport in porous media, 2013, Grégoire Allaire.

PhD: G. Delgado, Optimal design of the draping of composite materials, 2013, Grégoire Allaire.

HdR: Jing-Rebecca Li, "Modelisation et simulation de la diffusion", Université Paris Sud, 16 dec, 2013.

DEMAR Project-Team

9. Dissemination

9.1. Scientific Animation

- David Guiraud D. Guiraud is Member of the Editorial Board of Journal of Neural Eng., Associate Editor of EMBC conferences "track rehabilitation, theme 6" 2010-2013, Member of the organizing committee of IEEE NER 2013 (more than 550 registrations for the 2013 edition), member of the steering committee of "Institut des Technologies pour la Santé", Chair of the Labex Numev "Aide à la personne malade et déficiente" specific action. D. Guiraud was reviewer for the 2013 ERC consolidator program panel PE7. specific action.
- C. Azevedo-Coste is Board member of IFESS society (international functional electrical stimulation society) and Associate Editor of Paladyn Behavioral Robotics Journal.
- M. Hayashibe is member of the Editorial Board of the International Journal of Advanced Robotic Systems, Rehabilitation Robotics, and Guest Associate Editor, Frontiers in Neuroprosthetics, Biosignal processing and computational methods to enhance sensory motor neuroprosthetics.
- François Bonnetblanc is reviewer for several journals : Journal of Neuroscience (2011), IEEE Transactions on Neural Systems & Rehabilitation Engineering (2012), Neurosurgery, Journal of Neurology, Research in Developmental Disabilities (2012), Neurocase, Experimental Brain Research, Neuroscience Letters et Journal of Biomechanics.
- Daniel Simon was member of the RTNS'13 (Real Time Networks and Systems) and ETFA'13 (Emerging Technologies and Factory Automation int. conference program committees and of the IFAC Joint Conference (Grenoble, february 2013) organization committees. Peer reviewer for the IEEE Trans. on Industrial Informatics and the Simulation: Transactions of the Society for Modeling and Simulation International journals, and for the ECC'13, SysTol'13, ECC'14 and ACC'14 int. conferences.
- D. Andreu is co-organizer of the french working group on Control Architectures of Robots of the french GdR Robotique and assistant manager of the Robotic Department (LIRMM).
- F. Soulier was Local coordinator of the Belem (BioElectronics for Medical Engineering) intensive program for the University of Montpellier 2 (Erasmus program).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master : D. Guiraud, basics of neurophysiology and neuroprosthetics, 10h, niveau (M1, M2), Institut Telecom / Mines specialisation "Tic santé" UE "medical robotics", France;

Master : D. Guiraud, muscle function, modeling and the basics for the control through FES and neuroprosthesis, 20h, , master 1 & 2 "Tic et santé" and master 2 Human Movement Sciences UE "neuroprotheses", Univ. Montpellier 2, France;

Master : D. Andreu, Software engineering, real time OS, discrete event systems, networks, neuroprosthesis, 200h, master and engineers degrees, Polytech Montpellier, France;

Master : Christine Azevedo-Coste, Neuroprotheses II, Neurophysiology, 6h, Master STIC pour la Santé , Univ. Montpellier 2, France;

Master : Christine Azevedo-Coste, Neuroprotheses I, Neurophysiology, 4.5h, Master STIC pour la Santé , Univ. Montpellier 2, France;

Master : Mitsuhiro Hayashibe, Neuroprotheses II, EMG signal processing and its use for rehabilitation, 6h, Master STIC pour la Santé , Univ. Montpellier 2, France;

Master : Mitsuhiro Hayashibe , Modele et Regulation, Identification and Control in Biomechanics (module coordinator), 6h, Master STIC pour la Santé , Univ. Montpellier 2, France;

Master : Fabien Soulier, electronics and signal processing, 200h, Polytech' Montpellier, France;

Master : François Bonnetblanc, neurophysiology of movement and cerebral plasticity, 65h, University of Bourgogne, France;

Master : Paweł Maciejasz, Neuroprotheses I, Electrical stimulation of nerve fibers – Computer simulation and data processing, 4.5h (TP), Master STIC pour la Santé , Univ. Montpellier 2, France;

Master : Paweł Maciejasz, Neuroprotheses II, Electrical stimulation of nerve fibers and recording of neurophysiological signals, 4.5h (TP), Master STIC pour la Santé , Univ. Montpellier 2, France;

9.2.2. Supervision

HdR : François Bonnetblanc, “Prédictions et traitement des erreurs dans les comportements visuo-manuels : de la flexibilité à la plasticité” , Université de Bourgogne, 23 Sept.

PhD : Maud Pasquier, “Segmentation de la locomotion humaine dans le domaine du sport et de la déficience à partir de capteurs embarqués”, Université Montpellier 2, Sep. 16, Ch. Azevedo-Coste and B. Espiau

PhD in progress : Hélène Leroux, “Abstraction et composition pour la conception formelle de neuroprothèses”, 09/2011 , D. Andreu

PhD in progress : Yacine Berranen, Modélisation volumique du muscle avec représentation des fonctions physiologiques, 10/2011, D. Guiraud, M. Hayashibe and B. Gilles

PhD in progress : Alejandro Gonzalez de Alba, Whole body control framework for lower limb stability in computational rehabilitation, 09/2011, P. Fraise and M. Hayashibe

PhD in progress : Zhan Li , Réhabilitation fonctionnelle computationnelle et modélisation physiologique neuromusculaire, 10/2011, D. Guiraud and M. Hayashibe

PhD in progress : Mariam Abdallah, Système d’acquisition de signaux bioélectriques multicanal, programmable et implantable, 09/2012, G. Cathebras, F. Soulier and S. Bernard

PhD in progress : Marion Vincent, “Effets de la stimulation électrique directe (SED): intérêts pour la cartographie fonctionnelle en chirurgie éveillée” , 12/2013, F. Bonnetblanc

PhD in progress : Wafa Tigra, “Vers la commande intuitive d’une neuroprothèse dédiée à la préhension chez le tétraplégique” , 11/2013, Christine Azevedo-Coste, Guillaume Souquet (MXM), David Guiraud, Charles Fattal (Propara)

PhD in progress : Thomas Guiho, “Stimulation électrique médullaire en vue de la restauration des fonctions urinaires, intestinales et sexuelles chez le sujet lésé médullaire” , 11/2013, David Guiraud, Luc Bauchet (CHU Montpellier), Christine Azevedo-Coste

PhD in progress : Abir Ben Khaled (IFPEN), “Distributed real-time simulation of numerical models : application to powertrains”, 01/2010, D. Simon and M. Ben Gaid (IFPEN)

9.2.3. Juries

D. Guiraud was member of F. Bonnetblanc HDR defense jury, Univ. de Bourgogne, Sep. 23;

Ch. Azevedo Coste was member of M. Pasquier PhD defense, UM2 Montpellier, Sep. 16.

DIANA Team

9. Dissemination

9.1. Scientific Animation

- **Walid Dabbous** served in the programme committees of ACM MM'2013 and CCNxCon'2013. He is member of the ns-3 consortium and has organized the kick-off meeting for the consortium in March 2013. He co-organized the Rescom summer school on Information Centric Networking in Porquerolles in May 2013. He is member of the scientific council of the Inria Bell-Labs laboratory on Self Organizing Networks.
- **Thierry Turletti** Senior ACM and IEEE member, served in 2013 in the program committees of the following international conferences: 20th International Packet Video Workshop and 5th ACM Workshop on mobile Video Delivery (Movid). He is member of the Editorial Boards of the Journal of Mobile Communication, Computation and Information (WINET) published by Springer Science and of the Advances in Multimedia Journal published by Hindawi Publishing Corporation.
- **Chadi Barakat** is on the editorial board of the Computer Networks journal and served on the Technical Program Committee for the Traffic Monitoring and Analysis (TMA) 2013 workshop and the Passive and Active Measurement (PAM) 2013 conference. He is currently the scientific referee for international affairs at Inria Sophia Antipolis and member of the Conseil d'Orientation Scientifique et Technologique (COST) at Inria within the working group of international affairs (COST-GTRI).
- **Arnaud Legout** is on the editorial board of the Computer Networks journal. He was also reviewer of journals (IEEE/ACM Transactions on Networking, IEEE/ACM Transactions on Computers, IEEE Network, Computer Communications, ACM SIGCOMM CCR), and conferences (IEEE Infocom, ACM Sigmetrics). He also served as an expert to the European Commission to evaluate EC funded projects.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Undergraduate course at IUP GMI Avignon on Peer-to-peer networks, by Arnaud Legout (38h), France.

Master Ubinet: course on Evolving Internet - architectural challenges by Walid Dabbous and Chadi Barakat 42 hours, University of Nice-Sophia Antipolis, France.

Master Ubinet: course on Peer-to-peer networks, by Arnaud Legout (21), University of Nice-Sophia Antipolis.

Master 1 International in Computer Science: course on algorithms for networking, by Chadi Barakat (18h), University of Nice.

Master CAR: course on Internet monitoring by Chadi Barakat, 3h, Telecom Paris Tech, France.

Master TSM: course on Voice over IP by Chadi Barakat, (6h), University of Nice-Sophia Antipolis, France.

Master RISM: course on mobility and wireless networking, by Chadi Barakat (7h), University of Avignon.

Master RISM: course on peer-to-peer networks and privacy, by Arnaud Legout (30), University of Avignon.

9.2.2. Supervision

PhD : Ashwin Rao defended his PhD titled “Improving Transparency and End-User Control in Mobile Networks” on June 30th, at University of Nice Sophia-Antipolis. His thesis was co-supervised by Arnaud Legout and Walid Dabbous.

PhD in progress: Riccardo Ravaioli works on “Active and Passive Inference of Network Neutrality” since October 2012. His thesis is co-supervised by Chadi Barakat.

PhD in progress: Xuan Nam Nguyen works on "Software Defined Networking in challenged environments", since October 2012. His thesis is co-supervised by Thierry Turletti and Walid Dabbous.

PhD in progress: Alina Quereilhac works on "Unified Evaluation environment of Networking Protocols for Simulators and Testbeds", since 2011. Her thesis is co-supervised by Walid Dabbous and Thierry Turletti.

PhD in progress: Maksym Gabielkov works on “Propagation of data in social networks” since 2012. His work is supervised by Arnaud Legout.

9.2.3. Juries

Walid Dabbous served as a reviewer and jury member of Mohamed Diallo PhD thesis, defended in March 2013, at University Pierre and Marie Curie.

Walid Dabbous served as a reviewer and jury member of Bilel Ben Romdhanne PhD thesis, defended in December 2013, at Eurecom.

Thierry Turletti served as an external examiner and presides the jury of Bilel Ben Romdhanne PhD thesis, defended in December 2013, at Eurecom.

Thierry Turletti served as reviewer and jury member of Nicolas Kuhn PhD thesis, defended in November 2013 at INP Toulouse.

Thierry Turletti served as reviewer and jury member of Emmanuel Chaput HDR thesis, defended in November 2013, at INP Toulouse.

Thierry Turletti served as reviewer and jury member of Jean Vella PhD thesis, defended in September 2013, at University of Malta.

Chadi Barakat served as a reviewer and jury member of Xavier Miseri PhD thesis, defended in October 2013 at Telecom ParisTech.

Chadi Barakat served as jury member of Vincenzo Ciancaglini PhD thesis, defended in July 2013 at Inria Sophia Antipolis.

Chadi Barakat served as a reviewer and jury member of Heng Cui PhD thesis, defended in April 2013 at Eurecom.

Arnaud Legout served as a jury member for the Ph.D. thesis of Roberto Roverso defended in December 2013 at KTH.

Arnaud Legout served as an opponent for the Ph.D. thesis of Raul Jimenez defended in December 2013 at KTH.

9.3. Popularization

Arnaud Legout made a presentation on “Exploration macroscopique du graphe social de Twitter” to a user group interested in network security called OSSIR. See <http://www.ossir.org/paris/supports/index/2013.shtml>.

DICE Team

9. Dissemination

9.1. Scientific Animation

The digital revolution induces rapid changes in our societies, that are often not well prepared to adapt and take full advantage of them. Our objective is to communicate broadly to non specialist communities, through teaching, conferences in other communities, as well as through the media.

S Frénot and/or S Grumbach have been invited speaker or panelist at the following conferences in IT related fields:

- Panel La politique des données personnelles : big data ou contrôle individuel ?, IXXI, ENS de Lyon et Villa Gillet (Festival Mode d'Emploi), Lyon, 21 novembre 2013.
- Chair and organization of Session Managing the flow computing, Fossa, Lille, novembre 2013. Slides and presentation for this session are available at <https://fossa.inria.fr/slides/>
- Tutoriel Les flux de données personnelles, enjeux technologiques, économiques et stratégiques, 29e Journées Bases de Données Avancées, Nantes, 22-25 Octobre 2013.
- Panel: Big Data : c'est aussi un sujet de sécurité, Les assises de la sécurité et des systèmes d'information, Monaco, 2-5 octobre 2013.
- Invited speaker Congrès Big Data, Turning the Data Deluge into Decisions, CNIT, Paris, avril 2013
- La France à la périphérie de la société de l'information? Café techno, Paris, mars 2013
- Panel on Big Data, 6th International Conference on Computers, Privacy and Data Protection, CPDP, Reloading Data Protection, Brussels, january 2013

9.2. Teaching - Supervision - Juries

Teaching

We have been involved in the following courses:

- INSA, Frénot, Grumbach, TweetMyFace: A 38 hours optional course on social network technical architectures, evolutions and designs. The course covers current Web technologies from low-level networking to Facebook and Twitter API. L2 (Since 2012)
- INSA, Frénot, Agility: A 32 hours optional course on agile software development presenting both iterative (SCRUM) and stream based approaches (LEAN IT). M1. (since 2011)
- INSA, Frénot, Innovating Project: Supervising 250 hours student project aim at managing innovating projects. Each student group leads its own subject during one semester. All projects and organizational details are publicly available here: <http://tc-pi.insa-lyon.fr> M1 (Since 2006)
- INSA, Frénot, Learn Other Languages: The aim of the course is to improve one's skills in current state-of-the-art programming and discover different ways to develop using mainly web-oriented programming languages. M1 (new course)
- INSA, Frénot, Innovation and Transfer for Software: This final year optional course targets a specific activity for engineer profession dedicated to software transfert from research labs to industrials.

Stéphane Grumbach supervised the following thesis:

PhD: Ahmad Ahmad-Kassem, Programming Networks with Intentional Destination, Université de Lyon, november 2013

Stéphane Frénot supervised the following thesis:

- Etienne Brodu started in 2013. Worldline partnership CIFRE Phd. "Flow-base operating systems and programing languages. A new deal for social network architectures"
- François Goichon defense december 2013. French Ministry of research. "Resource access equity for best-effort shared operating systems"
- Zheng Hu defense january 2014. Orange-Labs partnership CIFRE PhD. "Self-configuration, monitoring and control of physical entities via Sensor and Actuator Networks"
- Dan Yufang defense Mid 2014. CSC China. "Secure and healable usage of components in a dynamic service-oriented architecture-based system"
- Manuel Selva defense End 2014. Bull SA partnership. "Monitoring data-flow programs"

Juries

Stéphane Frénot was involved in the following committee as reporting member.

- Roberto Minerva: Will the telco survive to an ever changing world? Technical considerations leading to disruptive scenarios.
- Aurelien Faravelon: A privacy aware conceptual and implementation framework for service oriented architecture based on access control.
- Azzedine Amiar : Trace and log analysis in micro-controllers.

9.3. Popularization

Intervention in other arenas:

- Co-organization of the CARA community, that gather IT professionals around agility design. Meetings occurs once per month from 7PM to 10PM and gather around 50 people to discuss and debate. The complete animation scheme is available at <http://lyon.clubagilerhonealpes.org/>
- La révolution numérique, L'enseignement philosophique et les sciences: nouvelles perspectives, Fondation Simone et Cino del Duca, Paris, 13 novembre 2013
- Panel: Open Data and Civic Participation, Can "Open Data" Improve Democratic Governance?, CITRIS Data & Democracy Initiative and Institute of Governmental Studies, Berkeley, 12 September 2013.
- Big Data: Where Does Europe Stand? a Citizen's Controversy, at the Madariaga – College of Europe Foundation, with Roberto Viola, Deputy Director of DG Communication, Brussels, 12 July 2013.
- La Révolution numérique, un enjeu politique, Conférence au Cercle Pierre Mendes France de Lyon, 25 juin 2013
- Les données, nouveau moteur de l'économie, Congrès France Génétique Elevage, janvier 2013

Intervention in political instances. The Dice team aims at interacting with political representatives at the French Assemblée nationale, the Sénat, as well as instances of the European Union.

- Global perspective on the information society, Invited speaker at the Council of the European Union, Part I Europe at the periphery of the information society? Brussels, April 17, 2013, Part II Information society in China, the Beijing consensus? Brussels, May 14, 2013,
- La dépendance de la France en matière de données et services numériques, Assemblée Nationale, Audition publique du 21 février 2013, "Le risque numérique : en prendre conscience pour mieux le maîtriser ?",

DIONYSOS Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. International memberships

- R. Marie and G. Rubino are members of the IFIP WG 7.3 (Working Group in Computer Performance Modeling and Analysis).
- Gerardo Rubino is a member of the Technical Committee on Multimedia Communications of IEEE.
- Adlen Ksentini is a member of the Technical Committee on Multimedia Communications and Wireless of IEEE.
- Adlen Ksentini is vice-chair of the Interest Group on QoE of the Technical Committee on Multimedia (IEEE Communication Society).

9.1.2. Seminar presentations

- B. Tuffin (with P. Maillé). Title: An analysis of ISP Inter-Relations: Traffic Exchange, Revenue Sharing, and Disconnection Threat. Colloquium Rennais des Sciences du Numérique, 4 Juillet 2013.
- A. Ksentini. Title: QoE-based in-network adaptation of SVC video streams. FP7 Envision project workshop, Orange labs Lannion, Sept. 2013.
- Y. Hadjadj-Aoul. Title: Streaming Vidéo sur Internet: Architectures, Protocoles et Services. University of Oran's Winter School, Oran, Algeria, Dec. 2013.
- C. Viho. Title: QoE (Quality of Experience): a new paradigm for multimedia networking. Institute of Computer Science, University of Goettingen (Germany), Jan 23, 2013.
- C. Viho. Title: Passive interoperability testing is the way to go for Internet of Things. BUPT, Beijing, China, Oct 15, 2013.
- C. Viho. Title: Internet of Things: Internet of challenges. IC-BNMT, Guilin, China, Nov 19, 2013.
- G. Rubino. Title: Context Delivery Networks in Dionysos. At the in Kick-off DTC ICT Labs, Rennes, France, March 22, 2013.
- G. Rubino. ITCE Distinguished Lecture, Postech, Pohang, Korea. Title: Automatic measuring of perceptual quality on the Internet. May 14, 2013.
- G. Rubino. Title: Transient queueing analysis. AMMA workshop, UDELAR, Montevideo, Uruguay, Sep 4, 2013.
- G. Rubino. Title: On fluid models in performance and dependability analysis. At the Design and Analysis of Communication Systems (DACs) group, University of Twente, Netherlands, Dec 6, 2013.

9.1.3. Editorial activity

- Bruno Tuffin is associate Editor for INFORMS Journal on Computing.
- Bruno Tuffin is associate Editor for Mathematical Methods of Operations Research.
- Bruno Tuffin is associate Editor for ACM Transactions on Modeling and Computer Simulation.
- Bruno Tuffin was the co-chair of the 8th International Workshop on Advanced Internet Charging and QoS technologies (ICQT'13), Zurich, Switzerland, 2013.
- Bruno Sericola is associate editor for The Open Operational Research Journal.
- Bruno Sericola is associate editor for International Journal of Stochastic Analysis.

- Bruno Sericola is associate editor for ISRN Probability and Statistics.
- Adlen Ksentini is guest editor in IEEE Wireless Communication Magazine for the special issue “Research & Standards: Leading the Evolution of Telecom Network Architectures”, June 2014.
- Adlen Ksentini is Associate Editor of Hindawei International Journal of Digital Multimedia Broadcasting
- Yassine Hadjadj-Aoul is a member of the editorial board of the International Journal of Computer Networks (IJCN)

9.1.4. Program committees

Bruno Tuffin served as TPC member for

- 9th International Workshop on Resource Allocation, Cooperation and Competition in Wireless Networks (RAWNET/WNC3), Tsukuba Science City, Japan, May 13-17, 2013.
- 7th workshop on Simulation, Rimini, Italy, May 21-25, 2013.
- IFIP Networking 2013 Conference, Brooklyn, New York, USA, May 22-24, 2013.
- 27th ACM/IEEE/SCS Workshop on Principles of Advanced and Distributed Simulation (SIGSIM/PADS), 2013.
- Joint Workshop on Pricing and Incentives in Networks and Systems (W-PIN + NETECON 2013), in conjunction with ACM SIGMETRICS 2013, Pittsburg, USA, June 21, 2013.
- 3rd International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH), Reikjavik, Iceland, 29-31 July 2013.
- 9th IMACS Seminar on Monte Carlo Methods, Annecy, France, July 15-19, 2013.
- 10th International Workshop on Economics of Grids, Clouds, Systems and Services (GECON'2013), Zaragoza, Spain September 18-20, 2013.
- 4th International Symposium on Information and Communication Technology (SoICT), Danang city, Vietnam, December 5-6, 2013.

Bruno Sericola served in the Program Committee of the following conferences:

- ASMTA 2013, 20th International Conference on Analytical and Stochastic Modelling Techniques and Applications, Ghent, Belgium, 8–10 July 2013.
- ACCESS 2013, 4th International Conference on Access Networks, Nice, France, 21-26 July 2013.

Adlen Ksentini served as TPC member for

- IEEE Global Communication Conference, GLOBECOM 2013 Wireless Network Symposium, December 2013, Atlanta, USA
- IEEE International Conference on Communication, ICC 2013 Wireless Network Symposium, June 2013, Budapest, Hungary
- IEEE Wireless Communication and Networking Conference, April 2013, Paris, France
- IEEE International Conference on Multimedia and Expo ICME 2013,

Yassine Hadjadj-Aoul served as TPC member for

- IEEE Global Communication Conference, GLOBECOM 2013, Wireless Network and communications QoS symposiums, December 2013, Atlanta, USA
- IEEE International Conference on Communication, ICC 2012 Wireless Network and communication software symposiums, June 2013, Budapest, Hungary
- IEEE Wireless Communication and Networking Conference, April 2013, Paris, France

Cesar Viho served as TPC member for

- The 25th IFIP International Conference on Testing Software and Systems (ICTSS 2013), Nov 13-15, 2013, Istanbul, Turkey. C. Viho was Tutorials Chair.
- IEEE International Conference on Broadband Network & Multimedia Technology (IC-BNMT 2013), Nov 17-19, Guilin, China. C. Viho was general co-chair.

Gerardo Rubino served or serves as TPC member of

- e-Health'13: International workshop of e-Health Pervasive Wireless Applications and Services, Lyon, France, Oct 2013.
- MAM8: 8th International Conference on Matrix Analytic Methods in Stochastic Models, Calicut, India, Jan 6-10,
- Networking 2014: IFIP Networking 2014 Conference, Trondheim, Norway, Jun 2–4
- Resim 2014: 10th International Workshop on Rare Event Simulation, Amsterdam, Netherlands, Aug 27–29, 2014.
- QEST 2014: 11th International Conference on Quantitative Evaluation of SysTems, Florence, Italy, Sep 8–12, 2014.
- CLEI 2014, XL Conferencia Latinoamericana de Informática (Latin-American Informatics Conference), Montevideo, Uruguay, Sep 15–19, 2014.

9.1.5. Managing research activities

- B. Tuffin is a member of the Steering Committee of the International Workshop on Rare Event Simulation (RESIM).
- B. Tuffin was a member of Inria Rennes' PhD thesis selection committee, 2013.
- Bruno Sericola is responsible for the Inria Rennes - Bretagne Atlantique budget.
- Bruno Sericola is a member of the Inria Evaluation Committee which role is to assess the calibre of research conducted at Inria and to guarantee the quality of its hiring and internal promotions.
- Bruno Sericola is the leader of the research group MAPI (Math Appli Pour l'Info) the goal of which is to improve the collaboration between computer scientists and mathematicians.
- B. Sericola was a member of the juries for the recruitment of young graduate scientists and senior researchers at Inria.
- Cesar Viho was responsible of the Network, Telecommunication and Services department and member of the scientific council of IRISA till June 2013.
- Cesar Viho is deputy director of the MATISSE (Mathematics, Electronics and Computer Sciences) doctoral school in charge of managing the recruitment of PhD students and their activities during their doctorate, in all the concerned areas of the school.
- G. Rubino was a member for years of the Steering Committee of the international conference QEST (Quantitative Evaluation of SysTems). This membership ended mid-2013.
- G. Rubino is a member of the Steering Committee of the International Workshop on Rare Event Simulation (RESIM).
- G. Rubino has been appointed as the Inria representative at the Scientific Committee of the IFCAM (Indo-French Center for Applied Mathematics), a joint international unit between Indian Ministry of Science and Technology and several French institutions including CNRS, Inria, École Polytechnique, École Normale Supérieure, Inria, Nice Sophia Antipolis University and University of Toulouse III.
- Gerardo Rubino is a member of the Research Commission of TELECOM Bretagne (advisory board for the research activities of the institution).
- Gerardo Rubino is a member of the CSV (Selection and Validation Committee) of the "Images et Réseaux" (Images and networks) cluster in the French Brittany Region. The cluster includes most companies and academic institutions working in networking and in image-based applications in Western France.
- Gerardo Rubino served as international evaluator of NWO projects for the Netherlands Organisation for Scientific Research, for the 2013 Program.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence L3: Introduction to networks, 20 hours, Istic/University of Rennes 1, France
 Master M1: Introduction to networks, 24 hours, Esir/University of Rennes 1, France
 Master M1: Wireless networking, 46 hours, Esir/University of Rennes 1, France
 Master M1: Networks and protocols, 24 hours, Istic/University of Rennes 1, France
 Master M1: Computer networks, 24 hours, Esir/University of Rennes 1, France
 Master M1: Algorithms and graphs, 48 hours, Esir/University of Rennes 1, France
 Master M1: Performance and dependability evaluation of computer systems, 54 hours, Istic/University of Rennes 1, France
 Master M1: Introduction to graph theory, 14 hours, Esir/University of Rennes 1, France
 Master M1: Introduction to networks, 20 hours, Esir/University of Rennes 1, France
 Master M1: Wireless Networks, 48 hours, Esir/University of Rennes 1, France
 Master M2: Multimedia transmission, 48 hours, Esir/University of Rennes 1, France
 Master M2: Introduction to C language, 12 hours, Istic/University of Rennes 1, France
 Master M2: Validation and tests, 6 hours, Istic/University of Rennes 1, France
 Master M2: Quality of service and multimedia, 6 hours, Istic/University of Rennes 1, France
 Master M2: Multimedia transmission, 18 hours, Istic/University of Rennes 1, France
 Master M2: Performance evaluation, 26 hours, Istic/University of Rennes 1, France
 Master M2: Network security, 14 hours, Istic/University of Rennes 1, France
 Master M2: Dependability analysis, 15 hours, Supelec, Rennes, France
 Master M2: Simulation, 5 hours, Telecom Bretagne, Rennes, France
 Master M2: Multimedia streaming over IP (MMR), 50 hours, Esir/University of Rennes 1, France
 Master M2: Multimedia services in IP networks (RSM), 29 hours, Esir/University of Rennes 1, France
 Master M2: Logistic and performance, 8 hours, Faculté de Sciences économiques/University of Rennes 1, France.
 PhD class: Introduction to Monte Carlo simulation, 12 hours, Matisse PhD school, France
 PhD class: Network economics, 6 hours, Matisse PhD school, France

9.2.2. Supervision

HdR : Adlen Ksentini; title: “Building the bridges between QoS and QoE for network control mechanisms”; University Rennes 1; date: July 3, 2013.

PhDs defended in Dionysos, in 2013:

- Wael Cherif; title: “Adaptation de contexte basée sur la qualité d’expérience dans les réseaux Internet du Futur”; advisors: A. Ksentini and G. Rubino; University Rennes 1; date: June 19, 2013.
- Nanxing Chen; title: “On passive approach for interoperability testing”; advisor: C. Viho, University of Rennes 1; date: June 24, 2013.
- Samira Saggadi; title: “Rare event simulation with applications in telecommunications”; advisor: B. Tuffin; University Rennes 1; date: July 8, 2013.
- Pablo Sartor del Giudice; title: “Propriétés et méthodes de calcul de la fiabilité diamètre-bornée des réseaux”; advisor: G. Rubino; University Rennes 1; date: Dec 18, 2013.

PhDs defended out of Dionysos, in 2013, with participation of team’s members as co-advisors:

- Selim Ellouze; title “Mécanismes de collaboration entre réseaux et services applicatifs pour l’optimisation des ressources et des services”; co-advisor: G. Rubino; University Rennes 1; July 2, 2013.
- Isabel Amigo; title “Métrologie et Ingénierie du Trafic pour la QoS de bout-en-bout dans un réseau multi-domaine”; co-advisor: G. Rubino; Telecom Bretagne, Brest, July 12, 2013.

PhDs in progress in the team:

- Romaric Ludinard; title: “Data aggregation for large-scale distributed networks”; PhD started on April 2011; advisors: B. Sericola from Inria/Dionysos and E. Anceaume from Inria/Cidre; University Rennes 1.
- Damien Le Queré; Cifre Grant, Orange Labs; title: “Conception et étude des performances d’une solution auto-configurable pour les réseaux de transport du futur”; PhD started on January 2012; advisors: B. Sericola and A. Ksentini; University Rennes 1.
- Btissam Errahmadi; Cifre Grant, Orange Labs; title: “Coopération et auto-* dans un réseau de small cells network”; PhD started on January 2013; advisors: C. Viho and A. Ksentini; University Rennes 1.
- Leila Ghazzai; title: “Replication and caching strategies for adaptive video streaming in future information centric networks”; PhD started on October 2012; advisors: G. Rubino, Y. Hadjadj-Aoul; University Rennes 1.
- Osam Arouk; title: “Cellular-based M2M communication: congestion control”; PhD started on December 2012; advisors: C. Viho and A. Ksentini; University Rennes 1.
- Quang Tran Anh Pham; title: “Dynamic QoE based resource management in heterogeneous networks”; PhD started on October 2013; advisors: C. Viho; University Rennes 1.
- Laura Aspirot; title: “Fluid limits of some Markovian models used in performance and dependability analysis”; PhD started in Dec 2010; advisors: E. Mordecki and G. Rubino; University of the Republic, Uruguay. Expected defense in Sep 2014.
- Leslie Murray; title: “New Monte Carlo variance reduction techniques with applications in dependability”; PhD started in Dec 2010; advisors: H. Cancela and G. Rubino; University of the Republic, Uruguay. Defense in May 2014.

9.2.3. Juries (PhD and HDR)

- B. Sericola was a reviewer of the PhD thesis of Alessio Angius, from the university of Torino, Italy; title: “Handling large state spaces in transient analysis of Markovian processes” date: May 7, 2013.
- B. Tuffin was the president of the PhD jury of Isabel Amigo; title “Métrologie et ingénierie du trafic pour la QoS de bout-en-bout dans un réseau multi-domaine”; Telecom Bretagne, Brest, July 12, 2013.
- B. Tuffin was a member (as advisor) of the PhD jury of Samira Saggadi (advisor); title: “Rare event simulation with applications in telecommunications”; Université Rennes 1; July 8, 2013.
- B. Tuffin was a member of the PhD jury of Pablo Sartor del Giudice; title: “Propriétés et méthodes de calcul de la fiabilité diamètre-bornée”; Université de la République, Montevideo, Uruguay, and Université Rennes 1 (defense at Montevideo, Uruguay), December 18, 2013.
- C. Viho was Member of the Jury of HDR of Adlen Ksentini; title: “Building the bridges between QoS and QoE for network control mechanisms”; University Rennes 1; date: July 3, 2013.
- C. Viho was member/reviewer of the PhD of Thomas Ring, from University of Goettingen (Germany); title: “Assessing and Improving Interoperability of Distributed Systems”; date: January 23, 2013.
- C. Viho was the president of the PhD Jury of Wael Cherif; title: “Adaptation de contexte basée sur la Qualité d’Expérience dans les réseaux Internet du Futur”; date: June 19, 2013.

- C. Viho was the president of the PhD Jury of Lucien Loiseau, from Telecom Bretagne; title: “Exploitation des réceptions opportunistes dans les mécanismes de relayage pour les réseaux sans-fils”; date: December 6, 2013.
- C. Viho was the president of the Jury of PhD of Luis Alberto Suárez Rivera, from Telecom Bretagne; title: “Optimisation des techniques et déploiements radio pour les réseaux efficaces en énergie”; date: December 13, 2013.
- G. Rubino was a member of the Jury of HDR of Adlen Ksentini; title: “Building the bridges between QoS and QoE for network control mechanisms”; University Rennes 1; July 3, 2013.
- G. Rubino was the president of the PhD jury of Samira Saggadi; title: “Rare event simulation with applications in telecommunications”; University Rennes 1; July 8, 2013.
- G. Rubino was the president of the Jury of HDR of Daniel Negru; title: “A Networked Media Ecosystem based on *-Awareness for Future Media Internet”; University of Bordeaux 1; December 5, 2013.
- G. Rubino was member/reviewer of the PhD of Daniël Reijbergen, at the University of Twente, Netherlands; title: “Assessing and Improving Interoperability of Distributed Systems”; December 6, 2013.
- G. Rubino was a member (as advisor) of the PhD jury of Pablo Sartor del Giudice; title: “Propriétés et méthodes de calcul de la fiabilité diamètre-bornée”. Université de la République, Montevideo, Uruguay, and Université Rennes 1 (defense at Montevideo, Uruguay), December 18, 2013.

9.3. Popularization

- G. Rubino makes regular presentations to high school students about the research work in general, and specific technical topics in particular. Titles of 2013:
 - Using randomness for solving deterministic problems
 - Internet as a research problem
 - Great challenges in maths: Riemann Hypothesis
 - Great challenges in math/computer science: the “P versus NP” problem

9.4. Standardization activities

Participants: Anthony Baire, César Viho, Nanxing Chen.

The Dionysos team continues to dedicate a significant effort towards standardization and certification in the telecommunications area. We participate in several working groups of the main telecommunication standardization institutes like the IETF (Internet Engineering Task Force), ETSI (European Telecommunication Standardization Institute), etc. We are also active in the main mailing-lists treating new generation networks and protocols. Several proposals of drafts and contributions to the definition of standards and RFCs (Request For Comments) have been published. This year we continued focusing mainly on Internet of Things and related protocols such as 6LowPAN (IPv6 for Low Power Area Networks) and CoAP (Constrained Application Protocol).

9.4.1. IPv6 Ready Logo Program

Participants: Anthony Baire, César Viho.

Dionysos team has also a major role in the world-wide certification process for IPv6 products launched by the IPv6 Forum, the “IPv6 Ready Logo Program”. For details, see <http://www.ipv6ready.org>. This project aims to provide the means needed to test existing IPv6 products to be deployed in the market. Dionysos contributes to the technical part of this Program by defining the certification process itself, specifying required tests, and developing some of the interoperability tests needed. This work is done together with the IPv6 Forum, the ETSI in Europe, the WIDE-project in Japan, the TTA (Telecommunications Technology Association) in Korea and BII in China.

This year, in collaboration with the IPSO alliance and ETSI, we addressed the usage of IPv6 on smart objects based on the IEEE 802.15.4 link layer (for instance, sensor networks). These networks have special constraints (limited power, packet loss, ...) and new protocols are designed at IETF (6LowPAN, CoAP) to allow using IPv6 with these constraints. We participated in the preparation of two Interoperability events for these protocols in June in Berlin (Germany) and in November in Las Vegas (USA).

DISCO Project-Team

9. Dissemination

9.1. Scientific Animation

- Catherine Bonnet is a member of the IFAC Technical Committee 2.5 on Robust Control and of the IFAC Technical Committee 2.6 on Distributed Parameter Systems. She is also in the boards of the association *Femmes et Mathématiques* and of the consortium Cap'Maths. She has been the co-chair of the NOC and a member of IPC of the first IFAC Workshop on Control of Systems Modeled by Partial Differential Equations, Paris September 2013 and has co-organized the workshop Modeling and Analysis of Cancer Cells Dynamics, Paris June 2013 (ISSMA 2013). She is a member of the organizing committee of the *Colloque en l'honneur d'Abdelhad El Jai* to be held 29-30 May 2014 in Ifrane, Marocco. She is a co-Editor of the book "Low Complexity Controllers for Time-Delay Systems" of the Springer Series *Advances in Dynamics and Delays*. She is co-organizer of the "Séminaire du Plateau de Saclay". She has co-organized with K. Morris (Univ of Waterloo) the session *Analysis and Control of Infinite-Dimensional Systems* at the SIAM CT13 Conference.
- Frédéric Mazenc was Associate Editor for the conferences 2014 American Control Conference, Portland, USA. and 52th IEEE Conference on Decision and Control, Florence, Italy, (2013). He is member of the Mathematical Control and Related Fields editorial board, member of the European Journal of Control editorial board and Associate Editor for the Asian Journal of control. He was member of the national organizing committee of 1st IFAC Workshop on Control of Systems Modeled by Partial Differential Equation, Paris 2013. He was member of the international program committee of the 2014 European Control Conference, Strasbourg, France, the 2013 IFAC Nolcos, Toulouse, France and the 5th IFAC International Workshop on Periodic Control Systems, Caen, France, 2013. He is evaluator for the National Agency for the Italian Evaluation of Universities and Research Institutes (ANVUR). He is evaluator for Partnersio Programme - Joint Applied Research Projects - PCCA of the Roumanian National Council for Development and Innovation. He was invited to the seminar of the Laboratoire d'Automatique, Ecole polytechnique Fédérale de Lausanne, Lausanne, Switzerland (13/03/2013 - 21/03/2013). He was invited to the seminar of the LAGEP, Université Claude Bernard, Lyon 1 in December 2013 (17/12/2013 - 20/12/2013).
- Alban Quadrat is an Associate Editor of the journal "Multidimensional Systems and Signal Processing", Springer. With Eva Zerz, he organized a special issue "Symbolic Methods in Multidimensional Systems Theory" for this journal (to appear in 2014). With Georg Regensburger, he organized an invited session "Algebraic and symbolic methods in mathematical systems theory" at the 5th Symposium on System Structure and Control (Grenoble, 4-6/02/2013). With Eva Zerz, he organized an invited session "Algebraic and behavioural approaches to multidimensional system theory" at the 8th International Workshop on Multidimensional Systems (nDS13), Erlangen, Germany (9-11/09/13). Moreover, they have also proposed two invited sessions "Algebraic methods and symbolic-numeric computation in systems theory" at the forthcoming 21st International Symposium on Mathematical Theory of Networks and Systems (MTNS), Groningen, the Netherlands (7-11/07/14). With Mohamed Barakat and Thierry Coquand, he organized a mini-workshop "Constructive homological algebra with applications to coherent sheaves and control theory" at Oberwolfach (12-18/5/2013). He was an International Programm Committee member of the 8th International Workshop on Multidimensional (nD) Systems (nDS13), Erlangen (Germany) (9-11/09/13), and a National Organizing Committee member of the 1st IFAC Workshop on Control Systems Modeled by Partial Differential Equations, IHP, Paris (France) (25-27/09/13). Finally, with Hugues Mounier (University of Orsay, L2S) and Sette Diop (CNRS, L2S), he organizes a seminar on algebraic systems theory at L2S (<http://pages.saclay.inria.fr/alban.quadrat/Seminar.html>).

- Alban Quadrat was a plenary speaker at the 5th International Workshop on Differential Algebra and Related Topics (DART V), Lille, France (24-26/06/13) and a semi-plenary speaker at the Colombian Congress of Mathematics, Barranquilla, Colombia (15-19/07/13). He was invited to give a talk at the University of Versailles (23/04/13), at the Centre Automatique et Systèmes (CAS), Mines ParisTech (20/06/13), at the Institute of Cybernetics of the University of Tallinn, Estonia (01/10/13), and at the Tampere University of Technology, Finland (24/10/13). Finally, he participated to the workshop Geometry and algebra of linear matrix inequalities, CIRM, Luminy (12-16/11/13).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Licence : Le Ha Vy Nguyen, Applied Informatics in Physics, 16h, L2, Paris-Sud University
 Licence : Le Ha Vy Nguyen, Signals and Systems, 28h, L3, Paris-Sud University
 Licence : Sorin Olaru, Numerical Methods and Optimization, 24h, L2, SUPELEC, France
 Licence : Sorin Olaru, Hybrid Dynamical Systems, 18h, L3, SUPELEC, France
 Licence : Guillaume Sandou, Signals and Systems, 87h, L3, Supélec
 Licence : Guillaume Sandou, Mathematics and programming, 18h, L3, Supélec
 Master : Le Ha Vy Nguyen, Information Processing and Source Coding, 12h, M1, Paris-Sud University
 Master : Guillaume Sandou, Automatic Control, 8h, M1, Supélec
 Master : Guillaume Sandou, Numerical methods and optimization, 28h, M1 and M2, Supélec
 Master : Guillaume Sandou, Modelling and system stability analysis, 21h, M2, Suplec
 Master : Guillaume Sandou, Control of energy systems, 22h, M2, Suplec
 Master : Guillaume Sandou, Robust control and mu-analysis, 9h, M2, Suplec
 Master : Guillaume Sandou, Systems identification, 32h, M2, ENSTA
 Master : Guillaume Sandou, Embedded Systems, 18h, M2, Ecole Centrale Paris
 Master : Guillaume Sandou, Automatic control, 23h, M2, Ecole Centrale Paris
 Master : Guillaume Sandou, System Analysis, 22h, M2, Ecole des Mines de Nantes
 Master : Guillaume Sandou, Multivariable control, 12h, M2, Evry University

9.2.2. Supervision

- PhD in progress José Luis Avila Alonso, Mathematical Analysis of Acute Myeloid Leukemia, December 31st 2011. University Paris-Sud, STITS. Supervisor : Catherine Bonnet. Co-supervisors : Jean Clairambault and Silviu Iulian Niculescu.
- PhD in progress: Thach Ngoc Dinh, Interval Observers and Delay Systems, December 2011. University Paris-Sud STITS. Supervisor: Frédéric Mazenc. Co-Supervisor: Silviu Iulian Niculescu, Silvère Bonnabel.
- PhD in progress Le Ha Vy Nguyen, H_∞ Stability and control of fractional delay systems, September 15th 2011. University Paris-Sud, STITS. Supervisor: Catherine Bonnet.
- PhD in progress Nikola Stankovic, Set-based control methods for systems affected by time-varying delay, September 30th 2010, University Paris-Sud, STITS. Defense: 20 November 2013. Supervisor: Sorin Olaru Co-Supervisor: Silviu Iulian Niculescu

9.2.3. Juries

Catherine Bonnet was an examiner member and President of the jury of the PhD Thesis of Hao Lu entitled "Approximation and Applications of Distributed Delays", INSA Lyon, 1st October 2013; and an examiner member of the jury of the PhD Thesis of Julien Chaudenson entitled "Analyse de robustesse par contraintes intégrales quadratiques, application aux lanceurs spatiaux", Supélec, 4 December 2013.

She was a member of the Recruiting Committee of the *Chargé de Recherche de 2ème classe* competition of Inria Saclay-Ile-de-France and in the Recruiting Committee of the *Maître de Conférences* competition at University Paris-Sud.

Alban Quadrat was the opponent of the PhD thesis “Robust Regulation for Infinite-Dimensional Systems and Signals in Frequency Domain” by Petteri Laakkonen, Tampere University of Technology, Finland (25/11/13), and the reviewer of the PhD thesis “Ring and Module Theoretic Properties of σ -PBW Extensions” by Milton Reyes Armando Villamil, Universidad Nacional de Colombia, Colombia (23/07/13).

9.3. Popularization

Catherine Bonnet spoke at the “Cérémonie de remise des prix des Olympiades de Mathématiques, Ministère de l’éducation nationale, juin 2013. She gave a talk and met high school students groups at the event “Sciences au Carré” in the context of Fête de la Sciences, CNES, October 2013.

Alban Quadrat was invited to give a popularization talk on the development of ideas in mathematics and physics at the conference “Lieux de passage en Science-Fiction”, University of La Rochelle (France), Lettres, Langues, Arts et Sciences Humaines (FLASH), 11-13/04/13.

DOLPHIN Project-Team**9. Dissemination****9.1. Scientific Animation**

Organization:

- NIDISC'2013, Nature Inspired Distributed Computing, in IEEE IPDPS, Boston, USA, May 2013.
- GreenDaysLille, Lille, Nov 2013.
- Special issue on New advances in metaheuristics, Journal of Mathematical Modelling and Applications, co-edited by L. Jourdan and E-G. Talbi
- Special issue on Emergent nature inspired algorithms for multi-objective optimization, Computers and Operations Research (COR), co-edited by J. Figueira and E-G. Talbi
- Special issue on Scalable optimization in grid, cloud and intelligent network computing, Concurrency and Computation : Practice and Experience, co-edited by J. Kolodziej, S. U. Khan and E-G. Talbi
- Special issue on Metaheuristics on GPUs, Journal of Parallel and Distributed Computing (JPDC), co-edited by E-G. Talbi and G. Hasle
- International conference EA 2013 Artificial Evolution (Oct 2013 Bordeaux, France)
- Intelligent optimization in Bioinformatics session in LION 7 (Catania, Italy, January 2013) organized by Clarisse Dhaenens and Laetitia Jourdan
- Problem structure vs. algorithm performance in multiobjective combinatorial optimization session at LION 2013, co-organized by Hernan Aguirre, Arnaud Liefooghe, Kiyoshi Tanaka and Sébastien Verel (Catania, Italy, January 2013)
- Special issue on Evolutionary Multiobjective Optimization, European Journal of Operational Research, co-edited by Dimo Brockhoff, Bilel Derbel, Arnaud Liefooghe and Sébastien Verel
- Evolutionary Multiobjective Optimization session at the MCDM 2013 conference, co-organized by Dimo Brockhoff, Bilel Derbel, Arnaud Liefooghe and Sébastien Verel (Malaga, Spain, June 2013)
- Artificial Evolution Summer School (AESS 2013, Quiberon, France, June 2013), co-organized by Dimo Brockhoff, Bilel Derbel, Arnaud Liefooghe and Sébastien Verel (Malaga, Spain, June 2013)
- Special issue on Evolutionary Multiobjective Optimization, Journal of Multi-Criteria Decision Analysis, co-edited by Dimo Brockhoff and Kalyanmoy Deb, published as Volume 20, Issue 5-6, in November 2013
- Lorentz Center workshop “SIMCO - Set-Oriented and Indicator-Based Multi-Criteria Optimization” in Leiden, Netherlands in September 2013, co-organized by Dimo Brockhoff together with Michael Emmerich, André Deutz, and Boris Naujoks, about 40 participants, see <http://www.lorentzcenter.nl/lc/web/2013/583/info.php3?wsid=583> and <http://simco.gforge.inria.fr/>
- GECCO 2013 workshop entitled “Blackbox Optimization Benchmarking” in Amsterdam, Netherlands in July 2013, co-organized by Dimo Brockhoff together with Anne Auger, Bernd Bischl, Nikolaus Hansen, Olaf Mersmann, Petr Pošík, and Heike Trautmann, see <http://coco.gforge.inria.fr/doku.php?id=bbob-2013>
- Special session on uncertainty handling at the 22nd International Conference on Multiple Criteria Decision Making (MCDM'2013) in Malaga, Spain in June 2013, co-organized by Dimo Brockhoff and El-Ghazali Talbi together with Jürgen Branke
- invited track chair for the EMO track at the GECCO'2013 conference in Amsterdam, Netherlands, Dimo Brockhoff together with Frank Neumann, see <http://www.sigevo.org/gecco-2013/organizers-tracks.html#emo>

Research management:

- Manager (Chargé de mission) of supercomputing for Université Lille 1.
- Scientific leader for Lille of the Grid'5000 nation-wide and EGI european-wide grid infrastructures.
- Scientific leader of the challenge "Large scale combinatorial optimization" of the HEMERA nation-wide grid and cloud computing research action (AEN) of Inria.
- Member of the steering committee of the Aladdin-Grid5000 nation-wide technological development action of Inria.
- Co-leader of the PPF "Supercomputing" at Université Lille 1.
- Chair of the "Parallel Evolutionary Systems" track of GECCO'2013, Amsterdam, Netherlands, July 2013.

Reviewing:

- Computers and Operations Research
- European Journal of Operational Research
- Journal of Multi-Criteria Decision Analysis
- IEEE Transactions on Evolutionary Computation
- Applied soft computing (ASOC)
- Soft Computing (SOCO)
- KAI (Knowledge and Information Systems)
- Journal of Mechanical Engineering Science
- Computer Languages, Systems and Structures
- 4OR - A Quarterly Journal of Operations Research
- Journal of Supercomputing
- International Transactions in Operational Research
- Computers and Industrial Engineering
- MEME (Memetic Computing Journal)
- Evolutionary Computation
- Theoretical Computer Science
- Artificial Intelligence Journal
- IEEE Transactions on Systems, Man and Cybernetics - Part B
- Journal of Multi-Criteria Decision Analysis

Program committees:

- MICAI 2013, track Evolutionary and Nature-inspired Metaheuristics (November 2013, Mexico City, Mexico)
- ECAL 2013, European Conference on Artificial Life, (September 2013, Taormina, Italy)
- IEEE Congress on Evolutionary Computation (IEEE CEC 2013) (Cancun, Mexico, June 2013)
- International conference MIC - Metaheuristics International Conference 2013 (Singapore)
- Genetic and Evolutionary Computation Conference (GECCO 2013), (Amsterdam The Netherlands, 2013)
- 7th International Conference on Evolutionary Multi-criterion Optimization (EMO 2013, Sheffield, UK, 2013)
- 7th Learning and Intelligent Optimization Conference (LION 7, Catania, Italy, January 2013)
- EA 2013 Artificial Evolution, 21-23 October 2013, Bordeaux, France

- 6th Workshop on Artificial Life and Evolutionary Algorithms (ALEA 2013), as a part of EPIA 2013 (AÃ§ores, Portugal, 2013)
- Genetic and Evolutionary Computation Conference (GECCO 2013), Evolutionary Combinatorial Optimization and Metaheuristics (ECOM) track (Amsterdam The Netherlands, 2013)
- IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2013, Singapur, 2013)
- 13th European Conference on Evolutionary Computation in Combinatorial Optimisation (EvoCOP 2013, Vienna, Austria, 2013)
- 7th International Conference on Evolutionary Multi-criterion Optimization (EMO 2013, Sheffield, UK, 2013)
- 7th Learning and Intelligent Optimization Conference (LION 7, Catania, Italy, January 2013)
- ICANN'2013 Int. Conf. on Adaptive and Natural Computing Algorithms, Lausanne, Switzerland, Apr 2013.
- HAIS'2013 8th Int. Conf. on Hybrid Artificial Intelligence Systems, Salamanca, Spain, Sept 2013.
- ECAL'2013 8th European Conf. on Artificial Life, Taormina, Italy, Sept 2013.
- IC3'2013 Int. Conf. On Contemporary Computing, Noida, India, Aug 2013.
- GPC'2013 Int. Conf. On Grid and Pervasive Computing, Daegu, Korea, May 2013.

Commission:

- President of the recruiting committee for associate professorship in computer science (COS McF 27 - Univ. Lille 1 - 2013) - 3 positions.
- External member of the recruiting committee for associate professorship in computer science (COS McF 27 - Univ. Littoral Cote d'Opale - 2013), (COS McF 26 - Univ Bordeaux - 2013).
- External member of the recruiting committee for professorship in computer science (COS PR27- Univ. Tours - 2013).
- External reviewer for the PhD student grants at Microsoft Research Cambridge
- External reviewer for the Luxembourg National Research Fund (FNR)
- President of the Technological Development Commission (CDT) of Inria Lille.
- President of the Research Positions Commission (CER - Commission des Emplois de Recherche) of Inria Lille.
- External project reviewer, Qatar National Research Fund (QNRF) (2013).

Dessimination:

- Dimo Brockhoff: invited GECCO'2013 tutorial on Evolutionary Multiobjective Optimization
- El-ghazali Talbi: invited CEC'2013 tutorial on Parallel and Distributed Evolutionary Algorithms

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Engineering school : Clarisse Dhaenens, Graphs and Combinatorics, 80 HeqTD, Polytech Lille, University Lille 1, France

Engineering school : Clarisse Dhaenens, Operations Research, 70 HeqTD, Polytech Lille, University Lille 1, France

Engineering school : Clarisse Dhaenens, Algorithmics and programming, 45 HeqTD, Polytech Lille, University Lille 1, France

Master: D. Brockhoff, Advanced Control, 18h, M2, Ecole Centrale Paris, Chatenay-Malabry, France

Licence : L. Jourdan, Initiation à la programmation, 54 heures équivalent TD, niveau L1, université de Lille 1, France

Master : L. Jourdan, Fouille de données, 60 heures en équivalent TD, niveau (M1-Miage) université de Lille 1, France

Master : L. Jourdan, Informatique décisionnelle, 36 heures en équivalent TD, niveau (M1-Informatique) université de Lille 1, France

Master : L. Jourdan, Mise à niveau en Informatique décisionnelle, 24 heures en équivalent TD, niveau (M1-Miage) université de Lille 1, France

Licence: A. Liefoghe, Algorithmic and Data structure, 36h, L2, Université de Lille 1, France

Licence: A. Liefoghe, Algorithmic - Operations Research, 36h, L3, Université de Lille 1, France

Master: A. Liefoghe, Databases, 30h, M1, Université de Lille 1, France

Master: A. Liefoghe, Object-oriented Design and Programming, 52h, M1, Université de Lille 1, France

Master: A. Liefoghe, Combinatorial Optimization, 10h, M2, Université de Lille 1, France

Master of Advanced Scientific Computing: Nouredine Melab, Supercomputing, 33, M2, université Lille 1, France

Master Computer Science: Nouredine Melab, Parallel and Distributed Programming, 20, M1, université Lille 1, France

Master MIAGE: Nouredine Melab, Operations Research, 45, M1, université Lille 1, France

Polytech Lille : Marie-Eléonore Marmion, Database, 67h ETD, 1st year, Université Lille 1, France

Polytech Lille : Marie-Eléonore Marmion, Algorithm and Programming, 45h ETD, 1st year, Université Lille 1, France

Polytech Lille : Marie-Eléonore Marmion, Graph, 10h ETD, 1st year, Université Lille 1, France

Polytech Lille : Marie-Eléonore Marmion, Data Mining, 10h ETD, 3rd year, Université Lille 1, France

Master : Bilel Derbel, Combinatorial Optimization, 35h, M2, University Lille 1, France

Master : Bilel Derbel, Grid Computing, 16h, M2, University Lille 1, France

Master : Bilel Derbel, Parallel and Distributed Programming, 12h, M1, University Lille 1, France

Master : Bilel Derbel, Advanced Object Programming, 92h, M1, University Lille 1, France

Master : Bilel Derbel, Design of Distributed Applications, 60h, M1, University Lille 1, France

Master : Bilel Derbel, Algorithms and Applications, 28h, M1, University Lille 1, France

Engineering school : El-Ghazali Talbi, Advanced optimization, 36h, Polytech'Lille, University Lille 1, France

Engineering school : El-Ghazali Talbi, Data mining, 36h, Polytech'Lille, University Lille 1, France

Engineering school : El-Ghazali Talbi, Operations research, 60h, Polytech'Lille, University Lille 1, France

Engineering school : El-Ghazali Talbi, Graphs, 25h, Polytech'Lille, University Lille 1, France

9.2.2. Supervision

PhD : Julie Hamon, Optimisation combinatoire pour la sélection de variables en régression en grande dimension : Application en génétique animale, Université Lille 1, 26/11/2013, Clarisse Dhaenens, Julien Jacques (MODAL)

PhD : Khedidja SERIDI, Approches multi-objectives pour le biclustering : applications aux microarrays (puce à ADN), Université de Lille 1, soutenance 5/7/2013, Co-direction : El-Ghazali Talbi et Laetitia Jourdan

PhD : Julie Jacques, Classification sur données médicales à l'aide de méthodes d'optimisation et de datamining, appliquée au pré-screening dans les essais cliniques, Université de Lille 1, soutenance 2/12/2013, Co-direction : Clarisse Dhaenens et Laetitia Jourdan

PhD : Yacine KESSACI, Multi-criteria Scheduling on Cloud, Université Lille 1, 11/28/2013, Nouredine Melab and El-Ghazali Talbi

PhD : Imen CHAKROUN, Parallel Heterogeneous Branch and Bound Algorithms for Multi-core and Multi-GPU Environments, Université Lille 1, 06/28/2013, Nouredine Melab

PhD : Mathieu DJAMAI, Peer to Peer Branch and Bound Algorithms for Computational Grids, Université Lille 1, 03/11/2013, Nouredine Melab and Bilel Derbel

PhD in progress : Sophie Jacquin, Combining exact method and metaheuristics for production problems, début : 1/10/2012, Co-direction : El-Ghazali Talbi et Laetitia Jourdan

PhD in progress : Sylvain Dufourny, Optimisation de décisions économiques concurrentielles dans un simulateur de gestion d'entreprise, Novembre 2012, Clarisse Dhaenens

PhD in progress : Thanh-Do TRAN, Benchmarking Continuous Multiobjective Optimization Algorithms, 12/2011, Dimo Brockhoff and El-Ghazali Talbi

PhD in progress : Rudi LEROY, Massively parallel tree-based exact algorithms for hybrid clusters, 11/05/2012, Nouredine Melab

PhD in progress : Francois LEGILLON, Static and Dynamic Resource Brokering on multi-clouds, 09/01/2010, Nouredine Melab and El-Ghazali Talbi

PhD in progress : Trong Tuan VU, Large scale heterogeneous tree-based exact algorithms for grids, 11/05/2012, 09/01/2010, Bilel Derbel and Nouredine Melab

PhD : Mustapha DIABY, Approche de gestion de revenus pour un problème de tarification pour le transport longue distance, Université de Lille 1, soutenance Nov 2013, El-Ghazali Talbi et Luce Brotcorne

PhD in progress : Nadia Dahmani, Multi-objective packing problems, 12/2009, El-Ghazali Talbi and François Clautiaux

PhD in progress : A. Stathakis, Satellite payload reconfiguration optimization, 12/2010, El-Ghazali Talbi and Pascal Bouvry

PhD in progress : A. Q. Nguyen, Green scheduling on cloud computing systems, 11/2012, El-Ghazali Talbi and Pascal Bouvry

PhD in progress : Oumayma Bahri, Fuzzy multi-objective optimization, 11/2013, El-Ghazali Talbi and Nayla Ben-Omar

PhD in progress : Asma Gannouni, Stochastic multi-objective optimization using metaheuristics , 11/2013, El-Ghazali Talbi and Rachid Ellaia

9.2.3. *Juries*

- Clarisse Dhaenens : Caractérisation d'instances difficiles pour des problèmes d'optimisation NP-difficiles de Valentin Weber, Université de Grenoble, Encadrants : Nadia Brauner, Yann Kieffer - July 2013 (Rapporteur et Présidente).
- Clarisse Dhaenens : Extraction de motifs contraints dans des données bruitées de K. Mouhoubi, Université de Paris XIII, Encadrants : Lucas Létocart, C. Rouveïrol - September 2013 (Rapporteur).
- Clarisse Dhaenens : Metaheuristics, Heuristics and Exact Algorithms to Solve Constrained Hybrid Flow Shop : Application to a Three-stage Supply Chain de Walid Besbes, Université de Mons (Belgique), Encadrants : Taicir Loukil, Jacques Teghem - September 2013.
- Clarisse Dhaenens : Column generation for Bi-Objective integer Linear programs : Application to Bi-Objective Vehicle Routing Problems de Boasu Sarpong, Université de Toulouse, Encadrants : Christian Artigues, Nicolas Jozefowicz - December 2013 (Rapporteur).

- L. Jourdan: Métaheuristiques pour l'optimisation combinatoire sur processeurs graphiques (GPU) de Audrey DELEVACQ de l'Université de Reims, encadrants : Pierre Delisle et Michael Krajecki - February 4th 2013 (Rapporteur)
- L. Jourdan Hybrid Evolutionary Metaheuristics for Multiobjective Decision Support de Ahmed M. KAFAFY de l'université de Lyon, encadrants : Stéphane Bonnevey et Ahmed Bounekkar - October 24th 2013 (Rapporteur)
- L. Jourdan: Optimisation multi-objectif de missions de satellites d'observation de la Terre de Panwadee Tangpattanakul, LAAS and INSA Toulouse, encadrant : Pierre Lopez et Nicolas Jozefowicz - September, 26th 2013 - (Présidente de Jury)
- E-G. Talbi: La métaheuristique CAT pour le design de réseaux logistiques déterministes et stochastiques de Marc-André Carle, Université Laval, Québec, Canada. encadrant: Nicolas Zuffery, Jan 2013 (Rapporteur)
- E-G. Talbi, Perfectionnement de métaheuristiques pour l'optimisation continue de Ilhem Boussaid, Université USTHB (Algérie) et Université Paris Créteil (France), encadrants: M. Ahmed-Nacer, P. Siarry, Juin 2013 (Rapporteur)
- E-G. Talbi: Modélisation dynamique de la densité de population via les réseaux cellulaires et optimisation multobjectif de l'auto-partage de Laurent Moalic Université Franche-Comté (France), encadrants: A. Caminada, S. Lamrous, F. Spies, Dec 2013 (Rapporteur).

9.3. Popularization

- Fête de la science
- Big Data Event (Mar 2013): Conference for industrial - Intervention on "Modeling and multi-objective optimization for knowledge discovery"

DRACULA Project-Team

9. Dissemination

9.1. Scientific Animation

The year 2013 was marked by the following events:

- The edition of 4 volumes of the journal MMNP (Mathematical Modelling of Natural Phenomena) on the following topics: Harmonic analysis; Anomalous diffusion; Front Propagation; Plant growth modelling (see <http://journals.cambridge.org/action/displayJournal?jid=MNP>).
- The co-organization of a monthly seminar (INRIabcd, every last friday), jointly with Inria team BEAGLE, and the organization of a seminar on biomathematics (on thursday, twice a month) (see archives : http://dracula.univ-lyon1.fr/news_old.php).
- The organization of the Semovi seminar (<http://www.biosyl.org/news/semovi>). Two editions (March and October) in 2013, Olivier Gandrillon.
- Thematic program: Mathematical Biology

Our team has been the co-organizer of a thematic program on "Mathematical Biology", in Lyon (France) from March 4th to June 14th (3 months), 2013:

<http://mathbio2013.sciencesconf.org/>

These activities are funded in part by the "Laboratoire d'Excellence", labex MILYON an initiative from the French ministry of research.

The main topics of this program are: Cell biology, population dynamics, quantitative modeling for drug development, systems biology, and evolutionary biology.

The highlights of the program are:

- Systems Biology Approach to Infectious Processes, Lyon (France), May 13-15 (part of the thematic program Mathematical Biology), Fabien Crauste, Olivier Gandrillon.

- ESMTB-EMS Summer school "Multiscale modeling in the life sciences", Lyon (France), May 27-31 (part of the thematic program Mathematical Biology), Thomas Lepoutre, Vitaly Volpert.

- Conference in honour of Michael Mackey's 70th birthday, Lyon (France), June 3-6 (part of the thematic program Mathematical Biology), Samuel Bernard, Fabien Crauste, Laurent Pujou-Menjouet.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Léon MATAR TINE, Analyse, fonctions de plusieurs variables, Prepa L2, 60h, University Lyon 1.

Licence : Léon MATAR TINE, Analyse numérique, L3, 36h, University Lyon 1.

Licence : Laurent PUJO-MENJOUET, EDP réaction-diffusion, 10.5h, L3, University Lyon 1.

Licence : Laurent PUJO-MENJOUET, EDO-Systèmes dynamiques, 40h, L3, INSA Lyon.

Licence : Laurent PUJO-MENJOUET, Equations différentielles et EDP, 36h, L3, University Lyon 1.

Licence : Laurent PUJO-MENJOUET, Fonctions de plusieurs variables, 36h, L1, University Lyon 1

Licence : Laurent PUJO-MENJOUET, Suite et série de fonctions, 36h, L2, University Lyon 1.

Licence : Laurent PUJO-MENJOUET, Projet Etudiant, 03h, L2, University Lyon 1.

Licence : Philippe MICHEL, Analyse appliquée, 56h, L3, Ecole Centrale de Lyon.
 Licence : Philippe MICHEL, Analyse appliquée, 56h, L3, Ecole Centrale de Lyon.
 Licence : Philippe MICHEL, Probabilités et statistique, 32h, L3, Ecole Centrale de Lyon.
 Licence : Philippe MICHEL, Projet d'études, 10h, L3, Ecole Centrale de Lyon.
 Master : Mostafa ADIMY, Dynamique des populations : application aux populations de cellules, 15h, M2, University Lyon 1.
 Master : Thomas LEPOUTRE, Préparation à l'agrégation, calcul scientifique, 30h, M2, University Lyon 1.
 Master : Thomas LEPOUTRE, Dynamique des protéines, 18h, M2, University Lyon 1.
 Master : Thomas LEPOUTRE, Equations de Hamilton Jacobi, 18h, M2, ENS Lyon.
 Master : Samuel BERNARD: Dynamique des populations : application aux populations de cellules, 15h, M2, University Lyon 1.
 Master : Laurent PUJO-MENJOUET, Modélisation en biologie et médecine, 4h, M2, ENS Lyon.
 Master : Laurent PUJO-MENJOUET, EDP et modélisation, 30h, M1, INSA Lyon.
 Master : Laurent PUJO-MENJOUET, Projets tutorés, 3h, M1, University Lyon 1.
 Master : Laurent PUJO-MENJOUET, Systèmes dynamiques, 27h, M1, University Lyon 1.
 Master : Laurent PUJO-MENJOUET, EDP pour l'hématopoïèse, 18h, M2, University Lyon 1.
 Master : Philippe MICHEL, Algorithmes pour la décision en entreprise, 16h, M2, Ecole Centrale de Lyon.
 Master : Philippe MICHEL, Systèmes embarqués collaboratifs, 14h, M1, Ecole Centrale de Lyon.
 Master : Philippe MICHEL, Projet Application - Recherche, 10h, M1, Ecole Centrale de Lyon.
 Master : Philippe MICHEL, Méthodes variationnelles pour les EDP, 36h, M2, Ecole Centrale de Lyon.

9.2.2. Supervision

PhD in progress: Loic Barbarroux, Ecole Centrale de Lyon, French ministry scholarship, since October 2013, co-supervised by Mostafa Adimy and Philippe Michel.
 PhD in progress: Latifa Bouguerra, University of Alger, Algerian scholarship, since October 2012, co-supervised by Mostafa Adimy and Rachid Boudchich.
 PhD in progress: Abdennasser Chekroun, University Lyon 1, Algerian scholarship, since October 2012, supervised by Mostafa Adimy.
 PhD in progress: Raouf El Cheikh, University Lyon 1, salarié, since October 2011, supervised by Samuel Bernard.
 PhD : Mohamed Helal, Contributions aux équations et inclusions différentielles et applications a des problèmes issus de la biologie cellulaire, University of Sidi Bel Abbes, Algeria, September 2013, co-supervised by Laurent Pujou-Menjouet and Abdelkader Lakmeche.
 PhD in progress: Marine Jacquier, University Lyon 1, since October 2012, co-supervised by Mostafa Adimy and Fabien Crauste.
 PhD in progress: Alen Tosenberger, University Lyon 1, CNRS scholarship, supervised by Vitaly Volpert.

9.2.3. Juries

- Mostafa Adimy was member and reviewer of the following PhD: Dhaou Lassoued (University of Paris 1 (Panthéon-Sorbonne)), December 2013; Souhila BOUDJEMA (University of Paris 1 (Panthéon-Sorbonne)), September 2013; Yuan HE (University of Bordeaux), November 2013; Ousmane SEYDI (University of Bordeaux), November 2013; Mohamed HELAL (University of Sidi Bel Abbes, Algeria), 22 September 2013; Naamat ALI (University of La Rochelle), July 2013.

- Mostafa Adimy was reviewer of the following PhD: William DIMBOUR (University of Antilles et de la Guyane), May 2013.
- Samuel Bernard was member of the following PhD: Anne-Sophie LESART (University of Grenoble), November 2013.
- Samuel Bernard was acting as a co-director for the following PhD: Stephan FISCHER (University of Lyon) December 2013.
- Olivier Gandrillon was acting as a director for the following PhD: Gael Kaneko (University of Lyon), Septembre 2013.
- Olivier Gandrillon was member and reviewer of the following PhD: Benoit Robisson (University of Marseille), November 2013; Lydia Boudarène (ENS Paris), March 2013.
- Olivier Gandrillon was member of the following PhD: Adrien Senecal (ENS Paris), September 2013.

DREAM Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Journal editorial board

- *AAI: Applied Artificial Intelligence* (M.-O. Cordier).
- *Interstices webzine* (M.-O. Cordier).
- *Revue d'Intelligence Artificielle*: Invited editors of the special issue on "Intelligence Artificiale and Agronomy": T. Guyet, F. Le Ber, M. Teisseire [25]

9.1.2. Conference program committees and organizations

- Program committee members of FOSTA workshop at EGC 2013 (T. Guyet, R. Quiniou).
- Organization committee member of CIDN workshop at EGC 2013 (T. Guyet).
- Local chair of EGC 2014 in Rennes (R. Quiniou).
- Organization committee member of EGC 2014 in Rennes (T. Guyet).
- Organization chairs and Program committee members of FST-CERGE workshop at EGC 2014 (T. Guyet, R. Quiniou).
- Steering Committee of RFIA'2014 (T. Guyet).
- Session chair of ICBBIO 2014 (S. Benabderrahmane)

9.1.3. Scientific and administrative boards

- ECCAI fellow + Honorary member of AFIA (Association Française d'Intelligence Artificielle): M. - O. Cordier
- Member of "Agrocampus-Ouest" scientific board: M.-O. Cordier.
- Member of "Conseil d'administration de l'ISTIC": M.-O. Cordier.
- Head of IRISA department "Data and Knowledge Management" and member of the IRISA scientific management committee: M.-O. Cordier
- Member of the "Prix de thèse AFIA 2013" award committee (selects the best French PhD thesis in the Artificial Intelligence domain): M.-O. Cordier.
- Chair of the INRA CSS-MBIA (Commission scientifique spécialisée "Mathématiques, Biologie et Intelligence Artificielle"): M.-O. Cordier.
- Member of the CoNRS (Comité national recherche scientifique (since october 2012) : M.-O. Cordier
- Member of the AFIA board (since october 2011): T. Guyet.
- Member of the COREGE (Research Committee-COMITÉ de la REcherche du Grand Etablissement) of Agrocampus-Ouest: T. Guyet.
- Evaluator for the "Fonds de recherche du Québec – Nature et technologies": T. Guyet.
- Member of the Payote-Network board: T. Guyet.

9.1.4. Misc

- Invited talk at the "Pattern Mining Days" workshop, Grenoble, July 2013 (T. Guyet).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

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

Master: *Module DSS: Apprentissage sur des données séquentielles symboliques*, 10 h, M2, ISTIC University of Rennes (R. Quiniou).

Master: *C++ Programming*, M1, ENSAI, Rennes (T. Guyet and S. Benabderrahmane),

Master: *Géoinformation*, M2, Agrocampus Ouest Rennes (L. Bonneau, T. Guyet, S. Malinowski)

9.2.2. Supervision

PhD: Tassadit Bouadi, “Analyse interactive de résultats de simulation et découverte de connaissances. Application à l’aide à la décision dans le domaine agroécologique pour l’amélioration de la qualité des eaux des bassins versants”, november 28th 2013, co-supervisors Marie-Odile Cordier, René Quiniou and Chantal Gascuel, ANR project Acassya grant

PhDs: Yulong Zhao, “Modélisation d’agroécosystèmes dans un formalisme de type systèmes à événements discrets et simulation de scénarios utilisant des outils de model-checking. Application à l’étude des impacts des changements climatiques et des pratiques agricoles sur les flux de nutriments vers les eaux de surface.”, january 13th 2014, supervisor Marie-Odile Cordier and Chantal Gascuel

PhD in progress: Philippe Rannou, “Modèle rationnel pour humanoïdes virtuels”, october 1st 2010, co-supervisors Marie-Odile Cordier and Fabrice Lamarche

9.2.3. Juries

- Committee member and reviewer of Nicolas Méger’s HDR defence (Univ. Savoie): M.-O. Cordier
- Committee member of Alexandre Termier’s HDR defence (Univ. Grenoble): M.-O. Cordier
- Committee member of Tassadit Bouadi’s PhD defence (Université de Rennes 1): M.-O. Cordier , R. Quiniou.
- Thesis committee of Pierre Clément, Oniris Nantes, “Valeur informative du budget-temps de la vache laitière pour la détection précoce des troubles de santé”. R. Quiniou.
- Bachelor: A. Fratila (Cluj-Napoca University, Romania), "Evaluating similarity measures between time series symbolic sequences", September 2013, supervisors: Sidahmed Benabderrahmane and René Quiniou.

DREAMPAL Team

9. Dissemination

9.1. Scientific Animation

F. Guyomarch is a member of the ComPAS program committee. Jean-luc Dekeyser is PC Member of DSD, Reconfig, Recosoc and Sympa.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : F. Guyomarch, Algorithmique et programmation, 144h, L1, IUT-A (Université de Lille 1), France

Licence : F. Guyomarch, Modélisation et théorie des langages, 64h, L2, IUT-A (Université de Lille 1), France

Licence : Philippe Marquet, Introduction to Computer Science, 15h, Secondary Education Teacher Training, Université Lille 1, France

Licence : Philippe Marquet, System Programming, 60h, L3, Université Lille 1, France

Master: Philippe Marquet, Design of Operating System, 60h, M1, Université Lille 1, France

Master: Philippe Marquet, Web of Things: Embedded System Programming, 20h, M1, Université Lille 1, France

Master: Philippe Marquet, Parallel and Distributed Programming, 24h, M1, Université Lille 1, France

Master: Philippe Marquet, Introduction to Innovation and Research, 15h, M2, Université Lille 1, France

Licence : Jean-Luc Dekeyser, Architecture élémentaire, 85h, L2, Université Lille 1, France

Master: Jean-Luc Dekeyser, Architecture évoluée, 90h, M1, Université Lille 1, France

Licence : Rabie Ben Atitallah, Introduction to Computer Architecture and Operating System, 36h, L2, Université de Valenciennes et du Hainaut-Cambrésis, France

Licence : Rabie Ben Atitallah, Algorithms and Language C Programming, 48h, L2, Université de Valenciennes et du Hainaut-Cambrésis, France

Master: Rabie Ben Atitallah, Tools for Embedded System Design, 32h, M2, Université de Valenciennes et du Hainaut-Cambrésis, France

Master: Rabie Ben Atitallah, Development and Compilation of Embedded Application, 32h, M2, Université de Valenciennes et du Hainaut-Cambrésis, France

Master: Vlad Rusu, Software Specification and Verification, 27 h, Univ. Lille 1, France

Master: Vlad Rusu, Advanced Software Architecture, 42 h, Univ. Lille 1, France.

9.2.2. Committees

Vlad Rusu participated as a reviewer in the PhD committees of Rouwaida Ben-Abdallah (Univ. Rennes) and Pierre-Nicolas Toltite (Conservatoire National des Arts et Métiers, Paris).

9.3. Popularization

Philippe Marquet is vice-president of the *Société informatique de France*, the French professional society in computer science.

Philippe Marquet is involved in scientific popularization, mostly within the context of a partnership of between the Inria Lille - Nord Europe Research Center, the University Lille 1, and the Académie of Lille. He organizes and participates to the visit of classrooms on the Inria Plateau at EuraTechnologies, promoting interactions between the scientific community and secondary school students and their teachers. This year, 30 “provisseurs”, 30 teachers, and about 170 students spend half a day on the Plateau. He has designed the [isnlilleacademie.fr](http://www.isnlilleacademie.fr) web site (<http://www.isnlilleacademie.fr>), an information site on the *spécialité ISN* (computer and digital science in french high schools) for pupils, students, and their parents’.

Philippe Marquet is a member of the editorial board of 1024, the new bulletin of the *Société informatique de France* that aims at showing informatics, science and technology, in all its dimensions. 1024 targets a wide audience, from high school students to researcher, including anyone interested in computer science.

DYLISS Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Administrative functions: scientific committees, journal boards

- Scientific Advisory Board of GDR BIM "Molecular Bioinformatics" [J. Nicolas].
- Member of the IRISA laboratory council [F. Coste]
- Member of the Inria Rennes center council [A. Siegel]
- Scientific Advisory Board of Biogenouest [J. Bourdon, J. Nicolas, A. Siegel].
- Expertise for AERES (LIFL, LRI) [J. Nicolas, A. Siegel] & ANR (programme blanc) [A. Siegel]
- Academic editor: Plos One [J. Bourdon]
- Ecole Normale recruitment jury [A. Siegel]
- Recruitment committees: junior researcher (Inra) [J. Nicolas], assistant professor (Univ. Rennes) [A. Siegel], assistant professor (Univ. Montpellier) [O. Dameron].
- Reviewer: Advances in Mathematics [A. Siegel], Algorithms for Molecular Biology [F. Coste], American Medical Informatics Association conference [O. Dameron], Bioinformatics [O. Dameron], BMC Bioinformatics [O. Dameron, A. Siegel], Briefings in Bioinformatics [O. Dameron], Bulletin of the Belgium Math. Society [A. Siegel], Computers in Biology and Medicine [F. Coste], Journal of Biomedical Semantics [O. Dameron], Machine Learning [F. Coste], Semantic Web Applications and Tools for Life Sciences workshop [O. Dameron].
- Member of SCAS (Service Commun d'Action Sociale) of Univ. Rennes 1 [C. Belleannée]

8.1.2. Meetings

- **Workshop on Integrative-Omics** A workshop was organized in Pucon, south Chile, in December 2013. The workshop gathered about 40 scientists from Chile, France and Germany. Nine invited lectures were given about the modeling of biological systems and data with various computational approaches (MILP, ASP, graph complexity, probabilistic and stochastic approaches). 15 young scientist talks were also given in complement to the lectures [[website](#)].
- **Seminar** A weekly seminar of bioinformatics is organized within the laboratory. Attendees are member of the symbiose team, biologists from Brittany and computer scientists from the laboratory. [[website](#)].

8.1.3. Conference program committees

- JOBIM [F. Coste]
- CIBB Computational Intelligence Methods for Bioinformatics and Biostatistics & PRIB International Conference on Pattern Recognition in Bioinformatics [A. Siegel]
- Program committee of Semantic Web Applications and Tools for Life Sciences (SWAT4LS 2013) [O. Dameron].

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence: C. Belleannée, Langages formels, 22h, L3 informatique, Rennes1, France.

Licence: C. Belleannée, Architecture des ordinateurs, 50h, L3 informatique, Rennes1 France.

- Licence: C. Belleannée, Bases de données, 21h, L3 Miage par alternance, Rennes1 France .
- Licence: G. Andrieux, TIC : Technologies de l'information et de la communication, 32h, L1, Univ. Rennes 1, France.
- Licence: O. Dameron, Biostatistiques, 12h, PACES, Univ. Rennes 1, France.
- Licence: O. Dameron, C2i niveau 2, 2.5h, Univ. Rennes 1, France.
- Licence: V. Picard, Scheme 14h, L1, INSA Rennes, France
- Licence: V. Picard, Architecture et systèmes, 24h, L3, ENS Rennes/Univ. Rennes 1, France
- Licence: V. Picard, Initiation Unix, 2h, L3, ENS Rennes, France
- Licence: S. Prigent, learning PHP/SQL, 12h, L3 (3ème année ingénieur), Ensai, Rennes, France
- Licence: S. Prigent, Database, 42h, L1, Ensai, Rennes, France
- Licence: S. Prigent, An introduction to R, 9h, L1, Ensai, Rennes, France
- Licence: V. Wucher, Introduction aux biostatistiques, 8h, L3 biologie, Rennes 1, France
- Master: C. Belleannée, Préférences Logique et contraintes, 32h, M1 informatique, Rennes1 France
- Master: C. Belleannée, Architecture matérielle et interface au système, 28h, M2 informatique, Rennes1 France
- Master: F. Coste, Apprentissage Supervisé, 10h, M2 Informatique, Univ. Rennes 1, France
- Master: F. Coste, Données Séquentielles Symboliques, 10h, M2 Informatique, Univ. Rennes 1, France
- Master: O. Dameron, gestion de projets en informatique, 49h, M1 bioinformatique et génomique, Univ. Rennes 1, France.
- Master: O. Dameron, principes de programmation et d'algorithmique, 64h, M1 bioinformatique et génomique, Univ. Rennes 1, France.
- Master: O. Dameron, initiation systèmes et réseaux, 4h, M1 bioinformatique et génomique, Univ. Rennes 1, France.
- Master: O. Dameron, modélisation des connaissances et bio-ontologies, 36h, M2 bioinformatique et génomique, Univ. Rennes 1, France.
- Master: O. Dameron, Bases de mathématiques, probabilités et statistiques, 65h, M1 santé publique, Univ. Rennes 1, France.
- Master: O. Dameron, E-santé et réseaux hospitaliers, 7h, ESIR3, Univ. Rennes 1, France.
- Master: C. Galiez, Compilation, 32h, M1 informatique, Rennes1 France
- Master: G. Collet, Langage C, 8h, M1 Informatique, Univ. Rennes 1, France
- Master: G. Collet, Analyse et Conception Objet, 14h, M1 MIAGE, Univ. Rennes 1, France
- Master: V. Picard, Préparation à l'agrégation de mathématiques option D: épreuve de modélisation, 20h, L2, ENS Rennes/Univ. Rennes 1, France
- Master: V. Picard, Aspects probabilistes en biologie des systèmes, 4h, M2, ENS Rennes/Univ. Rennes 1, France
- Doctorat: A. Siegel, Programmation par ensemble-réponse (ASP) et application à la reconstruction et la correction de réseaux biologiques, 3h, Ecole thématique CNRS, Modélisation Formelle de Réseaux de Régulation Biologique, France
- Doctorat: S. Videla, Answer Set Programming for Systems Biology, 10h, graduate course, Universidad de Chile, Chile.

8.2.2. Seminars

- A. Siegel. *Modeling the quantitative behaviors of biological systems*. IBISC laboratory. Evry (Jan. 2013).

- A. Siegel. *Extracting robust information from the confrontation of knowledge and observations on a biological system*. EBI, UK (Feb. 2013).
- S. Videla, *Learning Logic Models of Protein Signaling Networks with Answer Set Programming*. Brunel Univ (Feb. 2013).
- S. Videla. *(Boolean) Logic Models of Signal transduction Networks with Answer Set Programming*. Universidad de Chile (Apr. 2013).
- A. Siegel. *Extracting robust information from knowledge and observations on a biological system: a formal system framework..* CIBB Computational Intelligence Methods for Bioinformatics and Biostatistics & PRIB International Conference on Pattern Recognition in Bioinformatics, keynote lecture. (Jun. 2013).

8.2.2.1. Internships

- Internship, from Jun. until Sep. 2013. Co-supervised by J. Nicolas, G. Garet. Student :Liantsoa Rasata Manantena. Subject: Characterization of enzyme family sequences : sulfatases
- Internship, from Jan. until Jun. 2013. Supervised by C. Belleannée. Student: Aymeric Antoine Lorquin. Subject: Identification in silico du site de fixation de la protéine CELF1, au moyen de pattern matching spécialisé.
- Internship, from Ap. until Jun. 2013. Supervised by O. Dameron. Student: Ayite Kougbéadjo. Subject: Analyse de réactions candidates pour la reconstruction de bases métaboliques basée sur les connaissances symboliques chez *Ectocarpus Siliculosus*
- Internship, from Apr. until Jun. 2013. Supervised by J. Nicolas and V. Wucher. Student: Lucas Le Lann. Subject: Analyse exploratoire d'un réseau d'interactions par extraction de composants analogues appliqué au puceron du pois..
- Internship, from Apr. until Jun. 2013. Supervised by G. Andrieux. Student: Jean Coquet. Subject: Modélisation du réseau d'activation du TGF- β

8.2.3. Supervision

PhD : Oumarou Abdou-Arbi *Etude de la variabilité des contributions de nutriments à un réseau métabolique : modélisation, optimisation et application en nutrition*, 30 Sept. 2013, supervised by A. Siegel and T. Tabsoba (Burkina-Faso) [11].

PhD : Geoffroy Andrieux, *Discrete approach modeling of biological signaling pathway*, 18 Jul. 2013, supervised by N. Théret (Inserm) and M. Le Borgne [12]

PhD : Andres Aravena, *Probabilistic and constraint based modelling to determine regulation events from heterogeneous biological data*, 13 Dec. 2013, supervised by A. Maass (CMM, University of Chile) and A. Siegel [13].

PhD : Charles Bettembourg, *Modélisation Méthodes sémantiques pour la comparaison inter-espèces de voies métaboliques : application au métabolisme des lipides chez l'humain, la souris et la poule*, 16 Dec. 2013, supervised by O. Dameron and C. Diot (Inra) [14].

PhD in progress : Aymeric Antoine-Lorquin, *Modèles grammaticaux au service de l'identification de marqueurs de régulation génétique dans les séquences biologiques*, started in Oct. 2013, supervised by C. Belleannée

PhD in progress : Gaëlle Garet, *Discovery of enzymatic functions in the framework of formal languages*, started in Oct. 2011, supervised by J. Nicolas and F. Coste.

PhD in progress : Clovis Galiez, *Syntactic modelling of protein structure.*, started in Oct. 2012, supervised by F. Coste.

PhD in progress : Julie Laniau, *Méthodes d'optimisation combinatoire pour reconstruire et analyser les systèmes métaboliques de microalgues*, started in Oct. 2013, supervised by A. Siegel and D. Eveillard.

PhD in progress : Vincent Picard, *Analyse dynamique d'algorithmes et dynamique symbolique pour l'étude de modèles semi-quantitatifs en biologie des systèmes*, started in Sept. 2012, supervised by A. Siegel and J. Bourdon.

PhD in progress : Sylvain Prigent, *Modélisation par contraintes pour le contrôle génomique et physiologique de l'adaptation des algues brunes à la salinité de l'eau*, started in Oct. 2011, supervised by A. Siegel and T. Tonon (UMR 7150, station biologique de Roscoff)

PhD in progress : Santiago Videla, *Applying logic programming to the construction of robust predictive and multi-scale models of bioleaching bacteria*, started in Nov. 2011, supervised by A. Siegel and T. Schaub (Potsdam univ).

PhD in progress : Valentin Wucher, *Modélisation d'un réseau de régulation d'ARN pour prédire des fonctions de gènes impliqués dans le mode de reproduction du puceron du pois*, started in Nov. 2011, supervised by J. Nicolas and D. Tagu (Inra)

8.2.4. Juries

- *Member of Ph-D thesis jury*. F. Nguema Ndong, univ. Poitiers [A. Siegel, présidente]. T. Jolivet, Univ. Paris Diderot [A. Siegel].

8.3. Popularization

- *Bioinfo-fr.net* Bioinfo-fr.net is a french web site where researchers, engineers and students talk about bioinformatics. We have written 6 articles for this web site on diverse subjects: metabolic networks, genome assembly, phylogenetics. [G. Collet, S. Prigent]. [\[more info\]](#).
- *Participation at Rennes Village des Sciences for French National Science day* (Fête de la Science). Title : *Crazy random walks*. Description : Popularization Festival where researchers present scientific themes. [V. Picard]
- *Fête de la science (LINA, Nantes)* During the 24th of October, 250 students discovered bioinformatics, genome assembly and algorithmics by practicing games and tutorials made by our team with the help of Julien Gras and Marko Budinich (LINA) [J. Bourdon, D. Eveillard, G. Collet].
- *Organization of Sciences en Cour[t]s*. Popularization Festival where PhD students explain their thesis via short films. [S. Prigent, C. Bettembourg, G. Garet] [\[more info\]](#).

DYOGENE Project-Team

9. Dissemination

9.1. Scientific Animation

- François Baccelli:
 - Member of IFIP WG 7.3,
 - Advisory Editor, Queueing Systems, Springer Verlag,
 - Associate Editor IEEE Tr Information Theory,
 - TPC Member IEEE Wiopt 2013,
 - TPC Member IEEE ISIT 2013.
 - Organization of the first Simons Lectures on Network Mathematics in May 2013: <http://www.ma.utexas.edu/conferences/SimonsChairLectures/>
 - Co-organization of the workshop “Modern probabilistic techniques for design, stability, large deviations, and performance analysis of communication, social, energy, and other stochastic systems and networks”, Isaac Newton Institute, Cambridge, UK, 12-16 August 2013.
 - Inaugural lecture at the Workshop on Geometry and Physics of Spatial Random Systems, Aarhus, Denmark, April 2013, on stochastic geometry and information theory.
 - Invited lecture at the Asymptotics of Large-Scale Interacting Networks Workshop, Banff, February-March 2013, on the dynamics of peer to peer networks.
- Bartek Błaszczyszyn:
 - reviewer of all major IEEE journals publishing in wireless domain,
 - organizing and co-chairing of the “Workshop on Spatial Stochastic Models for Wireless Networks” in Riva del Garda, Italy (2005), Berlin, Germany (2008), Tokyo, Japan (2013).
 - organizing and chairing of the 17th Workshop on Stochastic Geometry, Stereology and Image Analysis, Torun, Poland 2013.
 - Reviewer for DIGITEO and Israel Science Foundation.
- Ana Bušić:
 - TPC Member Performance 2013; <http://performance.cs.univie.ac.at/>.
 - TPC Member Valuetools 2013; <http://valuetools.org/2013/show/home>.
- Marc Lelarge:
 - Associate Editor: QUESTA, Bernoulli
 - TPC Member IEEE Wiopt 2013
 - TPC Member ACM SIGMETRICS 2013,
 - Reviewer for Swiss National Science Foundation.
- Alexandre Proutière:
 - Associate editor of IEEE transactions on Networking, Queueing Systems.
 - TPC: ACM Mobihoc, IEEE Infocom, Performance.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Licence : Anne Bouillard, Structures et algorithmes aléatoires, 60h eqTD, L3, ENS, France
- Licence: Ana Bušić, Réseaux de communications, 36h, L3, ENS, France
- Licence: Ana Bušić, Conception of algorithms and applications, 27h, L3, UPMC Sorbonne Universités, France
- Licence: Marc Lelarge, Théorie de l'information et codage, 40h, L3, ENS, France
- Master : Anne Bouillard, Probabilistic aspects of computer science, 15h eqTD, M1, ENS Cachan, France
- Master : Anne Bouillard, Introduction to tropical mathematics, 32h eq TD, Tokyo institute of technology, Japan.
- Master: Ana Bušić, Foundations of network models, 14h, M2 MPRI, France
- Master: Marc Lelarge, Algorithmique des réseaux sociaux, 40h, M1, ENS, France
- Doctorat: Bartek Błaszczyszzy and Laurent Massoulié, Graduate Course on point processes, stochastic geometry and random graphs (program "Master de Sciences et Technologies"), 45h, UPMC, Paris 6.
- Doctorat: Alexandre Proutière, Invited short course at IIT Bombay, Decentralized learning in repeated games and network optimisation, 4h, IIT Bombay, India

9.2.2. Supervision

- PhD: Tien Viet Nguyen, On the modelling of wireless communication networks using non-poisson point processes [65], Ecole Doctorale Sciences Mathématiques de Paris Centre, defense: January 9, 2013, advisor: F. Baccelli.
- PhD : Aurore Junier, Analyses de performance et de stabilité des réseaux de télécommunication [60], ENS Cachan (Bretagne), defence: 16 december 2013, supervisors: Anne Bouillard and Claude Jard (Université de Nantes/LINA)
- PhD: Mathieu Leconte, Load-balancing and resource-provisioning in large distributed systems [2], EDITE, CIFRE Technicolor, defense: December 18, 2013, advisors: Marc Lelarge and Laurent Massoulié.
- PhD in progress :
- Kumar Gaurav, "Convex comparison of network architectures" started in October 2011, adviser B. Błaszczyszyn;
 - Miodrag Jovanović, "Evaluation and optimization of the quality perceived by mobile users for new services in cellular networks" started in January 2012, adviser B. Błaszczyszyn;
 - Christelle Rovetta, Applications of perfect sampling to queuing networks and random generation of combinatorial objects, from December 2013, co-supervised by Anne Bouillard and Ana Bušić.

9.2.3. Juries

- François Baccelli:
 - David Coupier, Habilitation, Université de Lille, Décembre 2013.
 - Nicolas Chenavier, Université de Rouen (Rapporteur), Décembre 2013.
 - Mathieu Leconte, Institut Mines Télécom, Décembre 2013.
- Bartek Błaszczyszyn was a member in PhD jury of: Anaïs Vergne, Telecom ParisTech, 28/11/2013 and Manjesh Kumar Hanawal, Univ. Avignon, 06/11/2013
- Anne Bouillard was part of the jury of the PhD defence of Aurore Junier.
- Marc Lelarge was part of the jury of the PhD defense of Feng Yan, EDITE, September 2013 and Mathieu Leconte, EDITE, December 2013.
- Alexandre Proutière was a member of the jury, Niek Bouman, Technical University in Eindhoven, December 2013.

E-MOTION Project-Team

8. Dissemination

8.1. Scientific Animation

- C. Laugier is Guest Editor (with A. Zelinsky, A. Broggi and U. Ozgüner) for the chapter “Intelligent Vehicles” of the 2nd edition of the Springer “Handbook of Robotics” to be published in April 2014.
- C. Laugier is Guest Editor (with Ph. Martinet and U. Nunes) for a Special Issue on “Perception and Navigation for Autonomous vehicles” of the IEEE Robotics and Automation Magazine. This issue will be published in March 2014.
- A. Spalanzani co-organised a workshop on Assistance and Service robotics in a human environment during IROS’ 13, Tokyo, Japan.
- A. Spalanzani co-organised a workshop on Wireless Communications and User centered Services in Pervasive Environments 2013, Hanoi, Vietnam, in the scope of Saisons croisées France-Vietnam.
- A. Spalanzani was associate editor of the Ro-Man 2013 conference.
- C. Laugier co-organized (with Ph. Martinet, U. Nunes, and C. Stiller) the 5th Workshop on “Planning, Perception and Navigation for Intelligent Vehicles” at the IEEE/RSJ IROS 2013 conference, Tokyo, November 2013.
- C. Laugier was co-chair (with Prof. Nobuki Murayama) of the workshop on ICT-PAMM, Kumamoto (Japan), Nov. 2013.
- C. Laugier was a member of the International Program Committee of the IEEE/RSJ IROS 2013 conference. He was also an Associate Editor for IROS 2013.
- C. Laugier was an Associate Editor for the IEEE ICRA 2013 conference.
- C. Laugier, A. Spalanzani, P.B. Wieber co-organized (with J. Troccaz from TIM-C and N. Simeon from LAAS) the 9th JNRR (French “Journée Nationale de la Recherche en Robotique”) in Annecy (France), 15-18 October 2013.
- C. Laugier and M. Perrollaz co-organized with Philippe Broun and the Inria In’Tech team in Grenoble, the in’Tech Seminar on “Perception embarquée pour les véhicules de demain”, Inria Grenoble Rhône-Alpes, October 24th 2013.
- C. Laugier was the scientific coordinator for the Inria Robotics Evaluation Seminar, March 2013.
- C. Laugier is co-chair (with Ph. Martinet and C. Stiller) of the IEEE RAS Technical Committee on “Autonomous Ground Vehicles and Intelligent Transportation Systems”.
- C. Laugier is a member of the Advisory / Steering Committee of IEEE/RSJ IROS conference.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- International Master 2 MOSIG-INP, Course on “Autonomous Robots” (24 h), C. Laugier (responsible), A. Martinelli, M. Perrollaz, A. Nègre. Grenoble University, France.
- C. Laugier and A. Spalanzani have given a tutorial on “Autonomous Robotics” at the ISIE 2013 Conference, Taipei, May 2013.
- Master CNAM: “Basic technologies for autonomous Robotics”, C. Laugier, CNAM, France.
- Doctorat (école d’été): “autonomous Robotics”, C. Laugier, 6h, SSIR’12, Ensenada, June 2012, Mexico.

- Ecole d'Ingénieur : "Programmation structurée en C", M. Perrollaz, 36h, L3, Phelma, Grenoble-INP, France.

8.2.2. Supervision

PhD in progress: Chiara Troiani, vision and inertial sensor fusion for 3D navigation, 2011, A. Martinelli.

PhD in progress: Arturo Escobedo, Shared Control navigation, 2011, A. Spalanzani.

PhD in progress: Tiana Rakotovao Andriamahefa, Embedded Bayesian Perception on a Multi-core Architecture, 2013, C. Laugier and D. Ruspini (CEA LETI).

PhD in progress: Boris Grechanichenko, Autonomous Driving, 2013, C. Laugier and D. Vasquez, (cooperation Toyota).

PhD in progress: Roxana Bersan, Decision making for Intelligent Vehicles, 2014, C. Laugier and A. Spalanzani (cooperation Renault)

PhD in progress: Vishnu K. Narayanan, semi-autonomous navigation of a electric wheelchair using visual servoing and user intention analysis, 2013, M. Babel (Lagadic Team) and A. Spalanzani.

8.2.3. Juries

- C. Laugier was a reviewer and a member of the defense committee of the PhD thesis of Julien Moras, UTC Compiègne, January 17th 2013.
- C. Laugier was a reviewer and a member of the defense committee of the PhD thesis of Ana Cristina Barata Pires Lopez, University of Coimbra, March 20th 2013.
- C. Laugier and M. Perrollaz were members of the jury of the CNAM Thesis of Nicolas Vignard, CNAM / Inria Grenoble Rhône-Alpes, February 21st 2013.

ESPRESSO Project-Team

8. Dissemination

8.1. Scientific Animation

- Jean-Pierre Talpin is Associate Editor with the ACM Transactions for Embedded Computing Systems (TECS); he is also Associate Editor with the Springer journal on Frontiers of Computer Science (FCS) and Associate Editor with EURASIP journal of embedded systems. Jean-Pierre Talpin co-chaired the program committee of the 12th International Symposium on Methods and Models for System Design (MEMOCODE'13). He served as program committee member of the International Conference on Embedded Systems (EMSOFT'13).
- Thierry Gautier served as program committee member for the 2013 Electronic System Level Synthesis Conference, ESLsyn 2013 (<http://www.ecsi.org/eslsyn2013>).
- Loïc Besnard participated to the Inria stand at the EclipseCon France (Toulouse, June 2013).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Jean-Pierre Talpin taught two conference-lectures to Graduate students at the Arlington campus of Virginia Tech in April and October.
- Jean-Pierre Talpin taught a series of fifteen MooC lectures to Master students at Beihang University, in November and December.
- Adnan Bouakaz taught three courses (Operating systems organization, Java programming, functional programming) to undergraduate students at University of Rennes 1 from September to November.

8.2.2. Juries

- Thierry Gautier served on an Associate Professor selection committee of Université de Rennes 1 in May 2013.

EXMO Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Editorial boards and programme committees

- Jérôme Euzenat is founding member of the "Semantic Web Science Association" (steering committee for the ISWC conference series).
- Editorial board of *Journal of Web Semantics*, *Journal on Data Semantics* and *Semantic web journal* (Jérôme Euzenat).
- Jérôme Euzenat has been programme committee member for the 2013 issues of the conferences International Joint Conference on Artificial Intelligence (IJCAI), International Semantic Web Conference (ISWC) main and evaluation track, Worldwide Web Conference (WWW), National Conference on Artificial Intelligence (AAAI), IA and the web track, ACM conference on Knowledge capture (KCap), International and Interdisciplinary Conference on Modeling and Using Context (Context), European Semantic Web Conference (ESWC), Ingénierie des connaissances (IC), Brazilian Conference on Ontological Research (OntoBras).
- Jérôme David has been programme committee member for the 2013 issues of the ingénierie des connaissances (IC) conference.
- Jérôme David has been programme committee member for the 2013 issues of the Ontology matching workshop (OM) and the Graph Based Structures for Knowledge Representation and Reasoning Workshop (GKR@IJCAI).
- Manuel Atencia has been programme committee member for the 2013 issues of the International Semantic Web Conference (ISWC), the Ontology matching workshop (OM), and the Graph Based Structures for Knowledge Representation and Reasoning Workshop (GKR@IJCAI).
- Jérôme Euzenat has also been programme committee member for the IJCAI workshop on "Acquisition, Representation and Reasoning with Contextualized Knowledge (ARCOE-Logic)".
- Jérôme Euzenat has co-organised (with Pavel Shvaiko, Jérôme Euzenat, Kavitha Srinivas, Ming Mao and Ernesto Jiménez-Ruiz) the 8th "Ontology matching" workshop of the 12th ISWC, Sydney (NSW AU), 2013 [13].
- Jérôme Euzenat has co-organised (with many other colleagues) the Ontology Alignment Evaluation Initiative 2013 at the "Ontology matching" workshop of the 12th ISWC, Sydney (NSW AU), 2013 [7].

8.1.2. Seminars

- Seminar on "Data mediation in SPARQL from alignments", CrEDiBle (fédération de données et de ConnaissancEs Distribuées en Imagerie BiomédicaLE) workshop, Sophia-Antpolis (FR), 4/10/2013 (Jérôme Euzenat)
- Seminar on "The dynamic knowledge medium", Inria/I3S, Sophia-Antpolis (FR), 29/11/2013 (Jérôme Euzenat)
- Seminar on "A Framework for Interlinking RDF Datasets Based on Pseudo-Keys Discovery", Tsinghua university, Beijing (CN), 20/11/2013 (Jérôme David)

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Licence: Manuel Atencia, Introduction à la programmation fonctionnelle, 36, L1, UJF, France
- Licence: Jérôme David, Outils Informatique (c2i), 24, L1, UPMF, France
- Licence: Jérôme David, Développement Mobile, 30, L3, UPMF, France
- Master: Jérôme David, Programmation Java 2, 30, M1-M2, UPMF, France
- Master: Jérôme David, JavaEE, 30, M2, UPMF, France
- Master: Jérôme David, Développement Web Mobile, 30, M2, UPMF, France
- Master: Jérôme David, Interface Homme Machine 2, 30, M2, UPMF, France
- Master: Manuel Atencia & Jérôme David, Introduction au Web Sémantique, 30, M2, UPMF, France
- Master: Jérôme Euzenat, Semantic web: from XML to OWL, 22heqTD, M2R, Université Joseph Fourier & INPG, France
- Post-graduate level: Jérôme Euzenat, Ontology matching, 4heqTD, European Summer School on Ontology Engineering and the Semantic Web, Cercedilla, Spain

8.2.2. Supervision

- PhD in progress: Zhengjie Fan, Ontology-based data interlinking, 1/1/2011, supervisors: Jérôme Euzenat and François Scharffe
- PhD in progress: Mustafa Al-Bakri, Modélisation et calcul de la confiance dans les réseaux pair-à-pair de partage de données, 1/1/2011, supervisors: Marie-Christine Rousset and Manuel Atencia
- PhD in progress: Tatiana Lesnikova, Multilingual data interlinking, 1/10/2012, supervisors: Jérôme Euzenat and Jérôme David
- PhD in progress: Armen Inants, Ontology alignment algebra, 1/12/2012, supervisor: Jérôme Euzenat
- PhD in progress: Adam Sanchez Ayte, Ontology alignment and data interlinking evolution on the web of data, 1/12/2013, supervisor: Jérôme Euzenat and Jérôme David

8.2.3. Juries

- Jérôme Euzenat chaired the HDR committee of Nabil Layaïda, Representation and analyses of web content and processing, Université de Grenoble, 23/4/2013
- Jérôme Euzenat has reviewed the HDR of Noël Conruyt, Gestion des signes: de la représentation des connaissances à leur signification pour les e-services, Université de la Réunion, 25/10/2013
- Jérôme Euzenat has reviewed the PhD dissertation of Luca Costabello, Context-aware access control and presentation of linked data, Université de Nice-Sophia Antipolis, 29/11/2013, Fabien Gandon and Ivan Hermann

8.3. Popularization

- Jérôme Euzenat gave a presentation on *Les données liées ouvertes (linked open data): publier des données réutilisables* at the open data days of the FREMIT Federation, IMT/IRIT, Toulouse (FR), 5/11/2013.
- Jérôme Euzenat coordinated the CNRS development days (JDEV) sessions on *web programming*, 4 presentations, 6 tutorials, 5 workshops, 80 participants, Palaiseau, 4-6/9/2013.

FLOWERS Project-Team

9. Dissemination

9.1. Editorial Activities

9.1.1. Editorial boards

Pierre-Yves Oudeyer has been editor of IEEE CIS Newsletter on AMD, and Fabien Benureau has been associate editor.

Pierre-Yves Oudeyer has been of journals IEEE TAMM, International Journal of Social Robotics, and Frontiers in Neurorobotics.

PY Oudeyer is member of the IEEE CIS Technical Committee on Autonomous Mental Development. (Key instance for the organization of the IEEE ICDL conference series).

M. Lopes is member of the steering committee of the IEEE RAS TC on Robot Learning.

D. Filliat has been associate editor for the IROS 2013 conference.

9.1.2. PC committees and reviewing

- PY Oudeyer has been reviewer for journals (Proceedings of IEEE, Topics in Cognitive Science, Frontiers in Psychology,), member of conference program committees (Humanoids 2013, ICDL-Epirob 2013, IROS 2013, ICRA 2013), and reviewer and expert for several European projects of the ICT Program.
- D Filliat has been member of the evaluation committee for the ANR Apprentissages program, member of the program committee for the REACTS workshop, reviewer for the Autonomous Robots journal and reviewer for conferences (ECMR, ICRA, IROS, IV).
- Jonathan Grizou has been reviewer for ICDL-Epirob 2013 and Robotica 2013 conferences.
- Clément Moulin-Frier has been reviewer for the ICDL-Epirob 2013 conference and the IEEE Transactions on Autonomous Mental Development journal.
- Alexander Gepperth has been reviewer for IROS 2013, ITSC 2013, IJCNN 2013, for the journals Cognitive Computation, Transactions on Intelligent Transportation systems, Neurocomputing, Neural Networks and Neural Processing Letters. He has been program committee member for IJCNN 2013.
- Freek Stulp was reviewer for journals (IEEE Transactions on Robotics, Autonomous Robots, IEEE Transactions on Autonomous Mental Development, Journal of Intelligent and Robotic Systems), conferences (International Joint Conference on Neural Networks (IJCNN), IEEE International Conference on Intelligent Robots and Systems (IROS), IEEE International Conference on Robotics and Automation (ICRA), IEEE Humanoids), and member of the program committee of ICRA.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

License: Introduction à Matlab, 21 heures. L3 - ENSTA ParisTech (Alexander Gepperth)

License: Traitement numérique du signal, 21 heures. L3 - ENSTA ParisTech (Alexander Gepperth)

Master: Apprentissage Autonome, 6 heures. M2, ENSEIRB - Bordeaux (Pierre-Yves Oudeyer).

Master: Apprentissage Autonome, 6 heures. M2, ENSEIRB - Bordeaux (Manuel Lopes).

Master: Robotique de Compagnie, 6 heures. M2, ENSTA - Paris Tech (Manuel Lopes).

Master: Robotique Mobile, 24 heures. M2, ENSTA - ParisTech (David Filliat).

Master: Vision pour la robotique, 12 heures. M2, University Pierre et Marie Curie (David Filliat).
 License: Introduction to Matlab, 21 heures. L3, ENSTA - ParisTech (David Filliat).
 Licence 2: Graphe, Langage, Cryptologie, 21 heures. Pole Universitaire Francais de Ho Chi Minh Ville
 Master: Option Robotique, Projet Robot Autonome, 32 heures. ENSEIRB, Bordeaux, France.
 Licence: Mathématique, 20 heures, niveau (L1), Université de Bordeaux (Olivier Mangin)
 Licence: Infomatique, Introduction à la robotique, 30 heures, niveau (L3), Université de Bordeaux (Olivier Mangin et Fabien Bénureau)

9.2.2. Supervision

PhD finished: Mai Nguyen, Bootstrapping Intrinsically Motivated Learning with Human Demonstration, defended nov. 2013 (superv. Pierre-Yves Oudeyer).
 PhD finished: Thomas Cederborg, A unified view of context-dependant skill learning and language acquisition, defended dec. 2013 (superv. Pierre-Yves Oudeyer).
 PhD finished: Natalia Lyubova, A developmental approach to perception for a humanoid robot [23], defended october 30th, 2013 (superv. David Filliat).
 PhD in progress: Louis-Charles Caron, Developmental learning in multimodal sensory-motor loops, started january 2012 (superv. Alexander Gepperth).
 PhD in progress: Guillaume Duceux, Navigation and exploration based on RGB-D cameras, started october 2011 (superv. David Filliat).
 PhD in progress: Alexandre Armand, Contextual electronic copilot for driving assistance, started feb. 2011 (superv. David Filliat)
 PhD in progress: Matthieu Lapeyre, Developmental constraints for biped humanoid walking, started oct. 2010 (superv. Pierre-Yves Oudeyer and Olivier Ly).
 PhD in progress: Fabien Benureau, Cumulative, hierarchical and intrinsically motivated learning of robot skills, started oct. 2010 (superv. Pierre-Yves Oudeyer).
 PhD in progress: Jonathan Grizou, Fluid simultaneous learning of task and feedback models, started oct. 2011 (superv. Manuel Lopes and Pierre-Yves Oudeyer).
 PhD in progress: Olivier Mangin, Learning of sensorimotor primitives with Non-Negative Matrix Factorization, started oct. 2010 (superv. Pierre-Yves Oudeyer).
 PhD in progress: Ievgen Perederieiev, Adaptive task execution for implicit human-robot coordination, started oct. 2012 (superv. Manuel Lopes).
 PhD in progress: Thibaut Munzer, Learning from Instruction, started oct. 2013 (superv. Manuel Lopes).
 PhD in progress: Yuxin Chen, Interactive learning of objects and names on a humanoid robot, started oct. 2013 (superv. David Filliat).

9.2.3. Juries

Edouard Klein (Manuel Lopes, 2013, examinateur) Contributions à l'apprentissage par renforcement inverse, supervised by Yann Guermeur and Matthieu Geist, Université de Lorraine, France
 Pedro Sequeira (Manuel Lopes, 2013, examinateur) Socio-Emotional Reward Design for Intrinsically Motivated Learning Agents, supervised by Ana Paiva and Francisco Melo, Instituto Superior Técnico, Portugal
 Hemanth Korrapati (03/07/13, David Filliat, Examinateur) : Loop Closure for Topological Mapping and Navigation with Omnidirectional Images. Université Blaise Pascal - Clermont-Ferrand II, Youcef Mezouar (Dir.)

Cédric Meyer (14/06/13, David Filliat, Examineur) : Théorie de vision dynamique et application à la robotique mobile. Université Pierre et Marie Curie, Ryad Benosman (Dir.)

Srikrishna Bhat (22/01/13, David Filliat, Rapporteur) : Visual words for pose computation. Université de Lorraine (22/01/2013), Marie-Odile Berger (Dir.)

Beata Gryzb (04/13, PY Oudeyer, Rapporteur): Grounding spatial awareness in sensorimotor representations: an interdisciplinary approach, Univ. Madrid, Spain

Xavier Hinault (01/12, PY Oudeyer, Rapporteur): Réseau de neurones récurrent pour le traitement de séquences abstraites et de structures grammaticales, avec une application aux interactions homme-robot, Univ. Lyon 1, France.

Antoine de Rengervé (12/13, PY Oudeyer, Rapporteur): Apprentissage interactif en robotique autonome : vers de nouveaux types d'IHM, Univ. Cergy Pontoise.

Michael Garcia Ortiz (7/2013, A.Gepperth, Rapporteur): Driver behavior prediction, Univ. de Bielefeld (Allemagne)

Sarra Jlassi (28/11/13, Freek Stulp, Examineur) : Formulation et Etude des Problemes de Commande en Co-manipulation Robotique. Laboratoire des Signaux et Systemes, Supelec (Dir. Yacine Chitour)

9.3. Popularization and Outreach

9.3.1. Popular Science Publications

Pierre-Yves Oudeyer published a popular science book entitled "Aux sources de la parole" at Odile Jacob, <http://www.pyoudeyer.com/AuxSourcesDeLaParole.htm>

9.3.2. Popular Science Radio Broadcast

PY Oudeyer participated to several popular science radio broadcast:

France Culture (28th october 2013), La parole et l'ordinateur, Interview avec Stéphane Delogeorges, émission Continent Sciences. <http://www.franceculture.fr/emission-continent-sciences-la-parole-et-l-ordinateur-2013-10-28>

France Inter (27 octobre) Le langage: une auto-organisation ? Interview avec Stéphane Paoli, émission 3D, le journal. <http://www.franceinter.fr/emission-3d-le-journal-ou-va-lhumanite-et-langage-une-auto-organisation>

RFI (Sept. 2013) Comment s'invente le langage ? (Interview 55 mn), Emission "Autour de la question" de Caroline Lachowsky. <http://www.rfi.fr/emission/20130909-1-comment-s-invente-le-langage>

9.3.3. Popular Science Talks

Musée des Arts et Métiers (7 nov. 2013) Aux sources de la parole, Parole d'auteurs, rencontre avec PY Oudeyer animée par Daniel Fiévet (France Inter).

9.3.4. Museum Exhibitions, Science Festivals and Public Demonstrations

9.3.4.1. Educatec-Educatices

Kidlearn have been presented on Educatec-Educatices exhibition the 20,21 and 22 November 2013. This exhibition was held in Paris and grouped together 220 education professional and more than 12000 visitors. It was an opportunity to present Kidlearn project and create contact for potential partnership.

9.3.4.2. Cap Sciences exhibition on "Brain and Cognition"

Cap Sciences is an organization in Bordeaux to promote and to communicate about science to the public. Cap Sciences is preparing an exhibit about the brain starting in February 2013. The Flowers team will contribute to this exposition by setting up a booth to explain the complexity of the processing required for intelligent artificial systems (e.g. robots) to transform observations from the environment to actions done in this environment, such processing being done continuously by all living beings, most notably by nervous systems and brains. To explain this idea, the Flowers team is working on a game for the visitors of the exhibit: a player has to drive forward a mobile robot, specifically an iRobot Roomba, while avoiding obstacles. The difficulty for the visitor in this game is that the player is not able to watch the robot in its environment: the player has to control it using only the sensory-information displayed on a computer screen. The player wins when the robot has traveled a given distance in a straight line and in limited time without bumping into an obstacle. This exhibit will start in February 2013 and last for a year. After that, it may move to different locations. More than 100,000 visitors are expected in Cap Sciences, half of them will come from elementary schools. The data generated by the robot and the visitors will be logged and will be available for research on life long learning with robots.

9.3.4.3. NOVAQT

Poppy and Kidlearn have been presented in the NOVAQT exhibition the 5, 6 and 7 December 2013. This exhibition was held in Bordeaux and brought together a selection of 108 innovations created in the region Aquitaine. It was a chance to present our research to 3 different public: industry, education and general public. Feedbacks were very enthusiastic and we have found several potential collaborations with local actors.

9.3.4.4. Fête de la science

On October 13th, the team organised robotics demonstrations for the "Fete de la science" in ENSTA ParisTech. We demonstrated physical human-robot interaction using the Meka robot, object segmentation and recognition through a Kinect camera and navigation and mapping with a Pioneer robot. Around 300 people participated in the event.

9.3.5. Education towards the younger

The team also initiated the development of educational activities in "écoles primaires" et "collèges" to have kids discover robotics and programming, as well as ran experiments in "école primaires" in Aquitaine to test novel educational software to help children learn mathematics, and developed within the KidLearn ADT project. This was achieved thanks to the arrival of Didier Roy, former math teacher in college, in the team. Our mediation of robotics activities aim primarily at students, teachers and schools. We focused on three approaches :

- A website, consisting of video presentation of researchers Flowers team, news related to robotics , questions / answers, ready activities for teachers for their students , a directory of links, videos, and pages for "robotics in schools stories " where teachers and students come to post texts, photos and videos to show what happens in robotics in their establishments. A forum is available for researchers to ask questions. We also test robotic kits to be able to provide advices on choices.
- Direct support of schools . For example, we went to Nevers in high school Follereau present what robotics is, interact with students, discuss robotic upcoming events in their school. We subsequently asked to provide technical assistance in the context of robotic operations in the school. We offer activities and we provide technical and educational advice. We move, if needed, in schools or propose meetings by videoconference .
- We formed a working group of a dozen people, most of whom are teachers in primary and secondary and special education (training for disabled adults returning to education) . This group meets regularly to discuss activities, share experiences within schools and consider a robotic curriculum from primary to the end of schooling.

We also participated in Educatec- Educatices event in Paris where education professionals told great interest in robotic activities in education. We participated in the symposium Didactic didapro in Clermont -Ferrand, about mediation of digital sciences . We worked with cluster Aquitaine Robotics to develop a reflection on the teaching of robotics.

9.3.6. Press, TV and Web coverage

<https://flowers.inria.fr/press/>

FLUMINANCE Project-Team

9. Dissemination

9.1. Scientific Animation

Christophe Collewet

- Technical program committees of ORASIS 2013 (journées francophones des jeunes chercheurs en vision par ordinateur)
- Reviewer for ICRA'13 (IEEE International conference on robotics and automation)

Dominique Heitz

- Member of IRSTEA "Comité directeur des Systèmes d'Information"
- Member of IRSTEA "Comité Technique Spécial"
- Responsible of the IRSTEA ACTA Team
- Reviewer for IEEE trans. Im. Proc, Exp in Fluid

Cédric Herzet

- Technical program committees of ICASSP 2013/2014 and SPARS 2013
- Project reviewer for the "Fond National de la Recherche Scientifique" (FNRS), Belgique
- Invited speaker at the CIMI Workshop, Toulouse, June 2013.
- Invited speaker at a local seminar at ParisTech, Paris, January 2013.
- Organizer of a monthly local seminar dedicated to sparse representations.

Etienne Mémin

- Invited speaker special session "Signaux & Images en Océanographie" Grets de traitement du signal et des images, Assimilation d'images satellites océaniques: filtrage stochastique et définition de dynamiques adaptées Brest sep. 2013.
- invited speaker 51st AIAA Aerospace Sciences Meeting, jan. 2013. Fluid flow velocity measurements from image sequences, 51st AIAA Aerospace Sciences Meeting, jan. 2013.
- Invited speaker workshop "2D to3D Ocean Dynamics from Space", Ifremer, Brest December 2013.
- invited speaker CIMI (Centre International de Mathématiques et d'Informatique - Trimestre EDP & Probabilités - Weather Forecast, jan. 2014
- Associate editor of the Journal of Computer Vision (IJCV)
- Associate editor of the journal of Image and Vision Computing (IVC)
- Reviewing for Tellus-A, IEEE Im. Proc., IEEE trans. Pat. Anal. Mach. Intel. , , m. Vis. Comp., Exp in Fluids, ICCV'13, Nonlinear Proc. in Geophysics.
- Responsible of the "Commission Développement Technologique" Inria-IRISA Rennes
- member of the "Commission Personnel" Inria-IRISA Rennes

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Dominique Heitz, Mécanique des fluides, 30h, niveau L2 INSA Rennes

Master : Dominique Heitz, Mécanique des fluides, 25h, niveau M1, Dep GMA INSA Rennes

Master : Cédric Herzet, Analyse de données, Mastere de Statistiques et Econométrie, 10h, niveau M1, Université de Rennes I

Master : Etienne Mémin, Analyse du mouvement, Mastere Informatique, 15h, niveau M2, Université de Rennes 1.

Master : Etienne Mémin, Vision par ordinateur , 15h, niveau M2, ESIR Université de Rennes 1.

9.2.2. Supervision

PhD & HdR :

PhD: Sébastien Béyou, Estimation de la vitesse des courants marins à partir de séquences d'images satellitaires. Université de Rennes I, 12/07/2011, Etienne Mémin [11].

PhD in progress : Ioana Barbu, Estimation volumique de mouvement fluides /'a partir de séquence d'images, 01/11/2010, Cédric Herzet et Etienne Mémin

PhD in progress : Qui Dao, Commande des écoulements fluides par asservissement visuel, 01/10/2010, Christophe Collewet

PhD in progress : Valentin Resseguier, Image based assimilation of geophysical flows models under uncertainty, Bertrand Chapron (IFREMER) and Etienne Mémin

PhD in progress : Cordelia Robinson, Assimilation de données images dans un modèle LES : application à la reconstruction d'écoulements turbulents tridimensionnels , 01/11/2011, Dominique Heitz et Etienne Mémin

PhD in progress : Yin Yang , Assimilation d'images par techniques variationnelle ensembliste , 01/11/2011, Etienne Mémin

9.2.3. Juries

Etienne Mémin

- Rapporteur de la thèse de Vincent Chabot, Université J. Fourier, Grenoble, 15 Novembre 2013.
- Président du Jury de thèse de Karim Driffi, Université de Bretagne Sud, Juillet 2013.
- Examineur Jury HDR d'Arthur Vidard, Université J. Fourier, decembre 2012.

9.3. Popularization

Etienne Mémin

- E. Mémin. Ou vont les nuages ?, Un jour, une brève, Mathématiques de la planète terre, (Brève)
- Invited paper in the journal "Revue française de photogrammetry et de Télédétection", Outils méthodologiques d'analyse d'images MSG : estimation du mouvement, suivi de masses nuageuses et détection de fronts, with T. Corpetti, V. Dubreuil, E. Mémin, O. Planchon, C. Thomas.
- Invited paper in the journal de la Société Française de Statistique, Image data assimilation with filtering methods, with Anne Cuzol.

FOCUS Project-Team

8. Dissemination

8.1. Scientific Animation

M. Bravetti: Program Committee co-chair for: SEFM 2013 11th International Conference on Software Engineering and Formal Methods.

Program Committee member of the following conferences: SITIS 2013 (WeCA): 9th Conference on Signal-Image Technology and Internet-Based Systems (Web Computing and Application track); CLOUD 2013: 6th IEEE Conference on Cloud Computing; WS-FM 2013: 10th Workshop on Web Services and Formal Methods: Formal Aspects of Service-Oriented and Cloud Computing; ESOC 2013: 2nd European Conference on Service-Oriented and Cloud Computing; FSEN 2013: 5th Conference on Fundamentals of Software Engineering; WS-FMDS 2013: 3rd Workshop on Formal Methods in the Development of Software.

O. Dardha: Program Committee member 6th Interaction and Concurrency Experience (ICE 2013)

U. Dal Lago: Program Committee co-chair and main organizer for FOPARA 2013: Third International Workshop on Foundational and Practical Aspects of Resource Analysis (August 29th to 31st, 2013, Bertinoro, Italy).

Program Committee member of the following conferences: FOSSACS 2013: 16th Conference on Foundations of Software Science and Computation Structures; CSL 2013: Computer Science Logic 2013; FSTTCS 2013: Foundations of Software Technology and Theoretical Computer Science; LOLA 2013: Syntax and Semantics of Low-Level Languages; GaLoP VIII: Games for Logic and Programming Languages.

I. Lanese: Program Committee co-chair of the following conferences: ICE 2013: 6th Interaction and Concurrency Experience; Service Oriented Architectures and Programming track of the 28th Annual ACM Symposium on Applied Computing (SAC 2013).

Program Committee member of 9th Workshop on Automated Specification and Verification of Web Systems (WWV 2013).

Member of the editorial board of the Scientific World Journal, and the Open Journal of Communications and Software.

C. Laneve: Invited speaker at IFM 2013, 10th International Conference on Integrated Formal Methods

M. Gabbrielli: Member of the editorial board of the Int'l Journal Theory and Practice of Logic Programming.

S. Martini: Program Committee member of the following conferences: 14th Italian Conference on Theoretical Computer Science (ICTCS 2013); 8th International Computer Science Symposium in Russia (CSR 2013); Workshop Logic and Computational Complexity (LCC 13); conference on the History and Philosophy of Computing (HaPoC 2013).

F. Montesi: Track program chair for 27th ACM Symposium on Applied Computing (SAC) track on Service-Oriented Applications and Programming track (SOAP).

Program Committee member of 2013 World Conference on Information Systems and Technologies (WorldCIST).

D. Sangiorgi: Member of the editorial board of the journals: Logical Methods in Computer Science, Acta Informatica, and Distributed Computing, Foundations and Trends in Programming Languages.

Invited speaker at the events: the SIGPLAN Programming Languages Mentoring Workshop; 6th Interaction and Concurrency Experience (ICE 2013)

Program Committee member of the conferences: 7th Conference on Language and Automata Theory and Applications (LATA 2013); 5th IPM International Conference on Fundamentals of Software Engineering (FSEN 2013); 24th International Conference on Concurrency Theory (CONCUR); Fourth International Symposium on Games, Automata, Logics and Formal Verification (GandALF)

Lecturer at the schools: 18th Estonian Winter School in Computer Science (EWSCS), Tallin, February 2013, and Scuola Estiva di Logica 2013, Garignano sul Garda, August 2013.

G. Zavattaro: Invited speaker at the 2013 European Conference on Service-oriented and Cloud Computing (ESOCC'13).

Program Committee member of the following conferences: 3rd Workshop on Adaptive Services for the Future Internet (WAS4FI'13); 10th Workshop on Web Services and Formal Methods: Formal Aspects of Service-Oriented and Cloud Computing (WS-FM'13); 7th Workshop on Reachability Problems (RP'13); European Conference on Service-oriented and Cloud Computing (ESOCC'13); 2nd Workshop on Quality Assurance for Service-based applications (QASBA 2013); 6th IEEE Conference on Cloud Computing (CLOUD 2013); IFIP Joint International Conference on Formal Techniques for Distributed Systems (33rd FORTE / 15th FMOODS); 10th Symposium on Formal Aspects of Component Software (FACS'13); the 10th Conference on Integrating Formal Methods (iFM'13).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Below are the teaching activities of the Focus members during 2013.

- Mario Bravetti
 - Undergraduate: “Tecnologie Web”, 66 hours, 3rd year, University of Bologna, Italy.
 - Master: “Applicazioni e Servizi Web”, 54 hours, 2nd year, University of Bologna, Italy.
- Ugo Dal Lago
 - Undergraduate: “Introduction to Programming in Python”, 20 hours, 1st year, University of Bologna, Italy.
 - Undergraduate: “Optimization”, 36 hours, 2nd year, University of Bologna, Italy.
- Maurizio Gabbrielli
 - Undergraduate: “Programming languages”, 40 hours, 2nd year, University of Bologna, Italy.
 - Master: “Artificial Intelligence”, 60 hours, 2nd year, University of Bologna, Italy.
- Marco Gaboardi
 - Master: “Advanced Programming”, 40 hours. 1st or 2nd year. University of Pennsylvania, USA.
- Ivan Lanese
 - Undergraduate: “Programmazione”, 40 hours, 1st year, University of Bologna, Italy.
 - Undergraduate: “Ingegneria del Software”, 20 hours, 2nd year, University of Bologna, Italy.
 - PhD: “Reversible Computing”, 10 hours, Department of Mathematics and Computer Science, University of Cagliari, Italy
- Cosimo Laneve
 - Undergraduate: “Programmazione”, 90 hours, 1st year, University of Bologna, Italy.
 - Master: “Analisi di Programmi”, 42 hours, 1st year, University of Bologna, Italy.
- Simone Martini

Undergraduate: “Introduction to programming in Python”, 58 hours, 1st year, University of Bologna, Italy.

Undergraduate: “Computer abilities for biologists”, 8 hours, 1st year, University of Bologna, Italy.

Master: “Basic Complexity”, 12 hours, 1st year and 2nd year, University of Bologna, Italy.

PhD: “Principles of Computer Science: Computing, Machines, and Programming Languages” Joint International Doctoral (Ph.D.) Degree in Law, Science and Technology, University of Torino, Italy.

- Davide Sangiorgi

Undergraduate: “Operating Systems”, 110 hours, 2nd year, University of Bologna, Italy.

Master: “Models for concurrency”, 15 hours, 2nd year, University of Bologna, Italy.

- Marco Solieri

Undergraduate: “Introduction aux structures de données linéaires”, 6h hours, 1st year, Institut Galilé, Université Paris 13, France

Master: “Administration Système”, 15 hours, 2nd year, école d’ingénieurs, Institut Galilé, Université Paris 13, France

Master: “Intranet, Internet et Web”, 44 hours, 2nd year, école d’ingénieurs, Institut Galilé, Université Paris 13, France

- Gianluigi Zavattaro

Master: “Linguaggi di Programmazione e Modelli Computazionali”, 120 hours, 1st year, University of Bologna, Italy.

- Roberto Amadini

Undergraduate: “Algoritmi e strutture dati”, 20 hours, 1st year, University of Bologna, Italy.

- Giulio Pellitta

Undergraduate: “Laboratorio di Operating Systems”, 40 hours, 2nd year, University of Bologna, Italy.

Undergraduate: “Attività di supporto alla didattica universitaria di Informatica nell’ambito della Piattaforma di e-learning A3”, 130 hours, 1st year, University of Bologna, Italy.

- Elena Giachino

Undergraduate: “Programmazione”, 40 hours, 1st year, University of Bologna, Italy.

8.2.2. Supervision

Phd thesis completed in 2013:

- Paolo Parisen Toldin, Implicit computational complexity and probabilistic classes, Dottorato di Ricerca in Informatica, University of Bologna, April 2013 Supervisors: S. Martini

Below are the details on the PhD students in Focus: starting date, topic or provisional title of the thesis, supervisor(s). These are all PhDs in progress.

- Michele Alberti, July 2011; Separation results in the algebraic lambda-calculus; L. Regnier (Marseille) and S. Martini
- Roberto Amadini, January 2012, Constraint Programming, M. Gabbrielli.
- Ferdinanda Camporesi, January 2009, Analysis of system biology, R. Cousot (Ecole Normale, Paris) and M. Gabbrielli
- Alberto Cappai, January 2013; Security, ICC and probabilistic bisimulation, U. Dal Lago.

- Ornella Dardha, January 2011, Type Systems for Distributed Programs: Components and Sessions, D. Sangiorgi.
- Saverio Giallorenzo, January 2013, Adaptation and choreography languages, M. Gabbrielli.
- Tudor Alexandru Lascu, January 2011, Automatic planning of the deployment of cloud-based applications, G. Zavattaro
- Jean-Marie Madiot, September 2011, Types, proofs and proof techniques for process calculi, D. Hirschhoff and D. Sangiorgi.
- Giulio Pellitta, January 2011, Extending Implicit Computational Complexity and Abstract Machines to Languages with Control, S. Martini.
- Alessandro Rioli, January 2012; Bisimulation equivalence in quantum lambda calculi, U. Dal Lago.
- Marco Solieri, December 2011; Géométrie de l'interaction, réseaux, et lambda-calcul, S. Guerrini (Paris Nord) and S. Martini.

The following PhD student is supervised by a member of Focus, but currently not in the Focus team:

- Sara Zuppiroli (Bologna), January 2010; models for quantum computing; U. Dal Lago.

8.2.3. *Juries*

U. Dal Lago has been rapporteur and member of the PhD evaluation committee for Clement Aubert, Paris 13, Stephane Zimmermann, Paris 7, and Martin Avanzini, University of Innsbruck.

S. Martini has been rapporteur and member of the evaluation committee of the “Habilitation a Diriger des Recherches” (HDR) of Michele Pagani, Paris 13, December 2013.

G. Zavattaro has been rapporteur and member of the PhD evaluation committee for Huu Nghia Nguyen (supervisors Prof. Pascal Poizat and Fatiha Zaidi), Université Paris Sud, Paris, France; and he has been member of the Ph.D. evaluation committee of Luca Panziera (supervisor Prof. Flavio De Paoli), universita' Milano Bicocca, Milano, Italy.

8.3. Popularization

Simone Martini has carried out extended work of scientific divulgation:

- member of the technical committee of Olimpiadi del Problem Solving (at Italian Ministry of Education), <http://www.olimpiadiproblemsolving.com>;
- the talks “Calcolo e simboli: la scienza digitale. A.M. Turing a cent'anni dalla nascita”, Accademia di Agricoltura Scienze e Lettere di Verona; “Problem solving tra linguaggio e competizione”, Workshop ‘Olimpiadi e Informatica’, Verona, 22 novembre 2013.

In addition, **S. Martini** and **U. Dal Lago** gave a series of lectures (20 hours altogether) to the students of "Collegio Superiore", a college of excellence at the University of Bologna (general students, not limited to Computer Science). The course was about algorithms, computational complexity, and cryptography.

FORMES Team

8. Dissemination

8.1. Scientific Animation

Frédéric Blanqui was member of the Steering Committee of the International Conference on Rewriting Techniques and Applications (RTA) for 3 years until June 2013.

Frédéric Blanqui was invited to present his work on “the formalization of λ -calculus and Tait-Girard’s notion of computability” at the 3rd Workshop on Proof Theory and Rewriting (PR), March 2013, Kanazawa, Japan.

Vania Joloboff has organized a LIAMA Open Day in Shanghai in May 2013, in collaboration with East China Normal University.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Frédéric Blanqui organized a 7-days school at the Institute of Applied Mechanics and Informatics (IAMA) of the Vietnamese Academy of Sciences and Technology (VAST) at Ho Chi Minh City, Vietnam, from 12 to 19 March 2013. The mornings were dedicated to theoretical lectures introducing basic notions in mathematics and logic for the analysis of computer programs. The afternoons were practical sessions introducing the OCaml programming language and the Coq proof assistant. Lecture notes are given in [17].

Vania Joloboff has taught simulation seminars at Shenzhen Institutes of Advanced Technology.

Licence: Jean-François Monin, Introduction to Interactive Proof of Software, 50 hours, L3, Tsinghua University, China

This course is expected to attract students in the FORMES group via the local PhD program; already one of them (2009) is currently a PhD student of Jean-Pierre Jouannaud, another (2010) in is the PhD track with Gu Ming and 2 others (2010) work with Jean-François Monin and Vania Joloboff.

Doctorate: Jean-François Monin (organizer and teacher), Coq Summer School, 30 hours, Tsinghua University, China

8.2.2. Supervision

PhD : Xiaomu Shi, “Certification of an Instruction Set Simulator”, University of Grenoble, July 2013, [14] Jean-François Monin, Vania Joloboff.

PhD in progress: Kim-Quyen Ly, automated formal verification of termination certificates, October 2011, Frédéric Blanqui

PhD in progress : Jiaxiang Liu, Testing Confluence via Critical Pairs, 2012, École Polytechnique, Jean-Pierre Jouannaud

PhD in progress: Qian Wang, CoqMTU: a secure combination of the Calculus of Construction, inductive types, universes and built-in equality, 2011, École Polytechnique, Jean-Pierre Jouannaud

8.2.3. Juries

Frédéric Blanqui has been in the jury of Zhiwu Xu for his PhD on “Parametric Polymorphism for XML Processing Languages” (directors: Giuseppe Castagna and Haiming Chen).

Frédéric Blanqui referred the habilitation thesis of René Thiemann (Innsbrück University) on “A Formalization of Termination Techniques in Isabelle/HOL”.

Jean-François Monin has been in the jury of Xiaomu Shi (see above).

Vania Joloboff has been in the jury of Xiaomu Shi (see above).

FUN Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Conference organization

Program (co-)chairs

- Nathalie Mitton is/was program chair or co-program chair for WiMob 2013, OpenWorldForum 2013 (IoT Track) and IoT-IP 2013.

Program committee members

- Nathalie Mitton is/was in the Technical Program Committee (TPC) for Algotel'14, WPMC'14, SecAN'14, WinSys 2014, MDM 2014, SensorNets 2014, MDM 2013, WWASN2013, AdHoc-Nets 2013, EUSPN 2013, MC3 2013, AdHocNow 2013, HuMoComp 2013, MDM 2013, WWASN2013, Africomm 2013, WWASN2013.
- Tahiry Razafindralambo is/was a TPC member for WiMob 2013, MSWIM 2013, PE-WASUN 2013.
- Valeria Loscri is/was TPC member for WiMob2013, NTMS2013, IoTIP2013, MC3 2013.

Other chairing

- Valeria Loscri was publicity chair for IoT-IP 2013.

8.1.2. Editorial activity

- Nathalie Mitton is editorial board members of AHSWN since 2011.
- Nathalie Mitton is editorial board member of Adhoc Networks since 2012.
- Nathalie Mitton is editorial board member of IET-WSS since 2013.
- Nathalie Mitton and David Simplot-Ryl edited the book "Wireless sensor and robot networks: from topology control to communication aspects", to be published in February 2014.

8.1.3. Misc

- Nathalie Mitton was member of the ANR programme blanc SIMI3 for 2013.
- Nathalie Mitton a member of the Inria COST-GTAI and Building User committee (CUB).
- Nathalie Mitton was vice-president of the Technological development committee (CDT) in 2013 and will be president from January 2014.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master : Nathalie Mitton, Wireless sensor networks, 36h eqTD (Master TIIR and MINT), Université Lille 1 and Telecom Lille 1, France

Master : Nathalie Mitton, RFID Middlewares, 16h eqTD, Institut Telecom and Université Lille 1, France

Master : Valeria Loscri, Digital Transmission - Course of Master Science in Engineering of Telecommunication Course (University of Calabria)

Post-Master : Valeria Loscri, KOM4T me: Knowledge Management 4 info Telemati in Mobile Environment (post-master course for expert in knowledge management systems applied to the context of infotainment for vehicular environments, organized by University of Calabria, Infomobility Spa, Magneti Marelli Spa, Info Blu Spa) - 100 hours

8.2.2. Supervision

HdR : Tahiry Razafindralambo, Mouvements autonomes: de la créativité dans les réseaux sans fil, Université Lille 1, December 5th 2013

PhD : Karen Miranda, Self-deployment algorithms for substitution networks, Université Lille 1, December 10th 2013, Tahiry Razafindralambo and David Simplot-Ryl

PhD : Tony Ducrocq, Auto-organisation des réseaux sans-fil multi-sauts dans les villes intelligentes , Université Lille 1, November 15th 2013, Nathalie Mitton and Michael Hauspie

PhD : Milan Erdelj, MobileWireless Sensor Network Architecture: Applications to Mobile Sensor Deployment, Université Lille 1, October 11th 2013, Tahiry Razafindralambo and David Simplot-Ryl

PhD : Nicolas Gouvy, Routage géographique dans les réseaux de capteurs et actionneurs sans fil Université Lille 1, September 19th 2013, Nathalie Mitton

PhD in process: Riccardo Petrolo, Internet of Things and Smart Cities, Université Lille 1, 2013-2016, Nathalie Mitton and Valeria Loscri

PhD in process: Viktor Toldov, : Interférence et consommation dans les réseaux de capteurs, Université Lille 1, 2013-2016, Nathalie Mitton and Laurent Clavier

PhD in process: César Marchal, Sécurité dans les réseaux de capteurs - Du routage à la pertinence des données, Université Lille 1, 2013-2016, Nathalie Mitton

PhD in process: Natale Guzzo, Auto - organisation et économie d'énergie dans un réseau sans fil de surveillance de fret, Université Lille 1, 2013-2016, Nathalie Mitton

PhD in process: Roudy Dagher, Géolocalisation en environnement réel, extérieur et intérieur avec réseau de capteurs, Université Lille 1, 2013-2016, Nathalie Mitton

8.2.3. Juries

- Nathalie Mitton was committee member of the following PhD thesis:
 - Julien Beaudaux, Université de Strasbourg, France, June 2013
 - Raul Gorcitz (reviewer), UPMC, Paris, July 2013
 - Alhem Riggani, UPMC, Paris, January 2014
 - Arnab Sinha, Inria Rennes, February 2014
 - Rafik Kheddami, Esisar, February 2014
- Nathalie Mitton was member of the CR2 Lille competition selection committee.
- Nathalie Mitton was member of the Boost Your Code 2013 competition jury.
- Nathalie Mitton was a member of the COS (associate professor selection committee) for INSA de Lyon and Université de Reims.

8.3. Popularization

- Tahiry Razafindralambo gave a popularization talk "Introduction to Wireless Sensor Networks" at Distributed Computing Department / Universidad de Chile.
- Nathalie Mitton gave a talk on "Introduction to RFID" to Terminales ES and S and "Introduction to Wireless Sensor Networks" to 4e and 3e in the framework of "Journées de la Science".
- Ibrahim Amadou gave a talk on "Introduction to Wireless Sensor Networks" in the framework of "Journées de la Science".

GALAAD Project-Team

9. Dissemination

9.1. Scientific Animation

Laurent Busé

- is a member of the Jury of the french "agrégation externe de mathématiques".

André Galligo

- is part of the Advisory Board of the MEGA conference series and took part this year to its program committee.

Evelyne Hubert

- is an associate editor of the Journal of Symbolic Computation (<http://www.journals.elsevier.com/journal-of-symbolic-computation>),
- is part of the Advisory Board of the MEGA conference series and, as such, took part to the program committee of this year conference,
- edited, with Elizabeth Mansfield (University of Kent, UK) and Gloria Mari Beffa (University of Wisconsin, USA) a special issue of the journal *Foundations of Computational Mathematics* (Volume 13, Issue 4, August 2013) in honor of Peter Olver (University of Minnesota, USA). Cf. <http://link.springer.com/journal/10208>,
- is part of the local Inria Committee for Invited Professors and Postdoctoral Fellows,
- was elected to the new hiring committee at the mathematics department of the University of Nice (CPRH 25-26-60),
- co-organized the mini-symposia *Computational Aspects of Moving Frame* that was part of the *SIAM Conference on Applied Algebraic Geometry* that took place in Fort Collins, Colorado, August 1-4.

Bernard Mourrain

- is an associate editor of the Journal of Symbolic Computation (<http://www.journals.elsevier.com/journal-of-symbolic-computation>),
- is member of the Advisory Board of the MEGA conference series and chair of the program committee of MEGA'13 in Frankfurt, June 3-7,
- is co-editing, with Alicia Dickenstein and Jan Draisma, a special issue of the Journal of Symbolic Computation, after the conference MEGA'13,
- organized the mini-symposia *Algebraic Geometry, Moment Problems and Applications* that was part of the *SIAM Conference on Applied Algebraic Geometry* that took place in Fort Collins, Colorado, August 1-4,
- is chair of the local Inria Committee for Courses and Conferences.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Mathieu Collowald, Statistics (Exercices), 20h ETD, L1 MASS, University of Nice-Sophia Antipolis, France

Licence: Mathieu Collowald, Algebra (Exercices), 44h ETD, L1 I, University of Nice-Sophia Antipolis, France

Master: Laurent Busé, Curves and Surfaces, 60h ETD, MAM4, Ecole Polytechnique of the University of Nice-Sophia Antipolis, France

Master: Laurent Busé, Elimination theory for geometric modeling, 40h ETD, M2 of mathematics, University of Nice-Sophia Antipolis, France

Doctoral: Evelyne Hubert, Invariants of Group Actions, courses at the french workshop *Journées Nationales de Calcul Formel* (May 2013), 3h, CIRM Luminy, France.

9.2.2. Supervision

9.2.2.1. Ph.D. thesis in progress

Marta Abril Bucero, Moment matrices, real algebraic geometry and polynomial optimization. Advisor: Bernard Mourrain.

Mathieu Collowald, Integral representation of shapes for feature conservation or extraction. Advisor: Evelyne Hubert.

9.2.2.2. Internship

Matthieu Dien, *Décomposition de Tenseur Symétrique : Algorithme et Implémentation* 3.5 months, Master 1. Advisor: Bernard Mourrain.

Anna Karasoulou, *Discriminant of multivariate homogeneous symmetric polynomials*, 6 months, doctoral. Advisor: Laurent Busé.

9.2.3. Juries

Laurent Busé was a member of the PhD committee of Amir Bagheri, "Cohomologie locale, les idéaux gradués et leurs puissances", 25th September, University Pierre et Marie Curie, Paris, France.

Bernard Mourrain was member of the Ph.D. committee of Tatjana A. Kalinka, "Changing representation of curves and surfaces: exact and approximate methods", University of Athenes, 15th March; of the Ph.D. committee of Remy Imbach, "Résolution de contraintes géométriques en guidant une méthode homotopique par la géométrie", University of Strasbourg, 8th October; of the HDR committee of G. Lecerf, "Algorithmique des polynômes à plusieurs variables : opérations élémentaires, factorisation, élimination", University of Orsay, 26th November.

Evelyne Hubert was a member of the PhD committee of Christine Jost, *Topics in Computational Algebraic Geometry and Deformation Quantization*, Stockholm University, March 11th, 2013; and Cédric Zanni, *Skeleton based Implicit Modeling and Applications*, Université de Grenoble, December 6th 2013. She also took part to the mid-term PhD evaluation of Jules Svartz, *Systèmes polynômiaux présentant des symétries : Algorithmes, Complexité, Applications*, Université de Paris 6, June 20th, 2013.

GALEN Project-Team

9. Dissemination

9.1. Scientific Animation

- **Andreas Argyriou**
 - **Conference Committee:** International Joint Conference on Artificial Intelligence (IJCAI), International Conference on Machine Learning (ICML), Advances in Neural Information Processing Systems (NIPS)
 - **Workshop and Tutorials Organization:** International Workshop on Advances in Regularization, Optimization, Kernel Methods and Support Vector Machines: theory and applications (ROKS).
- **Matthew Blaschko**
 - **Conference Committee:** British Machine Vision Conference (BMVC - area chair), IEEE Conference on Computer Vision and Pattern Recognition (CVPR), Neural Information Processing Systems (NIPS), Medical Image Computing and Computer Assisted Intervention (MICCAI), International Conference in Computer Vision (ICCV)
 - **Journal Reviewing Services:** Journal of Machine Learning Research, International Journal of Computer Vision, IEEE Transactions on Pattern Analysis and Machine Intelligence, Computer Vision and Image Understanding
 - **Invited Seminars/Presentations:** Stanford University - USA.
- **Iasonas Kokkinos**
 - **Editorial Activities:** Associate Editor, Image and Vision Computing Journal.
 - **Editorial Activities:** Guest Editor, Computer Vision and Image Understanding Journal.
 - **Conference Committee:** International Conference on Computer Vision (ICCV), International Conference on Computer Vision (CVPR), Artificial Intelligence and Statistics (AIS-TATS),
 - Energy Minimization Methods in Computer Vision and Pattern Recognition (EMM-CVPR).
 - **Journal Reviewing Services:** International Journal of Computer Vision, IEEE Transactions on Pattern Analysis and Machine Intelligence, Computer Vision and Image Understanding, Machine Vision and Applications.
 - **Invited Seminars/Presentations:** Institute for Pure and Applied Mathematics (IPAM) - USA, University of Oulu - FI, Konrad-Zuse Center for Computer Science - DE, Stony Brook University - USA.
- **Nikos Paragios**
 - **Editorial Activities:** Editor in Chief, Computer Vision and Image Understanding.
 - **Editorial Activities:** Associate Editor, International Journal of Computer Vision, Medical Image Analysis, Computer Vision and Image Understanding, Image and Vision Computing Journal, Machine Vision and Applications, SIAM Journal in Imaging Sciences.
 - **Editorial Activities:** Guest Editor, IEEE Transactions on Pattern Analysis and Machine Intelligence, Medical Image Analysis.
 - **Conference Committee:** IEEE International Conference in Computer Vision (ICCV-area chair), IEEE International Conference in Computer Vision (CVPR), Information Processing in Medical Imaging (IPMI), Medical Image Computing and Computer Assisted Intervention (MICCAI - area chair).

- **Workshop and Tutorials Organization:** Biomedical Image Analysis Summer School (BIOMED).
- **Journal Reviewing Services:** International Journal of Computer Vision, IEEE Transactions on Medical Imaging, NeuroImage.
- **Invited Seminars/Presentations:** Siemens Corporate Research - USA, Colloquium on Data Science in the Big Data Era - FR, SEERSS International Congress in Robotic Surgery - GR.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Participants: Matthew Blaschko, Iasonas Kokkinos, Pawan Kumar, Nikos Paragios.

9.2.2. Teaching

- Master : Structure Prediction, 24, M1, Ecole Centrale de Paris [M. Blaschko]
- Master : Discrete Optimization, 12, M1, Ecole Centrale de Paris [P. Kumar]
- Master : Signal Processing, 36, M1, Ecole Centrale de Paris, France [I. Kokkinos]
- Master : Computer Vision, 36, M1, Ecole Centrale de Paris, France [I. Kokkinos]
- Master : Pattern Recognition, 24, M2, Ecole Centrale de Paris/Ecole Normale Supérieure-Cachan, France [I. Kokkinos]
- Master : Advanced Mathematical Models in Computer Vision, 24, M2, Ecole Centrale de Paris/Ecole Normale Supérieure-Cachan, France [N. Paragios]

N. Paragios is in charge of the option Medical Imaging, Machine Learning and Computer Vision at the Department of Applied Mathematics of Ecole Centrale de Paris. This option consists of 7 classes in the above mentioned fields, 180 hours of teaching and is also directing the associated M.Sc. (M2) program of the ENS-Cachan in Applied Mathematics, Machine Learning and Computer Vision at Ecole Centrale de Paris.

9.2.3. Supervision

- HdR : Pawan Kumar, Weakly Supervised Learning for Structured Output Prediction, Ecole Normale Supérieure de Cachan - ENS Cachan, 12/2013
- HdR : Iasonas Kokkinos, Learning and Optimization for Shape-based Representations, Université Paris-Est, 9/2013
- PhD: Pierre-Yves Baudin, Graph-based Segmentation of Skeletal Striated Muscles in NMR Images, Ecole Centrale de Paris, 05/2013, Nikos Paragios
- PhD: Katerina Gkirtzou, Sparsity Regularization and Graph-based Representations in Medical Imaging, 12/2013, Ecole Centrale de Paris, Nikos Paragios
- PhD: Nicolas Honnorat, Curvilinear Structures Segmentation and Tracking in Interventional Imaging, 01/2013, Ecole Centrale de Paris, Nikos Paragios
- PhD: Helene Langet, Sampling and Motion Reconstruction in Three-dimensional X-Ray Interventional Imaging, 03/2013, Ecole Centrale de Paris, Gilles Fleury & Nikos Paragios
- PhD: Fabrice Michel, Multi-Modal Similarity Learning for 3D Deformable Registration of Medical Images, 10/2013, Ecole Centrale de Paris, Nikos Paragios
- PhD: Sarah Parisot, Graph-based Detection, Characterization & Segmentation of Brain Tumors, 11/2013, Ecole Centrale de Paris, Nikos Paragios
- PhD: Bo Xiang, Knowledge-Based Image Segmentation Using Sparse Shape Priors and High-Order MRFs, Ecole Centrale de Paris, 11/2013, Nikos Paragios

PhD in progress : Stavros Alchatzidis, Message Passing Methods, Parallel Architectures & Visual Processing, 2011-2014, Nikos Paragios

PhD in progress : Wacha Bounliphone, Sparse Methods towards data mining in Bio-informatics & Bio-imaging, 2013-2016, Matthew Blaschko

PhD in progress : Haithem Boussaid, Learning-based mid-level processing for computer vision and medical imaging, 2010-2014, Iasonas Kokkinos

PhD in progress : Enzo Ferrante, 2D-to-3D Multi-Modal Deformable Image Fusion, 2012-2015, Nikos Paragios

PhD in progress : Vivien Fecamp, Linear-Deformable Multi-Modal Deformable Image Fusion, 2012-2015, Nikos Paragios

PhD in progress : Evgenios Kornaropoulos, Diffusion Coefficient: a novel computer aided biomarker, 2010-2013, Nikos Paragios

PhD in progress : Puneet Kumar, Weakly Supervised Learning for Object Detection and Semantic Segmentation, 2010-2013, Pawan Kumar

PhD in progress : Stavros Tsogkas, Learning-based mid-level processing for computer vision and medical imaging, 2011-2014, Iasonas Kokkinos

9.2.4. *Juries*

- **Andreas Argyriou**
 - **PhD Thesis Participation:** G. Zappella - IT (PhD).
- **Matthew Blaschko**
 - **PhD Thesis Participation:** K. Gkirtzou - FR (PhD).
- **Iasonas Kokkinos**
 - **Grant Reviewing Services:** Swiss National Science Foundation.
- **Nikos Paragios**
 - **PhD Thesis Participation:** P-Y. Baudin - FR (PhD), K. Gkirtzou - FR (PhD), M. Heinrich - UK (PhD), N. Honnorat - FR (PhD), P. Kumar (HDR), H. Langet - FR (PhD), S. Merlet - FR (PhD), F. Michel - FR (PhD), S. Parisot - FR (PhD), B. Xiang - FR (PhD).
 - **Grant Reviewing Services:** Agence National de la Recherche, Austrian Research Council, Danish Research Council, Dutch Research Council, European Research Council, Israel Research Foundation, Swiss National Science Foundation.

GALLIUM Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Conference organization

Didier Rémy organized the October 2013 meeting of IFIP working group 2.8 “Functional programming”, which took place in Aussois, France.

Thomas Braibant participated in the organization of the LOLA 2013 workshop, associated with LICS 2013.

9.1.2. Editorial boards

Xavier Leroy is on the editorial board for the Research Highlights column of Communications of the ACM. He is a member of the editorial boards of Journal of Automated Reasoning, Journal of Functional Programming, and Journal of Formalized Reasoning.

9.1.3. Program committees

Xavier Leroy was a member of the program committee for VSTTE 2013, the conference on Verified Software: Theory, Tools and Experiments.

François Pottier was a member of the program committee for ESOP 2014, the European Symposium On Programming.

9.1.4. Steering committees

Xavier Leroy is a member of the steering committees for the Certified Programming and Proofs (CPP) conference and the Programming Languages meet Program Verification (PLPV) workshop.

François Pottier is a member of the steering committee for the ACM TLDI workshop.

Didier Rémy is a member of the steering committee of the OCaml Workshop.

9.1.5. Collective responsibilities

Damien Doligez chairs the *Commission des actions de développement technologiques* of Inria Paris-Rocquencourt.

Xavier Leroy is *vice-président du comité des projets* of Inria Paris-Rocquencourt and appointed member of *Commission d'Évaluation*. He participated in the following Inria hiring and promotion committees: *jury d'admissibilité CR2 Paris-Rocquencourt* (vice-chair, with Philippe Robert as chair); *jury d'admissibilité DR2*; *promotions CR1, DR1, DR0*. He was a member of the hiring committee for a *Maître de conférences* position at Université Rennes 1.

Luc Maranget chairs the *Commission des utilisateurs des moyens informatiques – Recherche* of Inria Paris-Rocquencourt.

François Pottier is a member of the post-doctoral hiring committee of Inria Paris-Rocquencourt. He was a member of the hiring committee for a *Maître de conférences* position at Université Paris Diderot.

Jonathan Protzenko curated the Junior Seminar of Inria Paris-Rocquencourt until June 2013, which marked the end of his two-year involvement in the seminar.

Didier Rémy represents Inria in the *commission des études* of the MPRI master, co-organized by U. Paris Diderot, ENS Cachan, ENS Paris, and École Polytechnique.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Thibaut Balabonski, “Travaux dirigés de Caml Light”, 14 hours, L1, Collège Stanislas (classes préparatoires MPSI), France.

Licence: Julien Cretin, “Bases de données”, 26h, L3, U. Paris Diderot, France.

Licence: Julien Cretin, “Principe de fonctionnement des machines binaires”, 33h, L1, U. Paris Diderot, France.

Licence: Jacques-Henri Jourdan, “Langages de programmation et compilation”, 46h, L3, École Normale Supérieure, France.

Licence: François Pottier, “Algorithmique et programmation” (INF431), 13h30, L3, École Polytechnique, France.

Licence: Gabriel Scherer, “IF1: Introduction to computer science and programming”, 42h, L1, U. Paris Diderot, France.

Master: Xavier Leroy and Didier Rémy, “Functional programming and type systems”, 12h + 18h, M2, MPRI master, France.

Master: Luc Maranget, “Semantics, languages and algorithms for multicore programming”, 9h, M2, MPRI master, France.

Master: François Pottier, “Compilation” (INF564), 13h30, M1, École Polytechnique, France.

Master: Jonathan Protzenko, “Conception et mise en œuvre d’algorithmes” (MOOC), 32h, M1, Coursera / École Polytechnique, France.

Master: Gabriel Scherer, “Advanced Functional Programming”, 30h, M1, U. Paris Diderot, France.

Doctorat: Xavier Leroy, “Mechanized semantics”, 6h, Verification Technology, Systems & Applications summer school 2013, Nancy, France.

9.2.2. Supervision

PhD in progress: Julien Cretin, “Erasable coercions: a unified approach to type systems”, École Polytechnique, since December 2010, supervised by Didier Rémy, to be defended January 30th, 2014.

PhD in progress: Pierre Halmagrand, “Dédution Automatique Modulo”, CNAM, since September 2013, supervised by David Delahaye, Damien Doligez, and Olivier Hermant.

PhD in progress: Jonathan Protzenko, “Fine-grained static control of side effects”, U. Paris Diderot, since September 2010, supervised by François Pottier.

PhD in progress: Gabriel Scherer, “Term inference”, U. Paris Diderot, since October 2011, supervised by Didier Rémy.

PhD in progress: Jacques-Henri Jourdan, “Formal verification of a static analyzer for critical embedded software”, U. Paris Diderot, since September 2012, supervised by Xavier Leroy.

9.2.3. Juries

Damien Doligez was a member of the Ph.D. jury of Mélanie Jacquél, CNAM, Paris, april 2013.

Xavier Leroy was a member of the Ph.D. jury of Xiaomu Shi, Université Joseph Fourier, Grenoble, july 2013.

Xavier Leroy was president of the Ph.D. jury of Pierre-Nicolas Tollitte, CNAM, Paris, december 2013.

9.3. Popularization

Jacques-Henri Jourdan and Arthur Charguéraud participated in the organization of the Castor computer science contest (<http://castor-informatique.fr/>). This contest aims at making computer science more popular in French high schools and junior high schools. It attracted over 170,000 participants.

Fabrice Le Fessant is one of the organizers of the OCaml meetup in Paris. Four events were organized in 2013, each featuring four short presentations on topics related to OCaml. Each event was attended by about 60 participants.

Xavier Leroy gave a tutorial on using theorem provers in programming language research at the 2013 ACM SIGPLAN Programming Languages Mentoring Workshop, which was attended by about 80 undergraduate, graduate and post-doctoral students.

Since 2012, the Gallium team publishes a research blog at <http://gallium.inria.fr/blog/>, edited by Gabriel Scherer. This blog continued its activity in 2013, with 26 posts by 12 different authors. It covered various changes in the OCaml language, announced small software libraries from members of the team, and discussed Gallium's research, notably the Mezzo language.

GAMMA3 Project-Team

7. Dissemination

7.1. Teaching - Supervision - Juries

7.1.1. Teaching

- T. Grosjes:
 - *Responsable du Master Science, Technologie et Santé (STS)*, Université de Technologie de Troyes, Troyes.
 - *Responsable de la filière Technologie et Commerce des Matériaux et Composants (TCMC)*, Département Matériaux, Economie et Technologie (MTE), Université de Technologie de Troyes, Troyes.
 - *Responsable du cours: Mesure Physique et Instrumentation (MS11)*, Université de Technologie de Troyes, Troyes.
 - *Responsable du cours: Méthodes mathématiques et numériques en optique (MO23)*, Université de Technologie de Troyes, Troyes.
 - *Responsable du cours: Technique d'achat et de réduction des coûts (TN19)*, Université de Technologie de Troyes, Troyes.
- D. Barchiesi:
 - *Responsable du cours: Design et sensorique (DS01)*, Université de Technologie de Troyes.
 - *Responsable du cours: Management de l'innovation (GE41)*, Université de Technologie de Troyes & Groupe École Supérieure de Commerce Troyes.

7.1.2. Supervision

PhD in progress : N. Barral, Adaptive ALE scheme for CFD, October 2012, F. Alauzet

PhD in progress : V. Menier, Adaptive Mesh Adaptation for Navier-Stokes Equations, October 2012, F. Alauzet and A. Loseille

7.1.3. Juries

P. Laug, participation au jury de thèse de Jie Zhang, *Procédure de remaillage adaptatif 3D avec modèle d'endommagement multi-axial pour la simulation numérique des procédés de mise en forme*, UTT, 21/03/2013.

GANG Project-Team

8. Dissemination

8.1. Scientific Animation

Participants: Carole Delporte, Hugues Fauconnier.

Most participants have been invited for the TRANSFORM Summer School on research Directions in Distributed Computing Heraklion, Greece 10-14 june <http://www.ics.forth.gr/carv/transform/srdc/index.html>

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master MPRI University of Paris Diderot:

- M. Habib, graph algorithms, 12 hours;
- P. Fraigniaud, "Algorithmique distribuée pour les réseaux", 12 hours;
- C. Delporte and H. Fauconnier, "Algorithmique distribuée avec mémoire partagée"; C. Delporte, 12 hours and H. Fauconnier, 12 hours.

Master Professional University of Paris Diderot:

- M. Habib, Search Engines, 50 hours;
- M. Habib, Parallelism and mobility which includes peer-to-peer overlay networks, 50 hours;
- C. Delporte, Distributed programming, 33 hours;
- H. Fauconnier, Internet Protocols and Distributed algorithms, 44 hours;

Master Bioinformatique University of Paris Diderot:

- L. Viennot, System, network and Internet, 15 hours.

Master: F. Mathieu, Peer-to-Peer Techniques, 30 hours, University of Paris 6;

D.U.T. : Y. Boufkhad, computer science and networks, 192 hours, University of Paris Diderot;

U.F.R.: F. de Montgolfier, foundation of computer science, algorithmics, and computer architecture, 192 hours, University of Paris Diderot;

Master: F. de Montgolfier, Peer-to-Peer theory and application, M2, University of Marne-la-Vallée;

Elementary school: L. Viennot, "Ateliers de fondements de l'informatique", 30 hours (CM1, corresponding to 4th grade).

8.2.2. Supervision

PhD :Hung Tran-The, "Le Problème du Consensus dans les Systèmes avec Homonymes", University of Paris Diderot June 06 2013, supervised by Hugues Fauconnier and Carole Delporte [1],

PhD in progress : François Durand, "Manipulabilité des systèmes de vote et applications aux réseaux", since 2012, supervised by Fabien Mathieu and Ludovic Noirie

Jérémie Dusart, "Parcours de graphes de cocomparabilité", since 2011, supervised by Michel Habib
Antoine Mamcarz, "Algorithmes de décomposition de graphes", since 2010, supervised by Michel Habib

The-Dang Huynh , "Extensions de PageRank et Applications aux Réseaux Sociaux", since 2012, supervised by Fabien Mathieu, Dohy Hong and Laurent Viennot,

Leonardo Linguaglossa, "Design of algorithms and protocols to support ICN functionalities in high speed routers", since 2013, supervised by Fabien Mathieu, Diego Perino and Laurent Viennot.

8.2.3. *Juries*

HdR reviews: C. Delporte-Gallet reviews Coelho's HdR thesis "Contributions à la performance du calcul scientifique et embarqué" (october 11th 2013)

L. Viennot has reviewed Nicolas Bonichon's HdR thesis "Quelques algorithmes entre le monde des graphes et les nuages de points" (April 3rd 2013) and Adrian Kosowski's HdR thesis "Time and space-efficient algorithms for mobile agents in an anonymous network" (October 26th 2013).

PhD review: L. Viennot has reviewed Przemyslaw Uznanski's PhD thesis "Large scale platform : instantiable models and algorithmic design of communication schemes" (October 11th 2013), Remigiusz Modrzejewski's PhD thesis "Distribution and storage in networks" (October 24th 2013) and Christian Glacet's PhD thesis "Algorithmes de routage, de la réduction des coûts de communication à la dynamique" (December 6th 2013).

8.3. Popularization

8.3.1. *scientific popularization*

Participant: Laurent Viennot.

Laurent Viennot is correspondent for the Inria Paris-Rocquencourt center concerning scientific popularization. In that context, he has participated to a document describing how scientific popularization actions could take place at Inria [26]

GECO Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Conference organization

- Y. Chitour, P. Mason and M. Sigalotti organized a double session named “Stability of switched systems: theoretical and computational aspects” for the 52nd IEEE Conference on Decision and Control, Firenze, Italy, December 10-13, 2013.
- Y. Chitour, P. Mason and M. Sigalotti organized a session named “Control issues for switched systems” for the 52nd IEEE Conference on Decision and Control, Firenze, Italy, December 10-13, 2013.

8.1.2. Editorial activity

- U. Boscain is Associate Editor of Journal of Dynamical and Control Systems, ESAIM Control, Optimisation and Calculus of Variations, Mathematical Control and Related Fields. He is also referee for Journal of Differential equations, AIMS Book series: Applied mathematics, SIAM J. Control Optim., Automatica, Rendiconti dei Lincei, Matematica ed Applicazioni, Physica A...and for the conferences ACC, CDC, MTNS...
- M. Sigalotti is Associate Editor of Journal of Dynamical and Control Systems. He is also referee for IEEE TAC, SIAM J. Control Optim., Automatica, MathSciNet, Journal of Functional Analysis...and for the conferences CDC, ACC, IFAC...

8.2. Teaching - Supervision - Juries

8.2.1. Supervision

PhD: Dario Prandi, “Geometric control and PDEs”, supervisors: Ugo Boscain, Mario Sigalotti, defended in september 2013.

PhD in progress: Moussa Gaye, “Some problems of geometric analysis in almost-Riemannian geometry and of stability of switching systems”, 1/9/2011, supervisors: Ugo Boscain, Paolo Mason.

PhD in progress: Guiherme Mazanti, “Stabilité et taux de convergence pour les systèmes à excitation persistante”, 1/9/2013, supervisors: Yacine Chitour, Mario Sigalotti.

GENSCALE Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Meeting organization and scientific animation

- **Seminar** A weekly seminar of bioinformatics is organized within the laboratory. Attendees are member of the ex-symbiose team (now teams Genscale, Dyliss and Genouest), biologists from Brittany and computer scientists from the laboratory. [[web site: http://symbiose.irisa.fr/symbioseNextSeminars](http://symbiose.irisa.fr/symbioseNextSeminars)]
- **Conference** P. Peterlongo and D. Lavenier were organisation members of the Environmental Genomic Colloque, Rennes, 4,5,6 Nov. 2013. [[web site:https://colloque.inra.fr/ge_rennes2013](https://colloque.inra.fr/ge_rennes2013)]

9.1.2. Conference program committees

- FPL'2013: 23rd International Conference on Field Programmable Logic and Applications [D. Lavenier]
- ICPADS'2013: 19th IEEE International Conference on Parallel and Distributed Systems [D. Lavenier]
- PBC'2013: Workshop on Parallel Computational Biology [D. Lavenier]
- Reconfig'2013: International Conference on ReConFigurable Computing [D. Lavenier]
- JOBIM'2013: French Colloquium in Biology, Mathematic anf Informatic [D. Lavenier, C. Lemaitre, P. Peterlongo]
- SeqBio 2013: Workshop on string algorithms [C. Lemaitre]
- DGA 2013: Workshop on Distance Geometry and Applications [R. Andonov, A. Mucherino]
- WCO 2013: 6th Workshop on Computational Optimization [R. Andonov, A. Mucherino]

9.1.3. Administrative functions: scientific committees, journal boards

- Member of the administrative council of ISTIC [R. Andonov]
- External evaluator for COST Action IC0805 on "Open European Network for High Performance Computing on Complex Environments" [R. Andonov]
- Member of evaluation committee AERES for LIGM [R. Andonov]
- Recruitment committees: 1 assistant professor [D. Lavenier], 1 professor [D. Lavenier]
- Member for PEPS-BMI program comittee (CNRS) [P. Peterlongo]
- Permanent expert for the MEI (International Expertise Mission), French Research Ministry [D. Lavenier]
- Member of the local Inria Rennes CDT (Technologic Transfer Commission) [D. Lavenier]
- Member of the scientific council of the INRA BIPAA Platform (BioInformatics Platform for Agroecosystems Arthropods) [D. Lavenier]
- Member of the scientific council of The GenOuest Platform (Bioinformatics Platform of BioGenOuest) [D. Lavenier]
- Member of the local Inria CORDIS comittee for PhD grants [C. Lemaitre]
- Representative of the environnemental axis of UMR IRISA [C. Lemaitre]
- Inria center refereee of Scientific mediation [P. Peterlongo]
- Member of the redaction committee Ouest Inria [P. Peterlongo]

- publication reviewing for Bioinformatics, BMC Bioinformatics, BMC Research Notes, Briefings in Bioinformatics, Plos One, Journal of Computational Chemistry, Optimization Methods and Software [D. Lavenier, R. Andonov]

9.1.4. Invited talks

- A. Mucherino gave an invited talk at DGA13, Manaus, Amazonas, Brazil, June 24–27, 2013
- D. Lavenier gave an invited talk at Inria-INRA days, Sophia Antipolis, September 11-12 2013
- D. Lavenier gave an invited talk at ORAP Meeting, Scalay, October 10 2013
- D. Lavenier gave an invited talk at X-meeting, Recife, Brazil, November 3-7 2013
- P. Peterlongo gave an invited talk at Colloque "Détection, Gestion et Analyse du Polymorphisme des Génomes Végétaux" of INRA EPGV, Lusignan, April 8-10 2013.
- P. Peterlongo gave an invited talk at Workshop "Storage, Search and Annotation of Multiple Similar Genomes", Bielefeld, December 9-10 2013.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : A. Mucherino, R. Andonov, Graph algorithms, 90h, L3, Univ. Rennes 1, Rennes France.

Licence : C. Lemaitre, Statistics for biology, 10h, L3, Univ. Rennes 1, France

Licence: D. Lavenier, Architecture and System, 36h, MIT1, ENS Rennes

Licence : M. Le Boudic-Jamin, Preparation to C2I level 1 , 44h, L1, Univ. Rennes 1, France

Master : D. Lavenier, Intensive Computation of Genomic Data, 18h, ESEO, M1, Angers

Master : C. Lemaitre, P. Peterlongo, Text algorithmics for Bioinformatics, 46 h, M1, Univ. Rennes 1, France.

Master : C. Lemaitre, Dynamical systems for biological networks, 22h, M2, Univ. Rennes 1, France

Master : R. Andonov, A. Mucherino, Operations research, 95h, M1, Univ. Rennes 1, France.

Master : R. Andonov, Advanced algorithms, 15h, M1, Univ. Rennes 1, France.

Master : A. Mucherino, Initiation to systems and networks, 39h, M2, Univ. Rennes 1, France

Master : A. Mucherino, R. Andonov, P. Peterlongo, Sequence and structure algorithms, 36h, M2, Univ. Rennes 1, France

9.2.2. Supervision

PhD defense : Nicolas Maillet, *Comparaison de novo de données de séquençage issues de très grands échantillons métagénomiques* [11], Univ. Rennes 1, defended on December 19th 2013, supervised by D. Lavenier and P. Peterlongo [online manuscript: <http://tel.archives-ouvertes.fr/tel-00941922>]

PhD defense : Guillaume Chapuis, *Exploiting parallel features of modern computer architectures in bioinformatics : Applications to genetics, structure comparison and large graph analyses* [10], Univ. Rennes 1, defended on December 18th 2013, supervised by D. Lavenier and R. Andonov [online manuscript: <http://tel.archives-ouvertes.fr/tel-00912553>]

PhD in progress : Mathilde Le Boudic-Jamin, *Structure et comparaison d'objets 3D: applications aux structures protéiques*, Univ. Rennes 1, started in October 2011, supervised by R. Andonov

PhD in progress : Erwan Scaon, *Modèles et algorithmes pour l'assemblage de novo de génomes à forte redondance*, Univ. Rennes 1, started in October 2012, supervised by D. Lavenier and C. Lemaitre

PhD in progress : François Moreews, *Environnement intégré de conception et d'exécution de workflows en bioinformatique: du prototypage au calcul intensif. Applications à la recherche de motifs de régulation dans les génomes*, Univ. Rennes 1, started in November 2012, supervised by D. Lavenier and S. Lagarigue

9.2.3. Juries

- *President of Ph-D thesis jury*. J. Lai, University of Rennes [D. Lavenier], O. Abdou-Arbi, University of Rennes 1 [R. Andonov]
- *Member of Ph-D thesis juries*. V. Silva Da Costa, Federal University of Rio de Janeiro (Brazil) [A. Mucherino]; R. Santos Alves, UNICAMP (Brazil) [A. Mucherino]; G. Chapuis, University of Rennes [D. Lavenier, R. Andonov]; Nicolas Maillet, University of Rennes [D. Lavenier, P. Peterlongo]; C. Yupeng, Nanyang Technological University, Singapor [D. Lavenier].
- *Member of Ph-D thesis comitees*. J. Boutte, University of Rennes [D. Lavenier]; A. Jeannin, University of Brest [D. Lavenier]; P. Nouhau, University of Rennes [C. Lemaitre]; C. Mercier, University of Grenoble [C. Lemaitre]; S. Guizard, University of Tours [C. Lemaitre], A. Radulescu, university of Nantes [P. Peterlongo].

9.3. Popularization

- Participation to the event "A la découverte de la recherche" (presentation of the research activity to high school students) [C. Lemaitre, P. Peterlongo]
- Participation to the event "Professional Meeting" (talk: discovering bioinformatics), IUT Lannion [D. Lavenier]
- Production of a short movie of PhD subject popularization. [M. Le Boudic-Jamin] <https://doctoriales2013.ueb.eu/content/posters>

GEOMETRICA Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Editorial boards of scientific journals

Jean-Daniel Boissonnat is a member of the Editorial Board of *Journal of the ACM, Discrete and Computational Geometry, Algorithmica, International Journal on Computational Geometry and Applications*.

Frédéric Chazal is a member of the Editorial Board of *SIAM Journal on Imaging Sciences, Graphical Models* and *Discrete and Computational Geometry* (start in Jan. 2014).

Olivier Devillers is a member of the Editorial Board of *Graphical Models*.

Monique Teillaud is a member of the Editorial Boards of *CGTA, Computational Geometry: Theory and Applications*, and of *IJCGA, International Journal of Computational Geometry and Applications*.

M. Yvinec is a member of the editorial board of *Journal of Discrete Algorithms*.

Monique Teillaud and Mariette Yvinec are members of the CGAL editorial board.

9.1.2. Conference program committees

Jean-Daniel Boissonnat was a member of the PC of the Symposium on Geometry Processing SGP 2013.

Jean-Daniel Boissonnat chaired WoCG (Workshops in Computational Geometry) and was a member of the program committee of the Young Researchers Forum, two satellite events of the ACM Symposium on Computational Geometry SoCG 2013.

Frédéric Chazal was a member of the PC of the ACM Symposium on Computational Geometry 2013, of the the Scientific committee of the SMAI 2013 conference, and of Geometric Science of Information (GSI 2013).

Monique Teillaud was a member of the PC of EuroCG, the European workshop on computational geometry.

9.1.3. Steering committees

Jean-Daniel Boissonnat is a member of the steering committee of the international conference on Curves and Surfaces.

Monique Teillaud was a member of the Computational Geometry Steering Committee until April.

Monique Teillaud has been a member of the Steering Committee of the European Symposium on Algorithms (ESA) since September.

9.1.4. Inria committees

Jean-Daniel Boissonnat was a member of the recruitment committee of Inria Rhône-Alpes.

Frédéric Chazal was a member of the recruitment committee of Inria Saclay (vice-chair).

Monique Teillaud is a member of the Inria Evaluation Committee.

She was a member of the national Inria DR2 interview committee and the local CR2 interview committee.

Monique Teillaud is a member of the local Committee for Technologic Development.

She was also a member of the local committee for transversal masters.

9.1.5. Other committees

Jean-Daniel Boissonnat is a member of the Conseil de l'AERES (Agence d'Evaluation de la Recherche et de l'Enseignement Supérieur).

9.1.6. Conference organization

- O. Devillers and M. Teillaud coorganized the workshop on Geometric Computing (<http://www.acmac.uoc.gr/GC2013/> Heraklion, Greece, January) with Menelaos Karavelas (University of Crete) and Elias Tsigaridas (EPI POLSYS).
- M. Teillaud coorganized the Dagstuhl Seminar on Computational Geometry [38] (<http://www.dagstuhl.de/en/program/calendar/semhp/?semnr=13101>, March 4-8) with Otfried Cheong (KAIST) and Kurt Mehlhorn (MPI Saarbrücken)
- M. Teillaud coorganized the Dagstuhl Seminar on Drawing Graphs and Maps with Curves [39] (<http://www.dagstuhl.de/en/program/calendar/semhp/?semnr=13151>, April 8-12) with Stephen Kobourov (University of Arizona) and Martin Nöllenburg (Karlsruhe Institute of Technology)
- O. Devillers organized the workshop of ANR Presage (Valberg, France, June).
- M. Teillaud (chair) and O. Devillers coorganized ALGO 2013, in cooperation with members of EPI ABS and COATI (<http://algo2013.inria.fr/>. Sophia Antipolis, France, September 2-6). ALGO 2013 combined the European Symposium on Algorithms (ESA) and six more specialized conferences and workshops. There were about three hundred attendees.
- D. Cohen-Steiner organized the 2013 edition of the “Journées de Géométrie Algorithmique” held at the CIRM, Luminy in December <http://quentin.mrgt.fr/events/jga2013.html>.

9.1.7. Web site

M. Teillaud is maintaining the Computational Geometry Web Pages <http://www.computational-geometry.org/>, hosted by Inria. This site offers general interest information for the computational geometry community, in particular the Web proceedings of the Video Review of Computational Geometry, part of the Annual Symposium on Computational Geometry.

9.1.8. Geometrica seminar

The seminar featured presentations by the following scientists:

Omri Azencot (Technion) : An Operator Approach to Tangent Vector Field Processing

Mirela Ben Chen (Technion - Israel Institute of Technology) : Can Mean-Curvature Flow be Modified to be Non-singular?

Benjamin Burton (University of Queensland) : Untangling knots using combinatorial optimisation

A. Chiara de Vitis (Pavia) : Geometrical and Topological Descriptors for Protein Structures

C. Couprie (Courant Institute) : Graph-based Variational Optimization and Applications in Computer Vision

J. Demantke (IGN) : Geometric Feature Extraction from LIDAR Point Clouds and Photorealistic 3D Facade Model Reconstruction from Terrestrial LIDAR and Image Data

Kyle Heath (Stanford University) : Image Webs: Discovering and using object-manifold structure in large-scale image collections

N. Mitra (UCL London) : Computational Design Tools for Smart Models Synthesis

P. Machado Manhães de Castro (UFPE, Brasil) : Invariance for Single Curved Manifolds

Natan Rubin (Freie Universität Berlin) : On Kinetic Delaunay Triangulations: A Near Quadratic Bound for Unit Speed Motions

D. Salinas (Gipsa Lab, Grenoble) : Using the Rips complex for Topologically Certified Manifold Learning

Régis Straubhaar (Université de Neuchâtel) : Numerical optimization of an eigenvalue of the Laplacian on a domain in surfaces

Jian Sun (Mathematical Sciences Center, Tsinghua University) : Rigidity of Infinite Hexagonal Triangulation of Plane

Anaïs Vergne (Télécom ParisTech) : Algebraic topology and sensor networks

Yuan Yao (School of Mathematical Sciences, Peking University) : The Landscape of Complex Networks

H. Zimmer (Aachen) : Geometry Optimization for Dual-Layer Support Structures

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Graduate level: Olivier Devillers, *Delaunay triangulation*, 6h, Universidade Federal de Pernambuco, Brasil.

Master : J.D. Boissonnat, D. Cohen-Steiner, M. Yvinec, *Computational Geometric Learning* , 24h, International Master Sophia-Antipolis.

Master : S. Oudot, *Computational Geometry: from Theory to Applications*, 36h, École polytechnique.

Master: Jean-Daniel Boissonnat, Frédéric Chazal, Mariette Yvinec, *Computational Geometric Learning*, 24h, Master MPRI, Paris.

Master: Olivier Devillers and Monique Teillaud, *Algorithmes géométriques, théorie et pratique*, 16h, Master SSTIM-VIM, Université Nice Sophia Antipolis.

Doctorat : Jean-Daniel Boissonnat, Frédéric Chazal, Mariette Yvinec, *Analyse géométrique des données* , 7h, Ecole Jeunes Chercheurs GDR Informatique Mathématique, Perpignan.

9.2.2. Supervision

PhD: Mikhail Bogdanov, Delaunay triangulations of spaces of constant negative curvature, Université de Nice - Sophia Antipolis, December 9, Monique Teillaud.

PhD in progress: Thomas Bonis, Topological persistence for learning, started on December 2013, Frédéric Chazal.

PhD in progress: Mickaël Buchet, Topological and geometric inference from measures, Université Paris XI, started October 2011, Frédéric Chazal and Steve Oudot.

PhD in progress : Ross Hemsley, Probabilistic methods for the efficiency of geometric structures and algorithms, started October 1st 2011, Olivier Devillers.

PhD in progress: Ruqi Huang, Algorithms for topological inference in metric spaces, started on December 2013, Frédéric Chazal.

PhD in progress : Clément Maria, Data structures and Algorithms in Computational Topology, started October 1st, 2011, Jean-Daniel Boissonnat.

PhD in progress : Rémy Thomasse, Smoothed complexity of geometric structures and algorithms, started December 1st 2012, Olivier Devillers.

PhD in progress : Mael Rouxel-Labbé, Anisotropic Mesh Generation, started October 1st, 2013, Jean-Daniel Boissonnat and Mariette Yvinec.

9.2.3. Juries

Jean-Daniel Boissonnat was a member (reviewer) of the HDR defense of Dominique Attali (Univ. Grenoble).

Jean-Daniel Boissonnat was a member (reviewer) of the PhD defense committee of David Salinas (Univ. Grenoble). Steve Oudot was also part of that defense committee.

Jean-Daniel Boissonnat was a member (reviewer) of the PhD defense of Jérémy Espinas (Univ. Lyon).

Frédéric Chazal was a member (reviewer) of the PhD defense of Lucie Druoton (Univ. de Bourgogne).

Frédéric Chazal was a member (reviewer) of the PhD defense of Anaïs Vergne (Telecom Paris).

Olivier Devillers was a member of the HDR defense committee of Nicolas Bonichon (Univ. Bordeaux).

Monique Teillaud was a member of the PhD defense committee of Marcel Roeloffzen, TU Eindhoven, October.

9.2.4. Internships

Thomas Bonis, image and shape classification using persistent homology (F. Chazal)

Claudia Werner, Triangulations on the sphere, Hochschule für Technik Stuttgart (Monique Teillaud)

Arnaud Poinas, Statistical manifold reconstruction (Jean-Daniel Boissonnat)

Sergei Kachanovich, Graph-induced simplicial complex (Jean-Daniel Boissonnat)

Chunyu Li, Persistence-based object recognition (F. Chazal and M. Ovsjanikov)

Venkata Yamajala, Implementing (and simplifying) the tangential complex (Jean-Daniel Boissonnat)

9.3. Popularization

Jean-Daniel Boissonnat, Au delà de la dimension 3, Caféin Inria Sophia Antipolis.

Jean-Daniel Boissonnat, Geometry Understanding in Higher Dimensions. Conference for the students of ENS Lyon (Inria Sophia Antipolis)

Monique Teillaud, “à quoi sert un triangle ?”, 2x2h, Collège Le Prés des Roures, Le Rouret, in the framework of the national Week of Mathematics.

Steve Oudot was coordinator of the *Photomaton 3d* booth at the *Nuit des chercheurs* event at École polytechnique in September 2013. Marc Glisse, Maks Ovsjanikov, Mickaël Buchet, and Thomas Bonis also participated.

9.4. Participation to conferences, seminars, invitations

9.4.1. Invited Talks

Jean-Daniel Boissonnat gave an invited lecture at the International Symposium on Voronoi Diagrams (St Petersburg) : on the empty sphere on manifolds. July.

Jean-Daniel Boissonnat gave an invited talk at the Jean-Paul Laumond’s day (on the occasion of his 60th anniversary) : Comprendre la géométrie des données.

Frédéric Chazal gave invited talks at the Workshop on Topological Data analysis, Institute for Mathematics and its Applications, Minneapolis, October 2013; at the Workshop on Topological Methods in Complexity Science, European Conference on Complex Systems satellite conference, Barcelona, September 2013.

9.4.2. Seminars

Members of the project have presented their published articles at conferences. The reader can refer to the bibliography to obtain the corresponding list. We list below all other talks given in seminars, summer schools and other workshops.

Frédéric Chazal, Filtrations et entrelacements : théorie et applications en Analyse Topologique des Données, Séminaire Brillouin, Paris, Dec. 2013.

Frédéric Chazal, Transport de mesures et inférence géométrique, Journées de Contrôle et Transport Optimal, Dijon, February 2013.

Frédéric Chazal, Computer Science and Machine Learning Seminar at Carnegie Mellon University, Pittsburg, September 2013.

Frédéric Chazal, Convergence rates for persistence diagrams in Topological Data Analysis, Workshop on Applied and Computational Topology, Bremen, July 2013.

Frédéric Chazal, Inférence géométrique et analyse topologique des données à l'aide de fonctions distance, colloquium de mathématiques, Univ. Paris 6, May 2013.

Olivier Devillers. Qualitative Symbolic Perturbations. Workshop on Geometric Computing. Heraklion. January.

Olivier Devillers. Hyperbolic Delaunay Triangulation, Universidade Federal de Pernambuco. June.

Monique Teillaud. Delaunay Triangulations of Point Sets in Closed Euclidean d -orbifolds. Workshop on Geometric Computing. Heraklion. January.

Monique Teillaud. Delaunay Triangulations of Point Sets in Closed Euclidean d -orbifolds. Meeting of ANR Presage. January.

Monique Teillaud. Curves in CGAL (with Michael Hemmer, University of Technology Braunschweig). Dagstuhl Seminar on Drawing graphs and maps with curves. April.

Monique Teillaud. 3D meshes in CGAL. Mathematics for Industry and Society, French Embassy Berlin. July.

9.4.3. Short scientific visits

Frédéric Chazal, Carnegie Mellon University, Sept. 2013.

Frédéric Chazal, Stanford University, May 2013.

Olivier Devillers and Monique Teillaud, University of Athens, January.

Monique Teillaud, Zuse Institut Berlin, July.

Monique Teillaud, TU Eindhoven, October.

GEOSTAT Project-Team

8. Dissemination

8.1. Scientific Animation

- H. Badri has presented the Siggraph ASIA paper to Manao team seminar (Inria BSO) in November 2013.
- H. Badri has presented his research projects to LRIT lab seminar (CNRST), December 2013, Rabat, Morocco.
- H. Badri is an invited speaker to the "Séminaire Signal-Image Bordeaux" organized by IMS, IMB and LaBRI, March 2014, Bordeaux.
- H. Yahia was an invited participant to the Workshop on "Global Systems Science: role of models and data" held at Brussels, February 7-8, 2013.
- H. Yahia was a member of the selection committee (February 25th, 2013) of the joint workshop in ICST held in Mumbai (India), 2013.
- H. Yahia participated in the CNU (Conseil national des Universités), section 61 selection meeting in January 2013.
- H. Yahia has presented the ICARODE project (*Integration and cascading for high resolution ocean dynamics*, CNES-NASA-OSTST) at the CNES meeting in September 2013 at LEGOS (UMR CNRS 5566), Toulouse.
- H. Yahia was an invited speaker at the India-CEFIPRA workshop in ICST "Challenges in overcoming complexity, from big data to cyberphysical systems", April 4 - 5, 2013, New Delhi- India, Bhagirathi Building - IIT Delhi. Title: *Advanced nonlinear approaches for handling complex datasets and acquisitions in Earth Observations and Universe Sciences* [22].
- O. Pont, B. Xu and H. Yahia were invited speakers at IEEE EMBC 2013: 35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Osaka, July 3-7, 2013. Title: *Arrhythmic dynamics from singularity analysis of electrocardiographic maps* [21].
- H. Yahia is a member of Elsevier's Digital Processing editorial board (2010-2013), and of Frontiers in Fractal Physiology open journal editorial board.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

K. Daoudi was invited for the second time by the Moroccan CNRST within the FINCOME'2013 program (<http://www.fincome.cnrst.ma/>) to give a 20 hour set of lectures on speech processing at the Master2 InfoTelecom of the faculty of science of Rabat (<http://www.fsr.ac.ma/MIT/>).

8.2.2. Supervision

PhD : V. Khanagha, *Novel Multiscale Methods for Nonlinear Speech Analysis*, University Bordeaux-1, PhD defended on January 16th, 2013, supervisors: K. Daoudi and H. Yahia [13].

PhD : S. Kumar Maji, *Multiscale Methods in Signal Processing for Adaptive Optics*, University Bordeaux-1, PhD defended on November 14th, 2013, supervisor: H. Yahia [14].

PhD : J. Sudre, *Circulation submésoséchelle et comportements des prédateurs marins supérieurs : Apport de l'analyse multi-échelles et multi-capteurs*, University Toulouse-III Paul Sabatier, PhD defended on December 16th, 2013, supervisors: V. Garçon and H. Yahia [14].

8.2.3. Juries

- H. Yahia is a member of the jury ("reviewer") for the PhD of N. Navoret, defended on June 26th, 2013 at University of Bourgogne. Title: *Analyse et détection des électrogrammes complexes fractionnés en vue de soigner la fibrillation auriculaire à l'aide de techniques d'ablation par radiofréquence*. Jury: H. Yahia (reviewer), J.-M. Vesin (reviewer), A. Pumir (examiner), J.-M. Bilbault (examiner), G. Laurent (invited), S. Binczak (supervisor), S. Jacquir (co-supervisor).

8.3. Popularization

- H. Yahia made a presentation (title: *Dynamique océanique turbulente à super-résolution*. at the Unithé séminat, on September 2th, 2013, Inria BSO).
- O. Pont participated to the "Ateliers de Médiation Scientifique" (Inria BSO).
- O. Pont did a radio interview with RFC radio station: "Que cherchent-ils ?".

GRACE Project-Team

9. Dissemination

9.1. Scientific Committees

- Daniel Augot is member of the scientific committee of the French *CCA seminar*, held thrice a year in Institut Henry Poincaré.
- Daniel Augot was member of the programm committee of Fq11, the 11th International Conference on Finite Fields and their Applications, Magdeburg, July 22-26, 2013.

9.2. Administrative committees

- Alain Couvreur and Benjamin Smith are elected members of the *Comité de centre* of Inria Saclay.
- Alain Couvreur is *Jeune chercheur référent* for the *Commission de suivi doctoral* of Inria Saclay.
- Daniel Augot is member of the *Conseil de Laboratoire* of the LIX as a team leader.
- François Morain, Julia Pielant and Benjamin Smith are elected members of the *Conseil de Laboratoire* of the LIX.
- Daniel Augot is head of the *Commission de suivi doctoral* of Inria Saclay.
- Daniel Augot is member of the *Bureau du comité des projets* de l’Inria Saclay–Île-de-France.
- Daniel Augot is member of the *commission scientifique* de l’Inria Saclay–Île-de-France.
- Daniel Augot is member of the *commission formation du labex Digicosme*
- Daniel Augot is member of the *comité de programme* of the Digiteo RTRA.
- Daniel Augot was member of the *comité de sélection pour un maître de conférence* at University of Versailles–Saint-Quentin.
- Benjamin Smith became the (scientific) international correspondent for Inria Saclay.
- Benjamin Smith became a member of Inria’s Groupe de Travail "Relations Internationales" du Comité d’Orientation Scientifique et Technologique (COST-GTRI).
- Benjamin Smith is responsible for office assignments at LIX.
- Benjamin Smith was the chair of the LIX/Qualcomm/Carnot fellowship committee.
- François Morain is vice-head of the Département d’informatique of Ecole Polytechnique.
- François Morain represents École polytechnique in the committee in charge of *Mention HPC* in the *Master de l’université Paris Saclay*.

9.3. Teaching - Supervision - Juries

9.3.1. Teaching

Master: Daniel Augot, “Codes correcteurs d’erreurs et applications à la cryptographie” 13.5h (equiv TD), M2, Master Parisien de Recherche en Informatique (MPRI), France

Master: Benjamin Smith, Algorithmes arithmétiques pour la cryptologie, 13.5h (equiv TD), M2, Master Parisien de Recherche en Informatique (MPRI), France

Master: François Morain, Algorithmes arithmétiques pour la cryptologie, 9h (equiv TD), M2, Master Parisien de Recherche en Informatique (MPRI), France

Master: Benjamin Smith, Cryptologie, 18h (equiv TD), M1, École polytechnique, France

Licence: Benjamin Smith, Introduction à l’informatique, 40h (equiv TD), L3, École polytechnique, France

Master: Françoise Levy-dit-Vehel, Introduction à la cryptographie, 12h (equiv TD), Mastère spécialisé architecture et sécurité des systèmes d'information, ENSTA ParisTech.

Licence : F. Morain, 10 lectures of 1.5h, 1st year course "Introduction à l'informatique" (INF311) at École polytechnique (L2). Responsibility of this module (350 students).

Master (M1) : F. Morain, 9 lectures of 1.5h, 3rd year course "cryptology" at École polytechnique.

9.3.2. Supervision

- PhD in progress : Cécile Gonçalves, Algorithmes avancés de calcul de cardinalité pour des courbes intéressantes en cryptologie, 1/10/2011, Benjamin Smith and François Morain.
- PhD in progress: Gwezheneg Robert, Métrique rang et codes de Gabidulin en caractéristique zéro, 1/10/12, Daniel Augot and P. Loidreau.
- PhD: Alexander Zeh, Algebraic Soft- and Hard-Decision Decoding of Generalized Reed–Solomon and Cyclic Codes, Ulm Universität, 2/09/2013, Daniel Augot and Martin Bossert.

9.3.3. Juries

- Alain Couvreur is member of the Jury of the *Agrégation de Mathématiques*, Options C (computer algebra) and D (computer science).
- Benjamin Smith was an examiner for the PhD of Louise Huot (UPMC, 13/12/2013)
- Benjamin Smith was an examiner for the PhD of Aurore Guillevic (ENS, 20/12/2013)
- Benjamin Smith was a member of the jury for the CNRS Concours IE63 (BAP E), 24-25/10/2013.
- Daniel Augot was examiner for the PhD of Mamdouh Abbara (X, 09/04/2013)
- Daniel Augot was reviewer of the PhD of Mila Tukumuli, (Aix-Marseille University, 13/09/2013)
- Daniel Augot was examiner for the PhD of Lin Sok (Télécom Paristech, 20/09/2013)
- Daniel Augot was examiner and reviewer of Johan Nielsen's PhD (DTU Lyngby, 30/09/2013)
- Daniel Augot was examiner and reviewer of Muhammad Foizul Islam Chowdhury's PhD (Western University Canada, London, Canada, 8/11/2013)
- Daniel Augot was reviewer of Stéphanie Dib's PhD (Aix-Marseille University, 11/12/2013)

9.4. Invitations to seminars and conferences

- Daniel Augot : 14/02/2014, GREYC, Caen. "Les connexions entre le logarithme discret sur les corps finis non premiers et le décodage des codes de Reed-Solomon".
- Daniel Augot was invited to participate to a session Cryptography and Number Theory at 2013 SIAM Conference on Applied Algebraic Geometry, 01-04/08/2013.
- Daniel Augot gave a talk at Dagstuhl Seminar 13351 on coding theory, 25-30/08/2013
- Alain Couvreur gave a talk at the Seminar on Coding Theory and Cryptography common to the universities of Neuchâtel and Zurich. 22/04/2013.
- Benjamin Smith was an invited speaker at the international Workshop on Number Theory at the American University of Beirut, Lebanon, 25-27/04/2013.
- Benjamin Smith gave a talk at AGCT-14, an invitational conference on Arithmetic, Geometry, Cryptography, and Coding Theory, 03-07/06/2013.
- Benjamin Smith gave two lectures on number-theoretic cryptography at the CryptoBG international summer school in Oriahovitsa, Bulgaria, 20-27/07/2013.
- Benjamin Smith gave an invited talk at the PIMS Workshop on Curves and Applications, Calgary, Canada, 19-21/08/2013.
- Benjamin Smith gave visited Microsoft Research, Redmond from 22/08/2013 to 04/09/2013, and gave a talk in their seminar.

- Benjamin Smith gave two lectures at the ECC 2013 summer school on Elliptic Curves for Cryptography in Leuven, Belgium, 11-13/09/2013.
- Benjamin Smith was an invited speaker at ECC 2013 (the 17th annual Elliptic Curve Cryptography workshop) in Leuven, Belgium, 16-18/09/2013.
- F. Morain gave three lectures in the summer school *Number theory for cryptography* in Warwick University, June 2013.

9.5. Popularization

- Alain Couvreur gave a talk at *UniThé ou Café*, a monthly science popularization event dedicated to all the employees of Inria Saclay.
- Daniel Augot presented bit operations, the Hamming code, the one-time pad and a bit of steganography to high school students in Courcouronnes, 10/04/2013.

GRAND-LARGE Project-Team

7. Dissemination

7.1. Scientific Animation

Christine Eisenbeis

- IJPP (International Journal on Parallel Programming) editorial board.

Marc Baboulin

- Member of Steering Committee of ACM High Performance Computing Symposium (HPC 2013), San Diego, April 7-10, 2013.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Licence : Cédric Bastoul, Réseaux niveau licence, IUT d'Orsay (60h), Système niveau licence, IUT d'Orsay (40h).

Master : Christine Eisenbeis, coordinatrice du module "Optimisations et compilation" du M2 recherche NSI ("Nouveaux systèmes informatiques") de l'université Paris-Sud 11. 3 heures de cours.

Master: M. Baboulin and J. Falcou teach in "Calcul Haute Performance" of M2 recherche NSI of University Paris Sud 11.

Polytech 5th year: M. Baboulin and J. Falcou teach the "Parallel Computing" class.

7.2.2. Supervision

PhD : Amal Khabou, Dense matrix computations: communication cost and numerical stability, University Paris Sud 11, 11 February 2013, PhD Supervisor: L. Grigori

PhD in progress: Ian Masliah, Automatic code generation in high-performance computing numerical libraries, University Paris Sud 11, Supervisors: M. Baboulin and J. Falcou

PhD in progress: Adrien Rémy, Solving dense linear systems on accelerated multicore architectures, University Paris Sud 11, Supervisors: M. Baboulin and B. Rozoy

PhD in progress: Yushan Wang, Numerical simulations of incompressible fluid flows on heterogeneous parallel architectures, University Paris Sud 11, Supervisors: M. Baboulin and O. Le Maître

PhD in progress: Lénaïc Bagnères, université Paris-Sud 11, supervisors: Cédric Bastoul and Christine Eisenbeis

PhD in progress: Alessandro Leite, université Paris-Sud 11, supervisors: Alba de Melo (university of Brazilia), Claude Tadonki (CRI, école des Mines de Paris), Christine Eisenbeis

PhD in progress: Michael Kruse, Polytopic memory layout optimization, université Paris-Sud 11, supervisor: Christine Eisenbeis

7.2.3. Committees

- Marc Baboulin, President of the PhD committee of Marc Letournel: "Approches duales dans la résolution de problèmes stochastiques", September 27, 2013.
- Christine Eisenbeis, jury de HdR de Claude Tadonki, "High Performance Computing as a Combination of Machines and Methods and Programming", jeudi 16 mai 2013, université Paris-Sud.

7.3. Popularization

Christine Eisenbeis est membre du conseil scientifique des programmes du centre d'Alembert, Centre Interdisciplinaire d'Étude de l'Évolution des Idées, des Sciences et des Techniques (CIEEIST), de l'université Paris-Sud.

GRAPHIK Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. *Habilitations à Diriger les Recherches (HDR)*

Rallou Thomopoulos defended her HDR on December, entitled *Aide à la décision dans les filières agroalimentaires* in front of the following jury:

- Christine FROIDEVAUX , Pr., Univ. Paris Sud, Orsay, Reviewer
- Bernard MOULIN, Pr., Univ. Laval, Québec, Canada, Reviewer
- Henri PRADE, DR CNRS, IRIT, Toulouse , Reviewer
- Joël ABECASSIS, IR (HDR), INRA, Montpellier
- Fabien GANDON, CR (HDR), Inria, Sophia-Antipolis
- Marie-Laure MUGNIER, Pr., Univ. Montpellier 2, Président of Jury

9.1.2. *Organization of Conferences/Workshops*

- Souhila Kaci co-organized the “Uncertain reasoning” track at FLAIRS’13. She also co-organized the 7th Multidisciplinary Workshop on Preferences (MPREF’13) in conjunction with IJCAI’13.
- Patrice Buche co-organized the IN-OVIVE workshop dedicated to heterogeneous data sources integration in life sciences during IC’2013 in Lille <http://umr-iate.cirad.fr/actualites/atelier-in-ovive-a-la-conference-ic-2013-le-2-juillet>.
- Madalina Croitoru was chair of GKR 2013 (3rd IJCAI international workshop on graph structures for knowledge representation and reasoning), in conjunction with IJCAI’13; and is general chair of ICCS 2014 (International Conference on Conceptual Structures).

9.1.3. *Editorial Boards*

ICCS (International Conference on Conceptual Structures)

RIA (Revue Francophone d’Intelligence Artificielle)

9.1.4. *Program Committees*

- **International conferences and workshops:**
 - ECAI 2014 (European Conference on Artificial Intelligence) [senior PC; PC]; RR 2014 (8th International Conference on Web Reasoning and Rule Systems) [co-presidency of program committee]; IPMU 2014 (15th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based System) [initiative committee of special session on “Decision Support and uncertainty management in Agri-Environment”]; ICCS 2014 (International Conference on Conceptual Structures) [general chair; steering committee]; ESWC 2014 (European Semantic Web Conference), IJCAI’13 (International Joint Conference on Artificial Intelligence)[senior PC; PC]; AAMAS’13 (Autonomous Agents and Multiagent Systems); EUSFLAT 2013 (8th conference of the European Society for Fuzzy Logic and Technology); RR 2013 (7th International Conference on Web Reasoning and Rule Systems).
 - NMR 2014 (Non-monotonic reasoning workshop); MPREF’14 (Workshop on Advances in Preference Handling); GKR 2013 (3rd IJCAI international workshop on graph structures for knowledge representation and reasoning)[chair].

- **National conferences and workshops:** JIAF 2013 and 2014 (Journées d'Intelligence Artificielle Fondamentale); IC 2013 (Ingénierie des Connaissances); LFA 2013 (22e rencontres francophones sur la logique floue et ses applications)

9.1.5. Invited Talks

- Jean-François Baget gave an invited talk at the “Artificial Intelligence meets the Web of Data” workshop associated to ESWC’13 (European Semantic Web Conference). Title : “*Ontologies and large databases: querying algorithms for the Web of Data*”.
- Marie-Laure Mugnier gave an invited talk at the workshop CrEDIBLE (fédération de données et de connaissances distribuées en imagerie biomédicale, CNRS - défi MASTODONS). Title: “*Ontological Query Answering with Existential Rules*”.
- Madalina Croitoru gave a seminar at the Univ. of Dresden. Title: “*What can argumentation do for inconsistent query answering?*”
- Madalina Croitoru gave 15h of lectures at the Computer Science winter school of the Univ. of Buenos Aires (ECI winter school, <http://www.dc.uba.ar/events/eci/2013/cursos/>). Title: “*Graph-based representation and reasoning in artificial intelligence*”

9.1.6. Scientific Advisory Boards

- ABES (National Bibliographic Agency for Universities) Scientific Advisory Board, Michel Chein (since its creation in 2010).
- Advisory Board of the Center of Excellence in Semantic Technologies (MIMOS, Malaysia), Marie-Laure Mugnier (since its creation in 2008).
- Scientific board of INRA-CEPIA department (Caractérisation et Elaboration des Produits Issus de l’Agriculture – Agricultural Products Engineering), Marie-Laure Mugnier (since Septembre 2011).

9.1.7. Local Collective Tasks

Souhila Kaci is co-responsible of “Artificial Intelligence” axis at LIRMM.

Souhila Kaci and Namrata Patel are members of the LIRMM Laboratory Council.

Jean-François Baget is member of the LIRMM Scientific Council.

9.1.8. Participation to the W3C RDF Working Group

(Jean-François Baget) The mission of the RDF Working Group, part of the Semantic Web Activity, is to update the 2004 version of the Resource Description Framework (RDF) Recommendation. The scope of work is to extend RDF to include some of the features that the community has identified as both desirable and important for interoperability based on experience with the 2004 version of the standard, but without having a negative effect on existing deployment efforts. <http://www.w3.org/2011/01/rdf-wg-charter>.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

The next table details the number of lecture hours as well as the number of module responsibilities for each team member.

Name	Position	2012/13	Cursus (*)	Module Resp. (per year)
J.-F. Baget	Research Scientist	40	M (UM2)	1
M. Croitoru	Assistant Prof.	198	L2	2
M. Chein	Emeritus Prof.	0		
J. Fortin	Assistant Prof	230	Polytech	2
S. Kaci	Professor	198	L and M(UM2)	3
M. Leclère	Assistant Prof.	96	L and M (UM2)	2
M. -L. Mugnier	Professor	192	L and M (UM2)	3
R. Thomopoulos	Research Scientist	0		no
L. Guizol	PhD	64	L	no
M. König	PhD	64	L	no
B. Paiva Lima	PhD	64	L (UM2)	no
M. Thomazo	PhD	64	L and M1 (UM2)	no

(*) L =Licence, M = Master (M1 = first year, M2 = second year), UM2 = Univ. Montpellier 2 (Sciences), IUT = Institute of Technology of UM2 (Licence Cursus), Polytech = Engineering School of UM2, UM3 = Univ. Montpellier 3 (Art and Humanities)

Globally, the team ensures the courses in logics (propositional logic and first-order logic in L, logics for Artificial Intelligence in M2) at the Montpellier 2 University, as well as the Master courses in Artificial Intelligence, Decision Support, Knowledge Representation and Knowledge Engineering. We are also responsible of modules in Web Technologies (Professional L at IUT) and Databases (L).

We have some specific responsibilities in the Computer Science Licence and Master:

- Michel Leclère is co-responsible of the master speciality DECOL (about 20 students) started in September 2011.
- Marie-Laure Mugnier is co-responsible of the Computer Science Master started in September 2011 (about 250 students), which gathers six specialties. She is also leading the Master project for the next four years (LMD4).
- Souhila Kaci is leading the Licence project for the next four years (LMD4).

9.2.2. Supervision

9.2.2.1. PhDs

Michaël Thomazo defended his PhD on October *Conjunctive Query Answering Under Existential Rules - Decidability, Complexity, and Algorithms* [15]. The jury was:

- Georg GOTTLOB (PR), Univ. of Oxford, Reviewer
- Carsten LUTZ (PR), Univ. of Bremen, Reviewer
- Marie-Christine ROUSSET (PR), Univ. de Grenoble, Reviewer
- Christophe PAUL (DR), CNRS, Examiner
- Jean-François BAGET (CR), Inria, Co-advisor
- Marie-Laure MUGNIER (PR), Univ. Montpellier 2, Advisor

The PhDs in progress are:

PhD in progress : Bruno Paiva Lima da Silva (ministry grant), Comparing Storage Systems for Large knowledge bases, Oct. 2010, supervised by Jean-François Baget and Madalina Croitoru. Defence in Jan. 2014.

PhD in progress : Tjitze Rienstra, Dynamic argumentation systems, Oct. 2010, supervised by Souhila Kaci and Leon van der Torre (University of Luxembourg)

PhD in progress : Mélanie König (ministry grant), Algorithms for querying large knowledge bases, Oct. 2011, supervised by Michel Leclère and Marie-Laure Mugnier

PhD in progress : Léa Guizol (ABES grant), Entity identification in metadata bases, Oct. 2011, supervised by Madalina Croitoru

PhD in Progress: Fabien Garreau (ANR ASPIQ grant), Algorithms for stable model semantics and existential rules (ANR ASPIQ, with Univ. of Angers), Sept. 2012, supervised by Igor Stephan, Jean-François Baget and Laurent Garcia

PhD in Progress: Swan Rocher (ANR Qualinca grant), Reasoning with inconsistent knowledge bases in presence of existential rules (ANR Qualinca), Sept. 2013, supervised by Marie-Laure Mugnier and Jean-François Baget

PhD in Progress: Namrata Patel (Univ. Montpellier II grant), Preference Handling in Decision Problems (bourse ministerielle), Sept. 2013, supervised by Souhila Kaci

9.2.3. Juries

9.2.3.1. PhDs

- Patrice Buche was reviewer for *Semantic support for quantitative research*, Hajo Rijgersberg, VU University Amsterdam, May 2013
- Patrice Buche was reviewer for *Validation, synthèse et paramétrage des cartes cognitives*, Aymeric Le Dorze, LERIA/Angers University, Nov. 2013
- Patrice Buche was reviewer for *Evolution cohérente des ressources termino-ontologiques et des annotations sémantiques*, Anis Tissaoui, IRIT/Toulouse 3 University, Dec. 2013
- Patrice Buche was jury member for *D'un langage de haut niveau à des requêtes graphes permettant d'interroger le web sémantique*, Camille Pradel, IRIT/Toulouse 3 University, Dec. 2013
- Marie-Laure Mugnier and Jean-François Baget were jury members (and co-directors) for *Conjunctive Query Answering Under Existential Rules - Decidability, Complexity, and Algorithms*, Univ. Montpellier II, Oct. 2013.

9.2.3.2. HDRs

- Marie-Laure Mugnier was jury president for *Aide à la décision dans les filières agroalimentaires*, Rallou Thomopoulos, Univ. Montpellier II, Dec. 2013
- Marie-Laure Mugnier was jury president for *Contribution des modèles de connaissances à l'amélioration continue des processus industriels*, Bernard Kamsu, ENI Tarbes, Apr. 2013

9.2.3.3. Other juries

- Marie-Laure Mugnier was president of a recruitment committee for a professor position at UM2-IUT Béziers
- Marie-Laure Mugnier was member of 3 recruitment committees for associate professor positions at UM2-IUT Montpellier, UPMF-Grenoble and SupAgro Montpellier
- Madalina Croitoru was member of a recruitment committee for an associate professor position at UM2-IUT Montpellier.

9.3. Popularization

Patrice Buche was invited to give a talk about Packaging Decision support system involving flexible querying and argumentation at ANR Ribenut final meeting in November, 14 2013 (Avignon)

HIEPACS Project-Team

9. Dissemination

9.1. Scientific Animation

Emmanuel Agullo has been a member of the scientific committee of the international conferences IPDPS'13. Olivier Coulaud is member of the C3I GENCI committee and of the scientific board of the regional computing mesocentre. Moreover, he is the leader of the Inria PlaFRIM computing platform. He is member of the scientific committee of CCGRID2014.

Mathieu Faverge has been member of the technical program committee of the international conference HiPC'13 and reviewed for Parallel Computing journal.

Pierre Ramet is member of the GENCI scientific committee (Mathematics and Computer Sciences). He is also in the decision board of the "MCIA" project (*Mésocentre Aquitain : un environnement Mutualisé de Calcul Intensif en Aquitaine*).

Luc Giraud has been member of the scientific committee of the international conferences Preconditioning'13, IPDPS'13, HiPC'13, Pareng'13, PDCN'13 and PDSEC'13. He is also member of the editorial board of the SIAM Journal on Matrix Analysis and Applications (SIMAX), expert for the PRACE program and for the Italian VQR 2004-2010 programme. He is a member of DAS-SCI (Domaine d'Activité technologiques Stratégiques - Systèmes complexes, Conception, architecture et Intégration) of Aerospace Valley (pôle de compétitivité).

Abdou Guermouche has been member of the scientific committee of the international conferences HiPC'13, ICPP'13 and IPDPS'13.

Jean Roman is a member of the Research Direction of Inria; he is the Deputy Scientific Director of the Inria research domain entitled *Applied Mathematics, Computation and Simulation* and is in charge at the national level of the Inria activities concerning High Performance Computing. He is member of the "Strategic Comity for Intensive Computation" of the French Research Ministry and is member of the "Scientific Board" of the CEA-DAM. As representative of Inria, he is member of the Steering Committee of EADS Corporate Foundation (for the research chair entitled *Mathematics of Complex Systems* in Bangalore-India), of the board of ETP4HPC (*European Technology Platform for High Performance Computing*), of the French Information Group for PRACE, of the Technical Group of GENCI and of the Scientific Advisory Board of the Maison de la Simulation. Finally, he has been member of the scientific committee of the international conference EuroMicro PDP'13 (IEEE).

Finally, the **HIEPACS** members have contributed to the reviewing process of several international journals (ACM Trans. on Mathematical Software, IEEE Trans. on Parallel and Distributed Systems, Journal of Engineering Mathematics, Parallel Computing, SIAM J. Matrix Analysis and Applications, SIAM J. Scientific Comp., ...), to the reviewing process of international conferences (CCGRID 2014, IEEE IPDPS 2014, IEEE PDP 2014, ...), and have acted as experts for the research agency ANR-MN.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

In the following are listed the lectures given by the **HIEPACS** members.

Undergraduate level/Licence

1. A. Esnard: Operating system programming, 36h, University Bordeaux I; Using network, 23h, University Bordeaux I.

He is also in charge of the computer science certificate for Internet (C2i) at the University Bordeaux I.

2. P. Ramet: System programming 24h, Databases 32h, Objet programming 48h, cryptography 32h at Bordeaux University.
He is also in charge of the "licences professionnelles" since 2007 at Bordeaux University.

Post graduate level/Master

1. O. Coulaud: Paradigms for parallel computing, 28h, ENSEIRB-MatMeca, Talence; Code coupling, 6h, ENSEIRB-MatMeca, Talence.
2. E. Agullo: Operating systems, 24h, University Bordeaux I; Dense linear algebra kernels, 8h, ENSEIRB-MatMeca; Numerical Algorithms, 30h; ENSEIRB-MatMeca, Talence.
3. A. Esnard: Network management, 27h, University Bordeaux I; Network security, 27h, University Bordeaux I; Programming distributed applications, 35h, ENSEIRB-MatMeca, Talence.
4. M. Faverge: System Programming, 74h; Programming Environment, 26h; Load Balancing and Scheduling, 19h; Numerical Algorithmic, 30h; C Projects, 20h; ENSEIRB-MatMeca, Talence.
He is also in charge of the second year of Embedded Electronic Systems option at ENSEIRB-MatMeca, Talence.
5. P. Ramet: Scheduling, 8h; Numerical Algorithmic, 30h; ENSEIRB-MatMeca, Talence.
He also give classes on advanced databases, 30h, Ho Chi Minh City, Vietnam.
6. L. Giraud: Introduction to intensive computing and related programming tools, 20h, INSA Toulouse; Introduction to high performance computing and applications, 20h, ISAE-ENSICA; On mathematical tools for numerical simulations, 10h, ENSEEIHT Toulouse; Parallel sparse linear algebra, 11h, ENSEIRB-MatMeca, Talence.
7. A. Guermouche: Network management, 92h, University Bordeaux I; Network security, 64h, University Bordeaux I; Operating system, 24h, University Bordeaux I.
8. J. Roman: Parallel sparse linear algebra, 10h, ENSEIRB-MatMeca, Talence; Parallel algorithms, 22h, ENSEIRB-MatMeca, Talence.
9. X. Vasseur: Solution of PDE, 16 h, ENSEEIHT Toulouse; Linear Algebra and Optimization, 25 h, ISEA-ENSICA, Toulouse; Introduction to MPI, 11 h, ENM, Toulouse; Introduction to Fortran 90, 5 h, CERFACS, Toulouse.

9.2.2. Supervision

Defended HDR

1. HdR: Olivier Coulaud, *Contributions algorithmiques pour les simulations complexes en physique des matériaux*, Université Bordeaux I, defended on 29 Nov. 2013.

Defended PhD thesis

1. Pablo Salas Medina, *Numerical and physical aspects of thermoacoustic instabilities in annular combustion chambers* Université Bordeaux I, defended on 15 Nov. 2013, advisors: L. Giraud and X. Vasseur (CERFACS).
2. Rached Abdelkhalek, *Accélération matérielle pour l'imagerie sismique: modélisation, migration et interprétation*, Université Bordeaux I, defended on 20 Dec. 2013 advisors: O. Coulaud, G. Latu (CEA Cadarache) and J. Roman.

PhD in progress :

1. Pierre Blanchard, *Fast and accurate methods for dislocation dynamics*, starting Oct. 2013, advisors: O. Coulaud and E. Darve.

2. Bérenger Bramas, *Optimization of time domain BEM solvers*, starting Jan 2013, advisors: O. Coulaud and G. Sylvand.
3. Astrid Casadei, *Scalabilité et robustesse numérique des solveurs hybrides pour machines massivement parallèles*, starting Oct. 2011, advisors: F. Pellegrini and P. Ramet.
4. Jean-Marie Couteyen, *Parallélisation et passage à l'échelle du code FLUSEPA*, starting Feb 2013, advisors : P. Brenner (Astrium Space Transportation) and J. Roman.
5. Yohann Dudouit, *Scalable parallel elastodynamic solver with local refinement in geophysics*, starting Oct. 2010, advisors: L. Giraud and S. Pernet (CERFACS).
6. Arnaud Etcheverry, *Toward large scale dynamic dislocation simulation on petaflop computers*, starting Oct. 2011, advisor: O. Coulaud.
7. Xavier Lacoste, *Scheduling and memory optimizations for sparse direct solver on multi-core/multigpu cluster systems*, starting Jan. 2012, advisors: F. Pellegrini and P. Ramet.
8. Andra Hugo *Composabilité de codes parallèles sur plateformes hétérogènes*, starting Oct. 2011, advisors: A. Guermouche, R. Namyst and P-A. Wacrenier.
9. Alexis Praga, *Parallel atmospheric chemistry and transport model solver for massively platforms*, starting Oct. 2011, advisors: D. Cariolle (CERFACS) and L. Giraud.
10. Stojce Nakov, *Parallel hybrid solver for heterogenous manycores: application to geophysics*, starting Oct. 2011, advisors: E. Agullo and J. Roman.
11. Maria Predari, *Dynamic Load Balancing for Massively Parallel Coupled Codes*, starting Oct. 2013, advisors: A. Esnard and J. Roman.
12. Fabien Rozar, *Peta and exaflop algorithms for turbulence simulations of fusion plasmas*, starting Nov. 2012, advisors: Guillaume Latu (CEA Cadarache) and Jean Roman.
13. Moustapha Salli, *Design of a massively parallel version of the SN method for neutronic simulations*, starting Oct. 2012, advisors: Laurent Plagne (EDF), Pierre Ramet and Jean Roman.
14. Clément Vuchener, *Algorithmique de l'équilibrage de charge pour des couplages de codes complexes*, starting Sept. 2010, advisors: A. Esnard and J. Roman.
15. Mawussi Zounon, *Numerical resilient algorithms for exascale*, starting Oct. 2011, advisors: E. Agullo and L. Giraud.

9.2.3. Juries

PhD thesis defences

1. M. Malandain, *Simulation massivement parallèle des écoulements turbulents à faible nombre de Mach*, Institut National des Sciences Appliquées de Rouen, spécialité mécanique des fluides numériques, January 15, Referee: L. Giraud.
2. S. Fourestier, *Redistribution dynamique parallèle efficace de la charge pour les problèmes numériques de très grande taille*, Université Bordeaux I, June 20, Member: A. Esnard.
3. S. Henry, *Modèles de programmation et supports exécutifs pour architectures hétérogènes*, Université Bordeaux I, spécialité Informatique, Nov. 14, Member: L. Giraud.

HdR defences

1. C. Tadonki, *High Performance Computing and Combination of Machines and Methods and Programming*, Université Paris-Sud, Orsay, spécialité Informatique, May 16, Referee: L. Giraud.

9.3. Popularization

In the context of HPC-PME initiative, we started a collaboration with ALGO'TECH INFORMATIQUE and we have organised one of the first PhD-consultant action implemented by Xavier Lacoste led by Pierre Ramet. ALGO'TECH is one of the most innovative SMEs (small and medium sized enterprises) in the field of cabling embedded systems, and more broadly, automatic devices. The main target of the project is to validate the possibility to use the sparse linear solvers of our team in the area of electromagnetic simulation tools developed by ALGO'TECH.

The **HIEPACS** members have organized the PATC training session on Parallel Linear algebra at "Maison de la simulation" in Saclay from March 26th to March 28th. Mathieu Faverge also gave a full day lecture on dense linear algebra libraries at the PRACE Summer School at CINECA.

HIPERCOM2 Team

9. Dissemination

9.1. Scientific Animation

Pascale Minet was member of the program committee of:

- AdHocNets 2013, 5th International ICST Conference on Ad Hoc Networks, October 2013.
- DCNET 2013, International Conference on Data Communication Networking, July 2013,
- ETFA 2013, 18th IEEE International Conference on Emerging Technologies & Factory Automation, September 2013.
- ICN 2013, the 12th International Conference on Networks, January 2013.
- IFIP Wireless Days 2013, November 2013.
- IUCC 2013, the 12th IEEE International Conference on Ubiquitous Computing and Communications, August 2013.
- IWCMC 2013, the 9th International Wireless Communications and Mobile Computing Conference, July 2013.
- PAEWN 2013, International workshop on Performance Analysis and Enhancement of Wireless Networks, November 2013.
- PECCS 2013, 3rd international conference on Pervasive and Embedded Computing and Communication Systems, February 2013.
- RAWSN 2013, first International Workshop on RFID and Adaptive Wireless Sensor Networks, in conjunction with NETYS 2013, Marrakech, Morocco, April 2013.
- RTNS 2013, 20th International Conference on Real-Time and Network Systems, September 2013.
- SERA 2013, Int. Conf. on Software Engineering Research & Applications, August 2013.
- SNPD 2013, 12th International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing, June 2013.

Pascale Minet was also reviewer for the following journals:

- IEEE Transactions on Vehicular Technology,
- The International Journal of Networked and Distributed Computing,
- International Journal of Communication Systems,
- International Journal of Distributed Sensor Networks,
- Computer Communications Journal,
- Ad Hoc Networks journal.

Paul Muhlethaler was reviewer for the following projects:

- the call 8 of the European commission: "Networks of the future".
- ANR projects,
- ASTRID projects.

Paul Muhlethaler was reviewer for the following journals:

- IEEE Transactions on Wireless Communications,
- IEEE Transactions on Vehicular Technology,
- IEEE Transactions on Information Theory.

Paul Muhlethaler was also member of:

- the Steering committee of MobileHealth 2013, 3rd ACM MobiHoc Workshop on Pervasive Wireless Healthcare In Conjunction With MobiHoc 2013 Conference, June 2013, Hilton Head Island, South Carolina, USA,
- the Technical committee of the second International Workshop on Performance Evaluation and Modeling in Wireless Networks, PEMWN 2013, November 2013, Hammamet, Tunisia.

Cédric Adjih was member of the program committee of:

- AINTEC 2013, ACM Asian Internet Engineering Conference, November 2013.
- PEMWN 2013, 2nd International Workshop on Performance Evaluation and Modeling in Wireless Networks, November 2013, Hammamet, Tunisia.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : **Ichrak Amdouni** taught "Imperative programming" at Univeristy of Versailles Saint-Quentin (L1).

Master : **Pascale Minet** taught:

- Networks and quality of service in Master Systèmes Electroniques et Traitement de l'Information, at INSTN (Saclay).
- Mobile ad-hoc networks: medium access, routing and quality of service in Master Ingénierie informatique of the University of Marne-la-Vallée.
- Mobile ad hoc networks and wireless sensor networks: medium access, routing and energy efficiency in Master ScTIC (Systèmes complexes, Technologies de l'Information et du Contrôle) of the University of Paris 12.

9.2.2. Supervision

PhD : **Ichrak Amdouni**, "Wireless Self-adaptive Ad hoc and Sensor Networks: Energy Efficiency and Spatial Reuse", University Pierre et Marie Curie - Paris VI, February 2013, Pascale Minet, adviser.

9.2.3. Juries

HdR : Rami Langar, "Urban wireless networks: mobility, routing and resource management concerns ", University Pierre et Marie Curie, Sorbone universities, December 2013, Paul Muhlethaler, reviewer.

PhD :

- Mouhannad Alattar, "Security supervision of mobile ad hoc networks: a lightweight, robust and reliable intrusion detection system", University of Franche-Comté, July 2013, Pascale Minet, reviewer.
- David Fotue, "Agrégation et routage efficace de données dans les réseaux de capteurs sans fil", Telecom ParisTech, October 2013, Pascale Minet, president.
- Skander Azzaz, "Maintenance proactive des réseaux de capteurs sans fil", ENSI, Tunisia, November 2013, Pascale Minet, examiner.
- Abir Ben Ali, "Contrôle de congestion dans les applications multimédia dans l'Internet sans fil", ENSI, Tunisia, November 2013, Paul Muhlethaler, reviewer.
- Ahmed Soua, "Réseaux véhiculaires: dissémination, routage et collecte de données: modèles et algorithmes", Telecom SudParis & University Pierre et Marie Curie, Sorbone universities, November 2013, Paul Muhlethaler, examiner.

9.3. Popularization

- **Futur en Seine**, in Paris, June 2013. The HIPERCOM2 team was very active and presented demonstrations of Wireless Sensor Networks with a focus on the context of Smart Cities. The demonstration prepared by Cédric Adjih, Ichrak Amdouni, Hana Baccouch, Ridha Soua and Ala-Edin Weslati concerned the principles of wireless sensor networks, the energy-efficient routing protocol, the node coloring algorithm running in the OCARI network to maximize network lifetime; along with application of wireless sensor networks to Smart Cities. The open testbeds for wireless sensor networks, Senslab and Equipex-FIT were also presented: what do they offer and how to use them.
- Nadjib Achir, Cédric Adjih, Hana Baccouch, Ichrak Amdouni and Ridha Soua explained the principles of communication and routing in wireless sensor networks and organized several demonstrations for undergraduates and students who visited Inria in February 2013.

HYBRID Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Editorial boards of journals

- Anatole Lécuyer is associate editor of ACM Transactions on Applied Perception (ACM TAP), and International Journal on Human-Computer Studies (IJHCS) .
- Maud Marchal is associate editor of Computer Graphics Forum (CGF).

9.1.2. Technical program committees of conferences

- Anatole Lécuyer was program and conference chair of IEEE 3DUI'13. He was also in international program committees of: IEEE VR'13, Eurographics'13, ACM Siggraph Asia'13.
- Bruno Arnaldi was program chair of AFRV'13 and member of the international program committee of IEEE VR'13.
- Thierry Duval was in international program committees of: IEEE 3DUI'13, GRAPP'13, JVRC'13, IHM'13 (Demo co-chair), IEEE CogInfoCom'13, ACM VRST'13, VRIC'13.
- Valérie Gouranton was in international program committee and Chair of Symposium "VR-Serious Game and Interactive Storytelling" at VRIC'13.
- Maud Marchal was in international program committees of: IEEE 3DUI'13, Eurographics Short Papers'13, GRAPP'13.
- Ferran Argelaguet was in international program committees of: IEEE 3DUI'13, ACM VRST'13, ICAT'13 (Demo co-chair), ACM SU'13.

9.1.3. Selection committees

- Anatole Lécuyer was in the selection committee for an Associate Professor position at "Université de Bordeaux 1".
- Bruno Arnaldi was in the selection committee for a Professor position at "Ecole Normale Supérieure de Cachan Antenne de Bretagne" and for a Professor Position at "INSA de Rennes".
- Thierry Duval was in the selection committee for an Associate Professor position at "École Nationale d'Ingénieurs de Brest".

9.1.4. Participation in seminars, invitations

- Anatole Lécuyer has been invited to give a keynote talk at AFIHM'13 (Bordeaux), and other talks at: SOFMER'13 (Reims), Chimie et TIC'13 (Paris). He has participated in "Dagstuhl Seminar 13241" on "Virtual Realities" at Schloss Dagstuhl (9–14 June 2013, Germany).

9.1.5. Animation at the international level

- Anatole Lécuyer was co-organizer of a Course on "Walking in Virtual environments" at ACM CHI'13 (with F. Steinicke, Y. Visell and J. Campos), a Tutorial on "BCI and Haptics" at World-Haptics'13 (with M. Ziat), a Workshop on "BCI Feedback" at the BCI Meeting'13 (with F. Lotte, and R. Scherer), a Workshop on "BCI and EEG" at Rennes Hospital (with I. Bonan, and G.TEC Company). He was also reviewer for conferences: JVRC'13, VRIC'13.
- Bruno Arnaldi was reviewer for conference IEEE VR'13 and reviewer for an ERC Advanced Grant Proposal.

- Thierry Duval was reviewer for international journal IEEE THMS, and for conferences: VRIC'13, IEEE 3DUI'13, IHM'13, JVRC'13, ACM VRST'13, IEEE VR'13, GRAPP'13. He also served as an expert for evaluation of the European FP7 project "Beaming".
- Valérie Gouranton was reviewer for international journal "Journal on Computing and Cultural Heritage", and for conference VRIC'13.
- Maud Marchal was reviewer for international journals: IEEE TVCG, IEEE ToH, and for conferences: IEEE VR'13, IEEE 3DUI'13, Eurographics'13, Siggraph'13, MICCAI'13, IEEE EMBS'13.
- Ferran Argelaguet was a reviewer for international journals: IEEE Computer Graphics and Applications, ACM Journal on Computing and Cultural Heritage, and for conference JVRC'13.

9.1.6. Animation at the national level

- Anatole Lécuyer was member of executive committee of the French Association for Virtual Reality (AFRV) until October 2013.
- Bruno Arnaldi was vice-president and member of the executive committee of AFRV.
- Thierry Duval was a member of AFRV and AFIHM. He served as an expert for selection of french ANR projects.
- Valérie Gouranton was member of executive committee of AFRV since October 2013.

9.1.7. Animation at the regional and local level

- Bruno Arnaldi was vice-president of the scientific committee of "INSA de Rennes" and was in the CSV (selection committee) of Competitivity Cluster "Images et Réseaux".
- Valérie Gouranton was co-head of a Master 2 in Computer Science (joint to University of Rennes 1, INSA Rennes, ENS CACHAN Antenne Bretagne, Supelec, UBO, ENIB, ENSTA Bretagne, Télécom Bretagne, UBS). She was also member of the scientific committee of INSA Rennes and member of the laboratory committee of IRISA.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Anatole Lécuyer:

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

Master SIBM: "Haptic and Brain-Computer Interfaces", 4,5h, M2, University of Rennes 1, FR

Bruno Arnaldi:

Master INSA Rennes: "VAR: Virtual and Augmented Reality", 12h, M2, INSA Rennes, FR

Master INSA Rennes: "Virtual Reality", 6h, M2, INSA Rennes, FR

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

Thierry Duval:

Master STS Informatique: "HCI", 54h, M1, ISTIC, University of Rennes 1, FR

Master STS Informatique: "Introduction to Virtual Reality", 24h, M1, ISTIC, University of Rennes 1, FR

Master STS Informatique: "Software engineering for HCI", 15h, M1, ESIR, University of Rennes 1, FR

Master STS Informatique GL and MITIC: "Software engineering for HCI", 37h, M2, ISTIC, University of Rennes 1, FR

Master STS Informatique GL and MITIC: "Collaborative Virtual Environments", 38h, M2, ISTIC, University of Rennes 1, FR

Valérie Gouranton:

Licence: "Introduction to Virtual Reality", 12h, L2 and responsible of this lecture, INSA Rennes, FR

Licence: Project on "Virtual Reality", 13h, L3 and responsible of this lecture, INSA Rennes, FR

Master INSA Rennes: "Virtual Reality", 12h, M2, INSA Rennes, FR

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

Maud Marchal:

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

9.2.2. Supervision

PhD in progress: Jérémy Lacoche, "Plasticity for user interfaces in mixed reality", Started in September 2013 at B<>COM Research Institute, Supervised by T. Duval, B. Arnaldi, É. Maisel and J. Royan

PhD in progress: Morgan Le Chénéchal, "Activity and perception for distant collaboration in virtual environments", Started in September 2013 at B<>COM Research Institute, Supervised by B. Arnaldi, T. Duval, V. Gouranton and J. Royan

PhD in progress: Lucas Royer, "Visualization tools for needle insertion in interventional radiology", Started in September 2013 at B<>COM Research Institute, Supervised by A. Krupa, M. Marchal and G. Dardenne

PhD in progress: Andéol Evain, "BCI-based Interaction", Started in September 2013, Supervised by N. Roussel, G. Casiez, F. Argelaguet and A. Lécuyer

PhD in progress: Guillaume Claude, "Synthesis and Simulation of Process Models ", Started in September 2013, Supervised by V. Gouranton and B. Arnaldi

PhD in progress: François Lehericey, "Collision Detection HPC", Started in October 2013, Supervised by V. Gouranton and B. Arnaldi

PhD in progress: Merwan Achibet, "Dexterous manipulation in virtual environments", Started in November 2012, Supervised by A. Lécuyer and M. Marchal.

PhD in progress: Jonathan Mercier-Ganady, "Hybrid Brain-Computer Interfaces", Started in October 2012, Supervised by M. Marchal and A. Lécuyer

PhD in progress: A. Talvas, "Bimanual haptic manipulation", Started in October 2011, Supervised by A. Lécuyer and M. Marchal.

PhD in progress: Thi Thuong Huyen Nguyen, "New 3D techniques for collaborative interaction and navigation that preserve users' immersion", Started in October 2011, Supervised by T. Duval

PhD in progress: Jérôme Ardouin, "Display of wide field-of-views in real and virtual environments", Started in January 2011, Supervised by M. Marchal, E. Marchand and A. Lécuyer

PhD in progress: Fabien Danieau, "Haptic Movies", Started in October 2010, Supervised by M. Christie, P. Guillotel, J. Fleureau and A. Lécuyer

9.2.3. Juries

- Anatole Lécuyer: Mehdi Ammi (HDR, Examiner, University of Paris XI-Orsay), Jérémy Laviolle (PhD, Referee, University of Bordeaux 1), Yuan Yang (PhD, Examiner, ENSTA-Télécom Paris Tech, Paris).
- Bruno Arnaldi: Jean-Marc Cieutat (HDR, Estia Biarritz), Nicolas Courty (HDR, UBS Vannes), Jonathan Wonner (PhD, University of Strasbourg), Jonathan Perrinet (PhD, University of Rennes 1).

9.3. Popularization

- Massive media coverage of the results of OpenViBE2 project (section 8.2.5) : following a press conference and press release organized in January 2013. This ended up with numerous appearances in the media (TV, Press, Radio).
- "Journées Nationales d'Archéologie" 2013 : organization and numerous demos of immersive and VR results of our team in Immersia room, Rennes, June 2013 [33].
- "Festival de la Science" 2013 : booth and demo of the FLYVIZ system, in Betton, October 2013.
- "Nuit de la Science" 2013 : demos of FLYVIZ system and Corvette project, Rennes, October 2013.
- "Colloque Chimie et TIC 2013" : presentation "Interagir par la pensée avec les Interfaces Cerveau-Ordinateur" (A. Lécuyer), Maison de la Chimie, Paris, October 2013.
- "Journées Science et Musique" 2013 : organization of this event, and presentation of several demos of the team in Immersia room, Rennes, October 2013.

Hycomes Team

7. Dissemination

7.1. Scientific Animation

Benoît Caillaud has served in the steering and program committees of the International Conference on Application of Concurrency to System Design (ACSD'13) and of the Applications of Regions Theory (ART'13) satellite workshop. He is serving on the Evaluation Committee of INRIA.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Benoît Caillaud has contributed to the training programme for the computer-science option of the *agrégation* in mathematics, at ENS Cachan-Ker Lann.

7.2.2. Supervision

PhD in progress Ayman Aljarbooh, *Scalable Simulation of Hybrid Systems: Language Design and Compilation*, started December 2013, supervised by Benoît Caillaud

7.2.3. Juries

Benoît Caillaud has participated to the jury for the defense of Florent Avellaneda's PhD thesis, *Verification of stateful Petri-nets under a partial order semantics*, December 10th 2013, Aix-Marseille University. He has also served on the junior researcher hiring committee of Inria Sophia Antipolis - Méditerranée

I4S Project-Team

8. Dissemination

8.1. Scientific Animation

L. Mevel is part of the IOMAC organisation committee. He is also reviewer for numerous journals and conference boards. He is associate editor of Journal of Modelling and Simulation in Engineering. He is co-head of the local organizing committee of EWSHM 2014.

V. LeCam is head of the local organizing committee of EWSHM 2014 (<http://www.ewshm2014.com>).

8.2. Teaching - Supervision - Juries

8.2.1. Supervision

PhD : Luciano Gallegos, Algorithms for monitoring and localization of damage. Luciano Gallegos, Université de Rennes 1, 08/10/13, L. Mevel and D. Bernal.

PhD in progress : Ambient diagnosis and early instability monitoring for helicopter rotor : Ahmed Jhinaoui, since June 2010, L.Mevel and J. Morlier (ISAE)

PhD in progress : Aeroelastic instability early detection methods in frequency domain : Philippe Mellinger, since June 2011, L. Mevel and C. Meyer (Dassault Aviation)

8.2.2. Juries

Laurent Mevel was examiner in the jury of Jérémy Vayssettes at University of Poitiers in November 2013.

IBIS Project-Team

8. Dissemination

8.1. Editorial, animation, and reviewing activities

Eugenio Cinquemani

Type	Journal, conference, agency
Associate Editor	European Control Conference (ECC) 2014

Hidde de Jong

Type	Journal, conference, agency
Member Editorial Board Member Editorial Board	Journal of Mathematical Biology ACM/IEEE Transactions on Computational Biology and Bioinformatics
Member Editorial Board Member Program Committee Member Scientific Advisory Board Member Review and Selection Committees Member Promotion Committee Member PhD Committee	Biosystems CMSB 13, IEEE BIBM 13, JOBIM 13, HSB 14 Microbiology and Food Chain Department, Inra International Human Frontier Science Program (HFSP) Senior research scientists, Inra Mathieu Trauchessec (CEA/Metabolic Explorer and Université Joseph Fourier)
Member PhD Advisory Committee	Caroline Baroukh (Inria/Inra and Université de Montpellier 2)
Coordinator (with C. Ambroise and F. Molina)	Working group on Transcriptome, protéome, modélisation, inférence et analyse des réseaux biologiques of GDR CNRS 3003 Bioinformatique moléculaire
Advisor Project reviews	Grenoble team for iGEM 2013 competition ANR, IDEX Saclay, Institut Pasteur, CNRS, NWO

Johannes Geiselmann

Type	Journal, conference, agency
Member Scientific Council Member PhD Committee Member PhD Advisory Committee Advisor Project reviews	Department of Biology, Université Joseph Fourier Khady Sall (CEA and Université Joseph Fourier) Xuejiao Jiang (INSA de Lyon) Grenoble team for iGEM 2013 competition ANR, CNRS

Stéphane Pinhal

Type	Journal, conference, agency
Advisor Co-organizer	Grenoble team for iGEM 2013 competition Journée des doctorants du LAPM

Delphine Ropers

Type	Journal, conference, agency
Member Organization Committee Member PhD Committee Advisor	SeMoVi (Séminaire de Modélisation du Vivant) Claire Villiers (Université Joseph Fourier) Grenoble team for iGEM 2013 competition

8.2. Other administrative activities

Eugenio Cinquemani is member of the Comité des Utilisateurs des Moyens Informatiques (CUMI) and of the Commission des Emplois Scientifiques at Inria Grenoble - Rhône-Alpes.

Hidde de Jong is member of the working group on International Relations of the Conseil d'Orientation Scientifique et Technique (COST) of Inria.

Johannes Geiselmann is head of the Control of Gene Expression group in the Laboratoire Adaptation et Pathogénie des Microorganismes (UMR 5163) and adjunct-director of the laboratory.

Yves Markowicz is director of the BSc department at Université Joseph Fourier.

François Rechenmann is CEO of Genostar. Until 2013, he has been leader of the editorial committee of the Interstices website (<http://interstices.info>). In addition, he has been commissioned by the Director of Inria Grenoble - Rhône-Alpes to help and to coach PhD students, in the research center, who encounter problems of various sorts during their thesis.

Michel Page is coordinator of the master Systèmes d'information et d'organisation at the Institut d'Administration des Entreprises (IAE), Université Pierre Mendès-France, Grenoble. Moreover, he is head of the ICT service center at IAE.

Delphine Ropers represents Inria Grenoble - Rhône-Alpes in the scientific board of IXXI, the Complex Systems Institute in Lyon (<http://www.ixxi.fr>). She is also member of the Commission de Formation Permanente at Inria Grenoble - Rhône-Alpes.

8.3. Seminars, presentations, and PhD thesis defenses

Eugenio Cinquemani

Title	Event and location	Date
On identifiability and identification of metabolic network models	Seminar GIPSA Lab, Grenoble	April 2013
Mixed-effects modelling of biochemical reaction networks: Two applications on two systems	BCM seminar, TIMC-IMAG, Grenoble	May 2013
State estimation for gene networks with intrinsic and extrinsic noise: Models and approaches on a case study	HYCON2-AD3 Workshop on Biological and Medical Systems, Paris	June 2013
Identification of biological systems	Seminar PhD school on Systems Biology, Bertinoro (Italy)	July 2013

Hidde de Jong

Title	Event and location	Date
Shared control of gene expression in bacteria by transcription factors and global physiological state	Invited talk at Network Biology Symposium, Institut Pasteur, Paris (France)	October 2013

Johannes Geiselmann

Title	Event and location	Date
Adaptation of bacteria to their environment: dominance of the global physiological state of the cell and only a minor role for specific transcription factors	Talk at conference of the French Society of Microbiology, Lille	February 2013
Synthetic biology, an emerging technology	Talk at conference Biologie de synthèse : potentiels et défis, Nimes	March 2013
Shared control of gene expression in bacteria by transcription factors and the global physiology of the cell	Talk at ESF Research Conference on Bacterial Networks, Pultusk (Pologne)	March 2013
The global physiological state controls bacterial regulatory networks: a new design paradigm for biotechnology	Talk at World Congress of Industrial Biotechnology, Nanjing (China)	April 2013
Growth rate and gene expression	Talk at ST-FLOW, University of Birmingham, Birmingham (UK)	September 2013
Growth-rate control in Escherichia coli	Talk at SynBio 2013, Heidelberg (Germany)	December 2013

Nils Giordano

Title	Event and location	Date
Dynamic optimisation of resource allocation in microorganisms	Poster presentation at Journée des doctorants du LAPM, Grenoble	October 2013

Stéphane Pinhal

Title	Event and location	Date
Inhibition de la croissance d'E. coli par l'acétate lors d'une croissance sur glucose	Poster presentation at Journée des doctorants du LAPM, Grenoble	October 2013

Delphine Ropers

Title	Event and location	Date
Mathématiques pour la biologie : quand les gènes jouent la montre	Programme 2012-2013 "Informatique au lycée" - Initiation, Villard-de-Lans	April 2013
Mathématiques pour la biologie : quand les gènes jouent la montre	Programme 2012-2013 "Informatique au lycée" - Approfondissement, Montbonnot	May 2013
Global control of gene expression in Escherichia coli	Keynote speaker at International Conference on Predictive Modelling in Food (ICPMF8), Paris	September 2013
Global control of gene expression in Escherichia coli	Invited talk at meeting ANR Stochagène	September 2013
Régulation globale et contrôle de la croissance chez E. coli	BEesy annual meeting, Saint Hugues de Biviers	November 2013

Diana Stefan

Title	Event and location	Date
Structural and parametric identification of bacterial regulatory networks A case study on the gene network regulating motility in E. coli	Poster presentation at Journée des doctorants du LAPM, Grenoble	October 2013

Valentin Zulkower

Title	Event and location	Date
Quantitative comparison of one-step and two-step models of gene expression	Oral presentation at Journées Ouvertes Biologie, Informatique et Mathématiques (JOBIM'13), Toulouse	July 2013
Carbon catabolite repression in <i>E. coli</i>	Poster presentation at EMS Autumn School on Computational Aspects of Gene Regulation, Bedlewo (Poland)	October 2013

8.4. Popular science writing

The members of IBIS are actively involved in the dissemination of research results in systems biology and bioinformatics to a wider, non-specialist audience. François Rechenmann has been leader of the editorial committee of the *Interstices* (<http://interstices.info>). *Interstices* offers pedagogic presentations of research themes and activities in the computer science domain, including at its interface with life sciences. François Rechenmann also contributed an article to *Texte et documents dans la classe (TDC)* this year, in the special issue on "Les mathématiques de la terre".

8.5. Teaching

Four members of the IBIS team are either full professor, associate professor or assistant professor at the Université Joseph Fourier or the Université Pierre Mendès-France in Grenoble. They therefore have a full teaching service (at least 192 hours per year) and administrative duties related to the organization and evaluation of the university course programs on all levels (from BSc to PhD). Besides the full-time academic staff in IBIS, the following people have contributed to courses last year.

Eugenio Cinquemani

Subject	Year	Location	Hours
Identification of dynamical models of genetic networks	5	INSA de Lyon	4
Statistics for biologists	5	Master Approches Interdisciplinaires du Vivant, Centre de Recherches Interdisciplinaires/Université Paris Descartes	20

Hidde de Jong

Subject	Year	Location	Hours
Modeling and simulation of genetic regulatory networks	5	INSA de Lyon	20
Modeling and simulation of genetic regulatory networks	5	ENS Paris	8

Nils Giordano

Subject	Year	Location	Hours
Modeling and simulation of genetic regulatory networks	5	ENS Paris	8
Génétique Procaryote	2	Université Joseph Fourier	16
Génétique des Populations	2	Université Joseph Fourier	18

Stéphane Pinhal

Subject	Year	Location	Hours
Génétique microbienne	2	Université Joseph Fourier	34
Eau en sciences	1	Université Joseph Fourier	17

Delphine Ropers

Subject	Year	Location	Hours
Modeling and simulation of genetic regulatory networks	4	Université Joseph Fourier	7.5
Modeling and simulation of genetic regulatory networks	5	INSA de Toulouse	4

Diana Stefan

Subject	Year	Location	Hours
Project Signal, Image, Communication, Multimédia	3	INPG Phelma	36

Valentin Zulkower

Subject	Year	Location	Hours
Calcul matriciel	3	Polytech' Grenoble	41

Hidde de Jong organized with Daniel Kahn a module on the modeling of genetic and metabolic networks at INSA de Lyon. Delphine Ropers is preparing a module on the mathematical modeling of biological systems at PHELMA, INP Grenoble.

[1]

IMAGINE Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Organization of conferences and editorial boards

- Marie-Paule Cani has been associate editor of ACM Transaction on Graphics since July 2013. She served on the programm committees of Shape Modeling International (SMI 2013), of Expressive'2013 (the ACM-EG symposium on Sketch-based Interfaces and Modeling - SBIM, Non-photorealistic Animation and Rendering - NPAR, and Computational Aesthetics - CAe), and of the EG Symposium on Geometry Processing (SGP'2013).
- Stefanie Hahmann
 - General co-Chair with Konrad Polthier of the SIAM GD/SPM 2013 conference in Denver
 - Member of the IPC for Eurographics in Girona 2013 and for CAD/Graphics in Hongkong 2013
 - Member of Program committee for the International Conference on Shape Modeling and Applications in Bournemouth 2013 and Computer Graphics International (CGI) Hannover, 2013
- Rémi Ronfard was a Program Committee members for 6 international conferences
 - International Conference on Motion in Games (MIG).
 - International Conference on Interactive Storytelling (ICIDS).
 - ACM conference on Computational Aesthetics (CAE).
 - Workshop on Intelligent Cinematography and Editing (WICED).
 - Workshop on Intelligent Narrative Technologies (INT).
 - International Conference on 3D Imaging (IC3D).
- Jean-Claude Léon was Member of the scientific board of SBIM 2014.
- François Faure was chairing the Eurographics working group on *Animation and Simulation*.
- Damien Rohmer
 - Member of the Technical Brief & Posters committee for SIGGRAPH Asia 2013.
 - Member of the Short Paper committee for Eurographics 2014.

8.1.2. Management and administration of scientific organisations

- Marie-Paule Cani has been vice chair of the Eurographics association since January 2013. She has been chairing the steering committee of the Eurographics conference since May 2013. She is a member of the ACM Publication Board. She is also member of the steering committees of the SMI and Expressive international conferences.
In France, Marie-Paule Cani is a member of the executive board of the GRD IG-RV (Informatique Graphique - Réalité Virtuelle) of CNRS, and an EC member of the french chapter of Eurographics.
- François Faure is a member of the Conseil du Laboratoire at LJK.
- Stefanie Hahmann
 - Member of the SMA Executive Committee (Shape Modeling Association)
 - President of GTMG (Groupe de Travail en Modélisation Géométrique) part of GDR IM and GDR IG.
 - International expert for the Italian Research and University Evaluation Agency (ANVUR)

- Member of the Conseil du Laboratoire at LJK.
- Responsible of Maths-Info department of the Grenoble doctoral school MSTII.
- Olivier Palombi is a member of the scientific board of ECCAMI (Excellence center for computer assisted medical interventions).
- Rémi Ronfard is the Director of the Geometry and Image Department, Laboratoire Jean Kuntzman, Université de Grenoble.

8.1.3. Public dissemination

- Damien Rohmer is involved in the Hévéa project working on the mathematical model of the flat torus. This flat torus has been highlighted in various medias during the year 2013 (fig. 13).
 - The flat torus and its visualization has been published in several diffusion journal
 - * Pour la Science, n. 425, mars 2013. *Les fractales lisses, un nouvel objet mathématique*
 - * La Recherche, n. 471, janvier 2013. The flat torus is cited as the 5th most important discovery of 2012.
 - * Science & Vie, decembre 2012. *Le tore plat n'a plus de secrets.*
 - * Cover of the magazine *CNRS Rhone-Auvergne*
 - * Images des Maths, decembre 2012, *Rothorn un tore plat!*
 - * Images des Maths, decembre 2012, *Gnash! un tore plat!*
 - 14 posters were created for the *Fête de la science* in Lyon to explain the model of the flat torus in October 2013.
 - From October to December 2013, the flat torus was highlighted in the art exhibition *Formes élémentaires* in Gyuancourt.
 - In 2014, a large image of the flat torus is exposed in the subway of Paris at the Montparnasse station.
- Rémi Ronfard gave an invited talk at the International Federation for Theatre Research where he presented his ongoing projects Scenoptique and Spectaclenligne(s) for recording, analyzing and editing theatre performances and rehearsals. He co-chaired a national meeting on the analysis and understanding of emotions, as part of the working group on "action and gesture", CNRS GDR ISIS, and the ARC6 region network, in Lyon in October 2013. Remi Ronfard organized an INTECH workshop on the convergence between digital cinéma and interactive games, which attracted 100 participants from research and industry to Inria Rhone Alpes (<http://www.inria.fr/centre/grenoble/actualites/cinema-et-jeu-video-la-convergence-passe-par-inria>).

8.2. Teaching - Supervision

8.2.1. Responsibilities of academic programs

- 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 of the MMIS (Images and Applied Maths) department at University ENSIMAG/Grenoble INP.

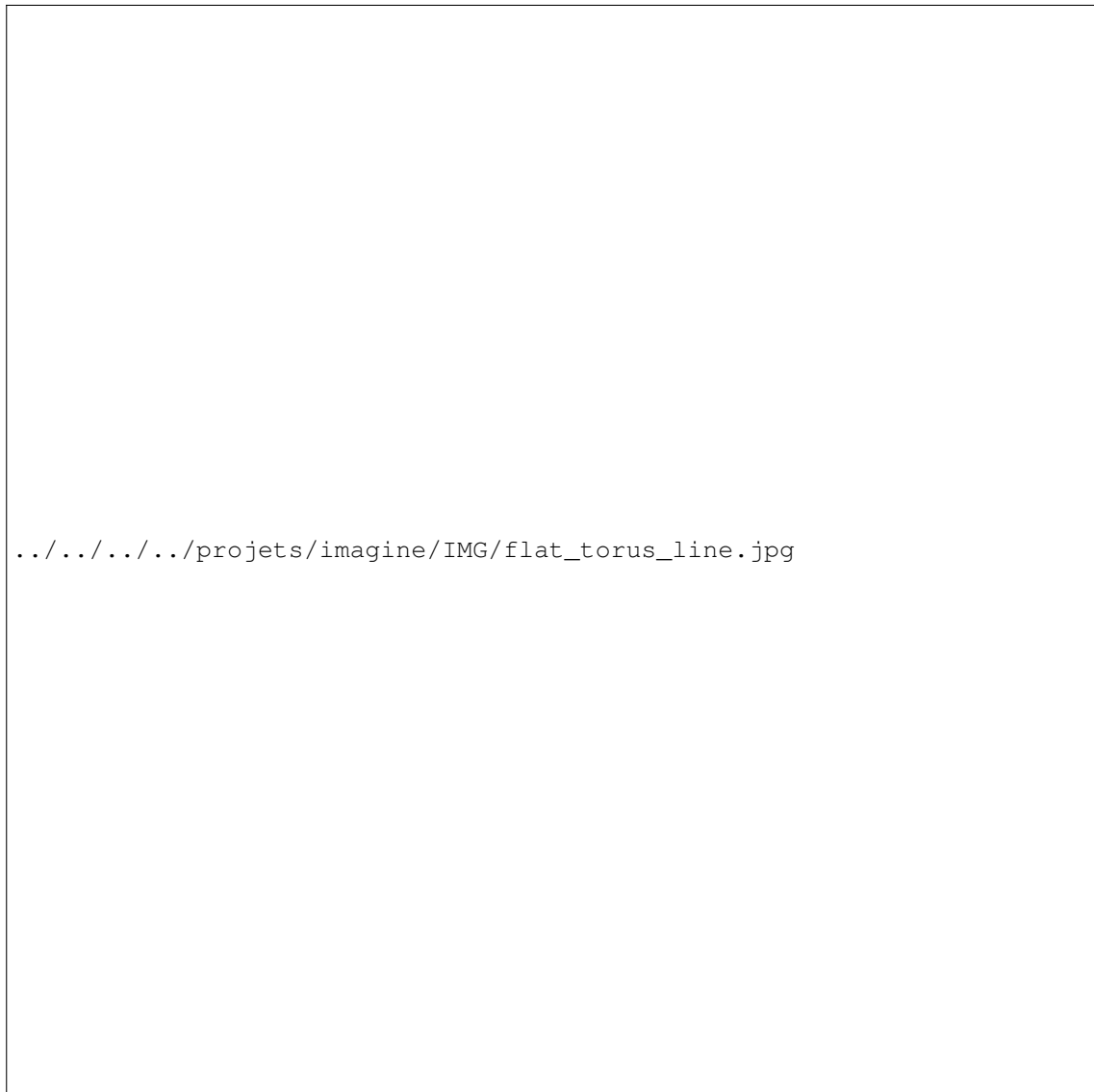


Figure 13. Various diffusions foccusing on the flat torus project.

- Olivier Palombi is responsible of the French **Campus numérique** of anatomy. Olivier Palombi 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 (examen) and to create a large shared database of questions.
- François Faure was responsible of the GVR-(Graphics, Vision and Robotic) programm in the MOSIG Master.
- Damien Rohmer is coordinator of the Math-Info-Image program in the school CPE Lyon.
- Rémi Ronfard served as president of the jury for Master 2 students at the University of Grenoble, Mathématiques et Informatique, option Graphique, Vision et Robotique (GVR).

Note that MOSIG is 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.

8.2.2. Educational activities

Most of the members of our team are Professor or Assistant Professor in University where the common teaching load is about 200h per year. Rémi Ronfard who is only researcher usually perform some teaching in delegation.

IMARA Project-Team

9. Dissemination

9.1. Scientific Animation

- Guy Fayolle is
 - Scientific advisor at the *Robotics Laboratory of Mines ParisTech*. In this respect, he participates in the contract COVADEC, which is an industrial project (FUI / FEDER 15) involving 8 partners, among which Peugeot, Valeo, Armines and All4tec. The acronym stands for *Conception et Validation des Systèmes Embarqués d'Aide à la Conduite*. Armines will propose a Markov chain analysis aiming at optimizing test generation, taking into account non independent parameters.
 - Associate editor of the journal *Markov Processes and Related Fields*,
 - Regular reviewer for some journals of high repute (PTRF, MPRF, QUESTA, IEEE-IT, JSP), and also for the *AMS Mathematical Reviews*.
 - Member of the working group IFIP WG 7.3.
 - Program committee member of the regular *Int. Symposium on Computer and Information Sciences*, held in Paris at IHP (28-29 oct. 2013). The chairman-organizer is E. Gelenbe (Imperial College, UK).

He gave two invited talks :

- *Séminaire de Probabilités* of the LAGA Laboratory (Univ. Paris 13, 23 may 2013) to speak on *Random walks in the quarter Plane: analytic and probabilistic aspects*.
- *Séminaire du Groupe de travail en Probabilités du MAP5, Univ. Paris 5*, where he presented the paper [11].

He was invited to attend the follow-up meeting of the Workshop Programme *Modern probabilistic techniques for design and analysis of stochastic systems and networks*, held at the *Isaac Newton Institute* (Cambridge Univ. UK), 12-16 aug. 2013. He also chaired a session at the *Rencontres de Probabilités*, 9-10 sept. 2013, Rouen University.

- Jean-Marc Lasgouttes has been reviewer for the European Journal on Operation Research (EJOR) and the IEEE Transactions on Intelligent Transportation Systems.
- Philippe Morignot

has been member of the steering committee of the French association for Artificial Intelligence (AFIA). He is Editor-in-Chief of the newsletter of this association. He has been session chair of the session entitled "Human and Hydrologic applications" at the IASTED AIA'13 conference.
- Fawzi Nashashibi is:
 - Scientific advisor at the *Robotics Laboratory of Mines ParisTech*.
 - Supervisor of 1 PhD thesis at Mines ParisTech in 2013: Miss Anne-Sophie Puthon
 - supervisor of 4 PhD thesis at Inria: B. Lefaudeux, H. Li, G. Tréhard, P. Merdrignac.
 - Associate editor of the journal *Traitement du signal*,
 - Associate editor and reviewer of major conferences in ITS and Robotics (IEEE IV, IEEE, ITSC, IEEE ICRA, IEEE ICARCV, IEEE ICVES,...)
 - Regular reviewer for some journals of high repute (Transportation Research Part C, IJRR, IJVAS, IEEE Transactions on Instrumentation and Measurement, IEEE Robotics and Automation Magazine, IEEE Transactions on ITS, IEEE TVT,...).

- Member of the European working group on Automation of the iMobility Forum.
- Member of the International Committee on Vehicle Highway Automation (AHB30)
- Member of the Technical Program Committee of the WUSPE Workshop on in Kumamoto (Japan).

Fawzi Nashashibi was co-organizer of the ict-PAMM Workshop on “*Mobility Assistance and Service Robotics*” held in Kumamoto (Japan) on November 9th, 2013.

Fawzi Nashashibi was an invited keynote speaker at the following events:

- ITSWC’2013 (Tokyo, Japan): Executive session “*ES01: Autonomous Vehicles - the Path to Implementations*”, at the International 20th ITS World Congress, Tokyo (Japan).
- ITS Dublin: presentation at the session “*Towards Automation of Vehicles and Roads in Europe*” entitled “*Design of fully automated vehicle transport system in urban settings and related Requirements for fully automated urban vehicles*”.
- WUSPE’2013 (Hanoi, Vietnam), Sept. 2013. International workshop on Wireless Communications and User centered Services in Pervasive Environments 2013. Presentation on “*Cooperative wireless communications for road users*” at the International Research Institute MICA of the HANOI UNIVERSITY of SCIENCE and TECHNOLOGY.
- AHB030 TRB Committee: a presentation at the Vehicle-Highway Automation session entitled “*Current advancements in urban mobility: the CityMobil use-case.*”.
- eu-Robotics Workshop: presentation about the results of the EU project PICA.V.
- Intech seminar: presentation at Inria Rhône-Alpes about the “Technical lessons learned from the urban mobility demonstration in La Rochelle” (joint presentation with M. Matthieu Graindorge from the City of La Rochelle), Oct. 24th, Grenoble.

Fawzi Nashashibi participated to the following round tables:

- ITS Dublin: participation in the International round table on “*ITS Standardization towards deployment*”.
 - National Assembly / Sénat OPECST: participation to the national roundtable organized by the OFFICE PARLEMENTAIRE D’ÉVALUATION DES CHOIX SCIENTIFIQUES ET TECHNOLOGIQUES on the “New serene and sustainable mobility: designing ecological vehicles”.
 - Intech: roundtable about legal issues and deployment strategies for vehicle automation. Oct. 24th, Grenoble.
- Joshué Pérez Rastelli
 - Guest-Editor of IEEE Intelligent Transportation Systems Magazine (special issue of ELECTRO-MOBILITY).
 - Associate editor of IEEE Intelligent Vehicles Symposium 2013, Gold Coast, Australia.
 - Session Chairs of Autonomous Marine Vehicles, 2013 IFAC Intelligent Autonomous Vehicles Symposium.
 - Reviewer in a number of international journals: ROBOTICA, IEEE Transactions on Vehicular Technology, Journal of the Franklin Institute, IEEE Transaction on Intelligent Transportation Systems, Journal of Control, IEEE Robotics and Automation Magazine and International Journal of Electrical Power and Energy Systems (Elsevier).
 - Reviewer in a number of international conferences including IEEE Intelligent Vehicles 2013, IEEE International Conference on Vehicular Electronics and Safety 2013, IEEE Intelligent Transportation Systems 2013, ICRA 2013, among others.
 - Responsible of the PAL Inria (Personally Assisted Living) at IMARA team.
 - Séminaire des doctorants (April 2013, Inria Rocquencourt) *Control Architecture for autonomous vehicles in urban environments.*

- **Evangeline Pollard**
is a reviewer for several international journals and conferences: 15th IEEE Intelligent Transportation Systems Conference, International Conference on Intelligent Robots and Systems, IEEE Intelligent Vehicles Symposium, IEEE Transactions on Vehicular Technology (TVT), IEEE Transactions on Aerospace and Electronics Systems (AES), Journal of Zhejiang University Science C (Computers & Electronics).
- **Oyunchimeg Shagdar**
is an associate editor of Wiley International Journal of Communication Systems and a technical program committee of the IEEE Vehicular Technology Conference (VTC 2014) and the IARIA International Conference on Emerging Network Intelligence (Emerging 2013). She is a reviewer of a number of international journals and conferences, including IEEE Communications Magazine, IEEE Communications Letter, IEICE Transactions on Communications, IEEE Vehicular Technology Conference (VTC), IEEE International Conference on Communications (ICC), and Intelligent Vehicle Symposium. She was a keynote speaker at the workshops "Journée National Communications dans le Transport 2013", in June 2013, in Nevers, France and "Wireless Communications and User Centric Services in Pervasive Environments 2013", in September 2013, in Hanoi, Vietnam

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Jean-Marc Lasgouttes

Master: "Analyse de données", 59.5h, second year of Magistère de Finance (M1), University Paris 1 Panthéon Sorbonne, France

Victorin Martin

Licence: "Statistiques", 9h, first year of Ecole Centrale Paris (L3) Châtenay-Malabry, France

Philippe Morignot

Master: "Constraint programming", 15h, M2, Epita (Le Kremlin-Bicêtre), France

Master: "Linear programming", 15h, M2, Epita (Le Kremlin-Bicêtre), France

Master: "Rule-based systems", 15h, M2, Epita (Le Kremlin-Bicêtre), France

Master: "Task planning", 15h, M2, Epita (Le Kremlin-Bicêtre), France

Fawzi Nashashibi

Licence: "Programmation avancée", 84h, L1, Université Paris-8 Saint-Denis, France

Master: "Programmation C++/OpenGL", 16h, 2nd year (MAREVA), Mines ParisTech, France

Master: "Synthèse d'images", 12h, M2, INT Télécom SudParis.

Joshué Pérez Rastelli

Master: "Digital environment and road -ITS applications- (Voie Numérique)", 20h, M2, François Rabelais University, Tours, France

Master: "Systèmes embarqués (embedded systems)", 22,5h, M2, Leonard Da Vinci University - l'ESILV-, La Défense, France

Guillaume Tréhard

Master: "C++ programming language", M1, 20h, Paris 8 University, France

DUT Génie Electrique et Informatique Industrielle: "C++ programming language", L1, 20h, IUT Chartres, France

9.2.2. Supervision

PhD in progress: Mohammad Abualhoul, “Visible Light and Radio Communications for automated driving”, from September 01, 2013, supervisor: Fawzi Nashashibi, co-supervisor: Oyunchimeg Shagdar

PhD in progress: Ines Ben Jemaa, “Communications and Management Control for Cooperative Vehicular Systems”, from January 01, 2011, supervisor: Arnaud De La Fortelle, co-supervisor Paul Muhlethaler, Oyunchimeg Shagdar

PhD: Benjamin Lefaudeux, “Détection, localisation et suivi d’objets mobiles à partir d’une plateforme de stéréovision”, Mines ParisTech, defended on September 30 2013, supervisor: Fawzi Nashashibi

PhD: Victorin Martin, “Modélisation probabiliste et inférence par propagation de croyances: application au trafic routier”, Mines Paristech, May 23, 2013, supervisor Arnaud De La Fortelle, co-supervisors Cyril Furtlehner and Jean-Marc Lasgouttes

PhD in progress: Pierre Merdrignac, “Development of cooperative perception and communication system for vulnerables’ safety enhancement”, from October 01, 2012, supervisor: Fawzi Nashashibi, co-supervisor: Oyunchimeg Shagdar, Evangeline Pollard

PhD in progress: Guillaume Tréhard, “Autonomous urban driving: dealing with intersections”, from October 01, 2012, supervisor: Fawzi Nashashibi, co-supervisor: Evangeline Pollard

9.2.3. Juries

Fawzi Nashashibi was the Jury President of the following PhD thesis defense:

- Yadu PRABAKHAR. “Detection and counting of Powered Two Wheelers in traffic using a single-plane Laser Scanner”. University of Normandy – INSA Rouen. Defended on: 10/10/2013.

Fawzi Nashashibi was a reviewer of the following PhD thesis defense:

- Benoit FORTIN. “Méthodes conjointes de détection et suivi basé-modèle de cibles distribuées par filtrage non-linéaire dans les données lidar à balayage”. University of Littoral Côte d’Opale. Defended on: 22/11/2013.
- Maxime CAUSERET. “Peindre avec des matières dynamiques : les systèmes procéduraux pour la création et l’expérimentation artistique.”. University of Paris-8 Saint-Denis. Defended on: 09/07/2013.
- Amnir HADACHI. “Travel Time Estimation using Sparsely Sampled Probe GPS data in Urban Road Networks Context”. University of Normandy – INSA Rouen. Defended on: 31/01/2013.

Fawzi Nashashibi was an examiner of the following PhD thesis defense:

- Jorge GODOY. “Arquitectura de control para la conducción autónoma de vehículos en entornos urbanos y autovías”. Universidad Polytechnica de Madrid – Escuela Tecnica Superior de Ingenieros Industriales. Defended on: 21/10/2013.
- Adam HOUENOU. “Calcul de trajectoires pour la préconisation de manoeuvres automobiles sur la base d’une perception multi-capteurs – Application à l’évitement de collision”. Université de Technologie de Compiègne. Defended on: 09/12/2013.

9.3. Popularization

Several members of the team have participated in the exhibition Futur-en-Seine (104, Paris, June 13-16 2013) by presenting the CITRIS association and explaining videos to industry (June 13-14) and public (June 15-16).

Guillaume Tréhard supervised three students from the Lycée Henri Bergson, Angers for their TIPE (TIPE, travaux d’initiative personnelle encadrés) “Assistance au freinage d’urgence par contrôle moteur d’un véhicule électrique”.

Jean-Marc Lasgouttes has presented “some solvable models for road traffic” at the *demi-heure de science* of the Paris–Rocquencourt Inria research center.

IN-SITU Project-Team

9. Dissemination

9.1. Scientific Animation

Conference Organization

- CHI 2013, *ACM Conference on Human Factors in Computing Systems*, Paris, 2013: Wendy Mackay (General Chair), Michel Beaudouin-Lafon (Technical Program Co-Chair)
- ECRC 2013, *First ACM European Computer Research Congress*, Paris, 2013: Michel Beaudouin-Lafon (Organizing Committee member)
- IHM 2013, *Conférence Francophone d'Interaction Homme-Machine*: Stéphane Huot (Program Co-Chair)

Program Committees

- CHI, *ACM Conference on Human Factors in Computing*: Caroline Appert, Stéphane Huot
- UIST, *ACM Symposium on User Interface Software and Technology*: Caroline Appert
- INTERACT 14th IFIP TC13 *Conference in Human-Computer Interaction*: Caroline Appert, Olivier Chapuis, Stéphane Huot
- Eurographics, *34th Annual Conference of the European Association for Computer Graphics*: Theophanis Tsandilas
- PacificVis, *IEEE Pacific Visualization Symposium 2013*: Anastasia Bezerianos
- IHM, *Conférence Francophone d'Interaction Homme-Machine*: Olivier Chapuis

Editorial Boards

- CACM, *Communications of the ACM*, ACM: Wendy Mackay (2008-)
- TOCHI, *Transactions on Computer Human Interaction*, ACM: Michel Beaudouin-Lafon (2009-)
- IJHCS, *International Journal of Human-Computer Study*, Elsevier: Michel Beaudouin-Lafon (Member of the Advisory Board, 2009-)
- JCSCW, *Journal of Computer Supported Cooperative Work*, Springer: Michel Beaudouin-Lafon (Member of the Advisory Board, 2010-)

Journal and Conference Reviewing

- Transactions on Computer-Human Interaction (TOCHI), ACM: Anastasia Bezerianos, Olivier Chapuis, Lora Oehlberg, Theophanis Tsandilas
- International Journal of Human-Computer Studies (IJHCS), Elsevier: Olivier Chapuis
- Journal on Computing and Cultural Heritage (JOCCH), ACM: Theophanis Tsandilas
- ACM CHI 2013: Anastasia Bezerianos, David Bonnet, Jérémie Garcia (Work In Progress), Theophanis Tsandilas
- ACM UIST 2013: Michel Beaudouin-Lafon, Anastasia Bezerianos, David Bonnet, Olivier Chapuis, Stéphane Huot, Theophanis Tsandilas
- ACM EICS 2013 - ACM Symposium on Engineering Interactive Computing Systems: Stéphane Huot
- ACM ITS 2013 - ACM Conference on Interactive Tabletop and Surfaces: Anastasia Bezerianos, Olivier Chapuis, Stéphane Huot
- ACM MobileHCI 2013 - ACM Conference on Human-Computer Interaction with Mobile Devices and Services: Olivier Chapuis
- TEI 2013 - Conference on Tangible Embedded and Embodied Interaction: Stéphane Huot
- IEEE InfoVis 2013 - IEEE Information Visualization Conference: Anastasia Bezerianos
- IHM 2013 - Conference Francophone d'Interaction Homme-Machine: Michel Beaudouin-Lafon, Theophanis Tsandilas

Research Organizations

- Agence Nationale de la Recherche (ANR), “Contenus et Interactions” program: Michel Beaudouin-Lafon (Steering Committee member)
- Agence Nationale de la Recherche (ANR), “Blanc” program: Caroline Appert and Theophanis Tsandilas (Reviewers)
- Agence Nationale de la Recherche (ANR), “Blanc International” and “Jeunes Chercheuses Jeunes Chercheurs” programs: Caroline Appert (Reviewer)
- Steering Committee of the Campus Paris-Saclay “Institute for Digital Society” (“Institut de la Société Numérique”): Michel Beaudouin-Lafon (Member)
- Alliance des Sciences et Technologies du Numérique (ALLISTENE), Working group “Knowledge, Content and Interaction”: Wendy Mackay and Michel Beaudouin-Lafon (Members)
- Alliance des Sciences et Technologies du Numérique (ALLISTENE), Working group “Interactions des mondes physiques, de l’humain et du monde numérique” for the National Research Strategy agenda: Michel Beaudouin-Lafon (Co-chair)

Learned Societies

- Association Francophone d’Interaction Homme-Machine (AFIHM): Olivier Chapuis (member of the board, vice-president), Stéphane Huot (members of the board and of the scientific council – CPPMS)
- Paris SIGCHI Local Chapter: Anastasia Bezerianos (vice-president)
- ACM Europe Council: Michel Beaudouin-Lafon (member)
- ACM SIGCHI: Wendy Mackay (member of conference management committee)

Hiring committees

- Univ. Paris-Sud hiring committee, Commission Consultative des Spécialistes de l’Université 27ème section (computer science), members: Michel Beaudouin-Lafon, Stéphane Huot, Wendy Mackay
- Univ. Paris-Sud hiring committee, Comité de Sélection 27ème section (computer science), members: Michel Beaudouin-Lafon, Wendy Mackay
- Univ. Bordeaux I (Bordeaux) hiring committee, Comité de Sélection 27ème section (computer science), members: Stéphane Huot

9.2. Teaching - Supervision - Juries**9.2.1. Teaching**

Interaction Masters (Research Master in Computer Science, Interaction Specialty): Anastasia Bezerianos & Michel Beaudouin-Lafon, Chairs, Caroline Appert, Cédric Fleury, & Wendy Mackay, Internships organization, M2, Univ. Paris-Sud

HCID Masters (EIT ICT Labs European Master in Human-Computer Interaction and Design): Michel Beaudouin-Lafon & Anastasia Bezerianos, Chairs, Wendy Mackay, M1 & M2, Univ. Paris-Sud

DUT Informatique: Stéphane Huot, Director of studies for the 1st year, IUT Orsay – Univ. Paris-Sud

Masters in Computer Science & HCID Masters: Anastasia Bezerianos & Cédric Fleury *Programming of Interactive Systems*, 63 hrs, M1, Univ. Paris-Sud

Research Masters in Computer Science: Wendy Mackay & Anastasia Bezerianos *Formation à la Recherche* 45 hrs, M2 (all research specialties), Univ. Paris-Sud

Interaction Masters & HCID Masters: Michel Beaudouin-Lafon, *Fundamentals of Human-Computer Interaction*, 38 hrs, M1/M2, Univ. Paris-Sud

Interaction Masters & HCID Masters: Wendy Mackay *Design and Evaluation of Interactive Systems*, 63 hrs, M1/M2, Univ. Paris-Sud

HCID Masters: Wendy Mackay *Business Design Labs*, 8 hrs, M1, Univ. Paris-Sud

Master 2 Professional: Anastasia Bezerianos *Design and Evaluation of Interactive Systems*, 38 hrs, M2Pro, Univ. Paris-Sud

Interaction Masters: Anastasia Bezerianos, *Mixed Reality and Tangible Interaction*, 18 hrs, M2, Univ. Paris-Sud

Interaction Masters: Michel Beaudouin-Lafon & Cédric Fleury, *Groupware and Collaborative Interaction*, 38 hrs, M2, Univ. Paris-Sud

HCID Masters: Caroline Appert, *Evaluation of interactive systems*, 63 hrs, M1, Univ. Paris-Sud

HCID Masters: Anastasia Bezerianos, Wendy Mackay, Michel Beaudouin-Lafon, *Human-Computer Interaction project*, 50 hrs, M1, Univ. Paris-Sud

Polytech 3ème année: Anastasia Bezerianos *Interaction Homme-Machine*, 18 hrs, M1, Univ. Paris-Sud

License 2: Anastasia Bezerianos *Developpement Logiciel*, 15 hrs, L2, Univ. Paris-Sud

DUT Informatique: Stéphane Huot, *Programmation Orientée Objet*, 21 hrs, L2, IUT Orsay – Univ. Paris-Sud

9.2.2. Supervision

Habilitations

HdR : Stéphane Huot, “*Designing Interaction*”: *A Missing Link in the Evolution of Human-Computer Interaction*, Université Paris-Sud, 7 May 2013

PhD Students

PhD : Cyprien Pindat, *A Content-Aware Design Approach to Multiscale Navigation*, Université Paris-Sud, defended on 20 December 2013, Claude Puech, Emmanuel Pietriga & Olivier Chapuis

PhD in progress : David Bonnet, *Gesture-based interactions and instrumental interaction*, October 2011, Michel Beaudouin-Lafon & Caroline Appert

PhD in progress : Jérémie Garcia, *Supporting creative activities with interactive paper*, October 2010, Wendy Mackay & Theophanis Tsandilas

PhD in progress : Ghita Jalal, *Co-Adaptive Systems*, September 2013, Wendy Mackay

PhD in progress : Alexandre Kouyoumdjian, *Multimodal Selection of Numerous Moving Targets in Large Visualization Platforms: Application to Interactive Molecular Simulation.*, October 2013, Stéphane Huot, Patrick Bourdot & Nicolas Ferey (LIMSI-CNRS)

PhD in progress : Can Liu, *Collaborative Multiscale Navigation and Interaction*, October 2012, Michel Beaudouin-Lafon, Olivier Chapuis & Eric Lecolinet (Telecom ParisTech)

PhD in progress : Justin Mathew, *New visualization and interaction techniques for 3D spatial audio*, June 2013, Stéphane Huot & Alan Blum (ENS Louis-Lumière)

PhD in progress : Daniel Strazzulla, *Multimedia Communication*, October 2012, Wendy Mackay

PhD in progress : Oleksandr Zinenko, *Interactive Code Restructuring*, September 2013, Stéphane Huot & Cédric Bastoul (Université de Strasbourg)

Masters students

Jessalyn Alvina. *RouteLens: efficient route following for map applications*, April - September 2013, Caroline Appert & Olivier Chapuis

Stephan Delarue. *Performance gestuelle et physiologie*, April - August 2013, Caroline Appert & Halla Olafsdottir

Evanthia Dimara. *Linking AI and HCI through Co-Adaptive Instruments*. April - September 2013, Wendy Mackay.

Magdalini Grammatikou. *BricoSketch: Replicating and reusing electronic and physical material in professional illustrations*, April - September 2013, Stéphane Huot & Theophanis Tsandilas

Thibaut Jacob. *Sketching Interactions for Data Exploration*, April - September 2013, Anastasia Bezerianos & Theophanis Tsandilas

Ghita Jalal. *Co-Adaptive Instruments*. May - September 2013, Wendy Mackay

Antoine Ponsard. *Interactive Visualisation with Temporal Data*. April - June 2013, Michel Beaudouin-Lafon September 2013, Anastasia Bezerianos & Theophanis Tsandilas

Julia Vlasenko. *Interactive Visualization of Ubiquitous Dat*. May - November 2013, Wendy Mackay

Summer Schools

Reviewing process workshop, Rencontres Jeunes Chercheurs en Interaction Homme-Machine. June 17-20, 2013. RJC-IHM'13, Lyon, France. Caroline Appert.

Les thèmes émergents de l'IHM, Rencontres Jeunes Chercheurs en Interaction Homme-Machine. June 17-20, 2013. RJC-IHM'13, Lyon, France. Olivier Chapuis.

Tangible Interfaces and Instrumental Interaction, French-German Tangible Interaction Studio. August 26-28, 2013, Biarritz, France. Michel Beaudouin-Lafon.

Participatory Information Technology, Generative Walkthroughs Summer School. August 26-28, 2013, Aarhus, Denmark. Michel Beaudouin-Lafon & Wendy Mackay.

UXdesign : l'expérience au service des apprentissages ?, Keynote at the Campus Européen d'Eté 2013 de l'Université de Poitiers. September 16-20, 2013, Poitiers, France. Wendy Mackay.

9.2.3. Juries

Simon Perrault (Télécom ParisTech, Paris): Olivier Chapuis, reviewer

Sebastien Rufiange (École de Technology Supérieure, Canada): Anastasia Bezerianos, reviewer

Raphaël Hoarau (ENAC, Toulouse): Michel Beaudouin-Lafon, reviewer and president

Joseph Malloch (McGill University, Canada): Michel Beaudouin-Lafon, reviewer

Eakachai Charoenchaimonkon (AIT, Bangkok): Michel Beaudouin-Lafon, reviewer

Dong-Bach Vo (Télécom ParisTech, Paris): Stéphane Huot, jury member

9.3. Popularization

Wendy Mackay was interviewed for Inria/Technoscope: "L'interaction homme-machine en ligne de mire", February, 2013, and for an article in "Science & Vie" on the topic of Google Glass, November 12, 2013.

Wendy Mackay was interviewed on two *France Culture* radio shows: "Place de la Toile" on the topic of tomorrow's computers ("l'ordinateur de demain") on September 7, 2013 and on "Science Publique" on the topic of whether augmented reality will change our vision of the world ("La réalité augmentée va-t-elle changer notre vision du monde?") on November 1, 2013.

Wendy Mackay and Michel Beaudouin-Lafon were each interviewed as the scientist of the day ("savant du jour") on the *France Inter* radio show "On va tous y passer", on October 30 and November 20, 2013 respectively.

INDES Project-Team

8. Dissemination

8.1. Seminars and conferences

- **Pejman Attar** gave a talk about security in concurrency at Paris 7 in february 2013. He participated March in *rencontres du numérique de l'ANR* and presented a poster about his work and the PARTOUT ANR team work.
- **Nataliia Bielova** was invited to present her work on web security in Labex Security day.
- **Iliaria Castellani** participated in March in the 1st working group (WG) meeting of the BETTY Action, in Rome, where she animated the discussion of the Security WG. In September, she took part in the 2nd WG meeting of BETTY, in Madrid, where she again animated the discussion of the Security WG. In August 2013, Iliaria Castellani participated in the workshop “25 Years of Combining Compositionality and Concurrency” (WS25CCC), in Königswinter, Germany, and in the 8th International Symposium on Trustworthy Global Computing (TGC 2013), in Buenos Aires, Argentina. In both of them, she presented her joint work with Pejman Attar [11]. In Buenos Aires, she also took part in the annual meeting of the IFIP WG 1.8 on Concurrency Theory.
- **Cyprien Nicolas** gave a talk about “Cable-Driven Robots with Wireless Control Capability for Pedagogical Illustration of Science” at the 8th National Conference of “Control Architecture of Robots” in Angers, France, June, 12th 2013 [13].
- **Tamara Rezk** was invited to present her work on web security in IRISA Rennes in January and in University of Cordoba in March. She gave a talk in the Labex Security day.
- **Manuel Serrano** gave a seminar about Web programming in the seminar series associated with the course of Gérard Berry at Collège de France called *Informatique du Temps et des Événements*. He participated in a one-week seminar in Brussels on Secure Cloud and Reactive Internet Programming Technology, where he gave a talk on HipHop. He presented the results of the PWD projet at the ANR *Rencontres du numérique* in Paris. Manuel Serrano gave a lecture on Hop at the ECOOP Programming Summer School.

8.2. Animation

- **Iliaria Castellani** is a member of the editorial board of *Technique et Science Informatiques*. She is a member of the IFIP WG 1.8 on Concurrency Theory. She is a member of the Management Committee of the BETTY Action, and the chair of the BETTY working group on Security. She was a member of the programme committee of the workshop EXPRESS/SOS 2013.
- **Tamara Rezk** was a member of the programme committees of JAIIO'13, CIBSI'13, TGC'13, LATIN'14, TIBETS'13, SOFSEM'14. She was invited to be in the PC of CSF'14. She was invited by the Estonian Research Council as an external expert to the evaluation of a research project. She is part of the organizing committee for the Labex Security day with **Nataliia Bielova**.
- **Manuel Serrano** is a member of the editorial board of the *Journal of Functional Languages*. He is the coordinator of the ANR DEFIS project PWD. He served on the program committee of the *16th Practical Aspects of Declarative Languages* (PADL'14) conference. He was a referee for the *Lisp in Summer Projects*. He was the co-program chair of the *European Lisp Symposium* (ELS'13).

8.3. Teaching - Supervision - Juries

8.3.1. Teaching

DUT: **Cyprien Nicolas**, *Introduction aux systèmes informatiques*, 36ETD, S1, IUT Nice Côte d'Azur, UNS, France. *Architecture Systèmes et Réseaux*, 16ETD, S3, IUT Nice Côte d'Azur, UNS, France.

Licence: **Cyprien Nicolas**, *Algorithmique et Complexité*, 30ETD, Licence Professionnelle SIL, IUT Nice Côte d'Azur, UNS. **Yoann Couillec**, *Algorithmique - Programmation objet - Python*, 36 ETD, L2, University of Nice Sophia Antipolis. **Vincent Prunet**, *Algorithms and Data Structures*, 80 ETD, L2, Lycée International de Valbonne, (Inria action to promote early CS courses in all scientific curricula).

Master: **Iliaria Castellani**, *Programmation et sécurité des applications du web*, 13.5 ETD, M2, University of Nice Sophia Antipolis. **Tamara Rezk**, *Programmation et sécurité des applications du web*, M2, University of Nice. *Programming the Diffuse Web*, 13.5 ETD, M2, University Paris 6 (UPMC), France. *Provable cryptography* 28h ETD, M2 University of Nice Sophia Antipolis. **Manuel Serrano**, *Programming the Diffuse Web*, 13.5 ETD, M2, University Paris 6 (UPMC), France.

PhD: **Manuel Serrano** gave a full-day seminar on Hop at the *École des Jeunes Chercheurs en Programmation* (Rennes).

8.3.2. Supervision

PhD: **Pejman Attar**, *Towards a safe and secure synchronous language*, University of Nice, 1/10/2010, **Frédéric Boussinot** and **Iliaria Castellani**.

PhD in progress: **Cyprien Nicolas**, *Orchestrating multi-tier programming languages*, University of Nice, 1/09/2010, **Gérard Berry** and **Manuel Serrano**.

PhD in progress: **Johan Grande**, *Conception et implantation d'un langage de programmation concurrente modulaire*, University of Nice, 1/10/2010, **Gérard Boudol** and **Manuel Serrano**.

PhD in progress: **Yoann Couillec**, *Langages de programmation et données ouvertes*, University of Nice, 1/10/2012, **Manuel Serrano** and **Patrick Valduriez**.

PhD in progress: **José Santos**, *Language based approach for information flow analysis in distributed mobile code*, University of Nice, 1/12/2010, **Tamara Rezk**.

Master internship: **Jérôme Brunel** master thesis at University of Nice-Sophia Antipolis, tutored by **Tamara Rezk**. **Gerard Boudol** has supervised the intership (Master Recherche) of Arthur Guillon, on relaxed memory models. The long term objective was to investigate the quantitative aspects of such models, but a first phase of the study consisted in refining an abstract model previously introduced by Boudol, Petri and Serpette. More precisely, this model was refined so as to provide an adequate semantics for PowerPC memory barriers, a notoriously difficult topic. To this end we extended the notion of visibility, attached to memory write operations, to these barriers. In this way, we achieved an accurate semantics of these synchronization operations with respect to the series of tests on PowerPC machines developed by Luc Maranget. In a second phase, some requirements for a notion of probabilistic memory model were identified.

8.3.3. Juries

Iliaria Castellani was a member of the jury of the PhD thesis of Fabrizio Montesi, IT University of Copenhagen.

8.4. Popularization

The Web is becoming the richest platform on which to create computer applications. Its power comes from three elements: modern Web browsers enable highly sophisticated graphical user interfaces (GUIs) with 3D, multimedia, fancy typesetting, among others; calling existing services through Web APIs makes it possible to develop sophisticated applications from independently available components; and open-data availability allows access to a wide set of information that was unreachable or that simply did not exist before. The combination of these three elements has already given birth to revolutionary applications such as GoogleMaps, radio podcasts, and social networks.

The next step is likely to be incorporating the physical environment into the Web. Recent electronic devices are equipped with various sensors (GPS, cameras, microphones, metal detectors, speech commands, thermometers, motion detection, and so on) and communication means (IP stack, telephony, SMS, Bluetooth), which enable applications to interact with the real world. Web browsers integrate these features one after the other, making the Web runtime environment richer every day. The future is appealing, but one difficulty remains: current programming methods and languages are not ideally suited for implementing rich Web applications. This is not surprising as most have been invented in the 20th century, before the Web became what it is now.

Traditional programming languages have trouble dealing with the asymmetric client-server architecture of Web applications. Ensuring the semantic coherence of distributed client-server execution is challenging, and traditional languages have no transparent support for physical distribution. Thus, programmers need to master a complex gymnastics for handling distributed applications, most often using different languages for clients and servers. JavaScript is the dominant Web language but was conceived as a browser only client language. Servers are usually programmed with quite different languages such as Java, PHP, Ruby, etc. Recent experiments such as Node.js propose using JavaScript on the server, which makes the development more coherent; however, harmonious composition of independent components is still not ensured.

In 2006, three different projects, namely, GWT from Google, Links from the University of Edinburgh, and HOP from Inria (<http://www.inria.fr>) [6], offered alternative methods for programming Web applications. They all proposed that a Web application should be programmed as a single code for the server and client, written in a single unified language. This principle is known as multitier programming.

Links is an experimental languages in which the server holds no state and functions can be symmetrically called from both sides, allowing them to be declared on either the server or the client. These features are definitely interesting for exploring new programming ideas, but they are difficult to implement efficiently, making the platform difficult to use for realistic applications.

GWT is more pragmatic. It maps traditional Java programming into the Web. A GWT program looks like a traditional Java/Swing program compiled to Java bytecode for the server side and to JavaScript for the client side. Java cannot be considered as the unique language of GWT, however. Calling external APIs relies on JavaScript inclusion in Java extensions. GUIs are based on static components declared in external HTML files and on dynamic parts generated by the client-side execution. Thus, at least Java, Javascript, and HTML are directly involved.

The HOP language takes another path relying on a different idea: incorporating all the required Web-related features into a single language with a single homogeneous development and execution platform, thus uniformly covering all the aspects of a Web application: client-side, server-side, communication, and access to third-party resources. HOP embodies and generalizes both HTML and JavaScript functionalities in a Scheme-based platform that also provides the user with a fully general algorithmic language. Web services and APIs can be used as easily as standard library functions, whether on the server side or client side.

In order to popularize HOP, we have written a paper for targeting engineers which presents an overview of the HOP language and its development environment. It has been simultaneously published in *ACM Queue and Communications of the ACM* [5]. We have also given several demonstrations of the system. In particular, Cyprien Nicolas has co-developed application software for an educational cable robot (Coprin) presented at the Fête de la Science, in November. The demo consisted in a Cable bot built by a Coprin student and piloted by Hop, the software being written by a Indes student. The demo took place in front of four classes of High School students.

8.5. Transfer

8.5.1. Diffuse Robotics

Dissemination of the HOP technology has become a priority for the team now that HOP is actually used to develop large projects. In 2012, a further step was taken with the allocation of dedicated resources missioned to develop and transfer the application portfolio to the industry. The team has focused on bringing web awareness

to personal assistance robots developed by the Coprin team, also at Inria CRISAM, in line with one of the top strategic orientations of Inria. Using web protocols as a native framework greatly simplifies the integration of the robot as a web entity, and the use of remote web services to manage, monitor or extend the features of the robot. The behavior of a HOP robot is specified in HOP and orchestrated within diffuse HOP run time agents embedded within the robot elements, in charge of handling communication and control between platforms and with remote web services. The project, code-named *Diffuse Robotics*, builds on the experience gained in using HOP for home automation over the recent years, adding in 2012 the support of versatile robotic computing platforms and associated mechanics and sensor hardware and a state of the art plug and play framework for automatic device and service discovery. Among the direct benefits of relying on a web framework are the ability to use any web enabled device such as a smartphone or tablet to drive the robot. Also, it is much simpler to put in place remote diagnostic and monitoring services by leveraging on existing robot sensors and the HOP framework.

IPSO Project-Team

7. Dissemination

7.1. Scientific Animation

7.1.1. Editorial activities

- P. Chartier is member of the editorial board of "M2AN"
- P. Chartier is member of the editorial board of "ESAIM Proceedings"
- P. Chartier is member of the editorial board of "Mathematical Analysis"
- N. Crouseilles is member of the editorial board of "International Journal of Analysis" <http://www.hindawi.com/journals/analysis/>
- A. Debussche is editor in Chief of "Stochastic Partial Differential Equations: analysis and computations".
- A. Debussche is member of the editorial board of "Potential Analysis", Differential and Integral Equations.
- A. Debussche is member of the editorial board of "Differential and Integral Equations".
- A. Debussche is member of the editorial board of "ESAIM: Proceedings".
- A. Debussche is member of the editorial board of the collection: "Mathématiques & Applications", SMAI, Springer.
- M. Lemou is associate editor of "Annales de la faculté de Toulouse"

7.1.2. Conference and workshop organization

- P. Chartier was a member of the scientific committees of SciCADE 2013 and ENUMATH 2013.
- A. Debussche was the main organizer of the thematic semester *Perspectives in Analysis and Probability* organized by the Lebesgue Center in Nantes and Rennes from april to september (see: <http://www.lebesgue.fr/content/sem2013-perspectives-analysis-and-probability>).
- A. Debussche was in the scientific committee of the conference *Probability and PDEs*, Centro de Giorgi, Pisa, may 20-24, 2013.
- E. Faou organized with J. Erhel (Rennes) and T. Lelièvre (CERMICS) the conference NASDPE13, *Numerical analysis of stochastic Partial Differential equations*, September 10-11, Rennes, France.
- N. Crouseilles co-organized the workshop on AP scheme (with C. Negulescu, F. Deluzet, C. Besse), Porquerolles, France (9-15 june, 2013).
- P. Chartier and M. Lemou organized a minisymposium on "Numerical schemes for highly oscillatory problems". ENUMATH, Lausanne, 25-30 august.
- M. Lemou organized a minisymposium on "Asymptotic preserving schemes for kinetic and related models". Hong-Kong, 07-11 January 2013.
- M. Lemou and F. Méhats were scientific advisors in the IHP semester *Gravasco* "N-body gravitational dynamical systems from N=2 to infinity" and were co-organizers of the workshop "Dynamics & Kinetic theory of self-gravitating systems" in this semester.
- F. Méhats was co-organizer of the workshop "Confined Quantum Systems: Modeling, Analysis and Computation" in Vienna.

7.1.3. Administrative activities

- P. Chartier is member of the bureau of the Comité des Projets at Inria-Rennes.
- A. Debussche leads the Lebesgue Center with San Vu Ngoc (coordinator) and L. Guillopé.

- A. Debussche is a member of the administrative board of the ENS Cachan.
- M. Lemou is partly in charge of the Master 2
- M. Lemou is member of the scientific committee of the Lebesgue Center (Labex)
- F. Méhats is member of the CNU, Section 26.
- F. Méhats is the head of the numerical analysis department of IRMAR.
- G. Vilmart was partly in charge of the weekly numerical analysis seminar at ENS Rennes “Groupe de travail: application des mathématiques”.
- N. Crouseilles was partly in charge of the weekly numerical analysis seminar at ENS Rennes “Groupe de travail : application des mathématiques”.

7.1.4. Talks in seminars and conferences, mini-courses

- E. Faou was invited at the Séminaire de Mathématiques Appliquées du Collège de France.
- A. Debussche gave a mini-course on *Stochastic equations and control theory*, in the conference *Mathematical Control in Trieste*, SISSA, Trieste, Dec. 2nd-6th, 2013.
- A. Debussche gave a mini-course on *Introduction aux EDPS* in the school *École Interdisciplinaire à Rennes*, Rennes, oct. 8-10, 2013.
- A. Debussche was gave a plenary talk in the conference *Theory and Applications of Stochastic PDEs*, IMA, Minneapolis, Jan. 14-18, 2013.
- F. Méhats and M. Lemou were invited to give a course on stability problems in gravitational models in the IHP Gravasco semester.
- G. Vilmart was keynote speaker in NASPDE workshop (Numerical Analysis of Stochastic PDEs), Rennes, 10-11 Sept., 2013.
- G. Vilmart was keynote speaker in the workshop on Multiscale methods and Asymptotic-Preserving schemes, Porquerolles island, June 09-15, 2013.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Licence 3: P. Chartier, “Equations différentielles”, 36, L3, ENS Cachan-Bruz

Master 2 : P. Chartier, “Intégration numérique géométrique”, 12H, M2, University of Rennes 1

Master 2: N. Crouseilles, “Numerical methods for kinetic equations”, 18H, M2, University of Rennes 1

Master 2: E. Faou, “Modélisation et analyse numérique des EDPs”, ENS Paris, in collaboration with D. Lannes

Master 2: M. Lemou, “Equations hyperboliques et lois de conservation”, and “Méthodes numériques pour les modèles cinétiques”.

Master 1: M. Lemou, “Theory of distributions” and “Equations elliptiques”.

7.2.2. Supervision

- N. Crouseilles: co-advising (with M. Mehrenberger) of Christophe Steiner PhD (second year in Strasbourg University), ministry grant.
- N. Crouseilles: co-advising (with S. Genaud) of Matthieu Kuhn PhD (second year in Strasbourg University), ANR “E2T2” grant.
- N. Crouseilles: co-advising (with M. Mehrenberger) of Pierre Glanc PhD (third year in Strasbourg University), Inria-Cordi grant.
- N. Crouseilles: co-advising (with M. Lemou) of H. Hivert PhD (first year in Rennes university), ENS grant.

- N. Crouseilles: co-advising (with R. Raghurama and M. Lemou) of A. Ruhi PhD (second year in IISc), Indian grant.
- F. Méhats is co-supervisor of the PhD thesis of G. Leboucher (with P. Chartier).
- F. Méhats is co-supervisor of the PhD thesis of M. Tusseau (with A. Debussche).
- A. Debussche supervizes the PhD theses of: M. Hofmanova (defended in July 2013), M. Kopeck (defense scheduled on June 2014), S. De Moor (defense scheduled on June 2014).

7.2.3. Juries

- P. Chartier was referee of the thesis of C. Zbinden (Geneva, supervised by E. Hairer), November.
- P. Chartier was referee of the thesis of H. Xue (Bergen, supervised by A. Zanna), November.
- P. Chartier was member of the HDR jury of G. Vilmart, July.
- N. Crouseilles: member of the PHD jury of C. Caldini-Queiros, 15 November 2013.
- F. Méhats was referee of the thesis of M. Lutz (Strasbourg, supervised by E. Frenod and E. Sonnendrücker).
- F. Méhats was referee of the thesis of J. Sabin (Cergy, supervised by M. Lewin).
- M. Lemou was referee of the PhD thesis of F. Doisneau: Ecole Centrale de Paris, April 2013.
- M. Lemou was member of the Jury for the PhD thesis of E. Franck: University Paris 6, October 2013.

7.3. Popularization

- Web interview of E. Faou: A l'occasion de la remise de la médaille Blaise Pascal (2013), Inria website.
- In <http://interstices.info/planetes> (2013), popularization article on the field of geometric numerical integration, published in "Interstices". Theme "Mathématiques de la planète Terre 2013" and Theme 2012-2013 "Invariants et similitudes" of TIPE in preparatory classes.
- Interview (June 2012) of M. Lemou for the journal "Science de l'Ouest" on the stability of galactic models. and publication of a popularized article: "Les mathématiciens déchiffrent l'univers" in the journal "Espace des sciences", Nov 2012.
- M. Lemou and F. Méhats wrote a popularized scientific text in a CNRS letter "Lettre de l'INSMI", June 25th, 2012.

KERDATA Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Gabriel Antoniu

- Program Co-Chair of the ScienceCloud 2013 International workshop held in conjunction with the ACM HPDC 2013 conference, New York, June 2013.
- Program Committee member (selection): ACM HPDC 2013 and 2014, ACM/IEEE SC 2013, IEEE/ACM CCGRID 2013, IEEE Big Data 2013, IEEE HPCC 2013, BDMC 2013 (workshop organized in conjunction with Euro-Par 2013).
- Coordinator for the MapReduce ANR project (see Section 8.1).
- G. Antoniu and B. Thirion (PARIETAL Project-Team, INRIA SACLAY – ÎLE-DE-FRANCE) co-led the A-Brain Microsoft-Inria Project (2010-2013).
- G. Antoniu and P. Valduriez (Zenith Project-Team, INRIA SOPHIA-ANTIPOLIS – MÉDITERRANÉE) co-lead the Z-CloudFlow Microsoft-Inria Project (2013-2016).
- Coordinator for the Data@Exascale Associate Team in collaboration with Argonne National Lab and the University of Illinois at Urbana - Champaign (2013-2015).
- Local coordinator for Inria Rennes – Bretagne Atlantique Research Center in the SCALUS Project of the Marie-Curie Initial Training Networks Programme (ITN), call FP7-PEOPLE-ITN-2008 (2009-2013).

9.1.2. Luc Bougé

- Vice-Chair of the Euro-Par conference steering committee (<http://www.europar.org/>). Workshop co-chair for the 2013 issue of the conference held in Aachen, Germany.
- PhD Forum Co-Chair for the 2013 IPDPS conference (<http://www.ipdps.org/>) held in Boston, MA, USA.

9.1.3. Shadi Ibrahim

- Program Committee member: ICPP 2013, ICA3PP 2013, CloudCom 2013, NPC 2013, CCGrid 2013 Doctoral Symposium, CLOUD COMPUTING 2013, BigData Book 2013
- Reviewer: IEEE Transactions on Cloud Computing, Future Generation Computer Systems, IEEE Systems Journal, Computing, Cluster Computing, Multimedia Tools and Applications Journal
- Subreviewer: SC 2013, HPDC 2013, CCGrid 2013, Cluster 2013, Euro-par 2013, HPCC 2013, ICPADS 2013, BigDataCloud 2013.

9.1.4. Alexandru Costan

- Organizer of the 2nd Workshop on Big Data Management in Clouds BigDataCloud in conjunction with EuroPar 2013, see <http://www.irisa.fr/kerdata/bigdatacloud/>
- Program Committee member: CloudCom 2013, ISPDC 2013, CCGrid Doctoral Symposium 2013, BigData Book 2013
- Reviewer: Transactions on Parallel and Distributed Systems, J. of Parallel and Distributed Computing, IEEE Internet Computing, Concurrency and Computation: Practice and Experience, Intl. J. of Grid and Utility Computing, Intl. J. of Systems and Software, Intl. J. of Intelligent Systems Technologies and Application
- Subreviewer: HPDC 2013, CCGrid 2013, ICPADS 2013, HPCC 2013, Cluster 2013

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

9.2.1.1. Gabriel Antoniu

Master (Engineering Degree, 5th year): Big Data, 24 hours (lectures), M2 level, ENSAI (*École Nationale Supérieure de la Statistique et de l'Analyse de l'Information*), Bruz, France.

Master: Grid, P2P and cloud data management, 18 hours (lectures), M2 level, ALMA Master, Distributed Architectures module, University of Nantes, France.

Master: Peer-to-Peer Applications and Systems, 10 hours (lectures), M2 level, PAP Module, M2RI Master Program, ENS Cachan/Rennes, France.

9.2.1.2. Luc Bougé

Licence: Introduction to programming concepts, 24 hours (lectures), L3 level, Informatics program, ENS Cachan/Rennes, France.

Master: Introduction to object-oriented high-performance programming, 24 hours (lectures), M1 level, Mathematics program, ENS Cachan/Rennes, France.

9.2.1.3. Shadi Ibrahim

Master : Cloud1 — Map/Reduce, 10 hours (lectures, lab sessions), M2 Level, École des Mines de Nantes, Nantes, France.

9.2.1.4. Alexandru Costan

License: Object-oriented programming, 18 hours, L3, ENS Cachan/Rennes

License: Databases, 28 hours, L2, INSA Rennes, France

License: Practical case studies, 16 hours, L3, INSA Rennes

Master: Object-oriented design, 28 hours, M1, INSA Rennes

9.2.1.5. Matthieu Dorier

Licence: Java programming 35 hours (lectures, lab sessions), L1 level, INSA de Rennes.

Licence: Ruby Programming, 15 hours (lectures, lab sessions), L3 level, ENS Cachan/Rennes.

Licence: Computer Architectures, 24 hours (lab sessions), L3 level, ENS Cachan/Rennes.

9.2.2. Supervision

PhD: Viet-Trung Tran, “Scalable data-management systems for Big Data”, thesis started in October 2009 co-advised by Gabriel Antoniu and Luc Bougé. Date of defense: 21 January 2013.

PhD: Housseem Chihoub, “Managing consistency for Big Data Applications: Tradeoffs and Self-Adaptiveness”, thesis started in October 2010 co-advised by Maria Pérez (UPM, Madrid) and Gabriel Antoniu. Date of defense: 10 December 2013.

PhD in progress : Matthieu Dorier, “Scalable I/O for postpetascale HPC systems”, thesis started in October 2011 co-advised by Gabriel Antoniu and Luc Bougé.

PhD in progress : Radu Tudoran, “Scalable data sharing for Azure clouds”, thesis started in October 2011 co-advised by Gabriel Antoniu and Luc Bougé.

PhD in progress : Álvaro García Recuero, “Scalable, Power-efficient Big Data Analysis on Geographically Distributed Clouds”, thesis started in October 2013 co-advised by Shadi Ibrahim and Gabriel Antoniu.

PhD in progress : Lokman Rahmani “Big Data Management for Next-Generation High-Performance Computing Systems”, thesis started in October 2013 co-advised by Gabriel Antoniu and Luc Bougé.

9.2.3. Juries

Gabriel Antoniu served as a Referee for a PhD Jury at the University Pierre et Marie Curie, Paris; as a Member in a PhD Jury at Telecom Bretagne, Cesson-Sévigné.

Luc Bougé served as a jury member for several PhD and HDR defenses, in many cases as the jury chairman.

9.3. Miscellaneous

- Gabriel Antoniu serves as a member of Inria's Evaluation Committee.
- Luc Bougé served as Head of the Computer Science Department of ENS Cachan/Rennes until September 2013.
- Luc Bougé is serving as a scientific co-ordinator for the IT Department (STIC) of the French *National Research Agency* (ANR), for 40 % of his working time. He is in charge of the logistic and the scientific management of the ANR call for proposals and of the various scientific ANR exhibitions and prizes in the IT domain.
- Luc Bougé is a member of the *National Academic Board* (CNU, *Conseil national des universités*) in the Informatics Committee (Section 27).

9.3.1. Popularization

9.3.1.1. Radu Tudoran's talks

Microsoft TechDays 2013, Paris, France. Invited Speaker together with Gabriel Antoniu to give a presentation about *Azure Brain: 4th paradigm, scientific discovery and (really) big data*.

Microsoft TechDays 2013, Paris, France. Invited Speaker to give a short talk about using the Azure cloud for science within Session *Introducing 10 Windows Azure projects in one hour*.

Microsoft ATLE, Munich, Germany. Internal Presentation about *Streaming and processing events across cloud data-centers*.

LAGADIC Project-Team

9. Dissemination

9.1. Scientific Animation

- *Editorial boards of journals*
 - Eric Marchand and Paolo Robuffo Giordano are Associate Editors of the IEEE Trans. on Robotics.
 - Eric Marchand is a Guest Editor (with Peter Corke and Jana Kosecka) of a Special Issue of the Int. Journal of Robotics Research on Robot Vision.
 - François Chaumette is in the Editorial Board of the Int. Journal of Robotics Research.
- *Technical program committees of conferences*
 - François Chaumette: WRV'13, ICRA'13, RSS'13, ICRA'14
 - Eric Marchand: ICRA'13, IROS'13, ISMAR'13 (area chair), RSS'13, ORASIS'13, ICRA'14, RFIA'14 (area chair)
 - Patrick Rives: RFIA'14
 - Paolo Robuffo Giordano: ICRA'13, RSS'13, IJCAI'13, ICRA'14
 - Alexandre Krupa: Orasis'13
 - Marie Babel: ACIVS'13
- *Selection committees*
 - Patrick Rives participated to the selection committees of research scientists (CR2) at Inria Nancy-Grand Est, Inria senior researchers (DR2), and Inria Starting and Advanced Research positions. .
 - François Chaumette was in the selection committee for an Assistant Professor position at the “Université Blaise Pascal” in Clermont-Ferrand. He also served in the jury for the selection of research scientists (CR2) at Inria Rhône-Alpes.
 - Eric Marchand was in the selection committee for an Assistant Professor position at INSA Rennes.
 - Alexandre Krupa was in the selection committee for an Assistant Professor position at the “Université de Montpellier 2”.
- *Participation in seminars, invitation*
 - Alexandre Krupa was invited by Nassir Navab to give a talk at the Chair for Computer Aided Medical Procedures (CAMP) from the Technische Universität München in May 2013.
 - François Chaumette was invited to give a seminar at the University of Zagreb during a one-week visit in July 2013 in the scope of the FP7 Across Regpot project (see Section 8.3.1.2). He also gave a talk at DGA-MI in Bruz during a workshop about visual localization.
 - Paolo Robuffo Giordano was invited to give talks at I3S in Sophia-Antipolis, Inria Grenoble, Isir in Paris, Ensam in Paris in the scope of the “GdR Robotique”, and University of Rome “La Sapienza”. He also presented an invited talk at the IEEE/RSJ IROS Workshop on Vision-based Closed-Loop Control and Navigation of Micro Helicopters in GPS-denied Environments [28].
 - Fabien Spindler was invited to present the ViSP software at the “Journées technologiques Robotex” in Toulouse in June 2013.

- *Animation at the international level*
 - François Chaumette served as a panel member of the ERC Consolidator Grants (PE7). He also served in the 2013 IEEE RAS Fellow Nomination Committee.
 - Paolo Robuffo Giordano served as external reviewer for evaluating research proposals of the Swiss National Science Foundation (SNSF).
 - Paolo Robuffo Giordano co-organized the ICRA'13 workshop “Towards Fully Decentralized Multi-Robot Systems: Hardware, Software and Integratio”, Karlsruhe, Germany and the “Sixth Workshop on Human-Friendly Robotics” at the University of Rome “La Sapienza”, Italy.
- *Animation at the national level*
 - François Chaumette and Patrick Rives are members of the scientific council of the “GdR Robotique” and JNRR.
 - Eric Marchand was a member of the AERES evaluation panel for U2IS lab at ENSTA Paristech.
 - Patrick Rives is a member of the Inria evaluation committee.
 - Alexandre Krupa is a member of the Inria Cost-GTAI in charge of the evaluation of the ADTs (“Actions de développements technologiques”).
- *Animation at the regional and local levels*
 - Eric Marchand is in the board of the “Images et réseaux” competitiveness cluster.
 - Alexandre Krupa is a member of the GestChir project at the IRT B-Com in Rennes.
 - Eric Marchand is a member of the scientific council of the “École supérieure d’ingénieurs de Rennes” (ESIR).
 - François Chaumette is 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 is a member of the committee in charge of all the temporary recruitments (“Commission Personnel”) at Inria Rennes-Bretagne Atlantique and Irisa. He is particularly in charge of Irisa Ph.D. students.
 - Marie Babel is a member of the “Comité de centre” of Inria Rennes-Bretagne Atlantique.
 - Fabien Spindler is a member of the “Commission développement durable” of Inria Rennes-Bretagne Atlantique.
 - Alexandre Krupa is a member of the CUMIR (“Commission des Utilisateurs des Moyens Informatiques”) of Inria Rennes-Bretagne Atlantique.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Marie Babel:

Master INSA3: “Statistical Signal Processing”, 24 hours, M2, INSA Rennes

Master INSA1: “Assembler”, 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”, 24 hours, L3, INSA Rennes

Master INSA1: “Risk Management for Information Systems”, 8 hours, L3, INSA Rennes

François Chaumette:

Master ESIR3: “Visual servoing”, 10 hours, M2, Ecole supérieure d’ingénieurs de Rennes

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

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

Paolo Robuffo Giordano

P. Robuffo Giordano: Master in Robotics: “Analysis and Control of Multi-Robot Systems”, 16 hours, M2, Department of Computer and System Sciences, University of Rome “La Sapienza”

9.2.2. Supervision

9.2.2.1. Ph.D.

Ph.D.: Tao Li, “Commande d’un robot de télé-échographie par asservissement visuel échographique”, Université de Rennes 1, defense in February 2013, supervised by Alexandre Krupa [10]

Ph.D.: Antoine Petit, “3D model-based tracking of complex objects in a spatial context”, Université de Rennes 1, defense in December 2013, supervised by Eric Marchand [11]

Ph.D. in progress: Rafik Sekkal, “Features extraction and robust tracking of objects for video representation”, started in October 2010, supervised by Marie Babel

Ph.D. in progress: Manikandan Bakthavatchalam, “Utilisation des moments photométriques en asservissement visuel”, started in October 2011, supervised by François Chaumette

Ph.D. in progress: Bertrand Delabarre, “An information theoretic approach for navigation in robotics”, started in October 2011, supervised by Eric Marchand

Ph.D. in progress: Tawsif Gokhool, “Représentations valides à long terme pour la navigation et l’apprentissage des modèles 3D”, started in February 2012, supervised by Patrick Rives

Ph.D. in progress: Romain Drouilly, “Représentation hybride métrique, topologique et sémantique d’environnement 3D pour la localisation temps réel”, started in May 2012, supervised by Patrick Rives

Ph.D. in progress: Le Cui, “Nano-manipulation par asservissement visuel”, started in October 2012, supervised by Eric Marchand

Ph.D. in progress: Riccardo Spica, “Autonomous vision-based two-hand manipulation strategies for humanoid robots”, started in December 2012, supervised by Paolo Robuffo Giordano and François Chaumette

Ph.D. in progress: Lucas Royer, “Visual tool for percutaneous procedures in interventional radiology”, started in September 2013, supervised by Alexandre Krupa, Maud Marchal (Hybrid group at Inria Rennes-Bretagne Atlantique and Irisa) and Guillaume Dardenne (IRT B-Com)

Ph.D. in progress: Pierre Chatelain, “Multi-modal visual servoing for intra-operative imaging”, started in September 2013, supervised by Alexandre Krupa and Nassir Navab (Technische Universität München)

Ph.D. in progress: Vishnu Narayanan, “Semi-autonomous navigation of a wheelchair by visual servoing and user intention analysis”, started in September 2013, supervised by Marie Babel and Anne Spalanzani (e-Motion group at Inria Rhône-Alpes)

Ph.D. in progress: Suman Bista, “Visual navigation of a humanoid robot”, started in October 2013, supervised by Paolo Robuffo Giordano and François Chaumette

Ph.D. in progress: Nicolas Cazy, “Model predictive visual servoing of a humanoid robot”, started in October 2013, supervised by Paolo Robuffo Giordano, François Chaumette and Pierre-Brice Wieber (Bipop group at Inria Rhône-Alpes)

Ph.D. in progress: Renato José Martins, “Robust navigation and control of an autonomous vehicle”, started in November 2013, supervised by Patrick Rives and Samuel Siqueira Bueno (CTI)

Ph.D. in progress: Aly Magassouba, “Audio-based control”, started in December 2013, supervised by François Chaumette and Nancy Bertin (Panama group at Inria Rennes-Bretagne Atlantique and Irisa)

9.2.2.2. Internships

- Antoine Berlon, Master in computer science, Univ. de Rennes 1
- Grégoire Boizante, Master at INSA Rennes
- Baptiste Brun, Master in computer science, Univ. de Rennes 1
- Sylvain Devie, Graduate student, ENS Cachan Bretagne
- Corentin Hardy, Graduate student, ENS Cachan Bretagne
- Lucas Royer, Master at INSA Rennes

9.2.3. Juries

- François Chaumette: Hugues Sert (Ph.D., reviewer, Inria Lille), Soukalo Dembele (HdR, reviewer, Femto, Besançon), Olivier Stasse (HdR, Laas, Toulouse), Nicolas Mansard (HdR, Laas, Toulouse), Fabien Expert (Ph.D, ISM, Marseille)
- Patrick Rives: Hugues Sert (Ph.D., Inria Lille), Benjamin Lefaudeux (Ph.D., Inria Rocquencourt)
- Eric Marchand: Cyril Roussillon (Ph.D., reviewer, LAAS, Toulouse), Joao Paulo Silva do Monte Lima (Ph.D., reviewer, Federal University of Pernambuco, Recife, Brazil), Tomy Tikkaälä (Ph.D., reviewer, I3S, Sophia-Antipolis), Jeff Delaune (Ph.D., reviewer, Onera, Toulouse), Mohamed Tamaazousti (Ph.D., reviewer, CEA, Fontenay-aux-Roses), Glauco Garcia Scandaroli (Ph.D., ISIR, Paris), Ricardo Marquês (Ph.D, president, Rennes), Pascal Lino (Ph.D, president, Rennes).
- Alexandre Krupa: Naresh Marturi (Ph.D., reviewer, Femto, Besançon)

9.3. Popularization

- Due to the visibility of our experimental platforms, the team is often asked 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, the construction of a tower by combining 3D model-based visual tracking and visual servoing techniques to pick up cubes that are assembled, the navigation of a mobile robot in urban environments, vision-based detection and tracking for space navigation in a rendezvous context, the semi-autonomous navigation of a wheelchair, and augmented reality applications.
- Fabien Spindler is a member of the editorial board of “Ouest Inria”, the internal journal at Inria Rennes-Bretagne Atlantique.
- Alexandre Krupa co-authored an article titled “Au coeur des hommes” in the journal DocSciences that is intended for general public. This article is about medical robotics guided from images [27]. An article entitled “L’asservissement visuel au service de la robotique médicale” has also been published in May 2013 in the “Emergences” general-public magazine of Inria Rennes-Bretagne Atlantique <http://emergences.inria.fr/lettres2013/newsletter26/126asservissementvisuel>.

- Paolo Robuffo Giordano participated to the “Café des sciences Drones” at the “Espace des sciences” in Rennes in November 2013 to illustrate his activities on quadrotor UAVs to the general public.
- Marie Babel and François Chaumette participated to the “Science Festival” in October 2013 with a debate after the projection of the film “Vivre avec des robots” in Brécé near Rennes.
- Marie Babel and François Pasteau gave a 1-hour lecture on "Assistance to the mobility: the place of the robotics" on December 13th, during the “Conf’Lunch” monthly seminar organised by Inria in Rennes. Furthermore, two articles related to wheelchair navigation have been published in general-public magazines, namely “Des yeux pour les fauteuils roulants” in “Emergences” in July 2013(http://emergences.inria.fr/lettres2013/newsletter_n27/L27-FAUTEUIL) and “Un fauteuil qui a les yeux en face des roues” in “Sciences Ouest” (the magazine of the “Espace des sciences” in Rennes) in November 2013 (<http://www.espace-sciences.org/sciences-ouest/314/actualite/un-fauteuil-qui-a-les-yeux-en-face-des-roues>).

LEAR Project-Team

9. Dissemination

9.1. Scientific Animation

- Conference, workshop, and summer school organization:
 - Z. Harchaoui has co-organized the workshop “Optimization and Statistical Learning” at Les Houches, January 2013.
 - Z. Harchaoui and F. Pierucci: Co-organizer of the NIPS 2013 workshop on Greedy Algorithms, Frank-Wolfe and Friends - A modern perspective. December 2013.
 - C. Schmid and Z. Harchaoui: Co-organizers of the Inria Visual Recognition and Machine Learning Summer School, Paris, July 2013. Attracted a total of 177 participants from 34 countries (49 participants from France, 57 from Europe and 71 from America, Asia, and Africa).
- Editor-in-chief:
 - C. Schmid: International Journal of Computer Vision, since 2013.
- Editorial boards:
 - K. Alahari: Guest editor for the Special Issue on “Higher Order Graphical Models in Computer Vision: Modelling, Inference and Learning” to be published in IEEE Transactions on Pattern Analysis and Machine Intelligence.
 - J. Mairal: Guest editor for the Special Issue on Sparse Coding to be published in the International Journal of Computer Vision.
 - C. Schmid: Foundations and Trends in Computer Graphics and Vision, since 2005.
 - J. Verbeek: Image and Vision Computing Journal, since 2011.
- General chair:
 - C. Schmid: CVPR '15.
- Area chair:
 - C. Schmid: CVPR 2013, ICCV 2013.
 - J. Verbeek: BMVC 2013.
- Program committees (reviewers):
 - CVPR 2013: J. Verbeek, J. Mairal, K. Alahari, H. Wang, A. Gordo, Z. Harchaoui.
 - ICCV 2013: J. Verbeek, K. Alahari, H. Wang, A. Gordo.
 - NIPS 2013: J. Verbeek, J. Mairal, K. Alahari, Z. Harchaoui.
 - ICML 2013: J. Mairal, Z. Harchaoui.
 - IJCAI 2013: J. Verbeek.
 - BMVC 2013: K. Alahari, A. Gordo.
 - AISTATS 2013: Z. Harchaoui.
- Prizes:
 - Z. Harchaoui was awarded a Fellowship from the Isaac Newton Institute for Mathematical Sciences (Cambridge University) to participate to the “Inference for Change-Point and Related Processes” program in January 2014.
 - J. Mairal received the Cor Baayen prize, which is awarded annually by ERCIM to a promising young researcher in the field of Informatics and Applied Mathematics.

- T. Mensink (former PhD student of LEAR) received the best PhD prize from AFRIF.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Doctorat: Z. Harchaoui co-organized a tutorial on “Large-Scale Visual Recognition” at CVPR, June 2013.

Doctorat: Z. Harchaoui, Tutorial on large-scale learning, 1h, Inria Visual Recognition and Machine Learning Summer School 2013, Paris, France.

Doctorat: J. Mairal, Tutorial for the IMA Short Course “Applied Statistics and Machine Learning”, 3H, Minneapolis, June 2013.

Doctorat: C. Schmid, Tutorial on image search and classification, 3h, Inria Visual Recognition and Machine Learning Summer School 2013, Paris, France.

Master: M. Douze, K. Alahari, Bases de donnees multimedia, M2, ENSIMAG, France..

Master: Z. Harchaoui, Kernel-based methods for statistical machine learning, 18H, M2, Université Joseph Fourier (Grenoble University);

Master: J. Mairal and Z. Harchaoui. Statistical Learning and Applications. 16H, M2, Ecole Normale Supérieure de Lyon, France.

Master: C. Schmid, Object recognition and computer vision, 10h, M2, ENS ULM, France.

Master: C. Schmid and J. Verbeek, Machine Learning & Category Representation, 18h, M2, ENSIMAG, France.

Master: P. Weinzaepfel, “Réseaux IP”, 18H TD, M1, University Joseph Fourier.

Licence: F. Pierucci, “Calculus”, 75H TD, L1, University Joseph Fourier.

Licence: P. Weinzaepfel, “Introduction à UNIX et à la programmation en langage C”, 33.5H TD, L1, DLST Grenoble.

Licence: P. Weinzaepfel, “Communications numériques”, 12H TD, L1, Polytech Grenoble.

9.2.2. Supervision

PhD: Z. Akata, Contributions to Large-Scale Learning for Image Classification, Université de Grenoble, 06/01/2014, advisors: C. Schmid and F. Perronnin.

9.2.3. Juries

- J. Mairal, reviewer and jury member for the PhD thesis of Roberto Rigamonti, EPFL, Lausanne, December 18th, 2013.
- C. Schmid, présidente du jury concours CR2 Inria Grenoble, May 2013.
- C. Schmid, jury member of PhD committee for Nicolas Ballas, Ecole Nationale Supérieure des Mines de Paris, November 2013.
- C. Schmid, jury member of PhD committee for Wafa Bel Haj Ali, Université Nice-Sophia Antipolis, October 2013.
- C. Schmid, jury member of HDR committee for Ivan Laptev, Ecole Normale Supérieure, July 2013.
- C. Schmid, jury member of PhD committee for Sandra Avila, Université Pierre et Marie Curie, June 2013.
- J. Verbeek, reviewer and jury member of PhD committee for K. Simonyan, University of Oxford, November 6 2013.

9.3. Invited presentations

- K. Alahari: Invited speaker at the Brookes Anniversary Workshop, University of Oxford, Oxford, UK, October 2013.
- K. Alahari: Invited speaker at the Maori Workshop, Ecole Polytechnique, Palaiseau, France, November 2013:
- K. Alahari: Seminar at IIIT Hyderabad, India, December 2013.
- Z. Harchaoui: Seminar at GDR Isis, Paris, October 2013.
- Z. Harchaoui: talk at ICCOPT 2013, Portugal, July 2013.
- Z. Harchaoui: Seminar at CREST-ENSAE, Paris, June 2013.
- Z. Harchaoui: invited speaker at SMAI Conference, Seignosse, May 2013.
- Z. Harchaoui: invited speaker at Optimization and big data workshop, Edinburgh, May 2013.
- Z. Harchaoui: invited speaker at IHES, Orsay, March 2013.
- J. Mairal: Invited speaker at the Maori Workshop, Ecole Polytechnique, Palaiseau, France, November 2013.
- J. Mairal: Cor Baayen award presentation at ERCIM meeting, Athens, October 2013.
- J. Mairal: Seminar at Gipsa-Lab, Grenoble, June 2013.
- J. Mairal: Seminar FREMIT, Toulouse, April 2013.
- J. Mairal: Seminar at Xerox Research Center Europe (XRCE), Grenoble, March 2013.
- F. Perucci: talk at ICCOPT 2013, Portugal, July 2013.
- C. Schmid: Seminar at MPI, Tübingen, January 2013.
- C. Schmid: CVPR area chair meeting workshop, USC, February 2013.
- C. Schmid: Seminar at UCF, Orlando, May 2013.
- C. Schmid: Seminar at WILLOW retreat, Bandol, June 2013.
- C. Schmid: Invited speaker at Second international workshop on visual analysis and geo-localization of large-scale imagery in conjunction with CVPR'13, June 2013.
- C. Schmid: Keynote speaker at 14th International Workshop on Image and Audio Analysis for Multimedia Interactive Services (WIAMIS), Paris, July 2013.
- C. Schmid: ICCV area chair meeting workshop, Oxford University, August 2013.
- C. Schmid: Keynote talk at The First International Workshop on Action Recognition with a Large Number of Classes, in conjunction with ICCV '13, Sydney, Australia, December 2013.
- J. Verbeek: Invited speaker at DGA workshop on Multimedia Information Processing (TIM 2013), Paris, France, July 2013.
- J. Verbeek: Seminar at Media Integration and Communication Center, University of Florence, Italy, September 2013.
- J. Verbeek: Seminar at Intelligent Systems Lab Amsterdam, University of Amsterdam, The Netherlands, October 2013.

9.4. Popularization

- C. Schmid presented the research area of visual recognition to a group of high-school teachers, Inria Grenoble, March 2013.
- A. Gaidon, Z. Harchaoui and C. Schmid published an article about activity recognition in videos in ERCIM-news 95 (October 2013).

LFANT Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Editorships

K. Belabas acts on the editorial board of *Journal de Théorie des Nombres de Bordeaux* since 2005 and of *Archiv der Mathematik* since 2006.

H. Cohen is an editorial board member of *Journal de Théorie des Nombres de Bordeaux*; he is an editor for the Springer book series *Algorithms and Computations in Mathematics (ACM)*.

J.-M. Couveignes is a member of the editorial board of the *Publications mathématiques de Besançon* since 2010.

A. Enge is an editor of *Designs, Codes and Cryptography* since 2004.

9.1.2. Invited talks

- J.-M. Couveignes attended the Séminaire Mathématique de Besançon in September 2013 and gave a talk on primality testing.
- J.-M. Couveignes attended GEOCRYPT 2013 in Papeete and gave a talk on genus two curves.
- A. Enge: “Class polynomials for dimension 2”, Jahrestagung Computeralgebra, Konstanz, 18–22/03/2013
- A. Enge: “Class polynomials for abelian surfaces”, Cryptography and Coding Theory at LIX, 20–21/06
- A. Enge: “Class polynomials for abelian surfaces”, Number Theory, Geometry and Cryptography, Warwick, 01–05/07

9.1.3. Conference organisation and programme committees

The third atelier PARI/GP was held at IMB from January 14th to 18th, 2013: <http://pari.math.u-bordeaux.fr/Events/PARI2013/>. External speakers include Eduardo Friedman (Universidad de Chile), Xavier Roblot (Université Claude Bernard Lyon I), Jürgen Klüners (Universität Paderborn), Pascal Molin (Université Paris 7), Loïc Grenié (Università di Milano-Bicocca), Charles Boyd, Christophe Delaunay (Université de Franche-Comté), François Brunault (ENS Lyon), Philippe Elbaz-Vincent (Grenoble), Denis Simon (Caen).

A. Enge and D. Robert were programme committee members of the *Selected Area in Cryptography* 2013 conference.

9.1.4. Seminar

The following external speakers have given a presentation at the LFANT seminar, see <http://lfant.math.u-bordeaux1.fr/index.php?category=seminar>

- Friedrich Panitz (Paderborn), “An algorithm to enumerate quartic fields, after Bhargava.”
- Sinai Robins (Nanyang Technological University, Singapore) “Cone theta functions and what they tell us about the irrationality of spherical polytope volumes.”
- Achill Schürmann (Universität Rostock) “Exploiting Symmetries in Polyhedral Computations.”
- Maike Massierer (University of Basel) “Point Compression for the Trace Zero Variety.”
- Christophe Ritzenthaler (Université Aix-Marseille) “Sur la distribution des traces des courbes de genre 3 sur les corps finis.”
- David Lubicz (CELAR — Rennes) “Algèbre linéaire sur $\mathbb{Z}_p[[u]]$ et application au calcul de réseaux dans les représentations galoisiennes p-adiques.”
- Marie-Françoise Roy (Rennes) “Algorithme diviser pour régner pour les cartes routières.”
- Sorina Ionica (ENS Paris) “Algorithms for isogeny graphs”.
- Philippe Jaming (imb) “Problème de la phase dans le cadre discret”

9.1.5. Research administration

K. Belabas is the head of the mathematics department of University Bordeaux 1. He also leads the computer science support service (“cellule informatique”) of the Institute of Mathematics of Bordeaux and coordinates the participation of the institute in the regional computation cluster PlaFRIM.

He is a permanent invited member of the councils of both the math and computer science department (UFR) and the Math Institute (IMB).

J.-P. Cerri is an elected member of the scientific council of the Mathematics Institute of Bordeaux (IMB) and responsible for the bachelor programme in mathematics and informatics.

Since January 2011, J.-M. Couveignes is involved in the *GDR mathématiques et entreprises* and in the *Agence pour les mathématiques en interaction avec l'entreprise et la société*.

Until October 2013, A. Enge was responsible for the international affairs of Inria–Bordeaux-Sud-Ouest. As such, he was a regular member of the COST-GTRI, the Inria body responsible for evaluating international partnerships. Since October 2013, he heads this committee.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: A. Page, Fondamentaux pour les mathématiques et l'informatique, cours et TD, 18h, L1, Université Bordeaux 1, France;

Licence: A. Page, CPBx Analyse 2, TD, 43h, L2, Université Bordeaux 1, France;

Licence: A. Page, Codes et cryptographie, TD, 13h, L1, Université Bordeaux 1, France;

Master: K. Belabas, Computer Algebra, 90h, M2, Université Bordeaux 1, France;

Licence: J.-P. Cerri, Algèbre 1, cours, 22h, L1, Université Bordeaux 1, France;

Licence: J.-P. Cerri, Algèbre 2, TD, 51h, L2, Université Bordeaux 1, France;

Licence: J.-P. Cerri, Cryptographie et Arithmétique, cours, 24h, L3, Université Bordeaux 1, France;

Licence: J.-P. Cerri, Algèbre 4, TD, 51h, L3, Université Bordeaux 1, France;

Master: J.-P. Cerri, Arithmétique, cours, 36h, M1, Université Bordeaux 1, France;

Master: J.-M. Couveignes, Algorithms for public key cryptograph, 40h, M2, Université Bordeaux 1, France;

Master: J.-M. Couveignes, Algorithms for number fields, 40h, M2, Université Bordeaux 1, France;

Licence: P. Lezowski, Ouverture professionnelle (help to students to look for a suitable Master), 12h, L3, Université Bordeaux 1, France;

Licence : N. Mascot, cours intégré MOSE 1003, 27h, L1, Université Bordeaux 1, France;

Licence : N. Mascot, C2I, TD, 15h, L1, Université Bordeaux 1, France;

Summer school: A. Enge, Complex multiplication of elliptic curves, 6h, PhD, Number Theory for Cryptography, Warwick, 24-28/06;

Summer school: A. Enge, Complex multiplication of elliptic curves, 1.5h, PhD, ECC 2013, Leuven, 11-13/09;

Summer school: A. Enge, Pairings on elliptic curves, 1.5h, PhD, ECC 2013, Leuven, 11-13/09.

9.2.2. Supervision

- K. Belabas, A. Enge
PhD Aurel Page, *Méthodes explicites pour les groupes arithmétiques*, University Bordeaux
- K. Belabas, J.-M. Couveignes

PhD Nicolas Mascot, *Calcul de représentations galoisiennes modulaires*, University Bordeaux

- K. Belabas, P. Stevenhagen

PhD Athanasios Angelakis, *Number fields sharing the same abelianized Galois group*, ALGANT, University Bordeaux and University Leiden

- K. Belabas, T. Dokchitser, P. Stevenhagen

PhD Julio Brau, *Computing Galois representations attached to elliptic curves*, ALGANT, University Bordeaux and University Leiden

- A. Enge, D. Robert

PhD Enea Milio, *Isogénies entre surfaces abéliennes*, University Bordeaux

9.2.3. Juries

K. Belabas was a member of the committee for

Habilitation defense (and referee) of Emmanuel Hallouin in Toulouse (November 2013).

J.-M. Couveignes was a member of the committees for

Professor position at the Université of Rennes (April 2013).

Professor position at the Université of Papeete (April 2013).

PhD defense of Jean-Gabriel Kammerer in Rennes (May 2013).

PhD defense (and referee) of Razvan Barbulescu in Nancy (December 2013).

PhD defense (and referee) of Emmanuel Fouotsa in Rennes (December 2013).

PhD defense (and referee) of Yvan Boyer in Paris (December 2013).

A. Enge was a member of the committees for

evaluation AERES LIP6, 07–09 January 2013;

evaluation AERES PRISM, 03–04 December 2013.

9.3. Popularisation

P. Lezowski has given a presentation on cryptology to high school students during “Fête de la science”.

LINKS Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Organization of Workshops

A two-days workshop on Data-centric Web Services has been organized by Bourhis and Niehren in October 2003. The workshop gathered together researchers from Inria Lille, Inria Rennes, Inria Saclay and Université Marne La Vallée.

8.1.2. Invited Talks

P. BOURHIS was invited to give a talk at the Journées Complexité et Modèles Finis 2013 - 60 ans d'Etienne Grandjean, on "Containment of monadic datalog for general structures".

S. TISON, J. NIEHREN, A. LEMAY and A. BOIRET were invited in a Dagstuhl seminar on Tree Transducers and Formal Methods.

8.1.3. Program Committees

J. NIEHREN is member of the editorial board of FUNDAMENTA INFORMATICA. He was in the program committees of STACS (Symposium on Theoretical Aspects of Computer Science) 2014 and TTATT (International Workshop on Trends in Tree Automata and Tree Transducers) 2013.

I. BONEVA was member of the program committee of ADBIS (East-European Conference on Advances in Databases and Information Systems) 2013. She was external reviewer for CIIA 2013 and TOIT.

A. BONIFATI was Chair of WebDB (International Workshop on the Web and Databases) 2013. She was also member of the program committees of SIGMOD (International Conference on Management of Data) 2013, VLDB (International Conference on Very Large Databases) 2013 and EDBT (International Conference on Extending Data- base Technology) 2013. She was a member of the program committee of BDA (Journées Bases de Données Avancées) 2013. She is a member of the program committee of ICDE (International Conference on Data Engineering) 2014, VLDB 2014, SIGMOD 2014, EDBT 2014, and ICDT (International Conference on Database Theory) 2015.

P. BOURHIS was member of the program committee of BDA (Journées Bases de Données Avancées) 2013 and of the CIKM PhD Workshop (PIKM) 2013. He was external reviewer for PODS 2013, TKDE and Information Systems.

S. STAWORKO was member of the program committee of ICDT 2013 and WebDB 2013 (International Workshop on the Web and Databases).

S. TISON is member of the steering committee of RTA (International Conference on Rewriting Techniques and Applications) and STACS (Annual Symposium on Theoretical Aspects of Computer Science). She is member of the editorial committee of RAIRO-ITA. She is member of the program committee of Highlights of Logic, Games and Automata 2013 and LATA (International Conference on Language and Automata Theory and Applications) 2014.

8.1.4. French Scientific Responsibilities

A. BONIFATI, serves in the vivier of Université Lille 1.

J. NIEHREN serves in the vivier of Université Lille 1.

S. TISON is head of the computer science lab in Lille (LIFL). She is elected member of the “Comité National de la Recherche Scientifique (CoNRS)” (Section 6) and of the IUF senior committee 2013. She was president of the scientific and technical council of the cluster “Pôle de Compétitivité Industries du commerce” and she is member of the administrative board of the cluster Pictanovo. She serves in the vivier of Université Lille 1, where she was member of the selection committee for professor positions. She was also member of the selection committee for professor positions in Marseille.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master (Mocad): Information extraction, 18h, M2, Université Lille 1, France by J. NIEHREN
 Master (Mocad): Information extraction, 18h, M2, Université Lille 1, France by A. BONIFATI
 License: Introduction to Databases, 54h, L3, Université Lille 1, France by A. BONIFATI
 Master: XML technologies: Sax and DOM, 18h, M1, Université Lille 3, France by D. DEBARBI-EUX
 Licence: Propositional Logic, 18h, L2, Université Lille 3, France by S. STAWORKO
 Master: Modelization XML, 24h, M1, Université Lille 3, France by S. STAWORKO
 Licence: Artificial Intelligence and Logic, 63h, L3, Université Lille 3, France by S. STAWORKO
 Master: Introduction to XML, 40h, M1, Université Lille 3, France by S. STAWORKO
 Master : Advanced algorithms and complexity, M1, 57h, Université Lille 1, by S. TISON
 Master: XML Technologies, 16h, M2, Université Lille 3, France by A. LEMAY

8.2.2. Supervision

PhD in Progress: R. CIUCANU, Cross-model queries and schema mappings: evaluation and learning. Since Sept. 2012. Supervised by Bonifati.
 PhD in Progress: G. LAURENCE, Learning XML transformations for data exchange on the web. Since Sept. 2008. Submitted in January 2014. Supervised by Tommasi, Niehren, Staworko and Lemay.
 PhD in Progress: A. M. NDIONE, Probabilistic algorithms for tree automata and transducers. Since Sept. 2010. Submitted in January 2014. Supervised by Niehren and Lemay.
 PhD in Progress: T. SEBASTIAN, Streaming algorithms for XSLT. Since May 2011. Supervised by Niehren.
 PhD in Progress: A. BOIRET, Top-down tree transformations with look-ahead : foundations and learning. Since Sept. 2011. Supervised by Niehren and Lemay.
 PhD in Progress: K. BATMANOV submitted in January 2014. Supervised by Niehren
 PhD in Progress: G. MADELAINE. Co-supervised by Niehren (2012-2015).

8.2.3. Juries

A. BONIFATI was in the PhD committee of Federico Cavalieri at Università di Genova, Italy.
 J. NIEHREN was the supervisor of the HdR of Cédric Lhoussaine at Université de Lille 1 in December 2013.
 J. NIEHREN was in the HdR committee of Pierre Senellart at Paris Telecom in July 2013.
 J. NIEHREN was the president of the PhD committee of Evgenia Kopylova from the Bonsai group at the University of Lille 1 in Dec 2013.
 S. STAWORKO was in the PhD committee of Alexandre Decan at Université de Mons, Belgium.
 S. TISON was in the HdR committee of Sébastien Picault and in the PhD committee of Julie Jacques, at the Université Lille 1. She was in the PhD committees of Vincent Hugot and Elena Tushkanova at Université de Franche-Compté. She was in the HdR committee of Nabil Layaida in Grenoble.

8.3. Popularization

Within the Initiative ‘Chercheurs à l’École’ during the ‘Fête de la science 2013’ in October, Iovka Boneva has done presentations for high-school students in two lycées in Villeneuve d’Ascq and Marcq en Baroeul.

LOGNET Team

9. Dissemination

9.1. Scientific Animation

- reviewing of an ANR blanc proposition;
- reviewing of an Ecos-sud proposition;
- reviewing of TLCA-13,
- program committee of Modularity 2014;

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master : Luigi Liquori, Peer-to-peer 1, 31.5hTD, M2, Université of Nice Sophia-Antipolis;

9.2.2. Supervision

PhD: Petar Maksimovic, “Development and Verification of Probability Logics and Logical Frameworks”, Faculty of Technical Sciences, University of Novi Sad, Serbia and the University of Nice Sophia Antipolis; Supervisors: Silvia Ghilezan and Luigi Liquori; Defended in October 2013 [24].

PhD: Vincenzo Ciancaglini, “Extending the reach of overlay networks through distributed gateways: design, modeling and applications”, Université de Nice-Sophia Antipolis; Supervisors: Luigi Liquori and Jean-Christophe Pazzaglia (SAP); Defended in July 2013 [23].

PhD: Giang Ngo Hoang, “Inter-heterogeneous overlay co-operation”, Université de Nice-Sophia Antipolis and HUST, Hanoi Institute of Science and Technology, Vietnam; Supervisors: Luigi Liquori and Hung Nguyen Chan (HUST & VIELINA); Defended in December 2013 [25]

PhD in progress: Riccardo Loti, “Modeling and evaluation of protocols for Delay Tolerant Networks exploiting DHT, Content driven routing, and rateless codes”, Université de Nice-Sophia Antipolis and University of Turin Italy; Supervisors: Luigi Liquori and Rossano Gaeta (UNITO); Defense envisaged in the first half of 2014.

PhD in progress: Thao Nguyen, “Trust and reputation management in online marketplaces”, Université de Nice-Sophia Antipolis; Supervisors : Luigi Liquori and Bruno Martin (UNICE); Defense envisaged in the first half of 2014.

9.2.3. Juries

Participating of Raoul Gimenez Ph.D. defense, KTH, Stockholm, December 2013.

9.3. Popularization

The LogNet team has conducted two dozen circa of sessions of popularization of the myMed software (typically an “atelier de formation au réseau social myMed”). Public are typically students, administration people of many town or institutions (CG06, Mairies, Hospital, etc.).

M3DISIM Team

8. Dissemination

8.1. Scientific Animation

Dominique Chapelle

- Member of the editorial boards of journals *Computers & Structures* and *M2AN*
- Program committee of conference “Functional Imaging and Modeling of the Heart 2013”
- Invited lecturer at conference “Shell Structures - Theory and Applications 2013”
- Member of the Academic Senate of FCS Paris-Saclay

Philippe Moireau

- Reviewer this year for ACOM IJNME JOMP MCCA journals, the Waves conference and the American Control Conference

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Philippe Moireau

Bachelor’s degree: “MA103 - Introduction aux EDP et à leur approximation numérique”, 14h, M1, ENSTA ParisTech, France

Master’s: “MA201 - La méthode des éléments finis”, 3h lectures and 14h classes, M2, ENSTA ParisTech, France

Sébastien Imperiale

Master’s: “MA201 - La méthode des éléments finis”, 12h, M2, ENSTA ParisTech, France

Post-graduate: “Numerical methods for waves propagation simulations”, 4h30, Collège Polytechnique, France

Post-graduate: “Piezoelectric sensor and wave based inverse problems”, Summer school on Inverse Problems, Bremen, 1h30, Germany

Annabelle Collin

Oral examination: “Algebra and Geometry”, UPMC, Spring 2012

Bachelor’s degree: “Multivariable Calculus”, UPMC, fall 2012

8.2.2. Supervision

PhD in progress: Annabelle Collin, “Dimensional reduction and electro-mechanical coupling for the modeling of electrophysiology and muscle contraction”, UPMC, started September 2011, advisors D. Chapelle and J.-F. Gerbeau

PhD in progress: Bruno Burtshell, “Mechanical modeling and numerical methods for poromechanics: Applications to cardiac perfusion”, Ecole Polytechnique, started October 2013, advisors D. Chapelle and P. Moireau

PhD defended in December: Alexandre Imperiale, “Image-based observation operators for data assimilation in cardio-mechanics”, UPMC, started October 2010, advisors D. Chapelle and P. Moireau

8.2.3. Juries

Dominique Chapelle: member of PhD committee of S. Marchesseau

Philippe Moireau: member of PhD committee of A.-C. Boulanger

8.3. Popularization

TV News Story “**la météo du coeur**” (how to predict the heart weather) on France5 “Magazine de la santé” (11 March 2013)

D. Chapelle invited speaker at “**Horizon Maths 2013**”

MADYNES Project-Team

9. Dissemination

9.1. Scientific Animation

Abdelkaer Lahmadi served as a reviewer for the following journals: IEEE Communications Magazine, IEEE Transactions on Parallel and Distributed Systems, IEEE Transactions on Network and Service Management.

Abdelkader Lahmadi served as a Technical Program Committee member for the following conferences: Autonomous Infrastructure, Management and Security (AIMS'2013, PhD student workshop), The 1st International Workshop on Crowdsensing Methods, Techniques, and Applications (CROWDSENSING 2014).

Abdelkader Lahmadi participated to the Dagstuhl Seminar "Global Measurement Framework".

Isabelle Chrisment is the Co-Chair together with Ahmed Serhrouchni from Telecom ParisTech of the IFIP Task Force 6.5 on Secure Networking. This Task Force provides a framework for the organization of activities within the scope of secure networking. It facilitates international cooperation activities and exchanges in this area.

Isabelle Chrisment is a member of AFNIC⁶ 's scientific board since January 2013.

Isabelle Chrisment served as a TPC member of : the 7th International IFIP Conference on Autonomous Infrastructure, Management and Security (IFIP AIMS'2013); the 14th joint TC6 and TC11 International IFIP Conference on Communications and Multimedia Security (IFIP CMS'2013); the IFIP/IEEE International Symposium on Integrated Network Management (IFIP/IEEE IM'13); the 4th International Conference on Emerging Ubiquitous Systems and Pervasive Networks (EUSPN-2013), Security and Privacy Track. the 8th national conference on Sécurité des Architectures Réseaux et des Systèmes d'Information (SARSSI 2013).

Olivier Festor is Chair of the IFIP Working-Group 6.6 on Network and systems management. This working group is actively involved the animation of most major conferences in this research area and organizes frequent meetings and workshops on the domain.

Olivier Festor is the Co-chair together with Lisandro Zambenedetti Grandvile from the Federal University of Rio Grande do Sul (UFRGS) of the Internet Research Task Force (IRTF) Network Management Research Group since march 2011. In 2013, we organized four workshops leading to a new work-plan for the design of new management protocols and services within the IRTF.

Olivier Festor served as a Technical Program Committee Member of the following 2013 events:

IFIP/IEEE Integrated Management Symposium (IM'2013), IFIP/IEEE in conjunction with ACM CNSM'2013. Asia-Pacific Network Operations and Management Symposium (APNOMS'2013 and IEEE GLOBECOM 2013.

Olivier Festor is member of the board of editors of the Springer Journal of Network and Systems Management. He is member of the editorial board of the IEEE Transactions on Network and Service Management.

In December 2012, Olivier Festor joined the University of Lorraine on a Full Professor position. There he became Director of the TELECOM Nancy Engineering School (350 students at Masters level, 50 faculty and staff).

Remi Badonnel served as a TPC member of the following conferences:

- the IFIP International Conference on Autonomous Infrastructure, Management and Security (IFIP AIMS'2013);
- the IEEE International Conference on Integrated Management (IEEE/IFIP IM'2013);
- the IEEE/IFIP International Workshop on Management of the Future Internet (IEEE/IFIP MANFI'2013).

⁶<http://www.afnic.fr>

Remi Badonnel served as a session chair and was part of the Best Paper Award Committee at the IEEE International Conference on Integrated Management (IEEE/IFIP IM'2013).

Remi Badonnel served as an expert for the "Futur et Ruptures" programm of the Mines-Telecom institute.

Thibault Cholez was invited to present a tutorial [38] on the Management of Content-Centric Networking at ResCom 2013, a CNRS summer school .

Thomas Silverston leads in 2013 the activity CityCrowdSource from EIT ICT Labs. He also co-organized the SDN Days (GdR CNRS RESCOM) in Loria (Nancy), November 26/27th 2013. Thomas is co-chair (General Chair) of the The 1st International Workshop on Crowdsensing Methods, Techniques, and Applications (CROWDSENSING) organized with IEEE Percom 2014. Thomas is a TPC member of the Named-Oriented Mobility Workshop organized with IEEE Infocom 2014. Thomas was a speaker at the CNRS GdR RESCOM summer school on Information-Centric Networks . Thomas was an invited speaker at the Internet for the Future Society Workshop in Tokyo, organized by the *Societe Franco-Japonaise des Techniques Industrielles* and sponsored by the « Ambassade de France au Japon »

Ye-Qiong Song served as a TPC Member of the following 2013 events: the 18th IEEE international conference on Emerging Technologies & Factory Automation (ETFA'2013) ; the 11th International Conference On Smart homes and health Telematics (ICOST 2013); IROS'13 Workshop on Robots and Sensors integration in future rescue INformation system (ROSIN'13); the International Workshop on Cooperative Robots and Sensor Networks (RoboSense 2013) ; the 12th International Workshop on Real-Time Networks (RTN 2013).

Ye-Qiong Song served as track co-chair of Ubimob2013.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

There is a high demand on networking courses in the various universities in which LORIA is par. This puts high pressure on MADYNES members which are all in charge of numerous courses in this domain. Especially the team professors and associate professors ensure more than the required amount of teaching obligation in their respective institutions: IUT, bachelor, master, TELECOM Nancy, ENSEM and École des Mines de Nancy engineering schools.

Laurent Andrey is the Head of Department of the Charlemagne IUT specialization on multimedia networking.

Olivier Festor is the Director of the TELECOM Nancy Engineering School. Isabelle Chrisment is co-directing the school and is in charge of the students recrutement process. Remi Badonnel is heading the Telecommunications and Networks specialization of the 2nd and 3rd years at the TELECOM Nancy engineering school, and is also in charge of the 2nd year design and development projects at the same school. They teach the networking related courses in this cursus.

Laurent Ciarletta is heading the specialization Safe Systems Architecture of the Computer Science and IT department of the Ecole des Mines de Nancy ("Grande Ecole", Engineering School, Master degree level). He is most notably in charge of Advanced Networking, Middleware, Component-based software development, Pervasive Computing, Networking and Systems courses at the Ecole des Mines de Nancy. Notably, within the ARTEM alliance (ICN - Business School, Mines Nancy, Ecole d'Art / School of Art), he is a member of the Research Comitee, more specifically with the "Smart Working Spaces" research theme, and he is co-responsible for the "Businesses: the digital challenge *CORP 3.0*, *Entreprises : le défi numérique* and the *Imagineries and the Workspaces*, 2 classes within the ARTEM alliance (over 90 hours).

Team members are teaching the following courses:

Abdelkader Lahmadi

- Ecole Ingénieur : Elements of Distributed Computing: algorithms and systems, 20, niveau M2 Ingénieur, ENSEM, France
- Ecole Ingénieur : Wireless Sensor Network Programming, 12, niveau M2 Ingénieur, ENSEM, France

- Ecole Ingénieur : Operating Systems and C language programming, 30, niveau M1 Ingénieur, ENSEM & Ecole des Mines de Nancy, France
- Ecole Ingénieur : Real time systems: concepts and programming, 30, niveau M1 Ingénieur, ENSEM, France
- Ecole Ingénieur : Relational Database, 20, niveau M1 Ingénieur, ENSEM, France
- Ecole Ingénieur : Algorithmic and Programming (Java), 50, niveau L1 Ingénieur, ENSEM, France
- Ecole Ingénieur : Computer Architecture ,50, niveau L1 Ingénieur, ENSEM, France

Bernardetta Addis

- Ecole d'ingénieur : Optimisation Discrete et Deterministe, 21, 2A, Université de Lorraine-ENSMN, France
- Ecole d'ingénieur : Recherche Operationelle, 28, 2A, Université de Lorraine-ENSMN, France

Isabelle Chrisment

- Ecole Ingénieur : Langage C et Shell, 42hTD, niveau L3, Telecom Nancy
- Ecole Ingénieur : Réseaux et Systèmes, 60hTD, niveau M1, Telecom Nancy
- Ecole Ingénieur : Réseaux et Systèmes Avancés, 30hTD, niveau M1, Telecom Nancy
- Ecole Ingénieur : Routage Internet, 50hTD, niveau M2, Telecom Nancy
- Ecole Ingénieur : Sécurité des Réseaux et des Applications, 18hTD, niveau M2, Telecom Nancy

Laurent Andrey

- Licence : Introduction to networks, 56, niveau L1 (DUT), IUT nancy-Charlemagne, France
- Licence : Introduction to network services, 38, niveau L2 (DUT), IUT nancy-Charlemagne, France

Laurent Ciarletta

- Ecole Ingénieur : Networking and Information System, 8, niveau L3 Ingénieur, Mines Nancy, France
- Ecole Ingénieur : Bootcamp (programming bootcamp), 9, niveau M1 Ingénieur, Mines Nancy, France
- Ecole Ingénieur : Operating Systems, 10, niveau M1 Ingénieur, Mines Nancy, France
- Ecole Ingénieur : Networking, 27, niveau M1 Ingénieur, Mines Nancy, France
- Ecole Ingénieur : Advanced Networking and Ambient Systems, 18, niveau M1 Ingénieur, Mines Nancy, France
- Ecole Ingénieur : Embedded Systems, 18, niveau M1 Ingénieur, Mines Nancy, France
- Ecole Ingénieur : Advanced Software Engineering, 18, niveau M1 Ingénieur, Mines Nancy, France
- Ecole Ingénieur : Android development, 12, niveau M1 and M2 Ingénieur, Collegium Ingenieur and Mines Nancy, France
- Ecole Ingénieur : Ateliers ARTEM "Smart and new workspaces", 90, niveau M1 and M2 Ingénieur, Collegium Ingenieur and Mines Nancy, Nancy National School of Art, ICN Business School, France

Emmanuel Nataf

- DUT : Introduction to computer system and network, 60, niveau L1, IUT nancy-Charlemagne, France

- DUT : Network, 30, niveau L1 , IUT Nancy-Charlemagne, France
- DUT : System, 30, niveau L2, IUT Nancy-Charlemagne, France
- Licence : Network monitoring, 30, niveau L3, IUT Nancy-Charlemagne, France
- Master : Network monitoring, 30, niveau M2, Université de Lorraine, France

Olivier Festor

- Ecole Ingénieur : P2P Algorithms, Protocols and Applications, 12, niveau M2 Ingénieur, Telecom Nancy & ENSEM, France
- Ecole Ingénieur : Voix sur IP, Protocols and Applications, 9, niveau M2 Ingénieur, Telecom Nancy, France

Rémi Badonnel

- Ecole Ingénieur : Networks and Services Management, 24, niveau M2 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : Cloud Computing, 22, niveau M2 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : Industrial Project, 20, niveau M2 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : Networks and Systems, 28, niveau M1 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : Advanced Courses on Networks and Systems, 28, niveau M1 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : Algorithmics, Data Structures and Algebra, 30, niveau L3 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : Design and Development Project, 16, niveau M1 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : Initiation to Research Project, 18, niveau M1 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : Object-Oriented Programming, 32, niveau L3 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : XML Design and Development, 18, niveau L3 Ingénieur, TELECOM Nancy, France

Thibault Cholez

- Ecole Ingénieur : Principles and architecture of computers (ASM), 18h, niveau L3 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : C and Shell programming, 22h, niveau L3 Ingénieur, TELECOM Nancy, France
- Ecole Ingénieur : Reliable C++ programming, 10h, niveau M2 Ingénieur, TELECOM Nancy, France

Thomas Silverston

- Master : Réseaux Avancés, 57, niveau M2, Université de Lorraine, France
- Master : Sécurité des réseaux, 45, niveau M2, Université de Lorraine, France
- Master : Architecture des Réseaux, 22, niveau M1, Université de Lorraine
- Master : VoIP, 24, niveau M1, Université de Lorraine
- Master : Introduction aux Réseaux, 26, niveau M2 Math, université de Lorraine, France
- Master : Convergence IP et Mobilité, 24, M2, Université de Lorraine, France
- Ecole d'ingénieur : Voix sur IP, 28, 3A, Telecom Nancy, France
- Master : Convergence et Multimédia, 15, Université de la Réunion

Ye-Qiong Song

- Master : Embedded and Sensor Networks, 8, niveau M2, Université de Lorraine, France
- Ecole Ingénieur : Networking, 40, niveau M2, ENSEM - Université de Lorraine, France
- Ecole Ingénieur : Wireless Sensor Network protocols, 8, niveau M2 Inge´nieur, ENSEM, France
- Ecole Ingénieur : Database, 6, niveau M1, ENSEM - Université de Lorraine, France
- Ecole Ingénieur : Algorithmic and programming (Java), 90, niveau L3, ENSEM - Université de Lorraine, France
- Ecole Ingénieur : Computer Architecture , 30, niveau L1 Ingénieur, ENSEM, France

9.2.2. Supervision

PhD : Oussema Dabebbi, Dynamic risk management in Voice over IP services, defended the 3rd June 2013, supervised by Remi Badonnel and Olivier Festor

PhD : Juan Pablo Timpanaro, Monitoring and Security in P2P file sharing networks, defended the 6th November 2013, supervised by Isabelle Chrisment

PhD in progress : Martin Barrere, Vulnerability management in autonomic networks and services, since Mar 2011, supervised by Remi Badonnel and Olivier Festor

PhD in progress : César Bernardini, Réseau orienté-contenu basé sur les communautés d'utilisateurs, since Nov 2011, supervised by Olivier Festor et Thomas Silverston

PhD in progress : François Despaux, Delay evaluation in wireless sensor networks for providing QoS, since Oct 2011, supervised by Ye-Qiong Song and Abdelkader Lahmadi

PhD in progress : Patrick Olivier Kamgueu, Routing management in WSNs, since Jun 2012, supervised by Emmanuel Nataf and Olivier Festor in France, Thomas Djotio in Cameroun

PhD in progress : Kevin Roussel : Dynamic management of QoS and energy in heterogenous sensor and actuator networks for e-health applications, since Dec 2012, supervised by Ye-Qiong Song

PhD in progress : Anthéa Mayzaud, Monitoring and Security in the Internet of Things, since May 2013, supervised by Isabelle Chrisment and Remi Badonnel

PhD in progress: Evangelia Tsiontsiou, Multi-constrained QoS routing for wireless sensor networks with applications to smart space for ambient assisted living, since Oct 2013, supervised by Ye-Qiong Song and Bernardetta Addis

PhD in progress : Elian Aubry, Security and Management of Content-Centric Networks, since Oct 2013, supervised by Isabelle Chrisment and Thomas Silverston

PhD in progress : Wazen Shbair, An open and flexible architecture for monitoring the uses of Internet, since Dec. 2013, supervised by Isabelle Chrisment and Thibault Cholez

PhD in progress : Dorin Maxim, Probabilistic Analysis of Real-Time Systems, since Dec 2013, supervised by Françoise Simonot-Lion and Liliana Cucu-Grosjean

PhD in progress : Mohamed Said Seddiki, Allocation des ressource dans la virtualisation des réseaux, since Mar 2013, supervised by Ye-Qiong Song, and by Mounir Frikha in Tunisia

9.2.3. Juries

Team members participated to the following Ph.D. defense committees :

- Yosra Ben Saied, Ph.D in Computer Science from TELECOM SudParis and Université Pierre et Marie Curie. Title: *Sécurité Collaborative pour l'Internet des Objets*, June 2013. (Isabelle Chrisment)
- Chrystel Gaber, Ph.D. in computer Science from Université de Caen Basse-Normandie. Title: *Sécurisation d'un système de transactions sur terminaux mobiles*. October 2013. (Isabelle Chrisment)

- Leila Benacer, Ph.D in Computer Science from University Paris Est Créteil. Title: *Contributions à l'autodiagnostic de pannes dans les réseaux de communication à large échelle*. December 2013. (Olivier Festor)
- Véronique Legrand, Ph.D in Computer Science from INSA Lyon. Title: *Confiance et risque pour engager un échange en milieu hostile*. March 2013. (Olivier Festor)
- Florian Many, Combinaison des aspects temps réel et Sureté de fonctionnement pour la conception des plateformes avioniques, February 2013. (Françoise Simonot-Lion)
- Zhe Li, Ph.D. in Computer Science from TELECOM Bretagne. Title *Optimization d'un réseau de distribution de contenus géré par un opérateur*, January 2013. (Olivier Festor)
- Sylvain Cherrier, Ph.D in Computer Science from University Paris Est. Title: *Architecture et protocoles applicatifs pour la chorégraphie de services dans l'Internet des objets*. December 2013. (Olivier Festor)
- Ludovic Jacquin, Ph.D in Computer Science from University of Grenoble. Title: *Compromis Performance Sécurité pour des passerelles très haut débit pour Internet*, December 2013. (Olivier Festor)
- Jamila Ben Slimane, Ph.D in Computer Science from both University of Lorraine and SupCom Tunis. Title: *Allocation conjointe des canaux de fréquence et des créneaux e temps et routage avec QoS dans les réseaux de capteurs dans fil denses et étendus*, March 2013. (Ye-Qiong Song)
- Xiaoting LI, Ph.D in Computer Science from University of Toulouse - INPT. Title: *Worst-case delay analysis of real-time switched Ethernet networks with flow local synchronization*, September 2013. (Ye-Qiong Song)
- Cédric Mauclair, Ph.D in Computer Science from University of Toulouse - ISAE. Title: *Analyse statistique de réseaux embarqués temps réel*, September 2013. (Ye-Qiong Song)
- Juan Lu, Ph.D in Computer Science from University of Toulouse. Title: *Modeling, simulation and implementation of an 802.15.4 based adaptive communication protocol in wireless sensor network: application to monitoring the elderly at home*, February 2013. (Ye-Qiong Song)
- Mohamed-Anis Gallas, Ph.D in Architecture Science from University of Lorraine. Title: *De l'intégration à la solution architecturale: proposition d'une méthode d'assistance à la prise en compte de la lumière naturelle durant les phases amont de conception*, September 2013. (Ye-Qiong Song)
- Soumeiya-Leila Hernane, Ph.D in Computer Science from University of Lorraine. Title: *Modèles et algorithmes de partage de données cohérents pour le calcul parallèle distribué à haut débit*, June 2013. (Ye-Qiong Song)

Team members participated to the following Habilitation Degree defense committees :

- Joaquin Garcia-Alfaro, Habilitation Degree in Computer Science from Université Pierre et Marie Curie Paris 6. Title: *Contributions to the Security of EPC/RFID Wireless Technologies*, 2013. (Olivier Festor)
- Martin Quinson, Habilitation Degree in Computer Science from Université de Lorraine. Title: *Méthodologies d'expérimentation pour l'informatique distribuée à large échelle*, March 2013. (Isabelle Chrisment)

MAESTRO Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Editorial activities

MAESTRO members are

Editor-in-Chief of

- *Performance Evaluation* (PEVA) (**P. Nain** since 1 January 2008);

Associate Editors of (in alphabetical order)

- *Dynamic Games and Applications* (DGAA) (**E. Altman** since 2011);
- *IEEE Transaction on Control of Networks* (TCNS) (**E. Altman** since 2013);
- *IEEE/ACM Transaction on Networking* (ToN) (**E. Altman** since 2013);
- *Journal of Economic Dynamics and Control* (JEDC) (**E. Altman** since 2001);
- *Performance Evaluation* (PEVA) (**K. Avrachenkov** since 2008);

Guest editors of Special Issues of

- *Dynamic Games and Applications* (DGAA) on “Dynamic Games for Networks” [69] (**E. Altman**);
- *Performance Evaluation* (PEVA) on “Selected Papers from the 9th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2011)” [70] (**E. Altman**).

8.1.2. Conferences, meetings and tutorial organization

MAESTRO members were

in the Steering Committee of

- 7th Intl. Conference on Performance Evaluation Methodologies and Tools (VALUE-TOOLS 2013, Turin, Italy) (**E. Altman**);
- 31st Intl. Symposium on Computer Performance, Modeling, Measurements and Evaluation (IFIP WG 7.3 Performance 2013, Vienna, Austria) (**P. Nain**);
- 11th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2013, Tsukuba, Japan) (**E. Altman** as chair).

General Co-chair of

- IEEE Intl. Workshop on Self-Organizing Networks (SONETs 2014, Istanbul, Turkey) (**M. Haddad**);
- 4th Intl. Workshop on Indoor and Outdoor Small Cells (IOSC 2013, Tsukuba, Japan) (**E. Altman, M. Haddad**).

Publicity Co-chair of

- ACM Intl. Conference on Measurement and Modeling of Computer Systems (ACM SIGMETRICS 2014, Austin, Texas, USA) (**S. Alouf**);
- 33rd IEEE Intl. Conference on Computer Communications (IEEE INFOCOM 2014, Toronto, Canada) (**G. Neglia**).

Organizer of

- a stream of sessions “Random Graphs and Complex Networks” at the 17th INFORMS Applied Probability Society Conference 2013 (Costa Rica) (**K. Avrachenkov**).

Workshops chair of

- 11th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2013, Tsukuba, Japan) (**M. Haddad**).

8.1.3. Participation in technical program committees (TPC)

MAESTRO members were in the TPC of (in alphabetical order)

1. 8th ACM MobiCom Workshop on Challenged Networks (CHANTS 2013, Miami, Florida, USA) (**G. Neglia**);
2. ACM Intl. Conference on Measurement and Modeling of Computer Systems (ACM SIGMETRICS 2013, Pittsburgh, Pennsylvania, USA) (**A. Jean-Marie**);
3. 9th Advanced Intl. Conference on Telecommunications (AICT 2013, Rome, Italy) (**K. Avrachenkov**);
4. 33rd IEEE Intl. Conference on Computer Communications (IEEE INFOCOM 2014, Toronto, Canada) (**G. Neglia**);
5. 4th Intl. Conference on Access Networks (ACCESS 2013, Nice, France) (**K. Avrachenkov**);
6. 20th Intl. Conference on Analytical and Stochastic Modelling Techniques and Applications (ASMTA 2013, Ghent, Belgium) (**K. Avrachenkov**);
7. 7th Intl. Conference on Game Theory and Management (GTM 2013, St. Petersburg, Russia) (**E. Altman**);
8. 13th Intl. Conference on Next Generation Wired/Wireless Networking (NEW2AN 2013, St. Petersburg, Russia) (**K. Avrachenkov**);
9. 7th Intl. Conference on Performance Evaluation Methodologies and Tools (VALUETOOLS 2013, Turin, Italy) (**S. Alouf, G. Neglia**);
10. 28th Intl. Symposium on Computer and Information Sciences (ISCIS 2013, Paris, France) (**A. Jean-Marie**);
11. 11th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2013, Tsukuba, Japan) (**D. Ciullo**);
12. 25th Intl. Teletraffic Conference (ITC 2013, Shanghai, China) (**S. Alouf, G. Neglia**);
13. 1st Intl. Workshop on Modeling, Measurements and Optimization of Video Performance over Wireless Networks (WiVid 2013, Tsukuba, Japan) (**O. Habachi**);
14. 6th Intl. Workshop on Multiple Access Communications (MACOM 2013, Vilnius, Lithuania) (**K. Avrachenkov**);
15. Intl. Workshop “Networking Games and Management” (Petrozavodsk, Russia) (**E. Altman, K. Avrachenkov**);
16. 9th Intl. Workshop on Resource Allocation, Cooperation and Competition in Wireless Networks (RAWNET/WNC3 2013, Tsukuba, Japan) (**O. Habachi**);
17. Joint Workshop on Pricing and Incentives in Networks and Systems (W-PIN+NetEcon 2013, Pittsburgh, Pennsylvania, USA) (**E. Altman**);
18. 15èmes Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (Algo-Tel 2013, Pornic, France) (**G. Neglia**);
19. 10th Workshop on Algorithms and Models for the Web Graph (WAW 2013, Cambridge, Massachusetts, USA) (**K. Avrachenkov**);
20. 15th Workshop on Mathematical Performance Modeling and Analysis (MAMA 2013, London, UK) (**A. Jean-Marie, P. Nain**);

8.1.4. Leadership within the scientific community

- E. Altman is a fellow member of IEEE (Class of 2010).
- E. Altman, A. Jean-Marie and P. Nain are (elected) members of IFIP WG7.3 on “Computer System Modeling”.
- P. Nain is the vice-Chair of the IFIP WG7.3 working group on “Computer System Modeling” (since June 30, 2007).

8.1.5. Research administration

S. Alouf

- was member of the recruitment committee for a *Maître de Conférences* position at Polytech’Tours.

E. Altman

- is co-responsible of one of the five themes of the SFR (Structure Fédérative de Recherche) AGORANTIC (in which Inria is a founding member) entitled “Digital Culture and Virtual Societies.”
- is Scientific coordinator of the European project CONGAS.

K. Avrachenkov

- together with Arnaud Legout (DIANA team) and Fabien Gandon (WIMMICS team) is co-responsible of the multi-disciplinary research theme (Action Transversale) “Semantic and Complex Networks” at Inria Sophia Antipolis - Méditerranée.

A. Jean-Marie

- is the scientific coordinator of Inria activities in Montpellier (since 2008); as part of this duty, he represents Inria in the Scientific Board of the Univ. of Montpellier 2, at the Scientific Council of the Doctoral School “Sciences and Agrosiences” of the Univ. of Avignon, at the Regional Conference of Research Organisms (CODOR), at the Regional Consulting Committee for Research and Technological Development (ARAGO Committee);
- is member of the managing sub-committee of the Project-Team Committee of the Inria Sophia Antipolis – Méditerranée research center (since July 2010);
- is a member of the Steering Committee of the GDR RO, a national research initiative on Operations Research sponsored by the CNRS;
- is president of the Technical and Industrial Orientation Council for Information Technologies (COSTI TIC) of the Transferts LR association (since 2009);
- has presided the 2013 recruitment committee for junior Inria researchers (CR2) for the Inria Sophia-Antipolis – Méditerranée research center.

P. Nain

- is Chairman of Inria’s Evaluation Committee since 1 September 2012 (<http://www.inria.fr/en/institute/organisation/committees/evaluation-committee>); as part of this duty he has presided the 2013 recruitment committee for senior Inria researchers (DR2) and was member of the 2013 recruitment committee for junior Inria researchers (CR2) for the Inria Nancy Grand Est center.
- is Head of project-team MAESTRO.

MAESTRO members are in the following committees of Inria Sophia Antipolis - Méditerranée

- CC (Comité de Centre): General Information Commission (**N. Choungmo Fofack** as PhD Student Representative, until May 2013); **G. Neglia** since September 2013);
- ComRes: Commission Restauration (**N. Choungmo Fofack** as PhD Student Representative, until May 2013);
- CSD: Doctoral Committee (**S. Alouf**, since February 2006);
- NICE: Invited Researchers Committee (**K. Avrachenkov**, since 2010);

and in charge of the following tasks for the research center:

- Supervision and validation of the project-teams' yearly activity reports (**K. Avrachenkov**, since 2010);
- Accounting for the monthly Project-Team Committee meetings (**S. Alouf**, since February 2012);
- Organizing MAESTRO internal meetings (**N. Choungmo Fofack**, since November 2011).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence:

S. Alouf, "Probability and Statistics", 45H, 1st year Water Engineering degree (L3), Univ. of Nice Sophia Antipolis (UNS), France.

E. Altman, "Culture and Internet", 32H, 3rd year of Communication and Culture studies (L3), Univ. of Avignon (UAPV), France.

N. Choungmo Fofack, "Stochastic processes for Signal Processing", 64H, 1st year Electronic Engineering degree (L3), Univ. of Nice Sophia Antipolis (UNS), France.

M. El Chamie, "Databases", 20H, Computer Science Methods applied to the Enterprise Management Program (L3), Univ. of Nice Sophia Antipolis (UNS), France.

M. El Chamie, "Networks", 15H, Computer Science Program (L3), Univ. of Nice Sophia Antipolis (UNS), France.

Master:

S. Alouf, "Performance Evaluation of Networks", 31.5H, M2 IFI Ubinet, Univ. of Nice Sophia Antipolis (UNS), France.

E. Altman, "Analysis of social Networks", 8H, Venezuelan Informatics School (EVI), Master in Computer Engineering, Merida, 30 Sept – 4 October, Merida, Venezuela.

M. El Chamie, "Internet and Networks", M1 International in Computer Science, Univ. of Nice Sophia Antipolis (UNS), France.

G. Neglia, "Performance Evaluation of Networks", 31.5H, M2 IFI Ubinet, Univ. of Nice Sophia Antipolis (UNS), France.

Doctorat:

A. Jean-Marie, "Advanced Markov Modeling", 18H, Univ. of Montpellier 2, France.

8.2.2. Supervision

PhD:

Richard Combes, "Self-organizing functionalities in radio networks," Univ. Pierre and Marie Curie, 15 February 2013, advisors: Eitan Altman and Zwi Altman (Orange Labs) and Sylvain Sorin (Univ. Pierre and Marie Curie).

Eugenio Della Vecchia, "Contribution to the solution of problems in stochastic control and games", National Univ. of Rosario, Argentina, 12 March 2013, advisors: Silvia Di Marco (National Univ. of Rosario, Argentina) and Alain Jean-Marie.

Manjesh Kumar Hanawal, "Resource allocation and learning algorithms in small cells wireless networks," Univ. of Avignon (UAPV), 6 November 2013, advisors: Eitan Altman and Rachid El-Azouzi (Univ. of Avignon).

Cengiz Hasan, "Optimization of resource allocation for small cells networks," INSA Lyon, 29 August 2013, advisors: Eitan Altman and Jean-Marie Gorce (Inria project-team SOCRATE).

Yuhui Wang, “On the use of network coding and multicast for enhancing performance of wired networks”, Telecom SudParis, 17 May 2013, advisors: Eitan Altman, Tijani Chahed and Eric Gourdin (Telecom SudParis).

PhD in progress:

Alberto Benegiamo, “Mathematical tools for smart grids,” 1 November 2013, advisors: Patrick Loiseau (Eurecom) and Giovanni Neglia.

Iliaria Brunetti, “Cooperative and competitive content dissemination in social networks,” 1 October 2012, advisor: Eitan Altman.

Nicaise Choungmo Fofack, “Performance Evaluation of TTL-based resource networks,” 1 October 2010, advisors: Sara Alouf and Philippe Nain.

Mahmoud El Chamie, “Belief propagation in complex networks,” 1 October 2011, advisors: Konstantin Avrachenkov and Giovanni Neglia.

Julien Gaillard, “Creation, simulation and multidiscipline evaluation of dynamic mobility models in complex systems,” 1 October 2011, advisors: Eitan Altman, Marc El Bèze (Univ. of Avignon) and Emmanuel Ethis (Univ. of Avignon).

Jithin Kazhuthuvelil Sreedharan, “Diffusion processes in complex networks,” 23 July 2013, advisor: Konstantin Avrachenkov.

Yonathan Portilla, “Analysis of social networks,” 1 January 2012, advisor: Eitan Altman.

Alexandre Reiffers, “Modelling competition and cooperation in telecommunication networks,” 15 October 2012, advisor: Eitan Altman.

Marina Sokol, “Clustering and learning techniques for traffic/user classification,” 1 October 2009, advisors: Paulo Gonçalves (Inria project-team DANTE) and Philippe Nain.

Abdoulaye Tall, “Self organization in wireless networks,” 1 December 2012, advisors: Eitan Altman and Zwi Altman (Orange Labs).

8.2.3. *Juries*

MAESTRO members participated in the Habilitation (HDR) thesis committees of (in alphabetical order):

- Marc Chaumont: 23 July 2013, Univ. of Montpellier 2 (**A. Jean-Marie** as jury member);
- Yezekael Hayel: 4 December 2013, Univ. of Avignon (UAPV) (**E. Altman** as advisor and **A. Jean-Marie** as jury president);
- Raphaël Soubeyran: 13 November 2013, Univ. Montpellier 1 (**A. Jean-Marie** as jury member);

and in the PhD thesis committees of (in alphabetical order):

- Richard Combes: 15 February 2013, Pierre and Marie Curie Univ. (**E. Altman** as advisor);
- Manjesh Kumar Hanawal: 6 November 2013, Univ. of Avignon (**E. Altman** as advisor);
- Mathieu Leconte: 18 December 2013, Telecom ParisTech (**A. Jean-Marie** as jury president);
- Cédric Mauclair: 13 June 2013, Univ. Toulouse (**A. Jean-Marie** as jury member);
- Alexandre Salch: 29 November 2013, INPG (**A. Jean-Marie** as reviewer and **P. Nain** as jury member);
- Romain Tajan: 5 December 2013, Univ. Cergy-Pontoise (**Eitan Altman** as jury member);
- Yuhui Wang: 17 May 2013, Telecom SudParis (**E. Altman** as advisor).

8.3. Popularization

Activities are presented in chronological order:

- The article titled “Internet” (interview of S. Alouf by E. Kuntzelmann, as reported in the 2012 activity report) has appeared in *Savoirs Jeunes* (14 January 2013). It is available here: <http://www.savoirs.essonne.fr/sections/ressources/questions-a/resource/internet/>.
- E. Altman and A. Reiffers participated in a round-table on the network economy in France, organized at the National Assembly in Paris (28 February 2013).
- A short publication [80] by M. Cosnard and E. Altman has appeared in *01Business* on the network neutrality debate in France (11 July 2013). It is intended for a large audience and presents advantages in legislating on this topic.
- E. Altman presented a talk at the 9th Mediterranean rendez-vous entitled: “The new networks - Cradle of globalized culture in the Mediterranean Area” at Marseille, with the participation of leading political and economical figures from Mediterranean and Middle Eastern countries (9 November 2013).
- S. Alouf delivered a conference titled “Internet ou Web ?” at Inria, Sophia Antipolis, for a group of high school students (22 November 2013).

S. Alouf is a member of MASTIC, a commission in charge of popularization and regional and internal scientific animation (since November 2011).

8.4. Participation in scientific events

8.4.1. Keynotes, tutorials and invited talks

MAESTRO members gave the following keynote lectures (in alphabetical order):

- *Admission control to an M/M/1 queue with partial information*, at the 20th Intl. Conference on Analytical & Stochastic Modelling Techniques & Applications (ASMTA), Ghent, Belgium, 8 July 2013 (**E. Altman**);
- *Dynamic game models in complex systems*, at the 17th Intl. Conference On Principles Of Distributed Systems (OPODIS), Nice, France, 17 December 2013 (**E. Altman**);

the following tutorials (in alphabetical order):

- *Tutorial on Stochastic Games*, at Game Theory Workshop of Politecnico di Milano, Italy, 23–24 May 2013 (**K. Avrachenkov**).

and the following invited talks (in alphabetical order):

- *Analysis of Social Networks*, at the Seminar on interactions of computer science and mathematics in the LIP6 laboratory of the Pierre and Marie Curie Univ., France, 18 October 2013 (**E. Altman**);
- *Competition over popularity in social networks*, at KAIST, Seoul, 21 May 2013 (**E. Altman**);
- *Cooperative Game Theory for Markovian quasi-static multiple access channels*, at the Workshop “Networking Games and Management”, Petrozavodsk, Russia, 24 June 2013 (**K. Avrachenkov**);
- *Game theoretic models for competition over popularity in social networks*, University of California at Berkeley, USA, 26 July 2013 (**E. Altman**);
- *Graph-based semi-supervised learning methods: Comparison and tuning*, at the Yandex Workshop on Random Graphs and their Applications, Moscow, Russia, 25 October 2013 (**K. Avrachenkov**);
- *MAESTRO’s activities on smart grids*, at the JRC-TUM Partnership Event “Emerging Smart Electricity Systems”, 20–21 March 2013, Munich, Germany (**G. Neglia**);
- *Modeling Energy Demand Aggregators for Residential Consumers*, at the Centre de Mathématiques Appliquées de l’Ecole des Mines, Sophia Antipolis, France, 2 April 2013 (**G. Neglia**);

- *Modern DNS cache network*, at Boston Univ., Boston, Massachusetts, USA, 23 September 2013 (**N. Choungmo Fofack**);
- *Online Myopic Network Covering*, at the Mathematics Department of the University of Liverpool, UK, 8 February 2013 (**K. Avrachenkov**);
- *Pay Few, Influence Most - Online Myopic Network Coverage*, at the Technical Univ. of Darmstadt, Germany, 6 September 2013 (**G. Neglia**);
- *Singular Perturbations in Optimization*, at GeoLMI 2013 Conference, Luminy, France, 12 November 2013 (**K. Avrachenkov**);
- *Weight Selection in Consensus Protocols*, at Univ. of Illinois at Urbana-Champaign (UIUC), Champaign, Illinois, USA, 24 October 2013 (**M. El Chamie**).

8.4.2. Conferences and workshops

MAESTRO members gave presentations at the following scientific events (in alphabetical order):

- Conf. on Empirical Methods in Natural Language Processing (EMNLP), 18–21 October 2013, Seattle, Washington, USA (**J. Gaillard**);
- Dagstuhl Scheduling Seminar, 11 March 2013, Dagstuhl Castle, Germany (**K. Avrachenkov**);
- 52nd IEEE Conf. on Decision and Control (CDC), 10–13 December 2013, Florence, Italy (**I. Brunetti, G. Neglia**);
- 32nd IEEE Intl. Conf. on Computer Communications (INFOCOM), 14–19 April 2013, Turin, Italy (**E. Altman**);
- IEEE Wireless Communications and Networking Conf. (WCNC), 7–10 April 2013 Shanghai, China (**O. Habachi**);
- 12th IFIP Intl. Conf. on Networking (Networking), 22–24 May 2013, Brooklyn, New York, USA (**G. Neglia**);
- 20th Intl. Conf. on Analytical and Stochastic Modelling Techniques and Applications (ASMTA), 8–10 July 2013, Ghent, Belgium (**E. Altman**);
- 9th Intl. Conf. on Data Mining (DMIN), 22–25 July 2013, Las Vegas, Nevada, USA (**J. Gaillard**);
- 7th Intl. Conf. on Performance Evaluation Methodologies and Tools (VALUETOOLS), 10–12 December 2013, Turin, Italy (**N. Choungmo Fofack**);
- 11th Intl. Symp. on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt), 13–17 May 2013, Tsukuba, Japan (**E. Altman, M. Haddad, M. K. Hanawal**);
- 25th Intl. Teletraffic Conference (ITC), 10–12 September 2013, Shanghai, China (**M. Haddad**);
- 15èmes Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (Algo-Tel), 28–31 May 2013, Pornic, France (**M. El Chamie, A. Reiffers**);
- 10th Workshop on Algorithms and Models for the Web Graph (WAW), 14–15 December 2013, Cambridge, Massachusetts, USA (**K. Avrachenkov**);
- Workshop of the ANR CLEANER, 31 January–1 February 2013, Annecy, France (**A. Jean-Marie**);
- 9th Workshop of the Intl. Society of Dynamic Games (ISDG), 5–6 July 2013, Barcelona, Spain (**I. Brunetti**).

8.4.3. Technical program committee meetings

MAESTRO members have participated in the following TPC meetings:

- 33rd IEEE Intl. Conference on Computer Communications (IEEE INFOCOM 2014), 16 November 2013, Toronto, Canada (**G. Neglia**).

8.4.4. Schools and students workshops

MAESTRO members have attended the following summer schools:

- Summer school ResCom on “Content-oriented networks, Internet evolution or revolution?” (30H), 13–17 May 2013, Porquerolles, France (**I. Brunetti, N. Choungmo Fofack**).

MAGIQUE-3D Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Administrative Activities

- Mohamed Amara is President of the Université de Pau et des Pays de l'Adour.
- H  l  ne Barucq is vice-chair of the Inria evaluation committee. She participated to the national jury of Inria competitive selection for Senior Researchers (DR2) and to the local jury of Inria competitive selection for Young Graduate Scientists (CR2) in Bordeaux. She participated to the selection committee for Research (Grant and Senior) Positions. She participated to the selection committee for a Professor position at the University of Rouen and at the University of Pau. She is member of the direction team of the Research Center of Bordeaux. She is member of the board of the Laboratory of Mathematics of Pau and of the research federation IPRA which are both under the administrative supervision of CNRS. She is the scientific head of the project DIP.
- Julien Diaz is elected member of the Inria evaluation committee. He participated to the local juries for Young Graduate Scientists (CR2) in Saclay and Sophia. He is elected member of the CLHSCT (Comit   Local Hygi  ne et S  curit  ) of Inria Bordeaux Sud-Ouest and appointed member of the CDT (Commission de D  veloppement Technologique), of the CUMI (Commission des Utilisateurs des Moyens Informatiques) and of the Center Committee of Inria Bordeaux Sud-Ouest.
- Victor P  ron is appointed member of the CJC (Commission Jeunes Chercheurs) of Inria Bordeaux Sud-Ouest. He was member of the committee to evaluate posters of PhD Students (in 2nd year), at Scientific School Doctoral 211 (Univ. of Pau), July 2013.
- S  bastien Tordeux is elected member of the 26th section of the CNU (Conseil National des Universit  s). He is also responsible of the first year of the Master of Applied Mathematics of Pau University.

9.1.2. Conferences

- H  l  ne Barucq and Julien Diaz were members of the scientific committee of Waves 2013 (<http://www.lamsin.tn/waves13/>)
- H  l  ne Barucq was member of the scientific committee of JSA 2013 (<http://jsa2013.sciencesconf.org/>)
- Julien Diaz was member of the organizing committee of the "Journ  e Ondes et probl  mes inverses en g  ophysique" (<http://www.ensta-paristech.fr/~chailat/MPT2013.html>).
- S  bastien Tordeux was member of the scientific committee of the Fifth International Scientific Conference and Young Scientists School "Theory and Computational Methods for Inverse and Ill-posed Problems"the (<http://conf.nsc.ru/tcmiip2013>)

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Victor P  ron, Math  matiques pour les Sciences de la Mati  re, 19,5 Eq. TD, L2, UPPA, France,

Master: Victor P  ron, Analyse num  rique fondamentale, 75 Eq. TD, M1, UPPA, France,

Master: Victor P  ron, Analyse, 28 Eq. TD, M1, UPPA, France,

Master : S  bastien Tordeux, Analyse num  rique fondamentale, 36 Eq. TD, M1, UPPA, France.

Master : Julien Diaz : Transformées, Fourth-year engineering students at ESTIA (Ecole Supérieure des Technologies Industrielles Avancées), 16 Eq. TD.

Master: Julien Diaz and Sébastien Tordeux, Introduction aux phénomènes de propagation d'ondes, 55 Eq TD, M2, UPPA, France.

ISAE (<http://www.isae.fr/>): Hélène Barucq, Introduction à la simulation numérique des ondes, 5h Eq TD, Toulouse.

Master : Marc Duruflé, Algorithmique numérique, 60 Eq. TD, Enseirb-Matmeca, France.

Master : Marc Duruflé, Algorithmique et programmation, 32 Eq. TD, Enseirb-Matmeca, France.

Master : Marc Duruflé, Mini-projets de programmation, 28 Eq. TD, Enseirb-Matmeca, France.

Master : Marc Duruflé. Outils informatiques pour le calcul scientifique, 80 Eq. TD, Enseirb-Matmeca, France.

9.2.2. Supervision

PhD : Élodie Estécahandy, Contribution à l'analyse mathématique et à la résolution numérique d'un problème inverse de scattering élasto-acoustique, September 19th 2013, Hélène Barucq and Rabia Djellouli.

PhD in progress : Julen Alvarez, *hp*-adaptive inversion of magnetotelluric measurements, October 2011, Hélène Barucq and David Pardo.

PhD in progress : Lionel Boillot, Propagateurs optimisés pour les ondes élastiques en milieux anisotropes, May 2011, Hélène Barucq and Julien Diaz.

PhD in progress : Marie Bonnasse-Gahot, Simulation de la propagation d'ondes élastiques et visco-élastiques en régime harmonique par des méthodes Galerkin discontinues d'ordre élevé en maillage non-structuré adaptées au calcul haute performance, October 2012, Julien Diaz and Stéphane Lantéri (EPI Nachos, Inria Sophia Antipolis-Méditerranée).

PhD in progress : Théophile Chaumont-Frélet, October 2012, Hélène Barucq and Christian Gout.

PhD in progress : Aralar Erdozain, Fast inversion of 3D Borehole Resistivity Measurements using Model Reduction Techniques based on 1D Semi-Analytical Solutions, October 2013, Hélène Barucq, David Pardo and Victor Péron.

PhD in progress : Jérôme Luquel, RTM en milieu hétérogène par équations d'ondes élastiques, November 2011, Hélène Barucq and Julien Diaz.

PhD in progress : Vanessa Mattesi, Détection des hétérogénéités en acoustique et élastodynamique, October 2011, Hélène Barucq and Sébastien Tordeux.

PhD in progress : Vincent Popie, September 2012, Investigation numérique et expérimentale du comportement acoustique de plaques perforées en vue de développement de modèles homogénéisés, Sébastien Tordeux and Estelle Piot

PhD in progress : Florent Ventimiglia, Schémas d'ordre élevé et pas de temps local pour les ondes élastiques en milieux hétérogènes, November 2010, Hélène Barucq and Julien Diaz.

9.2.3. Juries

- Hélène Barucq was referee for the PhD thesis defended by Rafael Lago at the Institut National Polytechnique de Toulouse, June 3th 2013, entitled "A study on block flexible iterative solvers with applications to Earth imaging problem in geophysics".
- Julien Diaz :
 - Jean-Baptiste Laurent (Université de Toulouse) "Raffinements locaux auto-adaptatifs dans une méthode Galerkin discontinue pour la résolution des équations de Maxwell", July 10th 2013.
 - Axel Modave (Université de Liège, Belgium) "Absorbing Layers for Wave-Like Time-Dependent Problems - Design, Discretization and Optimization", October 7th 2013.

- Ludovic Moya (Université de Nice), Ludovic Moya, “Discontinuous Galerkin time domain method for electromagnetic wave propagation in biological tissues”, December 16th 2013.

9.3. Popularization

- The short movie “Probing the invisible, from the earthquake to the model” realized by MAGIQUE-3D in 2010, has been presented at Unesco during the day “Mathematics for Planet Earth”, on March 5th 2013 <http://mpe2013.org/fr/mpe-day-at-unesco/>. It is also part of the virtual exhibition “Mathematics of Planet Earth <http://imaginary.org/fr/node/134>”
- H el ene Barucq is member of the scientific board created for helping to the organization of a mobile exhibition in favor of the equality between girls and boys. The exhibition will be held in Pau in June 2014.
- Juliette Chabassier has written a short paper, “Simuler le son d’un piano” , on the website of Math ematiques de la plan ete Terre 2013, “Un jour, une br eve”, <http://mpt2013.fr/facteur-de-piano-numerique> [75].
- Juliette Chabassier has written a short paper, “Le piano r ev e des math ematiens” , in the book “Math ematiques: l’explosion continue”, <http://hal.inria.fr/hal-00913685>.
- Juliette Chabassier has published a website on the piano modeling, <http://modelisation.piano.free.fr>.
- Julien Diaz participated to the “Journ ees jeunes chercheurs en math ematiques du lyc ee de Navarre / UPPA” <http://univ-pau.fr/live/newsletter/newsletter-n46/journeesmaths?isPdf=1>, March 20th-22th, 2013.
- Julien Diaz has written an article, “Prospection p etroli ere : le sous-sol r ev el e”, in the TDC (Textes et Documents pour la classe) journal, for high-school teachers, <http://www.cndp.fr/tdc/tous-les-numeros/les-mathematiques-de-la-terre.html> [77].
- Julien Diaz has written a short paper, "Jeter un œil “Au centre de la Terre” , on the website of Math ematiques de la plan ete Terre 2013, “Un jour, une br eve”, <http://mpt2013.fr/jeter-un-oeil-au-centre-de-la-terre/> [76].
- Victor P eron participated to the “Journ ee d’Immersion des Lyc eens  a l’Universit e de Pau” and has given a talk “Probing the invisible, from the earthquake to the model”, November 28th, 2013.

MAGNET Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Invited Talks

FABIO VITALE was invited to give a talk at the Computer Science department of Copenhagen University in November 2013 on the topic of *Machine Learning on Trees and Graphs*.

9.1.2. Program Committees

PASCAL DENIS served as member of the program committee of ACL 2013, EACL 2013, EMNLP 2013, *SEM 2013.

ANTONINO FRENO served as member of the program committee of ECML-PKDD 2013.

MIKAELA KELLER was reviewer for ECML-PKDD 2013.

FABIEN TORRE served as member of the program committee of IClaNov workshop at ICDM 2013, ICPRAM 2014, EGC 2014, CluCo workshop at EGC 2014.

MARC TOMMASI served as member of the program committee of CAP 2013 and CIAA 2013.

9.1.3. Hiring Committees

MIKAELA KELLER served as member of the hiring committee for a MdC position at University of Calais. and as member of the hiring committee for a MdC position at University of Lille 3.

RÉMI GILLERON served as member of the hiring committee for a MdC position at University of Saint Etienne.

MARC TOMMASI served as member of the hiring committee for a MdC position at University of Lille 3 and as member of the hiring committee for a Professor position at University of Paris 6.

9.1.4. Other Committees

PASCAL DENIS served as reviewer for the French National Research Agency (ANR), Programme Blanc.

MIKAELA KELLER served as reviewer for the French National Research Agency (ANR), Programme Blanc.

FABIEN TORRE is elected member of Conseil national des universités (Section 27).

MARC TOMMASI served as member of the SIMI2 committee of the French National Research Agency (ANR). He is also coordinator for the ANR Lampada project.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master MOCAD: PASCAL DENIS, Extraction d'information, 18h, M2, Université Lille 1, France

Master MOCAD: ANTONINO FRENO, Extraction d'information, 16h, M2, Université Lille 1, France

RÉMI GILLERON is in charge of master MIASHS at Université Lille 3, France

Master MIASHS: RÉMI GILLERON, Classification supervisée, 36h, M1, Université Lille 3, France

Master MIASHS: RÉMI GILLERON, Classification non supervisée, 24h, M1, Université Lille 3, France

Master MIASHS: RÉMI GILLERON, Recherche d'information, 24h, M1, Université Lille 3, France
Master MIASHS: RÉMI GILLERON, Web sémantique, 36h, M2, Université Lille 3, France
Master MIASHS: RÉMI GILLERON, Programmation R, 24h, M1, Université Lille 3, France
Licence EMO: RÉMI GILLERON, Cours bases de données, 18h, L3, Université Lille 3, France
Licence MIASHS: RÉMI GILLERON, Programmation Python, 36h, L1, Université Lille 3, France
Licence: MIKAELA KELLER, Apprentissage statistique, 63h, L3, Université Lille 3, France
Master LTTAC: FABIEN TORRE, Traitements automatiques des textes, 55.5h, M1, Université Lille 3, France
Master IDEMM: FABIEN TORRE, Langages du web, 37.5h, M2, Université Lille 3, France
Master GIDE: FABIEN TORRE, Algorithmique et programmation PHP pour le web, 75h, M2, Université Lille 3, France
Master ICDD: FABIEN TORRE, Internet et ses langages, 37h, M1, Université Lille 3, France
Master ID: MARC TOMMASI, Réseaux, 60h, M1, Université Lille 3, France
Master ICCD: MARC TOMMASI, Représentation et codage de l'information, 37h, M1, Université Lille 3, France

9.2.2. Supervision

PhD in progress: THOMAS RICATTE, Learning in Multiple Graphs with Hypergraphs, Université Lille 3, since Sept. 2011, Marc TommasiLille, scheduled for June 2014, MARC TOMMASI, RÉMI GILLERON, and GEMMA GARRIGA

PhD in progress: DAVID CHATEL, Supervised Spectral Clustering and Information Diffusion in Graphs of Texts, Université Lille 1, since Sept. 2012, PASCAL DENIS and MARC TOMMASI

PhD in progress: PAULINE WAUQUIER, Recommendation in Information Networks, Université Lille 1, since Dec. 2013 supervised by MARC TOMMASI and MIKAELA KELLER

PhD in progress: AHMAD HOSSEINI, Machine Learning for Information Diffusion in Graphs, Université Lille 1, since Dec. 2013, MARC TOMMASI and MIKAELA KELLER and PHILIPPE PREUX

PhD in progress: Grégoire Laurence, Learning Tree Transducers, Université Lille 1, since Sept. 2008, MARC TOMMASI and JOACHIM NIEHREN

PhD in progress: Jean Decoster, Relation learning for XML documents, Université Lille 1, since Sept. 2009, FABIEN TORRE and RÉMI GILLERON

PhD in progress: EMMANUEL LASSALLE, Improved Coreference Resolution with Feature Space Learning, Université Paris-Diderot, since Sept. 2010, PASCAL DENIS and LAURENCE DANLOS (Université Paris-Diderot)

PhD in progress: CHLOÉ BRAUD, Discourse Relation Identification from Labeled and Unlabeled Data, Université Paris-Diderot, since Sept. 2011, PASCAL DENIS and LAURENCE DANLOS (Université Paris-Diderot)

9.2.3. Juries

RÉMI GILLERON was member of the PhD committee of Emilie Morvant, Université de Marseille, France

MAGNOME Project-Team

9. Dissemination

9.1. Scientific Animation

Pascal Durrens is :

leader of the “Comparative Genomics” theme and member of the Scientific Council of the LaBRI UMR 5800/CNRS.

responsible for scientific diffusion for the Génolevures Consortium.

member of the editorial board of the journal ISRN Computational Biology, and was reviewer for the journal BMC Genomics

expert in Genomics for the Fonds de la Recherche Scientifique-FNRS (FRS-FNRS), Belgium

David Sherman is :

president of the Commission de Jeunes Chercheurs, Inria Bordeaux Sud-Ouest

member for Bordeaux Sud-Ouest of Inria’s Young Scientists Mission

member of the editorial board of the journal Computational and Mathematical Methods in Medicine

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Anna Zhukova, JIMI2013 : Algorithmes et Programmes TD/TP, 30h, L2, Université Bordeaux, France

9.2.2. Supervision

PhD in progress: Anna Zhukova, “Knowledge engineering for biological networks,” 2011–, Sherman

PhD in progress: Razanne Issa, “Analyse symbolique de données génomiques,” 2010–, Sherman

9.2.3. Juries

David Sherman was a member of the juries of:

Natalia GOLENETSKAYA, “Addressing scaling challenges in comparative genomics,” U. Bordeaux, 2013-09-09

Boyang JI, “Comparative and Functional Genome Analysis of Magnetotactic Bacteria,” U. Aix-Marseille, 2013-10-23

Andres ARAVENA, “Probabilistic and constraint based modelling to determine regulation events from heterogeneous biological data,” U. Rennes, 2013-12-13

9.3. Popularization

Magnome participated in « UniThé ou Café » in the Inria Bordeaux – Sud-Ouest research center.

Anna Zhukova animated one of the Inria workshops at the 2013 “Fête de la Science”

David Sherman is a member of the Inria Bordeaux – Sud-Ouest’s “Scientific Culture” committee, which organizes and proposes various scientific popularization actions.

MAGRIT Project-Team

9. Dissemination

9.1. Scientific Animation

- The members of the team reviewed articles for IEEE Transactions on Visualization and Computer Graphics, IEEE Transactions on Pattern Analysis and Machine Intelligence, Elsevier Optics and Lasers in Engineering, Computer & Graphics, the Journal of Computer Science and Technology.
- M.-O. Berger was a member of the program committee of the following conferences: IEEE International Symposium on Mixed and Augmented Reality (ISMAR 2013), International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI 2013), the IEEE International Symposium on Biomedical Imaging (ISBI) 2013 and of the french conference on computer vision ORASIS 2013.
- Gilles Simon was a member of the program committee of ISMAR 2013 and Eurographics 2013.
- P.-F. Villard was a member of the program committee of MICCAI 2013 and ISBI 2013.
- E. Kerrien was a member of the program committee of MICCAI 2013.
- Members of the team are members of local management committees (Conseil de Laboratoire, Comité de Centre and Pôle Scientifique AM2i).
- Pierre-Frédéric Villard gave a seminar on "Respiration Simulation : Application in Treatment Planning and Training Simulators" for the Visualization and Medical Graphics Group of the School of Computer Science, Bangor University, UK, on the Wednesday 5 June 2013. This talk was also given for the Computer Vision And Medical Image Analysis Group of the School of Computer Science, Swansea University, UK, on the Friday 14 June 2013
- Frédéric Sur gave a talk within the GDR ISIS day dedicated to *mesure dimensionnelle*, IUT Auxerre. He also gave a talk entitled *dérivation et intégration de mesures de champ* within GDR 2519 day (Mesures de Champs et Identification en Mécanique des Solides), ENSAM Paris.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Graphic and haptic rendering, 30h, IUT Saint-Dié des Vosges, France

Licence: Image processing, 30h, IUT Saint-Dié des Vosges, France

Licence: 3D programming, 30h, IUT Saint-Dié des Vosges, France

Licence: Object oriented programming, 110h, IUT Saint-Dié des Vosges, France

Licence: Outils informatiques et internet, 14 h, L1, Université de Lorraine, France

Licence: Algorithmique et programmation (python), 48h, L1, Université de Lorraine, France

Licence: Introduction à la programmation objet (java); conception d'interfaces graphiques, 50 h, L2, Université de Lorraine, France

Licence: Système : synchronisation et communication de processus sous Linux, 48 h, L3, Université de Lorraine, France

Licence: Modélisation 3D, 40 h, LP, Université de Lorraine, France

Master: Perception et raisonnement, 50 h, M1, Université de Lorraine, France

ENSAN : Géométrie, 30h, 1A, École Nationale Supérieure d'Architecture de Nancy, France

Licence : Informatique graphique, 10h, L1, Université de Lorraine, France

Master: Réalité augmentée, 24 h, M2, Université de Lorraine, France

Master : Vision par ordinateur, 12h, M1, Université de Lorraine, France
 Master: Reconnaissance des formes statistiques, 15 h, M2, Université de Lorraine, France
 Master: Outils pour le traitement et l'analyse d'images, 21 h, 2A, École des Mines de Nancy, France
 Master: Recherche opérationnelle, 59 h, École des Mines de Nancy, France
 Master: Méthodes et outils pour la conception informatique, 34 h, 2A, Télécom-Nancy, Université de Lorraine, France
 SUPELEC: Réalité augmentée, 3 h, 3A, SUPELEC Metz, France
 DIU: Robotique chirurgicale, 1 h, CHU Nancy Univ. Hospital, France.
 Primary and secondary school teacher training: 3h, Maison pour la Science de Lorraine, Nancy, France.

9.2.2. Supervision

PhD in progress: Ahmed Yureidini, Modélisation implicite des vaisseaux sanguins pour la simulation interactive d'actes de radiologie interventionnelle, janvier 2010, Erwan Kerrien, Stéphane Cotin (Shacra, Lille).
 PhD in progress: Nazim Haouchine, Modèles physiques pour la réalité augmentée des organes déformables, janvier 2012, Marie-Odile Berger, Stéphane Cotin (Shacra, Lille).
 PhD in progress: Pierre Rolin, Calcul de pose par simulation de points de vue pour la réalité augmentée, octobre 2013, Marie-Odile Berger et Frédéric Sur.
 PhD in progress: Charlotte Delmas, Reconstruction 3D des outils chirurgicaux en radiologie interventionnelle, avril 2013, Marie-Odile Berger, Erwan Kerrien.

9.2.3. Juries

- Marie-Odile Berger was external reviewer of the PhD of A. Dufour, G. Gaullier and M. Tamaazousti.

9.3. Popularization

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

- Erwan Kerrien heads the local Scientific Mediation Committee. Among other activities, he was invited to last Didapro5-DidaSTIC conference (didactics of computer science) as a panelist and was an associate researcher to a MATH.en.JEANS workshop.
- Pierre-Frédéric Villard participated to various activities in the IUT of Saint-Dié des Vosges: open days, science festival, science café, Film screening following by a debate and computer science presentations to schoolgirls to promote science.
- In an exploratory experiment conducted in collaboration with the IUFM de Lorraine (teacher training institute), we investigated the use, the usefulness and the impact of an innovative Augmented Reality Environment for teaching/learning astronomy at primary school [15]. An AR learning environment has been designed whose aim is to show augmented views of some celestial bodies and support the pupils' investigations using spatial visual guides and views from a terrestrial observer. Each child was asked to solve problems related to astronomy in two different conditions in which they had to use and manipulate: (1) the traditional learning environment (i.e., with physical models), or (2) the Augmented Reality environment. Preliminary results show that the declarative knowledge related to astronomy was higher with the AR Environment. Only AR users have developed scientific conceptions of the explored astronomical phenomena and learnings have been significantly improved. Furthermore, we presented some arguments in order to support the assumption that the AR model assists the process of scaffolding, promotes collaborative learning by reducing cognitive load, and takes part to the motivation dynamic by enhancing task controllability.
- We have designed and developed a software whose aim is to support students with learning computer programming. This software, named artEoz, enables a pedagogical view of the computer memory, dynamically changing while the user program is running [26]. Using a nice visualization helps to understand the behavior on an object oriented program. This software concerns beginners as well experimented students thanks to its facilities to draw complex data structures. artEoz can be freely downloaded for academic use only from <http://arteoz.loria.fr>. This software is licensed by the APP (French agency for software protection).

MAIA Project-Team

9. Dissemination

9.1. Scientific Animation

- François Charpillet is member of the scientific concil of the Robotic GDR

9.1.1. Conference organization, Program committees, Editorial boards

- Amine Boumaza was a member of the program committee of GECCO'13 (The Genetic and Evolutionary Computation Conference) and CEC'13 (Congress on Evolutionary Computation). He was a reviewer for ANR *jeune chercheur programme blanc*.
- Olivier Buffet is a member of the editorial boards of the “*revue d'intelligence artificielle*” (RIA), and the “Journal of Artificial Intelligence Research” (JAIR).
- Olivier Buffet was a reviewer for the journals: AIJ (Artificial Intelligence Journal), JAIR (Journal of Artificial Intelligence Research), RIA (Revue d'Intelligence Artificielle); for the conferences AAAI'13 (National Conference on Artificial Intelligence), ICAPS'13 (International Conference on Automated Planning and Scheduling), IJCAI'13 (International Joint Conference on Artificial Intelligence), JFPDA'13 (Journées Francophones sur la Planification, la Décision et l'Action pour le contrôle de systèmes); and for the workshop WRLComp'13 (ICML Workshop on the 2013 Reinforcement Learning Competition).
- Vincent Chevrier was a reviewer for the journal: ActaBiotheroretica (ACBI), for the conferences IJCAI'13 (International Joint Conference on Artificial Intelligence), JFSMA'13 (Journées franco-phones sur les Systèmes multi-Agents).
- Vincent Chevrier was an expert for the following project calls: ANR Blanc Program and Digiteo, for the best PhD thesis price of the AFIA.
- François Charpillet was in the program committees of ICAART, MSDM, WACAI, the 2013 IEEE/RSJ IROS Workshop “Assistance and Service Robotics in a Human Environment” and has also reviewed papers for IROS, ICRA, and RIA.
- Alain Dutech was a reviewer for the journals : JMLR (Journal of Machine Learning Research), RIA (Revue d'Intelligence Artificielle); for the conferences IJCAI'13 (International Joint Conference on Artificial Intelligence), JFPDA'13 (Journées Francophones sur la Planification, la Décision et l'Action pour le contrôle de systèmes);
- Nazim Fatès co-organised **WPCA'13**, the First European workshop on probabilistic cellular automata, held in Eindhoven, June 10-12, 2013. He was a reviewer for the following journals: *Theoretical Computer Science*, *Physica D*, *Journal of cellullar automata*. He was a program committee member of the following conferences: AUTOMATA'13 (Workshop on cellular automata), CAAA'13 (cellular automata Algorithms & Architectures), SCW'13 (spatial computing workshop). He was an external referee for the conference CiE'13 (Computation in Europe). He was invited to give a talk and a tutorial at AUTOMATA'13.
- Bruno Scherrer was a reviewer for the journals Mathematics of Operations Research, Annals of Operations Research, Applied Mathematics and Optimization, and Transactions on Neural Networks and Learning Systems, for the international conferences ICML'13 (International Conference on Machine Learning) and NIPS'13 (Neural Information Processing Systems), and for the national conference on learning CAP'13 (Conférence Francophone sur l'Apprentissage Automatique).
- Bruno Scherrer was invited to give a talk at the Reinforcement Learning seminar of the Gatsby Unit (University College of London).

- Alexis Scheuer was a reviewer for the journals Artificial Intelligence (Elsevier), Robotics and Autonomous Systems (Elsevier) and IEEE Transactions on Robotics, as well as for the conference ICRA'14 (IEEE International Conference on Robotics and Automation).
- Olivier Simonin has co-organized the 2013 IEEE/RSJ IROS Workshop "Assistance and Service Robotics in a Human Environment". He is a member of the program committees of ICINCO'13, ICAART'13, and national conferences CAR2013 and JFSMA'13. He was a reviewer for the following international journals, IEEE Transactions on Systems, Man and Cybernetics: Systems, International Journal of Advanced Robotic Systems, and the conference IEEE ICRA'13.
- Vincent Thomas was a reviewer for the journal IEEE Transactions on Cybernetics and for the conference JFPDA'13 (Journées Francophones sur la Planification, la Décision et l'Action pour le contrôle de systèmes).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

PhD & Master level: Amine Boumaza, Métaheuristiques, 15h eq TD., Master 1 Computer Science, Université de Lorraine, France.

Master level: Alain Dutech, Numerical Learning in AI, 15h eq TD, Master 1 Cognitive Sciences, Université de Lorraine, France.

PhD & Master level: Nazim Fatès, cellular automata, four lectures for a complex systems doctoral module, University Adolfo Ibañez, Santiago, Chile.

PhD & Master level: Alexis Scheuer & Olivier Simonin, Introduction to Mobile Robotics, 30h eq TD., Master 1 Computer Science, Université de Lorraine, France.

PhD & Master level: Alexis Scheuer & Olivier Simonin, Additional Mobile Robotics, 30h eq TD., Master 2 Computer Science, Université de Lorraine, France.

Master level: Olivier Simonin, Artificial Life, 15h eq TD., last year course (equivalent to Master 2), Ecole Supérieure d'Électricité de Metz, France.

PhD & Master level: Vincent Thomas, Métaheuristiques, 15h eq TD., Master 1 Computer Science, Université de Lorraine, France.

PhD & Master level: Vincent Thomas, Optimisation et systèmes dynamiques stochastiques, 22h eq TD., Master 2 Computer Science, Université de Lorraine, France.

Master level: Vincent Thomas, Agents Intelligents, 25h eq TD., Master 1 Cognitive Sciences, Université de Lorraine, France.

Master level: Vincent Thomas, Serious Game and Game Design, 15h eq TD., Master 2 Cognitive Sciences, Université de Lorraine, France.

9.2.2. Supervision

PhD: Mauricio Araya, "*Near-Optimal Algorithms for Sequential Information-Gathering Decision Problems*", Université de Lorraine, Feb. 4th, F. Charpillet (advisor), O. Buffet, V. Thomas.

PhD: Antoine Bautin, "*Stratégie d'exploration multirobot fondée sur le calcul de champs de potentiels*", Université de Lorraine, Oct. 3rd, F. Charpillet (advisor), O. Simonin.

PhD: Olivier Bouré, "*'Le simple est-il robuste ?' Une étude de la robustesse des systèmes complexes à travers les automates cellulaires*", Université de Lorraine, Sep. 13th, Nazim Fatès, Vincent Chevrier (advisor).

PhD: Lucie Daubigney, "*Gestion de l'Incertitude pour l'Optimisation de Systèmes Interactifs*", Université de Lorraine, Oct. 1st, Olivier Pietquin, Alain Dutech (advisor).

PhD in progress Mihai Andries, "*Calcul spatialisé pour l'assistance à la personne: étude d'un réseau de dalles intelligentes*", Université de Lorraine, Oct. 2012, F. Charpillet (advisor), O. Simonin.

PhD in progress: Benjamin Camus, “*Un laboratoire virtuel pour la multi-modélisation*”, Université de Lorraine, Oct 2012, Christine Bourjot, Vincent Chevrier (advisor).

PhD in progress: Amandine Dubois, “*Assistance à la personne en perte d'autonomie: étude de l'apport d'un réseau de Kinects à la détection et la prévention des chutes*”, Université de Lorraine, Oct. 2011, F. Charpillet (advisor).

PhD in progress: Abdallah Dib, “*Assistance à la personne en perte d'autonomie: étude de l'apport d'un robot compagnon*”, Université de Lorraine, March. 2013, F. Charpillet (advisor).

PhD in progress: Arsène Fansi Tchango, “*Suivi multi-caméra en environnement partiellement observé*”, Université de Lorraine, Oct. 2011, A. Dutech (advisor), O. Buffet, V. Thomas.

PhD in progress: Nassim Kaldé, “*Exploration et reconstruction d'un environnement inconnu par une flottille de robots*”, Université de Lorraine, Oct. 2012, F. Charpillet (advisor), O. Simonin.

PhD in progress: Manel Tagorti, “*Approximating the Value Function for Heuristic Search in Factored MDPs*”, Université de Lorraine, Nov. 2011, J. Hoffmann (advisor), B. Scherrer, O. Buffet.

PhD in progress: Mohamed Tlig, “*Reactive coordination for traffic adaptation in large situated multi-agent systems*”, Université de Lorraine, Dec. 2010, O. Simonin (advisor), O. Buffet.

PhD in progress: Julien Vaubourg, “*Multi-modélisation, multi-simulation dans le cadre des Smart-grids*”, Université de Lorraine, Oct 2013., Laurent Ciarletta, Vincent Chevrier (advisor).

PhD in progress: Jano Yazbeck, “*Secure and robust immaterial hanging for automated vehicles*”, Université de Lorraine, Oct. 2010, F. Charpillet (advisor), A. Scheuer.

9.2.3. Juries

9.2.3.1. PhD and HDR committees

- Amine Boumaza was a member of the PhD committee of
 - Charles Olion, October 18th 2013, ISIR/UPMC.
- Olivier Buffet was a member of the PhD committee of
 - Caroline Ponzoni Carvalho Chanel, 12th Apr. 2013, Université de Toulouse / ISAE, and
 - Adrien Couëtoux, 30th Sept. 2013, Université Paris Sud.
- Vincent Chevrier was a member of the PhD committee of
 - Yishuai Lin, 10th Sept. 2013, Université de Technologie de Belfort-Monbéliard, as a referee; and
 - Inaya Lahoud, 10th Sept. 2013, Université de Technologie de Belfort-Monbéliard, as a committee member.
- François Charpillet was a member (as a referee) of the PhD committee of:
 - Jean-Baptiste Soyez, 3rd December, Lagis/Université de Lille 1
 - Asma Azim, 17th December, LIG, Université de Grenoble
 - Nicolas Coté, 10th December, GREYC, Université de Caen
 - Rémi Guyanneau, 19th November, LISA, Université d'Angers
 - Zhaoxia Peng, Lagis, Université de Lille
 - Xuan Son Nguyen, 28th Jun., LIP6, Université Pierre et Marie Curie, Paris 6
 - Caroline Ponzoni Carvalho Chanel, 12th Apr., ONERA, Université de Toulouse/ISAE
 - Pedro Chahuara Quispe, 27th march, LIG, Université de Grenoble
 - Joni Pajarinen, 7th February, Aalto University
- François Charpillet was a member of the HdR committee of :
 - Frank Gechter, 4th December, SET, UTBM-Université de Franche-Comté
 - Stéphane Galland, 11th December, SET, UTBM-Université de Franche-Comté

- Alain Dutech was a member of the PhD committee of
 - Tony Pinville, 30th January 2013, Université Paris 6 (referee),
 - Mahuna Akplogan, 15th May 2013, INRA Toulouse (referee),
 - Jean-Baptiste Hoock, 12th June 2013, Université Paris 11 (referee),
 - Joseph El-Gemayel, 25th June 2013, Université de Toulouse 1 (referee),
 - Lucie Daubigny, 1st October 2013, Université de Lorraine.
- Nazim Fatès was a member of the PhD committee of Markus Redeker, June 17th, 2013, Int. Center Unconventional Computing, Bristol University, UK.
- Olivier Simonin was a member was a member of the PhD committee of
 - Benjamin Cogrel, 18th November 2013, Univ. Paris Est Créteil,
 - Remy Guyonneau, 19th November 2013, Univeristé d'Angers,
 - Nicolas Coté, 10th December 2013, Univ. de Caen,
 - Jean-Baptiste Soyez, 3rd December 2013, Univ. de Lille.
- Olivier Simonin was a member (as a referee) of the PhD committee of
 - Jorge Rios Martinez, 8th January 2013, LIG-Inria Rhône-Alpes Grenoble,
 - Cyril Poulet, 23rd April 2013, UPMC LIP6,
 - Yassine Gangat, 27th August 2013, Ile de la Réunion,
 - Feirouz Ksontini, 13th November 2013, Univ. de Valenciennes,
 - Madeleine El Zaher, 22th November 2013, Univ. Technologique de Belfort-Montbéliard,
 - Nicolas Carlesi, 19th December, Univ. Montpellier 2.

9.2.3.2. Specialist Committees

- François Charpillat was a member of "Specialist committee" in University of Grenoble
- Olivier Buffet was a member of the "Specialist committee" in Université de Caen Basse-Normandie.
- Alain Dutech was a member of the "Specialist committee" in Université Paris 13.

9.3. Popularization

- François Charpillat participated to the popularization of the robotic and Ambient Intelligence activity of the maia team :
 - <http://videotheque.inria.fr/videotheque/media/25615>
 - <http://videotheque.inria.fr/videotheque/doc/809>
 - <http://vimeo.com/78659657>
 - <http://vimeo.com/83727993>
- The popularization article by Alain Dutech, Bruno Scherrer and Christophe Thiéry on Reinforcement Learning for the game of Tetris, that was first published at Interstices, was revised and published at Images des Mathématiques [44].
- Vincent Thomas has organized, in collaboration with the "Bibliothèque Universitaire du Campus Lettres", an exposition "jeux: les ateliers de la pensée" where the main objective is to promote games as an interesting subject for academics. This exposition included two days of vulgarization seminars with specialists of several scientific fields (economy, psychology, computer science) and animations. See http://ticri.inpl-nancy.fr/wicri-lor.fr/index.php?title=Exposition_Jeu. The material of the exposition will be presented in several university libraries of the Université de Lorraine in the first half of 2014.

- Vincent Thomas participated in “Journée ISN-EPI” (Jun. 27 2013) whose audience is computer science teachers of secondary school by making a presentation on "games and artificial intelligence" and by organizing a workshop on the same subject. Vincent Thomas is participating in the LORIA IDEES group dedicated to teaching activities <http://idees.loria.fr/index.php?n=Main.ProgrammeJourneeISN-EPI>.
- Vincent Thomas participated in “Dans les coulisses d’un labo d’informatique” (Mar. 21 2013) by proposing an animation about “artificial intelligence and video games” for secondary school students <https://iww.inria.fr/NanSciNum/dans-les-coulisses-dinria-nancy-grand-est-2/>.
- Vincent Thomas and Olivier Buffet participated in “Fête de la Science” by organizing a workshop on board games and artificial intelligence (Oct. 10 and 12). See <https://iww.inria.fr/NanSciNum/un-ticet-pour-la-science/>.
- Nazim Fatès animated two debates following the presentation of the film *Codebreaker* which is a “biopic” dedicated to Alan Turing: in January, it was presented at the Lycée Jean-Moulin in Forbach; in November, it was presented in the main cinema of Saint-Dié-des-Vosges (organisation by “Festival du film de chercheur”).
- Christine Bourjot, Alain Dutech and Nazim Fatès participated in a debate on artificial intelligence in the café “l’Irlandais” with a public mainly constituted of university students.

MANAO Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Conference organization

PRISM2 workshop: second workshop of the PRISM network (6 invited speakers, 42 attendees, 3 days).

IHM 2013 workshop: 25th francophone conference on human-computer interaction (125 attendees, 3 days).

INM 2013 workshop: Imaging New Modalities (in conjunction with German Conference on Pattern Recognition GCPR: 200 attendees, 3 days - workshop 1 day).

8.1.2. Program committee

Conferences: International Conference on Computer Vision (ICCV) 2013, Computer Vision and Pattern Recognition (CVPR) 2013, Eurographics (EG) 2014, Siggraph Asia Posters & Technical Briefs 2013, International Conference on Computational Photography (ICCP) 2013, British Machine Vision Conference (BMVC) 2013, International Conference on 3D Vision (3DV) 2013, High Performance Graphics (HPG) 2013, Workshop on Computational Cameras and Displays (CCD), Pacific Graphics (PG) 2013, Eurographics Symposium on Rendering (EGSR) 2013, Web3D 2013, International Conference in Central Europe on Computer Graphics, Visualization, and Computer Vision (WSCG) 2013

8.1.3. Reviews

The members of *MANAO* have also participated to the reviewing process for conferences and journals:

Journals: ACM Transaction on Graphics (TOG), Computer Graphics Forum (CGF), International Journal of Computer Vision (IJCV), Transactions on Pattern Recognition and Machine Intelligence (PAMI), Applied Optics (AO), Computer and Graphics (C&G), The Visual Computer (VC), Signal Image and Video Processing, ACM Journal of Computing and Cultural Heritage, Image & Vision Computing

Conferences: ACM Siggraph 2013, ACM Siggraph Asia 2013, Eurographics 2014, Eurographics Symposium on Rendering 2013, Graphics interface (GI) 2013, CGI 2013, Web3D 2013.

Grant Proposals: NSERC (Canada)

8.1.4. Committees

In 2013, the members of *MANAO* have been involved in the following responsibilities:

Inria - Evaluation committee member - Gaël Guennebaud.

Inria Bordeaux - commission for technological development (CDT) - Gaël Guennebaud.

AFIG 2013 - Best paper jury - Gaël Guennebaud.

IHM 2013 - Demo chair - Patrick Reuter.

8.1.5. Invited Talks

Talk "The archeologist of the future" at TedX Basque Country, June, Bidart, France.

Keynote Talk "Computational Optical Measurement and Display" at Journée Imagerie Optique Non-Conventionnelle, Paris

Invited Talk "Computational Optical Measurement and Display" at SPIE student chapter University of Rochester

Invited Talk "A Reconfigurable Camera Add-On for HDR, Multi-Spectral, Polarization, and Light-Field Imaging" at University of British Columbia

Invited Talk "Computational Optical Measurement and Display" at Schloss Dagstuhl, Germany

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

The members of our team are involved in teaching computer science at University Bordeaux I and II, 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 and Romain Pacanowski, Photorealistic and Expressive Image Synthesis, 60 HETD, M2, Univ. Bdx I, France.

Master : Xavier Granier, Numerical Techniques, 45 HETD, M1, IOGS, France

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

Master : Xavier Granier, Romain Pacanowski and Boris Raymond, Algorithmic and Object Programming, 60 HETD, M1, IOGS, France

Master : Xavier Granier and Romain Pacanowski, Radiometry and Colorimetry, 15 HETD, M1, IOGS, France

Master : Gaël Guennebaud and Simon Boyé, High-performance 3D Graphics, 60 HETD, M1, Univ. Bdx I, France.

Master : Pascal Guitton and Pierre Bénard, Virtual Reality, 60 HETD, M2, Univ. Bdx I, France.

Master : Ivo Ihrke, Computational Optical Imaging, 20 HETD, M1, IOGS, France

Master : Christophe Schlick, Martin Hachet, Pierre Bénard and Jeremy Laviolle, Image Synthesis and Virtual Reality, 60 HETD, M2, ENSEIRB, France

Licence : Patrick Reuter, Digital Imaging, 36 HETD, L3, Univ. Bdx 2, France.

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

Master : Xavier Granier, Optics and Computer Science, M1/M2, IOGS, France.

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

8.2.2. Supervision

PhD : Cyprien Buron, Interactive Generation and Rendering of Massive Models: a Parallel Procedural Approach, Univ. Bordeaux, 4th of February 2014, Jean-Eudes Marie & Gaël Guennebaud & Xavier Granier

PhD : Heqi Lu, Importance Sampling of Realistic Light Sources, Univ. Bordeaux, 27th of February 2014, Xavier Granier & Romain Pacanowski

PhD : Alkhazur Manakov, Calibration and Characterization of Advanced Image-Based Measurement Systems, Saarland University, Ivo Ihrke

PhD : Boris Raymond, Rendering and manipulation of anisotropic materials, Univ. Bordeaux, Pascal Barla & Gaël Guennebaud & Xavier Granier

PhD : Ilya Reshetouski, Mirror Systems for Extended View Point Coverage, Saarland University, Ivo Ihrke

PhD : John Restrepo, Plenoptic Imaging and Computational Image Quality Metrics, Univ. Bordeaux, Ivo Ihrke

PhD : Brett Ridell, Interactive spatial augmented reality, Univ. Bordeaux, Patrick Reuter & Xavier Granier

PhD : Carlos Zubiaga Pena, Image-space editing of appearance , Univ. Bordeaux, Pascal Barla & Xavier Granier

8.2.3. Juries

PhD : Jean-Patrick Roccia [87], 24th of May, Toulouse, France.

PhD : Adrien Bernhardt [36], 3th of July, Grenoble, France.

PhD : Suman-Kumar Maji [71], 12th of November, Bordeaux, France.

PhD : Violaine Todoroff, 9th of December, Toulouse, France.

8.3. Popularization

8.3.1. Exhibitions

Organization of the Inria's booth at Siggraph 2013, Anaheim, US.

Participation at the temporary exhibition "Eternal Egypt" at the Museum "Allard Pierson" in Amsterdam, The Netherlands, with the interactive spatial augmented reality setup "The Revealing Flashlight" [26].

Participation at the temporary exhibition "Du Nil à Alexandrie. Histoires d'eaux" at the Museum "Mariemont" near Bruxelles, Belgium with the 1/5 scale reproduced reassembled Isis statue within the ANR SeARCH project.

8.3.2. Tutorials and Workshops

Tutorial on the Eigen library at Cg-libs, Italian Eurographics chapter, June, Pisa, Italy.

Tutorial at Eurographics 2013, Girona, Spain

Tutorial at German Conference on Pattern Recognition 2013, Saarbrücken, Germany

Workshop at the Nodem 2013 conference: "Interactive exhibitions with 3D content: Virtual Museums - Workshop", December, Stockholm, Sweden.

8.3.3. Miscellaneous

Organization of Miniforum 3D - a meeting between students, researchers, and local industry

MARELLE Project-Team

8. Dissemination

8.1. Scientific Animation

Members of the project refereed papers for the journals MSCS (Mathematical Structures of Computer Science), JFR (Journal of Formalized Reasoning), they participated to the program committee of ITP (Interactive Theorem Provers), ACL2 (A Computational Logic for Applicative Common Lisp), PxTP (Proof Exchange for Theorem Provers), and refereed papers for the conferences ITP and ESOP (European Symposium on Programming), ISSAC (International Symposium on Symbolic and Algebraic Computation).

Benjamin Grégoire gave lectures at the first EasyCrypt summer school in Philadelphia in July.

Members of the project participated to the conferences “Journées Francophones des Langages Applicatifs” (Aussois, France, January) “workshop on Foundation of Mathematics for Computer-Aided Formalization” (Padova, Italy, January), “Journées Nationales de l’Informatique Mathématique” (Lyon, January), “Conferences on Intelligent Computer Mathematics” (London, July), “Conference on Interactive Theorem Proving” (Rennes, France), “Conference on Symbolic and Numerical Algorithms for Scientific Computing” (Timisoara, Romania, September).

Yves Bertot was invited to give a joint seminar on homotopy type theory at Harvard in Boston, USA, and MIT on March 25th, 2013, Benjamin Grégoire made 8 visits to IMDEA in Madrid, Spain, to work on formally verified proofs in cryptography and automatic tools for formal verification for cryptographers, L. Rideau, L. Théry, E. Martin-Dorel were invited to meetings in Lyon, in July and October, Y. Bertot, L. Rideau participated to the Spring Day of Microsoft Research-Inria joint centre.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence : Laurence Rideau, “Introduction to programming” classe préparatoire MP*, teaching assistant, 48 hours, Lycée Masséna, Nice, France

Master : Laurent Théry: “Formalization of floating point arithmetic”, 8 hours, ENS Lyon, France

Master : Laurent Théry: “Introduction to Coq”, 3 hours, École des Mines de Paris, Sophia Antipolis, France

Master : Laurent Théry: Examiner for the exam “agrégation de mathématiques, option informatique”

Master : Julianna Zsidó: “Logic”, 48 hours, École Polytechnique Universitaire, Sophia Antipolis, France

8.2.2. Supervision

PhD : Maxime Dénès, “Étude formelle d’algorithmes efficaces en algèbre linéaire”, Université de Nice, defended on November, 20th, 2013, supervised by Yves Bertot.

PhD in progress: Maxime Cano, “Interaction entre algèbre linéaire et analyse en formalisation des mathématiques”, thèse commencée en octobre 2010, supervised par Yves Bertot.

8.2.3. Juries

- Yves Bertot was an examiner for the thesis defense of Shi Xiaomu (University of Grenoble, France and Tsinghua University, Beijing, China), María Poza (Universidad de la Rioja, Spain—with written report duty), Pierre Néron (Ecole Polytechnique, France—as chairman for the Jury), Victor Magron (Ecole Polytechnique, France—with written report duty).

- Benjamin Grégoire was an examiner for the thesis of Chantal Keller (Ecole Polytechnique, France).

8.2.4. Community Service

- José Grimm is a member of the *comité de centre*, the committee where representatives of personnel and management discuss questions of daily life at the level of the Sophia-Antipolis Méditerranée center, he also participates in a commission on continued training and a commission on hygiene, safety, and working conditions. This activity involves around 12 meetings per year.
- Benjamin Grégoire was a member of the *comité de développement technologique* (in English, technological development committee), the committee that oversees the allocation of software engineers on experimental software and platform development, until June 2013. Laurent Théry is a member of the same committee since June 2013.
- Benjamin Grégoire and Yves Bertot are members of the Coq steering committee. Yves Bertot has been appointed chairman of this committee since October 2013. As such, Yves Bertot attended a Coq users meeting at ICFP in 2013.
- Yves Bertot is deputy scientific director for the Sophia Antipolis méditerranée research center. This task implies meetings approximately every fortnight with the center director, the scientific director, and the director of administrative services for the center, together with frequent meetings with researchers from any domain in the center and monthly meetings at the national level as part of the evaluation committee.

8.3. Popularization

Yves Bertot participated to two articles published in popular science magazines (*Science et Vie* and *Science et Avenir*) and Laurence Rideau to one of these articles.

MASAIE Project-Team

7. Dissemination

7.1. Scientific Animation

A. Iggidr is an elected member of Inria Evaluation committee (CE).

A. Iggidr served as a member of the CR2 committee (Jury concours CR2) at Inria RHÔNE ALPES, May 2013.

G. Sallet was an invited speaker at the "Workshop on Mathematical Methods and Modeling of Biophysical Phenomena", Cabo Frio, State of Rio de Janeiro, Brazil, March 4th-8th, 2013. <http://w3.impa.br/~zubelli/BIOMATH2013/>.

A. Iggidr was an invited speaker at "III Simpósio de Modelagem do Controle da Dengue", Petrópolis, State of Rio de Janeiro, Brazil, May 8th-10th, 2013. <http://claudia-codeco.github.io/pronex/simposio2013.html>.

G. Sallet was a lecturer at the CIMPA-ICTP-UNESCO research school "Numerical methods in fluid mechanics, mathematical epidemiology and reaction-diffusion systems", September 2-13, 2013, University Gaston Berger, Saint-Louis, Senegal. <http://www.cimpa-icpam.org/spip.php?article500>.

G. Sallet was a speaker at the scientific meeting "Des dynamiques singulièrement perturbées aux dynamiques des populations", La Rochelle, December 16th-18th, 2013.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Licence and Master : P. Adda, 192h, L1, L2, L3, M1, University Lorraine.

7.2.2. Supervision

- PhD : Derdei Bichara. Application de la théorie des observateurs à l'identification des paramètres de modèles épidémiologiques, Université de Lorraine, February 28, 2013, G. Sallet and A. Iggidr.
- PhD : L. Tendeng. Etude de modèles de transmission de la Schistosomiase: Analyse mathématique, reconstruction des variables d'état et estimation des paramètres, Université de Lorraine, May 2013, G. Sallet.
- PhD in progress : Mouhamadou Diaby, "Etude mathématique de l'évolution temporelle et spatiale de certaines épidémies. Applications à la Bilharziose (schistosomiase).", 01/01/2010, A. Iggidr.
- PhD in progress : Mamadou Lamine Diouf, "Modélisation, observation et contrôle de la propagation de certaines épidémies en Afrique Subsaharienne.", 01/01/2010, A. Iggidr.

7.2.3. Juries

A. Iggidr was member (referee) of the PhD thesis jury of Mamadou Diagne, "Modélisation et étude mathématique de la dynamique de prolifération du Typha dans le Parc National des Oiseaux de Djoudj", defended in November 2013 at Université de Haute-Alsace.

MATHRISK Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Collective responsibilities

- A. Alfonsi: Co-organizer of the working group seminar of MathRisk “Méthodes stochastiques et finance”.
In charge of the Master “Finance and Application” at the Ecole des Ponts.
- B. Jourdain:
 - Head of the doctoral school MSTIC, University Paris-Est,
 - Associate Editor of ESAIM:Proc,
 - Member of editorial board of American Journal of Algorithms and Computing.
- B. Jourdain and A. Sulem: Guest Editors of a special issue on systemic risk, to appear in *Statistics and Risk modeling*.
- C. Labart: reviewer for : Mathematical Reviews and Referee for Stochastic Processes and Their Applications, Mathematical Finance and Mathematics of computation, Journal of Computational Finance, SIAM Numerical Analysis and Annals of Applied Probability.
- D. Lamberton: associate editor of *Mathematical Finance* and co-editor of *ESAIM Probability and Statistics*.
Research Vice President of Université Paris-Est Marne-la-Vallée.
- B. Lapeyre: Head of the doctoral department of Université Paris-Est.
- A. Sulem:
 - Editorship:
 - *Journal of Mathematical Analysis and Applications (JMAA)*
 - *International Journal of Stochastic Analysis (IJSA)*
 - *SIAM Journal on Financial Mathematics (SIFIN)*
 - Participation to selection committees:
 - Full Professor of Mathematics, Ecole Centrale de Paris, September 2013.
 - Researcher, Inria Sophia-Antipolis, 2013.

9.1.2. Invitations and participations in conferences

- A. Alfonsi :
 - "Optimal execution and price manipulations", ANR Liquirisk Workshop, Paris Dauphine.
 - "Pathwise optimal transport bounds between a one-dimensional diffusion and its Euler scheme", (June at Mannheim, October at Evry).
- V. Bally
 - Visits to Ritsumeikan University (Japan), Collaboration with A. Kohatsu Higa, September 2013, and to Tor Vergata University, Roma (May-June and July 2013).
 - 29-31 August 2013. Conference for the 150 anniversary of the Mathematical Faculty of Bucharest. Romania
- R. Dumitrescu:
 - Poster Presentation, SMAI Congress, Seignosse (Landes), 27-31 May 2013.

- C. Fontana:
 - 7th Bachelier Colloquium on Mathematical Finance and Stochastic Calculus, Métabief, 13-20 January 2013 (speaker);
 - visits Politecnico di Milano, collaboration with Emilio Barucci, 27-29 January, 27 March - 1 April, 13-14 May.
 - Seminar: Université Marne La Vallée, Laboratoire d'Analyse et de Mathématiques Appliquées, 8 February 2013;
 - Current Topics in Mathematical Finance, Wien, 18-19 April 2013 (participant);
 - Seminar: Politecnico di Milano, Department of Mathematics, 14 May 2013;
 - 30th International French Finance Association Conference, Lyon, 28-31 May 2013 (speaker & discutant);
 - 6th General AmaMeF and Banach Center Conference, Warsaw, 10-15 June 2013 (speaker);
 - Workshop on Stochastic Portfolio, Arbitrage Theory, Role of Information and Credit Risk, Beijing, 24-28 June 2013 (invited speaker);
 - Seminar: Ludwig-Maximilians-Universität Munich, 8 July 2013, and collaboration with Alessandro Gnoatto et Christa Cuchiero, 7-10 July ? 37th Meeting of the Italian Association for Mathematics Applied to Economics and Social Sciences (AMASES), 5-7 September 2013 (speaker);
 - Workshop on Mathematics in Finance, Zurich, 18 October 2013 (participant);
 - Seminar: ENSTA Paris, 28 October 2013.
- B. Jourdain:
 - colloquium Bezout, 31 January 2013, Discretization of stochastic differential equations.
 - BigMC Seminar, 21 February 2013 , Optimal scaling of the transient phase of Metropolis-Hastings algorithms
 - Ergonom workshop , CIRM, 25-28 February 2013 : Optimal scaling of the transient phase of Metropolis-Hastings algorithms
 - Seminar of the chair "Financial risks", 22 April 2013 : American Put in an exponential Levy model with discrete dividends
 - German-Polish joint Conference on Probability and Mathematical Statistics, Torun, 6-9 juin 2013, Optimal scaling of the transient phase of Metropolis-Hastings algorithms
 - ANR Stab meeting, Paris Dauphine, 11-12 June 2013, Optimal transport bounds between a one-dimensional diffusion and its Euler scheme
 - LIASFMA Summer school : new developments in stochastic analysis : probability and PDE, interactions, Beijing, 8-12 July 2013 : Optimal scaling of the transient phase of Metropolis-Hastings algorithms
 - Scicade 2013, 19 September 2013, Optimal scaling of the transient phase of Metropolis-Hastings algorithms, in an invited session on MCMC algorithms
 - Seminar Stochastic Analysis, Oxford MAN Institute, 14 October 2013, Optimal transport bounds between a one-dimensional diffusion and its Euler scheme
 - Mathematics seminar of Marne-la-Vallée, 3 December 2013, Optimal scaling of the transient phase of Metropolis-Hastings algorithms
 - ANR Stab meeting, 16-17 December 2013, 4h lecture on "Discretization of stochastic differential equations : strong error, weak error and optimal transport"
- C. Labart:
 - Colloquium on Financial Mathematics and Numerical Probability, Beijing.

- Local organizer of the international conference IMACS 2013, which took place in Annecy.
- J. Lelong:
 - Conference "Les Nouveaux Outils du Développement Durable", Paris, October 2013.
 - 9th IMACS Seminar on Monte Carlo, Annecy, July 2013.
 - Workshop on Financial Mathematics and Numerical Probability, Beijing, June 2013.
- A. Sulem:
 - Plenary talk at the IFIP TC 7 Conference on System Modelling and Optimization, Klagenfurt, Austria. September 2013
<http://ifip2013.uni-klu.ac.at/>
 - Invited talk, "Stochastic Analysis and Mathematical Finance", September 2013, Bergen
 - "PDE and Mathematical Finance V", Stockholm, June 10-14, 2013.
<http://www.math.kth.se/pdefinance/2013/Welcome.html>
 - Stochastics and Real World Models 2013, July 2013, Bielefeld, Germany.
<http://www.igk.math.uni-bielefeld.de/workshop2013>
 - Nomura seminar, Mathematical Institute, University of Oxford, March 8 2013,
<http://www.maths.ox.ac.uk/events/seminars/upcoming/P10Y/4/1664>
 - Stochastic Analysis and Applications Conference, Växjö, Sweden, June 2013,
 - Seminar of Probability, Rennes University, June 2013
 - Talk at *Horizon Maths 2013*, Fondation Sciences Mathématiques de Paris, Paris, December 16-17 2013.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- A. Alfonsi:
 - Modéliser, Programmer et Simuler, second year course at the Ecole des Ponts, France.
 - Calibration, Volatilité Locale et Stochastique, third-year course at ENSTA (Master with Paris I).
 - Traitement des données de marché : aspects statistiques et calibration, lecture for the Master at UPEMLV.
 - Mesures de risque, Master course of UPEMLV and Paris VI.
- V. Bally:
 - Mini course (6 hours) for Phd and Post Doc students, Ritzumeikan University, Japan, September 2013.
 - "The Malliavin calculus and applications in finance", 30 hours, Master 2 Finance University Marne la Vallée,
 - "Risk methods in actuarial science", 36 hours, Master IMIS, University Marne la Vallée.
- R. Dumitrescu:
 - Evaluation d'actifs financiers par absence d'opportunité d'arbitrage (3rd year ENSAE, M2 MASEF Dauphine and M2 Modélisation aléatoire Paris Diderot).
 - Calcul stochastique appliqué à la finance (2nd year ENSAE).
 - Algèbre linéaire (L2, Paris Dauphine).

- B. Jourdain:
 - Course "Probability theory and statistics", 1st year ENPC.
 - Course "Introduction to probability theory", 1st year, Ecole Polytechnique.
 - Course "Stochastic numerical methods", 3rd year, Ecole Polytechnique.
 - Projects in finance and numerical methods, 3rd year, Ecole Polytechnique.
- B. Jourdain, B. Lapeyre:
 - Course "Monte-Carlo methods in finance", 3rd year ENPC and Master Recherche Mathématiques et Application, university of Marne-la-Vallée
- J.-F. Delmas, B. Jourdain:
 - Course "Jump processes with applications to energy markets", 3rd year ENPC and Master Recherche Mathématiques et Application, university of Marne-la-Vallée
- D. Lamberton: Master course "Calcul stochastique et applications en finance", Université Paris-Est Marne-la-Vallée.
- B. Lapeyre:
 - Monte-Carlo methods in finance, 3rd year ENPC and Master Recherche Mathématiques et Application, University Paris-Est Marne-la-Vallée
 - "Finance : mathematical and numerical aspects", 2nd year ENPC, professor, 15 hours/year
- J. Lelong:
 - Oct. 2012 – May 2013 : supervisor of 2 third year students from Ensimag to work on an adaptive Monte Carlo method for jump diffusion models. See the research report "Importance sampling for jump processes and applications to finance" I am co-responsible for the *Financial Engineering* major at Ensimag.
 - Lectures on "Parallel programming in financial mathematics" at Ensimag (third year course)
 - Lectures on "Monte-Carlo methods in financial engineering" at Ensimag (third year course)
 - Lectures on "Numerical methods for pricing American options" at Ensimag (third year course)
 - Lectures on "Martingales and stochastic approximation" at Ensimag (third year course)
 - Lectures on "Interest rate and Foreign exchange derivatives" at Ensimag (third year course)
 - Lectures on "Numerical programming in C++" at Ensimag (second year course)
 - Supervision of third year students for a long term project on "Pricing structured products"
 - Supervision of second year students for long term projects on numerical finance.
- A. Sulem:
 - Master of Mathematics, "Numerical methods in Finance", Luxembourg University, 20 hours
 - Master course, Université Paris IX-Dauphine, Department "Mathématiques et Informatique de la Décision et des Organisations" (MIDO), Master MASEF, 21 hours "Numerical Methods for PDEs in Finance"

9.2.2. Supervision

PhD theses defended in 2013:

- José Infante Acevedo, Méthodes et modèles numériques appliquées aux risques du marché et à l'évaluation financière, Université Paris-Est, December 9 2013, Adviser: A. Alfonsi and T. Lelièvre.
- Ayech Bouselmi, "Processus de Lévy et options américaines", University of Marne la Vallée, December 11 2013, Adviser : D. Lamberton.
- Maxence Jeunesse, "Etude de deux problèmes de contrôle stochastique : Put Américain avec dividendes discrets et principe de programmation dynamique avec contraintes en probabilités", Université Paris-Est, 29 January 2013, Adviser: B. Jourdain.

PhD in progress:

- Clément Rey: ENPC and UPMLV. Weak error analysis of discretization schemes for some financial processes. Advisers: A. Alfonsi and V. Bally (from Oct. 2012).
- Pierre Blanc: Modeling the price impact of limit and market orders. Adviser: A. Alfonsi. (from Nov. 2012).
- Anis Al Gerbi : Discretization of stochastic differential equations and systemic risk modeling. Adviser B. Jourdain (from Sept. 2013).
- J. Reygner, Longtime behaviour of particle systems : applications in physics, finance and PDEs, Advisers: B. Jourdain and L. Zambotti (from Sept. 2011).
- A. Kritoglou, Stochastic modelling for ferromagnetic materials, Since sept. 2013 : Advisers: J. Lelong and S. Labbé (from Sept. 2013).
- R. Dumitrescu, Reflected BSDEs with jumps, 2nd year : Advisers: A. Sulem and R. Elie (from Sept. 2012).
- Victor Rabiet, On a class of jump type stochastic equations, Adviser : V. Bally (from Sept. 2009).
- Paolo Pigato, Lower bounds for the density of the solution of SDE's under the weak Hörmander condition, and applications in finance, Advisers: V. Bally and A. Dai Pra.
- Ernesto Palidda (Since September 2010), Crédit Agricole, Operation Research group, Adviser: B. Lapeyre (from Sept. 2010).
- Marouen Iben Taarit (from September 2013), Cifre industrial contract Natixis/ENPC, Adviser: B. Lapeyre.
- Jyda Mint Moustapha (Since November 2012), IFSTTAR, Adisers: D. Daucher and B. Jourdain.

9.2.3. Participation to PhD committees

- A. Alfonsi
 - Florian Klöck, "Regularity of Market Impact Models, Time-Dependent Impact, Dark Pools and Multivariate Transient Impact", University of Mannheim, June 18 2013.
 - Timothée Papin, "Pricing of corporate loan: Credit risk and Liquidity cost", Université Paris-Dauphine, September 25 2013
- A. Sulem:
 - Myriana Grigorova, *Quelques liens entre la théorie de l'intégration non-additive et les domaines de la finance et de l'assurance*, (President of the committee), Laboratoire de Probabilités et Modèles Aléatoires (LPMA), Université Paris VII, October 18 2013
 - Fabien Guillaud, *Contrôle optimal dans des carnets d'ordres limites*, (President of the committee), LPMA, Université Paris VII, 1 February 2013

MAVERICK Project-Team

8. Dissemination

8.1. Scientific Animation

- Romain Vergne is member of the jury for the best paper at AFIG 2013.
- Romain Vergne is member of the "Commission d'auto-évaluation" of the LJK.
- Romain Vergne is member of EGSR 2013 program committee.
- Cyril Soler is member of Eurographics 2013 program committee.
- Cyril Soler is member of Pacific Graphics 2013 program committee.
- Cyril Soler is member of the Eurographics Symposium on Rendering 2013 program committee.
- Joëlle Thollot is member of Expressive 2013 program committee.
- Nicolas Holzschuch was co-chair of the Eurographics Symposium on Rendering 2013, with Symon Rusinkiewicz from Princeton University.
- Nicolas Holzschuch was co-chair of the Tutorials track of Eurographics 2014, with Karol Myszkowski from the MPI Informatik.
- Nicolas Holzschuch is a member of Inria "Evaluation Committee", since 2008.
- Nicolas Holzschuch is a member of the ACM Symposium on Interactive 3D Graphics 2014 program committee.
- Georges-Pierre Bonneau is industrial co-chair of Eurographics 2014, with Xin Tong from Microsoft Research Asia
- Georges-Pierre Bonneau is member of the international program committee of Solid and Physical Modelling 2013
- Georges-Pierre Bonneau is member of the international program committee of EnvirVis'2013 and 2014

8.2. Teaching - Supervision - Juries

8.2.1. 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.

8.2.2. Supervision

PhD: Alexandre Derouet-Jourdan, Courbes dynamiques : de la capture de formes géométriques à l'animation, UJF, November 7 2013, Florence Bertails-Descoubes, Joëlle Thollot.

PhD in progress : Eric Heitz, Représentations alternatives pour le traitement haute qualité efficace des scènes complexes, October 2010, Fabrice Neyret.

PhD in progress : Léo Allemand-Giorgis, Visualisation de champs scalaires guidée par la topologie, October 2012, Georges-Pierre Bonneau, Stefanie Hahmann.

PhD in progress : Aarohi Johal, algorithmes de génération automatique d'arbres de construction à partir de modèles géométriques CAO B-Rep, September 2013, Jean-Claude Léon, Georges-Pierre Bonneau, thèse CIFRE EdR R&D.

PhD in progress : Benoît Zupancic, acquisition of reflectance properties using compressive sensing, October 2012, Nicolas Holzschuch, Cyril Soler.

PhD in progress : Hugo Loi, Automatisation de la génération de textures vectorielles et application à la cartographie, October 2012, Joëlle Thollot, Thomas Hurtut.

PhD in progress : Benoit Arbelot, Etudes statistiques de forme, de matériaux et d'environnement pour la manipulation de l'apparence, October 2013, Joëlle Thollot, Romain Vergne.

8.2.3. Juries

- Georges-Pierre Bonneau has been reviewer and member of the jury for the "Habilitation à Diriger des Recherches" of Guillaume Lavoué at the University of Lyon (04/04/13) and Frédéric Cordier at the University of "Haute-Alsace" (29/11/13).
- Georges-Pierre Bonneau has been member of the jury for the PhD of Adrien Bernhardt (Grenoble, 03/07/13), Jeremy Espinas (Lyon, 24/10/13), Lionel Untereiner (Strasbourg, 08/11/13) and Cédric Cordier (Grenoble, 06/12/13).
- Nicolas Holzschuch has been a member of the jury of the "Habilitation à Diriger des Recherches" of Lilian Aveneau at the University of Poitiers (12/12/2013).

Maxplus Project-Team

9. Dissemination

9.1. Animation de la communauté scientifique/Scientific Animation

- M. Akian :
 - Membre élue du conseil du laboratoire du CMAP.
- S. Gaubert :
 - Vice-président du comité des projets du Centre de Recherche Inria de Saclay – Île-de-France depuis Janvier 2008, et membre nommé de la commission d'évaluation de l'Inria.
 - Membre du comité éditorial de la collection Mathématiques et Applications, SMAI et Springer.
 - Membre du comité éditorial du journal RAIRO Operations research.
 - Membre du conseil scientifique du CMAP.
 - Membre du CNU en 26ième section.
 - Membre du comité de pilotage du PGMO (programme Gaspard Monge d'optimisation, FMJH et EDF), nommé directeur de ce programme depuis le 1er Novembre.
 - Coorganisateur du Séminaire Parisien d'Optimisation.

9.2. Enseignement - Encadrement - Jurys /Teaching - Supervision - Juries

9.2.1. Enseignement/Teaching

- X. Allamigeon
 - Master: Petites classes et encadrement d'enseignements d'approfondissement de Recherche Opérationnelle en troisième année à l'École Polytechnique (majeure de Mathématiques Appliquées) (niveau M1).
- P. Benchimol
 - Monitorat en L1 à l'Univ. Paris VI, 72h.
- S. Gaubert
 - Cours "Systèmes à Événements Discrets", option MAREVA, ENSMP.
 - Cours "Algèbre max-plus pour le contrôle optimal et les jeux" du Parcours Optimisation et Théorie des Jeux - Modélisation en Économie (OJME) du M2 Mathématiques et Applications de l'Université de Paris 6 et de l'École Polytechnique.
 - Cours magistral, petites classes et organisation des enseignements d'approfondissement de Recherche Opérationnelle en troisième année à l'École Polytechnique (majeure de Mathématiques Appliquées), avec polycopié [75].
- Z. Qu
 - Petites classes d'Automatique (AO102) en première année à l'ENSTA (14h).

9.2.2. Encadrement/Supervision

- PhD: Zheng Qu, inscrite à l'École Polytechnique, depuis septembre 2010, directeur de thèse: S. Gaubert, coencadrement: S. Tang (Université Fudan, Shanghai, Chine), soutenue le 21 Octobre 2013.

- PhD in progress : Pascal Benchimol, inscrit à l'École Polytechnique à partir de septembre 2011, directeur de thèse: S. Gaubert, coencadrement: X. Allamigeon, avec une participation à l'encadrement de M. Joswig (TU-Darmstadt) dans le cadre du programme bourse Monge (bourses données pour des doctorants avec un partenaire étranger).
- PhD : Victor Magron, inscrit à l'École Polytechnique, depuis septembre 2010, directeur de thèse: Benjamin Werner (Inria et LIX), coencadrement: S. Gaubert et X. Allamigeon, soutenue le 9 décembre 2013.
- PhD in progress : Andrea Marchesini, inscrit à l'École Polytechnique, depuis septembre 2012, directeur de thèse: Marianne Akian, codirection: S. Gaubert, avec une participation à l'encadrement de Françoise Tisseur (U. Manchester).
- PhD in progress : Antoine Hochart, inscrit à l'École Polytechnique, depuis octobre 2013, directeur de thèse: Stéphane Gaubert, codirection: Marianne Akian.
- PhD in progress : Eric Fodjo, inscrit à l'École Polytechnique, depuis octobre 2013, directeur de thèse: Marianne Akian.

9.2.3. *Jurys/Committees*

- M. Akian
 - Jury (rapporteur) de thèse de Jean-Christophe Alais (16 décembre 2013).
- X. Allamigeon
 - Membre du jury du prix de thèse Gilles Kahn de la Société Informatique de France (septembre-décembre 2013).
 - Examineur dans le jury de soutenance de thèse de Victor Magron (Décembre 2013).
- S. Gaubert
 - Membre de la commission de recrutement en informatique à l'École Polytechnique.
 - Membre du jury de concours Inria CR2 Grenoble.
 - Jury de thèse de Richard Combes (rapporteur), Université Pierre et Marie Curie, Février 2013.
 - Jury de thèse de Jean-Robin Medori (rapporteur), Université Pierre et Marie Curie, Juin 2013.
 - Jury de thèse de Rabah Boukra (rapporteur), Université d'Angers, Novembre 2013.
 - Jury de thèse de Matthew Bourque, University of Illinois at Chicago, Juillet 2013.
 - Jury de thèse de Daniel Hoehener, Université Pierre et Marie Curie, 17 Septembre 2013.
 - Jury de thèse de Zheng Qu, École Polytechnique, 21 Octobre 2013.
 - Jury de thèse de Dario Prandi, École Polytechnique, 23 Octobre 2013.
 - Jury de thèse de Victor Magron, École Polytechnique, 9 Décembre 2013.

9.3. Popularization

- J.P. Quadrat :
 - Administre le site d'intérêt général <http://www.maxplus.org>, dédié à l'algèbre max-plus.

9.4. Participation à des colloques, séminaires/Conférences, Seminars

- M. Akian
 - Tropical Mathematics Seminar and Reading Group, Univ. Manchester, 30 avril 2013. Titre de l'exposé: "Majorisation inequalities for valuations of eigenvalues"

- Tropical Mathematics and its Applications Meeting (Workshop) of the LMS Joint Research Group, Univ. Birmingham, 16 mai 2013. Titre de l'exposé: "Majorisation inequalities for valuations of eigenvalues"
- 18th Conference of the International Linear Algebra Society (ILAS), Providence, June 3-7, 2013. Minisymposium "Linear and Nonlinear Perron-Frobenius Theory". Titre de l'exposé: "Policy iteration algorithm for zero-sum two player stochastic games: complexity bounds involving nonlinear spectral radii"
- Seminario di Modellistica Differenziale Numerica, Mathematics Dept., Univ. La Sapienza, Rome, 10 décembre 2013. Titre de l'exposé: "Policy iteration for stochastic games"
- 52nd IEEE Conference on Decision and Control, Florence, 10 décembre 2013. Titre de l'exposé: "Solving multichain stochastic games with mean payoff by policy iteration"
- X. Allamigeon
 - SIAM Conference on Control and its Applications, San Diego (Etats-Unis), du 8 au 10 juillet 2013, dans le cadre du mini-symposium "Max-Plus/Tropical Analysis in Control and Systems Theory". Titre de l'exposé: "Tropicalizing the simplex algorithm".
- P. Benchimol
 - Séminaire des thésards, CMAP, Ecole Polytechnique, Mars 2013. Titre de l'exposé: "Petite visite sous les tropiques".
 - SMAI 2013 - 6ème biennale des mathématiques appliquées et industrielles (2013), Seignosse (Landes), 27-31 mai 2013. Titre du Poster: "Tropicalizing the Simplex Algorithm"
 - 18th Conference of the International Linear Algebra Society (ILAS), Providence, June 3-7, 2013. Minisymposium "Applications of Tropical Mathematics". Titre de l'exposé: "Tropicalizing the simplex algorithm".
 - Journée des doctorants, CMAP, Ecole Polytechnique, Juin 2013
 - Institut für Mathematik, TU Berlin, Décembre 2013
 - Séminaire parisien de théorie des jeux, IHP, Décembre 2013
- S. Gaubert
 - Séminaire de calcul formel, Université de Limoges, 7 Février 2013.
 - Séminaire pluridisciplinaire d'optimisation de Toulouse, May 6, 2013.
 - Control and Games Workshop May 7-10, 2013, Warwick.
 - Conférence plénière à SMAI 2013, Seignosse (Landes), 27-31 mai 2013.
 - Conférence SIAM CT'2013, Juillet, San Diego.
 - Conférence ECC'2013, Juillet, Zurich.
 - Minicours (3h00) aux Journées de Géométrie Algorithmique, Marseille, Décembre 2013.
- A. Marchesini
 - 18th Conference of the International Linear Algebra Society (ILAS), Providence, June 3-7, 2013. Minisymposium "Applications of Tropical Mathematics". Titre de l'exposé: "Tropical bounds for eigenvalues of matrices"
- Z. Qu
 - Séminaire PGMO, le 19/02/2013. Titre de l'exposé: "Maxplus basis methods for high dimensional optimal control problem: introduction and perspectives"
 - SMAI 2013, Seignosse (Landes), 27-31 mai 2013. Titre de l'exposé: "Taux de contraction de flots croissants sur un cône et application au contrôle stochastique"

- 18th Conference of the International Linear Algebra Society (ILAS), Providence, June 3-7, 2013. Titre de l'exposé: "Dobrushin ergodicity coefficient for Markov operators on cones, and beyond"
- SIAM conference on control and its applications (SIAM CT 13), San Diego, du 8 au 10 juillet 2013. Titre de l'exposé: "Contraction of Riccati flows applied to the convergence analysis of a max-plus curse of dimensionality free method"
- European control conference 2013 (ECC 13), Zurich, du 17 au 19 juillet 2013. Titre des 2 exposés: "Markov Operators on Cones and Non-Commutative Consensus", "Contraction of Riccati Flows Applied to the Convergence Analysis of the Max-Plus Curse of Dimensionality Free Method"
- Journée PGMO, le 04/10/2013. Titre de l'exposé: "Max-plus numerical methods for Hamilton-Jacobi equations: attenuation of the curse of dimensionality"
- C. Walsh
 - Séminaire de théorie ergodique à l'Université de Rennes 1, le 8 avril 2013. Titre de l'exposé: "The horofunction boundary of Teichmüller space".
 - Series de trois exposés au "Special Program on Teichmüller Theory" à l'institut Erwin Schrödinger, Vienne, Autriche, du 10 au 12 avril 2013. Titre des exposés: "The horofunction boundary of Teichmüller space".
 - Séminaire de géométrie différentielle à l'Université de Nancy 1, le 21 mai 2013. Titre de l'exposé: "Horofunctions and isometries of Hilbert geometries".
 - Workshop "Journée dynamique et géométrie de Hilbert" à Jussieu (Université Paris VI), le 3 mai 2013. Titre de l'exposé: "Horofunctions and isometries of Hilbert geometries".

MC2 Project-Team

9. Dissemination

9.1. Scientific Animation

Thierry Colin is elected as a member of the national committee of the French Universities (CNU). It is a national structure that has in charge a peer review of the carriers of mathematicians in France.

Charles-Henri Bruneau is member of the executive board of the international conferences on CFD. Selection of the 270 abstracts received for the next conference in China July 2014.

Angelo Iollo has managed the national ANR research project Carpeinter.

C. Poignard gave a talk at Lycée Montaigne in december 2013 on the modeling of electroporation.

Lisl Weynans has participated to organize the YIC (2nd ECCOMAS Young Investigators Conference), Bordeaux 2-6 September 2013.

Olivier Saut is the head of the GDR Metice (Mathématiques appliquées aux espèces, tissus et cellules).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

All Professors and Associate Professors teach 192 hours per year.

Licence : Modélisation et calcul scientifique, 32H, L2, Université Bordeaux 1, France (Michel Bergmann)

Licence : Initiation au langage de programmation Fortran 90, 28H, ENSEEIRB-MATMECA, France (Michel Bergmann)

Master : approximation des EDP 2, 28h, M1, Université Bordeaux 1, France (Michel Bergmann)

Master : electrical modelling of biological cells, 32H, M2, Université Bordeaux 1, France (Clair Poignard)

9.2.2. Supervision

PhD & HdR (Les thèses soutenues doivent figurer dans la bibliographie) :

HdR: O. Saut, Contributions en optique non-linéaire et en modélisation de la croissance tumorale en vue des applications cliniques, Université Sciences et Technologies - Bordeaux I, September 2012

M. Cisternino, A parallel second order Cartesian method for elliptic interface problems and its application to tumor growth model, Université Sciences et Technologies - Bordeaux I and Politecnico di Torino, April 2012

PhD: Y. Gorsse, Méthode cartésienne pour les fluides compressibles et l'élasticité non-linéaire autour d'obstacles, November 2012

J. Hovnanian, Modélisation, Simulation et contrôle d'écoulement autour d'obstacle déformables, December 2012

PhD: V. Huber, Numerical modelling of complex bifluid flows, September 2012

PhD in progress : F. Cornelis is a medical doctor of the Institut Bergonié. He is a radiologist practicing CT-Scans, MRI but also local mini-invasive treatments (interventional radiology). He spends one day a week to prepare a PhD on the modelling aspects of his work. started 2010

PhD in progress : X. Jin, Etude et conception d'une éolienne, started 1st May 2011, supervisors : Angelo Iollo and Michel Bergmann

PhD in progress : M. Leguebe, Electroporation modelling at the cell scale, started 1st october 2011, supervisors : Thierry Colin and Clair Poignard

PhD in progress, started October 2011: Chloe Mimeau advised by I. Mortazavi and GH Cottet.

PhD in progress, started February 2011: Yoann Eulalie, Advised by I. Mortazavi in a CIFRE partnership Plastic Omnium.

PhD in progress : M. Lattige, (co-director G. Gallice, CEA CESTA). Numerical modeling of ablation. started october 2010

PhD in progress, started October 2011: F. Bernard, V. Pianet

PhD in progress, started October 2012: A. De Bauer, J. Jouganous, G. Lefevre, H. Ung.

PhD in progress : O. Gallinato started October 2013 on the modeling of invadopodia, in joint supervision with T. Colin, C.Poignard from MC2 and T. Suzuki from Osaka University.

PhD in progress: T. Michel started his PhD in september 2013, cosupervised by T. Colin and C.Poignard on the modeling of the growth of cancer cells spheroids.

PhD in progress: M. Jedouaa started her PhD in October 2013 under supervision of CH Bruneau and O. Maitre.

PhD in progress: Perrine Berment advised by O. Saut and T. Colin since Oct. 2013.

MCTAO Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Editorial service

Ludovic Rifford belongs to the editorial board of *Journal of Dynamical and Control Systems* and *Discrete and Continuous Dynamical Systems-A*.

All members of the team are active reviewers in journals of the field.

9.1.2. Seminars

The team organized two one-day seminars <http://nolot.perso.math.cnrs.fr/JourneesControleTransport.html> on optimal control and optimal transport:

- February 13 in Dijon. Speakers: F. Chazal, B. Bonnard, G. Carlier, E. Trélat.
- June 4 in Nice. Speakers: S. Rigot, Q. Mérigot, M. Mirrahimi, A. Farres.

9.1.3. Conference organization

A two days conference was organized September 6 to 7 (co-organisers: Monique Chyba and Bernard Bonnard), on “Control and Observation of Nonlinear Control Systems with Application to Medicine” at the University of Hawaii. It was supported by supported by a NSF grant and by the Engineering Department (P.E. Crouch); it followed J. Marriott’s PhD defense.

Jean-Baptiste Caillaud organized a mini-symposium on Optimization in aeronautics and space mechanics in the SMAI annual congress in Seignosse, France.

9.2. Community service within Inria

J.-B. Pomet is the president of the “Comité de Suivi Doctoral”, and in charge of “formation par la recherche”. This includes organising local visits for students, organising PhD candidates selection, managing PhD students working at Inria Sophia (that are from two different “écoles doctorales” from Université de Nice, not counting these in Montpellier).

9.3. Teaching - Supervision - Juries

9.3.1. Teaching

Jean-Baptiste Caillaud, *Contrôle optimal : introduction au cas déterministe en dimension finie*, 15 hours, 7ème école d’été de Peyresq en traitement du signal et des images (<http://www.gretsi.fr/peyresq13/cours.php>).

Jean-Baptiste Caillaud, *Introduction to optimal control and application to space mechanics*, 15 hours, Gravasco trimester, Institut Henri Poincaré, France (<http://uma.ensta-paristech.fr/conf/gravasco/P1a.html>).

9.3.2. Supervision

PhD: John Marriott, *Geometric Optimal Control with an Application to Imaging in Nuclear Magnetic Resonance*, University of Hawaii, defended september 5, 2013, advisors: Monique Chyba and Bernard Bonnard.

PhD in progress: Alice Erlinger, subject: *Economics and Optimal Transport*, Université de Nice Sophia Antipolis, started october, 2012, advisor: Ludovic Rifford. She unfortunately decided to stop in 2013, within her first year.

PhD in progress: Helen Heninger, subject: *Étude des solutions du transfert orbital avec poussée faible dans le problème des deux ou trois corps*, Université de Nice Sophia Antipolis, started october, 2012, advisors: Bernard Bonnard and Jean-Baptiste Pomet.

PhD in progress: Ayadi Lazrag, subject: *Control methods in dynamical systems*, Université de Nice Sophia Antipolis, started october, 2011, advisor: Ludovic Rifford.

PhD in progress: Lionel Jassionnesse, subject: *Lieu conjugués et de coupure pour des métriques de Liouville et applications*, Université de Bourgogne, started october, 2010, advisor: Bernard Bonnard.

PhD in progress: Jérémy Rouot, subject: *Moyennisation en contrôle et en contrôle optimal, effet des perturbations non périodiques*, Université de Nice Sophia Antipolis, started october, 2013, advisors: Bernard Bonnard and Jean-Baptiste Pomet.

MSc: Jasseur Abidi, *Optimisation d'une commande appliquée à un satellite*, Ensta ParisTech, supervisors: Jean-Baptiste Caillau and Jean-Baptiste Pomet.

9.3.3. Juries

Jean-Baptiste Caillau was in the jury of X. Dupuis (Ecole Polytechnique, PhD) as President and in the jury of T. Bayen (university of Montpellier, HDR) as a referee.

9.4. Popularization

Jean-Baptiste Caillau: "Mathematics for planet Earth 2013": <http://mpt2013.fr/tout-autour-de-la-terre/>, <http://mpt2013.fr/de-la-terre-a-la-lune/>, <http://mpt2013.fr/tout-autour-de-la-terre-2nde-partie/>.

MESCAL Project-Team

9. Dissemination

9.1. Scientific Animation

- Yves Denneulin is the director of Grenoble INP ENSIMAG.
- Corinne Touati is the Grenoble INP correspondent for international relations with Japan.
- Yves Denneulin and Jean-Marc Vincent are co-directors of the LICIA (Franco-Brazilian Laboratory).
- Arnaud Legrand is mandated by the LIG for representing the Networking and Parallel and Distributed System teams of the LIG.
- Panayotis Mertikopoulos is mandated by the LIG to supervise PhD students of the laboratory.

9.1.1. Invited Talks

- Bruno Gaujal was a keynote speaker at ICPP'13 and an invited speaker at the Dagstuhl Seminar on Exascale computing.
- Panayotis Mertikopoulos was an invited speaker to
 - the 30 years congress of the Société de Mathématiques Appliquées et Industrielles
 - the Evolutionary Dynamics and Market Behavior workshop, Hausdorff Research
 - the Institute for Mathematics , Bonn, Germany
 - Erice 2013 (Stochastic Methods in Game Theory), Sicile, Italy
 - ADGO 2013 (Algorithms and Dynamics for Games and Optimization), Playa Blanca, Chile
- Arnaud Legrand has given an invited talk at TU Wien (April), at the JLPC at NCSA (November). He was a keynote speaker at ERADS (Porto Alegre, Brazil) in March 2013 and at SimuTools (Nice, Cannes) in March 2013.

9.1.2. Journal, Conference and Workshop Organization

- Arnaud Legrand has organized the *SimGrid user days* in Lyon (June 2013).
- Arnaud Legrand has organized the *BOINC workshop* in Grenoble (September 2013).
- Corinne Touati and Panayotis Mertikopoulos have organized the *Algo-GT workshop* in Grenoble (July 2013).

9.1.3. Program Committees

- Panayotis Mertikopoulos has been Publication chair of WiOpt'13, TPC member of ValueTools'13. He is a regular reviewer for ISIT'13, ITW'13, Games on Economic Behavior, Journal of Economic Theory, Advances on Applied Probability, IEEE Trans. on Information Theory, IEEE Trans. on Wireless Communications, IEEE Trans, on Signal Processing.
- Bruno Gaujal has been a TPC member of Wodes, IPDPS and SigMetrics.
- Olivier Richard has initiated a reproducible research track in Compas entitled Realis. He is a regular reviewer for Parallel Computing, TSI and CLCAR.
- Jean-Marc Vincent has been in the steering committee of AMSTA and a TPC member of IPDPS'13, SimuTools'13, ValueTools'13 and SimulTech'13.
- Arnaud Legrand has been a TPC member of IPDPS'13, ICPP'13, PPAM and is a regular reviewer for IJHPCA, SIMPAT and TPDS.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Several members of MESCAL are university professors and comply with their recurrent teaching duties. We only list here lectures (i.e., not tutorials or practical sessions) at the master level or above.

Master : Florence Perronnin, Probabilities for computer science, 23h Eq. TD, M1, ENSIMAG

Master : Florence Perronnin, Performance Evaluation, 23h Eq. TD, M1, Polytech

Master : Arnaud Legrand and Jean-Marc Vincent, Performance Evaluation, 32h Eq. TD, M2, UJF

Master : Arnaud Legrand, Parallel Systems, 47h Eq. TD, M2, UJF

Master : Bruno Gaujal, Discrete Events, 18 Eq. TD, M2, MPRI/ Paris Diderot.

Master : Bruno Gaujal, Mean field Approximation, 20 Eq. TD, M2, BCAM (Bilbao)

Doctorat : Bruno Gaujal, Mean field Approximation 30 Eq. TD, Toulouse PhD Program.

Master : Panayotis Mertikopoulos, Game theory for the working economist, 55 Eq. TD, M2, University of Athens.

Master : Olivier Richard, Networking, 33 Eq. TD, M1, Polytech

Master : Jean-Marc Vincent, Probabilities and Simulation, 23h Eq. TD, M1, Polytech

- Olivier Richard is also responsible of the organization of the RICM4 (M1 Polytech) and of multi-disciplinary projects.

9.2.2. Supervision

PhD : Joseph Emeras, *Workload Traces Analysis and Replay in Large Scale Distributed Systems*, Université de Grenoble, 01 octobre 2013 [5].

PhD : Robin Lamarche Perrin, *Building Meaningful Macroscopic Descriptions of Large-scale Complex Systems*, 14 octobre 2013 [6].

9.2.3. Juries

- Bruno Gaujal has been president of the junior researcher selection committee in Inria Bordeaux.
- Bruno Gaujal has been member of the professor selection committee in University of Avignon.
- Bruno Gaujal has been member of the PhD thesis committee of Alexandre Salch (G-SCOP laboratory, Grenoble).
- Arnaud Legrand has been member of the PhD thesis committee of Sorina Camarasu Pop (Creatis laboratory, Lyon).
- Arnaud Legrand has been a reviewer of the PhD thesis of Javier Celaya Alastrué (University of Zaragoza, Spain).

9.3. Popularization

9.3.1. Popular Science

- MESCAL actively promotes science to young and non-scientific audience. This year Corinne Touati participated the *Fête de la science* and animated a workshop on game theory. theory [48].
- Jean-Marc Vincent contributed to the national initiative for introducing computer science to high school professors in mathematics. He was responsible of the high school professors training, of the corresponding university diploma and of the online training provided by the rectorat. Jean-Marc also participated to the steering committee of CERVIN (<http://flet.fr/cervin/>) for Inria.
- Olivier Richard is involved in training *Classe Préparatoires* professors to Python. He is also responsible of the Polytech fablab, which he presented at the Toulouse Hacker Space Factory.

MEXICO Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. *Benedikt Bollig*

was on the program committee of *YR-CONCUR 2013*. He also was a member of the commission scientifique Inria Saclay.

8.1.2. *Thomas Chatain*

was on the program committee *ACSD 2013* and of *FORMATS 2013*. He also participated in the organization of the latter.

8.1.3. *Paul Gastin*

is co-head (with Madhavan Mukund) of the new International Associated Laboratory (LIA) INFORMEL (INdo-French FORMal Methods Lab). This LIA was created in January 2012 by an agreement between CNRS, ENS Cachan, University Bordeaux 1 on the french side and the Chennai Mathematical Institute, the Institute of Mathematical Sciences of Chennai, and the Indian Institute of Science of Bangalore on the Indian side.

He is the head of the computer science department of ENS Cachan.

Paul Gastin is an associate editor of the Journal of Automata, Languages and Combinatorics.

He is on the Advisory Board of the EATCS-Springer book series

- Monographs in Theoretical Computer Science,
- Texts in Theoretical Computer Science.

8.1.4. *Stefan Haar*

is an associated editor for the journal *Discrete Event Dynamic Systems: Theory and Application*, and was on the program committee of *PNSE 2013*. At the Inria Center Saclay, Stefan was the correspondent for international relations until September 2013 (his successor is Benjamin Smith), and has since become the correspondent for European Partnerships; he continues as a member of the GTRI (working group on international relations) of Inria's *COST*. In 2013 he also joined the DIGITEO program committee.

8.1.5. *Serge Haddad*

has been a member of the steering committee of the international conference Applications and Theory of Petri Nets (ATPN) since 2001. In 2013, he was a member of the following program committees of international conferences:

- *7th International Workshop on Verification and Evaluation of Computer and Communication systems*, Florence, Italy;
- *21st International Conference on Real Time Networks and Systems (RTNS 2013)*, Sophia-Antipolis, France;
- PC Co-Chaire of *SMC*, associated workshop at *Run-Time Verification 2013*, Rennes, France;
- *33rd International Conference on Application and Theory of Petri Nets (ATPN)*, Milan, Italy;
- *Petri Nets in Software Engineering (PNSE)*, associated Workshop at ATPN 2013.

Serge Haddad served on the program committees of the following national conferences:

- *9ème Colloque Francophone sur la Modélisation des Systèmes Réactifs (MSR) 2013*, Rennes
- *Ecole d'été Temps Réel (ETR) 2013*, Toulouse.

8.1.6. Claudine Picaronny

is a member of the Program committee of the *SIMUL* conference. She is a *Maître de Conférence* at ENS Cachan, and in charge of the Master M2 FESUP and the *préparation à l'agrégation en mathématiques* at ENSC. Moreover, Claudine Picaronny is a member of the jury for the second ENSC entrance examination in mathematics, coordinator of the entrance examinations MP and PC of the groupe E3A, and of the jury of the national olympics in mathematics and computer science.

8.1.7. Stefan Schwoon

was on the program committee of *SPIN 2013*.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Here we present the teaching activities of *researchers*; note that in addition to the classes here, five team members (Th. Chatain, P. Gastin, S. Haddad, C. Picaronny and S. Schwoon) are full-time professors (*professeurs* ou *maître de conférences*) of ENS Cachan and fulfill their teaching obligations there.

Master : Stefan Haar, *Analyse structurelle de Réseaux de Petri*, 15 TDEQ, M2 SAR, UPMC
 Agrégation: Stefan Haar, Algorithmique, ca. 20 TDEQ, *Préparation Agrégation option informatique*, ENS Cachan

Thomas Chatain and Stefan Schwoon gave lectures on unfoldings of Petri nets at the Petri Nets 2013 conference.

8.2.2. Supervision

8.2.2.1. HdR

Thomas Chatain, *Concurrency in Real-Time Distributed Systems, from Unfoldings to Implementability*, ENS Cachan, defended Dec. 13, 2013; *garant*: Stefan Haar

HdR : Stefan Schwoon, *Efficient verification of sequential and concurrent systems*, ENS Cachan, defended Dec. 6, 2013; *garant*: Stefan Haar

8.2.2.2. PhD

Benjamin Monmege, *Specification and Verification of Quantitative Properties: Expressions, Logics, and Automata*, ENS Cachan, defended Oct 24, 2013; Supervisors: Paul Gastin and Benedikt Bollig.

César Rodríguez, *Verification Based on Unfoldings of Petri Nets with Read Arcs*, ENS Cachan, defended Dec 12, 2013; Supervisor: Stefan Schwoon

8.2.2.3. PhD in progress

Benoît Barbot, *Rare event handling in statistical model checking*, since September 2011; Supervisors: Serge Haddad and Claudine Picaronny.

Aiswarya Cyriac, *Verification of Communicating Recursive Programs via Split-width*, since September 2010; Supervisors: Paul Gastin and Benedikt Bollig.

Hernán Ponce de León, Testing concurrent systems using event structures, ENS Cachan, since September 2011; Supervisors: Stefan Haar and Delphine Longuet

Simon Theissing, Supervision of Multi-Modal Transport Systems, since September 2013, ENS Cachan/Inria/IRT SystemX project MIC; Supervisor: Stefan Haar

Salim Perchy, *D-Spaces*, Ecole Polytechnique, since November 2013; main supervisor : Supervisors: Frank D. Valencia (COMETE Team) and Stefan Haar

8.2.3. Juries

8.2.3.1. Paul Gastin

was a reviewer

- of the PhD thesis of Amélie Stainer, Rennes , defended on Nov. 25;
- and of the HdR thesis of Loic Helouet, Rennes, defended on May 17.

As supervisor of Benjamin Monmege, he also served as *rapporteur* on the jury of his defense, on Oct 24.

8.2.3.2. Stefan Haar

was a reviewer of the PhD theses of

- Elisabeta Mangioni, Univ. Milan-Bicocca, Italy,
- Florent Avellaneda, Univ. Aix-Marseille, defended Dec 10, and
- Sébastien Chédor, Université Rennes 1, defended on January 7, 2014.

Except for the defence of E. Mangioni, he also participated in the respective juries. Moreover, he was jury president for the defence of Aurore Junier, ENS Cachan, defended on December 16 in Rennes, and *examineur* in the PhD jury of César Rodríguez, defended December 12. He also was a member of the HdR juries (as *garant*) of Stefan Schwoon (December 6) and Thomas Chatain (December 13), both at ENS Cachan.

8.2.3.3. Serge Haddad

was a reviewer for the PhD thesis of Henri Debrat in Nancy and member of the Jury on December 6, 2013. He also served on the jury for the HdR of Kais Klai at Université Paris 13/ Nord on December 9, 2013.

8.2.3.4. Stefan Schwoon

was *examineur* for the PhD thesis of Yan Zhang at Université Paris 6. [18], [22], [23], [17], [19], [21]

8.3. Popularization

Benedikt Bollig gave an invited talk at the German Workshop “Automaten und Logik”, held on September 25, 2013, in Ilmenau.

Paul Gastin has given a talk on “*Automates: Applications et Algorithmique*” during the *Rencontres Algorithmiques et Programmation*, addressing secondary teachers of the *classes préparatoires* level, at CIRM Marseille, 6 to 10 May. He also gave an invited talk on *Evaluation of Weighted Specifications over Nested Words* for the opening of the research training group *Quantitative Logics and Automata (QuantLa)*, Leipzig, on April 30.

MICMAC Project-Team

8. Dissemination

8.1. Animation of the scientific community

S. Boyaval has co-organized:

- at SMAI 2013, Seignosse, 2 minisymposiums: "écoulements complexes en rivières" with E. Audusse and "Interactions Fluide-Structure" with M. Fernandez and L. Monasse.

E. Cancès

- is a member of the editorial boards of Mathematical Modelling and Numerical Analysis (2006-), of SIAM Journal of Scientific Computing (2008-), of Communications in Mathematical Sciences (2011-),
- is a member of the executive committee of the CEA-EDF-Inria schools in applied mathematics and computer science,
- is a member of the scientific committee of the GDR co-DFT.

He has organized or co-organized:

- the SIAM MS Minisymposium on "Electronic structure calculation", Philadelphia, USA, June 2013,
- the IHP mini-workshop on "The mathematics of interacting quantum systems in a random environment", Paris, June 2013,

C. Le Bris is editor-in-chief of Applied Mathematics Research Express (2003-). He is a member of the editorial boards of Annales mathématiques du Québec (2013-), Archive for Rational Mechanics and Analysis (2004-), COCV (Control, Optimization and Calculus of Variations) (2003-), Mathematics in Action (2008-), Networks and Heterogeneous Media (2005-), Nonlinearity (2005-), Journal de Mathématiques Pures et Appliquées (2009-).

He is a member of the editorial boards of the monograph series Mathématiques & Applications, Series, Springer (2008-), and Modeling, Simulations and Applications, Series, Springer (2009-).

C. Le Bris is a member of

- the Cabinet of the High Commissioner for Atomic Energy,
- the scientific board of ENPC, 2008- (nominated as representative of the research scholars),
- the "Comité d'experts" for the "Fondation de Recherche pour l'Aéronautique et l'Espace",
- the "Comité d'animation du domaine thématique Mathématiques appliquées, calcul et simulation" at Inria,
- the "International Scientific Advisory Committee" of the Centre de Recherche Mathématique, Université de Montréal,
- the "Advisory Board" of the DFG Cluster of Excellence Engineering of Advanced Materials, Erlangen,
- the "International Scientific Advisory Board" of the DFG research center Matheon, Berlin,
- the "Conseil de perfectionnement du Master de Mathématiques" of the University Pierre et Marie Curie.

C. Le Bris has held a position of Visiting Professor at the University of Chicago, February-October-November 2013.

He has been a member of

- the Organizing Committee of the SIAM Materials Science meeting, 2013.
- the Scientific Committee of CANUM 2014.

He has co-organized

- with G. Bal, B. Engquist, H. Owhadi, the Oberwolfach workshop *Interplay of theory and numerics for deterministic and stochastic Homogenization*, Oberwolfach, 17-23 March 2013,
- with Ch. Lubich, the workshop *Mathematical and numerical challenges in quantum chemistry*, Institut Henri Poincaré, Paris, June 2013,
- with P.-M. Mariano, the one-week school *Multi-scale and multi-field representations of condensed matter behavior* at the Centro De Giorgi, Pisa, Italy, 25-29 November 2013,
- with S. Adams, J. Ball, Ch. Ortner, the workshop *Computational coarse graining of many-body systems*, University of Warwick, 9-13 December 2013.

F. Legoll

- is a member of the editorial board of SIAM MMS (2012-) and of ESAIM Proc (2012-),
- has co-organized with Y. Maday a mini-symposium on "Recent advances on parareal algorithms" at the SciCADE 2013 conference, Valladolid, September 16-20, 2013,
- has co-organized with R. Cottreau, L. Graham-Brady and M. Ostojca-Starzewski a mini-symposium on "Multi-scale methods for heterogeneous materials" at the 12th U.S. National Congress on Computational Mechanics (12th USNCCM), Raleigh, July 22-25, 2013,
- has co-organized with B. Kraczek, R. Jones and K. Mandadapu a mini-symposium on "The atomistic basis of non-equilibrium thermal processes in materials" at the 12th U.S. National Congress on Computational Mechanics (12th USNCCM), Raleigh, July 22-25, 2013.

T. Lelièvre

- is editor-in-chief of ESAIM: Proceedings (with D. Chafai, P. Lafitte and C. Mouhot).
- was an Ordway visiting professor at the University of Minnesota for the academic year 2012-2013 (one month-stay in April 2013).
- has co-organized the CEMRACS 2013 summer school: "Modelling and simulation of complex systems: stochastic and deterministic approaches" (with N. Champagnat and A. Nouy).
- has co-organized the workshop NASPDE (Numerical Analysis of Stochastic PDEs), 10 and 11 September 2013 (with E. Faou and J. Erhel).
- co-organizes the Journées EDP-Probab at Institut Henri Poincaré (with F. Malrieu).
- is the head of the GDR MoMaS, a French research group on the mathematical modeling and the numerical simulations for nuclear waste management problems (Main scientific themes: multiscale models for flows in porous media, molecular simulation of clays, multiphase flows).
- is in charge of the Theme 4 (Stochastic modeling, quantification and uncertainty propagation for multiscale mechanical models of materials) of the Labex MMCD.

8.2. Teaching - Supervision

The members of the team have taught the following courses:

- Licence: Calcul Scientifique, 12h, L3, Ecole des Ponts ParisTech (S. Boyaval).
- Licence: probabilités deuxième semestre, 12h, Ecole Centrale de Paris, (S. Boyaval).
- Licence: Analyse, 36h, L3, Ecole des Ponts, France (E. Cancès, F. Legoll, G. Stoltz, M. Rousset, W. Minvielle, V. Ehrlacher)
- Licence : Fonctions à plusieurs variables et équations différentielles, 60h, L2, ESIEE, France (D. Gontier)
- Licence: Projets de physique, 20h, L3, Ecole des Ponts, France (I. Dabo, G. Stoltz)
- Master: Processus Stochastiques, 18h. M1, ESIEA (C.-E. Bréhier).
- Master: Analyse spectrale, 39h, M1, Ecole des Ponts, France (G. Stoltz, V. Ehrlacher)

- Master: Méthodes déterministes en mathématiques financières, 42h, M2, Ecole des Ponts ParisTech (T. Lelièvre).
- Master: Modéliser Programmer Simuler, 28 h, M1, Cours Ecole des Ponts ParisTech (T. Lelièvre).
- Master: Méthodes numériques probabilistes, 36 h, M2 Mathématiques et Applications, Université Pierre et Marie Curie (T. Lelièvre).
- Master: Mathématiques des modèles multiéchelles, 39h, M1, Ecole des Ponts ParisTech, France (F. Legoll)
- Master: Problèmes multi-échelles, 24h, M2, Université Paris 6, France (F. Legoll)
- Master: Introduction au calcul Scientifique, 12h, M1, Ecole des Mines ParisTech, France (D. Benoit, W. Minvielle, G. Stoltz, F. Madiot)
- Master: Analyse Numérique et Optimisation, 56h, M1, Ecole Polytechnique, France (E. Cancès)
- Master: Méthodes variationnelles en mécanique quantique, 12h, M2, University Paris 6, France (E. Cancès)
- Master: Analyse spectrale, 39h, M1, Ecole des Ponts, France (V. Ehrlacher, G. Stoltz)
- Master: Spectral theory of Schrodinger operators, 30h, M2, Université de Marne-la-Vallée, France (G. Stoltz)
- Master: Outils Probabilistes pour la Finance, 24h, M1, Cours Ecole des Ponts ParisTech (M. Rousset).

The following PhD were defended by students members of the research group at the Ecole des Ponts:

- I. Acevedo Méthodes et modèles numériques appliqués aux risques du marché et à l'évaluation financière, Université Paris-Est, Université Paris Est, 10 dec. 2013, supervised by A. Alfonsi (Ecole des Ponts) et T. Lelièvre.
- F. Casenave, Méthodes de réduction de modèles appliquées à des problèmes d'aéroacoustique résolus par équations intégrales, Université Paris-Est, Université Paris Est, 10 dec. 2013, supervised by A. Ern (Ecole des Ponts) et T. Lelièvre.
- S. Lahbabi, Etude mathématique de modèles quantiques et classiques pour les matériaux aléatoires à l'échelle atomique, Université de Cergy Pontoise, supervised by E. Cancès and M. Lewin, July 2013.

The following PhDs are in progress:

- D. Benoit, Méthodes numériques pour la simulation des fluides non-Newtoniens, Université Paris-Est, Université Paris Est, started October 1st, 2010, supervised by C. Le Bris and T. Lelièvre, to be defended on January 22nd 2014.
- F. Madiot, Multiscale finite element methods for advection diffusion problems, Université Paris-Est, Ecole des Ponts ParisTech, started october 1st, 2013, supervised by C. Le Bris and F. Legoll
- W. Minvielle, Méthodes numériques pour les matériaux, Université Paris-Est, Université Paris Est, started october 1st, 2012, supervised by C. Le Bris and F. Legoll
- D. Gontier, Université Paris-Est, started September 1st, 2012, supervised by E. Cancès
- A.-A. Homman, Multiscale methods for the simulation of shock and detonation waves, Université Paris-Est, Ecole des Ponts ParisTech and CEA/DAM, started April 1st, 2013, supervised by G. Stoltz and J.-B. Maillet

8.3. Conference participation

Members of the project-team have delivered lectures in the following seminars, workshops and international conferences:

- S. Boyaval, NASCA 2013 (Calais)
- S. Boyaval, CEMRACS 2013
- S. Boyaval, seminar at the Universities of Montpellier and Toulouse
- C.-E. Bréhier, Conference NASPDE 2013, Rennes, September 2013.
- E. Cancès, workshop on Mathematical and numerical methods for electronic structure calculation, Berlin, January 2013.
- E. Cancès, workshop on Multiscale modeling, analysis, and computation of nano-optics, Michigan State University, Lansing, USA, March 2013.
- E. Cancès, IMA workshop on Mathematics and Chemistry, Chicago, April 2013.
- E. Cancès, Weekly seminar, Mathematics department, University of Chicago, USA, May 2013.
- E. Cancès, SIAM MS 2013, Philadelphia, USA, June 2013.
- E. Cancès, IHP mini-workshop on Mathematical and numerical challenges in quantum chemistry, Paris, June 2013.
- E. Cancès, plenary lecture, Enumath 2013, Lausanne, August 2013.
- E. Cancès, Enumath minisymposium on Multiscale methods for atomistic and continuum problems, Lausanne, August 2013.
- E. Cancès, IPAM workshop on Semiclassical origins of Density Functional Approximations, Los Angeles, September 2013.
- E. Cancès, plenary lecture, Q-Math 12, Berlin, September 2013.
- E. Cancès, IPAM workshop on Fuels from sunlight, Los Angeles, October 2013.
- E. Cancès, Conference in honor of Wolfgang Hackbusch's 65th birthday, Leipzig, October 2013.
- V. Ehrlacher, SIAM Conference on Computational Science and Engineering (CSE13), Boston, USA, February 2013.
- V. Ehrlacher, Seminar Zentrum Mathematik, TU München, Munich, Germany, February 2013.
- V. Ehrlacher, Applied mathematics seminar of Warwick University, Warwick, England, February 2013.
- V. Ehrlacher, Oberwolfach workshop on Interplay of Theory and Numerics for Deterministic and Stochastic Homogenization, Oberwolfach, Germany, February 2013.
- V. Ehrlacher, Congrès SMAI 2013, Seignosse, France, May 2013.
- V. Ehrlacher, CIRM workshop on Model Reduction and Approximation for Complex Systems, Luminy, France, June 2013.
- V. Ehrlacher, Seminar of Excellence cluster of Engineering of Advanced Materials, Erlangen, Germany, June 2013.
- V. Ehrlacher, Mathematik Seminar der Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany, June 2013.
- V. Ehrlacher, CEMRACS 2013, CIRM, Luminy, France, August 2013.
- V. Ehrlacher, ENUMATH, Lausanne, Switzerland, August 2013.
- V. Ehrlacher, QMATH 12, workshop on Mathematical results in quantum mechanics, Berlin, Germany, September 2013.
- V. Ehrlacher, Séminaire du laboratoire GeM, Ecole centrale Nantes, France, September 2013.

- V. Ehrlacher, Séminaire du laboratoire Jacques-Louis Lions, Université Paris 6, France, November 2013.
- V. Ehrlacher, MATHICSE seminar, EPFL, Lausanne, Switzerland, December 2013.
- D. Gontier, Annual meeting of the GDR co-DFT, Guidel, France, May 2013.
- D. Gontier, IHP Seminar, Paris, July 2013.
- S. Lahbabi, weekly seminar of the mathematics department University of Pau, May 2013.
- S. Lahbabi, IHP workshop on Mathematical properties of large quantum systems, Paris, June 2013.
- C. Le Bris, plenary lecture, SMAI 2013, Seignosse, 27-31 May 2013
- C. Le Bris, Workshop "Numerical Methods for Uncertainty Quantification", May 13-17, 2013, Hausdorff Center for Mathematics, Bonn.
- C. Le Bris, SIAM Materials Modeling minisymposium, Philadelphia, June 9-12, 2013.
- C. Le Bris, 2nd Pacific Rim Mathematical Association Congress, Shanghai, June 24-28, 2013.
- C. Le Bris, Scientific and statistical computing seminar University of Chicago
- C. Le Bris, Argonne National Laboratory,
- C. Le Bris, Colloquium of the Max Planck Institute Leipzig,
- C. Le Bris, Colloquium Ecole Polytechnique Fédérale de Lausanne,
- C. Le Bris, Computations in Science Seminar of the university of Chicago,
- C. Le Bris, PDE Seminar of the university of Chicago,
- C. Le Bris, Inaugural lecture in Mathematics for the "Semaine de la Science", Ecole Polytechnique
- F. Legoll, weekly seminar of the mathematics department, Université de Besançon, February 2013
- F. Legoll, weekly seminar of the Jacques-Louis Lions laboratory, March 2013
- F. Legoll, workshop on Interplay of Theory and Numerics for Deterministic and Stochastic Homogenization, Oberwolfach, March 2013
- F. Legoll, workshop on multiscale modelling and simulation in material science, Shanghai, April 2013
- F. Legoll, 11ieme Colloque National en Calcul des Structures, Giens, May 2013
- F. Legoll, workshop on slow-fast dynamics, Barcelona, June 2013
- F. Legoll, SIAM conference on mathematical aspects of material sciences, Philadelphia, June 2013
- F. Legoll, 12th US National Congress on Computational Mechanics, Raleigh, July 2013
- F. Legoll, SES 50th Annual Technical Meeting, Providence, July 2013
- F. Legoll, CEMRACS summer school, Marseille, August 2013
- F. Legoll, SciCADE conference, Valladolid, September 2013
- F. Legoll, MoMaS Multiphase Seminar Days, Orsay, October 2013
- F. Legoll, workshop "Stochastic Modeling of Multiscale Systems", Eindhoven, december 2013
- F. Legoll, Symposium on Statistical Mechanics, Warwick, december 2013
- T. Lelièvre, Kolloquium, Institut für Mathematik, Universität Mainz, January 2013.
- T. Lelièvre, Séminaire ANR BIGMC, Paris, February 2013.
- T. Lelièvre, Séminaire Institut de Mathématiques de Toulouse, March 2013.
- T. Lelièvre, Workshop "Genetic models and Quasi-stationarity", CIRM, Marseille, March 2013.
- T. Lelièvre, Workshop "Analysis and Stochastics in Complex Physical Systems", Leipzig, March 2013.
- T. Lelièvre, Math colloquium, University of Minnesota, April 2013.
- T. Lelièvre, PDE seminar, University of Minnesota, April 2013.

- T. Lelièvre, Workshop Randomness and PDE, Labex Lebesgue semester, Nantes, April 2013.
- T. Lelièvre, IMA Chem year Summit, Chicago, May 2013.
- T. Lelièvre, SMAI 2013, May 2013.
- T. Lelièvre, Plenary speaker at the SIAM conference on Mathematical Aspects of Materials Science, Philadelphia, June 2013.
- T. Lelièvre, Workshop Scicade 2013, Valladolid, September 2013.
- T. Lelièvre, Workshop on Reduced Basis, POD and PGD model, Blois, November 2013.
- T. Lelièvre, Séminaire de la Chaire FDD, IHP, Paris, December 2013.
- T. Lelièvre, Workshop "Computational coarse-graining of many-body systems", Warwick, December 2013.
- T. Lelièvre, Workshop on Material Theories, Oberwolfach, December 2013.
- F. Nier, Collège de France, April 2013,
- F. Nier, workshop of the ANR Lodiquas à Vienne (Autriche), July 2013: Artificial gauge and adiabatic Ansatz for Bose-Einstein condensates.
- F. Nier, Berkeley, September 2013,
- F. Nier, Institute for Pure and Applied Mathematics, Workshop "Semiclassical Origins of Density Functional Theory", Los Angeles, September 2013,
- F. Nier, CIRM, Microlocal analysis and spectral theory, September 2013,
- F. Nier, Orsay, Working group "Opérateurs de Dirac", December 2013,
- M. Rousset, SIAM conference on mathematical aspects of material sciences, Philadelphia, June 2013
- M. Rousset, CEMRACS summer school, Marseille, August 2013.
- M. Rousset, Séminaire Institut de Mathématiques de Toulouse (Probabilités), December 2013
- G. Stoltz, Oberwolfach meeting "Large Scale Stochastic Dynamics" (Germany), October 2013
- G. Stoltz, QMaths12, Berlin (Germany), September 2013
- G. Stoltz, GDRE ConEDP Meeting, Grenoble (France), April 2013
- G. Stoltz, AMMP seminar, Imperial College London (United-Kingdom), October 2013
- G. Stoltz, daily seminar at CEMRACS 2013, Marseille (France), August 2013
- G. Stoltz, Mathematical Physics Seminar, Institut Poincaré, Paris (France), May 2013

In addition to the above, some members of the team have been invited for stays in institutions abroad:

- E. Cancès, University of Chicago, April-May 2013,
- E. Cancès, IPAM, UCLA, October 2013,
- T. Lelièvre, one month at the University of Minnesota as an Ordway professor.

Members of the project-team have delivered the following series of lectures:

- E. Cancès (15h) on numerical methods for electronic structure calculation, Summer school on the scientific trends at the interfaces mathematics - chemistry - high performance computing, Roscoff, France, July-August 2013,
- E. Cancès (6h) on the mathematics of quantum chemistry, Oberwolfach seminar, Germany, November 2013,
- C. Le Bris, Lectures on 'Numerical homogenization', The University of Chicago, 12 hours, February 2013,
- C. Le Bris, Lectures on 'Renormalized solutions to parabolic equations', The University of Chicago, 20 hours, Fall 2013,

- C. Le Bris, Lectures on 'Stochastic homogenization and related problems', Series of 4 one-hour lectures, Multi-scale and Multi-field Representations of Condensed Matter Behavior, Scuola Normale Pisa, November 2013,
- T. Lelièvre, Lectures on the adaptive biasing force method at the University of Minnesota,
- G. Stoltz, Lectures (4h) on "Molecular simulation: A mathematical introduction", School "Multi-scale and Multi-field Representations of Condensed Matter Behavior", Pisa (Italy), November 2013
- G. Stoltz, Lectures (4h) on "Molecular simulation: A mathematical introduction", School "Longtime limits of stochastic models" at CIRM, Marseille (France), February 2013
- G. Stoltz (9h) on numerical methods for statistical physics, Summer school on the scientific trends at the interfaces mathematics - chemistry - high performance computing, Roscoff, France, July-August 2013.

Members of the project-team have participated (without giving talks nor presenting posters) in the following seminars, workshops and international conferences:

- D. Gontier, Q-Math 12, Berlin, September 2013.
- D. Gontier, Oberwolfach seminar, November 2013.
- W. Minvielle, "Ecole Thématique du GdR CHANT", January 2013
- W. Minvielle, workshop on Interplay of Theory and Numerics for Deterministic and Stochastic Homogenization, Oberwolfach, March 2013
- W. Minvielle, Summer School in Analysis and Applied Mathematics, Roma, June 2013
- W. Minvielle, CEMRACS summer school, Marseille, August 2013
- W. Minvielle, workshop on "Quasistatic and Dynamic Evolution Problems in Plasticity and Fracture", Trieste, October 2013

MIMETIC Project-Team

9. Dissemination

9.1. Scientific Animation

- F. Multon: **Reviewer** for Journal of Biomechanics, IEEE Transaction of Affective Computing, PlosOne, Computer Methods in Biomedical Engineering journal, Computer & Graphics journal, IEEE TVCG journal, Computer Animation and Virtual Worlds journal **Program Committee member** of ACM SIGGRAPH Asia (Sketches and posters), Motion in Games Conference MIG2013, CASA 2013, **Scientific expert** for "Pole Productique de Bretagne", and Auteo association, in ergonomics, **Session chairman** of in Motion in Games 2013, **Associate Editor** of the Presence journal MIT Press since 2012, **Steering committee member** of Motion in Games Conference, **reviewer** for national ANR projects in computer sciences and health domains, for the Belgium FNRS foundation, and for the HongKong Baptist University for internal promotions.
- M. Christie: **Reviewer** for IEEE Transactions on Visualization and Computer Graphics, ACM Transactions on Graphics, The Visual Computer, Computer Graphics Forum, Computers and Graphics, Journal on Computing and Cultural Heritage, Foundations on Digital Games, Pervasive Computing, Eurographics, Computer And Graphics, Grapp, Motion in Games, Computer Animation and Social Agents **Senior Program Committee member** of Foundations on Digital Games, **Program Committee member** of Grapp, Smartgraphics, **Steering Committee** of Smartgraphics, **External scientific expert** for Natural Sciences and Engineering Research Council of Canada (Discovery Grants)
- R. Kulpa: **Reviewer** for Eurographics, Computer Graphics Forum, GRAPP, Journal of Graphics Tools, Journal of Sport Science, Pacific Graphics, PlosOne, Siggraph Asia, Transaction on Visualization and Computer Graphics, IEEE VR; **Associate Editor** of the Presence journal MIT Press since 2012; **Leader** of a European Intensive Program called "Routine & Cutting-edge Technologies in Physical Activity: Implication for Health & Sport Performance" with the Queen's University of Belfast and the Universitat de Valencia.
- F. Lamarche: **Reviewer** for Computer Animation and Virtual Worlds
- C. Pontonnier: **Reviewer** for IEEE Transactions on Visualization and Computer Graphics, International Journal of Virtual Reality, **Scientific expert** for ANR.
- J. Pettré: **Reviewer** for ACM Transactions on Graphics, Siggraph, Siggraph Asia, Eurographics, Pacific Graphics, Computer Animation and Social Agents, ACM/Eurographics Symposium on Computer Animation, IEEE Transactions on Visualization and Computer Graphics, Computer Animation and Virtual Worlds, ICRA, VR, Journal of Computational Science, Computer Graphics Forum, Autonomous Robots, Motion in Game Conference, **Program Committee member** of Pacific Graphics, Symposium on Computer Animation, International Conference on Computer Graphics Theory and Applications **Scientific expert** for ANR.
- A. Créteil: **Reviewer** for Medical & Biological Engineering & Computing, Journal of Electromyography and Kinesiology, Journal of Musculoskeletal & Neuronal Interactions, Computer Methods in Biomechanics & Biomedical Engineering, **Editorial Board** of Journal of Electromyography and Kinesiology, **Scientific expert** for ANR TecSan program, PCCA (Romanian equivalent of French ANR).
- G. Dumont: **Head** of Media and Interaction department of IRISA (UMR 6074), **Member** of the Selection Committee (CSV) of the Competitiveness Cluster "Media and Networks" (<http://www.images-et-reseaux.com/>), **Member** of Executive Board of international Journal IJIDeM. **Reviewer** for ASME-IMECE2013, ASME-DETC2013, IEEE Transactions on Visualization and Computer Graphics.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Georges Dumont
 - First year of Mechatronics : Design project, 24h, École Normale Supérieure de Rennes, France
 - Master2, Mechatronics : Mechanical simulation in Virtual reality, 36h, level M2, Rennes 1 University and École Normale Supérieure de Rennes, France
 - Master2, formation des enseignants du supérieur : Mechanics of deformable systems, 40h, level M2, École Normale Supérieure de Rennes, France
 - Master2, formation des enseignants du supérieur : oral preparation to agregation competitive exam, 20h, level M2, École Normale Supérieure de Rennes, France
 - Master2, formation des enseignants du supérieur : Vibrations in Mechanics, 10h, level M2, École Normale Supérieure de Rennes, France
 - Master2, formation des enseignants du supérieur : Multibody Dynamics, 9h, level M2, École Normale Supérieure de Rennes, France
 - Master2, formation des enseignants du supérieur : Finite Element method, 12h, level M2, École Normale Supérieure de Rennes, France
 - Master2, Mechatronics : Responsible of the second year of the master, Rennes 1 University and École Normale Supérieure de Rennes, France
- Charles Pontonnier
 - ESM2 majeure mécanique (Master 1 level) : Numerical techniques, 40h, École Spéciale Militaire de Saint-Cyr Coëtquidan, France
 - ESM2 majeure mécanique (Master 1 level) : Numerical simulation of mechanical systems, 28h, École Spéciale Militaire de Saint-Cyr Coëtquidan, France
 - ESM2 majeure mécanique (Master 1 level) : Vibrations in Mechanics, 24h, École Spéciale Militaire de Saint-Cyr Coëtquidan, France
 - ESM2 majeure électronique (Master 1 level) : Modelisation and control of manipulators and mobile robots, 40h, École Spéciale Militaire de Saint-Cyr Coëtquidan, France
 - EMIA 1 majeure électronique (Bachelor level) : numerical control, 40h, École Inter-Armes de Saint-Cyr Coëtquidan, France
 - Master2, formation des enseignants du supérieur : Numerical tools for reasearch, 10h, level M2, École Normale Supérieure de Rennes, France
 - Master2, formation des enseignants du supérieur : Design, simulation and control of mechanical systems, 16h, level M2, École Normale Supérieure de Rennes, France
 - Master2, formation des enseignants du supérieur : Practicals: identification and control of mechanical systems, 24h, level M2, École Normale Supérieure de Rennes, France
- Franck Multon
 - "Image et Mouvement - IMO" (Master 2 Level): leader of the module, Master M2RI Research in Computer Sciences, INSA Rennes, France
 - "Santé et performance au travail : études de cas" (Master 1 Level): leader of the module, Master M2S Sports Sciences, University Rennes2, France
 - "Analyse biomécanique de la performance motrice" (Master 1 Level): leader of the module, Master M2S Sports Sciences, University Rennes2, France
 - "Modélisation et simulation du mouvement" (Master 2 Level): Leader of the module, Master M2S, Sports Sciences, University Rennes2, France

"Ergonomie du poste de travail" (Licence 2-3 levels): Licence STAPS, Ergonomics and sports sciences, University Rennes2, France

"Facteurs psycho sociaux et ergonomie" (Master 2 Level): Mastère Excellence opérationnelle, INSA Rennes, France

- Richard Kulpa

Co-leader of the Master M2S, Sports Sciences and Health, University Rennes2, France

"Outils informatiques d'analyse des données" (Master 2 Level): Leader of the module, Master M2S, Sports Sciences and Health, University Rennes2, France

DIU "Sciences du Mouvement Humain": leader of the module "Nouvelles technologies", University Rennes2, France

"Biomécanique" (Licence 2-3 levels): Licence STAPS, Ergonomics and sports sciences, University Rennes2, France

"Méthodes numériques d'analyse du mouvement" (Licence 2-3 levels): Licence STAPS, Ergonomics and sports sciences, University Rennes2, France

"De la capture de mouvements à l'animation d'humain virtuel" (Engineering school): Ecole Centrale de Nantes, France

"L'animation d'humain virtuel": IUT Bordeaux 1, France

- Armel Crétual

Responsible for Master 1 Level of Master "Mouvement, Sport, Santé" (M2S), University Rennes 2

"Méthodologie", leader of the module, Master M2S, University Rennes2, France

"Biostatistiques", leader of the module, Master M2S, University Rennes2, France

"Analyse cinématique du mouvement", Licence 1, University Rennes 2, France

- Marc Christie

"Multimedia Mobile" (Master 2 Level): leader of the module, Computer Science, University of Rennes 1, France

"Système d'information Tactiques" (Master 2 Level): Computer Science, University of Rennes 1, France

"Programmation Impérative 1" (Licence 1 level): leader of the module, University of Rennes 1, France

9.2.2. Supervision

- Christophe Lino

PhD "Dynamic Spatial Partitions for Virtual Camera Control", University of Rennes1, defended in October 2013

Co-supervised by Marc Christie and Kadi Bouatouch

- Pierre Plantard

PhD "Maitriser les Troubles MusculoSquelettiques sur les postes de travail: apport de la simulation d'humains virtuels", University Rennes2, Cifre contract with Faurecia (2013-2015).

Supervised by Franck Multon

- Steve Tonneau

PhD "Synthèse et planification de mouvements pour des humains virtuels autonomes dans des environnements contraints", INSA Rennes (2011-2014)

Co-supervised by Julien Pettré and Franck Multon

- Philippe Rannou
 - PhD** "Modèle rationnel pour les humains virtuels autonomes", University of Rennes 1 (2010-2014)
 - Co-supervised** by Fabrice Lamarche and Marie Odile Cordier
- Carl-Johan Jorgensen
 - PhD** "Peuplement automatisé d'environnements urbains pour l'étude et la validation d'aménagements.", University of Rennes 1 (2011-2014)
 - Co-supervised** by Fabrice Lamarche and Kadi Bouatouch
- Antoine Marin
 - PhD** "Génération de trajectoires de marche par fonction de tâche", University of Rennes 2,(2010-2014)
 - Supervised** by Armel Cretual
- Camille Pouliquen
 - PhD** "Optimisation de modèles musculo-squelettiques au cours du geste sportif. Application au cyclisme et au handball", (2013-2016)
 - Co-supervised** by Nicolas Bideau and Paul Delamarche
- Ana-Lucia Cruz-Ruiz
 - PhD** "Design and evaluation of a modular and multiscale musculoskeletal model as a support to motion analysis-synthesis in computer animation and robotics", (2013-2016)
 - Co-supervised** by Charles Pontonnier and Georges Dumont
- Jonathan Perrinet
 - PhD** "Effet des émotions sur les interactions physique durant la marche", University Rennes1, funded by FP7 TANGO project (2010-2013).
 - Co-supervised** by Julien Pettré and Stéphane Donikian
- David Wolinski
 - PhD** "Modèles de simulation foules microscopiques réalistes", University Rennes1, funded by MRT (2012-2015).
 - Co-supervised** by Julien Pettré and Stéphane Donikian
- Kevin Jordao
 - PhD**"Peuplement massif de maquettes numériques immenses", University Rennes1, funded by the ANR-CHROME contract (2012-2015).
 - Supervised** by Julien Pettré
- Julien Bruneau
 - PhD**"Foules immersives", University Rennes1, funded by MRT (2013-2016).
 - Supervised** by Julien Pettré

9.2.3. Juries

- Franck Multon
 - reviewer** of Julien Lardy's PhD defense "Analyse et simulation cinématique du mouvement du bras lors de la manipulation d'un objet pour la simulation ergonomique à l'aide d'un mannequin numérique", IFSTTAR Lyon, University Lyon1, February 2013
 - reviewer** of Zohrhe Anvari's PhD defense "Transport des enfants et locomotion : approche intégrative biomécanique et comparative chez l'humain et le primate non humain", Museum National d'Histoire Naturelle, September 2013

president of Thibaut Le Naour's PhD defense "Utilisation des relations spatiales pour l'analyse et l'édition de mouvement", University Bretagne Sud, December 2013

reviewer of Maud Pasquier's Phd defense "Segmentation de la locomotion humaine dans le domaine du sport et de la déficience à partir de capteurs embarqués", Université de Grenoble, September 2013

reviewer of Aurore Huchez's PhD defense "Etude de la gestion et du contrôle de l'inertie lors de la réalisation d'une tâche acrobatique complexe en gymnastique", Université de Valenciennes, January 2013

reviewer of Fabrice Megrot's HDR defense "Sur l'instabilité motrice: De l'équilibre du sujet à la marche du patient", Université Technologique de Compiègne, July 2013

president of Nicolas Courty's HDR defense "Contributions to Analysis/Synthesis Schemes in Computer Animation", Université Bretagne Sud, April 2013

- Armel Cretual

reviewer of Jessica Schiro's PhD defense "Analyse biomécanique multi variables du geste de tourner le volant chez les conducteurs sans déficiences motrices", Université de Valenciennes, March 2013

- Julien Pettré

reviewer of Panayiotis Charalambous's PhD defense "Data driven techniques for crowd simulation and evaluation", University of Cyprus, December 2013

MINT Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Invited Talks

- “Future generation of tactile stimulators”: F. Giraud, Haptic Forum organized by the Femto-ST (november 30th)
- “Past interfaces still have a future”: N. Roussel, LIRMM, Montpellier (April 11th)
- “Perception-action coupling for Human-Computer Interaction”: N. Roussel, Inria Executive Committee (February 6th)

8.1.2. Journal reviewing

- Transactions on Computing and Cultural Heritage (ACM): T. Pietrzak, D. Marchal
- Transactions on Applied Perception (ACM): T. Pietrzak
- Transactions on Haptics (IEEE): T. Pietrzak, B. Semail
- Transactions on Visualization and Computer Graphics (IEEE): F. Chevalier
- Technique et Science Informatique (Lavoisier) special issue on big data visualization: F. Chevalier (program committee)

8.1.3. Conference organization

- **ACM CHI**: G. Casiez, PC member and member of the best paper committee; N. Roussel, video showcase co-chair
- **ACM UIST**: F. Chevalier, PC member
- IEEE 3DUI: G. Casiez, PC member
- **ACM EICS**: N. Roussel, PC member
- ACM SUI: G. Casiez, PC member
- IEEE VIS, : F. Chevalier, fast-forward co-chair
- IEEE BigData Congress: F. Chevalier, PC member
- **IHC** (*Simpósio de Fatores Humanos em Sistemas Computacionais*): N. Roussel, PC member
- **IHM**: N. Roussel, co-president; F. Chevalier, tutorials and workshops co-chair; G. Casiez & T. Pietrzak, PC members
- **fOSSa**: N. Roussel, PC member
- **Journée IHM-IA**: N. Roussel, co-organizer
- **EPE 2013**: B. Semail, general chairman

8.1.4. Conference reviewing

- **ACM CHI**: G. Casiez, F. Chevalier, T. Pietrzak, N. Roussel
- **ACM UIST**: G. Casiez, F. Chevalier
- **ACM EICS**: N. Roussel
- IEEE PacificVis: F. Chevalier
- ACM ITS: G. Casiez
- GI: G. Casiez
- TEI: G. Casiez

- IFIP Interact: T. Pietrzak, N. Roussel
- **IHC** (*Simpósio de Fatores Humanos em Sistemas Computacionais*): N. Roussel
- **IHM**: G. Casiez, F. Chevalier, T. Pietrzak, D. Marchal

8.1.5. Scientific associations

- AFIHM, the French speaking HCI association: N. Roussel and T. Pietrzak, members of the Executive Committee (vice-president and secretary from November 2011 to November 2013)
- EPE, European Power Electronic association: B.Semail is member of the steering committee

8.1.6. Evaluation committees and invited expertise

- Inria's acceptance jury for junior researcher positions: N. Roussel
- Inria Lille's eligibility jury for junior researcher positions: N. Roussel (president)
- ANR SIMI 2 panel (*JCJ, Blanc and Blanc international calls*): N. Roussel
- Expert reviewer for EPSRC (United Kingdom): N. Roussel
- Expert reviewer for Digiteo-DigiCosme: G. Casiez
- Expert reviewer for MITACS (Canada): G. Casiez

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence: T. Pietrzak; Compilation, 36h, L3, Univ. Lille 1

Licence: T. Pietrzak; Algorithms and data structures, 36h, L3, Univ. Lille 1

Licence: T. Pietrzak; Automatas and Logic, 55h, L2, Univ. Lille 1

Licence: N. Roussel; Algorithms and imperative programming, 64h, L1, Univ. Lille 1

Licence: G. Casiez; Algorithms and imperative programming, 64h, IUT A, Univ. Lille 1

Licence: G. Casiez; Databases, 48h, IUT A, Univ. Lille 1

Licence: F. Aubert; Introduction to Programming, 48h, L1, Univ. Lille 1

Licence: F. Aubert; Algorithms and imperative programming, 36h, L3, Univ. Lille 1

Master: G. Casiez, L. Grisoni, P. Plénacoste & T. Pietrzak; Human-Computer Interaction, 48h, M1, Univ. Lille 1

Master: G. Casiez & F. Aubert; Multi-Touch Interaction, 24h, M1, Univ. Lille 1

Master: F. Aubert; Computer Graphics, 48h, M1, Univ. Lille 1

Master: L. Grisoni & F. Aubert; Advanced 3D modeling, 20h, M2, Univ. Lille 1

Master: G. Casiez & L. Grisoni; Artificial Vision, 12h, M2, Univ. Lille 1

Master: G. Casiez; Multitouch interaction, 7h, M2, Telecom Lille 1

Master: G. Casiez, D. Marchal, F. Aubert & T. Pietrzak; Virtual Reality, 36h, M2, Univ. Lille 1

Master: D. Marchal; Introduction to Unity for Virtual Reality, 10h, M2, Univ. Lille 1

Master: D. Marchal; Game Development with Unity, 21h, Formation professionnelle, Univ. Lille 1

Introduction to HCI, haptics and computer graphics, 12h, Ecole Centrale de Lille (G2): N. Roussel

8.2.2. Supervision

PhD in progress: Alix Goguy, "Interacting between physical and digital tools", Univ. Lille 1, started October 2013, co-advised by G. Casiez and T. Pietrzak

PhD in progress: Andéol Evain, "Smart user interfaces based on BCI", Univ. Rennes 1, started September 2013, co-advised by A. Lecuyer (in Rennes), G. Casiez and N. Roussel

PhD in progress: Jonathan Aceituno, “Designing the ubiquitous desktop”, Univ. Lille 1, started October 2011, advised by N. Roussel

Yosra Rekik, “Multi-finger gestural interaction”, Univ. Lille 1, started September 2010, co-advised by L. Grisoni and N. Roussel

PhD in progress: Jérémie Gilliot, “Interactions multi-points indirectes sur grands écrans”, Univ. Lille 1, started December 2010, co-advised by N. Roussel and G. Casiez, defense expected in February 2014

PhD in progress: David Selosse, “Annotation interactive de modèles 3D, application à la reconstruction”, Univ. Lille 1, started October 2009, co-advised by L. Grisoni and J. Dequidt

PhD: Gina Craciun, “Nouvelles interfaces pour la simulation des opérations d’assemblage dans des environnements virtuels”, Suceava Univ. (Romania), defended, co-advised by L. Grisoni and S-G. Pentiu

PhD: Yi Yang, “Design and Control of an integrated haptic interface for touch screen applications”, Beihang University, November 2013, co-supervised by B.Semail, Yuru Zheng (in Beihang University) and M. Amberg

PhD in progress: Wael Ben Messaoud, “Développement et contrôle d’un stimulateur tactile pour textures réelles”, University Haute-Alsace, started september 2012, co-supervised by B. Semail and M.-A Bueno (in University Haute-Alsace)

PhD in progress: Sofiane Ghenna, “Modélisation et commande multimodales d’actionneurs piézoélectriques”, Univ. Lille1, started October 2013, co-supervised by F.Giraud and C. Giraud-Audine (Arts et Métiers Paris Tech)

PhD in progress: Eric Vezzoli, “Analysis of the interaction between a fingertip and a surface in case of a global tactile stimulation”, Univ. Lille1, supervised by B. Semail

PhD in progress: Thomas Sednaoui, “Design and optimization of tactile stimulators”, Univ. Lille1, co-supervised by B. Semail and C. Chappaz (ST-Microelectronics)

PhD in progress: Nicolas Bremard, “Interaction hybride via smarhphone”, Univ. Lille1, started December 2012, co-advised by L. Grisoni and F. Aubert

8.2.3. Juries

PhD committees

- Cyprien Pindat (Univ. Paris-Sud, December): G. Casiez, reviewer
- Huiyuan Cao (Université de Technologie de Compiègne, November): N. Roussel, reviewer
- Dong-Bach Vo (Télécom ParisTech, September): N. Roussel, reviewer
- Simon Perrault (Télécom ParisTech, May): G. Casiez, reviewer
- Bérenger Arnaud (Univ. Montpellier 2, April): N. Roussel, reviewer
- Mikaël Martin (Ensam ParisTech, November): F. Giraud, reviewer
- Edouard Leroy (CEA, Polytechnique, December), B. Semail reviewer

8.3. Popularization

- “*Douglas Engelbart, inventeur et visionnaire*”, an article for the [Interstices](#) web site (J. Aceituno & N. Roussel, December 20th)
- [MIRIM](#), an installation within Inria’s demonstration area at EuraTechnologies to illustrate the experimental nature of HCI research (M. Amberg, M.-A. Dupré & N. Roussel, starting from October)
- [Interview](#) with Benoit Georges, from Les Echos, published as a supplement to his article on [novel interfaces for tablets, smartphones and computers](#) (N. Roussel, October 14th)

- *Chercheurs itinérants*: brief introduction to research topics for high-school students (J. Aceituno, L. Grisoni, L. Potier, H. Rateau, Y. Rekik & N. Roussel, October)
- Invited talk for a group of high-school teachers from Nice academy involved in the ISN (*informatique et sciences du numérique*) specialty (N. Roussel, June 4th)
- Co-organization of the press and VIP tour of the interactive exhibition of the ACM CHI conference in Paris (N. Roussel, April 29th)
- “*A propos de l’interaction homme-machine*”, a podcast for the [Interstices](#) web site (N. Roussel, April 26th)
- Invited talk as part of the launch of the 2013 “Questions numériques” publication by FING (N. Roussel, February 21st)

MISTIS Project-Team

8. Dissemination

8.1. Scientific Animation

Editorial activities

- Stéphane Girard is Associate Editor of the *Statistics and Computing* journal since 2012. He has been also an invited editor for a special issue of the *Journal de la Société Française de Statistique* dedicated to extreme-value analysis.

Workshops and summer schools

- Florence Forbes and Stéphane Girard co-organized the summer school “*Méthodes et applications de la régression en astrophysique*”, Annecy, <http://ecastrostat2013.sciencesconf.org/>.
- Florence Forbes and Stéphane Girard co-organized the workshop “*Géométrie Aléatoire et ses Applications*”, Grenoble, <http://gdr-geostoch.math.cnrs.fr/index.html>.
- Stéphane Girard organized the workshop “*Copulas and extremes*”, Grenoble, <http://mistis.inrialpes.fr/workshop-copulas-extremes.html>.
- Marie José Martinez, Jean Baptiste Durand, Florence Forbes in collaboration with Irageael Joly (Grenoble Applied Economics Laboratory) organized the workshop "Statistics, Activities and Transportation" in Grenoble <http://mistis.inrialpes.fr/workshop-statistique-transport.html> as part of the MOTU project (2013-14).

Societies and Networks

- F. Forbes is part of an INRA (French National Institute for Agricultural Research) Network (AIGM, <http://carlit.toulouse.inra.fr/AIGM>) on Algorithmic issues for inference in graphical models.
- F. Forbes and S. Girard were elected as members of the bureau of the “Analyse d’images, quantification, et statistique” group in the Société Française de Statistique (SFdS).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence (IUT): Marie-José Martinez , *Statistics*, 192 ETD, L1 to L3 levels, université Grenoble 2, France.

Master: Jean-Baptiste Durand, *Statistics and probability*, 192 ETD, M1 and M2 levels, Ensimag Grenoble INP, France.

Licence (IUT) : Gildas Mazo, *Mathematics and C language*, 128h, L1 level, université Grenoble 1, France.

Master: Farida Enikeeva, *Statistics*, 96 ETD, M1 level, Ensimag Grenoble INP, France.

Licence: Christine Bakhous, *Mathematics and Statistics*, 64 ETD, L1 level, université Grenoble 1, France.

Licence: Jonathan El Methni, *Mathematics and Statistics*, 64 ETD, L1 level, université Grenoble 1, France.

Master : Stéphane Girard, *Statistique Inférentielle Avancée*, 45 ETD, M1 level, Ensimag Grenoble-INP, France.

Master : Florence Forbes, *Mixture models and EM algorithm*, 12h, M2 level, UFR IM2A, université Grenoble 1, France.

M.-J. Martinez is faculty members at Univ. Pierre Mendès France, Grenoble II.

J.-B. Durand is a faculty member at Ensimag, Grenoble INP.

F. Enikeeva is on a half-time ATER position at Ensimag, Grenoble INP.

C. Bakhous and J. El Methni were both moniteur at University Joseph Fourier.

8.2.2. Supervision

PhD: Christine Bakhous, "*Modèles d'encodage parcimonieux de l'activité cérébrale mesurée par IRM fonctionnelle*", Université Grenoble 1, defended on December 2013. Supervision : Florence Forbes & Michel Dojat (GIN).

PhD : Jonathan El-methni, "*Différentes contributions à l'estimation de quantiles extrêmes*" Université Grenoble 1, defended on october 2013. Supervision : Stéphane Girard & Laurent Gardes (Université de Strasbourg).

PhD : El-hadji Deme, "*Quelques contributions à la théorie univariée des valeurs extrêmes. Estimation des mesures de risque actuariel pour des pertes à queues lourdes*", Université Gaston Berger, Sénégal, defended on june 2013. Supervision : Stéphane Girard & Gane Samb Lo (Université Gaston Berger, Sénégal)

PhD in progress: Aina Frau-Pascual, "*Statistical Models for the coupling of ASL and BOLD Magnetic Resonance modalities to study brain function and disease*", Université Grenoble 1, started in october 2013. Supervision : Florence Forbes & Philippe Ciuciu (Parietal, NeuroSpin).

PhD in progress : Alessandro Chiancone "*Sequential dimension reduction*", Université Grenoble 1, started in october 2013. Supervision : Stéphane Girard & Jocelyn Chanussot (Gypsa-lab, Grenoble INP).

PhD in progress : Seydou Nourou Sylla "*Modélisation statistique pour l'analyse des causes de décès décrites par autopsie verbale en milieu rural africain : cas du Sénégal*", Université Gaston Berger, Sénégal, started in october 2012. Supervision : Stéphane Girard & Abdou Ka Diongue (Université Gaston Berger, Sénégal).

PhD in progress : Gildas Mazo, "*Estimation de quantiles extrêmes spatiaux à partir de données environnementales*", Université Grenoble 1, started in october 2011. Supervision : Florence Forbes & Stéphane Girard.

8.2.3. Juries

Stéphane Girard has been involved in the following PhD committees:

- Yousri Henchiri, "*Support Vector Machine (SVM) pour l'analyse de données fonctionnelles*", Université Montpellier 2.
- François Portier "*Réduction de la dimension en régression*", Université Rennes 1.
- Smriti Joshi, "*Consommation statique dans les circuits numériques en CMOS 32nm: Analyse et méthodologie pour une estimation statistique au niveau porte*", Université Grenoble.

Florence Forbes has been involved in the PhD committees of:

- Xavier Alameda-Pineda, Egocentric audio-visual scene analysis: a machine learning and signal processions approach, University Grenoble 1.
- Antoine Deleforge, Acoustic Space Mapping: a machine learning approach to sound source separation and localization, University Grenoble 1
- Mohamad Belouni, Plans d'expérience optimaux en régression appliquée à la pharmacocinétique, University Grenoble 1.
- Solveig Badillo, Etude de la variabilité hémodynamique chez l'enfant et l'adulte sains en IRMf, University Paris Sud
- Virgile Fritsch, High-dimensional statistical methods for inter-subjects studies in neuroimaging, University Paris Sud

Since September 2009, F. Forbes is head of the committee in charge of examining post-doctoral candidates at Inria Grenoble Rhône-Alpes ("Comité des Emplois Scientifiques").

Florence Forbes is a member of the INRA committee (CSS MBIA) in charge of evaluating INRA researchers once a year in the MBIA dept of INRA.

Florence Forbes was a member of:

- the AERES committee in charge of evaluating the AgroParisTech unit.
- the committee for selecting a new professor at University Grenoble 1.
- the LJK committee for attributing the first Jean Kuntzman award.

MNEMOSYNE Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Responsibilities

- Thierry Viéville is in charge, at the Inria national level, of the institute science outreach actions and depends on the Direction de la Recherche for this part of his work.
- Member of the scientific committee of the CNRS PEPS program, of the local Inria committee for invited professors (F. Alexandre).
- Expert of the ITMO 'Neurosciences, Sciences Cognitive, Neurologie, Psychiatrie' (F. Alexandre)

8.1.2. Review activities

- Reviewing for journals: Plos One, Frontiers in Neurorobotics, Applied Intelligence, Cognitive Computation, J. Physiol. (F. Alexandre); Neural Networks, Neurocomputing (N. Rougier); Frontiers in Computational Neuroscience (T. Viéville).
- Member of program committees of conferences: CAP, EMBS, TAIMA (F. Alexandre)
- Reviewing for the Fonds Recherche Quebec, the CNRS, the ANR and several french regional and territorial agencies and universities (F. Alexandre)

8.1.3. Workshops, conferences and seminars

Organization of conferences and workshops:

- Member of the organizing committee of the annual symposium of the CNRS GDR "Multi-electrodes", in charge of the tutorial day (F. Alexandre, october)

Invited speaker and seminars:

- Invited talk to the CNRS 'STIC-Santé' GDR day: "Computer Science and the Brain" (N. Rougier, november)
- Invited Talk to the "Robotics and the Living", Conference organized by the Cergy-Pontoise university (N. Rougier, december)
- Invited Talks "Scientific Visualization" for the JDEV 2013 days (N. Rougier, september)

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Many courses are given in universities and schools of engineers at different levels (LMD) by most team members, in computer science, in applied mathematics, in neuroscience and in cognitive science.

Concerning tutorials during conferences, Euroscipy 2013, Matplotlib tutorial, (N. Rougier, August); PRACE Winter school 2013, Scientific Visualisation and Python introduction (N. Rougier, March).

8.2.2. Juries

We participate to many juries each year.

8.3. Popularization

For a multi-disciplinary team as Mnemosyne, science popularization is not a nice and useful contribution to the dissemination of scientific knowledge but also a necessity since we work with colleagues from bio-sciences with whom sharing profound ideas in computer science is mandatory for a real collaboration.

- Thierry Viéville is half-time involved in popularization actions both at a concrete level [21], [23], [22], [9], [10] (including on Mnemosyne subjects [25], [20] and at the methodological level [15], [29], [18]. This explains the rather huge amount of publications on these external subjects in this document.
- “A small history of cyber-criminality” at the Journées pédagogiques sur ISN (N. Rougier, June)
- “About brain modeling”, Interstices podcast, (N. Rougier, February)
- Participation to the program “Science Publique”, on the french national radio France Culture to a one-hour debate entitled “What can we expect from an artificial human brain?” (F. Alexandre, January).

MOAIS Project-Team

9. Dissemination

9.1. Scientific Animation

- Chair, Steering board:
 - Thierry Gautier, Chair of ComPAS'2013, Track Parallelism, located in Inria Grenoble, January 2013.
 - Bruno Raffin, Paper co-chair of JVRC 2013 (EGVE - EuroVR Joint Virtual Reality Conference).
 - Bruno Raffin, Member of the Steering Board of EGPGV (Eurographics Symposium on Parallel Rendering and Visualization)
 - Bruno Raffin, Member of the Steering Board of the journée visualisation scientifique.
 - Denis Trystram, Chair of the track Algorithms HiPC (20th Int'l Conf. on High Performance Computing), dec. 16-20, Hyderabad, India
- Program committees:
 - ICCS 2013 (International Conference on Computational Science).
 - GPUCOMP 2013 (third Workshop on GPU Computing).
 - IEEE VR 2013.
 - ISVC 2013 (International Symposium on Visual Computing).
 - SEARIS 2013 (Workshop on Software Engineering and Architectures for Realtime Interactive Systems).
 - COMPASS, january 15-18 2013, Grenoble, France
 - IPDPS 2013 (24th IEEE International Parallel & Distributed Processing Symposium) may 20-24 2013, Boston USA
 - HCW'2013 (22nd IEEE Heterogeneous Computing Workshop) may, 2013, Boston USA
 - ISPD (12th Internat Symposium on Parallel and Distributed Computing) june 27-30, 2013, Bucharest, Romania
 - OPTIM'13 (Workshop on Opt. Issues in Energy Efficient Distributed Systems) july 1-5, 2013, Helsinki, Finland
 - 6th MISTA, august 27-29 2013, Ghent, Belgium
 - 10th PPAM 2013, september 9-12, 2011, Warsaw, Poland
 - ParCo'2013, sept. 10-13, 2013, Munich, Germany
 - IC3 2012 (5th International Conference of Contemporary Computing) august 6-8, 2012, Noida, India
 - EuroMPI (20th internat conference) sept. 15-18, 2013, Madrid, Spain
 - ESA (21st European Symposium on Algorithms) sept. 2-6, 2013, Sophia Antipolia, France
 - 25th SBAC-PAD, october 23-26, 2013, Pernambuco, Brazil

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: J-L. Roch co-director (Grenoble-INP) with P Elbaz-Vincent (Université Joseph Fourier, Math. Dept) of the Master "SCCI Security, Cryptology and Coding of Information Systems" (M2) joined between UJF and INP Grenoble Universities. This Master, started in 2001, is taught in English from sept 2007 (international Master).

Master: C. Pernet and Denis Trystram are responsible of the first year (M1) of the international Master of Science in Informatics at Grenoble (MOSIG-M1).

Master: V Danjean: course "Parallel Programming" (M2), Grenoble University,.

Master: J-L. Roch, "Security models" 24h (M2), Grenoble University

Master: D. Trystram, P.-F. Dutot, J.-L. Roch, "Complexity, approximation theory and randomization" master course (M2) at Grenoble University

Master: François Broquedis. 192 hours per year. 192 hours per year. Engineering school Grenoble-INP/Ensimag, 1st year/L3 and Master (M1/2nd year and M2/3rd year).

Master: Vincent Danjean. 242 hours per year. Licence (third year) and Master (first and second year) at Joseph Fourier University. First to third year of engineering school at Polytech' Grenoble.

Master: Pierre-François Dutot. 226 hours per year. Licence (first and second year) at IUT2/UPMF (Institut Universitaire Technologique de l'Université Pierre Mendès-France) and 9 hours Master M2R-ISC Informatique-Systèmes-Communication at Joseph Fourier University.

Master: Guillaume Huard. 242 hours per year. Licence (first and third year) and Master (first year) at Joseph Fourier University.

Master: Grégory Mounié. 242 hours per year. Master (first year) and Computer Science for Non Computer Scientist Post-Master at Engineering school ENSIMAG and Dept TELECOM, Grenoble-INP.

Master: Clement Pernet. 210 hours per year. University J. Fourier. Master (first year and second year) and Licence (3rd year).

Master: Bruno Raffin. 22 hours per year. Master at Université d'Orléans and Polytech'Grenoble.

Master: Jean-Louis Roch. 242 hours per year. Engineering school Grenoble-INP/Ensimag and Master (M1/2nd year and M2/3rd year)

Master: Denis Trystram. 200 hours per year in average, mainly at first level of Engineering School.

Master: Frédéric Wagner. 220 hours per year. Engineering school ENSIMAG, Grenoble-INP (M1/2nd year and M2/3rd year) (190h) ; Master DESS/M2-P SCCI Security (30h).

9.2.2. Supervision

PhD in progress : **David Beniamine (since 2013)**. Parallelisation Patterns and Scheduling for Real-Time Physics Simulations. Co-advised Guillaume Huard and Bruno Raffin.

PhD in progress : **Amrit Kumar (since 2013)**. Analysis of work-stealing and adaptive algorithms. Labex-Persyval co-advised PhD by Pascal Lafourcade (Verimag lab), Cedric Lauradoux (Inria Privatics team) and Jean-Louis Roch.

PhD in progress : **Gilles Daviet (since 2013)**. Parallel Macroscopic Simulations of Fibrous Materials. Co-advised by Florence Bertails-Descoubes, Pierre Saramito and Bruno Raffin.

PhD in progress : **Julio Toss (since 2013)**. Parallel Algorithms and Data Structures for Physically Based Simulation of Deformable Objects. Join Ph.D with UFRGS, Brazil. Co-advised by Joao Comba and Bruno Raffin.

PhD in progress : **Marwa Sridi (since 2013)**. Parallel Algorithm Composition for Transient Mechanics Simulations. Join Ph.D with CEA, France. Co-advised by Vincent Faucher, Thierry Gautier and Bruno Raffin.

PhD in progress : **Ziad Sultan (since 2012)**. High-performance algebraic computations. Co-advised Ph.D by Jean-Guillaume Dumas (LJK Lab) and Clément Pernet.

PhD in progress : **Mathias Ettinger (since 2011)**. Cache Efficient Parallel Adaptive Algorithms for Scientific Visualization. Co-advised by Bruno Raffin and François Broquedis

PhD in progress : **Stefano Mor (since 2011)**. Analysis of work-stealing and adaptive algorithms. Join Ph.D with UFRGS, Brazil. Co-advised by Jean-Louis Roch, Nicolas Maillard and Bruno Raffin

PhD in progress : **Mathieu Dreher (since 2011)**. In-Situ Visualization for Molecular Dynamics. Advised by Bruno Raffin.

PhD in progress : **Joao Ferreira Lima (since 2010)**. Work Stealing on GPUs. Join Ph.D with UFRGS, Brazil. Co-advised by Vincent Danjean, Thierry Gautier, Nicolas Maillard and Bruno Raffin

MODAL Project-Team

9. Dissemination

9.1. Scientific Animation

- Alain Celisse is reviewer for numerous top-level statistical journal: Annals of Statistics, Electronic journal of Statistics, Biometrika, JSPL... He also reports on various French funding proposals (ANR, PEPPII, PEPS,...). Alain Celisse is a member of The French Statistical Association (SFDS) and more precisely belongs to the “Mathematical statistics” board.
- C. Biernacki belongs to the program comity of "Extraction et gestion des connaissances" in 2013 and to the program comity of "Journées Françaises de Statistique" in 2013. Since '10, he is an Associate Editor of the journal “Case Studies in Business, Industry and Government Statistics” (CSBIGS) <http://www.bentley.edu/centers/csbiggs>.
Since '12, C. Biernacki is the president of the data mining and learning group of the French statistical association (SFdS) <http://www.sfds.asso.fr/>. Since '11, he is leader of the team “Probability & Statistics” of the Laboratory of mathematics of U. Lille 1 <http://math.univ-lille1.fr/>. Since '13 (September), he is co-leader of the Laboratory of mathematics “Painlevé” of U. Lille 1 <http://math.univ-lille1.fr/>.
- Sophie Dabo-Niang animates a research group on « Spatial Statistics and Archeology » with statisticians and archeologist.
- Guillemette Marot is a member of the organizing committee of seminars from Bilille platform. More information about seminars of the year is available on <https://wikis.univ-lille1.fr/bilille/animation>.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Christophe Biernacki (head of the M2 Ingénierie Statistique et Numérique <http://mathematiques.univ-lille1.fr/Formation/>):
 - Master 1st year: Mathematical statistics, 60h, coaching project, 10h, M1, U. Lille 1, France
 - Master 2nd year: Data analysis, 97.5h, Analysis of variance and experimental design, 22.5h, coaching internship, 20h, M2, U. Lille 1, France
- Alain Celisse (6 month delegation at Inria):
 - Licence 1st and 2nd year: (96h) Computer Science departement in IUT A, Univ. Lille 1
 - Master 2nd year: Statistical theory (30h) to Applied Mathematics students.
- Sophie Dabo-Niang:
 - Master MIASHS (Mathématiques, Informatique appliquées aux SHS),
 - Master of Statistics of university Gaston Berger (Senegal).
- Serge Iovleff (6 month delegation at Inria):
 - Markov chain theory, Algebra, graphs, languages and automate theory (120h).
- Julien Jacques:
 - Licence 3rd year: Statistique Inférentielle, 50h, École Polytechnique Universitaire de Lille, U. Lille 1, France
 - Master 1st year: Statistique Exploratoire, 40h, École Polytechnique Universitaire de Lille, U. Lille 1, France

- Master 1st year: Modélisation Statistique, 30h, École Polytechnique Universitaire de Lille, U. Lille 1, France
- Master 2nd year: Séries Temporelles, 25h, École Polytechnique Universitaire de Lille, U. Lille 1, France.
- Mathieu Marbac-Lourdelle:
 - Licence: Probabilités, 30h, École Polytechnique Universitaire de Lille, U. Lille 1, France.
 - Licence: Statistiques, 34h, École Polytechnique Universitaire de Lille, U. Lille 1, France.
- Guillemette Marot:
 - Licence: Biostatistics, 12h, PACES (équivalent L1), U. Lille 2, France
 - Master : Biostatistics, 45h, M1, U. Lille 2, France
 - Formation permanente: Data Analysis with R, 12h, U. Lille 2, France
 - Master: Internships, 15h, M1, U. Lille 2, France.

9.2.2. Supervision

- Alain Celisse is co-supervising the Ph.D. theses of Jérémie Kellner and Quentin Grimonprez respectively with Christophe Biernacki and with Julien Jacques and Guillemette Marot.
- Christophe Biernacki supervises Clément Thery and co-supervises Loïc Yengo, Matthieu Marbac-Lourdelle and Jérémie Kellner.
- Sophie Dabo-Niang supervises:
 - Aladji BASSENE, until 2011. Co-tutelle with Aliou Diop (University Gaston Berger, Senegal)
 - Stéphane BOUKA, until 2012 : Co-tutelle with Guy Martial Nkiet, University of Franceville, Gabon)
 - Emad Aldeen DRWESH, until 2012 : co-direction with Jérôme Foncel (Lille 3)
 - Camille TERNYNCK, until 2011 :co-direction with Anne-Françoise Yao et Fateh Chebana
 - Mohamed YAHAYA, until 2012 : co-direction with Aboubacar Amiri (Lille 3)
 - Mohamed Ould Yehdih, until 2013 : Co-tutelle with Aliou Diop (University Gaston Berger, Senegal) and Mohamed Attouch (University Sidi Bel Abbes, Algeria).
- Serge Iovleff has supervised a software development engineer (Parmeet Bathia).
- Julien Jacques is supervizing Julie Hamon who passed her Ph.D. in November, 26th, 2013. He also co-advised Quentin Grimonprez (co-supervision with Guillemette Marot and Alain Celisse) and Florence Loingeville (co-supervision with Cristian Preda) from 2013.
- Guillemette Marot co-supervised (with Alain Celisse) a one-year engineer Morgane Pierre-Jean, who worked on change point detection with kernel methods for genomic data. She also supervised Quentin Grimonprez (ADT MPAGenomics until october 2013 then PhD) and Samuel Blanck (ADT MPAGenomics from 2013).

9.2.3. Juries

- Alain Celisse was a jury member (examinator) at the Ph.D. defense of Van Hahn NGUYEN (Paris-Sud 11) and during the CR2 INRA competition.
- Christophe Biernacki participated to 7 PhD juries in 2013 (1 as an opponent, 5 as a reviewer, 1 as an examiner).
- Sophie Dabo-Niang was in the PhD jury of Karima Kimouche (University of Constantine; June 2013), Ibrahim Sidi Zakari (University of Marrakesh, June 2013) Van Ly Tran (University of Orleans, December, 12, 2013) Aubin N'dri Yao (University of Abidjan, July, 2013).
- Guillemette Marot was a jury member for the CR2 Inria 2013 competition.

9.3. Popularization

Alain Celisse has given a talk in “30 minutes de science” that is proposed to all Inria team members to illustrate the type research carried out within the different teams in Lille. This talk was about kernel change-point detection.

MODEMIC Project-Team

8. Dissemination

8.1. Scientific Animation

C. Casenave has been an “outstanding reviewer” for IEEE Transactions on Automatic Control in 2013.

The team has organized a one day international workshop on biofilm modeling (May, Paris) [¹⁶].

The team has organized a “research school” of one week in June dedicated to the biologists of the marine research station of Banyuls [¹⁷].

F. Campillo was invited to give a lecture on stochastic modeling and simulation at CNRS/Génopôle Thematic School on “Advances in Systems and Synthetic Biology” at La Colle sur Loup (France), March 25 to 29. Fabien Campillo was invited to give a lecture on particle filtering at the Univ. of Mons at the "Dynamical systems, control and optimization" (DYSCO) of the Interuniversity Attraction Poles, May 24.

C. Casenave and F. Campillo are in the organizing committee of the MIA Division national meeting to be held in March 2014.

C. Casenave is in charge of the Modemic Seminar.

From the 15th to the 18th April, the team had its annual meeting in the “Hameau de l’Etoile”.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

F. Campillo and M. Joannides, “Stochastic modeling of ecosystem”, 20 hours, Master 2 in Biostatistics, Univ. Montpellier 2.

A. Rapaport, “Practical Mathematics”, 25 hours, Master 1 in Mathematics, Univ. Montpellier 2.

C. Casenave and A. Rapaport, “Advanced mathematical modeling”, 18 hours, Master 2 STIC - Environnement, Univ. Montpellier 2.

A. Rapaport, “About modeling and numerical simulations of dynamical systems”, 9 hours, Master 1 in Ecosystems, Univ. Montpellier 2.

A. Rapaport, “Introduction to modeling”, 12 hours, 1st year, SupAgro Montpellier.

C. Casenave, F. Campillo and A. Rapaport, “modeling for biology and ecology, mathematical and computational methods”, 20 hours, Doctoral lectures, Univ. Montpellier 2.

8.2.2. Masters supervision

Supervision:

A. Boutoub [70], supervisor: F. Campillo.

C. Droin [71], supervisor: C. Casenave.

S. Sekkat [74], supervisor: C. Casenave.

¹⁶<https://sites.google.com/site/anrdisco/meetings/workshop-may-2013>

¹⁷http://lomic.obs-banyuls.fr/fr/test/ecole_chercheur_chemostat.html

Co-supervision:

M. Chebbi: “Modélisation et approximation stochastique appliquées en écologie”, Master of Applied Mathematics, ENIT/LAMSIN, Tunis, co-supervisors: S. Toumi and F. Campillo.

Y. Dadoud: “Contrôle Optimal d’un procédé biologique séquentiel discontinu : approche par simulations”, Master of Applied Mathematics, ENIT/LAMSIN, Tunis, co-supervisors: N.a Abdellatif and F. Campillo.

Z. Khedim: “Réalisation d’une interface Matlab pour la simulation des bioprocédés : Application au modèle ADM1”, Master of Automatic Control, Univ. Aboubekr Belkaid, Tlemcen, Algeria, co-supervisors: B. Benyahia and J. Harmand.

M. Crespo: “Modelling unhomogeneous bioreactors”, Master of Applied Mathematics, Univ. Madrid., co-supervisors: B. Ivorra, A. Rapaport

8.2.3. PhD’s supervision

M. Radhouane Fekih-Salem, “Modèles mathématiques pour la compétition et la coexistence d’espèces microbiennes dans un chémostat, co-tutelle Univ. Montpellier 2/ENIT-LAMSIN, Tunis (Tunisia), defended in Sep. 2013 (co-directors: A. Rapaport and T. Sari) [11].

M. Angelo Raherinirina, “Modélisation markovienne des dynamiques d’usages des sols. Cas des parcelles situées sur le bord du corridor forestier Ranomafana-Andringitra”, Univ. Fianarantsoa (Madagascar), defended in Aug. 2013 (director: F. Campillo) [12].

Ms Coralie Fritsch, “Simulation et analyse de modèles individu-centrés d’écosystèmes bactériens pour des procédés biotechnologiques”, Univ Montpellier 2, since Oct. 2011 (director: F. Campillo).

Ms Amel Ghouali, “Analyse et commande optimale d’un bioréacteur de dépollution des eaux usées”, cotutelle Univ Montpellier 2/Univ. Tlemcen (Algeria), since Nov. 2011 (director: J. Harmand).

M. Guilherme Pimentel, “Modélisation dynamique, analyse et supervision d’un réacteur membranaire”, cotutelle Univ. Montpellier 2/Univ. Mons (Belgique), since Sept. 2013 (Co-directors: A. Vande Wouwer and A. Rapaport).

8.2.4. Juries

M. Benjamin Ivorra, “Méthodes et techniques de modélisation, simulation et optimisation appliquées à divers problèmes industriels”, thèse d’Habilitation à Diriger des Recherches, Univ. Montpellier 2, Fev. 2013 (examiner: A. Rapaport).

M. Derdei Bichara, “Etude de modèles épidémiologiques: stabilité, observation et estimation de paramètres”, Univ. Metz, Fev. 2013 (referee: A. Rapaport).

M. Mickael Teixeira Alves, “Des interactions indirectes entre les proies: modélisation et influence du comportement du prédateur commun, Univ. Nice Sophia Antipolis, Jan. 2013 (referee: T. Sari).

M. Sihem Kouloughli, “Optimisation de systèmes automatisés de stockage/déstockage multi allées et à racks glissants”, Univ. of Tlemcen, Algeria, Jun. 2013 (referee: T. Sari).

M. TERENCE Bayen, “Etude de quelques problèmes de contrôle optimal issus des EDP et des EDO”, Habilitation à diriger des recherches, Univ. Montpellier 2, Dec. 2013 (examiner: A. Rapaport).

8.3. Popularization

The team has participated to the writing of a blog [73], [72] for the MPT2013, french edition of Mathematics of the Planet Earth 2013.

The team has participated to the writing of two articles [31], [32] in the TDC magazine dedicated to teachers in secondary classes.

8.4. Community services

A. Rapaport is member of the scientific committee of BIOS dept. of CIRAD, and is member of the scientific committee of Ecotechnologies department of Irstea.

F. Campillo is member of the NICE Inria committee(long term invited scientists selection); deputy elected member of the Inria Scientific Council; member of the internal communication working group of Inria for the redesign of the national intranet; member the “support group to researchers” of Inria Sophia Antipolis; member of the selection board in case of selection of a Professor of probability at the Univ. of Montpellier 2.

J. Harmand is member of the steering committee of the Inra/MEM meta-program (Métagénomique des écosystèmes microbiens); member of the EA department of Inra; member of the “commissions scientifiques spécialisées” STEA-Inra.

MOISE Project-Team

9. Dissemination

9.1. Scientific Animation

- A. Rousseau is a member of the editorial board of *Discrete and Continuous Dynamical Systems - Series S* (DCDS-S).
- F. Lemarié and A. Rousseau organized a mini-symposium «Domain Decomposition Methods for Environmental Modeling» during the DD22 international conference in Lugano (Switzerland) [47].
- C. Prieur is a member of the editorial board of the section “états de l’art” of Journal of the French Statistical Society (SFdS).
- C. Prieur is in the scientific committee of the SAMO 2013 conference which will be held in Nice in July 2013, jointly with MASCOT NUM annual conference. The SAMO conference has now (since September 2013) a permanent board. C. Prieur is a member of that board.
- C. Prieur, E. Blayo, A. Rousseau have taken part in 2013 to the wide consortium of the Prospective think tank: MATHématiqueS en INteractions pour la TERRE whose purpose is to help the French National Research AgencyNR defining the research-funding program on the theme Mathematics for the Earth.
- C. Prieur was in the scientific committee of the Journées MAS 2013 (SMAI) which were held in Clermont-Ferrand in August 2012.
- C. Prieur and L. Viry organize jointly with H. Monod and R. Faivre (INRA) a school on sensitivity analysis for environmental models (les Houches, 7-12 April, 2013; 4-9 May, 2014).
- C. Prieur is a member of the scientific council of the French Mathematical Society (SMF).
- C. Prieur is member of the board of the group mathematical statistics of the French society of statistics (SFdS) since 2008.
- C. Prieur organized a session on sensitivity analysis in the Journées MAS (SMAI) 2013.
- C. Prieur organized a session on statistical estimation for PDE in the SMAI workshop 2013.
- M. Nodet co-organised with S. Labbé and Ch. Prieur the annual workshop of the GDRE research group in Grenoble, <http://ljk.imag.fr/membres/Maëlle.Nodet/GDRE2013>
- A. Vidard is deputy scientific leader to data assimilation for the NEMO consortium
- F.-X. Le Dimet participates in the organisation of the Sasaki Symposium in the framework of AOGS 2013 (Brisbane, June 2013) and of the Coupling Systems with heterogeneous information ERC (Rennes, January 2014)
- Since 2010, Ch. Kazantsev is the Director of the IREM of Grenoble <http://www-irem.ujf-grenoble.fr/irem/accueil/>. The Institute is under rapid development now, joining about 30 teachers of secondary schools of the Grenoble region and 15 university professors. They work together 16 times a year on the development of the teaching strategy for the educational community. In addition to this, IREM is the editor of two journals: "Grand N" destined to primary schools teachers and "Petit x" – to the secondary schools.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: M. Nodet: Statistics, 80h, L2, Université de Grenoble, France

Licence: E. Blayo: Statistics, 36h, L2, Université de Grenoble, France

Master: M. Nodet: Inverse Methods, 28h, M2, Université de Grenoble, France
 Licence: E. Blayo, M. Nodet : Mathematics for engineers, 80h, L1, university of Grenoble, France
 Master : E. Blayo: Finite element methods, 45h, M1, university of Grenoble, France
 Master: E. Blayo: Data assimilation in oceanography, 2h, M2, Ecole des ponts Paris Tech, France
 Master : L. Debreu, Numerical ocean modelling, 12H, M2, University of Brest, France
 Doctorat: E. Blayo, A. Vidard, introduction to data assimilation, 20h, Université de Grenoble, France

9.2.2. Supervision

HdR : M. Nodet, Inverse problems for the environment: tools, methods and applications, Université de Grenoble, November 28th 2013, [3]

PhD : B. Bonan, Assimilation de données pour l'initialisation et l'estimation de paramètres d'un modèle d'évolution de calotte polaire, Université de Grenoble, Nov 15th 2013, advisers: M. Nodet and C. Ritz. [1]

PhD : Manel Tayachi, Couplage de modèles de dimensions hétérogènes et application en hydrodynamique, Université Joseph Fourier, 28 octobre 2013, Eric Blayo and Antoine Rousseau, [4]

PhD : Gaëlle Chastaing, Estimation des indices de sensibilité sous conditions de dépendance, Université Joseph Fourier, 2013, C. Prieur and F. Gamboa, [2].

PhD in progress : Pierre-Antoine Bouttier, Variational data assimilation into highly nonlinear ocean models, October 2009, E. Blayo and J. Verron

PhD in progress : Vincent Chabot, Nouvelles distances pour l'assimilation de séquence d'images, start Nov 2010, advisers: A. Vidard and M. Nodet

PhD in progress : N. Feyeux, Transport optimal pour l'assimilation de séquences d'images, start Nov 2013, advisers: A. Vidard and M. Nodet

PhD in progress : Jérémie Demange, Numerical schemes for tracers and momentum advection in ocean models, 15/12/2010, Supervisors : L. Debreu and P. Marchesiello (IRD).

PhD in progress : Mehdi Pierre Daou, Développement d'une méthodologie de couplage multi-modèles avec changements de dimension. Validation sur un cas-test réaliste en dynamique littorale, May 2013, E. Blayo and A. Rousseau

PhD in progress: Federico Zertuche, Exploitation des simulateurs multifidelites pour l'analyse de risque, Octobre 2011, C. Prieur and C. Helbert.

PhD in progress : Simon Nanty, Approche stochastique pour la quantification des incertitudes et l'analyse de sensibilité des codes de calcul à entrées temporelles et spatio-temporelles : application aux études de sûreté et de calcul d'impact, October 2012, C. Prieur, C. Helbert

PhD in progress : Laurent Gilquin, October 2013, C. Prieur

PhD in progress : Patricia Tencaliec, Gestion des risques multivariés extrêmes, application à des données de débit sur le bassin versant de la Durance October 2013, C. Prieur

PhD in progress : Thomas Capelle, Recherche sur des methodes d'optimisation pour la mise en place de modeles integres de transport et usage des sols, October 2013, P. Sturm, A. Vidard

9.2.3. PhD and HdR Juries

- E. Blayo was a referee of PhD thesis of Selime Gurol: Solving regularized nonlinear least-squares problem in dual space. Université de Toulouse, June 14, 2013
- E. Blayo was a referee of PhD thesis of Sébastien Beyou: Estimation de la vitesse des courants marins à partir de séquences d'images satellitaires. Université de Rennes, July 12, 2013
- E. Blayo was a member of the jury for the PhD defense of Gaëlle Chastaings: Indices de Sobol généralisés pour variables dépendantes. Université de Grenoble, September 23, 2013.

- E. Blayo was a member of the jury for the PhD defense of Lucile Gaultier: Couplage des observations spatiales dynamiques et biologiques pour la restitution des circulations océaniques: une approche conjointe par assimilation de données altimétriques et de traceurs. Université de Grenoble, October 16, 2013.
- E. Blayo was a member of the jury for the HDR defense of Frédéric Parrenin: Sur l'âge de la glace et des bulles de gaz dans les calottes polaires. Université de Grenoble, October 21, 2013.
- E. Blayo was a member of the jury for the PhD defense of Olivier Vannier: Apport de la modélisation hydrologique régionale à la compréhension des processus de crue en zone méditerranéenne. Université de Grenoble, November 22, 2013
- F.-X. Le Dimet was a member of the jury for the HDR defense of Benjamin Ivorra: Méthodes et techniques de Modélisation, de Simulation et d'Optimisation appliquées à divers problèmes industriels, Université de Montpellier 2, February, 7, 2013.
- C. Prieur was a chair of the PhD jury of Matthias De Lozzo, INSA Toulouse,
- C. Prieur was a chair of the PhD jury of Jonathan El Methni, Université Grenoble 1
- C. Prieur was a chair of the PhD jury of Gérémy Panthou, Université Grenoble 1
- C. Prieur was a member of the PhD jury of Anne Sabourin, Université Lyon 1
- C. Prieur was a member of the PhD jury of Gaëlle Chastaing, Université Grenoble 1
- A. Rousseau was member of the PhD committee of Vincent Visseq (Université Montpellier II)
- A. Rousseau was member of the PhD committee of Nathan Martin (INSA Toulouse)
- A. Vidard was member of the PhD jury of Lucille Gaultier, Université Grenoble I
- A. Vidard was reviewer of the PhD of Alexandre Imperiale, Université Paris VI

9.2.4. Other Juries and Evaluation Committees

- M. Nodet is a member of the national board of Agregation externe de mathématiques 2013
- M. Nodet was a member of the recruiting committee of an assistant professor in applied mathematics in ENSEEIT Toulouse.
- C. Prieur was a member of the jury of the EADS Foundation's Best Thesis Prize reward.
- C. Prieur was a member of the AERES evaluation committee of the LAMA (Univ. Paris Est Marne la Vallée, Univ. Paris Est Créteil), in December, 2013.
- A. Rousseau is a member of Inria Evaluation Committee
- A. Rousseau was member of Inria Bordeaux committee for young graduate scientists
- A. Rousseau was member of Inria Grenoble committee for young graduate scientists
- A. Rousseau was member of the national Inria committee for research positions (both starting and advanced)
- A. Rousseau was member of the national Inria committee for internal competition « Assistant Ingénieur »

9.3. Popularization

- E. Blayo gave several conferences for highschool students on the topics of applied mathematics and applied mathematics for environment.
- A. Rousseau is the Grenoble Rhône-Alpes scientific correspondent for outreach
- A. Rousseau and M. Nodet wrote an outreach article in the APMEP journal about mathematical modelling for the environment [59].

- A. Rousseau, M. Nodet and S. Minjeaud (Nice) developed an impressive outreach effort on the subject of ocean circulation, called "Bottles and Oceanography". They first wrote a paper and designed a numerical experiment, then they proposed a physical experiment as well. This whole package has been presented at UNESCO for the launch of Maths for Planet Earth 2013 <http://mpe2013.org/mpe-day-at-unesco>, and is a part of the IMAGINARY platform for outreach <http://imaginary.org/films/flaschen-und-ozeanographie>. It has also been presented at the Comité International des Jeux mathématiques [57], and has been published in the journal Textes et Documents pour la Classe (resources for highschool teachers) [56].
- A. Rousseau and M. Nodet are members of the editorial committee of Maths for Planet Earth "Un jour une brève » operation <http://mpt2013.fr>, which aimed and succeeded to publish every day a short outreach article in 2013. Moreover, A. Rousseau is also webmaster and member of the executive board (6 people) of the operation.
- A. Rousseau and M. Nodet gave conferences during the Science Fair / Fete de la Science, for high-school students and their teachers, on the topics of mathematical modelling for the environment.
- M. Nodet gave a talk at the JELU workshop, which regroups university teachers and highschool teachers on teaching methods.
- M. Nodet wrote and outreach article about glaciology in the journal of the French society for applied mathematics SMAI, in the special issue MATAPLI number 100 on the occasion of Mathematics for Planet Earth 2013.
- M. Nodet gave a conference at the Mathematics Weeks in Valence for highschool students and their teachers, on the topic of mathematics for the environment and meteorology.
- Ch. Kazantsev begins a collaboration with Morocco, she has presented the IREM and IREM activities to the Ecole Normale de Rabat who wants now to create such an Institute.
- In the context of the program "100 parrains-100 classes", Ch. Kazantsev gives a weekly lectures to pupils of one secondary school in Grenoble.
- Ch.Kazantsev has participated in the "Fête de sciences" and in the "Semaine des maths" presenting the activities of the IREM of Grenoble.
- F. Zertuche and J. Calandreau have participated in the "Fête de sciences" presenting the activities of Moise.

MOKAPLAN Exploratory Action

8. Dissemination

8.1. Teaching - Supervision - Juries

8.1.1. Teaching

- Licence : Guillaume Carlier, Analyse complexe, 30hETD, Dauphine, L3,
- Master 2: Guillaume Carlier, Mean-Field-Games, 18hETD, Dauphine, M2,
- Doctorat : Guillaume Carlier, cours Optimization with divergence constraints and applications, Pise, Italie, 12h.

8.1.2. Supervision

PhD in progress : Luca Nenna, , 01/10/2013, J.D. Benamou & G. Carlier

PhD in progress : Maxime Laborde (01/09/2013) and Romeo Hatchi (01/09/2012), G. Carlier

8.1.3. Juries

Jean-David Benamou reviewer of PhD : Nicolas Bonnote, Unidimensional and Evolution Method for Optimal Transportation, Université Paris Sud, dec. 16 2013,Advisors : L. Ambrosio and F. Santambrogio

Guillaume Carlier jury member for the PhD of Vincent Nolot (Dijon), Miryana Grogorova (Paris 7) and Beatrice Acciaio (Vienna, reviewer), HDR committes: Pierre Bousquet (Marseille) and Naila Hayek (Paris 1).

8.2. Popularization

Jean-David Benamou run a Ipython Notebook web site <https://mathmarx.rocq.inria.fr:9999> on which simple Optimal Mass Transportation algorithm are coded in python and can be tested and modified.

MORPHEME Project-Team

7. Dissemination

7.1. Scientific Animation

- Florence Besse was co-organiser of the first Labex Signalife meeting, grant reviewer for ANR and reviewer for PLoS ONE, WIREs Developmental Biology.
- Xavier Descombes was reviewer for the conference ISBI 2013 and the journals IEEE TMI, IEEE IP,... He is associated editor of DSP (Digital Signal Processing), expert for the DRRT Provence Alpes Côte d'AZur and DRRT Paris Ile de France. He is member of the Scientific Committee of the competitiveness pole Optitech, associate member of IEEE BISP (Biomedical Imaging Signal Processing) Technical Committee and member of the Scientific Committee of Labex SIGNALIFE. Xavier Descombes was in the jury of an AAP Cancer call for project launched by INSERM. He was also in a MdC recruitment jury in Toulouse.

Xavier Descombes was invited to give seminar or lectures in Strasbourg University, in the annual workshop on stochastic geometry organized in Grenoble, in the summer school in Cabreret, in a workshop in Toulouse organized by the labex CIMI and at Institut Curie during the GdR workshop on computational biology.

- Eric Debreuve is member of the steering committee of Laboratoire I3S and coordinator of Pôle SIS (Signals, Images, Systems) of Laboratoire I3S (includes the management of a 25000-euro funding provided by the lab). He is member of the Board of the Association GRETSI (Groupement de Recherche en Traitement du Signal et des Images) and was reviewer for IEEE: Transactions on Medical Imaging; Springer: Multimedia Tools and Applications, Machine Vision and Applications; Elsevier: Pattern Recognition, Signal Processing; Revue Traitement du Signal. He was member of conference technical program committees (Advanced Concepts for Intelligent Vision Systems (ACIVS), Poznan, Poland and IEEE International Symposium on Biomedical Imaging (ISBI), Beijing, China).
- Laure Blanc-Féraud is Associate Editor of SIAM Journal Imaging Sciences and Traitement du Signal Journal. She is director of GdR ISIS of CNRS. She is Program chair of the conference IEEE ISBI 2014 in Beijing. She is member of the IEEE BISP (Biomedical Imaging Signal Processing) Technical Committee, she was vice chair of the evaluation committee of the ANR program blanc SIMI3 (till July 2013), she is member of the scientific steering committee of ANR (from September 2013), member of the scientific council of Institute INS2I of CNRS, invited member of the scientific council of Institute INSIS of CNRS, member of "bureau du comité des projets" Inria SAM and alternate member of CNECA (Comité National des Enseignants Chercheurs en Agriculture). She is part of the scientific committee of laboratory GreyC (UMR CNRS 6072) and of "Institut des Technologies Avancées en sciences du Vivant" (ITAV, USR CNRS 3505).

Laure Blanc-Féraud was reviewer for Inverse Problems journal and the conferences IEEE ISBI, IEEE ICIP, IEEE ICASSP. She was co-organiser of the workshop on New Computational Methods in Inverse Problems - NCMIP 2013 (NCMIP) in ENS Cachan and was associate editor for the conferences: IEEE ISBI'13, Workshop NCMIP 2013. She was in the scientific committees of the European workshop on Visual Information Processing (EUVIP 2013) and of the 11th International workshop on Adaptation and Learning in Control and Signal Processing (ALCOSP 2013).

- G. Malandain is member of the IEEE/EMB Technical Committee on Biomedical Imaging and Image Processing (BIIP) He is an invited member of the Scientific Committee of the MIA department of INRA.

G. Malandain is a member of the editorial board of the journal International Journal on Computer Vision (Kluwer). He was an associate editor for the conference ISBI 2014, and serves as reviewer for the conferences DGCI 2013, ISBI 2103, MICCAI 2013 and ICCV 2013.

- Caroline Medioni gave an oral communication at Cold Spring Harbor meeting: Neurobiology of Drosophila in New York and at the "Journées régionales de la Cancéropole PACA".

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

- Master : Emmanuel Soubies, Traitement Numérique des Images, 10h Eq. TD, Niveau M2, Université de Nice Sophia Antipolis, France.
- Master : Florence Besse, Contrôle génétique de la morphologie neuronale, 3h Eq. TD, Niveau M2, Université de Nice Sophia Antipolis, France.
- Master : Florence Bessee, Réseaux neuronaux : de la structure à la fonction, 3h Eq. TD, Niveau M2, Université de Nice Sophia Antipolis, France.
- License : Alejandro Mottini, Introduction au Web, 24h Eq. TD, Niveau L1, Université de Nice Sophia Antipolis, France.
- License : Alejandro Mottini, Systèmes Informatiques, 20h Eq. TD, Niveau L1, Université de Nice Sophia Antipolis, France.
- Master : Alejandro Mottini, Outils Mathématiques pour l'Image, 8h Eq. TD, Niveau M2, Université de Nice Sophia Antipolis, France.
- Master : Alejandro Mottini, Traitement d'images, 8h Eq. TD, Niveau M2, Université de Nice Sophia Antipolis, France.
- Master : Xavier Descombes, Traitement d'images, Analyse de données, Techniques avancées de traitement d'images, 30h Eq. TD, Niveau M2, ISAE, France.
- Master : Xavier Descombes, Traitement d'images, master ISAB, 12h Eq. TD, Niveau M2, Université de Nice Sophia Antipolis, France.
- Master : Xavier Descombes, Traitement d'images, master VIM, 12h Eq. TD, Niveau M2, Université de Nice Sophia Antipolis, France.
- Master : Xavier Descombes, Bio-imagerie, master IRIV, 6h Eq. TD, Niveau M2, Université de Strasbourg, France.
- Master : Eric Debreuve, Introduction to inverse problems in image processing, 29 h Eq. TD, Master 2 in Computational Biology and Biomedicine/5th year Polytech'Nice-Sophia, Université Nice Sophia Antipolis.
- Master : Eric Debreuve, Basics of image processing, 13h Eq. TD, Master 2 "Génie Biomédical", Université Nice Sophia Antipolis.
- Licence : Alexis Zubiolo, Informatique Générale, 36 heures en équivalent TD, niveau L1, Département Informatique de l'Université de Nice Sophia Antipolis, France
- Licence : Alexis Zubiolo, Programmation Web (HTML & CSS), 12 heures en équivalent TD, niveau L1, Département Informatique de l'Université de Nice Sophia Antipolis, France
- Licence : Alexis Zubiolo, Algorithmique et Programmation Objet, 18 heures en équivalent TD, niveau L2, Département Informatique de l'Université de Nice Sophia Antipolis, France
- Master : Laure Blanc-Féraud, Fluorescence image restoration, 18h, M2 Computational Biology , University Nice Sophia Antipolis, France
- Master : Laure Blanc-Féraud, Image restoration, 12h, M2 ISAB, University Nice Sophia Antipolis, France
- Master : Laure Blanc-Féraud, Traitement numérique des images, 12h Eq. TD, M2 VIM , EPU University Nice Sophia Antipolis, France
- Licence : Caroline Medioni. microscopie optique pratiques et théoriques, 15h Eq. TD, L3, University Nice Sophia Antipolis, France

7.2.2. Supervision

- PhD in progress : Gaël Michelin, Quantitative tools for morphogenesis study, 1st october 2011, Grégoire Malandain (advisor).
- PhD in progress : Alejandro Mottini, Métriques de graphes pour la caractérisation des axones, 1st october 2011, Xavier Descombes (advisor), Florence Besse (co-supervisor).
- PhD in progress, Alexis Zubiolo, Statistical Machine Learning for Automatic Cell Classification, Eric Debreuve (advisor).
- PhD : Saima Ben Hadj, Blind restoration of space variant 3D confocal microscopic images, University Nice Sophia Antipolis, 17 April 2013, Laure Blanc-Féraud
- PhD : Mikael Carlván, Optimization of the compression-restoration chain for satellite images, University Nice Sophia Antipolis, 10 June 2013, Laure Blanc-Féraud and Marc Antonini.
- PhD in progress : Emmanuel Soubies, MA-TIRF reconstruction, 1st october 2013, Laure Blanc-Féraud and Sébastien Schaub.
- PhD in progress : Lola Baustista, Fluorescence confocal microscopy image restoration, 1st november 2013, Laure Blanc-Féraud.

7.2.3. Juries

- Florence Besse was in one HDR jury at University of Montpellier and one PhD jury at UPMC Paris and Université Paris Sud.
- Eric Debreuve was examiner in the PhD jury of Thomas Peel, Université d'Aix-Marseille, Laboratoire d'Analyse, Topologie, Probabilités (LATP)/Laboratoire d'Informatique Fondamentale de Marseille (LIF). Title: "Algorithmes de poursuite stochastiques et inégalités de concentration empiriques pour l'apprentissage statistique", november 2013.
- PhD : Laure Blanc-Féraud, referee of the PhD committee of Moncef Hidane, University of Caen
- HDR : Laure Blanc-Féraud, referee of the HDR committee of David Mary, University Nice Sophia Antipolis
- PhD : Laure Blanc-Féraud was examiner for 1 HDR and 4 PhD.
- Grégoire Malandain participated as supervisor to the PhD thesis committee of Marine Breuille (Nice-Sophia Antipolis University), as reviewer to the PhD thesis committee of C. Hughes (INSA Lyon), as chair to the PhD thesis committee of B. Xiang (Ecole Centrale Paris) and V. Delmon (INSA Lyon), as reviewer to the HDR thesis committee of C. Fetita (UPMC) and as referee to the HDR thesis committee of H. Talbot (Paris Est Univ.)

7.3. Popularization

- Xavier Descombes has given a conference in Nice within the program "Science au Lycée".
- Xavier Descombes has given a seminar in Marseille University in a workshop dedicated to multi-disciplinarity.

MORPHEO Team

9. Dissemination

9.1. Scientific Animation

- Edmond Boyer was co-organizer of the ICCV 2013 workshop 4DMOD on 4D Modeling.
- Edmond Boyer was an area chair for BMVC 2013.
- Edmond Boyer was a member of the program committees of: CVPR2013, ICCV2013, 3DV2013, CVMP2013, HAU3D2013 (CVRP Workshop), ORASIS2013.
- Edmond Boyer has reviewed for the journals: IEEE PAMI, springer IJCV and Elsevier CVIU.
- Edmond Boyer gave invited talks at Kyoto University and Dagstuhl seminar.
- Jean-Sébastien Franco has reviewed for the following conferences: CVPR 2013, ICCV 2013, 3DV 2013.
- Jean-Sébastien Franco has reviewed for the following journal: Robotics and Autonomous Systems.
- Franck Hétroy has reviewed for the journal: ReFIG.
- Franck Hétroy has reviewed for the conferences: ACM SIGGRAPH 2013 and Joint Virtual Reality Conference 2013.
- Lionel Reveret has reviewed for the journals: ACM Transactions on Graphics, Computer Graphics Forum.
- Lionel Reveret has reviewed for the conferences in 2013: ACM SIGGRAPH, Eurographics, BMVC, Pacific Graphics (committee member), Motion in Games (committee member).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: J.S. Franco, Algorithmics, 70h, Grenoble INP - Ensimag, France.

License: J.S. Franco, C Project, 58h, Grenoble INP - Ensimag, France.

Licence: J.S. Franco, Introduction to Computer Vision, 27h, Grenoble INP - Ensimag, France.

Licence: Franck Hétroy, algorithmique et structures de données, 45h, Grenoble INP - Ensimag, France.

Master: Edmond Boyer, 3D Modeling, 9h, M2R GVR, Université Joseph Fourier Grenoble, France.

Master: Edmond Boyer, projet de programmation, 30h, M1 informatique - M1 MoSig, Université Joseph Fourier Grenoble, France.

Master: Edmond Boyer, Introduction to Image Analysis, 15h, M1 MoSig, Université Joseph Fourier Grenoble, France.

Master: J.S. Franco, End of study project (PFE) Project Tutoring, 9h, Grenoble INP - Ensimag, France.

Master: J.S. Franco, Projet de Spécialité - Project Tutoring, 9h, Grenoble INP - Ensimag, France.

Master: J.S. Franco, 3D Graphics, 50h, Grenoble INP - Ensimag, France.

Master: J.S. Franco, Modélisation et programmation C++, 9h, Ensimag 2nd year, Grenoble INP

Master: Franck Hétroy, modélisation et programmation C++, 18h, Grenoble INP - Ensimag, France.

Master: Franck Hétroy, géométrie algorithmique, 9h, Grenoble INP - Ensimag, France.

Master: Franck Hétroy, introduction a la recherche en laboratoire, 6h, Grenoble INP - Ensimag, France.

Master: Franck Hétroy, projets de spécialité image, 45h, Grenoble INP - Ensimag, France.

Master: Franck Hétroy, responsable for Grenoble INP - Ensimag 2nd year, France.

Master: Lionel Reveret, Synthèse d'Image Avancée, 22h, Grenoble INP - Ensimag, France.

Master: Lionel Reveret, Ingénierie de l'Animation 3D, 18h, Grenoble INP - Ensimag, France.

Master: Lionel Reveret, Anatomie Numérique, 4h, Ecole de Médecine, La Tronche, France.

9.2.2. Supervision

PhD in progress : Benjamin Allain, *Geometry and Appearance Analysis of Deformable 3D shapes*, Université de Grenoble, started 01/10/2012, supervised by J.S. Franco and E. Boyer.

PhD in progress: Benjamin Aupetit, *Raffinement de forme avec photo-consistance spatio-temporelle*, Université de Grenoble, started 01/10/2011, supervised by Edmond Boyer and Franck Hétroy.

PhD in progress: Adnane Boukhayma, *4D model synthesis*, Université de Grenoble, started 01/10/2013, supervised by Edmond Boyer.

PhD in progress: Simon Courtemanche, *Analyse et modélisation des gestes d'escalade*, Université de Grenoble, started 01/10/2010, supervised by Edmond Boyer and Lionel Reveret.

PhD in progress : Abdelaziz Djelouah, *Gesture Interfaces*, Technicolor-Université de Grenoble, started 01/04/2011, supervised by J.S. Franco, E. Boyer, F. Leclerc et P. Perez.

PhD in progress: Georges Nader, *Evaluation de la qualité perceptuelle de maillages dynamiques et ses applications*, Université Claude Bernard - Lyon 1, started 01/10/2013, supervised by Florent Dupont, Kai Wang and Franck Hétroy.

PhD in progress: Li Wang, *Transport optimal pour l'analyse de formes en mouvement*, Université de Grenoble, started 01/10/2013, supervised by Edmond Boyer and Franck Hétroy.

PhD in progress : Vagia Tsiminaki, *Appearance Modelling and Time Refinement in 3D Videos*, Université de Grenoble, started 01/10/2012, supervised by J.S. Franco and E. Boyer.

9.2.3. Juries

- Edmond Boyer was reviewer of one PhD thesis (Youssef Alj - Université de Rennes) and was examiner of one PhD thesis (Mathieu Barnachon - Université de Lyon 1).
- Franck Hétroy was examiner of one PhD thesis (Thibaut Le Naour - Université de Bretagne Sud).

MUTANT Project-Team

9. Dissemination

9.1. Scientific Animation

MuTant acted as co-organizer and scientific chair for the first **International Conference on Geometric Science of Information 2013** which took place in École des Mines (Paris) in partnership with SEE, and THALES. The conference attracted more than 150 participants worldwide and conference proceedings were published by Springer. MuTant team members organized a special session on Audio and Music and further organized a special social session on music computing at Ircam.

The **Brillouin Seminar series on Information Geometry** is coordinated by MuTant in partnership with LIX and THALES. It gathers 80 international researchers on the topic from various disciplines. In 2013, we organized 4 major talks. The seminar activity on 2013 was particularly down due to the co-organization of the first International Conference on the topic by MuTant and collaborators. Videos are available on the seminar website.

Jean-Louis Giavitto is in the management team of the GDR GPL (Genie de la programmation et du logiciel), responsible with Etienne Moreau of the “Languages and Verification” pole of the GDR. He is also an expert for the ANR DEFI projects and a reviewer for FET projects for the UC. He is also the redactor-in-chief of TSI (Technique et Science Informatiques) published by Lavoisier.

Jean-Louis Giavitto has participated in the program committee of the following workshop and conferences: Rencontres interdisciplinaires de Rochebrune: “La preuve et ses moyens” 13 au 19 janvier 2013; Digital Entertainment Technologies and Arts (DETA) track at GECCO 2013, 6-10 July 2013, Amsterdam, The Netherlands; NICSO 2013 The VI International Workshop on Nature Inspired Cooperative Strategies for Optimization, September 2-4, 2013 Canterbury, United Kingdom; HaPoC 2013 2nd International Conference on the History and Philosophy of Computing 2013, 28th - 31st October 2013, 27/11/13 4/9 Ecole Normale Supérieure, Paris; MeCBIC 2013 7th Workshop on Membrane Computing and Biologically Inspired Process Calculi, 7th July 2013, Riga, Latvia.

Jean-Louis Giavitto was cochair of the 6th Spatial Computing Workshop, satellite workshop of AAMAS 2013, Saint-Paul, USA.

Arshia Cont participated in the following events: Course in Collège de France, **Informatics of Time and Events** curated by Gérard Berry, June 2013; Invited keynote in Seoul (South Korea) on Antescofo, November 2013; Keynote in GSI, Grenoble in December 2013; Invited speech and demonstration for the 20th anniversary of **Prix La Recherche**; CHI workshop on Models of Time with Jean-Louis Giavitto and Florent Jacquemard, April 2013.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Arshia Cont, Audio Technology Review, 2h/week, L3, Paris Superior Conservatory of Music (CNSMDP), France.

Master : Arshia Cont, Machine Learning for Music, 15 hours, M2, UPMC/ATIAM, France.

Doctorat : Enseignant, titre du cours, nombre d’heures en équivalent TD, université, pays

Jean-Louis Giavitto has been invited to give a one week course on Spatial Computing at the University of Cali, Colombia (20 hours).

9.2.2. Supervision

PhD in progress :

Jose´ Echeveste, Synchronous Languages for Computer Music Composition and Performance, Started September 2011, co-directed by Jean-Louis Giavitto and Arshia Cont.

Philippe Cuvilier, Inference Mechanisms for on-line Machine Listening, Started September 2013, directed by Arshia Cont

Clement Poncelet, Formal analysis of human-machine interactions in complex timed scenarios. Started in October 2013, directed by Florent Jacquemard.

9.2.3. Juries

Florent Jacquemard participated in the selection committee to the 2013 recruitment campaign at the Inria center of Lille.

Florent Jacquemard participated to the defense committee for the PhD of Vincent Hugot, “Tree Automata, Approximations, and Constraints for Verification, Tree (Not-Quite) Regular Model-Checking”, University of Franche-Comté, September 2013. and to the mid-term PhD defense of Emil Mircea Andriescu on “Dynamic synthesis and deployment of mediation protocols in collaborative mobile environments”, a CIFRE agreement between UPMC, Inria and the SME Ambientic, in November 2013.

Jean-Louis Giavitto has expertised several project for the Ulysses Network <http://www.ulysses-network.eu/web/home/>; and has been reviewer of the PhD thesis of M. Obrovac (IRISA), A. Ajouli (LINA) and of the Habilitation of Arnaud Banos (Sorbonnes). He was also member of one selection committee for UPMC.

9.3. Popularization

MuTant team was featured in the 2nd edition of **Made In France (MIF) Expo** in the major Exhibition Hall in Paris (Porte de Versailles) with a **dedicated stand** for Antescofo with more than 3 million visitors during 3 days.



Figure 6. Antescofo demo in Ministry of Industry featuring Marlène Schaff (French THE VOICE, Season 2)

Antescofo was featured by the French Ministry of Industry for a public talk and largely diffused demo featuring the french star singer Marlène Schaff from *The Voice*.

Arshia Cont was invited for a public presentation/demo of *Antescofo* for the 20th anniversary of the [Prix La Recherche](#). [Click for video](#).

Jean-Louis Giavitto has co-animated the public discussion following the movie "Codebreaker: Alan Turing" with C. Villani and G. Berry at the Cinema Grand Action. He gave several seminars for a non computer scientist audience:

“Analyse formelle des concepts, Q-analyse et programmation spatiale : quelques aspects philosophiques du nœud mathématique/musique/ informatique, séminaire MaMuPhi, l’Ecole Normale (february 2013);

“Écriture du temps et de l’interaction en informatique musicale”, séminaire Philosophie de l’informatique, de la logique et de leurs interfaces, Centre Cavailles, Ecole Normale, (mars 2013);

“Modélisation spatiale et approche géométrique en musique”, Journées nationales du RNSC (octobre 2013);

“Simultanéité, succession et durée dans l’interaction musicale en temps-réel”, séminaire MaMux Temps, rythme et arithmétique, (décembre 2013).

As the redactor-in-chief of TSI, Jean-Louis Giavitto has initiated a new section devoted to portraits and talking with french personalities in computer science. These articles are also published in the SIF journal.

José Echeveste has presented Antescofo and participated to the event organized for the “Fête des Sciences” at Forum des Halles and UPMC.

We have published a popularization article on "Computer Assisted Music" in the review [DocSciences](#), number 15.

MYRIADS Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Program committees

Roberto Cascella was program committee member for IEEE VTC 2013-Fall and IEEE VTC 2013-Spring.

Eugen Feller was program committee member of EE-LSDS 2013 and PDP (2013, 2014).

Yvon Jégou was program committee member of IEEE TrustCom 2013 conference, GC2013 conference and ORMaCloud workshop co-located with ACM HPDC 2013.

Christine Morin was program committee member of the *International Symposium on Parallel and Distributed Computing (ISPDC)* in 2013 and 2014, *IEEE International Parallel & Distributed Processing Symposium (IPDPS)* in 2014, *IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CC-GRID)* in 2013 and 2014, *CLOSER* in 2013 and 2014, *International Conference on Cloud and Green Computing (CGC)* in 2013, *Resilience (Workshop on Resiliency in High Performance Computing in Clusters, Clouds, and Grids)* co-located with EuroPar in 2013, *VTDC (International Workshop on Virtualization Technologies in Distributed Computing)* co-located with ACM HPDC in 2013, *ScienceCloud* co-located with ACM HPDC in 2013, *OrmaCloud* co-located with ACM HPDC in 2013 and 2014, *ESPAS (Workshop on Extreme Scale Parallel Architectures and Systems)* in 2014 *CrossCloud (workshop on cloud interoperability and federation)* co-located with INFOCOM in 2014, *Distributed Cloud Computing (DCC)* workshop co-located with SIGCOMM in 2014. She was *General Co-Chair* of the IEEE ISPA conference held in Melbourne, Australia, in July 2013. She was *Program vice-chair* of the IEEE GreenCom conference held in Beijing, China, in August 2013. She was *General co-chair* of the DIHC international workshop co-located with the EuroPar conference held in Aachen, Germany, in August 2013. She is *Tutorial Chair* of the IEEE Cluster conference to be held in Madrid, Spain, in September 2014.

Anne-Cécile Orgerie was program committee member of FedICI workshop co-located with EuroPar 2013, OPTIM workshop co-located with HPCS 2013, IEEE GreenCom 2013, CGC 2013, ITC SSEGN seminar co-located with ATNAC 2013, TIWDC 2013, HSNCE workshop co-located with COMPSAC 2013, EEHPDC workshop co-located with HPDC 2013, EE-LSDS 2013, and E2HPC2 workshop co-located with EuroMPI 2013. She was also publication co-chair for ICPP 2013, general co-chair for ExtremeGreen workshop co-located with CCGrid 2013, and demo chair for EE-LSDS 2013.

Guillaume Pierre was program committee member of CCGrid 2013, CFSE 2013, IC2E 2013, SAC 2013, DAIS 2013, CSCS19, CloudDP 2013, ISPDC 2013, ORMaCloud 2013, BigDataCloud 2013, DIHC 2013, IC2E 2014, DADS track of SAC 2014, and MobileCloud 2014. He was also workshop chair of EuroSys 2014.

Thierry Priol was SC'13 "Grids and Clouds" track co-chair.

Cédric Tedeschi was a program committee member of ICWS 2013, ICCS 2013, CloSer 2013 and ComPas2013.

9.1.2. Evaluation committees, consulting

Roberto Cascella was invited to join the final review of the FUI11 CompatibleOne French project.

Yvon Jégou is a member of the Grid 5000 executive committee. He is a member of the *Comité de Sélection et de Validation (CSV)* of the *Images & Réseaux* cluster.

C. Morin acted as an expert to review proposals for the French Research Agency (ANR). She is a member of the ModaClouds European project Advisory Board. Since September 2013, she has been a member of the Irisa/Inria "Commission Personnel" being in charge of post-docs and "délégations". She is a member of the scientific council of ENS Cachan. She was a member of a professor position selection committee at *Ecole des Mines de Nantes*.

Anne-Cécile Orgerie is expert at the AERES for evaluating the doctoral schools.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Roberto Cascella (at the University of Rennes 1):

- License 3: Inter-networking (30h ETD)

Christine Morin is responsible for the ISI teaching unit.

Christine Morin:

- Master : Internet of Services: Programming Models & Infrastructures (ISI), 12 hours ETD, M2RI, University of Rennes 1, France.
- Master : Cluster single system image operating systems, 4.5 hours ETD, M2, Institut Telecom Sud Paris, France.
- Master : Energy management in computing infrastructures (as part of the Eco-STIC module), 4.5 hours ETD, M1, Supelec, France.

Anne-Cécile Orgerie (at ENS de Rennes):

- Master 1: projet logiciel (24 hours ETD)
- License 3: architecture et systèmes 2 (36 hours ETD)

Nikos Parlavantzas (at INSA Rennes):

- 4th year: Operating Systems (40 hours ETD)
- 4th year: Big Data and Applications (25 hours ETD)
- 4th year: Networking and SOA (12 hours ETD)
- 4th year: Advanced Operating Systems (12 hours ETD)
- 4th year: Parallel programming (12 hours ETD)
- 4th year: Software Development Project (30 hours ETD)
- 5th year: Component-based Software Engineering (16 hours ETD)

Jean-Louis Pazat is responsible for the following graduate teaching Modules: Advanced operating Systems, Parallel Computing, Networking and SOA.

Jean-Louis Pazat (at INSA Rennes for 2012-2013):

- 4th year: Advanced Operating Systems (32 hours ETD)
- 4th year: Parallel Programming (48 hours ETD)
- 4th year: Networking and SOA (48 hours ETD)
- 4th year: Software development project (60 hours ETD)

Guillaume Pierre (at the University of Rennes 1):

- License 3: Systèmes (25 hours ETD)
- License 3: Organisation et utilisation des systèmes d'exploitation 2 (67 hours ETC)
- Master 2: Techniques de développement logiciel dans le Cloud (39 ETD)
- Master 1: Service Technologies (24 ETD)
- Master 2: Approche algorithmique des applications et systèmes répartis (32 ETD)

Cédric Tedeschi (at the University of Rennes 1 for 2012-2013):

- Licence 3: Organization of Operating System (38 hours ETD)
- Licence 3: Algorithmic methods (22 hours ETD)
- Master 1: Multitask Operating Systems (65 hours ETD)
- Master 1: Concurrency in Systems and Networks (56 hours ETD)
- Master 2: Muli-users systems (50 hours ETD)
- Master 2 (research): Internet of Services (6 hours ETD)

9.2.2. Supervision

PhD : Marko Obrovac, Chemical Computing for Distributed Systems: Algorithms and Implementation, Université de Rennes 1, March, 28 2013, Thierry Priol, Cédric Tedeschi.

PhD : Erwan Daubert, Environmental adaptation of services in large scale distributed architectures, INSA de Rennes, May 24 2013, Françoise André, Olivier Barais (Triskell), Jean-Louis Pazat.

PhD : Chen Wang, Using Chemical Metaphor to Express Workflow and Service Orchestration, INSA de Rennes May, 28 2013, Jean-Louis Pazat.

PhD : Stefania Costache, Market-based Autonomous Resource and Application Management in the Cloud, defended on 3 July 2013, Christine Morin, Nikos Parlavantzas.

PhD in progress : Djawida Dib, Dynamic adaptation in distributed systems, October 2010, Christine Morin, Nikos Parlavantzas.

PhD in progress : Ancuta Iordache, Multi-resource optimization for application hosting in heterogeneous clouds, February 2013, Guillaume Pierre.

PhD in progress: Yunbo Li, Resource allocation in a Cloud partially powered by renewable energy sources, October 2013, Anne-Cécile Orgerie, Jean-Marc Menaud (Ascola).

PhD in progress: Ismael Cuadrado Cordero, Energy-efficient and network-aware resource allocation in Cloud infrastructures, October 2013, Christine Morin, Anne-Cécile Orgerie.

PhD in progress: Édouard Outin, A multi-objective adaptation system for the management of a Distributed Cloud, October 2013, Olivier Barais (Triskell), Yvon Jégou, Jean-Louis Pazat.

PhD in progress: Sabbir Hasan, SLA Driven Cloud autoscaling for optimizing energy footprint, December 2013, Thomas Ledoux (Ascola), Jean-Louis Pazat.

9.2.3. Juries

- Christine Morin is a reviewer in the PhD defense committee of Marco Meoni, EPFL (January 8, 2013).
- Christine Morin is a member of the PhD defense committee of Flavien Quesnel, Ecole des Mines de Nantes (February 20th, 2013).
- Christine Morin is a reviewer in the PhD defense committee of Damien Borghetto, Université de Toulouse 1 (June 3rd 2013).
- Christine Morin is a reviewer in the PhD defense committee of Enric Tejedor Saavedra, Université Polytechnique de Catalogne (UPC), Spain (July 15th, 2013).
- Christine Morin is a member of the PhD defense committee of Gylfi Gudmundsson, Université de Rennes 1 (September 12th 2013).
- Christine Morin is a member of the PhD defense committee of Joseph Emeras, Université de Grenoble (October 1st, 2013).
- Christine Morin is the president the HDR committee of Laurent Lefèvre, ENS Lyon (November 14th 2013).
- Christine Morin is a reviewer in the PhD defense committee of Sylvain Lefebvre, CNAM, Paris (December 10th 2013).

- Christine Morin is the president of the PhD defense committee of Minh Tuan Ho, University of Rennes 1 (December 18th, 2013).
- Guillaume Pierre is a member of the PhD defense committee of Jiayi Liu, Telecom Bretagne (November 4th 2013).
- Guillaume Pierre is a member of the promotion committee to the rank of Assistant Professor of George Pallis, university of Cyprus (October 30th 2013).
- Guillaume Pierre is a member of the PhD defense committee of Alexandre van Kampen, Inria (March 8th 2013).
- Guillaume Pierre is a member of the PhD defense committee of Viet-Trung Tran, Inria (January 21st 2013).
- Cédric Tedeschi is a member of the PhD defense committee of Chen Wang, Université Rennes 1 (May 28th 2013)
- Jean-Louis Pizat is a reviewer for the PhD thesis of Frederico Alvares, Ecole des Mines de Nantes (April 9th 2013)
- Jean-Louis Pizat is the president of the PhD defense of Rémy Druilhe, Université de Lille (December 5th 2013)
- Jean-Louis Pizat is the president of the PhD defense of Tan Le Nhan, Université de Rennes 1 (December 10th 2013)

9.3. Popularization and scientific animation

- Roberto Cascella gave a talk entitled “The Conrail approach for interoperable and dependable Clouds” at Create-Net, 12 December 2013 (Trento, Italy)
- Roberto Cascella gave a talk entitled “The Conrail Approach for Interoperable Clouds” at Cloud Interoperability Workshop, 18 September 2013 (Madrid, Spain — <http://www.cloudplugfest.org/cloud-interoperability-week/workshop>)
- Roberto Cascella gave a talk entitled “Open Social Lab: Ad Hoc Clouds for Crowd Social Computing” at Séminaire thématique Inria “Smart Cities”, 17 July 2013 (Paris, France)
- Roberto Cascella was a panelist in the panel “la sécurité dans le monde ouvert d’Internet” at journée CominLabs (Rennes, France)
- Roberto Cascella gave a talk entitled “Conrail: Open Computing Infrastructures for Elastic Services” at pre-FIA workshop “Multi-Cloud Scenarios for the Future Internet”, 7 May 2013 (Dublin, Ireland)
- Djawida Dib gave a talk entitled “Meryn - Open, SLA-driven, Cloud Bursting PaaS ” at Lawrence Berkeley National Laboratory, Berkeley, USA, in June 2013.
- Stefania Costache gave a talk entitled “Market-based Autonomous Resource and Application Management in the Cloud” at Queen’s University of Belfast, Belfast, UK, in November 2013.
- Florian Dudouet gave a talk about VEP at the Conrail summer school (Almere, the Netherlands, July 2013)
- Eugen Feller gave a talk entitled “From Autonomic Cloud Management to Storage and Data Management for Scientific Applications” at Ericsson Research Silicon Valley, October 2013 (San Jose, CA, USA).
- Eugen Feller gave a talk entitled “DALHIS – Data Analysis on Large Heterogeneous Infrastructures for Science” at the Berkeley-Inria-Stanford workshop, May 2013 (Stanford University, CA, USA).
- Yvon Jégou gave a talk entitled *Mise en œuvre des SLAs dans la pile logicielle Conrail* at the Workshop “SLA Management in Cloud computing”, colocated with ComPAS’2013.
- Yvon Jégou demonstrated the VEP component of Conrail on the Conrail booth during the *EGI Community Forum 2013*, April 8-12, Manchester UK.

- Yvon Jégou gave talk *Contrail Virtual Execution Platform* at the *OpenNebulaConf* event, September 24-26, Berlin, Germany.
- Christine Morin was invited to give a tutorial on *Energy Management in Large-scale Distributed Systems* at the *Green Wireless Communications school* of the NEWCOM Network of Excellence, Poznan, Poland, in September 2013.
- Christine Morin gave a talk entitled "Dependable Cloud Computing in Contrail" on Inria booth at SC'13, Denver, USA, November 2013.
- Christine Morin was invited to give a talk on Myriads activities on cloud computing at the EIT ICT Labs meeting on future clouds, Rennes, France, November 2013.
- Christine Morin gave a talk on Myriads research activities on cloud computing at CREATE-NET, Trento, Italy in December 2013.
- Guillaume Pierre gave a talk about ConPaaS and organized a hands-on session at Contrail summer school (Almere, the Netherlands, July 2013)
- Guillaume Pierre organized the 1st ConPaaS workshop (Amsterdam, the Netherlands, June 13th 2013) and gave the opening presentation
- Anne-Cécile Orgerie gave a talk entitled "Economies d'énergie dans les systèmes distribués à grande échelle", at ENS de Rennes, December 2013.
- Anne-Cécile Orgerie gave a talk entitled "Energy-Efficiency in Large-Scale Distributed Systems: an On-Off Approach" at the ACS department at LBNL, Berkeley, USA, May 2013.
- Anne-Cécile Orgerie gave a talk entitled "Snooze: an autonomic and energy-efficient management system for virtualized clusters" at GreenDaysLuxembourg, January 2013.
- Cédric Tedeschi gave a talk *Un protocole pour la capture atomique de molécules* at the "System" track of CompAS'2013.
- Alexandra Carpen-Amarie gave a talk entitled "Experimental Study of the Energy Consumption in IaaS Cloud Environments" at GreenDaysLille, November 2013.

9.4. Miscellaneous

Roberto Cascella is a member of the Inria "Commission locale formation".

Christine Morin is a member of the Project-Team Committee of INRIA RENNES – BRETAGNE ATLANTIQUE (Comité des projets), *Référent Chercheur* for INRIA RENNES – BRETAGNE ATLANTIQUE, Coordinator of the Inria@Silicon Valley program (in collaboration with Inria DRI) until August 2013, member of the scientific council of ENS Cachan. She is the coordinator of Contrail European project.

Nikos Parlavantzas is the local coordinator for the international exchange of students at the computer science department of Insa.

Jean-Louis Pazat is the leader of the "Large Scale Systems" department of IRISA. He is member of the Steering committee (conseil d'administration) of Insa Rennes. He is a member of the Computer Science Department committee and member of the IRISA-INSA Lab committee. He is the local coordinator for the international exchange of students at the computer science department of Insa.

Thierry Priol is the director of the Inria European Partnership department.

Cédric Tedeschi is a member of the administration council of the EECS departement of the University of Rennes 1.

NACHOS Project-Team

9. Dissemination

9.1. Teaching - Supervision - Juries

9.1.1. Teaching

Victorita Dolean, *Scilab*, MAM3, 24 h, Polytech Nice.

Victorita Dolean, *Partial differential equations*, MAM4, 66 h, Polytech Nice.

Victorita Dolean, *Computational electromagnetics*, MAM5, 40 h, Polytech Nice.

Victorita Dolean, *Numerical analysis*, L2, 30 h, University of Nice-Sophia Antipolis.

Victorita Dolean, *Mathematics and statistics*, M1 Erasmus Mundus EuroAqua, 34 h, University of Nice-Sophia Antipolis.

Claire Scheid and Stéphane Lanteri, *Introduction to scientific computing*, M2 Erasmus Mundus MathMods, 30 h, University of Nice-Sophia Antipolis.

Claire Scheid, *Practical works on differential calculus*, 26 h, L2, University of Nice-Sophia Antipolis.

Claire Scheid, *Practical works on differential equations*, 36 h, L3, University of Nice-Sophia Antipolis.

Stéphane Descombes, *Analyse numérique et applications en finances*, M2, 30 h, University of Nice-Sophia Antipolis.

9.1.2. Supervision

PhD in progress : Caroline Girard, *Numerical modeling of the electromagnetic susceptibility of innovative planar circuits*, October 2011, Stéphane Lanteri, Ronan Perrussel and Nathalie Raveu (Laplace Laboratory, INP/ENSEEIH/UPS, Toulouse).

PhD in progress : Fabien Peyrusse, *Numerical simulation of strong earthquakes by a discontinuous Galerkin method*, University of Nice-Sophia Antipolis, October 2010, Nathalie Glinsky and Stéphane Lanteri.

PhD in progress : Marie Bonnasse, *Numerical simulation of frequency domain elastic and viscoelastic wave propagation using discontinuous Galerkin methods*, University of Nice-Sophia Antipolis, October 2012, Julien Diaz (MAGIQUE3D project-team, Inria Bordeaux - Sud-Ouest) and Stéphane Lanteri.

PhD in progress : Jonathan Viquerat, *Discontinuous Galerkin time domain methods for nanophotonics*, October 2012, Stéphane Lanteri and Claire Scheid.

NANO-D Team

7. Dissemination

7.1. Teaching - Supervision - Juries

7.1.1. Teaching

Licence : Stephane Redon, "Introduction to computer science", INF311, 80h, Ecole Polytechnique, Paris, France

7.1.2. Supervision

PhD in progress : Petr Popov, Computational methods for protein structure prediction, November 2011, Sergei Grudinin

PhD in progress : Krishna Kant Singh, Adaptive parallel algorithms for molecular simulation, Grenoble University, September 2013, Jean-François Méhaut and Stéphane Redon

PhD : Zofia Trstanova, Adaptive Hamiltonians, Grenoble University, May 30, 2012, Stephane Redon

7.2. Participation to conferences, seminars

- S. Grudinin gave a talk "Efficient Boundary Element Method with curved elements" at the workshop "Computational Electrostatics for Biological Applications, CEBA 2013", Jul 1-3, Genova, Italy, 2013.
- S. Grudinin gave a talk "Predicting Multi Protein Assemblies" at the Second workshop on Computational Structural Biology: Integrative Approaches for Modeling Biomolecular Complexes, IAMB 2013, May 29-31, Nice, France, 2013.
- M. PiuZZi participated in ISMB/ECCB in Berlin, 2013.
- M. PiuZZi and S. Grudinin participated in XVIIIe congrès du Groupe de Graphisme et Modélisation Moléculaire, GGMM 2013, May 21-23, St Pierre d'Oléron, France, 2013.
- S. Grudinin and P. Popov participated at the Fifth CAPRI Evaluation Meeting, Apr 17-19, Utrecht, Netherlands, 2013.
- P. Popov gave a talk "Docktrina : Docking Protein Trimers" at the Fifth CAPRI Evaluation Meeting, Apr 17-19, Utrecht, Netherlands, 2013.
- S. Grudinin attended a school on Analysis of Diffraction Data in Real Space, ADD2013, Mar 18-22, Grenoble, France, 2013.

7.3. Popularization

NANO-D presented SAMSON to high school students during the 2103 "Fete de la Science" (Science Fair). The students were using SAMSON to interactively simulate chemical reactions, interact with models of nanotubes, build molecules, etc.

NECS Project-Team

9. Dissemination

9.1. Scientific Animation

- C. Canudas de Wit is President Elect of the European Control Association (EUCA) 2013-2015, and member of the Board of Governors of IEEE Control Systems Society. He is General Chair of the forthcoming European Control Conference, Strasbourg, July 2014 (<http://www.ecc14.eu/>). He is Associate Editor of IEEE Transactions on Control System Technology (since January 2013), Associate Editor of IEEE Transactions on Control of Network Systems (since June 2013), and Editor of the Asian Journal on Control.
- H. Fourati has been a peer-reviewer for international journals (IEEE Sensors Journal, IEEE/ASME Transactions on Mechatronics, Journal of Mechanics Engineering and Automation).
- F. Garin has been a peer-reviewer for international journals (IEEE Trans. Automatic Control, Automatica) and conferences (CDC 2013, ACC 2014, ECC 2014, ICCPS 2014) and for a chapter in a book in Springer LNCS. She is chair for student activities of the forthcoming European Control Conference ECC 2014.
- A. Kibangou has been a peer-reviewer for international journals (Automatica, IEEE Trans. on Control Systems and Technology, IEEE Trans. on Control of Network Systems, Elsevier Signal Processing, IEEE Trans. on Signal Processing, IET Communications, Int. J. of Adaptive Control and Signal Processing, and System & Control Letters) and conferences (CDC 2013, ACC 2014, ECC 2014). Locally, he is the organizer of seminars for the Control Department of GIPSA-LAB.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: H. Fourati, Informatique Industrielle, 100h, L1, IUT 1 (GEII2), University Joseph Fourier, France;

Licence: H. Fourati, Automatique, 24h, L2, IUT 1 (GEII2), University Joseph Fourier, France;

Licence: H. Fourati, Automatismes industriels et réseaux, 90h, L1 et L2, IUT1 (GEII2), University Joseph Fourier, France.

Licence: H. Fourati, Automatique, 45h, L3, UFR physique, University Joseph Fourier, France

Licence: F. Garin, Automatique, 26h, L2, IUT1 (GEII1), University Joseph Fourier, France.

Licence: A. Kibangou, Automatique, 62h, L2, IUT1 (GEII1), University Joseph Fourier, France.

Licence: A. Kibangou, Mathématiques, 14h, L2, IUT1 (GEII1), University Joseph Fourier, France.

9.2.2. Supervision

PhD: Valentina Ciarla, Commande d'un système de puissance électrique pour personne âgée et/ou handicapée, Grenoble University, Oct. 10th, 2013, co-advised by C. Canudas de Wit, F. Quaine, and V. Cahouet.

PhD in progress: Abir Ben Khaled, Distributed real time simulation of numerical models: application to powertrain, Grenoble INP, Jan. 2011 - Apr. 2014, co-advised by D. Simon and M. Ben Gaid (IFPEN).

PhD in progress: Luis R. Leon Ojeda, Modélisation macroscopique, estimation de la demande et prédiction du flux pour les systèmes de transport intelligents, Grenoble University, April 2011-March 2014, Co-advised by C. Canudas de Wit and A. Kibangou.

PhD in progress: Dominik Pisarski, Contrôle d'accès collaboratif : application à la Rocade Sud de Grenoble, Grenoble University, June 2011 - May 2014, Advised by C. Canudas de Wit.

PhD in progress: Ruggero Fabbiano, Distributed source seeking control, Grenoble University, Dec. 2011 - Nov. 2014, co-advised by C. Canudas de Wit and F. Garin.

PhD in progress: Thi-Minh Dung Tran, Consensus en temps fini et ses applications en estimation distribuée pour les systèmes de transport intelligents, Grenoble University, co-advised by A. Kibangou and C. Canudas de Wit, Jan. 2012 - Apr. 2015.

PhD in progress: Giovanni de Nunzio, Control of communicating vehicles in urban environnement, Grenoble University, co-advised by C. Canudas de Wit and P. Moulin (IFPEN), Sep. 2012 - Aug. 2015

PhD in progress: Aida Makni, Estimation multi-capteurs et commande temps-réel tolérante aux fautes d'un drone aérien, Grenoble INP, Oct. 2012 - Sep. 2015, co-advised by H. Fourati, A. Kibangou and C. Canudas de Wit.

9.2.3. Juries

- C. Canudas de Wit was member of the AERES Evaluation committee for the RTRA STAE, May 2013.
- F. Garin was a member of the Ph.D. defense committee of Weiguo Xia, Univ. of Groningen (The Netherlands), June 28th, 2013. Thesis: Distributed algorithms for interacting autonomous agents.

9.3. Popularization

Carlos Canudas has given a plenary talk on 'Forecasting and control of traffic systems: a network perspective' at the International Workshop on Smart City, organized by IEEE Control Systems Society in Hangzhou, China, in August 2013, <http://smartcity.hdu.edu.cn>

NEUROMATHCOMP Project-Team

7. Dissemination

7.1. Scientific Animation

Bruno Cessac is a reviewer for the CONYCIT (Chile) and COFECUB (Brasil) program and for the journals *Physica D*, *Nonlinearity*, *Chaos*, *Journal of Statistical Physics*, *IEEE Transaction in Neural Networks*, *Journal of Mathematical Biology*, *Journal of Computational Neuroscience*. He is in charge of internships organisation in the Master of Computational Biology, Nice.

Olivier Faugeras is co-Editor in Chief of the *Journal of Mathematical Science* (JMN). He is a member of the French Academy of Sciences and of the French Academy of Technology. He is a member of panel 1 for the ERC Frontier Research Grants.

Pierre Kornprobst was a member of the program committee of the 6th Pacific-Rim Symposium on Image and Video Technology. He co-edited with Frédéric Cazals the book entitled "*Modeling in Computational Biology and Medicine: A Multidisciplinary Endeavor*" [30], which illustrates the program taught in the Master of Science in Computational Biology (Website: <http://cbb.unice.fr>) that they launched in 2009.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Licence 1 : Massimiliano Muratori, TP de physique, 45 h, L1, Ecole d'ingénieurs Polytech.

Licence 2 : Rodrigo Cofre, Traitement du signal, 50h, L2, Université Nice Sophia Antipolis, France.

Licence 2 : Massimiliano Muratori, TD d'électromagnétisme , 18h, L2, Ecole d'ingénieurs Polytech.

Licence 3 : Hassan Nasser, Electronique numérique, 36h, L3, Université Nice Sophia Antipolis, France

License 3 : Hassan Nasser, Microprocesseurs, 28h, L3, Université Nice Sophia Antipolis, France

Master 2: Bruno Cessac, *Neuronal dynamics*, 36 hours, Master of Computational Biology and Biomedicine, Université Nice Sophia Antipolis, France.

Master 2: Olivier Faugeras, Etienne Tanré (TOSCA EPI) and Romain Veltz, teach the module *Mathematical Methods for Neuroscience*, M2, ENS Paris, France. The teaching load is mostly distributed between Etienne Tanré and Romain Veltz, 24h each.

7.2.2. Supervision

PhD: Javier Baladron, «Parallel implementations of mean field and neural field equations», Université Nice Sophia Antipolis, 2013, supervised by Olivier Faugeras.

PhD: Diego Fasoli, «Mean-field theory of realistic spiking neurons», Université Nice Sophia Antipolis, 2013, supervised by Olivier Faugeras.

PhD in progress: Hassan Nasser, «Reproducing and anticipating retinal responses», defence planned in March 2014, supervised by Bruno Cessac.

PhD in progress: Rodrigo Cofre-Torres, «Statistics of spike trains and neuronal structures», defense planned in 2014, supervised by Bruno Cessac.

PhD interrupted: Massimiliano Muratori, « Mean field equations for neural networks and synaptic correlations», supervised by Bruno Cessac. The student has decided to stop his PhD after one year to teach in college.

PhD in progress: Kartheek Medathati, « Perception du mouvement et attention: Des neurosciences à la vision artificielle », defence planned in 2016, co-supervised by Pierre Kornprobst and Guillaume Masson (Institut de Neurosciences de la Timone, UMR 6193, CNRS, Marseille, France).

7.2.3. Juries

Bruno Cessac. Jury member of Diégo Fasoli's PhD thesis "Mean-field theory of realistic spiking neurons". Nice, 25-09-2013.

Bruno Cessac. Reviewer of Christophe Magnani's PhD Thesis, "Analyse Sinusoïdale Quadratique de la Fonction Neuronale", Paris Descartes, 10-12-13.

Olivier Faugeras, Chair of the Jury of Mikhail Bogdanov PhD Thesis, Nice 9-12-2013.

Olivier Faugeras, Reviewer for the HDR manuscript of Christophe Pouzat, Paris-Descartes, 10-2013.

NEUROSYS Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Scientific responsibilities

- Responsibility of Master 2-program (speciality TAL) at UFR Math-Info, University of Lorraine (L. Buhry)
- Local coordinator of the Erasmus Mundus program *LCT (Language and Communication Technologies)* (L. Buhry)
- Responsibility of Master program in Computer Science (speciality *Recherche IPAC*), University of Lorraine (L. Bougrain)
- Head of Professional Master Internships in Computer Science, University of Lorraine (L. Bougrain)
- Member of committee IST (L. Bougrain)
- Head of the Communication team of the Computer Science Department of FST (L. Bougrain)
- Member of the Program Committee of the conference on Automatic Learning (CAP) (L. Bougrain)
- Member of the Board of Directors in Organization of Computation Neuroscience (A. Hutt)
- Editor of Journal *ISRN Probability and Statistics* and *Dataset Papers in Medicine – Anesthesiology* (A.Hutt)

8.1.2. Review activity

- For journals: *Frontiers in Computational Neuroscience*, *Cerebral Cortex*, *New Journal of Physics*, *Physical Review Letters*, *Physical Review X*, *Physical Review E*, *Cognitive Neurodynamics*, *Advances in Difference Equations*, *SIAM Journal of Applied Dynamical Systems*, *ISRN Probability and Statistics*, *Scholarpedia* (A. Hutt); *Journal of Neural Engineering*, *Neurocomputing*, *CSSP (Circuits, Systems and Signal Processing)* (L. Buhry)
- Programme FP7-PEOPLE (L. Buhry)
- Programme FP7-FET *Human Brain Project* (A. Hutt)

8.1.3. Conference organization and participation

- Organization of the g.tec-workshop at LORIA (L. Bougrain)
- Organization of a workshop at the Computational Neuroscience Conference in Paris (A. Hutt)
- Organization of a one-day tutorial at the Computational Neuroscience Conference in Paris (A. Hutt)
- Member of the organization committee of *Forum des Sciences Cognitives* at Nancy (L. Buhry)

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence : L. Buhry, *Artificial Intelligence and solution of problems*, 25h, level L3 MIASHS, University of Lorraine

Licence: L. Bougrain, *Artificial intelligence and mobile development - Licence of Computer Science*, 70h, level L3, University of Lorraine

Licence: L. Bougrain, *Optimization - Licence of Computer Science*, 37.5h, level L3, University of Lorraine

Licence: L. Bougrain, *Computer Networks - Licence of Computer Science*, 20h, level L2, University of Lorraine

Licence: L. Bougrain, *Artificial intelligence*, 59h, level L3, Telecom Nancy/ESIAL - University of Lorraine

Licence: L. Bougrain, *Immersive and innovative interfaces*, 3h, level L3, Supélec Metz

Master: L. Buhry, *Algorithms for Artificial Intelligence*, 31h, level Master 1 SCA (Sciences Cognitives et Applications), University of Lorraine

Master: L. Buhry, *Fundamentals in Artificial Intelligence and Data Search*, 18h, level Master 1 SCA (Cognitive Science and Applications), University of Lorraine

Master: L. Buhry, *Computational Neuroscience*, 25h, level Master 2 SCMN, University of Lorraine

Licence: L. Bougrain, *Artificial neural networks - Master of mathematics speciality pro. mathematical engineering and computing tools*, 24h, level M3, University of Lorraine

Master: L. Bougrain, *Ergonomics - Master of Computer Science*, 18h, level M1, University of Lorraine

Master : Axel Hutt, *Algorithm Perls*, 9h, level M1, École des Mines Nancy

8.2.2. Supervision

PhD: Maxime Rio, *Bayesian model for the detection of synchronisation in electro-cortical signals*, Université de Lorraine, July 16 2013, Bernard Girau and Axel Hutt

PhD: Carolina Saavedra, *Analysis and multi-channel denoising methods based on wavelets to improve the detection of evoked potentials without averaging: application to BCI*, Université de Lorraine, 14 December 2013, Bernard Girau and Laurent Bougrain

PhD in progress: Meysam Hashemi, *Analysis of a cortico-thalamic model in the context of general anaesthesia*, May 2012, Axel Hutt

PhD in progress: Mariia Fedotenkova, *Analysis of single-channel EEG-data by a recurrence analysis*, November 2013, Axel Hutt

PhD in progress: Cecilia Lindig Leon, *Multilabel classification for a 3D control of a robotic arm using band-specific EEG markers associated with a motor task*, November 2013, Laurent Bougrain and Axel Hutt

8.2.3. Juries

- PhD defense of Muhammad Yousaf, Norwegian University of Life Sciences, 22 February 2013, reviewer (Axel Hutt)
- PhD defense of Merdan Sarmis, Université de Mulhouse, 4 December 2013, reviewer (Axel Hutt)

8.3. Popularization

- Nancy Renaissance 2013 *Moments d'Invention* with stand and talk on conference (L. Bougrain).
- Fête de la Science à Nancy, October 2013 (L. Bougrain et A. Hutt).
- Science Slam Talk on *Sleep and Anaesthesia* at University of Frankfurt / Main, February 2013 (A. Hutt).

NON-A Project-Team

8. Dissemination

8.1. Scientific Animation

- Organization of conferences
 - J.P. Richard, a member of NOC of 20th IFAC World Congress, Toulouse, France, 10-14 July 2017
 - D. Efimov, Invited Session at IEEE CDC 2013, "Interval estimation of uncertain systems"
- Participation at International Programming Committees (IPCs) of conferences
 - J.P. Richard, AE at EUCA-IEEE ECC'13, Zürich, Suisse (12th European Control Conference) July 17-19, 2013
 - J.P. Richard, AE at IFAC 2013 Joint conference SSC-TDS-FDIA, Grenoble, France ("Symposium System Structure and Control", "Workshop Time-Delay Systems" and "Workshop Fractional Differentiation and Its Applications"), February 4-6, 2013
 - J.P. Richard, IEEE ICCVE 2013, Las Vegas, Nevada, USA (2nd Int. Conference on Connected Vehicles & Expo), December 2-6, 2013
 - J.P. Richard, IEEE GLOBECOM 2013, Atlanta, Georgia, USA (11th Global Communications Conference), Dec. 2013
 - J.P. Richard, IEEE VTC2013, Dresden, Germany (77th IEEE Vehicular Technology Conference), Track 'Mobile Networks, Applications and Services', 3-5 June 2013
 - J.P. Richard, IEEE SaCoNet 2013, Paris, France (4th IEEE Int. Conference on Smart Communications in Network Technologies), 17-19 June 2013
 - W. Perruquetti, IFAC 2013 Joint conference SSC-TDS-FDIA ("Symposium System Structure and Control", "Workshop Time-Delay Systems" and "Workshop Fractional Differentiation and Its Applications"), Grenoble, France, 4-6 February 2013
 - W. Perruquetti, 5th IFAC International Workshop on Periodic Control Systems (PSYCO'2013), Caen, France, 3-5 July 2013
 - W. Perruquetti, National Projects Vice-Chair at ECC 2014, Strasbourg, France, 24-25 June 2014
 - W. Perruquetti and D. Efimov, IFAC World Congress 2014, Cape Town, South Africa
 - A. Polyakov, VSS 2014, Nantes, France
- Plenary talks
 - J.P. Richard, Keynote paper GDRi DelSys CNRS, LAAS, Toulouse, November 2013
 - J.P. Richard and W. Perruquetti, HYCON2-BALCON joint workshop, FP7, Belgrade, Serbia, July 2013
 - D. Efimov, CinvesRob 2013, Cinvestav Guadalajara, Mexico, November 2013
 - O. Gibaru, International Conference on New Trends in Splines and Approximation Theory, June 19-21, 2013
 - R. Ushirobira, Colloquium São Paulo-Lyon "Algebra, Groups and Logic", Lyon, April 2013
- Invited seminars
 - J.P. Richard, GREYC CNRS, EnsiCaen, Caen, "Networked Control Systems: to buff, or not to buff", Novembre 2013

- J.P. Richard, GT SàR du GDR MACS, Lille, Juin 2013
- D. Efimov, UNAM, Mexico, November 2013
- National scientific animation
 - T. Floquet is a member of Conseil National des Universités, 61ème Section
 - G. Zheng is a member of Conseil National des Universités, 61ème Section
 - R. Ushirobira is a member of Conseil National des Universités, 25ème Section, a member of the bureau of the "Comission Permanente du CNU"
 - R. Ushirobira is a member of the "Commission de Développement Technologique" of the research center Inria Lille and a member of the "Comité de centre" of the research center Inria Lille
 - J.P. Richard, Scientific Committee of the GdR MACS, CNRS, Group of Research in "Modelling, Analysis and Control of dynamic Systems"
 - J.P. Richard, Scientific Committee of the group "Control and communication networks", created Jan. 2010 within the GdR MACS
 - R. Ushirobira is a member of the GDR CNRS 3395 "Algebraic and geometric Lie theory"
 - W. Perruquetti is a head of ANR Piloting Committee
- International scientific animation
 - J.P. Richard is a member of GDRi DelSys CNRS
 - J.P. Richard is a member of IFAC Technical Committee "Networked Systems" (International Federation of Automatic Control, TC1.5)
 - J.P. Richard is a member of IFAC Technical Committee "Linear Control Systems" (International Federation of Automatic Control, TC2.2)
 - D. Efimov is a member of IFAC Technical Committee "Adaptive and Learning Systems" (International Federation of Automatic Control, TC1.2)
 - W. Perruquetti is a member of IFAC Technical Committee "Non-linear Control Systems" (International Federation of Automatic Control, TC2.3) and a member of IFAC Technical Committee "Discrete and Hybrid Systems" (International Federation of Automatic Control, TC1.3)
 - A. Polyakov is a member of IFAC Technical Committee "Non-linear Control Systems" (International Federation of Automatic Control, TC2.3)
 - W. Perruquetti is the Chair of IFAC Technical Committee "Social impact of automation" (International Federation of Automatic Control, TC9.2)
 - G. Zheng, T. Floquet and D. Efimov are members of IFAC Technical Committee "Social impact of automation" (International Federation of Automatic Control, TC9.2)

The members of Non-A are reviewers for most of the journal of the control and signal communities: IEEE Transactions on Automatic Control, IEEE Transactions on Systems and Control Technologies, IEEE Transactions on Industrial Electronics, IEEE Transactions on Signal Processing, Automatica, SIAM Journal on Control and Optimization, Journal of Computation and Applied Mathematics, Systems & Control Letters, International Journal of Control, International Journal of Robust and Nonlinear Control, International Journal of Systems Science, Journal Européen des Systèmes Automatisés, IET Control Theory & Applications, Fuzzy Sets and Systems, Mathematics and Computers in Simulation, International Journal of Modeling and Simulation, Journal of the Franklin Institute, ...

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Licence : Jean-Pierre Richard; Automatique et Intelligence ambiante (12h); L2; EC-Lille; France
- Licence : Lotfi Belkoura; Automatique (systèmes linéaires monovariables)(75h), Introduction à la Robotique (25h); L3; Lille 1; France
- Licence : Denis Efimov; TP Automatic control (16h), L2; EC Lille; France
- Licence : Gang Zheng; TP Automatic control (16h), L2; EC Lille; France
- Licence : Samer Raichy; Systèmes linéaires, Asservissements, Conversion d'énergie, Echantillonnages et systèmes discrets (192h), L3; ENSEA; France
- Licence : Rosane Ushirobira; TP Automatic control (16h); L2; EC-Lille; France
- Licence : Rosane Ushirobira; TP Numerical Analysis (20h); L1; Polytech Lille; France
- Master : Jean-Pierre Richard; Systèmes dynamiques (30h), Métiers de la recherche (4h), Modélisation des systèmes complexes(12h), Commande et observation (12h), Séminaire episteme (24h); L3; EC-Lille; France
- Master : Jean-Pierre Richard; Systèmes dynamiques non linéaires et à retards (30h); M2; Lille 1 – EC-Lille, France
- Master : Lotfi Belkoura; Représentation d'état (55h); M1; Lille 1; France
- Master : Lotfi Belkoura; Projets (10h); M1; Lille 1; France
- Master : Lotfi Belkoura; Introduction aux distributions (10h); M2; Lille 1; France
- Master : Rosane Ushirobira; Probability and Statistics (20h); M2; EC-Lille; France

8.2.2. Supervision

PhD : Emmanuel Bernuau, "Homogeneity theory for analysis and control", EC Lille, 04 October 2013, supervisors are W. Perruquetti and D. Efimov

PhD : Diego Mincarelli, "State estimation for hybrid systems", Lille 1, 19 December 2013, supervisors are L. Belkoura and T. Floquet

PhD : Yingchong Ma, "Path planning and control of non-holonomic mobile robots", EC Lille, 19 December 2013, supervisors are W. Perruquetti and G. Zheng

PhD : Marouene Oueslati, "Contribution à la modélisation dynamique, l'identification et la synthèse de lois de commande adaptées aux axes flexibles d'un robot industriel", Arts et Métiers ParisTech, 18 December 2013, supervisor is O. GIBARU

PhD : Sert H., "Intelligent module decision for autonomous indoor navigation of wheelchair robot", EC Lille, 15 January 2013, supervisors are W. Perruquetti and A.M. Kökösy

PhD in progress : Matteo Guerra, "Supervisory control of collective motion of mobile robots", 2012–..., supervisors are W. Perruquetti, D. Efimov and G. Zheng

PhD in progress : Zilong Shao, "Oscillatory control of robot manipulator", 2013–..., supervisors are W. Perruquetti, D. Efimov and G. Zheng

PhD in progress : Hafiz Ahmed, "Identification and modeling of circadian rhythms for oysters", 2013–..., supervisors are D. Efimov, R. Ushirobira and D. Tran

PhD in progress : Omran Hassan, "Commande et observation des systèmes de contrôle en réseau", 2011–2014, supervisors are J.P. Richard, F. Lamnabhi-Lagarigue and L. Hetel

PhD in progress : Maalej Sonia, "Algebraic estimation for robust control", 2011–..., supervisors are A. Kruszewski and L. Belkoura

PhD in progress : Essaid Edjekouane, "Cyber-physical systems", 2012–..., supervisors are J.P. Barbot, S. Riachy and Malek Ghanes

8.2.3. Juries

The team members are also involved in numerous examination committees of Theses and Habilitations, recruitment committees, in France and abroad (more than 15).

NUMED Project-Team

7. Dissemination

7.1. Scientific Animation

- Vincent Calvez: Organization of a thematic trimester in Lyon "Mathematical Biology 2013" (ENS and Univ. Lyon 1): 3 months, 4 conferences, 1 workshop and 1 summer school, more than 400 participants, focus on interdisciplinary conferences with biologists and theoretical physicists (evolutionary biology, cell biology, drug development, system biology).
- Paul Vigneaux and Vincent Calvez are editors of the **CEMRACS 2009 - Mathematical Modelling in Medicine** Proceedings. ESAIM. Vol. 30, August 2010, 165 pages.
- **Organization of Conferences :**
In 2008/2009, Vincent Calvez and Paul Vigneaux co-organize the **CEMRACS 2009 - Mathematical Modelling in Medicine**, 14th edition of this 6-week international summer school (at the CIRM, Marseille, France, July 20 to August 28, 2009). CEMRACS is supported by the SMAI (French Industrial and Applied Mathematics Society).
In 2010, Paul Vigneaux co-organizes the **8th JERAA**, 25-26 Nov., a two days conference on Partial Differential Equations gathering the community from Rhône-Alpes-Auvergne (France).
- **Seminars :**
Since September 2008, Paul Vigneaux and Vincent Calvez co-organize the "Modelling and Partial Differential Equations" seminar, joint with ENS de Lyon and Institut Camille Jordan (4 talks by month, from September to June).
- **Commissions and Boards :**
 - Paul Vigneaux is member of the Board of **MILYON**, the Laboratory of Excellence (Labex) in Mathematics of Lyon. This Labex aims at federating international research, higher education and society activities.
 - Paul Vigneaux is member of the Hiring Commissions ("Comités de Sélection") at the University of **Clermont-Ferrand 2, Lyon 1, Montpellier 2, Centrale Nantes, INSA Lyon** and **ENS de Lyon** : it consists in the selection of candidates for permanent positions in the Mathematics department.
 - Paul Vigneaux is member of the Boards of the Numerical Modelling Center (**PSMN**) of Lyon, of **UMPA**, the mathematics research lab at ENS de Lyon, of the Board of the Department of Mathematics (teaching) at ENS de Lyon.
 - Emmanuel Grenier created, together with Didier Bresch, the first national network gathering most of the french academic teams working on mathematical models for life sciences (GDR Mabem 2008 – 2011). He is in the scientific board of the GDR Metice, successor of GDR Mabem.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

- Marie Aimée Dronne teaches 192h per yer, in Lyon 1 University and in INSA de Lyon (Licence and Master, "master of neurosciences", "master of cancerology", "master of drug development"), teaching in mathematics and statistics for medical students and modeling for INSA students (electrophysiological models, epidemiological models, pharmacocinetic models)
- Vincent Calvez teaches 64h per year, L3, M2 (mathematics, complex systems) at ENS de Lyon

- Paul Vigneaux has his Associate Professor's teaching service (192 hours each year in 2010, 2011, 2012) at ENS de LYON. A few hours are done at L3 level and the majority of the service is done at 'Agregation' Training (M2 level): Numerical/Analysis, Partial Differential, Scientific Computing and Modelling. Excellent results are obtained by his students at the National Competition "Agregation de Mathematiques" (Several 20/20 and one first total rank (over 300 competitors) in 2012).
- In 2013, Paul Vigneaux only teaches 64 hours thanks to an Inria "delegation". The same year, he was an invited lecturer at the well established CNRS thematic school on "Computational Fluid Mechanics" (13th edition, each 2 years). This school is intended for Tenure-Track Researchers' as well as PhD students' training. He was also invited to give a 12 hours Doctoral lecture in the framework of the PhD program of the Institute of Mathematics of Seville, Spain (with Excellence Label from the Ministry of Education). He is also teaching at the M2-Recherche level at ENS de Lyon, a core lecture of the Mathematical Doctoral Program training of Lyon.
- Emmanuel Grenier is professor. He teaches 192h per year, at L3, M1, M2, Agrégation level (modeling, pde, analysis, ...). He was responsible of third year students of mathematics at ENS Lyon. He is now responsible for first year master students. He is a former associate professor at Ecole Polytechnique (till 2010).

7.2.2. Supervision

HdR: Benjamin Ribba, Université de Grenoble, 2013.

7.3. Popularization

- Vincent Calvez is responsible for regular actions towards high school students (regular talks in high schools).
- Paul Vigneaux:

Paul Vigneaux has a significant activity in the official dissemination website of CNRS: "Images des Mathematiques". He is a member of its Editorial Board since the beginning in 2009, in particular responsible of the "Billets" section (60% of the total reading flux of the website). Nonetheless, he also edited most of the applied mathematics articles of the site and made several articles contributions. Among others a translated/commented article on Richard Courant and his Institute, as well as a series, with the authorization of the EMS, of 20 articles on "Success Stories of Mathematics in Industry" in 2012-2013. Cf: <http://images.math.cnrs.fr/Vigneaux-Paul.html> In 2013, he was one of the editors of the series of 40 books published by the association of *Le Monde* (top national newspaper), *Institut Henri Poincaré* (Head: Cedric Villani) and *Images des mathematiques*. This series was supported by Cedric Villani and aims at broadcasting mathematics to a general public. Vincent Calvez was also one of the editors of the series. Currently still under publication, it is already an editorial success in terms of selling (20 book issued).

OAK Project-Team

8. Dissemination

8.1. Scientific Animation

Journal editorial responsibilities

- I. Manolescu has been the editor-in-chief of the ACM SIGMOD Record and an associate editor of the ACM Transactions on Internet Technologies. She has also been a member of the editorial board of PVLDB. Further, she has been the guest editor of a special issue of the *Ingénierie et Science Informatique (ISI)* journal vol. 18, no. 4, 2013.

Program committees memberships

- Nicole Bidoit served in the program committee of ADBIS 2013, the 7th East-European Conf. on Advances in Databases and Information Systems, Genoa (Italy).
- Bogdan Cautis served as program committee member for the international conferences ACM SIGMOD 2013 and ACM CIKM 2013.
- Dario Colazzo served as program committee member for the national conference Bases de Données Avancées (BDA) 2013.
- F. Goasdoué has participated to the program committees of the International Joint Conference on Artificial Intelligence (IJCAI, senior PC), IEEE International Conference on Tools with Artificial Intelligence (ICTAI), and International Workshop on Open Data (WOD), 2013.
- M. Herschel served as program committee member at the following conferences: Bases de Données Avancées (BDA) 2013, Advances in Databases and Information Systems (ADBIS) 2013, Data Management Technologies and Applications (DATA) 2013, IEEE Big Data 2013, Extending Database Technology (EDBT) 2013, and Business, Technology, and Web (BTW) 2013.
- I. Manolescu has participated to the program committees of the ACM SIGMOD Conference 2013, EDBT 2013 demonstration track, International Workshop on the Web and Databases (WebDB) 2013, Workshop on Open Data (WOD) 2013, and the Workshop “Data Engineering Meets the Semantic Web (DESWEB)” associated with the IEEE ICDE Conference, 2013.

Participation to scientific bodies

- International:
 - * I. Manolescu: member of the ACM SIGMOD Executive Committee, the EDBT Association, and the IEEE TCDE Awards Committee (since October 2013).
- National:
 - * I. Manolescu has been the president of the *Bases de Données Avancées (BDA)* steering committee in Jan-Oct 2013.
 - * N. Bidoit and I. Manolescu: members of the BDA committee.
- Faculty recruitment committees:
 - * N. Bidoit has been a member of a Professor recruitment committee at UNIV. PARIS-SUD (IUT).
 - * I. Manolescu has been a member of a Assistant Professor recruitment committees at U. Paris VI and U. Paris IX, and of a Professor committee at U. Paris IX.
- Other local committees and responsibilities:

- * Nicole Bidoit has been the head of the UNIV. PARIS-SUD Database team (until Jun 2013). In July, the team has fused with another Univ. one to form the new University team LaHDaK, of which N. Bidoit is the vice-head.
- * Nicole Bidoit is the head of the CS Doctoral School (ED 427) of UNIV. PARIS-SUD, a member of the HdR ad-hoc Committee, a member of the Inria SIF Scientific Committee, and is in charge of the CS Doctoral School in the EIT ICT Labs Doctoral Program. She is also a member of the LRI council, of the CCSU 27, and of the Telecom SudParis School Committee.
- * Nicole Bidoit and Ioana Manolescu are members of the steering committee of *Institut de la Société Numérique - ISN* within the Paris-Saclay IdEx.
- * Ioana Manolescu is a member of the executive committee of the DIGICOSME LabEx; she is also an elected member of Inria SIF personnel representative committee (since Oct 2013).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence: François Goasdoué, Databases, 62.5 ETD, L3, UNIV. PARIS-SUD, France.

Master: Dario Colazzo, Relational database systems: application tuning, 21h ETD, M2, UNIV. PARIS-SUD, France.

Master: Dario Colazzo, Databases, 21 ETD, M2, UNIV. PARIS-SUD, France.

Master: Dario Colazzo, Database Management Systems, 36h ETD, Polytech, UNIV. PARIS-SUD, France.

Master: Dario Colazzo, Databases, 21 ETD, Polytech, UNIV. PARIS-SUD, France.

Master: Dario Colazzo, Advanced Databases, 31 ETD, Polytech, UNIV. PARIS-SUD, France.

Master: Dario Colazzo, Remedial Databases, 17 ETD, M1, UNIV. PARIS-SUD, France.

Master: Dario Colazzo, Web Data Management, 18 ETD, M1, UNIV. PARIS-SUD, France.

Master: Dario Colazzo, Databases, 20 ETD, Polytech, UNIV. PARIS-SUD, France.

Master: Dario Colazzo, XML and Web programming, 18 ETD, M2, UNIV. PARIS-SUD, France.

Master: François Goasdoué, Semantic Web, 74 ETD, M2, UNIV. PARIS-SUD, France.

Master: François Goasdoué, Data and Knowledge for the Web, 7.5 ETD, M2, UNIV. PARIS-SUD, France.

Master: François Goasdoué, Distributed Reasoning, 4.5 ETD, M2, UNIV. PARIS-SUD, France.

Master: Ioana Manolescu, Big Data Algorithms and Techniques for the Web, 18 ETD, M2, UNIV. PARIS-SUD, France.

Master: Melanie Herschel, Data Warehouses and OLAP, 99.5 ETD, M2, UNIV. PARIS-SUD, France.

Master: Bogdan Cautis, Introduction to Databases, 30 ETD, M1, Telecom ParisTech, France.

Master: Bogdan Cautis, Advanced Databases, 60 ETD, M1, Telecom ParisTech, France.

Master: Bogdan Cautis, Modern Web Data Management, 45 ETD, Telecom ParisTech – Athens week, France.

Master: Bogdan Cautis, Massive Data Analysis, 18 ETD, Ecole Polytechnique – COMASIC Master, France.

8.2.2. Supervision

PhD: Julien Leblay, “Techniques d’optimisation pour des données semi-structurées du web sémantique”, UNIV. PARIS-SUD, September 2013, François Goasdoué and Ioana Manolescu.

PhD: Asterios Katsifodimos, “Scalable view-based techniques for web data : algorithms and systems”, UNIV. PARIS-SUD, July 2013, Ioana Manolescu.

Raphael Bonaque: “Structured, Social and Semantic Search”, since October 2013, Bogdan Cautis, François Goasdoué, and Ioana Manolescu.

Jesús Camacho-Rodríguez : “Cloud-based Web Data Management”, since October 2011, Dario Colazzo and Ioana Manolescu.

Alexandra Roatiş: “Scalable Database Techniques for the Semantic Web”, since October 2011, Dario Colazzo, François Goasdoué, and Ioana Manolescu.

Aikaterini Tzompanaki: Foundations and Algorithms to Compute the Provenance of Missing Data, since November 2012, Melanie Herschel and Nicole Bidoit.

Stamatis Zampetakis: “Massively Parallel Algorithms for Semantic Web Data”, since October 2012, François Goasdoué and Ioana Manolescu.

Ioana Ileana: “Extracting and Archiving Web Data: a holistic approach”, since October 2011, Bogdan Cautis.

8.2.3. *Juries*

Ioana Manolescu has been a member of the PhD committee of Siarhei Bykau in April 2013, University of Trento, Italy.

François Goasdoué has been a member of the PhD committee of Anh Tuan Ly in December 2013, University Paris-Sud, France.

Bogdan Cautis has been a member of the PhD committee of Émilien Antoine (December 2013, University of Paris-Sud, France).

8.3. Popularization

- T. Ghosh, I. Manolescu, A. Tzompanaki, A. Roatiş and S. Zampetakis have presented a graph-based game to the audience of *Fête de la Science* in October 2013.
- Still part of *Fête de la Science* 2013, I. Manolescu has participated to a “speed dating” event between researchers and high-school students in Paris.

OASIS Project-Team

8. Dissemination

8.1. Scientific Animation

- Françoise Baude: member of the editorial board of the Techniques et Sciences Informatique French journal from feb 2011, program committee member of HPCS 2013, ISPA 2013, reviewer for HPCS 2012 special issue journal Concurrency Practice and Experiment to be published in 2013, for JPDC, PC member for Compas 2014, ISPA2014 and CCGrid 2014, University of Nice official representative within the KIC EIT ICT Labs, including the Master school, from 2012.
- Olivier Dalle: member of the Steering Committee of SIMUTools (since 2009), member of the Program Committee of the Conferences DEVS/TMS'2013, WSC'2013, ACM SIGSIM PADS'2013, HPC&S 2013, Omnet++2013, reviewer for SIMULATION (SCS), ACM TOMACS, SIMPRA (Elsevier) and JOS (Palgrave).
- Ludovic Henrio: program committee member of FESCA'13, FOCLASA'13, ICE'13 and reviewer for the journal SCP (Science of Computer Programming), DIST, and STVR.
- Fabien Hermenier: program committee member of VTDC and PDP (energy efficiency track) and reviewer for IEEE Transactions on Computers, IEEE Transactions on Cloud Computing, IEEE Transactions on Network and Service Management, Journal of Software: Practice and Experiment, Journal of Systems and Software.
- Fabrice Huet : program committee member of HPDC 2013, CCGrid 2013, Big Data 2013.
- Eric Madelaine: member of the steering committees of the FACS and FMCO symposia, member of the program committee of FACS'13, and of the Science of Computer Programming (SCP) journal.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Master : Françoise Baude and Ludovic Henrio, Distributed systems: an Algorithmic approach, 17 H + 17 h eqTD, niveau M2, Polytech'Nice Sophia/UFR Sciences, UNS, France
- Master : Françoise Baude, Applications Réparties, 45 H eqTD, niveau M1/SI4, Polytech'Nice Sophia, UNS, France
- Licence : Françoise Baude, Algorithmique et Programmation en Java, 70 H eqTD, niveau L2, Polytech'Nice Sophia, UNS, France
- Licence : Olivier Dalle, Systèmes d'Exploitation, 60h eq. TD
- Licence : Olivier Dalle, Initiation Framework Programmation Serveur, 70h eq. TD
- Licence : Olivier Dalle, Algorithmique, 12h eq. TD
- Licence : Olivier Dalle, Projet Scientifique Informatique, 37h eq. TD
- Licence : Fabien Hermenier, Algorithmique et Programmation en Java, 70 H eqTD, niveau L2, Polytech'Nice Sophia, UNS, France
- Licence : Fabien Hermenier, Introduction à Internet, 103 H eqTD, niveau L2, Polytech'Nice Sophia, UNS, France
- Licence : Fabien Hermenier, Outils pour le Génie Logiciel 14 H eqTD, niveau L3/SI3, Polytech'Nice Sophia, UNS, France

8.2.2. Supervision

- PhD in progress: Laurent Pellegrino “Pushing dynamic and ubiquitous event-based interaction in the Internet of services: a middleware for event clouds”, since Sept 2010, advisor Françoise Baude, Fabrice Huet.
- PhD in progress: Nuno Gaspar “Integrated, Autonomic, and Reliable Deployment and Management for SaaS composite applications”, since Nov 2011, advisor: Eric Madelaine
- PhD in progress: Michaël Benguigui, “Modèles de programmation pour l’analyse de données sur machines multi-cœurs, grilles et clouds”, since Dec 2011, advisor Françoise Baude.
- PhD in progress: Yanwen Chen, “Formal model and Scheduling for cyberphysical systems”, since Dec 2011, advisors Eric Madelaine and Yixiang Chen (ECNU Shanghai)
- PhD in progress: Alexandra Savu, “Design, specification, and verification of parameterized topologies of distributed components”, since Oct. 2012, advisor Eric Madelaine
- PhD in progress: Maeva Antoine, “Plateforme élastique pour le stockage et la notification d’Evènements”, since Oct. 2012, advisors Eric Madelaine, Fabrice Huet
- PhD in progress: Oleksandra Kulankhina, “Model-driven environment for the development of safe component-based distributed applications”, since Oct. 2013, advisor Eric Madelaine
- PhD in progress : Vincent Kerbache, “Resource Management in a Cloud Supplied with Renewable Energies”, since Sep. 2013, advisors Eric Madelaine, Fabien Hermenier
- PhD in progress: "Programming model and middleware support for distributed and concurrent applications", since Oct. 2013, advisor Ludovic Henrio
- PhD in progress: Sophie Song, "Publish-Subscribe Models for Large Scale Data Analysis Frameworks", since Feb. 2013, advisor Fabrice Huet, Frédéric Margoulés (ECP)
- PhD in progress: Damian Vicino, "Simulation-based Open Science in the Cloud", since Jan. 2013, advisors Françoise Baude, Gabriel Wainer (Carleton University, Canada), Olivier Dalle.

8.2.3. Juries

Françoise Baude participated in PhD evaluations as

- PhD reviewer and jury member: PhD of Francisco Alvares on 9th April 2013, Ecole des Mines de Nantes (ASCOLA EPI); PhD of Erwan Daubert on May 24th 2013, at INSA Rennes (TRISKELL and MYRIADS EPIs); PhD of Denis Morand on November 5th 2013, Université de Grenoble.
- PhD examiner: PhD of Gauthier Berthou on 21th January 2014, Université de Grenoble; PhD; PhD of Pierre-Louis Aublin, Université de Grenoble, on the same day.

She participated in the recruitment committee for a Professor at ENSEIRB, in May 2013. She evaluated one project for Programme ANR Blanc in 2013.

Ludovic Henrio evaluated one project for Programme ANR: INS 2013.

Olivier Dalle participated in PhD evaluations as

- PhD jury member for the PhD of Imran Mahmood, Feb. 26 2013, Royal Technological Institute of Sweden (KTH), Stockholm.

Fabrice Huet participated in PhD evaluations as jury member for the PhD of Giang Ngo Hoang on 16th December 2013.

8.3. Popularization

- Françoise Baude is in charge since September 2011 of the set up and animation of an educational program *Cordées de la Réussite*. She leads as Polytech’Nice Sophia member, and in connection with MASTIC activities at Sophia-Antipolis, two *Cordées pour la Science à Sophia* groups (one with Lycée Vinci Antibes, the other with Lycée Tocqueville Grasse). Since 2013, she is in charge of the AVOSTII-STI2D program implementation for Polytech’Nice Sophia, requiring advertising high-school pupils for engineering studies, in particular in ICT.

- **Rencontres Inria Industrie:**
The 11th of June 2013, we took advantage of the Inria-Industry national meeting to expose our works on the American basket option pricing. Our strategy relies on a two-level CPU/GPU parallelization of the Picazo algorithm, combining dynamic strategies to fully exploit distributed resources. During the event, we presented the difficulty to price such instruments in reasonable time, and highlight our solution through multiple tests on Grid'5000, of our pricing engine.
A Video is available here: <http://www.inria.fr/centre/saclay/innovation/rii-modelisation-simulation-calcul-intensif/demos/pricing-d-options-sur-panier-de-type-americaain-en-utilisant-des-clusters-equip-es-de-gpus>
- This year, Fabrice Huet gave a seminar to high school students about the inner working of computers. He also leads the ISN *Informatiques et Sciences du Numérique* courses for the academia of Nice. These courses were given to high school teachers who volunteered to offer a Computer Science option to their students.

OPALE Project-Team

9. Dissemination

9.1. Scientific Animation

- R. Duvigneau is member of the "Conseil National des Universités" (CNU) for the 26th section (applied mathematics and application of mathematics)
- P. Goatin was member of the Organizing Committee of the Workshop "*Traffic Modeling and Management: Trends and Perspectives - TRAM2*", Sophia Antipolis (France). March 2013. <https://team.inria.fr/opale/workshop-tram2/>

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Introduction to Numerical Analysis, 19.5 hrs, L3 ("Water Resources Engg." Section), Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (J.-A. Désidéri)

Licence: Numerical Methods, 19.5 hrs, L3 ("Applied Mathematics and Modelling" Section), Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (J.-A. Désidéri)

Licence: Partial Differential Equations, 36 hrs, L3, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (R. Duvigneau).

Master: Advanced Optimization, 40.5 hrs, M2, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (J.-A. Désidéri, R. Duvigneau).

Master: Multidisciplinary Optimization, 22.5 hrs, joint ISAE ("Complex Systems") and M2 (Mathematics), Toulouse (J.-A. Désidéri, R. Duvigneau).

Licence: Numerical Methods I, 56 hrs tutorials, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (A. Habbal).

Licence: Summer Project in Mathematical Modeling, 36 hrs, L3, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (A. Habbal).

Master: Numerical Methods for Partial Differential Equations, 66 hrs, M1, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (A. Habbal).

Master: Reconstructing lost GPS signals using accelerometrics, 10 hrs, M1, Ecole Polytechnique Universitaire (EPU), Nice Sophia Antipolis (A. Habbal).

9.2.2. Supervision

HdR : Régis Duvigneau, *Conception optimale en mécanique des fluides numérique : approches hiérarchiques, robustes et isogéométriques*, University of Nice Sophia Antipolis, october 2013

PhD : Andrea Minelli, *Aero-acoustic shape optimization of a supersonic business jet*, University of Nice Sophia Antipolis, November 2013, supervisor: Jean-Antoine Désidéri

PhD : Adrien Zerbinati, *Optimisation multidisciplinaire robuste pour application à l'automobile*, University of Nice Sophia Antipolis, April 2013, supervisors: Jean-Antoine Désidéri and Régis Duvigneau.

PhD in progress : Maria Laura Delle Monache, *Traffic flow modeling by conservation laws*, October 2011, supervisor: P. Goatin.

PhD in progress : Maxime Nguyen Dinh (Cifre ONERA/Aibus), *Qualification of numerical simulations by anisotropic mesh adaptation*, October 2011, supervisor : Jean-Antoine Désidéri.

PhD in progress : Sébastien Bourasseau (Cifre ONERA/Snecma), *Goal-oriented hybrid mesh adaptation for turbomachinery*, April 2011, supervisor : Jean-Antoine Désidéri.

PhD in progress : Enric Roca León (Cifre ONERA/Eurocopter), *Helicopter rotor blade multi-objective optimization*, October 2011, supervisor : Jean-Antoine Désidéri.

PhD in progress : Asma Gdhami, *Analyse isogéométrique pour les problèmes hyperboliques*, November 2013, supervisor: Régis Duvigneau.

PhD in progress : Maroua Mokni, *Numerical analysis and computational assessment of variants of the multiple-gradient of descent algorithm*, November 2013, supervisor: Jean-Antoine Désidéri.

PhD in progress : Bouthaina Yahyaoui, *Cell-dynamics modelling : from the Fisher-KPP equations to mechanical-biological-chemical systems*, January 2013, supervisor: Abderrahmane Habbal.

PhD in progress : Jérémie Labroquère, *Optimization of Flow Control Devices*, October 2010, Supervisors: Jean-Antoine Désidéri and Régis Duvigneau.

PhD in progress : Matthias Mimault, *Crowd motion modeling by conservation laws*, October 2012, Supervisor: P. Goatin.

PhD in progress : Aalae Benki, *Méthodes efficaces de capture de front de Pareto en conception mécanique multicritère. Applications industrielles.*, October 2010, supervisor: A. Habbal.

PhD in progress : Fatima Zahra Oujebbour, *Méthodes et applications industrielles en optimisation multicritère de paramètres de processus et de forme en emboutissage*, October 2010, Supervisors: A. Habbal.

PhD in progress : Bouthaina Yahyaoui, *Modélisation de la dynamique des cellules : Des équations de Fisher-KPP aux systèmes mécano-bio-chimiques*, January 2013, Supervisors: A. Habbal and M. Ayadi (Tunis).

PhD in progress : Mohamed Kaicer, *Group lending : analysis of asymmetric information using game theory. Analysis design and implementation of a simulator adapted to micro-finance market*, October 2009, Supervisors: R. Aboulaich (Rabat) and A. Habbal.

9.3. Popularization

Jean-Antoine Désidéri gave the lecture “*Modelling and simulating, when engineering becomes numerical*” to the Valbonne International High School (CIV) on October 11, 2013.

Paola Goatin was interviewed twice :

- TV interview on evening news, France 3 Côte d’Azur, January 30, 2013 <http://www.youtube.com/watch?v=VIW4VgoTjEI&feature=youtu.be>.
- Journal interview : “*Une chercheuse au chevet des embouteillages*”, Nice Matin, January 2013 <http://www-sop.inria.fr/members/Paola.Goatin/NiceMatin.pdf>.

ORPAILLEUR Project-Team

9. Dissemination

9.1. Scientific Animation

- The scientific animation in the Orpailleur team is based on two seminars, the Team Seminar and the BINGO seminar. The Team Seminar is held twice a month and is used either for general presentations of members of the team or for invited presentations of external researchers. The BINGO seminar is also held twice a month and is used for more specific presentations focusing on biological, chemical, and medical topics. Actually, both seminars are active and are useful instruments for researchers in the team.
- Members of the Orpailleur team are all involved, as members or as head persons, in various national research groups (mainly GDR CNRS I3 and BIM).
- The members of the Orpailleur team are involved in the organization of conferences and workshops, as members of conference program committees (ECAI, IJCAI, PKDD, ICFCA ...), as members of editorial boards, and finally in the organization of journal special issues.
- Valmi Dufour-Lussier, Emmanuelle Gaillard and Alice Hermann have organized the 21th French workshop on case-based reasoning in the framework of PFIA-2013 (*Plateforme IA 2013*). This workshop is an annual meeting gathering junior and senior researchers from different communities.
- Emmanuel Nauer co-organized the “Cooking with Computers” workshop at IJCAI 2013 (Beijing, China). This workshop aims at bringing together researchers from every possible fields of artificial intelligence applying their research on food and cooking.
- Amedeo Napoli organized with Sergei O. Kuznetsov (HSE Moscow) and Sebastian Rudolph (TU Dresden) the second workshop FCA4AI (“What can do FCA for Artificial Intelligence”) which was associated with the last IJCAI Conference in Beijing (China, August 2013, <http://ijcai13.org/program/workshop/30>).
- Amedeo Napoli organized with Claudio Carpineto (Fondazione Ugo Bordononi, Roma) and Sergei O. Kuznetsov (HSE Moscow) a Workshop in Moscow, March 24 2013, on “Formal Concept Analysis meets Information Retrieval” (<http://www.hse.ru/en/org/hse/fcair>). This was a joint workshop with the ECIR Conference.
- Amedeo Napoli organized with with Francisco Carvalho of the organization of a Workshop in Recife (Brazil), April 24-26, namely the s“French-Brazilian Workshop on Numerical and Symbolic Methods of Data Analysis -WFB2013” (<http://www.cin.ufpe.br/~wfb2013/>). This workshop took place within an Inria-Facepe joint project where Amedeo Napoli and Francisco Carvalho are the scientific leaders.
- Amedeo Napoli was in charge of the organization of the so-called “Journées de la Société Francophone de ChemoInformatique” (SFCI) in October 2013 at LORIA (October 10th and 11th), which is the meeting of researchers working on chemoinformatics and computational chemistry in France, gathering around 100 persons (<http://sfci2013.loria.fr/>).
- Jean-Sébastien Sereni organized a workshop on combinatorics and distributed computing in the scope of the LEA STRUCO, with 21 participants, on November 12th–15h, 2013, in Pont-à-Mousson, France (<http://www.liafa.univ-paris-diderot.fr/~sereni/STRUCO/CDCMeeting/>).
- Mario Valencia has organized the Graph Days in Nancy on May 23th-24th 2013 (see <http://www.loria.fr/news/journees-graphes-les-23-et-24-mai-2013-en>).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

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

PANAMA Project-Team

9. Dissemination

9.1. Scientific Animation

Rémi Gribonval is in charge of the Action "Parcimonie" within the French GDR ISIS on Signal & Image Processing

Rémi Gribonval is a member of the International Steering Committee for the LVA conference series.

Rémi Gribonval is a member of the IEEE Technical Committee on Signal Processing Theory and Methods (2012–2014), and a member of the Awards sub-committee.

Rémi Gribonval was a member of the organizing committee of the GRETSI 2013 edition.

Rémi Gribonval is a member of the program committee of the GRETSI.

Rémi Gribonval is a member of the Steering Committee of the SPARS international workshop (chairman until 2013).

Frédéric Bimbot is the Head of the "Digital Signals and Images, Robotics" in IRISA (UMR 6074).

Frédéric Bimbot has been the General Chairman of the Interspeech 2013 Conference in Lyon (1400 participants) [46].

Frédéric Bimbot is a member of the International Advisory Council of ISCA (International Speech Communication Association)

Nancy Bertin is a member of the IEEE Technical Committee on Audio and Acoustic Signal Processing (2013–2015).

Nancy Bertin and Frédéric Bimbot co-organised a two-day workshop on "localization, separation and tracking of audio sources", in the context of IRISA D5 (Signal, Image & Robotics) department's scientific animation seminars.

Laurent Albera was a scientific council member at University of Rennes 1.

Laurent Albera was co-organizer with David Brie at Paris of a one-day seminar on tensor decompositions and applications sponsored by the GDR ISIS (french research groups in signal and image processing).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : N. Bertin, "Discovery of selected topics in audio signal processing research", 9 hours, L3, École Supérieure de Réalisation Audiovisuelle (ESRA), France

Master : N. Bertin, "Audio rendering, coding and source separation", 9 hours, M2, Université Rennes 1, France

Master : N. Bertin, "Audio indexing and classification", 9 hours, M2, Université Rennes 1, France

Master : R. Gribonval, "Sparse representations for inverse problems in signal and image processing", 10 hours, M2, Université Rennes 1, France

Master : R. Gribonval, "Signal and image representations", 8 hours, M2, Université Rennes 1, France

Master: R. Gribonval, coordination of the ARD module "Acquisition et Représentation de Données", M2, Université Rennes 1, France

Laurent Albera gives lectures in Mathematics and in Signal Processing, and he supervises end of school year projects, mainly at the university of Rennes 1:

Licence: L. Albera, "Mathematics for electronics", 18 hours, L2, Université Rennes 1, France

Licence: L. Albera, "Mathematics for electronics", 21 hours, L3, Université Rennes 1, France

Licence: L. Albera, "Mathematics", 48 hours, L3, Ecole Supérieure d'Ingénieurs de Rennes, France

Master: L. Albera, "Multimodal analysis of biomedical signals", 12 hours, M1, Ecole Supérieure d'Ingénieurs de Rennes, France

Master: L. Albera, "Evaluation of EEG signals to measure brain activity during entertainment applications", project supervision (with Technicolor R&I France), M2, Ecole Supérieure d'Ingénieurs de Rennes, France

Master : L. Albera, "Blind equalization", 4.5 hours, M2, Université Rennes 1, France

Master: L. Albera, "Brain source imaging", project supervision, M2, Université Rennes 1, France

Doctorat : L. Albera, "Brain source imaging", 2.5 hours, EUROSAB formation continue, France

Doctorat : L. Albera, "Brain source imaging", 6 hours, CominLabs, Université Rennes 1, France

Laurent Albera is responsible of the "Signal Processing" branch of the SISEA (Signal, Images, Embedded Systems and Control) Master 2 of University of Rennes 1.

9.3. Popularization

9.3.1. *Journée science et musique*

Participants: Nancy Bertin, Frédéric Bimbot, Jules Espiau de Lamaestre, Rémi Gribonval, Corentin Guichaoua, Srđan Kitić, Stéphanie Lemaile, Pierre Machart, Laurent Simon, Nathan Souviraà-Labastie, Stefan Ziegler.

PANAMA coordinated the organization of a public event called "Journée Science et Musique" (Day of Music and Science). 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 2013 hosted 350 visitors.

9.3.2. *Radio and press*

Nancy Bertin was an invited speaker in the France Inter scientific radio show "La Tête au Carré".

PAREO Project-Team

8. Dissemination

8.1. Scientific Animation

Jean-Christophe Bach:

- Member of the LORIA laboratory council
- Member of the organizing committee of the “Journées GDR–GPL” colocated with the AFADL and CIEL conferences

Christophe Calvès

- Member of the organizing committee of the “Journées GDR–GPL” colocated with the AFADL and CIEL conferences

Horatiu Cirstea:

- PC member of RuleML 2013 (International RuleML Symposium on Rule Interchange and Applications).
- PC member of SCSS 2013 (International Symposium on Symbolic Computation in Software Science).
- Steering committee of RULE.
- Responsible for the Master speciality “Logiciels: Théorie, méthodes et ingénierie”.
- Member of the organizing committee of the “Journées GDR–GPL” colocated with the AFADL and CIEL conferences

Sergueï Lenglet:

- Member of the organizing committee of the “Journées GDR–GPL” colocated with the AFADL and CIEL conferences
- Invited speaker at the “Journées LAC”
- Reviewer for the TCS (Theoretical Computer Science) journal

Pierre-Etienne Moreau:

- Member of the GDR–GPL (CNRS Research Group on Software Engineering) board.
- Member of the national committee for Inria “Médiation Scientifique”.
- Head of the local committee for Inria “détachements” and “délégations”.
- Head of the Computer Science department at Ecole des Mines de Nancy.
- President of the organizing committee of the “Journées GDR–GPL 2013” colocated with the AFADL and CIEL conferences
- PC member of SLE 2013 (6th International Conference on Software Language Engineering), SCSS 2013 (5th International Symposium on Symbolic Computation in Software Science),
- Member of the organizing committee of WASDeTT 2013 (4th International Workshop on Academic Software Development Tools and Techniques)

Sorin Stratulat:

- Member of the LITA Laboratory Council.
- Member of the program committee of the 9th International Conference on Information Assurance and Security (IAS '13)
- Member of the program committee of the 6th International Conference on Computational Intelligence in Security for Information Systems (CISIS' 13)
- Member of the program committee of the 5th International Symposium of Symbolic Computation in Software Science (SCSS '13)
- Tutorial speaker at the Conference on Automated Reasoning with Analytic Tableaux and Related Methods (TABLEAUX 2013)
- Speaker at
 - Workshop on Inductive Theorem Proving 23-24 November 2013, Imperial College London, UK
 - LIX Colloquium on the Theory and Application of Formal Proofs, 5-7 November 2013, Ecole Polytechnique, Palaiseau, France
 - Workshop on Proof Search in Axiomatic Theories and Type Theories (PSATTT), 8 November 2013, Ecole Polytechnique, Palaiseau, France

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence : Pierre-Etienne Moreau, Responsible of the course "Introduction to Algorithms and Programming" (<http://www.depinfo Nancy.net/s5/tcs13>), first year at Mines-Nancy (150 students), Université de Lorraine, France

8.2.2. Supervision

PhD in progress : Jean-Christophe BACH, "Transformation de modèles et certification", November 1st 2010, Pierre-Etienne Moreau

PhD in progress : Amira HENAIEN, "Certification du raisonnement formel porté sur des systèmes d'information critiques.", November 1st 2010, Sorin Stratulat

8.2.3. Juries

Horatiu Cirstea:

PhD committee of Henri Debrat, "Certification formelle de la correction d'algorithmes de Consensus", Nancy 2013

Pierre-Etienne Moreau:

PhD committee of Mathieu Giorgino, reviewer, Toulouse, 2013: "Inductive Representation, Proofs and Refinement of Pointer Structures"

PhD committee of Clément Guy, reviewer, Rennes, 2013: "Facilités de typage pour l'ingénierie des langages"

PhD committee of Pengfei Liu, reviewer, Bordeaux, 2013: "Intégration de politiques de sécurité dans des systèmes ubiquitaires"

PhD committee of Laurent Wouters, Paris, 2013: "Multi-Domain Expert-User Modeling Infrastructure"

8.3. Popularization

Participants: Jean-Christophe Bach, Pierre-Etienne Moreau.

Jean-Christophe Bach participated to scientific mediation by proposing several activities to demonstrate the *algorithmic thinking* at the core of the Computer Science without requiring any computer or even electric devices. These activities are the first part of the CSIRL (Computer Science In Real Life) project which aims to popularize computer science and to initiate children, school students and non-scientists into this domain. These activities were presented during the high school students welcome at LORIA and Inria - Nancy Grand Est, and also during APMEP¹ days. Jean-Christophe Bach also took part to the "Fête de la science" in October.

Jean-Christophe Bach was also involved in popularization activities with Interstices ² by writing short debunking articles (“Idées reçues”) for non computer scientists about Church’s thesis and Turing’s work [15]. Other popularization articles are still under work.

Pierre-Etienne Moreau gave two lectures about “Robotics and Programming” in the ISN course (Informatique et Science du Numérique), in order to help professors of “classes de terminale” to teach this discipline.

Pierre-Etienne Moreau organized a three day course about “Algorithms, Programming and Databases” in order to help professors of “classes préparatoires aux grandes écoles” to teach this discipline.

¹<http://www.apmep.asso.fr/>

²<http://interstices.info>

PARIETAL Project-Team

8. Dissemination

8.1. Scientific Animation

- B. Thirion acts as reviewers for Medical Image Analysis, IEEE Transactions on Medical Imaging, NeuroImage, ISBI, IPMI, as associate editor for Frontiers in Neuroscience Methods, as program committee for the MICCAI 2012 conference and as expert for ANR, NWO.
- B.Thirion set up the following workshop at the OHBM 2013 conference: *Functional Data-Driven Atlases of the Brain* <http://www.humanbrainmapping.org/i4a/pages/index.cfm?pageid=3526> and took part to the morning workshop entitled *Big Data in Neuroimaging: Big Opportunities or Just a Big Hassle - The Skeptical Neuroimagers View*.
- Bertrand Thirion organized a national workshop on Brain-Computer Interfaces at ICM, paris, on June 4th <https://itneuro.aviesan.fr/Local/itneuro/dir/documents/newsletter/Newsletteroctobre2013.pdf>.
- B. Thirion and G. Varoquaux organized the MMBC workshop at MICCAI 2013 <http://groups.csail.mit.edu/vision/mmhc2013/>.
- G. Varoquaux was program chair for PRNI 2013 and committee for Euroscopy 2013.
- G. Varoquaux acts as reviewer for NeuroImage, HBM, MedIA, TMI, Frontiers in NeuroInformatics, Frontiers in Brain Imaging methods and Trends in cognitive science Review editor for Frontiers in NeuroInformatics and Frontiers in Brain Imaging methods and as expert for ANR and Agoranov.
- Gael Varoquaux presented scikit-learn and machine learning tools and concepts at the Microsoft Spark incubator, and at Cap Digital.
- Philippe Ciuciu is IEEE senior member, member of the BioImaging Signal Processing (BISP) committee of the IEEE ISBI conference for 3 years (2013-15). He will be BISP area chair of the 2014 IEEE ICASSP conference in Florence.
- Philippe Ciuciu was the main organizer with JM Lina of a symposium in Montreal in Oct 2013: *Scale-free Dynamics and Networks in Neurosciences*, financially supported by the Centre de recherche mathématique de l'université de Montreal. <http://www.crm.umontreal.ca/2013/Neuro13/>.
- Philippe Ciuciu is an international expert and reviewer for the *Biotechnology and Biological Sciences Research Council*: <http://www.bbsrc.ac.uk> and the *Technology Foundation STW, Netherlands*. He also serves as **reviewer** for the French research funding agency (ANR) in the field of biomedical engineering and life science research calls. He is also reviewer for 16 peer-reviewing journals including IEEE TMI/BME/SP/IP/PAMI, Medical Image Analysis, NeuroImage, Human Brain Mapping, Plos One, MAGMA, JMRI, Journal of Neuroscience Methods, Signal Processing. He regularly serves as reviewer for the MICCAI, IEEE (ICASSP, ISBI, ICIP, EMBC, PRNI), EUSIPCO, HBM, SampTA, conferences.
- Alexandre Gramfort is Program committee PRNI, Associate editor IEEE EMBC conference and Associate editor Frontiers in brain imaging methods.
- Alexandre Gramfort acts as reviewer for Neuroimage, IEEE TMI, brain topography, HBM journal, PLOS ONE, brain connectivity, journal of clinical neurophysiology, MICCAI, physics in medicine and biology.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Gael Varoquaux

- Stat Course cogmaster (3 × 3H)
- Python course Inria Rocquencourt et Rennes: 8Hrs each time
- Optimization tutorial at Euroscipy: 2H
- Scikit-learn tutorial at Scipy: 4H
- Functional connectivity course at OHBM: 30mn, ISMRM 30mn

Bertrand Thirion

- Master MVA, Imagerie fonctionnelle cérébrale et interface cerveau machine, 12h + 3h, M2, ENS Cachan, France.

8.2.2. Supervision

PhD : Solveig Badillo, Study of hemodynamic variability in sane adults and children in fMRI, Paris XI, 18/11/2013, supervised by Philippe Ciuciu

PhD : Virgile Fritsch, High-dimensional statistical methods for inter-subject neuroimaging studies, Paris XI, 18/12/2013, supervised by J.-B. Poline and B. Thirion

8.2.3. Juries

- B. Thirion was reviewer for the PhD thesis of A.C. Philippe (Inria Sophia-Antipolis); the defense took place at Sophia-Antipolis on Dec. 19th, 2013.
- G. Varoquaux was examiner for the PhD defense of Katerina Gkirtzou at Centrale Paris, in Dec. 2013.
- P.Ciuciu took part to three PhD committees in 2013, one as reviewer (F. Karahonuglu, EPFL, Lausanne, Switzerland).

8.3. Popularization

PARIETAL presented a game designed by Virgile Fritsch to illustrate our research activities on brain activity decoding, at the Salon de jeux et culture mathématique (May 30th-June 2nd, 2013).

PARKAS Project-Team

9. Dissemination

9.1. Scientific Animation

- Albert Cohen was the program chair of CC 2014, the TPC chair of the DAC 2013 and 2014 ESS1 subcommittees, and the co-Program Chair of the APPT 2013 bi-annual Symposium on Advanced Parallel Processing Technology. Albert Cohen was also a member of the PC of PLDI 2014, and a member of the ERC of ASPLOS 2014, PPOPP 2014 and ICS 2014. Albert Cohen also participated to the PC of the IMPACT and HiRES workshops associated with HiPEAC 2014.
- Albert Cohen is an associate editor of ACM TACO and IJPP (Springer).
- Albert Cohen will be the general chair of PPOPP 2015.
- Albert Cohen was the sponsor chair for the HiPEAC 2013 and HiPEAC 2014 conference, and will serve as the exhibit and sponsor chair for HiPEAC 2015.
- Marc Pouzet was a member of the PC of DAC 2014, AFADL 2014, MSR 2013, RTNS 2013, DATE 2013.
- Marc Pouzet manages with Catherine Dubois (ENSIIE, Evry, France) the GDR (“Groupe de Recherche”) TLP (“Types, Langages et Preuves”) du CNRS (“Centre National de Recherche Scientifique”). Two one-day seminars are organised every year.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: T. Bourke & J. Vuillemin, “Digital Systems”, 64h, L3, Ecole normale supérieure, France

Licence: L. Mandel, “Systèmes”, 42h, L3, Université Pars-Sud 11, France

Licence: L. Mandel & M. Pouzet, “Systèmes et réseaux”, 24h+24h, L3, Ecole normale supérieure, France

Licence: L. Mandel, “Langages de programmation et compilation”, 24h, L3, Ecole normale supérieure, France

Master: L. Mandel & M. Pouzet, “Synchronous Systems”, 8h+16h, M2, MPRI: Ecole normale supérieure and Université Paris Diderot, France

Master: A. Cohen & F. Zappa Nardelli, “Semantics, languages and algorithms for multicore programming”, 9h+14h, M2, MPRI: Ecole normale supérieure and Université Paris Diderot, France

Licence: “Components of a Computing System Introduction to Computer Architecture and Operating Systems” (L3), A. Cohen (44h), École Polytechnique, France

Master 1 École Polytechnique: “Operating Systems Principles and Programming” (M1), A. Cohen (38h), École Polytechnique, France

Marc Pouzet is supervising the national entry exam in computer science for École normale supérieure.

Marc Pouzet is director of studies (“Directeur des études”) for the CS department of École normale supérieure.

9.2.2. Supervision

PhD : Léonard Gérard, Programmer le parallélisme avec des futures en Heptagon un langage synchrone flot de données et étude des réseaux de Kahn en vue d’une compilation synchrone, Université Paris-Sud 11, Orsay. Soutenue le 25 septembre 2013, au LRI, à Orsay.

PhD : Cédric Pasteur, Raffinement temporel et exécution parallèle dans un langage synchrone fonctionnel, Université Pierre et Marie Curie (UPMC), soutenue le 26 novembre 2013, au Collège de France. Encadrants: Louis Mandel et Marc Pouzet.

PhD in progress : Guillaume Baudart, Real-time fidelity in Quasi-synchronous Systems, Start: 1/10/2013, Timothy Bourke and Marc Pouzet

PhD in progress : Robin Morisset, Compiler Optimisations and Concurrency, 1/10/2013, F. Zappa Nardelli

9.2.3. Juries

- Albert Cohen was the president of the Habilitation Thesis committee of Fabien Coelho, MINES ParisTech.
- Albert Cohen was the president of the PhD thesis committee of Bruno Bodin, UPMC (CIFRE Kalray).
- Albert Cohen was a reviewer for the PhD thesis of Martin Schindewolf at the Karlsruhe Institute of Technology.
- Albert Cohen was a reviewer for the PhD thesis of Daniel Cordes at TU Dortmund.
- Albert Cohen was a reviewer for the PhD thesis of Yuriy Kashnikov, UVSQ.
- Albert Cohen was an examiner in the PhD thesis committee of Thomas Preud'Homme, UPMC.
- Marc Pouzet was a reviewer for the PhD thesis of Boris Golden, École Polytechnique.
- Marc Pouzet was a reviewer for the PhD thesis of Gideon Smeding, Université de Grenoble.
- Albert Cohen was a member of a hiring committee for professors at the University of Strasbourg.
- Albert Cohen was a member of a hiring committee for assistant professors (“maître de conférences”) at the University Claude Bernard de Lyon.

PAROLE Project-Team

9. Dissemination

9.1. Scientific animation

- Members of the team frequently review articles and papers for the following journals and conferences: Computer Speech and Language, Traitement du Signal, ICASSP, INTERSPEECH, AVSP, ASRU, SLAM, CHiME, JEP.
- Member of editorial boards:
 - Computer Speech and Language, special issue on Speech Separation and Recognition in Multisource Environments (E. Vincent) [15]
 - IEEE Transactions on Audio, Speech, and Language Processing (E. Vincent)
 - Eurasip Journal on Audio speech and Music Processing (Y. Laprie)
- Member of scientific committee of conference:
 - INTERSPEECH'2013 (area chair: D. Jouvét)
 - INTERSPEECH'2013 (K. Smaïli)
 - TALN 2013 (K. Smaïli)
 - IEEE Technical Committee on Audio and Acoustic Signal Processing (E. Vincent)
 - Steering Committee of the LVA conference series (E. Vincent)
- Special session:
 - Special Session at Interspeech 2013 “Articulatory data acquisition and processing” (Co-organizer: S. Ouni)
- General chair:
 - 12th International Conference on Auditory-Visual Speech Processing (AVSP2013), August 2013 (S. Ouni)
 - 2nd International Workshop on Machine Listening in Multisource Environments, Vancouver, June 2013 (E. Vincent)
 - Journée de la Fédération Charles Hermite ‘Incertitudes: approches et défis’, Nancy, December 2013 (E. Vincent)
 - 4th Joint Workshop on Hands-Free Speech Communication and Microphone Arrays, Nancy, May 2014 (E. Vincent)
- Organizer of the 2nd CHiME Speech Separation and Recognition Challenge (E. Vincent).
- Members of the team have been invited as lecturers:
 - Emmanuel Vincent, “Introduction to sound scene analysis - Source localization”, “Source separation” and “Source classification”, Journées Thématiques IRISA ‘Localisation, séparation et suivi de sources audio’, Rennes, February 2013 [32], [35], [34]
 - Emmanuel Vincent, “Leveraging online sound exposure and big data”, 013 Hearing Aid Developers Forum, Oldenburg, June 2013 [33]
 - Emmanuel Vincent, “Uncertainties in speech and audio processing”, Journée de la Fédération Charles Hermite ‘Incertitudes: approches et défis’, Nancy, December 2013 [73]
 - David Langlois, “Uncertainty in Machine Translation”, Journée de la Fédération Charles Hermite ‘Incertitudes: approches et défis’, Nancy, December 2013

- Yves Laprie and Slim Ouni, “Articulatory Data Acquisition and Processing”. Colloque Corpus et Outils en Linguistique Langue et Parole : Statuts, Usages et Mésusages, Jul 2013, Strasbourg, France.[31]
- Anne Bonneau, “Troubles du traitement temporel du langage oral : vers des outils en recherche clinique”, 23ème Congrès de la Société Française de Neurologie Pédiatrique [30]
- Demonstration of VisArtico software at Interspeech 2013 (S. Ouni)

9.2. Teaching - supervision - juries

9.2.1. Teaching

List below is not exhaustive.

PhD

A. Piquard-Kipffer, Language acquisition and language pathology, 25h, Sorbonne Paris Cité University -EHESP, France

Master

K. Smaïli, Master research for ERASMUS MUNDUS LCT, Statistical language modeling for speech recognition and machine translation, Course done in English

K. Smaïli, Master for students from Luxembourg, Business Intelligence

D. Langlois, courses on "vigilance juridique" for teachers at primary school in the scope of using electronic resources (25HTED), ESPE of Academy Nancy-Metz, University of Lorraine, France

D. Langlois and V. Colotte, "Introduction to Speech Analysis and Recognition" (35HTED), University of Lorraine, France

O. Mella, Computer Networking (60HETD), M1, University of Lorraine, France

O. Mella, Project and internship supervision in Networking Engineering (18HETD), M2, University of Lorraine, France

A. Piquard-Kipffer, Language acquisition and language pathology, 200h, M1, M2, University of Lorraine, Blaise Pascal University, Paris 6 University, France

School of engineers

V. Colotte, XML (35HETD), Telecom Nancy, France

Licence

D. Langlois, Algorithmic, C Language (60HETD), Complexity (15HTED), Miage of Nancy, University of Lorraine, France

V. Colotte, C2i - Certificat Informatique et Internet (50HETD), System (80HETP), University of Lorraine, France

A. Piquard-Kipffer, Psycholinguistics, 30h, L3, University of Lorraine, France

O. Mella Networks and Network Programming(30HETD), L3, University of Lorraine, France

O. Mella From Chip to Internet (Introduction about Information Technology) (60 HETD), L1, University of Lorraine, France

I. Illina, Java Programming, 110h, L1, University of Lorraine, France

I. Illina, Graphical Interface, 30h, L1, University of Lorraine, France

I. Illina, Computer Operating System, 50h, L1, University of Lorraine, France

Adults

O. Mella, informatic courses for secondary school teachers (Informatique et Sciences du Numérique courses) (35HTED), ESPE of Academy Nancy-Metz, University of Lorraine, France

D. Langlois, informatic courses for secondary school teachers (Informatique et Sciences du Numérique courses) (100HTED), ESPE of Academy Nancy-Metz, University of Lorraine, France

Other

V. Colotte: Responsible for "Certificat Informatique et Internet" for the University of Lorraine (50000 students, 30 departments).

9.2.2. Supervision

HdR : Chiraz Latiri, "Extraction de connaissances à partir de Textes : Méthodes et Applications", University of Lorraine, 24 June 2013.

HdR : Slim Ouni, "Multimodal Speech: from articulatory speech to audiovisual speech, University of Lorraine, 29 November 2013.

PhD : Uptala Musti, "Acoustic-Visual Speech Synthesis by Bimodal Unit Selection", University of Lorraine, 21 Feb 2013, Yves Laprie et Slim Ouni.

PhD: Gabriel Sargent, "Estimation de la structure des morceaux de musique par analyse multi-critères et contrainte de régularité", University Rennes 1, Feb 2013, Emmanuel Vincent

PhD : Imen Jemaa, Inversion acoustique articulatoire à partir de coefficients cepstraux, University of Lorraine - ENIT (Tunis), 19 February 2013, Yves Laprie et Kaïs Ouni.

PhD : Julie Busset, Inversion acoustique articulatoire à partir de coefficients cepstraux, University of Lorraine, 25 March 2013, Yves Laprie.

PhD : Fadoua Bahja, Détection du fondamental de la parole en temps réel : application aux voix pathologiques, Université Mohammed V-Agdal Faculté des Sciences Rabat Marocco, 11 July 2013, Elhassan Ibn Elhadj and Joseph Di Martino.

PhD: Alexis Benichoux, "Fonctions de coût pour l'estimation des filtres acoustiques dans les mélanges réverbérants", University Rennes 1, Oct 2013, Emmanuel Vincent

PhD in progress : Cyrine Nasri, New methods for machine translation, October 2011, K. Smaïli, C. Latiri.

PhD in progress : Othman Lachhab, Automatic speech recognition applied to pathological voices, Institut National des Postes et Télécommunications (INPT) Rabat Morocco, from November 2010, Elhassan Ibn Elhaj and Joseph Di Martino.

PhD in progress : Arseniy Gorin, Handling trajectories and speaker consistency in automatic speech recognition, October 2011, D. Jouvét.

PhD in progress : Motaz Saad, Cross-lingual concept mining, November 2011, K. Smaïli and D. Langlois.

PhD in progress : Dung Tran, Uncertainty handling for noise-robust automatic speech recognition, December 2012, E. Vincent and D. Jouvét.

PhD in progress : Luiza Orosanu, Speech recognition for communication help for deaf or hard of hearing people, December 2012, D. Jouvét.

PhD in progress: Nathan Souviraà-Labastie, "Localisation et séparation de sources sonores pour la reconnaissance de la parole en environnement réel", University Rennes 1, from Jan 2013, Emmanuel Vincent

PhD in progress: Xabier Jaureguiberry, "Fusion et optimisation de modèles pour la séparation de sources audio", Télécom ParisTech, from Feb 2013, Emmanuel Vincent.

9.2.3. Juries

Participation in PhD thesis Jury for Souhir Gahbiche (Université de Paris-Sud, September 2013), K. Smaïli, reviewer

Participation in PhD thesis Jury for Marion Potet (Université de Grenoble, April 2013), K. Smaïli, reviewer

Participation in HDR Jury for Chiraz Latiti (University of Lorraine), June 2013, K. Smaïli, co-supervisor.

Participation in PhD thesis Jury for Penny Karanasou (Université Paris-Sud, June 2013), D. Jouvét.

Participation in PhD thesis Jury for Mohammed Bouallegue (Université Avignon et Pays du Vaucluse, December 2013), D. Jouvét, reviewer.

Participation in PhD thesis Jury for Tiraogo Abdoulaye Yves Zango (Université de Rennes, February 2013, Y. Laprie, reviewer.

Participation in PhD thesis Jury for Utpala Musti (University of Lorraine), February 2013, V. Colotte, member.

Participation in PhD thesis Jury for Julian Andrés VALDES VARGAS (Université de Grenoble), June 2013, Y. Laprie, reviewer.

Participation in PhD thesis Jury for Sebastien Le Maguer (Université de Rennes - ENSAT Lannion), July 2013, V. Colotte, member.

Participation in PhD thesis Jury for Amel Benamrane (Université de Strasbourg), December 2013, Y. Laprie, reviewer.

Participation in PhD thesis Jury for Julie Busset (University of Lorraine), March 2013, Y. Laprie, supervisor.

Participation in PhD thesis Jury for Imen Jemaa (University of Lorraine - ENIT (Tunis)), February 2013, Y. Laprie, co-supervisor.

Participation in HDR Jury for Slim Ouni (University of Lorraine), February 2013, Y. Laprie, supervisor.

Participation in PhD thesis Jury for Benoit Fuentes (Télécom ParisTech, March 2013), E. Vincent, reviewer

Participation in PhD thesis Jury for Ricard Marxer (University Pompeu Fabra, Barcelona, September 2013), E. Vincent, reviewer

Participation in PhD thesis Jury for Sašo Mušević (University Pompeu Fabra, Barcelona, September 2013), E. Vincent, reviewer

Participation in PhD thesis Jury for François Rigaud (Télécom ParisTech, December 2013), E. Vincent, reviewer

Participation in PhD thesis Jury for Charles Fox (Télécom ParisTech, December 2013), E. Vincent, reviewer

Participation in PhD thesis Jury for Alban Portello (University of Toulouse, December 2013), E. Vincent, reviewer

Participation in PhD thesis Jury for Stanislaw Gorlow (University Bordeaux 1, December 2013), E. Vincent, reviewer

9.2.4. Participation to external committees

Member of a Selection Committee of Le Mans (Université of Maine), LIUM (Laboratoire d'Informatique de l'Université du Maine), D. Langlois

Member of a Selection Committee of University of Lorraine (Ecole des Mines), LORIA, Y. Laprie

Titular member of the National Council of Universities (CNU section 61), E. Vincent

Member of a Visiting AERES Committee (LIMSI), Y. Laprie

9.2.5. Participation to local committees

Titular member of the Comité de Centre Inria, E. Vincent

Member of the Commission de Développement Technologique, A. Bonneau

Member of the Commission développement durable, D. Fohr

Member of Commission de médiation, I. Illina

Member of bureau of Ecole doctorale, I. Illina

Elected member of the Conseil du Pôle Scientifique AM2I of University of Lorraine, Y. Laprie

Elected member of the Conseil de secteur MIAE of University of Lorraine, V. Colotte

Elected member of the Conseil de Laboratoire (LORIA), S. Ouni

Appointed member of the Conseil de Laboratoire (LORIA), Y. Laprie

President of the local "Comité des Utilisateurs des Moyens Informatiques" (Inria NGE), D. Fohr

9.3. Popularization

Demonstration (of audio processing and source separation) to high school students at Inria Nancy in March 2013 (E. Vincent).

Demonstration to students of Mines Nancy at Inria Nancy in December 2013 (S. Ouni).

Participation in the Renaissance festival in Nancy in June 2013 (E. Vincent, D. Fohr, Y. Salaün, Y. Laprie, J. di Martino) Demonstrations of automatic speech recognition, speech analysis, source separation, articulatory modeling and voice conversion were presented.

Participation in the 11th Rencontres européennes CNRS Jeunes "Sciences et Citoyens" in Pont-à-Mousson in November 2013 (E. Vincent).

Participation in the Forum Sciences Cognitives, presentation to students in Cognitive Sciences at the University of Lorraine, in November 2013 (S. Ouni) .

PARSIFAL Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Organization

Dale Miller served on the Program Committee of Tableaux 2013, 16-19 September, Nancy, France.

Dale Miller is the editor-in-chief of the ACM Transactions on Computational Logic (ToCL) (June 2009 - May 2015).

Dale Miller has editorial duties on the following three other journals: *Journal of Automated Reasoning*, published by Springer (member of Editorial Board since 2011), *Theory and Practice of Logic Programming* published by Cambridge University Press (an editorial advisor since 1999), and *Journal of Applied Logic*, published by Elsevier (an area editor for “Type Theory for Theorem Proving Systems” since 2003).

Dale Miller is a member of the selection jury for the 2013 E. W. Beth Dissertation Award of the Association for Logic, Language and Information.

8.1.2. Invited Talks

François Lamarche gave a total of eight hours of lectures on path functors at the Groupe de Travail sur les Catégories supérieures, polygraphes et homotopie at the PPS laboratory, Université Paris VII.

Dale Miller gave an invited talk at LFMTP 2013: Logical Frameworks and Meta-Languages: Theory and Practice, affiliated with ICFP’13, Boston, 23 September 2013.

Dale Miller is on the Advisory Board for LICS (for 2012 - 2015) and is a member of the Steering Committee of CPP since 2012.

Dale Miller gave invited departmental colloquia at the College of Engineering and Computer Science, Australian National University, 14 May and the Department of Mathematics and Computer Science, Freie Universität Berlin, 22 February.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence: Stéphane Graham-Lengrand teaches 50 hours (eq. TD) in L3 at Ecole Polytechnique in the course “INF431: Algorithmique et programmation”.

Master: Stéphane Graham-Lengrand teaches 36 hours (eq. TD) in M1 at Ecole Polytechnique in the course “INF551: Computer-aided reasoning”, and 15 hours (eq. TD) in M2 at Master Parisien de Recherche en Informatique (MPRI) on “Curry-howard correspondence for classical logic”.

Master: Dale Miller taught 12 hours at MPRI (Master Parisien de Recherche en Informatique) in the Course 2-1: Logique linéaire et paradigmes logiques du calcul.

Dale Miller was an invited lecturer at the CUSO Winter School in Mathematics and Computer Science “Proof and Computation”, Les Diablerets, Switzerland, 27-31 January 2013.

8.2.2. Supervision

PhD: Nicolas Guenot, “Nested Deduction in Logical Foundations for Computation”, Ecole Polytechnique, April 10 2013, supervisor Lutz Straßburger (thesis available at [12])

PhD: Ivan Gazeau, “Safe Programming in finite precision: Controlling the errors and information leaks”, Ecole Polytechnique, October 14 2013, supervisors: Dale Miller and Catuscia Palamidessi [11].

PhD: Mahfuza Farooque, “Automated reasoning techniques as proof search in sequent calculus”, Ecole Polytechnique, December 19 2013, supervisor: Stéphane Graham-Lengrand [29].

PhD in progress: Quentin Heath, since October 2013, supervisor: Dale Miller.

PhD in progress: Zakaria Chihani, since October 2012, supervisor: Dale Miller.

PhD in progress: Hernán Vanzetto, since October 2010, co-supervisors: Stefan Merz and Kaustuv Chaudhuri.

8.2.3. Juries

François Lamarche was member of the PhD jury of Pierre Rannou, Université Aix-Marseille, October 21 2013.

Dale Miller was a member of the PhD jury of the following three students during 2013: Mahfuza Farooque, Ecole Polytechnique 19 December 2013 (evaluator); Stéphane Zimmermann, University of Paris Diderot, 10 December 2013 (president); Matthias Puech, University of Bologna, 8 April 2013 (reporter).

Stéphane Graham-Lengrand was member of the PhD jury of Sophia Knight, École Polytechnique, September 20 2013.

PERCEPTION Team

8. Dissemination

8.1. Scientific Animation

Radu Horaud is a member of the following editorial boards:

- advisory board member of the *International Journal of Robotics Research*,
- associate editor of the *International Journal of Computer Vision*, and
- area editor of *Computer Vision and Image Understanding*.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Doctorat (EEATS) : Radu Horaud, **Manifold Learning for Signal and Image Analysis**, 18 hours, Université de Grenoble, France.

Doctorat (MSTII) : Radu Horaud, **Three-Dimensional Sensors**, 12 hours, Université de Grenoble, France.

8.2.2. Supervision

PhD: Jordi Sanchez-Rieira, 3D Human-Robot Interaction with NAO, November 2009 – June 2013, Radu Horaud

PhD: Antoine Deleforge, Sound-Source Separation and Localization, October 2010 – December 2013, Radu Horaud

PhD: Xavi Alameda-Pineda, Audio-Visual Fusion for HRI, October 2010 – November 2013, Radu Horaud

PhD in progress: Kaustubh Kulkarni, Continuous Action Recognition, November 2009, Radu Horaud

PhD in progress: Maxime Janvier, Sound Recognition for Humanoids, November 2012, Radu Horaud

PhD in progress: Israel Dejene-Gebru, Multimodal human-robot dialog based on audio and visual features, October 2013, Radu Horaud

PHOENIX Project-Team

8. Dissemination

8.1. Scientific Animation

We have organized the following workshops:

- HCAN'13: Workshop on Assistive Technologies - <http://phoenix.inria.fr/hcan13>
- International Workshop on "Assistance and Service Robotics in a Human Environment", in conjunction with the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS'2013) - <http://www.lissi.fr/iros-ar>

Charles Consel has been involved in the following events as

- Program Committee member of
 - ACM/IEEE International Conference on Software Engineering (ICSE) 2013, the New Ideas and Emerging Results (NIER Track)
 - 10th International Conference on Autonomic Computing (ICAC). ICAC 2013 will be held in conjunction with the 2013 Usenix Federated Conference Week (FCW), and will take place on June 26th-28th, 2013, in San Jose, CA.
 - ICSE 2014
- Invited speaker at
 - Yale University March 29th (DiaSuite Approach)
 - Fraunhofer Ctr. for Exp. Soft. Eng., College Park, Maryland (DiaSuite Approach)
 - MAPLS Mid-Atlantic Programming Language Seminar, University of Maryland (UMD) (DiaSuite Approach)
 - HCIL seminar, University of Maryland (UMD) (Personalizing Assisted Living)
 - University of Montreal, Université du Québec à Montréal (QaM), University of Sherbrooke (DiaSuite Approach)
 - McGill University (Design-Driven Development of Dependable Applications: A Case Study in Avionics)
 - the David Schmidt Fest, Kansas State University Sept, 2013 (DiaSuite Approach)
 - Research Institute for Geriatrics of the University of Montreal (CRIUGM) (Personalizing Assisted Living)

Charles Consel is a member of Quebec Network for Research on Aging and he participate to the project "Dépistage précoce de la démence : Utilisation novatrice des environnements intelligents pour détecter les difficultés rencontrés dans la vie quotidienne" (2013-2015).

Emilie Balland has been involved in the following events as

- Program Committee member of
 - SLE'13: 6th International Conference on Software Language Engineering
 - GPCE'13: 12th International Conference on Generative Programming: Concepts & Experiences (collocated with SPLASH'13, incl. OOPSLA'13)
 - WGP'13: 9th ACM SIGPLAN Workshop on Generic Programming (collocated with ICFP'13)
 - WASDETT'13: 4th International Workshop on Academic Software Development Tools and Techniques (collocated with ECOOP'13)
- Invited speaker at
 - ETH Zurich, Switzerland, August 2013.

David Daney has been involved in the following events as

- Organizer and Program Committee member of
 - IROS 2013 workshop on Assistance and Service Robotics in a Human Environment, IROS'13, Tokyo.
- Invited speaker at
 - National Days of Robotics Research, JNRR'13, Annecy
 - 2nd Workshop of National Expertise Center in Robotics, Evry
 - Inria Scientific Day, Rennes

D. Daney is coordinator of the Inria Project Lab Personally Assisting Living (IPL PAL) – see <http://pal.inria.fr>

Hélène Sauzéron has been involved in the following events as

- Reviewer for the following journals
 - Gerontology
 - BMC Geriatrics
 - Applied Psycholinguistics
 - Experimental Aging Research
 - Journal of Speech, Language, and Hearing Research
- Invited speaker at
 - Workshop – Alzheimer, Approche pluri-disciplinaire :de la recherche clinique aux avancées technologiques, Toulouse, Jan. 2013.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence : David Daney, Industrial control systems, 48h, L3, ITII, Polytech Nice, France

Master : David Daney, Medical robotics, 22h, M2, Master of Bio-Medical , Univ. Nice Sophia Antipolis France.

Master : David Daney, Mathematics of robotics, 9h, M2, IPB, Bordeaux, France.

Master : David Daney, Health Technology, 10h, M2, IPB, Bordeaux, France.

Master : Hélène Sauzéron, UE Neuroscience cognitive, 6h, M2, Master NEURASMUS, Université Bordeaux Segalen, France

Diplôme Inter-Universitaire Antilles-Guyanne, Sciences neuropsychologiques, 30h, Université de médecine de Guadeloupe, France

8.2.2. Supervision

PhD : Quentin Enard, “Développement d’applications logicielles sûres de fonctionnement: une approche dirigée par la conception”, University of Bordeaux, May 6, 2013, supervised by Charles Consel

PhD : Pengfei Liu, “Intégration de politiques de sécurité dans les systèmes ubiquitaires”, University of Bordeaux, January 17, 2013, supervised by Hélène Kirchner and Charles Consel

PhD : Tsounil Prashant Arvind Pala, “Approche écologique de l’évaluation de la mémoire épisodique dans le vieillissement normal et les neuropathologies”, University of Bordeaux Segalen, December 18, 2013, supervised by Hélène Sauzéron and Bernard N’Kaoua

PhD in progress : Stéphanie Gatti, “Architecture en composants et qualification incrémentale”, started in February 2010, supervised by Charles Consel and Emilie Balland

PhD in progress : Paul Van der Walt, “Certification d’une plateforme ouverte”, started in November 2012, supervised by Charles Consel and Emilie Balland

PhD in progress : Milan Kabac, “Orchestration à grande échelle d’objets communicants”, started in September 2012, supervised by Charles Consel

PhD in progress : Charles Fage, “Validation expérimentale d’un assistant numérique d’inclusion scolaire d’élèves collégiens porteurs d’autisme”, started in September 2012, supervised by Hélène Sauzéon

PhD in progress : Lucile Dupuy, “DomAssist : Assistance domiciliaire pour la personne âgée et son aidant formel basée sur la technologie DiaSuiteBox”, started in September 2013, supervised by Hélène Sauzéon and Charles Consel

8.2.3. *Juries*

Charles Consel has participated:

- in the thesis defense committee
 - Miruna Stoicescu, University of Toulouse, France
- in the thesis award committee of
 - Programming and Software of "Groupement de Recherche Génie de la Programmation et du Logiciel (GDR GPL)"

Emilie Balland has participated in the thesis defense committee of Jimmy Lauret, May 15, University of Toulouse, France.

David Daney has participated in the thesis defense committee of:

- Jorgé Alberto Rios Martinez, January 8, University of Grenoble, France
- Julien Alexandre Dit Sandretto, September 11, University of Nice, France
- Thibault Gayral, November 29, University of Nice, France

Hélène Sauzéon has participated in the thesis defense committee of Tsounil Prashant Arvind Pala, December 18, University of Bordeaux Segalen, France.

8.3. Popularization

Participation of the Phoenix Inria project team in the following events:

- Salon Aquitec, February 2013
- Accueil d’étudiants de terminale S option ISN, February 2013
- “Fête de la science” (national popular science event), October 2013
- Emilie Balland and Milan Kabac, Metro’Num, talk and demonstration of the HomeAssist project, September 2013
- Hélène Sauzéon, "Conférence prospective : Demain les objets sont connectés !", presentation of the HomeAssist project, 3ème Semaine digitale organized by the Bordeaux city hall, March 2013
- Hélène Sauzéon and Charles Fage, "Autisme et Numérique : Mise en place d’un assistant scolaire pour collégiens porteurs d’autisme", « Journée mondiale de sensibilisation à l’autisme » organized by Collectif Girondin des Associations Autour de l’Autisme, April 2013
- Hélène Sauzéon and Charles Fage, "Mise en place d’un assistant solaire Collège + pour les collégiens porteurs d’autisme", « Journée mondiale de sensibilisation à l’autisme » organized by Centre Ressource Autisme, CHU Poitiers, April 2013
- Hélène Sauzéon, presentation of the School+ project to Vincent Peillon, Point d’étape de l’entrée de l’École dans l’ère du numérique, Ministère de l’éducation Nationale, June 2013

PL.R2 Project-Team

7. Dissemination

7.1. Scientific Animation

7.1.1. Collective responsibilities

Pierre-Louis Curien is member of the Conseil Scientifique of the INSII (CNRS). He is also a member of the Conseil Scientifique of CIRM (since June 2013).

7.1.2. Editorial activities

Pierre-Louis Curien is co-editor in chief of *Mathematical Structures in Computer Science*, and is an editor of *Higher-Order and Symbolic Computation*.

7.1.3. Program committees and organising committees

Alexis Saurin has been co-chair of the program committee and editor of the proceedings of the workshop *Control Operators and their Semantics* (COS'13, organized at RDP 2013, <http://cos2013.di.unito.it> and <http://rvg.web.cse.unsw.edu.au/eptcs/content.cgi?COS2013>). The proceedings were published by EPTCS.

Alexis Saurin has been a member of the scientific committee of the Summer School *Linear Logic and Geometry of Interaction* (<http://www.logoi.fr/events/school>) which took place in Torino as a satellite event of CSL 2013.

Alexis Saurin is a PC member of GaLoP 2014 (International Workshop on Games and Logic for Programming) which will take place during ETAPS 2014 in Grenoble.

Hugo Herbelin, Pierre Letouzey and Matthieu Sozeau are co-organizing and co-chairing the TYPES'14 conference in Paris in May.

Matthieu Sozeau was in the PC of DTP'13, JFLA'13 and JFLA'14. He is in the newly formed steering committee of the DTP workshop <https://www.pps.univ-paris-diderot.fr/dtp/>.

Matthieu Sozeau co-organized a (private) meeting at POPL'14 in San Diego, there were 30 participants. He gave a talk on the upcoming 8.5 version of Coq and a tutorial.

Hugo Herbelin organized with Gyesik Lee a workshop on constructive reverse mathematics in Seoul, March 2013.

Yves Guiraud and Philippe Malbos are organisers of the 5-weeks programme *Mathematical Structures of Computation*, held in Lyon in January-February 2014, and supported by the Labex MILYON. They are also organisers of the second week, *Algebra and Computation*, while Pierre-Louis Curien and Hugo Herbelin organised the first week, *Recent Trends in Type theory*.

Pierre-Louis Curien, Hugo Herbelin and Paul-André Melliès are the organisers of the IHP trimester *Semantics of proofs and certified mathematics*, to be held next spring. They also organise a spring school at CIRM preceding the trimester.

Pierre-Louis Curien is member of the steering committee of the conferences *Typed Lambda Calculi (TLCA)* and *Applications* and of the international workshops *Games for Logic and Programming Languages (GaLop)*.

7.1.4. Jury participation

Alexis Saurin was an examiner for the computer science oral at the entrance exam for Ecoles normales supérieures and a member of the jury for Ecole normale supérieure de la rue d'Ulm.

Alexis Saurin has been member of the Jury for LMFJ Master.

7.1.5. Invited talks

Hugo Herbelin gave an invited talk on proving Gödel's completeness theorem with side-effects at the conference TLCA'13 in Eindhoven.

Philippe Malbos was invited speaker at the Sao Paulo - Lyon Algebra meeting, in October 2013.

Pierre-Louis Curien was an invited speaker at Glynn Winskel's anniversary workshop in Cambridge (where he presented his joint work with Garner and Hofmann on coherence issues in type theory), at the workshop Higher structures in China (Lanzhou, August), where he presented homotopical completions and reductions, at the International Symposium on Domain Theory, where he presented Thomas Ehrhard's result "Scott is the extensional collapse of Rel", and at the Loday's Mathematical Legacy conference in Strasbourg as well as at the Algebra and Computation workshop in Lyon where he presented his work on languages for operads and related structures.

7.1.6. Presentation of papers

Philippe Malbos has presented [16] at RTA 2013.

Lourdes González presented [14] at TYPES 2013.

Yann Régis-Gianas presented [14] at ITP 2013.

7.1.7. Other presentations

Yves Guiraud gave a talk on "Coherent presentations of Artin monoids" during the Journées PPS in September 2013.

Pierre Boutillier gave a talk on "An abstract machine to conceal strong reduction and fixpoints" during the journées PPS.

Yann Régis-Gianas presented the CerCo european project at two satellite workshops of HIPEAC (Berlin) in March 2013 and ETAPS (Roma) in April 2013.

Hugo Herbelin gave two lectures on reducibility candidates and their relation with completeness proofs to the Réalisabilité à Chambéry #6 workshop in June.

Hugo Herbelin gave a talk on the development of Coq at the Coq workshop '13 in Rennes.

Hugo Herbelin gave a talk at FOMCAF 2013 in Padova on the status of equality in type theory.

Hugo Herbelin gave a talk at TYPES 2013 in Toulouse on the status of equality in type theory.

Hugo Herbelin gave a talk at PCC 2013 in Toulouse on the Computational interpretation for the big five systems of reverse mathematics (joint work with Gyesik Lee and Keiko Nakata).

Matthieu Sozeau gave a talk at TYPES 2013 in Toulouse on universe polymorphism.

Matthieu Sozeau gave a talk at the TYPEX meeting in Paris on universe polymorphism.

Ludovic Patey gave a talk on Probabilistic Algorithms and Ramsey-Type Principles in Reverse Mathematics at the Workshop in Type Theory, in Séoul, on Rainbow Ramsey theorem for pairs at Computability in Europe, Milano, and on Classifying principles by the no randomized algorithm property at Logic Colloquium, Évora.

Jaime Gaspar gave a talk on Krivine's classical realisability and the unprovability of the axiom of choice and the continuum hypothesis at the 6th Young Set Theory Workshop 2013, Oropa, Italy. He gave a talk on "Refuting" Cantor at the Logic Colloquium 2013, Évora, Portugal.

7.1.8. Talks in seminars

Yves Guiraud gave three talks on "Coherent presentations of Artin monoids" at the Groupe de Travail Catégories supérieures, polygraphes et homotopie, PPS, Paris 7, in May-June 2013.

Matthieu Sozeau gave a talk on universe polymorphism at the Coq working group in Paris.

Alexis Saurin gave a talk at "Journées PPS" in september 2013 on linear head reduction and call-by-need, entitled "Éloge de la paresse".

Guillaume Claret gave a talk at Gallium on the Cybele plugin to do proofs by reflection in Coq using the extraction mechanism.

Guillaume Munch-Maccagnoni gave a talk on duploids at the PPS days in September 2013.

Zena Ariola presented a talk on Call-by-need: reduction, continuation passing style and abstract machines at Paris 7 University, 20 December 2012, and at Inria Saclay, 27 February 2013.

Jaime Gaspar gave a talk on Formalising $ZF \subseteq ZF_\varepsilon$ in Paris, and at the Mathematical Logic Seminar, Lisbon. He gave a talk on Proof interpretations: what they are and what they are good for, at Junior Seminar, Rocquencourt, and at Parsifal team seminar, Palaiseau. He gave a talk on Krivine's classical realizability (see also above) at Technical University of Darmstadt, Darmstadt, and at University of Applied Sciences, Wiesbaden.

7.1.9. Attendance to conferences, workshops, schools,...

Yves Guiraud and Philippe Malbos attended RTA 2013, Eindhoven, in June.

Pierre Boutillier, Alexis Saurin and Pierre-Marie Pédrot attended the JFLA 2013 conference in Aussois.

Pierre Boutillier and Lourdes González attended the Coq workshop 2013 in Rennes.

Pierre Boutillier attended ICFP and DTP 2013 in Boston.

Lourdes González attended the Workshop on Formal Meta-Theory organized by the Parsifal team (Lix and Inria) the 5-6th March 2013.

Lourdes González, Guillaume Claret and Pierre-Marie Pédrot attended TYPES 2013 in Toulouse.

Yann Régis-Gianas, Guillaume Claret and Lourdes González attended ITP 2013 in Rennes.

Lourdes González and Pierre-Marie Pédrot attended the Summer School on Linear Logic and Geometry of Interaction in Turin.

Lourdes González attended CSL 2013 and its satellite events in Turin.

Pierre Letouzey attended the Coq workshop 2013 in Rennes.

Matthieu Sozeau attended the JFLA'13 in Aussois.

Matthieu Sozeau attended the Coq workshop 2013 and ITP 2013 in Rennes.

Matthieu Sozeau attended the TYPES 2013 conference in Toulouse.

Matthieu Sozeau attended the POPL'14 conference in San Diego.

Pierre Letouzey, Matthieu Sozeau, Lourdes González, Guillaume Munch and Pierre-Marie Pédrot attended Pierre-Louis Curien's 60th birthday meeting in Venice.

Matthieu Sozeau attended the Conference on Type Theory, Homotopy Theory and Univalent Foundations at the Centre de Recerca Matemàtica in Barcelona.

Guillaume Claret attended the EJCP 2013 school at Saint-Malo and Rennes.

Alexis Saurin attended BLL, a workshop on Bounded Linear Logic, in November 2013.

Zena Ariola attended POPL 2013, Rome.

Jaime Gaspar attended Proof Theory in Lisbon (a one-day workshop), and a workshop on Reverse Mathematics in Paris.

7.1.10. Groupe de travail *Théorie des types et réalisabilité*

Pierre-Marie Pédrot gave a talk on a classical realizability account of the Dialectica transformation, as well as a dependent version of it, in November.

Matthieu Sozeau gave a talk on a groupoid interpretation in March.

This year's other internal speakers were Hugo Herbelin, Philippe Malbos, and the external speakers were Maribel Fernández (King's College, London), Gregory Malecha (MIT), Marc Lasson (then postdoc at Cambridge Univ.), Keiko Nakata (Institute of Cybernetics, Tallinn), Cyril Cohen (Univ. of Göteborg), Eduardo Bonelli (Universidad Nacional de Quilmes), Barbara Petit (Sardes team, Inria Grenoble), Lionel Rieg (ENS Lyon), Fernando Ferreira (Univ. of Lisbonne), Chantal Keller (Univ. of Aarhus), Matthias Puech (Univ. of Aarhus), Dominic Hughes (Stanford University), Thomas Braibant (Gallium team), and Alexander Kreuzer (ENS Lyon).

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Licence: Pierre Boutillier has a temporary research and teaching position (A.T.E.R) at University Paris 7 for the academic year 2013–2014. He teaches this year Programmation fonctionnelle (L3) and Analyse lexicale et syntaxique (L3).

Master: Compilation, (Boutillier) 1/4, M1, Université Paris Diderot.

Master: Assistants de Preuve (Sozeau), 9, M2, Université Paris Diderot.

Master: Functional Programming and Type Systems (Regis-Gianas), 12, M2, Université Paris Diderot.

Master: Lambda-calculus (Saurin), 24H, M2 of Mathematics "Logique Mathématique et Fondements de l'Informatique", Université Paris Diderot.

Master Pierre-Louis Curien teaches in the course Models of programming languages: domains, categories, games of the MPRI (together with Thomas Ehrhard and Paul-André Mellès).

7.2.2. Supervision

Internship: Yves Guiraud has supervised the M2 internship of Maxime Lucas.

Internship: Alexis Saurin has supervised the internship of Fanny He.

Internship: Alexis Saurin has supervised (with Claudia Faggian) the M2 internship of Amina Doumane.

PhD in progress: Pierre Boutillier, Représentation des effets et inférence de type dans le cadre du développement d'un langage de programmation à types riches, September 2010, Hugo Herbelin.

PhD in progress: Lourdes del Carmen González Huesca, Un langage de tactiques typées pour Coq, December 2011, Hugo Herbelin and Yann Régis-Gianas.

PhD in progress: Guillaume Claret, Programmation avec effets en Coq, September 2012, Hugo Herbelin and Yann Régis-Gianas.

PhD in progress: Pierre-Marie Pédro, Logique linéaire et types dépendants, september 2012, supervised by Alexis Saurin and Hugo Herbelin.

PhD in progress : Cyrille Chenavier, supervised by Yves Guiraud and Philippe Malbos.

PhD in progress : Maxime Lucas, supervised by Yves Guiraud and Pierre-Louis Curien.

PhD defended: Guillaume Munch-Maccagnoni, Syntaxe et modèles d'une composition non-associative des programmes et des preuves, Université Paris Diderot - Paris 7, December 10 2013, Pierre-Louis Curien and Thomas Ehrhard. [11]. Hugo Herbelin was a member of the jury.

7.2.3. Juries

Pierre-Louis Curien was referee and Yves Guiraud was jury member for the PhD defence of Pierre Rannou ("Réécriture de diagrammes et de Sigma-diagrammes", Univ. Aix-Marseille).

Pierre-Louis Curien was jury member of the thesis of Florian Hatat ("Jeux graphiques et théorie de la démonstration", Univ. Chambéry).

Pierre-Louis Curien was (as thesis director) in the jury of the theses of Stéphane Zimmermann (“Vers une ludique différentielle”, Univ. Paris Diderot) and of Alexis Goyet (“Le lambda lambda-bar calcul, un calcul dual pour les stratégies non contraintes”, Univ. Paris Diderot).

Pierre Letouzey was a referee for the PhD thesis of Pierre-Nicolas Tollitte in December 2013 (“Extraction de code fonctionnel certifié à partir de spécifications inductives”, CNAM), while Hugo Herbelin was a member of this PhD committee.

7.3. Popularization

Yann Régis-Gianas organised the "Fête de la Science" event for the computer science department of the University Paris 7.

Yann Régis-Gianas co-organised the “Journée Francilienne de Programmation”, a programming contest between undergraduate students of three universities of Paris (UPD, UPMC, UPS).

Yann Régis-Gianas gave several conferences about computer science in several primary schools of Paris.

POEMS Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Membership

- A. S. Bonnet-Ben Dhia is the Head of the Electromagnetism Group at CERFACS (Toulouse)
- A. S. Bonnet-Ben Dhia is in charge of the relations between l'ENSTA and the Master "Dynamique des Structures et des Systèmes Couplés (Responsable : Etienne Balmes)".
- A. S. Bonnet-Ben Dhia chairs the scientific council of the CNRS Institute for Engineering and Systems Sciences (INSIS)
- A. S. Bonnet-Ben Dhia is associate editor of SINUM (SIAM Journal of Numerical Analysis).
- M. Bonnet is associate editor of European Journal of Mechanics A/Solids
- M. Bonnet is associate editor of Engineering Analyses with Boundary Elements
- M. Bonnet is on the editorial board of *Inverse Problems*.
- M. Bonnet is on the editorial board of *Computational Mechanics*.
- P. Ciarlet is an editor of DEA (Differential Equations and Applications)
- P. Ciarlet is an editor of CAMWA (Computers & Mathematics with Applications)
- P. Ciarlet is an editor of ESAIM:M2AN (Mathematical Modeling and Numerical Analysis)
- G. Cohen is a scientific expert of ONERA.
- P. Joly is a member of the scientific committee of CEA-DAM.
- P. Joly is a member of the Scientific Committee of the Seminar in Applied Mathematics of College de France (P. L. Lions).
- P. Joly is an editor of the journal Mathematical Modeling and Numerical Analysis.
- P. Joly is a member of the Book Series Scientific Computing of Springer Verlag.
- M. Lenoir is a member of the Commission de Spécialistes of CNAM.
- M. Lenoir is in charge of Master of Modelling and Simulation at INSTN.
- E. Lunéville is the Head of UMA (Unité de Mathématiques Appliquées) at ENSTA.
- The Project organizes the monthly Seminar Poems (Coordinators: S. Chaillat, S. Marmorat)

9.1.2. Organisation of conferences

- POEMS has co-organized the international conference WAVES 2013 (Tunis june 2013).
- Patrick Joly was co-organizer of the Oberwolfach seminar (Computational Acoustics and Electromagnetism) in February 2013.
- Sonia Fliss organized the CEA-EDF-Inria summer school (Waves in periodic media : mathematical and numerical aspects), ENSTA-Paristech in april 2013.
- Anne-Sophie Bonnet-Ben Dhia co-organized a workshop (Mathematical methods for spectral problems : applications to waveguides, periodic media and metamaterials), Helsinki in Mars 2013.
- Anne-Sophie Bonnet-Ben Dhia organized a workshop on waveguides, ENSTA-Paristech in october 2013.
- Stéphanie Chaillat organized a workshop (Error Estimates and Adaptive Mesh Refinement Strategies for Boundary Elements Methods), ENSTA-Paristech in may 2013.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Éliane Bécache

- *Compléments sur la méthode des éléments finis*, ENSTA Paristech, (2nd year).

Marc Bonnet:

- *Problèmes inverses*, Master TACS (ENS Cachan) and DSMSC (Centrale Paris)
- *Méthodes intégrales*, Master TACS (ENS Cachan)
- *Equations intégrales et multipôles rapides*, Ecole doctorale MODES (Univ. Paris Est, Marne la Vallée)
- *Outils élémentaires d'analyse pour les équations aux dérivées partielles*, ENSTA Paristech (1st year)

Anne-Sophie Bonnet-Ben Dhia

- *Outils élémentaires d'analyse pour les EDP*, ENSTA Paristech (1st year).
- *Propagation dans les guides d'ondes*, ENSTA Paristech (3rd year).
- *Théorie spectrale des opérateurs autoadjoints et applications aux guides optiques*, ENSTA Paristech (2nd year).
- *Propagation des ondes*, Ecole Centrale de Paris (M2).

Laurent Bourgeois

- *Outils élémentaires pour l'analyse des EDP*, ENSTA Paristech (1st year)
- *Fonction de la variable complexe*, ENSTA Paristech (2nd year)
- *Inverse problems: mathematical analysis and numerical algorithms*, Université Pierre et Marie Curie (Master 2)

Aliénor Burel

- *Calculus, L1 PCST*, Université Paris-Sud XI (1st year)
- *Systèmes Linéaires, L3 MAP, Matlab*, Université Paris-Sud XI (3rd year)
- *Probabilités*, IUT d'informatique, Université Paris-Sud XI (2nd year)
- *Analyse*, IUT d'informatique, Université Paris-Sud XI (1st year)

Camille Carvalho

- *Optimisation Quadratique*, ENSTA Paristech (1st year)
- *Fonction d'une variable complexe*, ENSTA Paristech (2nd year)
- *Tutorat pour les élèves en difficulté en mathématiques appliquées*, ENSTA Paristech (1st year)

Maxence Cassier

- *Système dynamique: Stabilité et Commande*, ENSTA Paristech (1st year)
- *Introduction à MATLAB*, ENSTA Paristech (1st year)
- *Fonctions d'une variable complexe*, ENSTA-Paristech, (2nd year)
- *Tutorat pour élèves en difficulté en mathématiques appliquées*, ENSTA Paristech (1st year)

Stéphanie Chaillat

- *Introduction à la discrétisation des équations aux dérivées partielles*, ENSTA Paristech (1st year)
- *Fonctions d'une variable complexe*, ENSTA, ENSTA Paristech (2nd year)

Patrick Ciarlet

- *The finite element method*, ENSTA Paristech (2nd year)
- *The finite element method – extensions*, ENSTA Paristech (2nd year)
- *Theory and algorithms for distributed computing*, ENSTA Paristech (3rd year), and Master "Modeling and Simulation" (M2)
- *Maxwell's equations and their discretization*, ENSTA Paristech (3rd year), and Master "Modeling and Simulation" (M2)

Rémi Cornaggia:

- *Mécanique*, Polytech' Paris Sud, Orsay (PeiP, 1st year)
- *Physique des solides*, Université Paris 11, Orsay (L3 "Physique et mécanique")
- *Méthodes numériques pour la physique*, Université Paris 11, Orsay (M1 "Mécanique physique")

Sonia Fliss

- *Méthode des éléments finis*, ENSTA Paristech (2nd year)
- *Programmation scientifique et simulation numérique*, ENSTA Paristech (2nd year)
- *Introduction à la discrétisation des équations aux dérivées partielles*, ENSTA Paristech (1st year).
- *Local perturbations of periodic media*, International Summer School in Mathematics on the topic "Periodic structures in Applied Mathematics", Georg-August Universität, Göttingen.

Christophe Hazard

- *Outils élémentaires d'analyse pour les EDP*, ENSTA Paristech (1st year)
- *Théorie spectrale des opérateurs autoadjoints et applications aux guides optiques*, ENSTA Paristech (2nd year).

Patrick Joly

- *Introduction à la discrétisation des équations aux dérivées partielles*, ENSTA Paristech (1st year).
- *Outils élémentaires d'analyse pour les EDP*, ENSTA Paristech (1st year).

Nicolas Kielbasiewicz

- *Programmation scientifique et simulation numérique*, ENSTA-Paristech (2nd year)
- *Parallélisme et calcul réparti*, ENSTA-Paristech (Master 2)

Marc Lenoir

- *Fonctions d'une variable complexe*, ENSTA Paristech (2nd year)
- *Equations intégrales* ENSTA Paristech (Master 2)

Simon Marmorat

- *Introduction à la discrétisation des équations aux dérivées partielles et à leur discrétisation*, ENSTA Paristech (1st year)
- *La méthode des éléments finis*, ENSTA Paristech (2nd year)

Jean-François Mercier

- *Outils élémentaires d'analyse pour les équations aux dérivées partielles*, ENSTA Paristech (1st year)
- *Fonctions d'une variable complexe*, ENSTA-Paristech, ENSTA Paristech (2nd year)
- *Théorie spectrale des opérateurs autoadjoints et application aux guides optiques*, ENSTA Paristech (Master 2)

Nicolas Salles

- *Analyse et séries de Fourier*, Université Paris-Sud XI (L2)
- *Systèmes Linéaires (Matlab)*, Université Paris-Sud XI (L3)
- *Calcul scientifique*, Université Paris-Sud XI (L3)
- *Géométrie et Analyse de Fourier*, Université Paris-Sud XI (L2)

Elizaveta Vasilevskaya

- *Algèbre linéaire*, Institut Galilée (L1)
- *Mathématiques générales*, Univ. Paris XIII (L1)
- *Mathématiques générales*, Univ. Paris XIII (L2)

Valentin Vinales

- *La méthode des éléments finis*, ENSTA Paristech (2nd year)
- *Introduction à MATLAB*, ENSTA-Paristech, ENSTA Paristech (1st year)

9.2.2. Supervision

PhD : Nicolas Salles, "Stabilisation du calcul des singularités dans les méthodes d'équations intégrales variationnelles", September 2013, Marc Lenoir and Eliane Bécache

PhD in progress : Aliénor Burel, "Méthodes numériques pour les ondes élastiques en présence d'interfaces minces et de milieux mous", October 2010, Patrick Joly and Marc Bonnet

PhD in progress : Maxence Cassier, "Focalisation par retournement temporel sur des obstacles diffractants.", October 2010, Christophe Hazard and Patrick Joly

PhD in progress : Matthieu Chamaillard, "Conditions aux limites effectives pour des revêtements minces périodiques", October 2011, Patrick Joly

PhD in progress : Simon Marmorat, "Etude d'un modèle asymptotique et de son couplage avec une approche par éléments finis pour simuler la propagation d'ondes ultrasonores dans un milieu complexe perturbé par de petites inclusions", Mars 2012, Patrick Joly

PhD in progress : Antoine Tonnoir, "Simulation numérique de la diffraction d'ondes ultrasonores par un défaut localisé dans une plaque élastique anisotrope", October 2011, Anne-Sophie Bonnet-Ben Dhia and Sonia Fliss

PhD in progress : Audrey Vigneron, "Formulations intégrales pour la simulation du contrôle non destructif par courants de Foucault", November 2011, Marc Bonnet

PhD in progress : Rémi Cornaggia, "Asymptotique petit-défait de fonctions-coût et son application en identification: justifications théorique et expérimentale, extensions", October 2012, Marc Bonnet

PhD in progress : Geoffrey Beck, "Modélisation de la propagation d'ondes électromagnétiques dans des câbles co-axiaux", October 2012, Patrick Joly

PhD in progress : Elizaveta Vasilevskaya, "Modes localisés dans les guides d'onde quantiques", November 2012, Patrick Joly

PhD in progress : Camille Carvalho, "Étude théorique et numérique de guides d'ondes plasmoniques", October 2012, Anne-Sophie Bonnet-Ben Dhia and Patrick Ciarlet

PhD in progress : Valentin Vinales, "Analyse asymptotique des équations de Maxwell en présence de métamatériaux", October 2012, Sonia Fliss and Patrick Joly

PhD in progress : Mathieu Lecouvez, "Méthodes de décomposition de domaine optimisées pour la propagation d'ondes en régime harmonique", March 2012, Patrick Joly

PhD in progress : Luca Desiderio, "Efficient visco-elastic wave propagation in 3D for high contrast media", October 2013, Stéphanie Chaillat and Patrick Ciarlet

9.3. Popularization

Marc Bonnet:

- Opening workshop of UCL Centre for Inverse Problems (London, UK, March 2013),
- Conference honoring Andreas Kirsch for his 60th birthday (Bad Herrenalb, Germany, April 2013),
- International Conference on Novel Directions in Inverse Scattering (Newark DE, USA, July 2013),
- Singular Days (Rennes, France, August 2013)

Laurent Bourgeois

- *On sampling methods to identify defects in a periodic waveguide from far field data*, Inverse Problems: Scattering, Tomography and Parameter Identification, Conference honoring Andreas Kirsch for his 60th birthday, Bad Herrenalb - Germany, 8-11/4/2013
- *On Lipschitz stability for a class of inverse problems*, Inverse Problems and Nonlinear equations, Ecole Polytechnique, Palaiseau, 22-24/05/2013
- *On the far field of scattering solutions in a periodic waveguide. Part II : The inverse problem*, Waves conference, Gammarth, Tunisie, 3-7/6/2013

Aliénor Burel

- *Using potentials in elastodynamics : a challenge for FEM*, WONAPDE, Concepción (Chile), January 14-18th
- *Utilisation des potentiels en élastodynamique : un challenge pour les méthodes éléments finis ?*, GTN Orsay, Université Paris-Sud, February, 19th
- *Effective Transmission Conditions for Thin-Layer Transmission Problems in Elastodynamics*, WAVES '13, Gammarth (Tunisia), June 3-7th
- *Utilisation des potentiels en élastodynamique : un challenge pour les méthodes éléments finis ?*, Poems Seminar, Palaiseau, June 27th

Camille Carvalho

- *Plasmonic cavity modes with sign-changing permittivity*, WAVES, Tunis, June
- *Plasmonic cavity modes: black-hole phenomena captured by Perfectly Matched Layers*, PIERS, Stockholm, August

Maxence Cassier

- *Space-time focusing on unknown obstacles*, International conference in applied mathematics, Heraklion, Greece, September 2013.
- *Space-time focusing for acoustic waves* (poster session), International conference on novel directions in inverse scattering, honoring David Colton, Newark, United states, July 2013.
- *Selective focusing on unknown scatterers*, Maxence Cassier, Christophe Hazard and Patrick Joly, Waves conference, Tunis, Tunisia, June 2013.
- *Selective focusing for time-dependent waves*, Maxence Cassier, Christophe Hazard and Patrick Joly, Workshop: Inverse problems and imaging, institut Henri Poincaré, Paris, France, February 2013.
- *Selective focusing for time-dependent waves*, Maxence Cassier, Christophe Hazard and Patrick Joly, Workshop: Computational electromagnetism and acoustics, Oberwolfach, Germany, January 2013.

Stéphanie Chaillat

- *Fast multipole accelerated boundary integral equation method for 3-D elastodynamic problems in a half-space*, Séminaire EDP LJK, Grenoble, France, November 2013.
- *Fast multipole accelerated boundary integral equation method for 3-D elastodynamic problems in a half-space*, Séminaire Equipe ENI MSSMAT, Chatenay-Malabry, France, November 2013.

- *A fast and adaptive algorithm for the inverse medium problem based on Singular Value Decomposition*. 3rd European Conference on Computational Optimization, Chemnitz, Germany, July 2013.
- *An Adapted Fast Multipole Accelerated Boundary Element Method for 3D Elastodynamics*, SIAM in the Geosciences, Padua, Italy, June 2013.
- *Fast Multipole Accelerated Boundary Element Method for problems in an elastic Half-Space*, WAVES 2013, Tunis, Tunisia, June 2013.
- *Fast multipole accelerated boundary integral equation method for 3-D elastodynamic problems in a half-space*, Séminaire ISTERRE, Grenoble, France, February 2013.
- *Fast multipole accelerated boundary integral equation method for 3-D elastodynamic problems in a half-space*, Séminaire du LMA, Marseille, France, January 2013.
- *Comparison of two Fast Multipole Accelerated BEMs for 3D elastodynamic problems in semi-infinite media*, IABEM 2013, Santiago, Chile, January 2013.

Patrick Ciarlet

- *Strong convergence for Gauss' law with edge elements*, Mafelap'13, Uxbridge (G.-B.), 10-14/06/2013
- *Numerical approximation of transmission problems with sign changing coefficients*, Journées Singulières Augmentées, Rennes, 26-30/08/2013

Sonia Fliss

- *DtN approach for the exact computation of guided modes in a photonic crystal waveguides*, Séminaire EDP de Metz, Metz, January 18th.
- *Sufficient conditions for existence of guided modes in photonic crystal waveguide or how useful can be a numerical method*, Mathematical Methods for spectral problems, University of Helsinki, March 5th-7th
- *Transparent boundary conditions in periodic media*, HF 2013, Nancy, March 19th-21th
- *Scattering in locally perturbed periodic waveguides : forward and inverse problems*, Applied Analysis for the Material Sciences with a special hommage to Michael Vogelius, CIRM Marseille, May 27th-31st
- *On the far field of scattering solutions in a periodic waveguide. Part 1: the forward problem*, Waves 2013, Tunis, June 3rd-7th

Patrick Joly

- *Numerical simulation of a grand piano*, Conference WONAPDE, Concepcion, Chile, January 2013
- *A rigorous approach to the propagation of electromagnetic waves in co-axial cables*, Workshop EMSCA, Weierstrass Institute, Berlin, Germany, May 2013
- *Simulation numérique d'un piano de concert*, Journées EDPs, Contrôle et Musique, Université Pierre et Marie Curie, Paris, May 2013
- *A rigorous approach to the propagation of electromagnetic waves in co-axial cables*, Conference WAVES2013, Gammarth, Tunisia, June 2013
- *Quasi-local transmission conditions and iterative domain decomposition methods for time harmonic wave propagation*, International Conference on Novel Directions in Inverse Scattering, Newark (Delaware), USA, Juillet 2013
- *Riesz potentials and quasi-local transmission condition for iterative non overlapping domain decomposition methods for the Helmholtz equation*, Conference JSA 2013, Rennes, France, August 2013
- *Perfectly Matched Layers for time domain wave propagation : overview and recent progress*, Conference CEDYA 2013, Castellon, Spain, September 2013

- *Conditions de transmission quasi-locales et méthodes de décomposition de domaine pour la propagation d'ondes en régime harmonique*, CMAP Seminar, Ecole Polytechnique, Palaiseau, France, December 2013

Simon Marmorat

- *An improved linear sampling method in the time domain*, WONAPDE 2013, Concepción, Chile, January.
- *Time domain computation of the scattering of waves by small heterogeneities*, Waves 2013, Tunis, Tunisia, June.
- *An asymptotic model for the scattering of waves by small heterogeneities*, Inria Junior Seminar, Rocquencourt, France, November.
- *Méthodes d'échantillonnage pour la diffraction inverse en fréquence et en temps*, POems Seminar, ENSTA, France, December.

Jean-François Mercier

- *Aeroacoustics in a waveguide with a shear flow*, Anne-Sophie Bonnet-BenDhia, Jean-François Mercier et Florence Millot, 11th International Conference on Mathematical and Numerical Aspects of Wave Propagation (WAVES' 13), Tunisia (june 2013)
- *Numerical modeling of nonlinear acoustic waves with fractional derivatives*, B. Lombard et J.-F. Mercier, 11th International Conference on Mathematical and Numerical Aspects of Wave Propagation (WAVES' 13), Tunisia (june 2013)

Nicolas Salles

- *Explicit evaluation of integrals arising in Galerkin BEM*, XIV International Conference on Boundary Element & Meshless Techniques, Palaiseau (France), July 2013

Antoine Tonnoir

- *New transparent boundary conditions for time harmonic acoustic diffraction in anisotropic media*, Waves International conference on Mathematical and numerical aspects of waves, Tunis, June 2013

Elizaveta Vasilevskaya

- *Localized modes in perturbed ladder-like periodic waveguides*, Workshop on waveguides, ENSTA ParisTech, Palaiseau, France, October 2013

POLSYS Project-Team

9. Dissemination

9.1. POLSYS seminar

Our seminar hosted over twenty invited speakers in 2013.

<http://www-polsys.lip6.fr/Seminar/index.html>

9.2. Scientific Animation

L. Perret was a PC member of Inscrypt'13, PKC'13 and Eurocrypt'14. L. Perret joined the editorial board of Designs, Codes and Cryptography.

L. Perret was invited speaker in the workshop “Computer algebra and polynomials” held on November 25-29, 2013 at the Research Institute for Symbolic Computation, Linz, Austria.

M. Safey El Din was invited speaker at

- the Polynomial Optimisation Program at Newton Institute in Cambridge (UK);
- the conference “Numerical Methods and Efficient Computations” in honor of J.-P. Dedieu, CIRM, France, 2013.
- the International Symposium on Symbolic and Algebraic Computation (ISSAC) [21].

C. Eder and E Tsigaridas were invited speakers in the workshop “Gröbner Bases, Resultants and Linear Algebra” held on 3-6 September 3-6, 2013 at the Research Institute for Symbolic Computation, Hagenberg, Austria.

G. Renault was invited speaker in the *Minisymposium On Coppersmith's Heuristic Algorithm for Finding Roots of Multivariate Polynomials* in the *SIAM Conference on Applied Algebraic Geometry* at Colorado State University, USA (August 1–4, 2013) (http://meetings.siam.org/sess/dsp_programsess.cfm?SESSIONCODE=16747).

M. Safey El Din co-organized (with P. Boito, G. Chèze and C. Pernet) the *Journées Nationales de Calcul Formel* in CIRM, France (May, 13-17, 2013) (<http://jnfc2013.imag.fr/>).

M. Safey El Din co-organized (with E. Kaltofen and L. Zhi) the *Minisymposium on Exact Certificates in Nonlinear Global Optimization* in the *SIAM Conference on Applied Algebraic Geometry* at Colorado State University, USA (August 1–4, 2013) (<http://meetings.siam.org/program.cfm?CONFCODE=AG13>).

J.-C. Faugère was invited speaker in the *Computer algebra and polynomials International Workshop* at Linz, Austria (Dec 2013).

J.-C. Faugère was invited speaker in the *Multivariate Polynomial Workshop* at Fukuoka, Japan (Fev 2013).

J.-C. Faugère was invited speaker in the *Groebner bases, resultants and linear algebra Workshop* at Linz, Austria (Sep 2013).

M. Safey El Din and E. Tsigaridas organized the *Minisymposium Algorithms in Real Algebraic Geometry and its Applications* in the *SIAM Conference on Applied Algebraic Geometry* at Colorado State University, USA (August 1–4, 2013) (<http://meetings.siam.org/program.cfm?CONFCODE=AG13>).

M. Safey El Din is member of the editorial board of Journal of Symbolic Computation.

E. Tsigaridas (in collaboration with O. Devillers, M. Karavelas, M. Teillaud) organized the *Workshop on Geometric Computing, Heraklion*, in Greece, January 21 – 25 2013 (<http://www.acmac.uoc.gr/GC2013/>).

E. Tsigaridas participated in the *International Symposium on Symbolic and Algebraic Computation (ISSAC)* which was held in June 26-29, 2013 at Northeastern University, Boston, Massachusetts, USA and presented the paper [32].

C. Eder participated in the *International Symposium on Symbolic and Algebraic Computation (ISSAC)* which was held in June 26-29, 2013 at Northeastern University, Boston, Massachusetts, USA and presented the paper [27].

C. Eder was invited in University of Mississippi, Hattiesburg Mississippi (USA) on 25 June 2013 and gave a talk on *Improved Gröbner Basis computation with applications in cryptography*.

J.-C. Faugère has the following editorial activities:

- Associate Editor of *Cryptography and Communications - Discrete Structures, Boolean Functions and Sequences (SPRINGER)*.
- Guest Editor of a special issue of the *Journal Of Symbolic Computation (2013)* (with L. Perret).

D. Wang has the following editorial activities:

- Editor-in-Chief and Managing Editor for the journal *Mathematics in Computer Science* (published by Birkhäuser/Springer, Basel).
- Executive Associate Editor-in-Chief for the journal *SCIENCE CHINA Information Sciences* (published by Science China Press, Beijing and Springer, Berlin).
- Member of the Editorial Boards for the
 - *Journal of Symbolic Computation* (published by Academic Press/Elsevier, London),
 - *Frontiers of Computer Science* (published by Higher Education Press, Beijing and Springer, Berlin),
 - *Texts and Monographs in Symbolic Computation* (published by Springer, Wien New York),
 - *Book Series on Mathematics Mechanization* (published by Science Press, Beijing),
 - *Book Series on Fundamentals of Information Science and Technology* (published by Science Press, Beijing).
- Member of the International Advisory Board for the *Communications of JSSAC (Japan Society for Symbolic and Algebraic Computation)* (published by JSSAC).
- Editor for the *Book Series in Computational Science* (published by Tsinghua University Press, Beijing).

D. Wang was involved in the organization of the following conferences

- General Co-chair of the *5th International Conference on Mathematical Aspects of Computer and Information Sciences (MACIS 2013)* (Nanning, China, December 11-13, 2013).
- Member of the Program Committee
 - *2nd International Workshop on Hybrid Systems and Biology (HSB 2013)* (Taormina, Italy, September 2, 2013),
 - *15th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC 2013)* (Timisoara, Romania, September 23-26, 2013).
- Co-organizer and Program Co-chair *Second International Seminar on Program Verification, Automated Debugging and Symbolic Computation (PAS 2013)* (Beijing, China, October 23-25, 2013).
- Member of the Steering Committee
 - *International Conference on Mathematical Aspects of Computer and Information Sciences (MACIS)*
 - *International Symposium on Symbolic Computation in Software Science (SCSS)*.

9.3. Teaching - Supervision - Juries

9.3.1. Teaching

Master : J.-C. Faugère. Cours sur les systèmes polynomiaux au MPRI Université Paris 7 Denis Diderot, France

Master : J. Berthomieu, Modélisation et résolutions numérique et symbolique de problèmes *via* les logiciels MAPLE et MATLAB, 35 heures équivalent TD, niveau M1, Université Pierre-et-Marie-Curie, France

Master : J. Berthomieu, Algèbre linéaire et applications, 35 heures équivalent TD, niveau M1, Université Pierre-et-Marie-Curie, France

Master : L. Perret, 96 heures équivalent TD, niveau M1 et M2, Université Pierre-et-Marie-Curie, France

Master : L. Perret, 96 heures équivalent TD, niveau L2 et M3, Université Pierre-et-Marie-Curie, France.

Master : G. Renault, Cryptologie Avancée, 50 heures équivalent TD, niveau M2, Université Pierre-et-Marie-Curie, France

Master : G. Renault, Algèbre linéaire et applications, 35 heures équivalent TD, niveau M1, Université Pierre-et-Marie-Curie, France

Licence : G. Renault, Introduction à la Cryptologie, 50 heures équivalent TD, niveau L3, Université Pierre-et-Marie-Curie, France

Master : M. Safey El Din, Modélisation et résolutions numérique et symbolique de problèmes *via* les logiciels MAPLE et MATLAB, 35 heures équivalent TD, niveau M1, Université Pierre-et-Marie-Curie, France

9.3.2. Supervision

PhD : Aurélien Greuet, 5 Dec 2013, [1]. *Optimisation polynomiale et variétés polaires : théorie, algorithmes et implantations*. University of Versailles Saint-Quentin and Université Pierre et Marie Curie, France. V. Cossart and M. Safey El Din.

PhD : Louise Huot, 13 Dec 2013. *Résolution de systèmes polynomiaux et cryptologie sur les courbes elliptiques*. Université Pierre et Marie Curie, France. J.-C. Faugère, P. Gaudry and G. Renault.

PhD : Jing Yang, 2013. Beihang University, China and North Carolina State University, USA. D. Wang and H. Hong.

PhD : Chenqi Mou, 2013. *Solving polynomial systems over finite fields*. Beihang University, China and Université Pierre et Marie Curie, France. J.-C. Faugère and D. Wang.

- J.-C. Faugère and M. Safey El Din supervise the PhD thesis of T. Verron.
- J.-C. Faugère and G. Renault supervise the PhD thesis of R. Zeitoun.
- J.-C. Faugère and L. Perret supervise the PhD thesis of F. Portzamparc.
- J.-C. Faugère supervises the PhD thesis of J. Svartz.
- J.-C. Faugère supervises the PhD thesis of A. Wallet (jointly with V. Vitse, UJF, Grenoble).
- M. Safey El Din supervises (jointly with D. Henrion, LAAS, Toulouse) the PhD thesis of S. Naldi.

9.3.3. Juries

M. Safey El Din was member of

- the Habilitation Thesis Committee of S. Graillat (UPMC) as an examiner (Dec. 2013) ;
- the PhD Thesis committee of A. Greuet (Univ. Versailles Saint-Quentin) as the PhD advisor (Dec. 2013) ;
- the PhD Thesis committee of L. Huot (UPMC) as an examiner (Dec. 2013) ;
- the PhD Thesis committee of C. Mou (UPMC and Beihang Univ.) as president (June 2013) ;
- the PhD Thesis committee of J. Rohal (North Carolina State Univ., USA) as an external examiner (Aug. 2013).

J.-C. Faugère was member of

- the PhD Thesis committee of L. Ducas (ENS Paris) as president (2013) ;
- the PhD Thesis committee of S. Montan (UPMC) as president (2013) ;
- the PhD Thesis committee of A. Greuet (Univ. Versailles Saint-Quentin) as examiner (Dec. 2013) ;
- the PhD Thesis committee of C. Mou (UPMC and Beihang Univ.) as PhD advisor (June 2013) ;
- the PhD Thesis committee of L. Huot (UPMC) as PhD advisor (Dec. 2013) ;

M. Safey El Din participated to the hiring committee for promotion to Associate Professor of the Academy of Mathematics and Systems Science in China.

G. Renault was member of

- the PhD Thesis committee of J.-G. Kammerer (Univ. Rennes 1) as examiner (May 2013) ;
- the PhD Thesis committee of L. Huot (UPMC) as PhD advisor (Dec. 2013).

POMDAPI Project-Team

7. Dissemination

7.1. Scientific Animation

J. Jaffré organized (with P. Knabner) the mini symposium “Complementarity Problems for Flow in a Porous Medium” at the SIAM Geosciences conference, June 17–20, 2013, Padova, Italy.

C. Japhet and M. Kern organized the mini symposium “Coupled Models and Domain Decomposition in Geosciences” at the SIAM Geosciences conference, June 17–20, 2013, Padova, Italy.

M. Kern was co-chair of the Scientific Committee of the SIAM Conference on Mathematical and Computational Issues in the Geosciences <http://www.siam.org/meetings/gs13/>, June 17–20, Padova, Italy.

M. Kern is Deputy Director of **Maison de la Simulation**, a joint project between CEA, CNRA, Inria, Université de Paris 11 and Université de Versailles, focused on applications of high end computing.

J. E. Roberts is a member of the External Advisory Board for **CFSES** (Center for Frontiers of Subsurface Energy Security), University of Texas at Austin and SANDIA National Laboratories, Albuquerque, New Mexico.

J. E. Roberts organized (with A. Scotti and L. Formaggia) the mini symposium “Discrete-fracture Models for Porous Media Flow” at the SIAM Geosciences conference, June 17–20, 2013, Padova, Italy.

J. E. Roberts is a member of the prize committee for the Interpore society.

J. E. Roberts is a member of the selection committee for recruiting professors in the department of maths of the University of Bergen, and a member of the national Norwegian committee for the promotion of professors.

M. Vohralík was member of the ENUMATH 2013 scientific committee, see <http://enumath2013.epfl.ch/>.

M. Vohralík organized a workshop on “A posteriori error estimates and mesh adaptivity for porous medium problems”, on November 13th, 2013, see https://who.rocq.inria.fr/Martin.Vohralik/A_posteriori/13/.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Licence : I. Ben Gharbia, *Mathématiques 4*, 54 h, L2, Université de Paris 2, France.

Licence : I. Ben Gharbia, *Statistiques 4*, 54 h, L2, Université de Paris 2, France.

Master : J. Ch. Gilbert, *Optimisation différentiable – Théorie et algorithmes*, 42 h, M1, ENSTA ParisTech, France.

Master : M. Kern, *Éléments finis*, 30 h, M1, Mines ParisTech, France.

Master : M. Kern, *Problèmes inverses*, 26 h, M1, Mines ParisTech, France.

Master : M. Vohralík, A posteriori error estimates for efficiency and error control in numerical simulations, 36 h, M2, Université de Paris 6, France.

Master : M. Vohralík, A posteriori error estimates for efficiency and error control in numerical simulations, 21 h, M2, Charles University, Czech Republic.

7.2.2. Supervision

PhD : T. T. P. Hoang, *Méthodes de décomposition de domaine espace-temps pour la formulation mixte de problèmes d'écoulement et de transport en milieu poreux*, Université de Paris 6, December 11th, 2013, J. E. Roberts, C. Japhet, M. Kern.

PhD : Carole Widmer-Heinry, Adaptive finite volume method based on a posteriori error estimators for solving two phase flow in porous media, Université de Paris 6, November 21st, 2013, M. Vohralík, Vivette Girault (LJLL), Huy Tran (IFPEN).

PhD : Soleiman Yousef, A posteriori error estimates and adaptivity based on stopping criteria and adaptive mesh refinement for multiphase and thermal flows. Application to steam-assisted gravity drainage, Université de Paris 6, December 10th, 2013, M. Vohralík, Vivette Girault (LJLL), Éric Flauraud (IFPEN).

PhD in progress : E. Ahmed, *Modélisation d'écoulements diphasiques dans un milieu poreux fracturé*, January 2012, J. E. Roberts and A. Ben Abda.

PhD in progress : S. Ali Hassan, *Estimations d'erreur a posteriori et critères d'arrêt pour des solveurs par décomposition de domaine et avec des pas de temps locaux*, November 1st, 2013, M. Vohralík.

PhD in progress : N. Birgale, *Écoulements souterrains, méthodes numériques, et calcul haute performance*, October 2012, J. Jaffré.

PhD in progress : F. Cheikh, *Identification de failles dans un milieu poreux par une méthode d'indicateurs*, December 2011, J. E. Roberts and H. Ben Ameer.

PhD in progress : C. Jozs, *Optimisation globale des flux d'énergie dans un réseau de transport d'électricité*, May 1st, 2013, J. Ch. Gilbert.

PhD in progress : M. H. Riahi, *Identification de paramètres hydrogéologiques dans un milieu poreux*, December 2011, J. Jaffré and H. Ben Ameer.

7.2.3. Juries

J. Ch. Gilbert was a member of the Selection Commmity for a Maître de Conférence position at both Université Joseph Fourier (Grenoble 1) and ENSEEIHT (INP Toulouse).

M. Vohralík was the referee of the PhD thesis of Simon Lemaire (Université de Paris 12, December 12th, 2013) and examiner of the HdR thesis of Ludovic Chamoin (ENS Cachan, October 11th, 2013).

7.3. Popularization

J. Ch. Gilbert has written the following pages on Wikipedia.fr in 2013: [Algorithme des directions alternées](#), [Borne d'erreur](#), [Complémentarité](#), [Cône dual](#), [Ensemble de sous-niveau](#), [Gradient projeté](#), [Inéquation variationnelle](#), [Lagrangien \(optimisation\)](#), [Lemme de Hoffman](#), [Matrice complètement positive](#), [Matrice copositive](#), [Méthode de Gauss-Seidel](#), [Optimisation complètement positive](#), [Optimisation conique](#), [Optimisation convexe](#), [Optimisation copositive](#), [Optimisation SDP](#).

M. Kern gave a talk on “Mathematics and Simulation” at the *Palmarès académique des Olympiades de mathématiques de l'Académie de Paris*, on May 29th, 2013.

M. Kern gave a talk on “Mathematics and Subsurface Water”, as part of the *Promenades mathématiques* program for students in Terminale S and 1ère S, at Lycée Émilie du Châtelet (Serris), on May 22nd, 2013.

Popix Team

9. Dissemination

9.1. Scientific Animation

Editorial Activity.

POPIX members reviewed articles for *Bioinformatics*, *Journal of Statistical Software*, *Computational Biology and Chemistry*, *European Journal of Clinical Pharmacology*, *Ecological Modelling*, *Scientia Iranica*, *Computers in Biology and Medicine*, *Communications in Mathematical Sciences*, *SIAM journal of Scientific Computing*, *Computational Statistics and Data Analysis*, *Statistical Sciences*.

Bertrand Maury is Associate Editor of *M2AN*.

Conference Participation

Marc Lavielle:

- PAGE Meeting, Glasgow UK, June 2013
- ACOP Meeting, Fort-Lauderdale USA, May 2013
- Rencontres de statistiques, Avignon, June 2013
- Combine 2013, Paris, September 2013
- GDR Metice, Paris, June 2013
- SMB 2013, Paris , September 2013

Bertrand Maury:

- MMCS 2013 (Ecole Centrale de Paris),
- CPDE 2013 (IHP),
- French Chilian Polish Conference 2013 (Poland),
- Conference NUMACH 2013 (Sevilla)
- Bertrand Maury is the leader of the GDR (Groupement de Recherche) Maths-Entreprise, a group of more than 300 researchers, dedicated to tighten the links between academic research in mathematics and private companies (<http://www.maths-entreprises.fr>).

Astrid Decoene:

- MOTIMO colloquium, Nice, September 2013.

Célia Barthélémy:

- PAGE Meeting, Glasgow UK, June 2013
- Journées de la SFdS, Toulouse, June 2013

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Masters: Astrid Decoene, Elements finis et optimisation sous contraintes, Master EDPCS, Paris-Sud University.

Licence: Astrid Decoene, Licence Sciences Technologie Santé, mention mathématiques, Paris-Sud University.

Masters: Marie-Anne Poursat, Coordinator of the Mathematical Engineering course, Paris-Sud University

Masters: Marc Lavielle, Modèles Mixtes et Approche de Population, 24 hours, Paris-Sud University.

Masters: Bertrand Maury, Finite element method and optimization, modeling of the respiratory system, Paris-Sud University.

Masters: Bertrand Maury, Computational Fluid Dynamics, Numerical Analysis and Optimization, Ecole Polytechnique.

Miscellaneous: Marc Lavielle, Population approach and Mixed effects models: PAGE meeting 2013 (Glasgow); ACOP meeting 2013 (Fort-Lauderdale); University of Manchester (UK); University of Buffalo (USA).

9.2.2. Supervision

- PhD in progress: Célia Barthélémy, *Modèles à effets mixtes pour l'assimilation de données en oncologie*, debut: October 2012, Marc Lavielle.
- Bertrand Maury co-supervises several PhD students: J. Fouchet-Incaux, A. Preux, G. Le Poutier, L. Lacouture, C. Etchegarai.
- Astrid Decoene co-supervises the PhD thesis of L. Lacouture.
- Other: Kevin Bleakley supervised two student projects in statistical learning in the *Marketing et gestion de la relation client* year 3 class at ENSAI, Rennes.

9.2.3. Juries

- Kevin Bleakley was in selection committees for Maître de Conférence positions in biostatistics at Paris 6 and Paris 11 Universities. He also participated in the Thesis Committee of Eltaf Alamyar, Montpellier 2 University.
- Marc Lavielle was referee for the HDR of Stéphanie Allasonnière.
- Bertrand Maury was member of the jury for CR2 Inria. He was also member of the selection committees of Nice (PR) and Orsay (MCF).
- Marie-Anne Poursat was member of the selection committee of Orsay (MCF).

9.3. Popularization

We have built a comprehensive online wiki (WikiPopix, <https://wiki.inria.fr/popix>) for the population approach with mixed-effects models. This wiki aims to be an invaluable resource for all pharmacometricians, statisticians, teachers, graduate and undergraduate students in academia, industry and regulatory agencies. It is freely available online for all these communities.

Furthermore, the team developed an online animated film called *Introduction to PK modeling* for interested members of the public and for teaching and training purposes. It can be seen at <https://team.inria.fr/popix/files/2013/02/PKmodelling.swf>, and joins two previous animated films already developed by the team (see <http://team.inria.fr/popix/files/2011/11/PopulationApproach.swf>).

POTIOOC Team

8. Dissemination

8.1. Scientific Animation

- Editing : ACM Journal of Computer and Cultural Heritage - Special issue on "Interacting with the Past" (M. Hachet)
- Conference organization (all Potioc team) and general chairing (M. Hachet): IHM 2013
- Workshop organization: "affective Brain-Computer Interface (aBCI) workshop" at ACII, 2013 (C. Mühl)
- Workshop organization: "Brain-Computer Interface workshop in Bordeaux", co-organized with the g.tec R&D company, March 2013 (F. Lotte)
- Workshop organization: "Teachning the BCI skill: feedback and human training approaches", International BCI meeting 2013, Asilomar, CA, USA, co-organized with R. Scherer (TU Graz) and A. Lécuyer (Inria Rennes), June 2013 (F. Lotte)
- Steering committee : IEEE 3DUI (M. Hachet)
- Program committees : IEE VR 2013 (M. Hachet), ISIS3D (M. Hachet), Web3D 2013 (J. Jankowski), aBCI workshop @ ACII 2013 (C. Mühl, F. Lotte), ACII 2013 (F. Lotte), PRNI 2013 (F. Lotte), IEEE SSCI-CCMB 2013 (F. Lotte)
- Reviewing for conferences: ACM CHI 2013 (M. Hachet, F. Lotte), ACM CHI 2014 (M. Hachet, F. Lotte, J. Jankowski, C. Mühl, J. Laviolle), ACM UIST 2013 (M. Hachet, J. Laviolle), INTERACT 2013 (J. Jankowski, F. Lotte), Web3D 2013 (J. Jankowski), SUI 2013 (J. Jankowski), MobileHCI 2013 (J. Jankowski), CSCW 2014 (J. Jankowski), 3DUI 2014 (J. Jankowski, J. Laviolle), ISMAR 2013 (J. Laviolle), ITS 2013 (R. Gervais), PG 2013 (R. Gervais), ACII 2013 (F. Lotte), aBCI Workshop @ ACII 2013 (J. Frey, C. Mühl, F. Lotte), IHM 2013 (F. Lotte), PRNI 2013 (F. Lotte), IEEE SSCI-CCMB 2013 (F. Lotte)
- Reviewing for journals: ACM Journal on Computing and Cultural Heritage (J. Jankowski, R. Gervais, J. Frey), GeoInformatica (J. Jankowski), Technique et Science Informatique (TSI) (R. Gervais), IEEE Transactions on Affective Computing (C. Mühl), Brain-Computer Interfaces (F. Lotte), Frontiers in Neuroprosthetics (F. Lotte), IEEE Transactions on Biomedical Engineering (F. Lotte), IEEE Transactions on Human Machine Systems (F. Lotte), International Journal of Neural Systems (F. Lotte), Journal of Neural Engineering (F. Lotte), NeuroImage (F. Lotte), Presence (F. Lotte), IEEE Reviews in Biomedical Engineering (F. Lotte)
- Reviewing for book chapters: Handbook of Affective Computing @Oxford (C. Mühl)
- ANR : Revue de programme CONTINT 2013 (M. Hachet)

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Teaching at University of Bordeaux I:

- Master: Jérémy Laviolle, Réalité Virtuelle immersive, Projet Étude et Développement, Master 2, University of Bordeaux I, France
- Bachelor: Jérémy Frey, supervision of 3 programming projects during "semestre rebondir", 30h, 1st year, University of Bordeaux 1, France
- Bachelor: Jérémy Frey, réseau et projet de programmation 2, 35h, 3rd year, University of Bordeaux 1, France

Teaching at University of Bordeaux II:

- Master: Martin Hachet, Réalité Virtuelle, 24h eqtd, M2 Sciences Cognitives, Université Bordeaux Segalen, France
- Master: Fabien Lotte, Réalité Virtuelle, 12h eqtd, M2 Sciences Cognitives, Université Bordeaux Segalen, France
- Bachelor: Camille Jeunet, Knowledge and Representations, 18h, 3rd Year, Cognitive Sciences, Université Bordeaux Segalen, France

Teaching at Enseirb-Matmeca:

- Master: Martin Hachet, Réalité Virtuelle, 12h eqtd, 3rd Year, Enseirb-Matmeca, IPB, France
- Master: Fabien Lotte, Réalité Virtuelle, 2h eqtd, 3rd Year, Enseirb-Matmeca, IPB, France
- Master: Jérémy Laviolle, Virtual Reality, 9h, 3rd Year, Enseirb-Matmeca, France
- Master: Jérémy Laviolle, Object Tracking Project, 8h, 3rd Year, Enseirb-Matmeca, France
- Bachelor: Renaud Gervais, Medias numériques, 4h, Enseirb-Matmeca, France

Other teaching activities:

- Master: Jérémy Laviolle, Augmented Reality Course + TP, 16h, 3rd Year, ENJMIN, France

8.2.2. Supervision

- PhD: Jérémy Laviolle, "Interaction en Réalité Augmentée Spatiale pour le Dessin Physique", Université Bordeaux 1, Defended December 5th, 2013, Martin Hachet
- PhD in progress: Renaud Gervais, "Organic User Interfaces", started December 1st, 2012, Martin Hachet
- PhD in progress: Jérémy Frey, "Assesing 3DUI with passive Brain-Computer Interfaces", started October 1st, 2012, Fabien Lotte and Martin Hachet
- PhD in progress: Camille Jeunet, "Human Learning for Brain-Computer Interfaces", started October 1st, 2013, Fabien Lotte, Martin Hachet, Bernard N'kaoua and Sriram Subramanian.
- Master 2: Camille Jeunet, Master 2 from University of Bordeaux 2, affective BCI, February-June 2013 (C. Mühl, F. Lotte)
- Engineer (Master 2): Pierre-Marie Plans, Enseirb-Matmeca 3rd year, Collaborative virtual reality, February-June 2013 (M. Hachet)
- Master 1: Leonard Pommereau, Master 1 from University of Bordeaux 2, EEG and stereoscopy, April-June 2013 (F. Lotte, M. Hachet)

8.2.3. Juries

- PhD Jury: Prashant Arvind-Pala, Université Bordeaux Segalen, 18 Dec. 2013 (M. Hachet)
- PhD Jury: Javier Mauricio Antelis, University of Zaragoza, Spain, June 2013 (F. Lotte)
- PhD Jury: Mohit Kumar Goel, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland, June 2013 (F. Lotte)
- PhD Jury for half-PhD (after 1.5 year of PhD work): Raphaëlle N. Roy, CEA-Leti/Gipsa-Lab, Grenoble, France (F. Lotte)
- External PhD Review: Adam Westerski - Universidad Politecnica de Madrid (J. Jankowski)

8.3. Popularization

The members of Potioc have published several popularization articles targeted to the general public:

- "Quand la réalité virtuelle rencontre les surfaces tactiles" (<http://interstices.info/toucheo>), Interstices [24] (M. Hachet)
- "Arrêtez de regarder la 3D, prenez-en le contrôle !" (<http://www.inriality.fr/informatique/interaction-homme-machine/3d/arretez-de-regarder-la/>), Inriality [23] (M. Hachet)
- "Grâce au numérique, on peut lire dans les pensées" (https://interstices.info/jcms/nn_73094/grace-au-numerique-on-peut-lire-dans-les-pensees), Interstices : Idée reçue [26] (F. Lotte)
- " Interaction Hommes-Machines : une histoire de 30 ans" (<http://www.inriality.fr/informatique/interface-homme-machine/inria/interaction-hommes-machines-une/>), Inriality [25] (M. Hachet)

They gave the following popularization talks:

- "L'activité cérébrale pilote directement l'ordinateur : présentation de l'interface cerveau-ordinateur (Brain-Computer interface)", conférence "Demain les objets sont connectés !", événement "Semaine Digitale 2013" in Bordeaux (J. Frey)
- Talk introducing BCI and follow-up debate around augmented human, conférence "L'homme « augmenté » : notre avenir est-il « cyborg » ?", événement "Nancy Renaissance 2013" in Nancy (J. Frey)
- "Utiliser son cerveau pour contrôler une machine", Cité des sciences, Paris (F. Lotte)
- "Le cerveau au commandes", conférence as part of the "Cervorama" exhibition, Cap-Sciences, Bordeaux (F. Lotte)
- "Interfaces Cerveau-Ordinateur et Homme Augmenté", conférence "Neurotechnologies: vers un homme augmenté?", Bordeaux (F. Lotte)

They also demonstrated their work to the general public during various events:

- Portes ouvertes Université Bordeaux1, démonstrations de PapARt (J. Laviolle)
- Cap Sciences - expo permanente, PapARt - développement (J. Laviolle)
- Cap Sciences - Évènement IHM 2013, démonstration de PapARt (J. Laviolle)
- BCI demo for highschool students following "informatique et sciences du numérique" courses (J. Frey, A. Cellard, F. Lotte)
- BCI demo for the general public during "La nuit des chercheurs" in Talence (F. Lotte, A. Cellard)

Finally, they also participated to the following events

- Aquitec 2013, for promoting research jobs (J. Frey)
- Film-debate, "ExistenZ : faut-il avoir peur de la réalité virtuelle ?", University of Bordeaux 1 (J. Frey)
- Interview for a highschool class for their video project on science (A. Cellard)
- Participation to "visages des sciences 2013" (postcard and video interview) (A. Cellard)
- Interview (video and paper) for the SoNews online journal (local Inria Bordeaux newspaper) (A. Cellard)

Prima Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Sabine Coquillart

8.1.1.1. Animation of the Scientific Community

- Sabine Coquillart has served as a member of the Conference Committee of IEEE VR 2013 - IEEE Virtual Reality, Orlando, FL, USA, March 2013.
- Sabine Coquillart has co-chaired the Dagstuhl seminar on "Virtual realities", June 2013.
- Sabine Coquillart is elected member of the EUROGRAPHICS Executive Committee.
- Sabine Coquillart is member of the EUROGRAPHICS Working Group and Workshop board.

8.1.1.2. Participation on Conference Program Committees

- Sabine Coquillart has served as International Program Committee co-chair for IEEE VR 2013 - IEEE Virtual Reality, Orlando, FL, USA, March 2013.
- Sabine Coquillart has served as Program co-chair for GRAPP - the International Conference on Computer Graphics Theory and Applications, Barcelona, Spain, Feb. 2013.
- Sabine Coquillart has served as area co-chair (Virtual reality) for ISVC 2013 - the 9th International Symposium on Visual Computing, Rethymnon, Crete, Greece, July 2013.

Sabine Coquillart has served as a member of the program committee for the following conferences:

- GRAPP'2013 - International Conference on Computer Graphics Theory and Applications - Barcelona Spain, Feb. 2013.
- CASA 2013 - International Conference on Computer Animation and Social Agents - Istanbul, Turkey, May 2013.
- CGI 2013 - Computer Graphics International ,Hannover, Germany, June 2013.
- CGVCVIP 2013 - IADIS Computer Graphics, Visualization, Computer Vision and Image Processing - Prague, Czech Republic, July 2013.
- CVRB 2013 - International Conference on Virtual Reality and Broadcasting, Dusseldorf, Germany, 2013.
- DigitalHeritage 2013, Marseille, France, Oct-Nov 2013.
- GRAPHICON'2013 - International Conference on Computer Graphics and Vision - Vladivostok, Russia, October 2013.
- ICAT 2013, the 23rd International Conference on Artificial Reality and Telexistence, Tokyo, Japan, Dec 2013.
- ICVRV 2013 - International Conference on Virtual Reality and Visualization 2013, Xi'an, China, September 2013.
- IEEE 3DUI 2013 - IEEE 3D User Interfaces - Orlando, FL, USA, March 2013.
- ISMAR 2012 - IEEE International Symposium on Mixed and Augmented Reality - Adelaide, Australia, Oct. 2013 (reviewer).
- JVRC 2013 - Joint Virtual Reality Conference on Virtual Reality of EGVE - EuroVR, Orsay, France, Dec. 2013.
- VRIC 2013 - Virtual Reality International Conference, Laval, 2013.
- SUI 2013 - ACM Symposium on Spatial User Interaction, Los Angeles, CA, USA, Jul. 2013.
- SVR 2013 - Symposium on Virtual and Augmented Reality - Brazil , May 2013.
- VisGra 2013 - International Workshop on Computer Vision and Computer Graphics - Sevilla Spain, Jan. - Feb. 2013.
- VRST 2013 - 19th ACM Symposium on Virtual Reality Software and Technology, Nanyang, Singapore, Oct. 2013.
- WSCG 2013 - International Conferences in Central Europe on Computer Graphics, Visualization and Computer Vision - Prague, Czech Republic, 2013.

8.1.1.3. Participation on Advisory panels

- 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 was a member of the FET pool of experts for European Commission funding under the framework of FET Open.
- Sabine Coquillart has reviewed proposal for ANR - the "Agence National de la Recherche".

8.1.1.4. Participation on Journal Editorial Boards

- S. Coquillart, J.J. LaViola Jr., Z. Pan, D. Schmalstieg (Guest Editors), IEEE Transactions on Visualization and Computer Graphics, vol. 19 n. 4, 2013.
- Sabine Coquillart is a member of the Editorial Board of the Journal of Virtual Reality and Broadcasting.
- Sabine Coquillart is co-Guest Editor for some papers of an issue of Presence: Teleoperators & Virtual Environments Journal, 2013.
- Sabine Coquillart is a member of the Editorial board (computer Sciences) of the Scientific World Journal.
- Sabine Coquillart is a member of the Editorial Board of the Advances in Human-Computer Interaction Journal.

8.1.1.5. Invited Presentations by Sabine Coquillart

- "Réalité Virtuelle et Réalité Augmentée, une introduction centrée utilisateur", ENS Cachan, Paris, Sept. 2013.

8.1.2. James L. Crowley

James L. Crowley has served as a Program Chair for PETS 2013. He was a member of the technical program committee for Ubicomp 2013. He has reviewed papers for CVPR, ICCV, ICRA, ICMI, ICVS, and IE. He has served as member of the selection committee for the Institut Universitaire de France (IUF) Junior. He served as expert for the European Commission ICT program. He has served as member of EDF competition on Smart energy.

8.1.3. Thierry Fraichard

Thierry Fraichard has served as an Associated Editor for IEEE/RSJ Int. Conf/ on Intelligent Robots and Systems 2013 (IROS) and IEEE Int. Conf. on Robotics and Automation (ICRA). He has served as a Program Committee member for the European Conf. on Mobile Robots 2013 (ECMR). He has reviewed papers for different conferences and journal in his domain (IV, JFR, RAS, IEEE TRO, IJRR, EuroGraphics) and has reviewed projects in the European FET Xtrack program.

8.1.4. Patrick Reignier

Patrick Reignier has served as a Program Committee member for the following conferences:

- INTERACT 2013, 2 - 6 September 2013, Cape Town, South Africa
- IUI 2013, poster session, March 2013, Santa Monica, USA
- Smart Object Workshop of IUI 2013, March 2013, Santa Monica, USA

He also reviewed papers for the main track of IUI 2013. He has been re-elected for 3 years at the board of the Association Française pour l'Intelligence Artificielle (AFIA). He has co-organized the joint scientific day between the HMI and the Artificial Intelligence Associations.

8.1.5. Dominique Vaufreydaz

Dominique Vaufreydaz has served as reviewer and Program Committee member for the following conferences:

- the Eighth IEEE International Workshop on Multimedia Technologies for E-Learning (MTEL) in conjunction with the IEEE International Symposium on Multimedia 2013 (ISM2013), December 2013, Anaheim, CA, USA.
- the 2nd Workshop on Assistance and Service robotics in a human environment at IEEE International Conference on Intelligent Robots and Systems (IROS2013), November 2013, Tokyo, Japan.
- the Seventh International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies (UBICOMM 2013), October 2013, Porto, Portugal.
- the International Workshop on Wireless Communications and User-centered Services in Pervasive Environments(WUSPE2013), September 2013, Hanoi, Vietnam.
- the 1st Workshop on Affective Social Speech Signals (WASSS) in conjunction with Interspeech 2013, August 2013, Grenoble/Lyon, France.

He has reviewed articles for:

- the IEEE Robot and Human Interaction Communication (Ro-Man 2013), August 2013, Gyeonggy, South Korea.
- the IEEE International Conference on Robotics and Automation (ICRA 2013), May 2013, Karlsruhe, Germany.

He was in the Organization Committee of the 1st Workshop on Affective Social Speech Signals (WASSS) (in conjunction with Interspeech 2013), in August 2013, Grenoble/Lyon, France. He co-organized the Keynotes Speeches of the LIG Laboratory <http://www.liglab.fr/spip.php?article884>. He served as expert for the TecSan 2013 call for project from ANR. He was elected as representative of the researchers at the Inria Grenoble Research Center Committee.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

8.2.1.1. James Crowley

- Computer Vision, Course 24h EqTD, M2 year, Master of Science in Informatics at Grenoble,
- Intelligent Sysetms, Cours 54h EqTD, ENSIMAG

James Crowley is Director of the Master of Science in Informatics at Grenoble.

8.2.1.2. Sabine Coquillart

- Sabine Coquillart teaches a course on “Virtual Reality and 3D User Interfaces” for the GVR Master 2R, 2013-2014.
- Sabine Coquillart teaches a one day course on “3D User Interfaces and Augmented Reality” for the “Numerical Modeling and Virtual Reality” Master 2 in Laval, 2013-2014.

8.2.1.3. Thierry Fraichard

Licence: Thierry Fraichard, Introduction à la robotique, 19h eqTD, L3 INFO, Univ. of Grenoble, France.

Licence: Thierry Fraichard, Algorithmique, 36h eqTD, M1, ENSIMAG/Grenoble INP, France.

Master: Thierry Fraichard, Introduction to Perception and Robotics, 23h eqTD, M1 MOSIG, Univ. of Grenoble, France.

Master: Thierry Fraichard, Advanced Motion Planning (invited course), 9 heqTD, Centre de Développement des Technologies Avancées, Algiers (DZ), Jan. 2013.

8.2.1.4. Patrick Reignier

Master: Patrick Reignier, Projet Génie 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 réparties, 18h eqTD, M2, ENSIMAG/Grenoble - INP, France

Master: Patrick Reignier, Programmation Internet, 18h eqTD, M1, ENSIMAG/Grenoble INP, France

Licence: Patrick Reignier, Algorithmique, 70h eq TD, L3, ENSIMAG/Grenoble INP, France

Licence: Patrick Reignier, Projet C, 20h eqTD, L3, ENSIMAG/Grenoble INP, France.

Patrick Reignier is supervising the industrial part of the “formation en apprentissage” of the ENSIMAG engineering school.

8.2.2. Supervision

8.2.2.1. PhD defended in 2013

Antoine Méler, BetaSAC et OABSAC, Deux Nouveaux Echantillonnages Conditionnels pour RANSAC, Thesis defended January 2013, Thesis Director James Crowley.

Marion Décrouez, Modélisation et Localisation Visuelle dans les Environnement Dynamiques, Thesis defended May 2013, Thesis Directed by Frédéric Devernay and James Crowley.

8.2.2.2. PhD in progress

Evanthia Mavridou, Visual Invariants for Detection and Recognition, Université de Grenoble, expected fall 2014, James Crowley (Professor)

Varun Jain, Perception of Human Emotions, Université de Grenoble, expected fall 2014, James Crowley (Professor)

Sergi Pujades-Rocamora, Modèles de caméras et algorithmes pour la création de contenu video 3D, expected fall 2015, Rémi Ronfard (HDR) et Frédéric Devernay

Julian Quiroga, Visual Perception of Gestures, Université de Grenoble, expected fall 2014, James Crowley (Professor) and Frédéric Devernay

Dimitri Masson, Modèles et outils pour favoriser la créativité dans les premières phases de conception d'IHM, Université de Grenoble, expected fall 2014, Gaëlle Calvary (Professor) and Alexandre Demeure

Étienne Balit, Multimodalité et interaction sociale, Université de Grenoble, expected Fall 2016, Patrick Reignier (Professor), Dominique Vaufreydaz.

Viet Cuong Ta, Multiple Users localization in public large-scale space, Université de Grenoble, expected Fall 2016, Eric Castelli (HDR, Mica laboratory Hanoi, Vietnam), Dominique Vaufreydaz.

Rémi Paulin, Human-Robot Motion, Univ. of Grenoble, expected Fall 2016, Thierry Fraichard (HDR).

8.2.3. Juries

- Sabine Coquillart (examiner), HDR, Mehdi Ammi, Univ Paris-Sud - LIMSIS, Nov. 2013
- Sabine Coquillart (reviewer), PhD, Florimond Guéniat, Univ Paris-Sud - LIMSIS, Dec. 2013
- James Crowley (reviewer), HDR, Jean-Pierre Nikolovski, Univ Paris - UPMC, Dec. 2013
- James Crowley (reviewer), PhD, Alberto Calatroni, ETH Zurich, Sept. 2013
- James Crowley (jury president), PhD, Alfonso Garcia-Frey, Université de Grenoble, July 2013
- James Crowley (jury president), PhD, Jorgé Rios Martinez, Université de Grenoble, Jan. 2013
- Thierry Fraichard (reviewer), PhD, Adam Houenou, Univ. Tech. de Compiègne, Dec. 2013.
- Thierry Fraichard (jury president), PhD, Asma Azim, LIG, December 2013.

- Patrick Reignier (examiner), PhD, Pedro Chahuara, LIG, March 2013.
- Patrick Reignier (examiner), PhD, Benoit Vettier, LIG, Sep. 2013.
- Patrick Reignier (examiner), PhD, Benjamin Cogrel, Université Paris Est, Nov. 2013.
- Patrick Reignier (examiner), HDR, Julie Dugdale, LIG, Dec. 2013.
- Patrick Reignier (reviewer), DRI (Diplome de Recherche et d'Innovation), Safietou Thior, LIG, May 2013.

8.3. Invited Presentations

8.3.1. James Crowley

- James Crowley, Socially Intelligent Human Computer Interaction, Journée Interaction Homme-Machine et Intelligence Artificielle, Paris, 28 March 2013.
- James Crowley, Table ronde “Robotique intelligente et compétitivité des PME”, InnoRobot, Lyon, 19 Mars 2013.

8.3.2. Thierry Fraichard

- Will the driver seat ever be empty?, Technion, Haifa (IL), April 2013.
- Will the driver seat ever be empty?, Tel Aviv University (IL), June 2013.
- Will the driver seat ever be empty?, Ariel University (IL), June 2013.
- Will the driver seat ever be empty?, Bar Ilan University, Ramat Gan (IL), Oct. 2013.

8.3.3. Dominique Vaufreydaz

- Multimodal perception, activity recognition and companion robots, MICA laboratory, Hanoi (Vietnam), June 2013.
- Invited speaker at “L’Homme 2.0 et son environnement – Entre rejet et fascination”, an inter-professional meeting (entrepreneurs, researchers, artists, associative and institutional actors), Université de Lyon, December 2013.

8.4. Popularization

- Thierry Fraichard gave three lectures on Robotics to highschool students and teachers in the scope of the “Informatique au lycée” initiative, April and May 2013.
- Dominique Vaufreydaz gave two lectures on perception and companion robot to highschool students and teachers in the scope of the “Informatique au lycée” initiative, April and May 2013.
- Dominique Vaufreydaz gave seminars entitled “Perception, reconnaissance d’activités et robots compagnons.”, Fêtes de la Science, at Inria Grenoble, Monbonnot, October 2013.
- The first version of the AppsGate integration platform was demonstrated to the public as part of the Experimenta Fair ⁴ in Grenoble, from 10 to 13 of October 2013.

⁴<http://www.echosciences-grenoble.fr/sites/experimenta>

PRIVATICS Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Organization

Claude Castelluccia : WISEC 2014.

Mathieu Cunche : WISEC 2014.

Cédric Lauradoux : Colloque CAPPRIS-AFDIT, 11/09/2013, Lyon, <http://planete.inrialpes.fr/capprisafdit>.

Daniel Le Métayer : Colloque CAPPRIS-AFDIT, 11/09/2013, Lyon, <http://planete.inrialpes.fr/capprisafdit>.

Vincent Roca : SAR-SSI 2014.

8.1.2. Program committee

Claude Castelluccia : PETS 2013, WISEC 2013, POST 2013, SESOC 2013.

Mathieu Cunche : WCNC 2014.

Cédric Lauradoux : ACNS 2013, Cardis 2013, GreHack 2013, WISEC 2014.

Daniel Le Métayer : CPDP 2013, APF 2013, APVP 2013, WOSSIP 2013, SAR-SSI 2013.

Vincent Roca : SPACOMM 2014, SNDS 2014, SSCC 2013.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Undergraduate course : Vincent Roca, On Wireless Communications, 12h, L1, Polytech' Grenoble, France.

Undergraduate course : Vincent Roca, On Network Communications (24h), L1, IUT-2 (UPMF University) Grenoble, France.

Undergraduate course : Marine Minier, Probabilities, 50h, L3, INSA-Lyon, France.

Undergraduate course : Marine Minier, Signal Processing, 50h, L3, INSA-Lyon, France.

Undergraduate course : Marine Minier, Analysis, 50h, L3, INSA-Lyon, France.

Undergraduate course : Marine Minier, Introduction to Cryptography, 30h, L3, INSA-Lyon, France.

Undergraduate course : Marine Minier, Information Theory, 30h, L3, INSA-Lyon, France.

Undergraduate course : Marine Minier, Micromachine, 20h, L3, INSA-Lyon, France.

Undergraduate course : Mathieu Cunche, Introduction to computer science, 120h, L1, INSA-Lyon, France.

Master : Claude Castelluccia, Wireless Security, 20h, M2, Ensimag/University of Grenoble, France.

Master : Claude Castelluccia, Wireless Security, 15h, M2, Ensimag/INPG, France.

Master : Marine Minier, Security for wireless networks, 10h, M2, INSA-Lyon, France.

Master : Mathieu Cunche, Wireless Security, 2h, M2, INSA-Lyon, France.

8.2.2. Supervision

PhD in progress : Jagdish Achara, Mobile devices and operating systems from a privacy point of view, October 2013, Vincent Roca and Claude Castelluccia.

PhD in progress : Thibaud Antignac, New solutions for a better privacy, September 2011, Daniel Le Métayer.

PhD in progress : Abdelberi Chaabane, Threats against privacy on Internet: evaluation and solutions, September 2010, Mohamed Ali Kaafar and Claude Castelluccia.

PhD in progress : Jessye Dos Santos, Wireless physical tracking, October 2013, Cédric Lauradoux and Claude Castelluccia.

PhD in progress : Amrit Kumar, Privacy and multiparty computation, November 2013, Cédric Lauradoux.

PhD in progress : Ferdaouss Mattooussi, Design and optimizations of AL-FEC: GLDPC-Staircase Codes, September 2010, Vincent Roca and Claude Castelluccia.

PhD in progress : Lukasz Olejnik, Internet Tracking and Profiling, October 2011, Claude Castelluccia.

PhD in progress : Vincent Primault, Privacy and geolocated services, November 2013, Cédric Lauradoux.

PhD in progress : Gael Thomas, Algebraic Automata in Symetric Cryptography, November 2011, Marine Minier.

PhD in progress : Minh-Dung Tran, Privacy-Preserving Ad systems, September 2011, Claude Castelluccia and Mohamed Ali Kaafar.

PhD in progress : Dong Wang, titre (provisoire) du mémoire, date du début de la thèse, Mohamed Ali Kaafar.

8.2.3. Juries

HdR : Marc-Olivier Killijian, Towards Resilient and Private Mobiquitous Systems, Toulouse, 20/02/2013, Claude Castelluccia.

PhD : Ahmed Benfarah, Security of a UWB-IR link, INSA-Lyon, 10/07/2013, Cédric Lauradoux.

PhD : Ludovic Jacquin, Efficiency/Security trade-off for High Bandwidth Internet Gateway, Grenoble, 20/11/2013, Vincent Roca and Claude Castelluccia.

PhD : Mohammad Nabil ALAGGAN, Private Peer-to-peer similarity computation in personalized collaborative platforms, Rennes, 16/12/2013, Daniel Le Métayer.

PhD : Sophie Guicherd, Le régime juridique applicable aux dysfonctionnements du logiciel, 05/12/2013, Daniel Le Métayer.

8.3. Popularization

Claude Castelluccia and Daniel Le Métayer, La vie privée, un obstacle à l'économie numérique ?, LeMonde.fr, 03.09.2013, http://www.lemonde.fr/economie/article/2013/08/25/la-vie-privee-un-obstacle-a-l-economie-numerique_3466139_3234.html.

Mathieu Cunche, Smartphone, Wi-Fi et vie privée : comment votre smartphone peut se révéler être votre pire ennemi [35], October 2013, MISCMAG.

Mathieu Cunche, Quand les terminaux mobiles jouent les mouchards de poche, Podcast Interstices, September 2013, https://interstices.info/jcms/ni_74624/quand-les-terminaux-mobiles-jouent-les-mouchards-de-poche.

Cédric Lauradoux and Levent Demir, Guesswork [40], October 2013, MISCMAG.

Mobilitics project, Paris Metro Tracks and Trackers: Why is the RATP App leaking my private data?

Mobilitics project, Voyage au cœur des smartphones et des applications mobiles avec la CNIL et Inria, 09/04/2013, bit.ly/M3cWCi.

PROSECCO Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Journal Editorial Boards

Associate Editor

- of the *International Journal of Applied Cryptography (IJACT)* – Inderscience Publishers:
Bruno Blanchet

9.1.2. Conference Program Committees

- FCS – June 2013, New Orleans, LA, USA: Bruno Blanchet (PC co-chair)
- POST – April 2014, Grenoble, France: Bruno Blanchet
- SEC@SAC – March 2013, Coimbra, Portugal: Graham Steel (PC co-chair)
- CSF – June 2013, New Orleans, USA: Graham Steel
- IWIL – December 2013, Stellenbosch, South Africa: Graham Steel

9.1.3. Participation to Workshops and Conferences

ETAPS – March 2013, Rome, Italy: Bruno Blanchet, David Cadé, Miriam Paiola, Benjamin Smyth

CSF, FCS, FCC – June 2013, New Orleans, LA, USA: Bruno Blanchet, Benjamin Smyth

CCS – November 2013, Berlin, Germany: Bruno Blanchet, David Cadé, Miriam Paiola, Gergely Bana

S&P – May 2013, San Francisco, USA: Karthikeyan Bhargavan, Alfredo Pironti

Usenix Security, WOOT – August 2013, Washington DC, USA: Karthikeyan Bhargavan, Alfredo Pironti, Antoine Delignat-Lavaud

CryptoForma – September 2013, San Francisco, USA: Alfredo Pironti

Black Hat USA – July 2013, Las Vegas, USA: Benjamin Smyth

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Karthikeyan Bhargavan, Cryptographic protocols: formal and computational proofs, 18h equivalent TD, master M2 MPRI, universit  Paris VII, France

Karthikeyan Bhargavan, TDs in INF431 and INF321, introductory programming language courses at Ecole Polytechnique, France

Bruno Blanchet, Cryptographic protocols: formal and computational proofs, 18h equivalent TD, master M2 MPRI, universit  Paris VII, France

Bruno Blanchet, Automatic Verification of Cryptographic Protocols in the Symbolic Model, the Automatic Verifier ProVerif, 6h equivalent TD, 13th International School on Foundations of Security Analysis and Design (FOSAD'13), Bertinoro, Italy

Miriam Paiola, Internet et Outils - IO2, TP, 52h equivalent TD, L1 en Math-Info, Universit  Paris VII, France

Miriam Paiola, Automates finis - AF4, TP, 26h equivalent TD, L2 en Informatique, Universit  Paris VII, France

Graham Steel, Formal Methods for the Science of Security Summer School, UIUC, July 2013, "Security APIs" (4 hours teaching)

Graham Steel, SecAppDev Days Training, Katholieke Universiteit Leuven, March 2013, "Security APIs" (3 hours teaching)

Graham Steel, University of Venice Ca' Foscari, PhD course "Security APIs" October/November 2013, (20 hours teaching)

Evmorfia-Iro Bartzia, Introduction to Mathematical Cryptography (cours + TD), MACS3: Mathématiques appliquées et calcul scientifique 3eme année, Université Paris 13

Evmorfia-Iro Bartzia, Elliptic Curves and Complex Torus (TD), MFPI: Mathématiques Fondamentales et Protection de l'Information, Université Paris 8

9.2.2. Supervision

- David Cadé
Proved Implementations of Cryptographic Protocols in the Computational Model, defended on December 16, 2013, supervised by Bruno Blanchet
- Miriam Paiola
Automatic Verification of Group Protocols, since November 2010, supervised by Bruno Blanchet
- Robert Künnemann, *Secure APIs and Simulation-Based Security*, Started Oct. 2010, supervised by Steve Kremer (CASSIS) and Graham Steel, submitted October 2013 will defend January 2014
- Gavin Keighren, *A Type System for Security APIs*, since 2007 (submitted August 2013), advisors Graham Steel and David Aspinall (University of Edinburgh). Will defend January 2014.
- Antoine Delignat-Lavaud, since 2012, supervised by Karthikeyan Bhargavan
- Evmorfia-Iro Bartzia, since 2011, supervised by Karthikeyan Bhargavan and Pierre-Yves Strub

9.2.3. Internships

- Benjamin Beurdouche did an undergraduate internship under the supervision of Alfredo Pironti and Karthikeyan Bhargavan
- Adam McCarthy did a masters internship under the supervision of Benjamin Smyth

9.2.4. Juries

- Jannik Dreier – Ph.D. – Nov. 25, 2013 – Université de Grenoble
Bruno Blanchet
- Maria Christofy – Ph.D. –Feb. 15, 2013– UVSQ
Graham Steel (rapporteur)
- François Dupressoir – Ph.D.–Feb. 6, 2013– Open University
Graham Steel (rapporteur)

9.3. Popularization

9.3.1. Vulnerability Reports

- Benjamin Smyth and Alfredo Pironti reported TLS truncation vulnerabilities to Helios, Microsoft, and Google, and presented a talk at BlackHat USA. They were acknowledged in Google's Hall of Fame.
- Karthikeyan Bhargavan and Antoine Delignat-Lavaud reported HTTPS header truncation vulnerabilities in Google Chrome and Apple Safari, resulting in a security update to Google Chrome.
- Karthikeyan Bhargavan and Antoine Delignat-Lavaud reported TLS protocol-level vulnerabilities in Internet Explorer, Google Chrome, and Mozilla Firefox, resulting in security updates to all three.
- Antoine Delignat-Lavaud reported new vulnerabilities in Akamai-hosted websites, resulting in an update to Akamai's web caching network.

RAP Project-Team

7. Dissemination

7.1. Leadership within scientific community

Christine Fricker is member of the jury of agrégation.

Philippe Robert is Associate Editor of the Book Series “Mathématiques et Applications” edited by Springer Verlag and Associate Editor of the journal “Queueing Systems, Theory and Applications”. He is member of the scientific council of EURANDOM. He is also associate Professor at the École Polytechnique in the department of applied mathematics where he is in charge of lectures on mathematical modeling of networks.

James Roberts is a Fellow (membre émérite) of the SEE. He is an associate editor of IEEE Transactions on Networking.

7.2. Teaching

Nicolas Broutin has taught at the Master Parisien de Recherche en Informatique (MPRI), in the course 2.15 on Analysis of Algorithms. He also gave a series of tutorials on the continuum random tree at the Adama summer school in Mahdia, Tunisia.

Christine Fricker is member of the jury of agrégation.

Philippe Robert gives Master2 lectures in the laboratory of the Probability of the University of Paris VI. He is also giving lectures in the “Programme d’approfondissement de Mathématiques Appliquées et d’Informatique” on Networks and Algorithms at the École Polytechnique.

7.3. Conference and workshop committees, invited conferences

Nicolas Broutin is member of the steering committee of the international meeting on analysis of algorithms (AofA).

Nicolas Broutin has given invited lectures at annual meeting of the ANR presage, the annual meeting of the workgroup ALEA of the GDR-Im, and at the Oberwolfach workshop on extremes of branching random walk and branching Brownian motion. He has presented his results in seminars to the complex networks team at LIP6, in Paris X Nanterre, Nancy, ETH Zürich, Bell Labs France, and Frankfurt university. He has visited the computer science department of UL in Brussels, the mathematics institute of the Universität Zürich and of the mathematics institute of the Universität Frankfurt.

Nicolas Broutin has defended and obtained the HDR in July.

Philippe Robert has been a member of the technical programme committee of the conferences ACM Sigmetrics(2013) ICCCN (2013). He gave a talk at the PDMP workshop in Rennes in May. He gave an invited conference at the workshop “Modern probabilistic techniques for stochastic systems and networks” in Cambridge in August 2013 and in Eindhoven at the occasion of the 15th anniversary on December 11.

James Roberts was a member of the technical programme committee of the following conferences: NOMEN, CoNext, ITC. He gave keynote talks at Infocom (March), SaCoNeT (June) and ValueTools (December), invited talks at Rescom (February), Bell Labs France (October) and AINTEC (November), and a tutorial at ITC 25 (September).

REALOPT Project-Team

9. Dissemination

9.1. Scientific Animation

Until June 2013, Pierre Pesneau was a member of the organizing committee of the Polyhedral and Combinatorial Optimization working group of the CNRS Operations Research group. In this scope, he organized in April, 26th seminars around the field of “Semi-Definite Programming”.

The team members are regular referees for the best journals of the field. Besides, we are called on the scientific committee of international and national conferences:

- Program committee member of INOC 2013, International Network Optimization Conference, May 20-22, 2013
- Program committee member for CPAIOR 2014, Eleventh International Conference on Integration of Artificial Intelligence (AI) and Operations Research (OR) techniques in Constraint Programming
- Program committee for ISCO 2014, 3rd International Symposium on Combinatorial Optimization
- Program committee for ICGT 2014, 9th International colloquium on graph theory and combinatorics, June 30-July 4, 2014.
- Program committee for ROADEF 2014, 15^{ème} congrès annuel de la Société française de recherche opérationnelle et d’aide à la décision (ROADEF)

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Pierre Pesneau, Modèles et Méthodes d’Optimisation, 30h, L2, Université de Bordeaux, France

Licence : Pierre Pesneau, Système et Programmation, 59h, L2, Université de Bordeaux, France

Licence : Arnaud Pêcher, Programmation objet et impérative, 200h, DUT, Université de Bordeaux, France

Licence : Arnaud Pêcher, Théorie des graphes, 16h, DUT, Université de Bordeaux, France

Master : François Clautiaux, Programmation linéaire 1, 15h TD, M1, Université de Bordeaux, France

Master : François Clautiaux, Introduction à l’optimisation en nombres entiers, 15h TD, M1, Université de Bordeaux, France

Master : François Clautiaux, Programmation en C++, 60h TD, M1, Université de Bordeaux, France

Master : François Clautiaux, Recherche opérationnelle, 16h TD, M1, Institut Polytechnique de Bordeaux, France

Master : Boris Detienne, Gestion des opérations et planification de production, 30h TD, M2, Université de Bordeaux, France

Master : Boris Detienne, Programmation Linéaire 1, 14h TD, M1, Université de Bordeaux, France

Master : Boris Detienne, Programmation Linéaire 2, 14h TD, M1, Université de Bordeaux, France

Master : Boris Detienne, Introduction à l’optimisation en nombres entiers, 14h TD, M1, Université de Bordeaux, France

Master : Boris Detienne, Modèles de flot, 14h TD, M1, Université de Bordeaux, France

Master : Boris Detienne, Projet informatique, 9h TD, M2, Université de Bordeaux, France

Master : Pierre Pesneau, Combinatoire et Routage, 14h, M1, Université de Bordeaux et ENSEIRB IPB, France

Master : Ruslan Sadykov, Introduction à la Programmation par Contraintes, 30 HETD, M2, Université de Bordeaux, France

Master : Ruslan Sadykov, Modélisation, Optimisation, Complexité, et Algorithmes, 50 HETD, M2, CNAM Aquitaine, France

Master : François Vanderbeck, Recherche opérationnelle, 15h cours, M1, Institut Polytechnique de Bordeaux, France

Master : François Vanderbeck, Flot et routage, 15h cours, M1, Université de Bordeaux, France

Master : François Vanderbeck, Programmation linéaire 2, 15h cours, M1, Université de Bordeaux, France

Master : François Vanderbeck, Programmation entière, 50h cours/TD, M2, Université de Bordeaux, France

9.2.2. Supervision

PhD in progress : Nastaran Rahmani, Planning and Routing via Decomposition Approaches, Ruslan Sadykov & François Vanderbeck.

PhD in progress : Nadia Dahmani, Problèmes de packing multi-critères, 01/09/2010, François Clautiaux, El-Ghazali Talbi

PhD in progress : Matthieu Gérard, Résolution de problèmes d'optimisation dans le commerce de détail, 01/09/2012, François Clautiaux.

PhD in progress : Martin Bué, Gestion du revenu dans le cadre du voyage professionnel, 01/09/2012, François Clautiaux, Luce Brotcorne

PhD in progress : Nicolas Dupin, Optimisation robuste des arrêts de centrales nucléaires pour maintenance, 01/09/2012, François Clautiaux, François Vanderbeck

PhD : Sagnik Sen, Oriented graph colourings, 01/01/2011 - 03/02/2014, Arnaud Pêcher

9.2.3. Juries

- François Clautiaux : Evaluation (rapporteur) of the PhD thesis of Louise Brac de la Perrière (Université de Technologie de Compiègne)
- François Clautiaux : Evaluation (rapporteur) of the PhD thesis of Marat Mesyagutov (University of Dresden)
- Boris Detienne: Evaluation (examinateur) of the PhD thesis of Xavier Libeaut (University of Angers)
- Arnaud Pêcher : Evaluation (examinateur) of the PhD thesis of Pierre Aboulker (University of Paris 7)
- Arnaud Pêcher : Evaluation (examinateur) of the PhD thesis of Alberto Passuelo (University of Bordeaux)
- François Vanderbeck : Evaluation (rapporteur) of the PhD thesis of Stephen J Maher (University of New South Wales, Australia)
- François Vanderbeck : Evaluation (rapporteur) of the PhD thesis of Amal Benhamiche (University Paris Dauphine)
- François Vanderbeck : Evaluation (examinateur) of the PhD thesis of Pierre-Louis Poirion (ENSTA-Paristech UMA –CEDRIC)

REGAL Project-Team

8. Dissemination

8.1. Scientific Animation

Bertil Folliot is:

- Co-program chair du 13th IEEE International Symposium on Parallel and Distributed Computing (ISPDC 2014), Porquerolles Island, France.
- Co-editor (with Juhnyoung Lee, IBM Watson) of International Journal of Networked and Distributed Computing (IJNDC),
- PC Member of 12th International Symposium on Parallel and Distributed Computing (ISPDC 2013), Bucharest, Roumanie, June 2013.
- PC Member of The 2013 International Conference on High Performance Computing & Simulation (HPCS 2013), Helsinki, Finlande, July 2013.
- PC Member of 13th IEEE International Symposium on Parallel and Distributed Computing (ISPDC 2014), Porquerolles Island, France, June 2014.

Swan Dubois is:

- PC member of the 1st International Workshop on Models and Algorithms for Reliable and Open Computing.
- External reviewer for the 31st Symposium on Theoretical Aspects of Computer Science (STACS 2014).

Julia Lawall is:

- Member of the steering committee of Generative Programming and Component Engineering.
- Secretary of IFIP TC2.
- Member-at-large of the SIGPLAN Executive Committee.
- Member of the editorial board of Science of Computer Programming.
- Associate editor of Higher Order and Symbolic Computation.
- Expert reviewer of DAC 2013, Design Automation Conference, Austin, TX, USA, June 2013.
- PC Member of GPCE 2013, Generative Programming and Component Engineering, Indianapolis, IN, October 2013.
- PC Member of OOPSLA 2013, formerly the ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications, Indianapolis, IN, USA, October 2013.
- External review committee of ASE 2013, the 28th IEEE/ACM International Conference on Automated Software Engineering, Palo Alto, CA, USA, November 2013.
- PC Member for various workshops: MISS, PLOS, Hotswup, Scheme Workshop, Real Time Linux Workshop.
- Member of IFIP WG 2.11 (Program Generation).

Gilles Muller is:

- Member of the EuroSys steering committee
- Workshop co-organizer of PLOS 2013, Nemaquin Woodlands Resort, Pennsylvania, USA, November 2013.
- PC member of DSN 2013, Budapest, Hungary, June 2013.
- PC member of EuroSys 2013, April 2013, Prague, Czech Republic.
- PC member of ICDCN 2013, January 2013, Mumbai, India.

Franck Petit is:

- Invited Editor of Journal of Theoretical Computer Sciences (TCS), Special Issue on Distributed Computing (ICDCN 2013)
- Invited Editor of Journal of Theoretical Computer Sciences (TCS), Special Issue on Stabilization, Safety, and Security (SSS 2011)
- PC Member of 14th International Conference on Distributed Computing and Networking (ICDCN 2013)
- PC Member of 22th Conférence d’informatique en Parallélisme, Architecture et Système (ComPass 2013)

Pierre Sens is:

- PC Member of 28th IEEE International Parallel & Distributed Processing Symposium (IPDPS’2014)
- PC Member of 2nd IEEE/SAE International Conference on Connected Vehicles and Expo (ICCVE 2013)
- PC Member of 42nd IEEE International Conference on Parallel Processing (ICPP’2013)
- PC Member of 27th IEEE International Parallel & Distributed Processing Symposium (IPDPS’2013)
- Project reviewer for Swiss National Science Foundation (Switzerland).
- Project reviewer for Agence Nationale de la Recherche (France).

In 2013, Marc Shapiro served as:

- Invited speaker at Int. W. on Exploiting Concurrency Efficiently and Correctly ((EC)2), <http://zvonimir.info/events/ec2-2013/>.
- Member of the Scientific Advisory Board of the **Center for Informatics and Information Technologies (CITI)** of **Universidade Nova de Lisboa**.
- Member of the **ACM Europe Council**.
- Member of the board (Conseil d’Administration) of **Société Informatique de France (SIF)**, the French learned society in Informatics.
- Member of the board of the **Euro. Forum for Info. and Comm. Sciences and Technologies (EFICST)**.
- Member of the “Consolidator Grants” for the PE6 (Computer Science) selection panel of the European Research Council (ERC).
- Co-chair of Dagstuhl workshop “Consistency in Distributed Systems” [24].
- Coordinator of FP7 project **SyncFree** (Section 7.2.1.1).
- Coordinator of ANR project (Section 7.1.6 ConcoRDanT).
- PC co-chair for Int. Conf. on Principles of Distr. Sys. (OPODIS) 2014.
- PC member for for **Int. Conf. on Principles of Distr. Sys. (OPODIS) 2013**.
- Review committee member of **ACM Symp. on Principles and Practice of Parallel Programming (PPoPP) 2014**.
- Reviewer for **Int. Symp. on DIStributed Computing (DISC) 2013**.
- Reviewer for **ACM Symp. on Principles of Dist. Comp. (PODC) 2013**.
- Project reviewer for Swiss National Science Foundation (Switzerland).
- Project reviewer for Agence Nationale de la Recherche (France).
- Project reviewer for US-Israel Binational Science Foundation.

Gaël Thomas is:

- PC Member of 7th Workshop on Programming Languages and Operating Systems (PLOS'2013)

Olivier Marin is:

- PC Member of the 1st Workshop on Real Applications for P2P Networks 2013 (RAPP'2013)

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master: Julia Lawall, Coccinelle, 4h, niveau M2, ENSEIRB, Bordeaux.

Licence: Gaël Thomas, Introduction to the C programming language, L1, Université Paris 6

Licence: Swan Dubois, Franck Petit, C programming language, L2, Université Paris 6

Licence: Gaël Thomas, Introduction to computer architecture, L2, Université Paris 6

Licence: Luciana Arantes, Bertil Folliot, Julien Sopena, Franck Petit, Pierre Sens, Principles of operating systems, L3, Université Paris 6

Licence: Mesaac Makpangou, Client/server architecture, L3 professionnelle, Université Paris 6

Licence: Sébastien Monnet, Gaël Thomas, System and Internet programming, L2, Université Paris 6

Licence: Sébastien Monnet, Computer science initiation, L1, Université Paris 6

Master: Luciana Arantes, Sébastien Monnet, Pierre Sens, Julien Sopena, Gaël Thomas, Operating systems kernel, M1, Université Paris 6

Master: Luciana Arantes, O. Marin, Maria Potop-Butucaru, Distributed algorithms, M1, Université Paris 6

Master: Luciana Arantes, Oliver Marin, Pierre Sens, Advanced distributed algorithms, M2, Université Paris 6

Licence: Luciana Arantes, Bertil Folliot, Olivier Marin, POSIX Advanced C system programming, M1 d'Informatique, Université Paris 6

Master: Bertil Folliot, Julien Sopena, Distributed systems and client/serveur, M1, Université Paris 6

Licence: Bertil Folliot, C programming & systems, L2, Université Paris 6

Licence: Bertil Folliot, Directed projects, L2, Université Paris 6

Licence: Bertil Folliot, Head of the Computer Courses "Applications of Computer Technology and Communication", L2, Université Paris 6

Master: Franck Petit, Resistance of Distributed Attacks, M2, Université Paris 6,

Master: Franck Petit, Embedded communicant systems, M2, Université Paris 6

Master: Luciana Arantes, Sébastien Monnet, Julien Sopena, Gaël Thomas, Middleware for advanced computing systems, M2, Université Paris 6"

Master: Marc Shapiro, Julien Sopena, Gaël Thomas, multicore kernels and virtualisation, M2, Université Paris 6

Master of Engineering: Marc Shapiro, OS-User, PolyTech-UPMC I4.

8.2.2. Supervision

PhD: Ruijing Hu, "Epidemic dissemination algorithms in large-scale networks: comparison and adaption to topologies", UPMC, 2/12/2013, Luciana Arantes, Isabelle Demeure, Julien Sopena, Pierre Sens.

PhD: Guthemberg Da Silva Silvestre, "Designing Adaptive Replication Schemes for Efficient Content Delivery in Edge Networks", UPMC, 18/10/2013, Sébastien Monnet, Pierre Sens.

PhD: Massata Ndiaye, “Techniques de gestion des défaillances dans les grilles informatiques tolérantes aux fautes”, UPMC, 17/09/2013, Pierre Sens.

PhD: Thomas Preud’homme, “Optimized inter-core communication for pipeline parallelism”, UPMC, 10/06/2013, Bertil Folliot, Gael Thomas, Julien Sopena.

PhD: Suman Saha, Improving the Quality of Error-Handling Code in Systems Software using Function-Local Information, UPMC, 25/03/2013, Giller Muller and Julia Lawall.

PhD: Anissa Lamani, “Algorithmes avec optimisation de ressources pour des problèmes et des systèmes distribués variés”, UPJV, 19/03/2013, Franck Petit et Vincent Villain.

8.2.3. *Juries*

Bertil Folliot was member of the jury of:

- Alexandre Carbon. Accélération matérielle couplée au processeur en charge de la compilation dynamique afin d’en accroître les performances. Thèse de Doctorat de l’Université Paris VI, CEA+Nano-INNOV, Palaiseau, October 2013 (président du jury).
- Ruijing Hu. Un système adaptatif de publication-abonnement pour des réseaux mobiles. Thèse de Doctorat de l’Université Paris VI, November 2013 (président du jury).
- Ridha Benosman. Conception et évaluation de performances d’un bus applicatif, parallèle et orienté services. Thèse de Doctorat du Conservatoire National des Arts et Métiers, Paris, December 2013 (président du jury).

Julia Lawall was member of the jury of:

- Tegawendé F. Bissyandé. PhD University of Bordeaux (Advisor: Laurent Réveillère)

Gilles Muller was the reviewer of:

- Sylvain Geneves, PhD U. of Grenoble (Advisor: Vivien Quema)
- Emmanuel Sifakis, PhD U. of Grenoble (Advisor: Laurent Mounier)

Gilles Muller was member of the jury of:

- Preston Rodrigues, PhD University of Bordeaux (Advisor: Laurent Réveillère)
- A MCF position at INSA of Lyon.
- Four committees for engineer positions at the Inria Paris-Rocquencourt.

Franck Petit was the reviewer of:

- Yvan Rivierre. PhD VERIMAG, Grenoble (Advisors: Florence Maraninchi, Fabienne Carrier, Stéphane Devismes)
- Sylvie Delaët, HDR LRI, Orsay.
- Hung Tran-The, PhD LIAFA, Paris (Advisors: C. Delporte-Gallet, H. Fauconnier)

Franck Petit was member of the jury of:

- Ndeye Massata Ndiaye, PhD LIP6, Paris (Advisors: Pierre Sens, Ousmane Thiare)

Pierre Sens was the reviewer of:

- Martin Quinson. HDR Loria, Nancy
- Houssein Chihoub. PhD ENS Cachan, Rennes (Advisors: Luc Bougé, Gabriel Antoniu)
- Aeiman Gadafi. PhD ENSHEIT, Toulouse (Advisor: Daniel Hagimont)
- Marko Obravac. PhD Rennes 1, Rennes (Advisor: Thierry Priol, Cedric Tedeschi)
- Mehdi Diouri. PhD ENS Lyon, Lyon (Advisor: Eddy Caron)

Gaël Thomas was the reviewer of:

- François Goicho, PhD Université de Lyon (Advisors: Stéphane Frénot, Guillaume Salagnac)
- Quentin Sabah, PhD Université de Grenoble (Advisor: Jean-Bernard Stefani)
- Konstantinos Kloudas, PhD Université de Rennes (Advisor: Anne-Marie Kermarrec)
- Geoffroy Cogniaux, PhD Université de Lille (Advisor: Gilles Grimaud, Michael Hauspie)

8.3. Popularization

- Marc Shapiro presented a tutorial on “From strong to eventual consistency: getting it right” at [OPODIS 2014](#).
- Marc Shapiro organized the Dagstuhl workshop on “Consistency in Distributed Systems,” in February 2013 [24].

REGULARITY Project-Team

9. Dissemination

9.1. Scientific Animation

Benjamin Arras attended the *Journées de Probabilités* at Orléans from 17th june 2013 to 21st june 2013. During a talk, he presented his research regarding wavelets expansion and Hölderian regularity of stochastic processes belonging to Wiener chaoses.

Benjamin Arras attended classes during the "Ecole de probabilités de Saint-Flour" at Saint-Flour from 10th july 2013 to 21st july 2013.

Paul Balança attended the *Journées de Probabilités* at Orléans from 17th june 2013 to 21st june 2013: Presentation on 2-microlocal analysis and Lévy processes. Paul Balança attended the *7th international conference on Lévy processes* at Wroclaw: Poster on 2-microlocal analysis and Lévy processes.

Alexandre Richard attended the *Journées de Probabilités* at Orléans from 17th june 2013 to 21st june 2013: Presentation on fractional Brownian fields in abstract Wiener spaces.

Alexandre Richard attended classes during the "Ecole de probabilités de Saint-Flour" at Saint-Flour from 10th july 2013 to 21st july 2013.

Xiequan Fan is a reviewer for Mathematical Reviews (AMS).

Jacques Lévy Véhel is associate editor of the journal *Fractals*.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Licence: Erick Herbin, Probability course at Ecole Centrale Paris (20h).
- Master: Erick Herbin, Advanced Probability course at Ecole Centrale Paris (30h).
- Master: Erick Herbin and Jacques Lévy Véhel, Brownian Motion and Stochastic Calculus course at Ecole Centrale Paris (30h).
- Master: Jacques Lévy Véhel teaches a course on Wavelets and Fractals at Ecole Centrale Nantes (8h).
- Licence: Benjamin Arras, Analysis, Probability and PDE, 3x10 hours, L3, Ecole Centrale Paris.
- Licence: Paul Balança, Analysis, Probability, 2x10 hours, L3, Ecole Centrale Paris.
- Master: Benjamin Arras, Brownian motion and Stochastic Calculus, 20 hours, M2, Ecole Centrale Paris.
- Master: Paul Balança, Advanced Probability, 18 hours, M1, Ecole Centrale Paris.

9.2.2. Supervision

PhD in progress : Benjamin Arras, Self-similar processes in higher order chaoses, started in September 2011, supervised by J. Lévy Véhel.

PhD in progress : Paul Balança, Stochastic 2-microlocal analysis of SDEs, started in October 2010, supervised by Erick Herbin.

PhD in progress : Alexandre Richard, Regularity of set-indexed processes and construction of a set-indexed process with varying local regularity, started in October 2010, supervised by Erick Herbin and E. Merzbach.

REO Project-Team

8. Dissemination

8.1. Scientific Animation

- Laurent Boudin
 - Member of the Board of Mathematics Licence (*EFU de Licence de mathématiques*), UPMC.
 - Co-organizer of the monthly workgroup “Humaniste” focusing on mathematics applied to humanities, alternatively taking place at UPMC, UP7D and Orléans and jointly handled by LJLL, MAPMO and CAMS.
 - Member of the think-tank for first-year programs in Mathematics at UPMC.
 - Member of the IREM (Institutes for Research on Mathematics Teaching) Scientific Committee.
 - Co-organizer of the conference "Multiscale multiphysics modelling for the respiratory system", with C. Grandmont and B. Grec,
 - Co-organizer of first-year ending workshop of the Kindymo project, with J.-P. Nadal and A. Vignes.
- Muriel Boulakia
 - Organization of the workshop "Mathematical Aspects of Fluid-Structure Interactions", IHP (Paris), November 2013
- Miguel Ángel Fernández Varela
 - Member of the Postdocs Selection Committee, Inria Paris-Rocquencourt
 - Mini-symposium on *Advanced numerical methods for fluid mechanics*, ENUMATH 2013, August 26-30, Lausanne, Switzerland (organized with E. Burman and A. Ern).
 - Mini-symposium on *Fluid-structure interaction and fictitious domain methods*, SMAI 2013, 6ème biennale française des mathématiques appliquées et industrielles, May 27-31, 2013, Seignosse Le Penon, France (organized with S. Boyaval and L. Monasse).
 - Member of the "Ramón y Cajal" Program selection committee, mathematics section, Ministry of research, development and innovation (Spain).
 - Member of the committee CEA-EDF-Inria summer school on Numerical methods for interface problems in fluid and solids with discontinuities, June 23-July 4, 2014, Cadarache (with P. Massin and J. Segré).
- Jean-Frédéric Gerbeau
 - Editor-in-Chief of Mathematical Modelling and Numerical Analysis (M2AN)
 - Member of the editorial boards of International Journal for Numerical Methods in Biomedical Engineering (IJNMBE) and of Communications in Applied and Industrial Mathematics.
 - Service activity at Inria: Délégué Scientifique / Chairman of the project-teams' committee of Inria Paris-Rocquencourt research center; Member of the Inria Evaluation Committee; Member of the Inria International Chairs committee.
 - Service activity in other French institutions: Member of the Mathematics Faculty Council of University P. & M. Curie Paris 6 (conseil de l'UFR 929); member of the scientific committee of the Faculty of Science, University Versailles Saint-Quentin; member of the scientific committee of Labex NUMEV, Montpellier.

- Service activity abroad: member of the Reference Committee of the PhD program Mathematical Models and Methods in Engineering (Politecnico di Milano, Italy);
- Organizing Committee of the SIAM APDE 2013 conference. Orlando, USA.
- Scientific Committee of the ENUMATH 2013 conference. Lausanne, Switzerland.
- Advisory Committee of the 3rd International conference on Computational & Mathematical Biomedical Engineering (CMBE 2013). Hong-Kong
- Céline Grandmont
 - Member of the CNU 26 (2011–2015).
 - Co-organizer of the international conference "Multiscale multiphysics modelling for the respiratory system" June 26-27, 2013, Paris, around 50 participants. <https://www.ljll.math.upmc.fr/m3rs2013/>
 - Co-organizer of the second Math-parity Day (on gender issues in the mathematics community), 24 juin 2013, IHP, Paris. <http://postes.smai.emath.fr/apres/parite/journee2013/>
- Jessica Oakes
 - International Society of Aerosol Medicine Student Forum Leader. September 2013 - Present.
 - 4th International Conference on Engineering Frontiers in Pediatric and Congenital Heart Disease. Sub-Organizer. November 2013 - Present.
- Elisa Schenone
 - Co-organizer of the monthly Junior Seminar of Inria Paris-Rocquencourt
- Marc Thiriet
 - Member of the Scientific committee of the collaborative platform [DiscInNet](#).
 - President of thematic committee CT3 (Biomedical Simulation and Applications to Health) of GENCI (Grand Equipement National de Calcul Intensif – National Large Equipment for Intensive Computation)
 - Member of several Evaluation Groups of the Canadian Granting Agency NSERC (mainly Mechanical Engineering, but also Mathematics)
- Marina Vidrascu
 - Member of the Postdocs Selection Committee, Inria Paris-Rocquencourt
- Irène Vignon-Clementel
 - Review Editor of *Frontiers in Pediatric Cardiology*
 - Organizing the monthly seminar at Inria Paris-Rocquencourt on “modeling and scientific computing”
 - Inria: member of the “Conseil d’orientation scientifique et technologique” (scientific and technologic orientation council) of Inria, in the subgroup “GT Actions Incitatives” (incentive action working group), PhD grant committee
 - Mediator between PhD students and their supervisors for Inria Paris-Rocquencourt
 - Coordinator of the associated team CARDIO between REO and Prof. Taylor’s lab at Stanford University, USA and colleagues both at Inria and in the USA (2008-present)

Conferences

- Grégory Arbia
 - Contributed talk, Congrès SMAI , Seignosse, France, May 2013.
 - Contributed talk, Modelling of physiological flows , Chia, Italy, June 2013.
 - Inria Junior Seminar, January 2013 Inria Junior Seminar, January 2013
- Laurent Boudin

- Seminar, Numerical analysis, Irmar, Univ. Rennes 1, January 2013
- Seminaire, MIP, Univ. Toulouse 3, February 2013.
- Muriel Boulakia
 - Seminar, Univ. Darmstadt (Germany), february 2013
 - Seminar, Maths-Club, Univ. Paris-Diderot, march 2013
 - Contributed talk, Workshop Control of fluid-structure systems, Paris, november 2013
- Miguel Ángel Fernández Varela
 - Talk at minisymposium, SMAI 2013, 6ème biennale française des mathématiques appliquées et industrielles, May 27-31, 2013, Seignosse Le Penon
 - Seminar, University of Montpellier, May
- Benoit Fabrèges
 - Contributed talk, M3RS ending conference, UPMC Paris 6, June 2013
 - Contributed talk, 3th International Conference on Computational & Mathematical Biomedical Engineering, 16-18 December 2013, Hong Kong, China
 - Seminar, Nantes, January 2013
 - Contributed talk, Journée Dynamo 2013, March 2013, Orléans
 - Seminar, Strasbourg, May 2013
- Justine Fouchet-Incaux
 - Seminar at "Groupe de Travail des Thésards", March 2013, Laboratoire Jacques-Louis Lions, Paris 6
 - Poster, VIIIème congrès de Physiologie, de Pharmacologie et de Thérapeutique (P2T'13), April 2013, Angers
 - Seminar at "Groupe de Travail Numérique", May 2013, Laboratoire de Mathématiques d'Orsay
 - Talk at minisymposium "Calcul scientifique et pathologies pulmonaires", Congrès SMAI 2013, May 27-31, Seignosse,
 - Seminar of "Analyse Numérique et Equations aux Dérivées Partielles" team, June 2013, Laboratoire de Mathématiques d'Orsay
 - Contributed talk, workshop "Multiscale multiphysics modelling for the respiratory system", ANR M3RS ending conference, June 2013, Laboratoire Jacques-Louis Lions, Paris 6
 - Poster, colloque EDP-Normandie, October 2013, Caen
 - Invited speaker, workshop "BioPhysMath", December 2013, Nice
- Jean-Frédéric Gerbeau
 - Invited conference, Workshop "EDP Normandie", Caen, 2013
 - Seminar Simon Fraser University, Vancouver, Canada, November, 2013
 - Seminar Université de Rouen, February 2013.
 - Talk at minisymposium, SIAM Conference on Analysis of Partial Differential Equation, Orlando, USA, 2013
 - Talk at minisymposium, USNCCM, Raleigh, USA, 2013
 - Talk at minisymposium, ECCOMAS, Lausanne, Switzerland, 2013
- Céline Grandmont
 - Invited speaker, Opening day of GDR Metice, May 2013, Paris
 - Contributed talk, Minisymposium, Equadiff 13, sept. 2013, Prague, Czech Republic

- Invited speaker, PDEs and Dynamical system in Biology, Oct. 2013, Tel Aviv, Israel
- EDP Seminar, Univ Paris-Sud, oct. 2013
- Matthieu Hillairet
 - Invited talk at Mathematical Aspects of Fluid-Structure Interactions, November 4-8, Paris,
 - Invited talk at Asymptotic behaviour of systems of PDE arising in physics and biology: theoretical and numerical points of view, November 6-8, Lille
 - Seminar, University of Paris 13, November
 - Seminar, University of Avignon, November
 - Seminar, University of Toulouse, December
 - Seminar, University of Lyon, December
- Mikel Landajuela
 - Contributed talk, 12th U.S National Congress on Computational Mechanics (US-NCCM12), Raleigh, USA, July 22-25, 2013
- Damiano Lombardi
 - Contributed talk “Tom Hughes 70”, San Diego USA, February 2013.
- Ayman Moussa
 - Workshop Kinetic Days (Toulouse, April 2013)
 - M3RS Ending Conference (LJLL, June 2013)
 - Workshop Math Bio (Versailles, March 2013)
 - Numerical Analysis/PDE Seminar (ENS Ker Lann, October 2013)
 - MFO “Classical and Quantum Mechanical Models of Many-Particle Systems” (Oberwolfach, December 2013)
 - Numerical Analysis/PDE Seminar (ENS Cachan, December 2013)
- Jessica Oakes
 - Talk and poster, 19th International Congress of the International Society for Aerosols in Medicine, Chapel Hill, USA, April 2013.
 - Poster, University of California, San Diego Research Exposition. April 2013.
 - Poster, Whitaker Grantee Orientation, July 2013.
 - Inria Junior Seminar, October 2013.
- Sanjay Pant
 - Contributed talk and poster, 4th International Workshop on Statistical Atlases and Computational Models of the Heart held in conjunction with the 16th International conference on Medical Image Computing and Computer Assisted Intervention, Sep 22–26, 2013, Nagoya, Japan.
- Elisa Schenone
 - Contributed talk at V International Symposium on Modelling Of Physiological Flows - MPF2013, June 11-14, 2013
 - Contributed talk at Mini Symposium on Cardiovascular Biomechanics at AP-COM&ISCM2013, Singapore, December 11-14, 2013.
 - 2nd Feel++ Users Days, January 23-25, 2013
 - Matinée "Contrôle" avec Alfio Quarteroni, LJLL, 21 mars 2013
- Saverio Smaldone
 - 5th International Symposium on Modelling of Physiological Flows (MPF 2013), Chia Laguna, Sardinia, Italy, 11-14 June 2013;

- Marc Thiriet
 - Keynote speaker 11th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering, April 3-7, 2013, Salt Lake City, Utah
 - Keynote speaker at Annual Meeting of the Canadian Applied and Industrial Mathematics Society, CAIMS 2013, Quebec City, June 16 - 20 (joint work with Deleuze, TWH. Sheu)
 - 4th CREST-SBM International Symposium, 13-14 March 2013, Tokyo, Japan.
 - International Conference on Life Science & Biological Engineering (LS&BE'13), 15-17 March, 2013, Tokyo (joint work with Y. Deleuze, TWH. Sheu, M.)
 - 2013 International Conference on Life Science & Biological Engineering (LS&BE'13), 15-17 March, 2013, Tokyo (joint work with M. Solovchuk, TWH. Sheu)
 - 2014 IEEE International Symposium on Biomedical Imaging, Beijing, China, April 29 - May 2, 2014 (Passat N.)
- Marina Vidrascu
 - Plenary talk 22st International Conference on Domain Decomposition Methods, September 16-20, 2013 - Università della Svizzera italiana - Lugano, Switzerland
 - Seminar Laboratoire Jacques Louis Lions, Paris 6 UPMC, October, 2013
- Irène Vignon-Clementel
 - Contributed talk in honor of TJR Hughes 70th birthday, FEF2013, Feb 24th-27th, San Diego, USA
 - Seminar, Department of Mechanical and Aerospace Engineering, University of California San Diego, Feb 28th, San Diego, USA
 - Plenary, CREST-SBM conference, March 13th-14th, Tokyo, Japan
 - Invited lecture (3h), University of Tokyo, March 15th, Tokyo Japan
 - Contributed talk, BIS' workshop, May 20th-21st, Paris, France
 - Invited talk, GDR Metice, June 17th-19th, Paris, France
 - Contributed talk, MAFELAP, June 10th-13th, London, UK
 - Seminar, Department of Biomedical Engineering, King's College London, June 12th, London, UK
 - Invited talk, Multiscale multiphysics modelling for the respiratory system workshop, June 26th-27th, Paris, France
 - Contributed talk, USNCCM12, July 22nd-25th, Raleigh, USA
 - Seminar, Demi-heure de science, Inria, Sept 12th, Rocquencourt, France
 - Evaluation seminar, associated team CARDIO 2008-2013, Oct 9th, Online
 - Contributed talk, 3rd International Conference on Computational and Mathematical Biomedical Engineering, Dec 15th-18th, Honk-Hong, China

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

DUT :

- Justine Fouchet-Incaux 1ère année: Mathématiques S'1, 45h, IUT d'Orsay, département Mesures Physiques, Université Paris-Sud,
- Justine Fouchet-Incaux 1ère année: Informatique et algorithmique S'1, 28h, IUT d'Orsay, département Mesures Physiques, Université Paris-Sud

Licence :

- Grégory Arbia
 - Algèbre 1 : calcul vectoriel, 36h, L1, UPMC
 - Calcul matriciel numérique, 24h, L3, UPMC.
- Chloé Audebert Calculus, 22h, L1 - undergraduate, Université Paris 6 UPMC
- Laurent Boudin
 - Series and integrals (10h), L2, UPMC.
 - Multivariable calculus and multiple integrals (111 h), L2, UPMC.
 - Shared studies supervision in mathematics licence for approximately 250 students (20h), L2, UPMC.
 - Co-supervisor (for mathematics) of the bidisciplinary computer science / applied mathematics licence program and of the joint program UPMC-Brown on computer science / applied mathematics (no hour dedicated), L2, UPMC.
- Muriel Boulakia
 - Scilab (30h), L2, UPMC
 - Hilbertian analysis (30h), level L3, Polytech'Paris,
- Miguel Àngel Fernández Varela Scientific computing, 30h, level L3, École des Ponts ParisTech,
- Céline Grandmont Numerical Analysis, 36 h, L3, UPMC
- Elisa Schenone
 - Calcul vectoriel, 72h, L1, UPMC
 - Calcul matriciel numérique, 24h, L3, UPMC
 - Scilab, 34h, L2, UPMC
- Irène Vignon-Clementel Mathematics for biology, 64h ETD, L1 - undergraduate, Université de Versailles Saint Quentin

Master :

Laurent Boudin

- Basics for numerical methods (48h), M1, UPMC.
- Studies supervision in mathematics master for 15 students (10h), M1, UPMC.

Muriel Boulakia

- Numerical Methods (48h), level M1, Polytech'Paris,
- Preparatory course for teaching admission examination Agrégation (80h), M2, UPMC,

Jean-Frédéric Gerbeau

- Numerical methods in hemodynamics (20h), level M2, UPMC / Univ Paris-Sud / Ecole Polytechnique.

Miguel Àngel Fernández Varela

- Numerical methods in bio-fluids, 6h, level M2, University of Vigo, Spain.
- Numerical methods for fluid-structure interaction, 6h, level M2, Université de Laval, Québec, Canada

Marc Thiriet

- “Biofluid flows”, 12 h, University Pierre & Marie Curie

Others

- Irène Vignon-Clementel Ecole d'ingénieur: Numerical simulations of blood flow, 1h30, as part of the undergraduate "continuum mechanics" class at AgroParisTech, France

8.2.2. Supervision

PhD in progress : Grégory Arbia, *Multi-scale Modeling of Single Ventricle Hearts for Clinical Decision Support*, since October 2010. Supervisors: J-F. Gerbeau & I. Vignon-Clementel.

PhD in progress : Chloé Audebert, *Modeling of liver hemodynamics*, since October 2013. Supervisors: J-F. Gerbeau & I. Vignon-Clementel.

PhD in progress : Justine Fouchet-Incaux, *Mathematical and numerical modeling of the human breathing*, since October 2011. Supervisors: C. Grandmont & B. Maury.

PhD in progress : Mikel Landajuena, *Coupling schemes and unfitted mesh methods for fluid-structure interaction*, since October 2012, Supervisor: M.A. Fernández Varela.

PhD in progress : Stéphane Liwarek, *Air flow in the nasal cavity*, since October 2010. Supervisors: M.A. Fernández Varela & J-F. Gerbeau

PhD in progress : Jimmy Mullaert, *Fluid-structure interaction*, since September 2009. Supervisors: M.A. Fernández Varela & Y. Maday

PhD in progress : Elisa Schenone, *Inverse problems in electrocardiology*, since October 2011. Supervisors: J-F. Gerbeau & M. Boulakia.

PhD in progress : Saverio Smaldone, *Numerical methods for cardiac hemodynamics*, since October 2010, Supervisors: J-F. Gerbeau & M.A. Fernández Varela.

8.2.3. Juries

- Laurent Boudin
 - Member of the PhD committee of Nicolas Lelong (Univ. Tours, Sept. 2013).
- Muriel Boulakia
 - Hiring committee: UPMC (MCF position)
- Miguel Àngel Fernández Varela
 - Member of the PhD committees (referee) of I. Dione (Université de Laval, Québec, Canada).
- Jean-Frédéric Gerbeau
 - Habilitation (HDR) committee: Jing-Rebecca Li (HDR), Université Paris-Sud.
 - PhD committees: Simon Labarthe, Université de Bordeaux (reviewer), Vincent Chabannes, Université de Grenoble (reviewer), Alexandre Impérial, Univ. Paris 6.
 - Hiring committee: Université Paris-Sud (assistant prof), Inria Bordeaux (junior researcher), Inria (senior researcher).
- Céline Grandmont
 - AERES Committee: LMPA, Calais Univ., Nov 2013
 - Hiring committee: Metz Univ. (Professor position).
- Marc Thiriet
 - Member of the PhD committee of Robin Chatelin, (University Toulouse)
- Marina Vidrascu
 - Member of the PhD committee (referee) of Vincent Visseq (University Montpellier)
- Irène Vignon-Clementel
 - Member of the PhD committee Jessica Oakes, University of California San Diego, USA, May 31st
 - Member of the PhD committee Charlotte Debbaut (referee), Ghent University, Belgium, Sept 20th;
 - Member of the PhD committee (referee) Alessandro Melani, MOX, Politecnico di Milano, Italy, Sept 30th.

8.3. Popularization

- Ayman Moussa
 - Participation at “Fête de la science” at Paris 7

REVES Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Program Committees

- George Drettakis served on the SIGGRAPH 2013 program committee.
- Adrien Bousseau served on the Eurographics program committee, on the Eurographics Symposium on Rendering program committee and on the NPAR program committee.
- Christian Richardt participated in the Expressive 2013 program committee and created the website: <http://www.cl.cam.ac.uk/conference/expressive-2013/>.

8.1.2. Community Service

G. Drettakis chaired the Eurographics (EG) Awards Committee until May this year, and chairs the EG Working group on Rendering and is part of the EG conference steering committee and the Advisory Board for Eurographics 2013. He also served on several ad-hoc ACM and IEEE Committees, concerning policy and EIC searches. He is an associate editor-in-chief for IEEE Transactions on Computer Graphics and Visualization. He also heads the steering committee of the Gouraud-Phong Immersive Space at Sophia-Antipolis.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

- Masters: G. Drettakis organizes and teaches Computer Graphics at the ECP (Paris) (9h), A. Bousseau teaches 3h at the same course. G. Drettakis teaches 6h in the MAPI M1 Module (Jeux Video), A. Bousseau teaches 3h in this program. A. Bousseau organizes and teaches the Computer Graphics module in the Master 1 International in Computer Science of University Nice Sophia Antipolis (9h), G. Drettakis teaches 7.5h in this program.

8.2.2. Supervision

- PhD in progress: Rodrigo Ortiz-Cayon, Inpainting and Artifact Removal for Image Based Rendering, (started November 2013), Advisor George Drettakis.
- PhD in progress: Gaurav Chaurasia, Image-Based Rendering, since October 2010 (to defend February 2014), Advisor: George Drettakis
- PhD in progress: Emmanuelle Chapoulie, Gestures in VR, since October 2010 (to defend April 2014), Advisor: George Drettakis
- PhD in progress: Emmanuel Iarussi, Computer-Assisted Drawing, since October 2012, Advisor: George Drettakis, Co-advisor: Adrien Bousseau
- Internship: Julia Chatain (Ecole Polytechnique, from April 8 to Aug. 9, 2013). Depicting materials in vector graphics. Advisor: George Drettakis, Co-advisor: Adrien Bousseau, Jorge Lopez Moreno
- Internship: Uditha Kasthuriarachchi (Jul. to Sep. 2013). GPU-Based Refraction. Advisor: George Drettakis, Co-advisor: Stefan Popov

8.2.3. International Internship

- Joal Sol Roo (UNCPBA Argentina, from May 21 to Sept. 13, 2013). Advisor: Adrien Bousseau, Christian Richardt

8.2.4. Juries

George Drettakis served on Mauricio Delbracio's Ph.D. committee.

8.3. Popularization

8.3.1. Popularization, Invited Talks

- Adrien Bousseau presented the work on Coherent Intrinsic Images from Photo Collections (SIGGRAPH Asia 2012) in the Research Session of the FMX conference in Stuttgart.
- Adrien Bousseau presented the work on sketching tools for designers as a “Cafe’In” at the Inria Sophia Antipolis center and as an introduction to research for high school students from Nice (MathC2+) and Grasse. This work also appeared as an article on the Inria Sophia Antipolis website <http://www.inria.fr/centre/sophia/actualites/des-outils-informatiques-pour-les-artistes-et-les-createurs>
- Christian Richardt gave invited talks at UC Berkeley, Stanford, Nvidia Research (Santa Clara, California) and TU Berlin (Germany).

8.3.2. Demos

We gave demos (mainly of the immersive space) to high school students, representatives from the planned Museum of Cosquer in Marseille, Sup’Com Tunis, the companies Thales, Thales AleniaSpace and Optis.

8.3.3. Conferences and Invited Talks

- At SIGGRAPH 2013, Adrien Bousseau presented the work on Gloss Perception in Painterly and Cartoon Rendering [14]. Jorge Lopez Moreno also presented our work at the French chapter of SIGGRAPH in Paris. Our work also appeared on the Inria Sophia Antipolis website (<http://www.inria.fr/centre/sophia/actualites/siggraph-2013-trois-equipes-du-centre-present-leurs-travaux>).
- Adrien Bousseau and Emmanuel Iarussi attended the ACM CHI conference in Paris (May).
- Adrien Bousseau and Emmanuel Iarussi attended the ACM UIST conference in St Andrews (October) where Emmanuel Iarussi presented the paper on assisting drawing from photographs [19].
- Adrien Bousseau gave a talk on drawing tools for depicting stylized materials at the “Groupe de Travail sur le Rendu” in Paris <http://gtrendu.blogspot.fr/>.
- George Drettakis attended Eurographics 2013 in Girona Spain (May) and EGSR 2013 in Zaragoza Spain (June).
- Gaurav Chaurasia attended Eurographics Symposium on Rendering at Zaragoza (Spain) June 19-21, 2013.
- Gaurav Chaurasia presented the paper “Depth Synthesis and Local Warps for Plausible Image-based Navigation” at SIGGRAPH at Anaheim (CA, USA) between July 21-25, 2013.
- Gaurav Chaurasia gave an invited talk titled “Algorithms and Perception for Interactive Free-Viewpoint Image-Based Navigation” at Microsoft Research Redmond, USA on July 18, 2013. He was hosted by Dr. Eyal Ofek in the Xtreme Computing Group.
- Gaurav Chaurasia visited MIT CSAIL between Aug 1, 2013 and Sept 30, 2013. He was hosted by Prof. Fredo Durand computer graphics group.
- Stefan Popov presented his paper at Eurographics 2013 in Girona, Spain
- Stefan Popov attended the Eurographics Symposium on Rendering 2013 in Zaragoza, Spain
- Christian Richardt attended the Berkeley-Inria-Stanford workshop in Stanford to represent the CRISP associate team.
- Christian Richardt attended Eurographics 2013 in Girona, Spain.
- Christian Richardt attended CVPR 2013 in Portland, Oregon, to present the "Megastereo" paper.
- Christian Richardt attended SIGGRAPH 2013 in Anaheim, California, and co-presented a paper with Peter Vangorp (Perception of Perspective Distortions in IBR).
- Emmanuel Iarussi participated in the ACM CHI Conference on Human Factors in Computing Systems. Paris, France - 27 April, 2 May 2013, and in the ACM Symposium on User Interface Software and Technology (UIST), St Andrews, UK, October 8-11, 2013.
- Sylvain Duchêne attended Siggraph Conference 2013 in Anaheim, USA, 18 hours Inria class on Computational Geometry Learning from David Cohen-Steiner, and university english course LAN02.

RMOD Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Organization

- Guillermo Polito helped organizing the *Uqbar Workshop* (November 2013) in Argentina.
- Damien Cassou: DYLA 2013, *7th Workshop on Dynamic Languages and Applications*. Colocated with ECMFA, ECOOP and ECSA, 1–5 July, Montpellier, France.
- Stéphane Ducasse and Marcus Denker: Part of the organization team of ESUG 2013, *21th International Smalltalk Conference*, Annecy, France 9-13 September 2013.

9.1.2. PC Memberships and Reviewing

- Anne Etien
 - ECMFA 2013, *European Conference on Modelling Foundations and Applications*.
 - IWST 2013, *International Workshop on Smalltalk Technologies*.
 - ME 2013, *Models and Evolution*
 - SLE 2013, *International Conference on Software Language Engineering*.
- Marcus Denker
 - DLS 2013, *Dynamic Languages Symposium at SPLASH*.
 - Varicom 2013, *International Workshop on Variability and Composition*.
 - ICSM 2013 Tool Demo Track, *International Conference on Software Maintenance*.
 - SCAM 2013 Tool Paper Track, *IEEE International Working Conference on Source Code Analysis and Manipulation*.
 - SLE 2013, *International Conference on Software Language Engineering*. External Reviewer.
- Damien Cassou
 - aec-esec FSE 2013, *ACM SIGSOFT Symposium on the Foundations of Software Engineering*.
 - ASE 2013, *28th IEEE/ACM International Conference on Automated Software Engineering*.
 - DYLA 2013, *7th Workshop on Dynamic Languages and Applications*.
 - WASDETT 2013, *4th International Workshop on Academic Software Development Tools and Techniques*.
- Nicolas Anquetil:
 - ICSM 2013, *International Conference on Software Maintenance*.
 - ECOOP/ECMFA/ECSA 2013 Doctoral Symposium.
 - Reviewer EMSE (Empirical Software Engineering journal).
 - Reviewer SCICO (Science of Computer Programming journal).

9.1.3. Memberships

- Marcus Denker is a member of *DFGWT - Deutsch-Französische Gesellschaft für Wissenschaft und Technologie e.V* (Association Franco-Allemande pour la Science et la Technologie) (from August 2013).

- Nicolas Anquetil and Anne Etien are member of IEEE. (from July 2013).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: C. Demarey, Architectures Logicielles, 30h (M1), GIS4, Polytech'Lille, France
 Misc: Stéphane Ducasse, Ecoles des jeunes chercheurs Inria (2013), 6h, Inria, France
 Licence: Stéphane Ducasse, Cours IAE (2013), 14h, Annecy, France
 Master: Stéphane Ducasse, Cours Ecole des Mines de Douai (2013), 12h, France
 Master: Stéphane Ducasse, Cours USTL L3 (2013), 4.5h, Université Lille, France
 Master: Stéphane Ducasse, Cours University of Quilmes, 2h, Argentina
 Master: Stéphane Ducasse, Cours University of Lviv, 12h, Ukraine
 Master: Stéphane Ducasse, Cours University of Buenos Aires, 3h, Argentina
 Master: Stéphane Ducasse, Cours FIT Prague (dec 2013), 8h, Czech Republic
 Licence: Nicolas Anquetil, Software engineering: Testing techniques, 40h, (L2), IUT-A Lille, France
 Licence: Nicolas Anquetil, Interface programming in Java/Swing, 48h, (L2), IUT-A Lille, France
 Licence: Anne Etien, Java, Course: 30h (L3), Polytech Lille, France
 Master: Anne Etien, Object Information System, TP: 8h (M1), Polytech Lille, France
 Master: Damien Cassou, Algo, 24h, Université Lille 1, France
 Master: Damien Cassou, COO, 18h, Université Lille 1, France
 Master: Damien Cassou, [OPL] Test, maintenance & évolution, 12h, Université Lille 1, France
 Master: Damien Cassou, Qualité logicielle, 30h, Université Lille 1, France
 Master: Damien Cassou, CAR, 24h, Université Lille 1, France
 Master: Damien Cassou, COA, 24h, Université Lille 1, France
 License: Damien Pollet, UV info, 100h, Introduction to OO programming in Java, Telecom Lille, France
 Master: Damien Pollet, SER, 25h, Distributed Algorithms, Telecom Lille, France
 Master: Damien Pollet, ILOG & TSIO, 35h, Programming & Software engineering, Telecom Lille, France
 Master: Damien Pollet, Supervision of industry internships, Telecom Lille, France
 Master: Guillermo Polito, Cours University of Quilmes, 2h, University of Quilmes, Argentina

9.2.2. Supervision

PhD: Jean Baptiste Arnaud, Towards First Class References as a Security Infrastructure in Dynamic Languages, 18/02/2013, Marcus Denker, Stéphane Ducasse
 PhD: Nick Papoylias, Languages and Development Environments for Mobile Autonomous Robots, 19/12/2013, Marcus Denker, Stéphane Ducasse
 PhD in progress: Camillo Bruni, Entering the 4th Quadrant, 01/03/2011, Stéphane Ducasse, Marcus Denker
 PhD in progress: Andre Hora, Improving Static Analysis with Domain-Specific Rules, 01/12/2011, Nicolas Anquetil, Stéphane Ducasse
 PhD in progress: Camille Teruel, Security for dynamic languages, 01/12/2012, Stéphane Ducasse, Damien Cassou
 PhD in progress: Martin Dias, Supporting Merging, 03/12/2012, Damien Cassou, Stéphane Ducasse
 PhD in progress: Guillermo Polito, Isolation and Reflection in Dynamic Object Oriented Languages, 01/04/2012, Noury Bouraqadi, Luc Fabrese, Marcus Denker, Stéphane Ducasse

9.2.3. Juries

Stéphane Ducasse was in the examination committee of the following PhD theses:

- F. Olivero, Lugano, 02/2013 (reviewer)
- Q. Sabah, Grenoble 12/2013 (examinator)

Anne Etien was in the examination committee of the following PhD theses:

- D. Blouin, Lorient, 10/12/2013

9.3. Popularization

- Marcus Denker gave a presentation about Pharo at the open source conference FOSDEM 2013.
- *Web with Pharo* Conference was held 6 June 2013 @ Euratechnologies, Lille.
- Camille Teruel and Damien Cassou gave a Pharo tutorial at ECOOP 2013 Montpellier. Slides got >16000 hits after a mention on ycombinator news (<http://www.lirmm.fr/ecoop13/?id=158#tutorial13>)
- *RIC Day* was held 2 October 2013 @ University of Lille 1, Lille, Anne Etien gave a presentation about Moose and software maintenance.
- Tutorials at ESUG 2013, Annecy, France in September.
- Esteban Lorenzano and Guillermo Polito gave multiple Presentations at Smalltalks 2013 (Argentina):
- Guillermo Polito gave a lecture about *Pharo Ninja Tricks* at Universidad de Quilmes / Argentina in November (a hands-on showing how to use the IDE and explore the system, open classes, extension methods...).
- Marcus Denker gave a lecture and a public talk at *Universitat Politecnica de Catalunya*, Barcelona, Spain.
- Software Maintenance Courses (Nicolas Anquetil):
 - IJDs Inria Lille Nord Europe, with Guillaume Larcheveque, 1 day
 - Thales, 1 day
- Stéphane Ducasse gave multiple lectures and talks at University of Prag in December 2013.
- Organization of the MooseDay in Lille on the 19th December with around 25 persons from all around the world. (<http://www.lifl.fr/~etien/MooseDay.html>).
- Multiple public Pharo Sprints in Lille, Santiago/Chile, Buenos Aires/Argentina and other places.

ROMA Team

9. Dissemination

9.1. Scientific Animation

Anne Benoit is an associate editor of the *Journal of Parallel and Distributed Computing (JPDC)*. She was the workshops co-chair of ICPP 2013. She was a member of the program committees of the following conferences and workshops: HiPC 2013, ICPE 2013, CCGrid 2013, IPDPS 2013, CLOSER 2013, HCW 2013, IGCC 2013.

Jean-Yves L'Excellent was a member of the program committees of Renpar'13 and ICPP'2013, where he was also local arrangements co-chair. He co-organized the third MUMPS Users days, EDF, Clamart, May 29-30, 2013.

Loris Marchal is or was a member of the program committees of IPDPS'2013, ICPP'2013, and IPDPS'2014.

Yves Robert is an associate editor of *IJHPCA*, *IJGUC* and *JOCS*. He was Program Chair of ICPP 2013 (Int. Conference on Parallel Processing) and of HiPC 2013 (Int. Conference on High Performance Computing). He is or was a member of the program committees of the following conferences and workshops: EduPar 2013, FTXS 2013, ICCS 2013, IGCC 2013, ISC tutorials 2013 ISCIS 2013 and SC 2013.

Bora Uçar was the chair of the applications track of ICPP 2013. He was a member of the program committee for IPDPS 2013, PCO 2013 (a workshop of IPDPS), and PPAM.

Frédéric Vivien is an associate editor of *Parallel Computing*. Frédéric Vivien was program vice-chair, for the algorithms track, of IPDPS 2013, is program vice-chair, for the algorithms track, of HiPC 2014, and is co-responsible of the stream "Algorithmes distribués, multi-agents et calcul parallèle" for ROADEF 2014.

He is or was a member of the program committee of the following conferences and workshops: SC'14, IPDPS 2014, ComPAS'2014, PDP 2014, SC'13, EduPDHPC, ICPP 2013, EduPar-13, PDP 2013, ROADEF 2013, RenPar'21 - ComPAS'2013.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: Anne Benoit, Systèmes et Réseaux, 48h, L3, École normale supérieure de Lyon, France.

Licence: Yves Robert, Algorithmes, 48h, L3, École normale supérieure de Lyon, France.

Master: Frédéric Vivien, Algorithmique et Programmation Parallèles, 36 h, M1, École normale supérieure de Lyon, France.

Master: Frédéric Vivien, Algorithms for High-Performance Computing Platforms, 36 h, M2, École normale supérieure de Lyon, France.

Master: Bora Uçar, Combinatorial Scientific Computing, 36 h, M2, École normale supérieure de Lyon, France.

9.2.2. Supervision

PhD in progress: Guillaume Aupy, Multi-criteria scheduling on volatile platforms, September 1, 2011, Anne Benoit and Yves Robert.

PhD in progress: Dounia Zaidouni, Performance and execution models for exascale applications in failure-prone environments, October 1, 2011, Frédéric Vivien and Yves Robert.

PhD in progress: Wissam M. Sid-Lakhdar, Exploitation of multicore architectures in the resolution of sparse linear systems by multifrontal methods, October 1, 2011, Jean-Yves L'Excellent.

PhD in progress: Julien Herrmann, Numerical algorithms for large-scale platforms, September 1, 2012, Loris Marchal and Yves Robert.

9.2.3. *Juries*

PhD: Anne Benoit was a “rapporteur” and member of the jury for the PhD defense of Przemysław Uznański, Bordeaux, France, October 11, 2013.

PhD: Jean-Yves L'Excellent was a “rapporteur” and member of the jury for the PhD defense of Sethy Montan, University Pierre et Marie Curie, France, October 17, 2013.

PhD: Yves Robert was a “rapporteur” and member of the jury for the PhD defense of Amal Khabou, University Orsay Paris XI, Saclay, France, on February 11, 2013.

PhD: Yves Robert was a member of the jury for the PhD defense of Dimitris Letsios, University of Evry Val d'Essonne, Paris, France, on October 22, 2013.

Habilitation: Yves Robert chaired the jury for the *Habilitation à Diriger des Recherches* of Laurent Lefèvre, ENS Lyon, France, November 22, 2013.

PhD: Frédéric Vivien was a member of the jury for the PhD defense of Javier Celaya, University of Zaragoza, Zaragoza, Spain, September 6, 2013.

PhD: Frédéric Vivien was an “expert” for the PhD defense of Marco Meoni, EPFL, Lausanne, Switzerland, December 11, 2013.

PhD: Bora Uçar was an “evaluator” for the PhD defense of Bastian Onne Fagginger Auer, Department of Mathematics, Utrecht University, the Netherlands, August 26 2013.

RUNTIME Project-Team

9. Dissemination

9.1. Scientific Animation

Raymond NAMYST is the head of the LaBRI-CNRS “SATANAS” (*Runtime systems and algorithms for high performance numerical applications*) research team (about. 50 people) that includes the BACCHUS, HIEPACS, PHOENIX and RUNTIME Inria groups.

Raymond NAMYST was chairing the scientific committee of the ANR “Numerical Models” program for the 2011-2013 period.

Raymond NAMYST serves as an expert for the following initiatives/institutions:

- ETP4HPC (<http://www.etp4hpc.eu/>, in 2013) ;
- CEA/DAM (as a “scientific expert” for the 2008-2012 period) ;
- ORAP (ORganisation Associative du Parallélisme, since 2013) ;
- CEA-EDF-Inria School technical committee (since 2009) ;
- GENCI (<http://www.genci.fr/?lang=en>, since 2009) ;

Raymond NAMYST was a program committee member of the following international conferences: SC’13, PACT 2013, ROSS 2013, ICPP 2013, CASS 2013; CCGrid 2013, PPAM 2013.

Raymond NAMYST gave invited talks at the following international conferences/workshops: SC’13 (Birds of a Feather on "Dynamic Exascale Runtime Systems"), ORAP 2013 ("Programming Heterogeneous Architectures").

Samuel THIBAULT was a program committee member of IPDPS 2014

Brice GOGLIN was a program committee member of EuroMPI 2013, Hot Interconnects 2013, HIPC 2013.

Brice GOGLIN organized the CEA-EDF-Inria summer school on Programming Heterogeneous Parallel Architectures in Cadarache (June 2013).

Guillaume MERCIER was program committee member of EuroMPI 2013.

Olivier AUMAGE was reviewer for the ACM TACO journal and for the EuroPar 2013, ICPP 2013, ROSS 2013, and IPDPS 2014 conferences and workshops. He also reviewed one project submission for the 2013 ANR MN funding call. He is part of the Inria Bordeaux – Sud-Ouest committee for scientific event fundings.

Olivier AUMAGE was an invited teacher for the European COST-funded ComplexHPC school in Uppsala, Sweden. He also was an invited speaker at the International Conquest Workshop organized by the Theoretical Chemistry and Modeling Group of the Institute for Molecular Science from the University of Bordeaux.

Emmanuel JEANNOT was program committee member for: Euro-MPI 2013, CCGRID 2013, Heteropar 2013, PPAM 2013, IPDPS 2014.

Emmanuel JEANNOT is member of the steering committee of Euro-Par and Cluster.

Emmanuel JEANNOT is associate editor of the International Journal of Parallel and Emergent Distributed Systems.

Emmanuel JEANNOT was reviewer for the following journals: JPDC, IEEE TPDS, Parallel Computing.

Emmanuel JEANNOT has given an invited talk at the JLPC in Urbana and at the ComplexHPC Spring School 2013 on "Heterogeneous computing - impact on algorithms - ".

Denis BARTHOU was program committee member for: Euro-Par 2013, IPDPS 2013, PROPER 2013, UCHPC 2013. He is part of the Inria Bordeaux – Sud-Ouest committee for Young Researchers. He is member of the Governing Board of the LaBRI and of the board of directors of the Institut Polytechnique de Bordeaux (IPB). Denis BARTHOU is scientific expert for the Exascale Computing Research Laboratory (since 2009).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Members of RUNTIME project gave thousands of hours of teaching at University of Bordeaux and ENSEIRB-MATMECA engineering schools, covering a wide range of topics from basic use of computers and C programming to advance topics such as operating systems, parallel programming and high-performance runtime systems.

9.2.2. Supervision

PhD: Sylvain HENRY, Programming Models and Runtime Systems for Heterogeneous Architectures, 2013/11, Denis BARTHOU and Alexandre DENIS

PhD: Cyril BORDAGE, Parallélisation de la méthode multipôle sur architecture hybride, 2013/11, Raymond NAMYST and David GOUDIN (CEA CESTA)

PhD: Alexandre DUCHATEAU, Automatic Algorithm Derivation and Exploration in Linear Algebra for Parallelism and Locality, 2013/03, Denis BARTHOU and David PADUA (UIUC)

PhD in progress : Bertrand PUTIGNY, Modèles de performance pour l'ordonnancement sur architectures multicœurs hétérogènes, 2010/11, Brice GOGLIN and Denis BARTHOU

PhD in progress : François TESSIER, Placement d'applications hybrides sur machine non-uniformes multicœurs, 2011/10 Emmanuel JEANNOT and Guillaume MERCIER

PhD in progress : Paul-Antoine ARRAS, Development of a Flexible Heterogeneous System-On-Chip Platform using a mix of programmable Processing Elements and hardware accelerators. 2011/10, Emmanuel JEANNOT and Samuel THIBAULT

PhD in progress: Andra HUGO, Composability of parallel codes over heterogeneous platforms, 2013/10, Abdou GUERMOUCHE and Pierre-André WACRENIER and Raymond NAMYST

PhD in progress: Corentin ROSSIGNON, Design of an object-oriented runtime system for oil reserve simulations on heterogeneous architectures, 2012/04, Olivier AUMAGE and Pascal HÉNON (TOTAL) and Raymond NAMYST and Samuel THIBAULT

PhD in progress: Emmanuelle SAILLARD, Analyse statique/dynamique/itérative pour la validation et l'amélioration des applications parallèles multi-modèles sur supercalculateur hybride de type cluster de CPUs/GPUs, 2012/10, Patrick CARRIBAULT (CEA/DAM), Denis BARTHOU

PhD in progress: Grégory VAUMOURIN, Hiérarchie mémoire hybride et gestion dynamique de données dans les architectures parallèles embarquées, 2013/10, Thomas DOMBEK (CEA/DACLE), Denis BARTHOU

PhD in progress: Soufiane BAGHDADI, Collaboration entre compilateur et support d'exécution pour les applications parallèles 2011/10, Elisabeth BRUNET (Telecom SudParis), Jean-François TRAHAY (Telecom SudParis), Denis BARTHOU

PhD in progress: Marc SERGENT, Passage à l'échelle de moteur d'exécution à base de graphes de tâches, 2013/09, Olivier AUMAGE, David GOUDIN (CEA/CESTA), Samuel THIBAULT, Raymond NAMYST

PhD in progress: Suraj KUMAR, Stratégies d'ordonnancement dynamique pour l'algèbre linéaire dense, 2013/12, Emmanuel AGULLO, Olivier BEAUMONT, Samuel THIBAULT

PhD in progress: Pei LI, High-Performance Code Generation for Stencil Computations on Heterogeneous Multi-device Architectures, 2012/10, Raymond NAMYST, Elisabeth BRUNET (Telecom SudParis)

9.2.3. Juries

Raymond NAMYST was member of the PhD defense jury for the following candidates:

- Jean-Yves VET (University Pierre et Marie Curie Paris, reviewer)

Denis BARTHOU was member of PhD defense jury of the following candidates:

- Amira MENSI (Mines de Paris, reviewer)
- Yuryi KACHNIKOV (UVSQ, reviewer)
- Jose NOUDOHOUENOU (UVSQ, president)
- Jean-Marc GRATIEN (UJF, president)

9.3. Popularization

Brice GOGLIN is in charge of the diffusion of the scientific culture for the Inria Research Center of Bordeaux. He is also a member of the national Inria committee on Scientific Mediation. He gave numerous talks about high performance computing and research careers to general public audience and school student, as well as several radio and paper interviews about Inria's activities.

Brice GOGLIN and Bertrand PUTIGNY wrote two popularization papers about High-Performance Computing in the Interstices online journal.

Brice GOGLIN and François TESSIER presented research careers at the Aquitec student exhibition.

Paul-Antoine ARRAS, Sylvain HENRY, Bertrand PUTIGNY and François TESSIER gave a hands-on introduction to programming to 30 teenagers at the *Fete de la Science*. Brice GOGLIN was in charge of a numeric science popularization game during that same event.

Samuel THIBAUT presented his research work in a local elementary school.

SAGE Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Scientific committees of conferences

- J. Erhel is a member of the editorial board of the PARENG'2013 conference (Pecs, Hungary, March 2013).
- J. Erhel is a member of the scientific committee of the MAMERN'13 conference (Granada, Spain, April 2013).
- J. Erhel is a member of the scientific committee of the SMAI 2013 conference (Seignosse, France, May 2013).
- J. Erhel is a member of the international advisory committee of the parallel CFD conferences (Changsha, Hunan, China, May 2013).

9.1.2. Organization of workshops

- J. Erhel organized with E. Faou and T. Lelièvre the conference NASPDE (Rennes, September 2013).

9.1.3. Editorial Boards

- B. Philippe is one of the four chief-editors of the electronic journal ARIMA (revue Africaine de la Recherche en Informatique et Mathématiques Appliquées).
- B. Philippe is managing editor of the electronic journal ETNA (Electronic Transactions on Numerical Analysis).
- J. Erhel and G. Pichot are editors of the proceedings of Domain Decomposition XXI (LNCSE, Springer)
- J. Erhel is member of the editorial board of ETNA.
- J. Erhel is member of the editorial board of ESAIM:Proceedings.
- J. Erhel is member of the editorial board of Mathematics of Planet Earth 2013, un jour-une brève.
- J. Erhel is member of the wide consortium of the prospective think tank: MATHématiques en INteractions pour la TERRE (funded by ANR)

9.1.4. Steering committees

- J. Erhel is a member of the steering committee of the Réseau National des Systèmes Complexes.
- J. Erhel is the scientific coordinator of the website Interstices (since June 2012).
See <http://www.interstices.info>.

9.1.5. Inria, IRISA and University committees

- É. Canot is member of the CLHSCT (Comité Local Hygiène Sécurité Conditions de Travail), of Inria-Rennes, from September 2010.
- J. Erhel is member of the Comité Technique d'Etablissement Public of Inria.
- J. Erhel is member of Conseil d'Administration of Inria.
- J. Erhel is member of the working group of Inria Rennes on project management.
- J. Erhel participated in the panel during the workshop on HAL organized by the Universities of Rennes.
- G. Pichot is responsible for the domain "environment" at IRISA.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- A. Abdelmoula is teaching assistant (permanent position) in computer science at the University of Tunis, Tunisia.
- S. Khalfallah is teaching assistant (permanent position since September 2012) in mathematics at the University of Kairouan, Tunisia.
- L. Lenôtre is teaching assistant (contrat doctoral avec mission d'enseignement) in mathematics at the University of Rennes 1.
- A. Le Gentil: Master M1; title: TP d'analyse, conception et programmation orientée objets; 26 hours; INSA, Rennes, France.
- J. Erhel: Master M2; title: Cours de modélisation et calcul scientifique; 12 hours; INSA, Rennes, France.
- É. Canot and G. Lecourt: Master M2; title: TP de modélisation et calcul scientifique; 12 hours each; INSA, Rennes, France.

9.2.2. Supervision

PhD: M. Oumouni, University of Rennes 1 and University of Kenitra, June 2013, co-advisors J. Erhel and Z. Mghazli.

PhD: A. Abdelmoula, University of Rennes 1 and University of Tunis, December 2013, co-advisors B. Philippe and M. Moakher.

PhD in progress: S. Khalfallah, University of Rennes 1 and University of Tunis, October 2009, co-advisors J. Erhel and A. ben Abda.

PhD in progress: L. Lenôtre, University of Rennes 1, October 2012, co-advisors A. Lejay (Inria Nancy) and G. Pichot, with J. Erhel.

PhD in progress: S. Mansour, University of Rennes 1 with LIU and AUB (Beiruth, Lebanon), January 2013, co-advisors É. Canot, M. Muhieddine and N. Nassif.

PhD in progress: L.-B. Nguenang, University of Yaounde 1, October 2011, advisors E. Kamgnia with B. Philippe.

PhD in progress: M. ben Refifa, University of Tunis, October 2013, advisors Rachida Bouhlila with J. Erhel and É. Canot.

PhD in progress: S. Sabit, University of Rennes 1, October 2010, advisors J. Erhel with É. Canot.

9.2.3. Juries

- HdR: O. Coulaud, University of Bordeaux, November 2013. Reviewer J. Erhel.
- PhD: R. Lago, University of Toulouse, Mathematics, June 2013. Examiner J. Erhel.
- PhD: C. Henry, University of Paris 6, Mathematics, December 2012. Reviewer J. Erhel.

9.3. Popularization

- J. Erhel participated in the Inria workshop on scientific popularization, Paris, January 2013.
- J. Erhel participated in the Mathematics of Planet Earth Day at UNESCO, Paris, March 2013.
- J. Erhel gave a talk entitled "la terre se met aux maths", during the week of maths, at lycée Victor and Hélène Basch, Rennes, in March 2013 [59]. See <http://www.irisa.fr/sage/jocelyne>
- J. Erhel participated in the panel on "Observer et mesurer la terre", Rencontres CNRS Jeunes Sciences et Citoyens, Ile de France, March 2013 See <http://www.scienceouverte.fr/Rencontres-CNRS-Jeunes-Sciences-et,413> and <http://www.scienceouverte.fr/-Divers-voyages-> [58]
- J. Erhel was invited to "congrès des jeunes chercheurs", at ISFEC Bretagne, Rennes, April 2013

- J. Erhel gave a talk with F. Tort (ENS Cachan) entitled "L'informatique, c'est pas pour les filles", at the salon "Educatec-Educaticice", Paris, November 2013.
- J. Erhel coordinated with C. Leininger the journal TDC no 1062 "les mathématiques de la terre", october 2013. See <http://www.cndp.fr/tdc/tous-les-numeros/les-mathematiques-de-la-terre.html>
- B. Philippe wrote a review on TDC no 1062. See <http://www.interstices.info>.
- J. Erhel wrote a document entitled "sur les traces des polluants", in TDC no 1062 [57].
- J. Erhel wrote a paper entitled "Le Jour d'après : vers une réflexion sur les modèles climatiques ", in Interstices [56]
- J. Erhel wrote two texts in the blog mpt2013: "Henry Darcy et sa loi" [54] and "La diffusion, un moteur universel" [55].
- B. Philippe wrote a text in the blog mpt2013: "La terre a du potentiel" [61] See <http://mpt2013.fr/>.

SCIPORT Team

8. Dissemination

8.1. Scientific Animation

- Laurent Hascoët is on the organizing committee of the EuroAD Workshops on Automatic Differentiation. The 12th EuroAD workshop was organized and hosted by the team in Sophia-Antipolis, june 10-11.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master : Laurent Hascoët, Optimisation avancée, 15 h, niveau M2, Université de Nice, France

8.2.2. Supervision

PhD : Alexandre Carabias, “Adaptation de maillage pour calculs d’écoulements à l’ordre 3”, Université de Nice, defended december 12th, advisor A. Dervieux

PhD : Cédric Lachat, “Conception et validation d’algorithmes de remaillage parallèles à mémoire distribuée basés sur un remaillieur séquentiel”, Université de Nice, defended december 13th, co-advisor L. Hascoët.

PhD in progress : Gauthier Brethes, “Multigrilles anisotropes adaptatives”, started october 2012, advisor A. Dervieux

PhD in progress : Ala Taftaf, “Adjoint Automatic Differentiation on High-performance codes”, started july 2013, advisor L. Hascoët.

8.3. Popularization

- Laurent Hascoët gave a presentation on adjoint Automatic Differentiation at the AboutFlow meeting in Tinos (Greece), may 27-31.
- Laurent Hascoët made a detailed presentation of Automatic Differentiation at Microsoft Research labs in Cambridge (UK) on december 6th.

SCORE Team

7. Dissemination

7.1. Scientific Animation

- Claude Godart is member of the editorial board of IEEE transaction on Service Computing, International Journal of Services Computing and International Journal of E-adoption journals, and member of the review board of the International Journal of Next Generation Computing. He has been PC co-chair of EIDWT 2013 (4th International Conference on Emerging Intelligent Data and Web Technologies). In 2013, he has been program committee member of BPM (Business Process Management), BPMDS (Business Process Modelling, Development and Support), CBI (IEEE Conference on Business Informatics), IEEE Conference on Big Data, EDOC (The enterprise computing conference), IEEE CLOUD Computing, ICWS (IEEE International Conference on Web Services), RCIS (Research challenges in Information Systems), SCC (IEEE International Conference on Services Computing) conferences.
- Claudia-Lavinia Ignat is member of the editorial board of Journal of CSCW (Computer Supported Cooperative Work). She has been or is PC member of CSCW (International Conference on Computer Supported Cooperative Work and Social Computing) 2015, SIGMOD Demo 2014, CDVE (International Conference on Cooperative Design, Visualization and Engineering) 2013 and 2014, ICEBE (International Conference on Business Engineering) 2013 and the workshop IWCES (International Workshop on Collaborative Editing Systems) in 2013 and 2014. She reviewed papers for IEEE Transactions on Parallel and Distributed Systems and Transactions on Internet Technology.
- Olivier Perrin has been or is Program Committee member of ICSOC 2013, BPM PALS 2013 workshop (3rd International Workshop on Process-Aware Logistics Systems), QASBA 2013 workshop (Quality Assurance for Service-based applications) 2013, BIS 2013 (International Conference on Business Information Systems), SITIS conference 2013 and 2014. He reviewed in 2013 papers for IEEE Transactions on Services Computing, International Journal of Cooperative Information Systems, Automated Software Engineering, IEEE Transactions on the Web journals.
- Gérald Oster was a PC member of CoopIS 2013 (International Conference on Cooperative Information Systems).
- François Charoy has been PC member of ICEBE (International Conference on Business Engineering) 2013, CTS 2013 (International Symposium on Collaborative Technologies and Systems), DG.O (International Conference on Digital Government Research) 2013, and of several workshops. He is member of the editorial board of the Service Oriented Computing and Applications Journal (Springer). He was co-chair of the Third Collaborative Technology for Coordinating Crisis Management Track at WETICE 2013.
- Claudia-Lavinia Ignat is member of the Inria Nancy-Grand Est COMIPERS researchers committee. She is in charge of European affairs for Inria Nancy Grand-Est. She is the Delegate of International Relations for Inria Nancy-Grand Est. She is member of the Inria Nancy - Grand Est committee for health, safety and working conditions. She was a member of the jury for the recruitment of permanent Inria junior researchers at Inria Nancy-Grand Est.
- Olivier Perrin is member of the council of École Doctorale IAEM (Informatique, Automatique, Électronique et Mécanique), and co-head of the Commission de la mention Informatique.
- Gérald Oster is member of the Administration Council of TELECOM Nancy.
- Nacer Boudjlida addressed an invited conference at the 3rd International Symposium ISKO-Maghreb'2013: Concepts and Tools for Knowledge Management. Marrakech, Morocco, November 2013.

- Nacer Boudjlida is a member of the council of the Fédération Charles Hermite (Université de Lorraine) and a member of the council of the Faculté Sciences et Technologies (Université de Lorraine).
- Nacer Boudjlida has been a PC member in many scientific events, including COOPIS, COOPIS/EI2N, CAISE/EMMSAD, IEEE-CBI, BPM/AICCSA, ISKO Maghreb symposium, IFAC, etc.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Permanent members of the SCORE team are leading teachers in their respective institutions. They are responsible of lecture in disciplines like software engineering, database systems, object oriented programming and design, distributed systems, service computing and even more advanced topics at all levels and in all kind of departments in the University. Most of the PhD Students have also teaching duties in the same institutions. As a whole, the SCORE team accounts for more than 2500 hours of teaching.

- G r me Canals is the head of the Computer science department of the Nancy University Institute of Technology (IUT Nancy Charlemagne) since sept. 2010, and is responsible for the professional licence degree "Web application programming" since sept. 2001.
- Jacques Lonchamp is responsible for the professional licence degree "Free and Open Source Software".
- Claude Godart is responsible for the Computer Science department of the engineering school ESSTIN. He was study director of the master degree "Distributed Services, Security and Networks" until September 2013. Claude Godart is member of the board of directors and the recruitment committee of the engineering school ESSTIN.
- Khalid Benali is responsible for the professional Master degree speciality "Distributed Information Systems" of MIAGE and of its international branch in Morocco.
- Olivier Perrin was responsible of the Certificat Informatique et Internet (C2I) course for DEG collegium of University of Lorraine.
- Fran ois Charoy is responsible of the Software Engineering specialisation at the TELECOM Nancy Engineering School of University of Lorraine.
- G rald Oster is responsible of the 3rd year internship program at the TELECOM Nancy Engineering School of University of Lorraine.
- Pascal Urso is responsible for the "Security, Services, Systems and Network" track of the master degree in computer science at University of Lorraine from September 2013.

7.2.2. Supervision

PhD: Aymen Baouab, Gouvernance et supervision d centralis e des chor graphies inter-organisationnelles, Universit  de Lorraine, 5/2013, Claude Godart, Olivier Perrin

PhD: Yongxin Liao, Title: Semantic annotations for systems interoperability in a PLM environment, University of Lorraine, 5/2013, Advisors: Nacer Boudjlida (LORIA) and Herv  Panetto (CRAN).

PhD in progress: Luc Andr , R plication et Maintien de la Coh rence en Temps R el dans les R seaux Pair- -pair, started in 9/2011, Fran ois Charoy et G rald Oster

PhD in progress: Mehdi Ahmed Nacer, Title: Evaluation of CRDT for optimistic replication, started in 9/2011, Fran ois Charoy et Pascal Urso

PhD in progress: Elio Goettelman, Ex cution en confiance de processus dans le cloud, started in 9/2011, Claude Godart

PhD in progress: Ahmed Bouchami , S curit  des donn es collaboratives d'une plateforme PaaS, started in 11/2012, Olivier Perrin

PhD in progress: Adrien Devresse , Study of effective sharing and analysis of very large metadata repositories: application to the High Energy Physics computing community, started on 11/2011, Olivier Perrin

PhD in progress: Badrina Gasmi, Title: Distributed Competence Management, Béjaïa University, Algeria, started in January 2011, Advisors: Nacer Boudjlida and Hassina Talantikite (Béjaïa University).

PhD in progress: Faïza Bouchaïb, Title: Toward a Generic Model for Competence Management, Béjaïa University, Algeria, started in January 2011, Advisors: Nacer Boudjlida and Hassina Talantikite.

PhD in progress: Jordi Martori i Adrian, Data constraints for large-scale collaboration, started in 10/2013, François Charoy et Pascal Urso

7.2.3. *Juries*

SCORE members were members of the following PhD defense committees:

- Mohammed Oussame Kherbouche, PhD, Université du Littoral Côte d'Opale, December 2013 (François Charoy)
- Oussema Dabbebi; PhD, Université Henri Poincaré Nancy 1, June 2013 (Claude Godart)
- Chedlia Chakroun, PhD, ENSMA Poitiers, October 2013 (Claude Godart)
- Francis Ouedraogo, PhD, INSA Lyon, November 2013 (Claude Godart)
- Hanane Abdeljelil, PhD, Université Claude Bernard Lyon1, November 2013 (Claude Godart)
- Hanaa Mayzad, PhD, Université du Littoral Côte d'Opale, January 2013 (Claude Godart)
- Mohamed Hilia, PhD, Université Paris Est, December 2013 (Claude Godart)
- Fahad Muhammad, PhD, University Lumière, Lyon 2, April 2013 (N. Boudjlida, reviewer and member)
- Karim Doumi, PhD, University Med V-Souissi, Rabat, Morocco, September 2013 (N. Boudjlida, reviewer and member)
- Yonxin Liao, PhD, Université de Lorraine, November 2013 (N. Boudjlida)
- Maryam Eslamichalandar, PhD, CNAM Paris, December 2013 (Olivier Perrin)
- M. Komlan Akpédjé KEDJI, PhD, Université de Toulouse, July 2013 (Khalid Benali)

SCORE members were members of the following Habilitation defense committees:

- Mme Julie Dugdale, HDR, Université Joseph Fourier Grenoble 1, December 2013 (François Charoy)
- Youakim Badr, HDR, INSA Lyon, December 2013 (Claude Godart)

SECRET Project-Team

8. Dissemination

8.1. Scientific Animation

8.1.1. Workshop organization

- *CBC 2013 - the fourth Code-based Cryptography Workshop*, Rocquencourt, June 10-12, 2013. Organizing committee: G. Landais, Rafael Misoczki, N. Sendrier (chair) <http://cbc2013.inria.fr/>.

8.1.2. Editorial activities

- *Designs, Codes and Cryptography*, associate editor: P. Charpin, since 2003.
- *Finite Fields and Their Applications* associate editors: A. Canteaut, P. Charpin.
- Special issue in Coding and Cryptography, *Designs, Codes and Cryptography*, 2013, co-editor: A. Canteaut.
- *Finite Fields and Their Applications. Character Sums and Polynomials*, Radon Series on Computational and Applied Mathematics, Degruyter, In Press. Editeurs: P. Charpin, A. Pott (U. Magdeburg) et A. Winterhof (Austrian Acad. of Sc.)
- A. Canteaut serves on the steering committee of *Fast Software Encryption (FSE)*;
- N. Sendrier serves on the steering committee of *Post-quantum cryptography (PQCrypto)*;
- M. Naya-Plasencia serves on the steering committee of the *Coding and Cryptography* group of GDR-IM <https://crypto.di.ens.fr/c2:main>.

8.1.3. Program committees

- FSE 2013: March 11-13, 2013, Singapore, Singapore (A. Canteaut, M. Naya-Plasencia);
- WCC 2013: April 15-19, 2013, Bergen, Norway (A. Canteaut, N. Sendrier);
- PQCrypto 2013: June 4-7, 2013, Limoges, France (N. Sendrier, JP. Tillich);
- CBC 2013: June, 10-12, 2013, Rocquencourt, France (N. Sendrier, JP. Tillich);
- SAC 2013: August, 14-16, 2013, Vancouver, Canada (A. Canteaut, M. Naya-Plasencia);
- MoCrySEn 2013: September, 2-6, 2013, Regensburg, Germany (N. Sendrier, co-chair; D. Simos, chair; M. Naya-Plasencia, J.P. Tillich);
- Asiacrypt 2013: December 1-5, 2013, Bangalore, India (A. Canteaut, N. Sendrier);
- *IMA International Conference on Cryptography and Coding*: December 17-19, 2013, Oxford, UK (P. Charpin, M. Naya-Plasencia);
- *Optimal Codes and Related Topics - OC 2013*, September 6-8, 2013, Albena, Bulgaria (P. Charpin);
- FSE 2014: March 2-5, 2014, London, UK (A. Canteaut);
- Africacrypt 2014: May, 28-30, 2014, Marrakech, Morocco (M. Naya-Plasencia);
- Eurocrypt 2014: May, 11-15, 2014, Copenhagen, Denmark (M. Naya-Plasencia);
- YACC 2014: June, 9-14, 2014, Porquerolles, France (N. Sendrier, JP. Tillich)
- ACNS 2014: June 10-13, 2014, Lausanne, Switzerland (A. Canteaut);
- SAC 2014: August 14-15, 2014, Montréal, Canada (A. Canteaut, M. Naya-Plasencia);
- Crypto 2014: August 17-21, 2014, Santa Barbara, USA (M. Naya-Plasencia);
- SCN 2014: September 3-5, 2014, Amalfi, Italy (G. Leurent);
- Latincrypt 2014: September, 17-19, 2014, Florianópolis, Brazil (N. Sendrier);

- Asiacrypt 2014: December 7-11, 2014, China (M. Naya-Plasencia);
- Indocrypt 2014: December 14-17, 2014, New Delhi, India (A. Canteaut).

8.1.4. Invited talks

- A. Canteaut, *Extended differential properties of cryptographic functions*, The 11th International Conference on Finite Fields and their Applications - Fq11, Magdeburg, Germany, July 2013.
- A. Canteaut, *Similarities between Encryption and Decryption: How far can we go?* (Stafford Tavares lecture.), Selected Areas in Cryptography - SAC 2013, Vancouver, Canada, August 2013.
- A. Leverrier, *A Combinatorial Approach to Nonlocality and Contextuality*, Quo Vadis, Quantum Physics?, Natal, Brazil, February 2013.
- A. Leverrier, *Security of continuous-variable quantum key distribution against general attacks*, APS March Meeting 2013, Baltimore, United States of America, March 2013.
- N. Sendrier, *The Construction of Code-Based Cryptosystems*, The 14th IMA International Conference on Cryptography and Coding, Oxford, United Kingdom, December 2013.

A. Canteaut and M. Naya-Plasencia have been invited to give a talk to the *Keccak & SHA-3 Day* organized in Brussels, following the selection of the hash function Keccak as the new SHA-3 standard:

- A. Canteaut, *On some algebraic properties of Keccak*, Keccak & SHA-3 Day, Brussels, Belgium, March 2013;
- M. Naya-Plasencia, *First practical results on reduced-round Keccak and Unaligned rebound attack*, Keccak & SHA-3 Day, Brussels, Belgium, March 2013.

The members of the project-team have also been invited to give talks to some workshops or international seminars, including:

- P. Charpin, *On binary $[2^n - 1, 2^n - 1 - 2n, d]$ codes*, workshop "Coding Theory", Dagstuhl Seminar 13351, August 2013.
- A. Leverrier, *Does BosonSampling need Fault-Tolerance?*, Journées Informatique Quantique 2013, Nancy, France, October 2013.
- M. Naya-Plasencia, *Meet-in-the-middle through an Sbox*, ESC 2013 - Early Symmetric Crypto seminar, Luxembourg, Luxembourg, January 2013.
- N. Sendrier, *Classical algorithm techniques for decoding generic linear codes*, workshop "Quantum Cryptanalysis", Dagstuhl Seminar 13371, September 2013.

8.1.5. Other responsibilities in the national community

- N. Sendrier is a vice-chair of the "Commission d'Evaluation" at Inria;
- N. Sendrier served on the following Inria juries: admissibilité DR2, admissibilité CR2 Rennes, admission CR;
- N. Sendrier has served on the selection committee of PEPS IQC (quantum information and communication, CNRS);
- A. Canteaut is a member of the "Comité de pilotage" of the Fondation Sciences Mathématiques de Paris;
- JP. Tillich is in charge of "Formation par la recherche" for the Paris-Rocquencourt Inria center.
- P. Charpin served on the selection committee for postdoctoral positions, Inria Paris-Rocquencourt.
- P. Charpin served on the selection committee for PhD fundings in Computer Science at University Pierre-et-Marie Curie (theme: *Software and Algorithms*).

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master: A. Canteaut, *Stream ciphers*, 9 hours, M2, Telecom ParisTech, France;

Master: A. Canteaut, *Introduction to symmetric cryptography*, 4.5 hours, M2, Telecom ParisTech, France;

Master: A. Canteaut, *Error-correcting codes and applications to cryptology*, 11 hours, M2, University Paris-Diderot (MPRI), France;

Master: N. Sendrier, *Code-based cryptography*, 4.5 hours, M2, University Paris-Diderot (MPRI), France;

Master: J.-P. Tillich, *Introduction to Information Theory*, 32 h, M2, Ecole Polytechnique, France.

The members of the project-team also gave advanced lectures to several summer schools for PhD students: *Icebreak 2013* (Reykjavik, Iceland, June 2013) [22], [25]; *Summer school on Design and Security of Cryptographic Functions, Algorithms and Devices* (Albena, Bulgaria, June 2013) [31]; *2013 Indian National Workshop on Cryptology* (Delhi, India, October 2013) [33]; *Forum des jeunes mathématicien-ne-s 2013* (Lyon, France, November 2013) [48].

8.2.2. Supervision

PhD: Mamdouh Abbara, *Quantum turbo-codes*, Ecole Polytechnique, April 9, 2013 (supervisor: JP. Tillich)

PhD: Rafael Misoczki, *Two Approaches for Achieving Efficient Code-Based Cryptosystems*, Université Pierre-et-Marie Curie, November 25, 2013 (supervisor: N. Sendrier)

PhD: Jean-Christophe Sibel, *Region-based approximation to solve inference in loopy factor graphs: decoding LDPC codes by the Generalized Belief Propagation*, Université de Cergy-Pontoise, June 7, 2013 (supervisor : D. Declercq)

PhD in progress: Marion Bellard, *Influence du mapping pour la reconnaissance d'un système de communication*, since January 2011, supervisors: N. Sendrier and J.-P. Tillich

PhD in progress: Virginie Lallemand, *Cryptanalysis for symmetric cryptography*, since October 2013, supervisors: M. Naya-Plasencia and A. Canteaut

PhD in progress: Grégory Landais, *Implementations of code-based cryptosystems and of their cryptanalyses*, since October 2010, supervisors: M. Finiasz and N. Sendrier

PhD in progress: Denise Maurice, *Quantum LDPC codes*, since September 2010, supervisor: JP. Tillich

PhD in progress: Joëlle Roué, *Security analysis of block ciphers*, since September 2012, supervisor: A. Canteaut

PhD in progress: Valentin Suder, *Permutations for symmetric cryptography*, since October 2011, supervisor: P. Charpin

PhD in progress: Audrey Tixier, *Reconnaissance de turbo-codes et de codes LDPC*, since October 2013, supervisor: J.P. Tillich

8.2.3. Juries

- Risto Hakala, *Results on Linear Models in Cryptography*, Aalto University, Helsinki, Finlande, February 2013, committee: P. Charpin (reviewer).
- Mohamed Ahmed Abdelraheem, *Cryptanalysis of Some Lightweight Symmetric Ciphers*, Danmarks Tekniske Universitet, Denmark, February 7, 2012, committee: A. Canteaut (reviewer);
- Mamdouh Abbara, *Turbo-codes quantiques*, Ecole Polytechnique, April 9, 2013, committee: JP. Tillich (supervisor);
- Paul Stankovski, Lunds University, Sweden, June 17, 2013, committee: A. Canteaut (opponent);
- Alexander Zeh, *Algebraic Soft- and Hard-Decision Decoding of Generalized Reed–Solomon and Cyclic Codes*, Ecole Polytechnique/University of Ulm, September 2, 2013, committee: P. Charpin (reviewer), JP. Tillich;

- Anne Marin, *Utilisation d'états multigraphes pour le partage de secret quantique*, Télécom Paris-Tech, September 17, 2013, committee: J.P. Tillich;
- Jérémy Jean, *Cryptanalyse de primitives symétriques basées sur le chiffrement AES*, École Normale Supérieure, September 24, 2013, committee: A. Canteaut (reviewer);
- Rafael Misoczki, *Two Approaches for Achieving Efficient Code-Based Cryptosystems*, University Pierre-et-Marie-Curie, November 25, 2013, committee: N. Sendrier (supervisor), JP. Tillich;
- Julien Schrek, *Signatures et authentification pour les cryptosystèmes basés sur les codes correcteurs en métrique de Hamming et en métrique rang*, University of Limoges, November 27, 2013, committee: N. Sendrier (reviewer), J.P. Tillich;
- Patrick Debrez, *Attaques par Rencontre par le Milieu sur l'AES*, École Normale Supérieure, December 9, 2013, committee: G. Leurent
- Alberto Passuello, *Semidefinite programming in combinatorial optimization with applications to coding theory and geometry*, University of Bordeaux, December 17, 2013, committee: J.P. Tillich

SECSI Project-Team

8. Dissemination

8.1. Scientific Animation

Administrative charges:

- Hubert Comon-Lundh is member of the “comité de pilotage”, labex Digicosme.
- Hubert Comon-Lundh is member of the “commission formation”, labex Digicosme.
- Hubert Comon-Lundh is member of the “Jury prix de these Gilles Kahn/SIF”.
- Hubert Comon-Lundh is member of the jury “appel à projets Digiteo”
- Hubert Comon-Lundh is member of the Master MPRI studies committee and director of the MPRI until sept. 2013.
- Stéphanie Delaune has been a member of the scientific committee of Inria Saclay since February 2012.
- Stéphanie Delaune has been “Déléguée aux thèses” at the École Doctorale Sciences Pratiques at ENS Cachan since September 2012.
- Jean Goubault-Larrecq is in charge of computer science questions, common Ecole Polytechnique-ENS Paris, Lyon, Cachan-ESPCI entrance competitive exam, starting September 2012.

Editorial boards:

- Hubert Comon-Lundh is associate editor of the ACM Transactions on Computational Logic.

Participation to program committees of conferences:

- 16th International Conference on Foundations of Software Science and Computation Structures FoSSaCS'13, Rome, Italy, March 2013 (Jean Goubault-Larrecq).
- 24th International Conference on Automated Deduction (CADE), Lake Placid, New York, USA, 2013 (Stéphanie Delaune)
- 26th IEEE Computer Security Foundations Symposium (CSF), Tulane University, New Orleans LA, USA, 2013 (Stéphanie Delaune)
- 24th International Conference on Rewriting Techniques and Applications (RTA), Eindhoven, The Netherlands, 2013 (Stéphanie Delaune)
- 20th Workshop on Logic, Language, Information and Computation (WoLLIC), Darmstadt, Germany, 2013 (Stéphanie Delaune)
- Workshop *Formal and Computational Cryptography (FCC)*, president of the program committee. June 30, 2013, New Orleans (Hubert Comon-Lundh).
- Workshop on *Logical Frameworks and Meta-Languages: Theory and Practice* LFMTTP'13, Boston, U.S.A., September 2013 (David Baelde).
- Workshop on *Fixed Points in Computer Science* FICS'13, Torino, Italy, September 2013 (David Baelde).
- 24th Journées Francophones des Langages Applicatifs JFLA'13, Aussois, France, February 2013 (David Baelde).

Organization of conferences:

- Workshop on *Fixed Points in Computer Science* FICS'13, Torino, Italy, September 2013 (David Baelde).
- 25th Journées Francophones des Langages Applicatifs JFLA'14, Fréjus, France, January 2014 (David Baelde).

Selection committees:

- Hubert Comon-Lundh was president of the “Maitre de Conférences” selection committee, ENS Paris, 2013.
- Hubert Comon-Lundh was member of the selection committee of “Maitre de conférences” selection committee, Univ. Paris-Diderot, 2013.
- Hubert Comon-Lundh was member of the Inria Paris-Rocquencourt junior recherche selection committee, 2013.
- Jean Goubault-Larrecq was member of the Inria Saclay-Ile-de-France junior researcher selection committee, 2013.

Scientific boards:

- Hubert Comon-Lundh, CNRS INSII, Oct. 2010-Oct 2014
- Hubert Comon-Lundh, scientific committee, labex CPU.
- Hubert Comon-Lundh, scientific committee, LIPN.
- Jean Goubault-Larrecq, external member of the selection committee of the Formal Methods and Security Inria-DGA seminar, Rennes
- Jean Goubault-Larrecq, external member of the selection committee of the Formal Methods and Security Inria-DGA seminar, Rennes
- Jean Goubault-Larrecq, member of the scientific committee of the Labex “Fondation Sciences Mathématiques de Paris”.
- Jean Goubault-Larrecq, member of the scientific committee of the “Ecole de Printemps d’Informatique Théorique” (EPIT).

Invited talks:

- Hubert Comon-Lundh, *LICS: Logic in Computer Security*, invited tutorial, IEEE Symp. Logic in Computer Science, New Orleans, July 2013.
- Jean Goubault-Larrecq, *A few Pearls in the Theory of Quasi-Metric Spaces*, semi-plenary talk, Summer Topology Conference, North Bay, Ontario, Canada, July 23-26, 2013.
- Jean Goubault-Larrecq, *A Simple Proof of the Schröder-Simpson Theorem*, session on Asymmetric Topology, Summer Topology Conference, North Bay, Ontario, Canada, July 23-26, 2013.
- Jean Goubault-Larrecq, *A Constructive Proof of the Topological Kruskal Theorem*, Mathematical Foundations of Computer Science (MFCS), IST Austria, near Vienna, Austria, August 26-30, 2013.
- Jean Goubault-Larrecq, *Is Mathematical Rigor Needed in Intrusion Detection?*, Foundations and Practice of Security (FPS), La Rochelle, France, October 21, 2013.

Invitation to seminars:

- Hubert Comon-Lundh, *Towards Unconditional Soundness*, IRISA, Rennes, Feb 1, 2013.
- Hubert Comon-Lundh, *Computationally Sound Automated Proofs of Security*, LRI, Orsay, March 15, 2013.
- Jean Goubault-Larrecq, *Orchids, ou: de l’importance de la sémantique*, séminaire DGA Inno-science, DGA, Bagneux, June 25, 2013.
- Jean Goubault-Larrecq, *Full Abstraction for Non-Deterministic and Probabilistic Extensions of PCF*, Pierre-Louis Curien Festschrift, Venice, Italy, September 9-11, 2013.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence :

- Rémy Chrétien, *Initiation à l'informatique* (TP), 39h., L1, Université Paris 7, Paris, France
- Hubert Comon-Lundh *Logic and Computability*, 42h., L3, ENS Cachan, France
- Jean Goubault-Larrecq, *Programming*, 42h., L3, ENS Cachan, France
- Jean Goubault-Larrecq, *Logic and Computer Science* (a.k.a., the lambda-calculus), 36h., L3, ENS Cachan and ENS Paris, France
- Jean Goubault-Larrecq, Internship reviews, 4h., L3, ENS Cachan, France
- David Baelde, *Logic and Computer Science*, 24h., L3, ENS Cachan, France
- David Baelde, *Logic II*, 22.5h., L3, ENS Cachan, France
- David Baelde, *Programming II*, 22.5h., L3, ENS Cachan, France
- David Baelde, Internship reviews, 3h., L3, ENS Cachan, France

Master :

- Jean Goubault-Larrecq, *Cryptography, Cryptographic Protocols and Quantum Cryptography*, Part 1/3, 3h., M1, Séminaire Regards Croisés Mathématiques-Physique, ENS Cachan, France
- Stéphanie Delaune, *Cryptography, Cryptographic Protocols and Quantum Cryptography*, Part 2/3, 3h., M1, Séminaire Regards Croisés Mathématiques-Physique, ENS Cachan, France
- Jean Goubault-Larrecq, *Advanced Complexity*, 42h., M1, MPRI course 1-17, France
- David Baelde, *Software Engineering Project*, 30h., M1, ENS Cachan, France
- Jean Goubault-Larrecq, Internship reviews, 4h., M1, ENS Cachan, France
- Hubert Comon-Lundh, Internship reviews, 32h, M2 MPRI
- Jean Goubault-Larrecq, Internship reviews, 16h., M2, MPRI, France
- Hubert Comon-Lundh *Preparation option info agreg: logique*, 24h, préparation à l'agrégation de Mathématiques, Jan-May 2012, ENS Cachan, France
- Hubert Comon-Lundh, rehearsal of Computer Science Lessons, préparation à l'agrégation de Mathématiques, 18h., ENS Cachan, France
- Hubert Comon-Lundh, *Tree Automata*, M1, MPRI, 22h
- Jean Goubault-Larrecq, rehearsal of Computer Science Lessons, préparation à l'agrégation de Mathématiques, 18h., ENS Cachan, France

8.2.2. Supervision

PhD in progress :

- Rémy Chrétien, *Trace equivalence for an unbounded number of sessions*, Started Oct. 2012, supervised by Stéphanie Delaune and Véronique Cortier
- Lucca Hirschi, *Reduction techniques for equivalence-based properties*, Started Sep. 2013, supervised by David Baelde and Stéphanie Delaune
- Guillaume Scerri, *Preuves abstraites de protocoles cryptographiques concrets*, Started Oct. 2011, supervised by Hubert Comon-Lundh

8.2.3. Juries

- PhD:

- Jean Goubault-Larrecq, member of the jury: Rémi Bonnet, *Decidability and Undecidability in Vector Addition Systems with one (or more !) Zero-Tests*, ENS Cachan, January 22, 2013.
- Jean Goubault-Larrecq, president of the jury: Song Fu, *On Pushdown Systems Model Checking: Application to Malware Detection and Software Model-Checking*, U. Paris Diderot, April 12, 2013.
- Jean Goubault-Larrecq, president of the jury: Alexis Goyet, *The $\lambda\bar{\lambda}$ -calculus, A Dual Calculus for Unconstrained Strategies*, U. Paris Diderot, December 11, 2013.
- Jean Goubault-Larrecq, member of the jury: David Cadé, *Implémentations de protocoles cryptographiques prouvés dans le modèle calculatoire*, U. Paris Diderot, December 16, 2014.
- Jean Goubault-Larrecq, member of the mid-term evaluation jury: Pablo Rauzy, SupTelecom Paris Tech, December 4, 2013.
- HdR:
 - Hubert Comon-Lundh, president of the jury: Jérôme Leroux. *Presburger Counter Machines*, Bordeaux, Dec.6, 2012.
 - Jean Goubault-Larrecq, reviewer and member of the jury: Michele Pagani, *Some Advances in Linear Logic*, U. Paris Nord Villetaneuse, December 5, 2013.
 - Jean Goubault-Larrecq, reviewer and member of the jury: Michele Pagani, *Some Advances in Linear Logic*, U. Paris Nord Villetaneuse, December 5, 2013.

8.3. Popularization

- Stéphanie Delaune, member of the scientific mediation committee at Inria Saclay. (“Mediation” is the new name for popularization.)
- Rémy Chrétien and Stéphanie Delaune, *La protection des informations sensibles*, article in *Pour La Science*, Nov. 2013.

SELECT Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Editorial responsibilities

Participants: Gilles Celeux, Pascal Massart, Jean-Michel Poggi.

- Gilles Celeux is Editor-in-Chief of *Journal de la SFdS*.
He is Associate Editor of *Statistics and Computing*, *CSBIGS* and *La Revue Modulad*.
- Pascal Massart is Associated Editor of *Annals of Statistics*, *Confluentes Mathematici*, and *Foundations and Trends in Machine Learning*.
- Jean-Michel Poggi is Associated Editor of *Journal of Statistical Software*, *Journal de la SFdS* and *CSBIGS*.

9.1.2. Invited conferences

Participants: Gilles Celeux, Jean-Michel Poggi.

- Gilles Celeux was invited speaker to the annual meeting of the Italian Society of Statistics in Brescia (June 2013), to the joint meeting of the British Classification Society, and the German Classification Society in London (November 2013) and to the Summer Model-Based Clustering working group in Bologna (July 2013).
- Jean-Michel Poggi was invited speaker at , International workshop Unsupervised Learning and High-dimensional Statistics, ENS Ulm, Paris, 11 (September 2013).

9.1.3. Scientific animation

Participants: Gilles Celeux, Christine Keribin, Erwan Le Pennec, Pascal Massart, Jean-Michel Poggi.

- Gilles Celeux was Chair of the Program Committee of the Annual Journées de Statistique de la SFdS, Toulouse, May 2013. Gilles Celeux was organizer of the ERCIM 2013 Session Model Selection, London, 14-16 December 2013.
- Gilles Celeux is member of the CSS of INRA.
- Gilles Celeux was a member of the scientific committee of SMPGD (Statistical Methods for Post Genomics Data). Christine Keribin is member of the council of the French statistical society (SFdS). Since this year, she organizes conferences for statisticians from various backgrounds (academic, software, companies) to exchange experiences on statistical methods and software http://www.sfds.asso.fr/323-Rendez_vous_SFdS_Methodes_et_Logiciels.
- Erwan Le Pennec is a member of the Board of the MAS group of the SMAI (french SIAM).
- Erwan Le Pennec is a member of the Labex AMIES (Agence pour les Mathématiques en Interaction avec les Entreprises et la Société).
- Erwan Le Pennec and Pascal Massart are members of the C.N.U. (section 26).
- Pascal Massart is a senior member of the I.U.F.
- Pascal Massart is a member of the scientific council of the French Mathematical Society.
- Pascal Massart is a member of the scientific council of the Mathematical Department of the Ecole Normale Supérieure de Paris.
- Jean-Michel Poggi was President of the French statistical society (SFdS).
- Jean-Michel Poggi is member of the EMS (European Mathematical Society) Committee for Applied Mathematics.

- Jean-Michel Poggi is Guest Editor (with R. Kenett, A. Pasanisi) of the special issue on Special Issue on Graphical causality models: Trees, Bayesian Networks and Big Data, in Quality Technology and Quantitative Management (QTQM).
- Jean-Michel Poggi is Editor (with A. Antoniadis, X. Brossat) of a Lecture Notes in Statistics: Modeling and Stochastic Learning for Forecasting in High Dimension, Springer 2014.
- Jean-Michel Poggi was Member Editorial committee of 2013 Mathématiques pour la planète terre : un jour, une brève, an initiative from Cap'Maths, Inria, INSMI, SFdS, SMAI, SMF for 2013 the year of Mathematics for Planet Earth.
- Jean-Michel Poggi is Organizer and President of the Scientific committee (with R. Kenett, A. Pasanisi) of the ENBIS-SFdS 2014 Spring Meeting on Graphical causality models: Trees, Bayesian Networks and Big Data, IHP, Paris, 9-11 April 2013.
- Jean-Michel Poggi is Organizer of the meeting Horizons de la Statistique, Paris, IHP, 21 January 2014.
- Jean-Michel Poggi was organizer of the ERCIM 2013 Session Random forests and related methods: theory and practice, London, 14-16 December 2013

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: Gilles Celeux, modèles à structure cachée ISUP 3ème année (Université Paris 6) 20 heures

Master: Gilles Celeux, modèles pour la classification M2 probabilités et statistique, Université Paris Sud, 24 heures

Master: Erwan Le Pennec, Méthode Parcimonieuse en Statistique, 30h, Université Paris Sud, France

Master: Erwan Le Pennec, Méthodes d'ondelettes, 20h, M2, Université Paris Diderot, France

Master: Erwan Le Pennec, Analyse Spectrale, 18h, M1, Ponts Paristech, France

Master: All the other SELECT members are teaching in various courses of different universities and in particular in the M2 "Modélisation stochastique et statistique" of University Paris-Sud.

9.2.2. Supervision

PhD : Jairo Cugliari Duhalde, Prédiction d'un processus à valeurs fonctionnelles. Application à la consommation d'électricité, 22/11/2011 at Paris XI Orsay, J.-M. Poggi and Anestis Antoniadis (Univ. Joseph Fourier, Grenoble)

PhD in progress: Vincent Brault, 2011, Gilles Celeux and Christine Keribin

PhD in progress: Rémi Fouchereau, 2011, Gilles Celeux and Patrick Pamphile

PhD in progress: Émilie Devivjer, 2012, Pascal Massart and Jean-Michel Poggi

PhD in progress: Clément Levrard, 2009, Pascal Massart and Gérard Biau (UPMC)

PhD in progress: Lucie Montuelle, Sélection de modèles et mélange de gaussiennes en imagerie hyperspectrale, 2011, Erwan Le Pennec

PhD in progress: Nelo Molter Magalães, 2011, Pascal Massart

PhD in progress: Solenne Thivin, 2012, Erwan Le Pennec

9.3. Popularization

Erwan Le Pennec takes care of a Math en Jeans group at lycée Joliot Curie from Nanterre.

SÉMAGRAMME Project-Team

8. Dissemination

8.1. Scientific Animation

- Maxime Amblard:
 - coordinator of the SLAM project (MSH-Lorraine - PEPS HuMaIn),
 - organizer and chair of the workshop (*In*)*Cohérence du discours* <http://webloria.loria.fr/~amblard/SLAM/index.php?n=Main.In-coh%E9rence13>,
 - member (elected) of the “conseil d’UFR” of the UFR mathematics and computer science, Université de Lorraine,
 - membre (elected) of the “conseil de laboratoire” - Loria,
 - member (elected) of the “conseil scientifique” of the Université de Lorraine,
 - member of the CA of the french scientific association for natural language processing : ATALA,
 - member of the “comité de sélection” McF 0542 Loria - Université de Lorraine,
 - member of the scientific committee of conference. *Traitement Automatique des Langues Naturelles (TALN) 2013*.
- 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 (CNRL-NCNL, Belgium).
- Karën Fort:
 - coordinator for the inter-annotator agreement working group, including researchers from LIMSI (Orsay), LNE (Trappes), GREYC (Caen),
 - co-writer of the Ethics and Big Data Charter <http://wiki.ethique-big-data.org>,
 - expert for the CNRS linguistic federations (TUL and ILF) and DGLFLF (Délégation Générale à la Langue Française et aux Langues de France) concerning the digitalization and archiving process for oral corpora, under the supervision of B. Habert (ENS of Lyon): interviews of the participants, analysis of the process and audit report,
 - member of the CA of the french scientific association for natural language processing : ATALA,
 - member of the scientific committee of the conferences *Traitement Automatique des Langues Naturelles (TALN) 2013*, *Linguistic Annotation Workshop (LAW) 2013*, *International Conference on Software Language Engineering (SLE 2013)*,
 - reviewer for the journal *Language and Linguistics Compass*,
 - Subreviewer for the conference *CICLing 2013*.
- Bruno Guillaume:
 - head of the department “Knowledge & Language management” of the LORIA laboratory (since Sep 2013),
 - member (elected) of the “pôle scientifique” AM2I of Université de Lorraine,
 - member of the COMIPERS Inria Nancy Grand-Est.
- Guy Perrier:

- member of the editorial board of the journal *Traitement Automatique des Langues*,
- member of the scientific committee of the conference *Traitement Automatique de Langues Naturelles (TALN) 2013*,
- member of the program committee of the conference PolTAL 2014, which will be held in Warsaw, Poland.
- Sylvain Pogodalla:
 - member of the editorial board of the journal *Traitement Automatique des Langues*,
 - coordinator of the POLYMNIE ANR Project.
 - local coordinator of the Erasmus Mundus Master program Language and Communication Technologies for the Université de Lorraine,
 - member of the program committee of conference *Journées francophones des langages applicatifs (JFLA) 2014*,
 - member of the scientific committee of conference *Traitement Automatique des Langues Naturelles (TALN) 2013*,
 - member of the Inria Nancy research scientist (CR2) hiring committee,
 - commentator of a paper at the Tsinghua Logic Conference, Beijing, 14-16 October 2013. It has been published in [17].

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence : Maxime Amblard, *Formalismes de représentation et raisonnement* 20h, L3, Université de Lorraine, France

Licence : Maxime Amblard, *Algorithmique Avancée* 50h, L2, Université de Lorraine, France

Licence : Maxime Amblard, *Introduction au Traitement Automatique des Langues* 20h, L2, Université de Lorraine, France

Master : Philippe de Groote, *Logique formelle*, 50h, M2, Université de Lorraine, France.

Master : Philippe de Groote, *Structures Informatiques et Logiques pour la Modélisation Linguistique*, 18h, M2, MPRI, France.

Licence : Karën Fort, *Introduction à l'informatique*, 65h, L3, Université de Lorraine, France

Licence : Karën Fort, *Séminaire informatique et Internet*, 12h, L3, Université de Lorraine, France

Master : Karën Fort, *E-business*, 30h, M1, Université de Lorraine, France

Master : Karën Fort, *Génie logiciel*, 14h, M1, Université de Lorraine, France

Master : Karën Fort, *UML*, 20h, M1, Université de Lorraine, France

Master : Karën Fort, *Pépites algorithmiques*, 10h, M1, Université de Lorraine, France

Master : Bruno Guillaume, *Linguistic Resources and NLP Toolchain*, 30h, M2, Université de Lorraine, France

Licence : Guy Perrier, *Outils conceptuels*, 24h, L3, Université de Lorraine, France

Master: Guy Perrier, *Initiation au TAL*, 30h, M1, Université de Lorraine, France

Master: Guy Perrier, *Programmation pour le TAL*, 30h, M1, Université de Lorraine, France

Master: Guy Perrier, *Formal Languages*, 30h, M2, Université de Lorraine, France

Licence : Sylvain Pogodalla, *Informatique*, 20h, L1, Université de Lorraine (Mines de Nancy)

Master : Sylvain Pogodalla, *Formalisms of Computational Linguistics*, 25h, M2, Université de Lorraine, France

8.2.2. Supervision

PhD: Florent Pompigne, *Modélisation logique de la langue et Grammaires Catégorielles Abstraites*, Université de Lorraine, Dec. 11 2013

PhD in progress: Aleksandre Maskharashvili, *Generation and Discourse with Abstract Categorical Grammars*, since November 2012, Philippe de Groote and Sylvain Pogodalla.

PhD in progress: Sai Qian, *Structure of variable's accessibility for natural language semantics*, since september 2009, Philippe de Groote and Maxime Amblard

PhD in progress: Jiri Marsik, *Modeling Discourse in a Dynamics framework : formal integration and evaluation*, since september 2013, Philippe de Groote and Maxime Amblard

8.2.3. Juries

- Philippe de Groote and Sylvain Pogodalla were member of the PhD committee of Florent Pompigne, *Modélisation logique de la langue et Grammaires Catégorielles Abstraites*, Dec. 11 2013, Université de Lorraine.
- Guy Perrier was president of the PhD committee of Laura Perez, *Natural Generation for Language Learning*, Université de Lorraine, April 19 2013

8.3. Popularization

- Maxime Amblard is member of editorial board of *interstices* (i), a french virtual revue of popularization for computer science : <http://interstices.info>.
- Maxime Amblard published an article which summarizes the main questions of natural language processing for (i) : https://interstices.info/jcms/ni_74169/real-humans-des-machines-qui-parlent-comme-des-hommes-ou-presque.
- Maxime Amblard was organizer of the exhibition *Proj'SC*, about master student's works for the University library, January 2013.

SequeL Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Awards

- *Crazy Stone* won the 6th edition of the UEC Cup (the most important international computer-Go tournament). It also won the first edition of the Densenen, by winning a 4-stone handicap game against 9-dan professional player Yoshio Ishida.
- *Alexandra Carpentier* obtained an AFIA ex-aequo accessit for her PhD, (french machine learning/artificial intelligence second price).

9.1.2. Tutorials

- Tutorial by Rémi Munos at AAAI 2013: From Bandits to Monte Carlo Tree Search: The optimistic principle applied to Optimization and Planning.

9.1.3. Conferences, Workshops and Schools

- *Philippe Preux* and *Marc Tommasi* were the main organizers of the Conférence sur l'Apprentissage Automatique (CAP'13).
- *Rémi Munos* was the main organizer of the 8th Journées Francophones sur la Planification, la Décision et l'Apprentissage (JFPDA'13) along with *Marta Soare*, *Raphael Fonteneau*, *Michal Valko* and *Alessandro Lazaric*.
- *Rémi Munos* was co-chair of the Algorithmic Learning Conference, in Singapore, 2013.

9.1.4. Invited Talks

- *Daniil Ryabko* gave a talk entitled "Time-series information and unsupervised representation learning" at SMILE seminar in Paris
- *Michal Valko* gave an talk "Sequential Face Recognition with Minimal Feedback" which was opening talk of the series named 30 minutes of Science, a new format at Inria Lille to support intra-center collaboration.
- *Rémi Munos* gave a course (6 hours) at the Summer School Netadis in Hillerod, Denmark in September 2013.
- *Rémi Munos* was invited to give a talk at CMU in November 2013.
- *Alessandro Lazaric* was invited to give a talk at CMU in March 2013.
- *Pierre Chainais* gave a talk "Learning a common dictionary over a sensor network" at GDR Phénix - ISIS workshop about "Analysis and inference for networks" in Paris in november 2013.
- *Pierre Chainais* gave a tutorial talk on "Multifractal analysis of images and applicaitons" at the "Groupe Image of the company TOTAL in Paris La Défense on sept. 11th, 2013.
- *Jérémie Mary* gave a invited talk "Recommendation system from a bandit perspective" at GDR "Estimation et traitement statistique en grande dimension" on May 16th, 2013 - Télécom Paristech.
- *Jérémie Mary* gave an invited talk "Bandit point of view on recommenders" at Large-scale Online Learning and Decision Making Workshop Cumberland Lodge, Windsor, UK in September, 2013.
- *Jeremie Mary* gave an invited talk on recommender systems at "Journées rencontres AFIA/IHM" in may 2013.

9.1.5. Review Activities

- **Participation to the program committee of international conferences**
 - International Conference on Pattern Recognition Applications and Methods (ICPRAM 2013)
 - Algorithmic Learning Theory (ALT 2013)
 - AAAI Conference on Artificial Intelligence (AAAI 2013)
 - European Workshop on Reinforcement Learning (EWRL 2013)
 - Annual Conference on Neural Information Processing Systems (NIPS 2013)
 - International Conference on Artificial Intelligence and Statistics (AISTATS 2013)
 - European Conference on Machine Learning (ECML 2013)
 - International Conference on Machine Learning (ICML 2013 and 2014)
 - International Conference on Uncertainty in Artificial Intelligence (UAI 2013)
 - French Conference on Planning, Decision-making, and Learning in Control Systems (JFPDA 2013)
 - IEEE FUSION 2013
 - IEEE Approximate Dynamic Programming and Reinforcement Learning (ADPRL 2013)
 - ICML workshop “Prediction with Sequential Models”
- **International journal and conference reviewing activities** (in addition to the conferences in which we belong to the PC)
 - IEEE Transactions on Image Processing
 - Journal of Statistical Physics
 - Digital Signal Processing
 - IEEE Transactions on Information Theory
 - IEEE Statistical Signal Processing SSP’2013
 - European Signal Processing Conference EUSIPCO 2013
 - 10th International Conference on Sampling Theory and Applications (SampTA 2013)
 - IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2013 & 2014)
 - Annual Conference on Neural Information Processing Systems (NIPS 2013)
 - International Conference on Machine Learning (ICML 2013)
 - European Conference on Machine Learning (ECML 2013)
 - Uncertainty in Artificial Intelligence (UAI 2013)
 - Machine Learning Journal (MLJ)
 - Journal of Machine Learning Research (JMLR)
 - Journal of Artificial Intelligence Research (JAIR)
 - IEEE Transactions on Automatic Control (TAC)
 - IEEE Transactions of Signal Processing
 - Journal of Autonomous Agents and Multi-Agent Systems (JAAMAS)
 - Mathematics of Operations Research (MOR)

9.1.6. Evaluation activities, expertise

- *M. Ghavamzadeh* is in the Editorial Board Member of Machine Learning Journal (MLJ, 2011-present).
- *M. Ghavamzadeh* is in the Steering Committee Member of the European Workshop on Reinforcement Learning (EWRL, 2011-present).

- *P. Preux, R. Gaudel* and *J. Mary* are experts for *Crédit Impôt Recherche (CIR)*.
- *E. Duflos* is a project proposal reviewer for ANR.
- *R. Munos* is a Member of the Belgium Commission Evaluation F.R.S-FNRS, 2013.

9.1.7. Other Scientific Activities

- *R. Munos* was Vice Président du Comité des Projets at Inria Lille-Nord Europe, until July 2013.
- *D. Ryabko* is a member of COST-GTRI committee at Inria.
- *D. Ryabko* is a general advisor at Inria Lille.
- *E. Duflos* is Director of Research of Ecole Centrale de Lille since September 2011.
- *E. Duflos* is the Head of the Signal and Image Team of LAGIS (UMR CNRS 8219).
- *R. Gaudel* is board member of LIFL.
- *R. Gaudel* manages the proml mailing list. This mailing list gathers French-speaking researchers from Machine Learning community.
- *P. Chainais* is a member of the administration council of GRETSI, the French association of researchers in signal and image processing.
- *P. Chainais* is co-responsible for the action "Machine Learning" of the GDR ISIS which gathers french researchers in signal and image processing at the national level.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Ecole Centrale de Lille: *P. Chainais*, , "Machine Learning", 36 hours, 3rd year.

Ecole Centrale de Lille: *P. Chainais*, "Wavelets and Applications", 24 hours, 2nd year.

Ecole Centrale de Lille: *P. Chainais*, "Introduction to Matlab", 16 hours, 3rd year.

Ecole Centrale de Lille: *P. Chainais*, "Signal processing", 22 hours, 1st year.

Ecole Centrale de Lille: *P. Chainais*, "Data Compression", 16 hours, 2nd year.

Ecole Centrale de Lille: *Ph. Preux*, "Data Data Data Data", 2 hours, 3rd year.

P. Chainais is Responsible for a new 3rd year program called Decision making & Data analysis.

Master: *O. Pietquin*, "Decision under uncertainty", 46 hours, M2, Master in Computer Science, Université de Lille 1.

Master: *A. Lazaric*, "Introduction to Reinforcement Learning", 30h eq. TD, M2, Master "Mathématiques, Vision, Apprentissage", ENS Cachan.

Master: *R. Gaudel*, "Data Mining", 30h eq. TD, M2, Université Lille 3.

Master: *R. Gaudel*, "Web Mining", 32h eq. TD, M2, Université Lille 3.

Master: *R. Gaudel*, "Algorithmic", 19h eq. TD, M2, Université Lille 3.

Master: *Ph. Preux*, "Mathematics, Computer Science, and Modeling", M1 of psychology, Université of Lille 3.

Master: *Ph. Preux*, "Algorithms, and programming in Python", M1 MIASHS, Université of Lille 3.

Licence: *Ph. Preux*, "Algorithms, and programming in Python", L3 MIASHS, Université of Lille 3.

Licence: *R. Gaudel*, "Programing", 2 × 16h eq. TD, L1, Université Lille 3.

Licence: *R. Gaudel*, "Logic", 31.5h eq. TD, L3, Université Lille 3.

Licence: *R. Gaudel*, "Information and Communication Technologies", 2 × 16h eq. TD, L1, Université Lille 3.

Licence: *R. Gaudel*, "Artificial Intelligence", 31.5h eq. TD, L2, Université Lille 3.

Licence: *R. Gaudel*, "C2i", 25h eq. TD, L1-3, Université Lille 3.

Licence: *R. Mary*, “C2i”, 25h eq. TD, L1-3, Université Lille 3.

Master: *J. Mary*, “Programmation et analyse de donnée en R”, 24h eq TD, M1, Université de Lille 3, France.

Master: *J. Mary*, “Programmation web avancée”, 24h eq TD, M2, Université de Lille 3, France.

Master: *J. Mary*, “Programmation objet et Design Pattern”, 48h eq TD, M2, Université de Lille 3, France.

Master: *J. Mary*, “Algorithmique”, 12h eq TD, M1, Université de Lille 3, France.

Master (3rd year of Engineer School): *J. Mary*, “Machine Learning avec R”, 16 hours, M2, Option "Data Analysis and Decision", Ecole Centrale de Lille, France.

Master (3rd year of Engineer School): *E. Duflos*, “Advanced Estimation”, 20 hours, M2, Option "Data Analysis and Decision", Ecole Centrale de Lille, France.

Master (3rd year of Engineer School): *E. Duflos*, “Multi-Objects Filreting”, 16 hours, M2, Option "Data Analysis and Decision", Ecole Centrale de Lille, France.

9.2.2. Supervision

PhD: *Azadeh Khaleghi*, “Sur Quelques Problèmes non supervisés impliquant des séries temporelles hautement dépendantes”, Nov. 2013, Université de Lille 1, advisor: D. Ryabko.

PhD in progress: *Boris Baldassari*, *Apprentissage automatique et développement logiciel*, since May 2011, advisor: Ph. Preux.

PhD in progress: *Gabriel Dulac-Arnold*, *A General Sequential Model for Constrained Classification*, since Oct. 2011, advisor: Ph. Preux, L. Denoyer, P. Gallinari.

PhD in progress: *Victor Gabillon*, “Active Learning in Classification-based Policy Iteration”, since Sep. 2009, advisor: Ph. Preux, M. Ghavamzadeh.

PhD in progress: *Frédéric Guillou*, “Sequential Recommender System”, since Oct. 2013, advisor: Ph. Preux, J. Mary, R. Gaudel.

PhD in progress: *vicenzo Musco*, “Topology and evolution of software graphs”, since Oct. 2013, advisor: P. Preux, M. Monperrus

PhD in progress: *Olivier Nicol*, “Data-driven evaluation of Contextual Bandit algorithms and applications to Dynamic Recommendation”, since Nov. 2010, advisor: Ph. Preux, J. Mary.

PhD in progress: *Adrien Hoarau*, “Multi-arm Bandit Theory”, since Oct. 2012, advisor: R. Munos.

PhD in progress: *Tomáš Kocák*, “Sequential Learning with Similarities”, since Oct. 2013, advisor: R. Munos, M. Valko

PhD in progress: *Emilie Kaufmann*, “Bayesian Bandits”, since Oct. 2011, advisor: R. Munos, O. Cappé, A. Garivier.

PhD in progress: *Amir Sani*, “Learning under uncertainty”, Oct. 2011, since advisor: R. Munos, A. Lazaric.

PhD in progress: *Marta Soare*, “Pure Exploration in Multi-arm Bandit”, since Oct. 2012, advisor: R. Munos, A. Lazaric.

PhD in progress: *Hong Phuong Dang*, *Bayesian non parametric methods for dictionary learning and inverse problems*, since Oct. 2013, advisor: P. Chainais.

PhD in progress: *Linh Van Nguyen*, *High resolution reconstruction from low resolution measurements of velocity fields in turbulent flows*, since Oct. 2013, advisor: P. Chainais & J.p. Laval (Laboratoire de Mécanique de Lille).

9.2.3. Juries

- member of the recruitment committee for an assistant professor position at Université de Lille 3: R. Gaudel, Ph. Preux

- member of the recruitment committee for an assistant professor position at Université de Lille 1: P. Chainais
- member of the recruitment committee for a professor position at Université de Paris 6: Ph. Preux
- Member of the jury DR2 Inria 2013: R. Munos
- Member of the jury CR2 Rocquencourt Inria 2013: R. Munos

9.3. Popularization

- “Small or big (data), make it sequentially!”, J. Mary, Ph. Preux, invited talk at Euratechnologies, March 2013.
- Inria publishes an article about Face Recognition, Michal Valko, <http://www.inria.fr/centre/lille/actualites/intel-collabore-avec-inria>, March 2013
- Jérémie Mary highlighted on TV and on Inria website: you are how you browse: <http://www.inria.fr/en/centre/lille/news/you-are-how-you-browse>, Dec. 2013

SERPICO Project-Team

9. Dissemination

9.1. Scientific Animation

- *Technical program committees of conferences*

Charles Kervrann: PC member for ISBI'2013, ISBI'2014, reviewer for ICASSP'2013, ICASSP'2014, ICIP'2013, ICIP'2014, EMMCPV'2013, GRETSI'2013, member of scientific committee of "Journées d'Imagerie Optique Non-Conventionnelle" (JIONC'2014).

Patrick Bouthemy: PC member for ICPRAM'2013, ICPRAM'2014, MLDM'2013, TAIMA'2013, reviewer for ISBI'2013, ISBI'2014, ICRA'2013, member of scientific committee of ELMI'13.
- *Journal reviewing*

Charles Kervrann: reviewer in 2013 for IEEE Transactions on Image Processing, IEEE Transactions on Medical Imaging, SIAM Journal Imaging Sciences, PLoS One, Image and Vision Computing, Journal of Signal Image and Video Processing.

Patrick Bouthemy: reviewer in 2013 for International Journal of Computer Vision, IEEE Transactions on Circuits and Systems for Video Technology, IEEE Transactions on Image Processing, IEEE Transactions on Medical Imaging.
- *Project reviewing*

Charles Kervrann: reviewer in 2013 for ERC (Consolidator Grant), ANR and IDEX Paris-Saclay.
- *Participations in seminars, invitations, awards*

Charles Kervrann was invited to give a talk entitled "Non parametric change detection methods in fluorescence life cell imaging for subcellular trafficking and exocytosis analysis" at the GdR 2588 "BioImage Informatics" Days (Institut Curie, Paris, July 2013) and the ANR MOTIMO workshop (University of Nice, September 2013).
- *Responsibilities*

Charles Kervrann:

 - Member of the IEEE BISP "Biomedical Image and Signal Processing" committee.
 - Member of executive board of the GdR MIV (2588 - Microscopie Fonctionnelle du Vivant) CNRS, member of the scientific committee of the Interdisciplinary MiFoBio School CNRS (<http://www.mifobio.fr>).
 - Member of the executive board of the project committee of the Inria Rennes - Bretagne Atlantique centre.
 - Member of the Scientific Council of the INRA Rennes Research Centre.
 - Member of the Steering Committee of ESFRI EuroBioImaging (Inria representative).

Patrick Bouthemy:

 - Deputy member of the board of directors and member of the Selection and Validation Committee of the Images & Réseaux competitiveness cluster.
 - Deputy member of the board of directors of IRT (Technological Research Institute) B-com.
 - President of AFRIF (Association Française pour la Reconnaissance et l'Interprétation des Formes) and member of the board of the GRETSI (Groupement de Recherche en Traitement du Signal et des Images).

- *Other activities*

SERPICO is involved in the CNRS French networks GdR MIV (2588 - Microscopie Fonctionnelle du Vivant) and the GdR ISIS.

SERPICO is member of the regional BioGenOuest GIS.

SERPICO is member of the France-BioImaging Infrastructure in Biological Imaging.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Charles Kervrann:

Master: From BioImage Processing to BioImage Informatics, 5 hours, coordinator of the module (30 hours), Master 2 Research IRIV, Telecom-Physique Strasbourg & University of Strasbourg.

Master: Geometric Modeling for Shapes and Images, 6 hours, Master 2 Research SISEA, University of Rennes 1.

Engineer Degree and Master 2 Statistics and Mathematics: Statistical Models and Image Analysis, 37 hours + 15 hours (TP, Nam-Hoai Nguyen), 3rd year, Ecole Nationale de la Statistique et de l'Analyse de l'Information ENSAI Bruz & University of Rennes 1.

Course on "Introduction to Markov Random Fields" (2 hours), "Image Denoising in Live Cell Imaging" (2 hours) and "Object tracking in Video-Microscopy" (2 hours) for BIAT'2013 (BioImaging Advanced Training), Campus of CNRS, Gif-sur-Yvette, November 2013.

Course on "Biological Imaging" (4 hours) for CIMI (Centre International de Mathématiques et d'Informatique de Toulouse) Image Processing Thematic School, Saint-Lary, June 2013.

Patrick Boutheymy:

Master: Analysis of Image Sequences, 18 hours, Master 2 Research SISEA, ISTIC & University of Rennes 1.

Master: Video Indexing, 9 hours, Master 2 Research Computer Science, ISTIC & University of Rennes 1.

Engineer Degree and Master 2 Research IRIV: Motion Analysis, 12 hours, Telecom-Physique Strasbourg & University of Strasbourg.

Course on "Motion Analysis" (2 hours) for BIAT'2013 (BioImaging Advanced Training), Campus of CNRS, Gif-sur-Yvette, November 2013 and for the CNRS formation "Comprendre les différentes méthodes d'analyse de la dynamique en biologie et leurs paramètres", Institut Jacques Monod, Paris, novembre 2013.

9.2.2. Supervision

PhD in progress: Philippe Roudot, Lifetime estimation of moving vesicles in FLIM microscopy, started in October 2010, supervised by Charles Kervrann and Francois Waharte (UMR 144, PICT IBiSA, CNRS-Institut Curie).

PhD in progress: Denis Fortun, Optical flow computing, aggregation methods and statistical methods: application to time-lapse fluorescence microscopy, started in October 2010, supervised by Charles Kervrann and Patrick Boutheymy.

PhD in progress: Antoine Basset, Event detection and recognition in video-microscopy and applications in cell biology, started in October 2012, supervised by Patrick Boutheymy and Charles Kervrann in collaboration with Jérôme Boulanger (UMR 144, CNRS-Institut Curie).

PhD in progress: Nam-Hoai Nguyen, Methods and algorithms for tissue microarrays image analysis, started in October 2013, supervised by Charles Kervrann and Vincent Paveau (Innopsys company).

9.2.3. *Juries*

Chair of a jury for the recruitment of an assistant professor: University of Rennes 1 (Section CNU 26) [Charles Kervrann].

Member of a jury for the recruitment of an assistant professor: University of Caen - Basse Normandie (Section CNU 27) [Patrick Bouthemey].

Referee of Habilitation thesis: N. Komodakis (ENPC) [Patrick Bouthemey], J.-B. Sibarita (University of Bordeaux 2) [Charles Kervrann].

Referee of PhD thesis: X.S. N'Guyen (University of Paris 6) supervised by S. Dubuisson et C. Gonzales [Patrick Bouthemey], M. Souded (University of Nice Sophia-Antipolis) supervised by F. Bremond [Patrick Bouthemey], K. Haas (University of Bordeaux 2) supervised by D. Choquet [Charles Kervrann, Chair of the jury], M.A. Kechkar (University of Bordeaux 2) supervised by J.-B. Sibarita [Charles Kervrann], L. Genin (University of Paris 13) supervised by F. Champagnat and G. Le Besnerais [Charles Kervrann].

Chair of PhD thesis juries: C. Maumet (University of Rennes 1) supervised by C. Barillot [Patrick Bouthemey], A. Petit (University of Rennes 1) supervised by E. Marchand [Patrick Bouthemey].

SHACRA Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. VRIPHYS 2013

VRIPHYS 2013 took place in Lille at the end of November: Christian Duriez and Jeremie Dequidt organized the conference with help from Nazim Haouchine and Hugo Talbot. The conference was preceded by a workshop for the users of the SOFA framework. This event was a real success: 60 persons attended the conference (which is about 15 persons more than the previous years).

9.1.2. IPCAI 2013

Stéphane Cotin, Co-Organizer and PC Co-Chair, 2013, International Conference on Information Processing in Computer-Assisted Interventions (IPCAI, <http://www.ipcai.org>). on June 26, 2013 in Heidelberg, Germany.

9.1.3. Reviewing Activities

- Guillaume Kazmitcheff has been reviewer for the European Archives of Oto-Rhino-Laryngology journal.
- Jeremie Dequidt has been reviewer for the following conferences and journals:
 - Conference IEEE/RSJ IROS 2013
 - Conference IEEE WHC 2013
 - Conference MICCAI 2013
 - the journal Computer Methods and Programs in Biomedicine
 and member of the following program committees:
 - Conference VRIPHYS 2013
 - Conference AFIG 2013
- Christian Duriez has been reviewer for the following conferences and journals:
 - Conference IEEE/RSJ IROS 2013
 - Conference iNaCoMM 2013
 - Conference IEEE VR 2013
 - Conference MICCAI 2013
 - the journal IEEE Transaction on Haptics
 - the journal IEEE Transactions on Visualization and Computer Graphics
 - the journal SCS Simulation
 - the journal the Visual Computer
 - the journal Computer Vision and Visual Understanding
 - ANR projects (Programme CONTINT)
 and member of the following program committees:
 - Conference VRIPHYS 2013
 - Conference IEEE WHC 2013
- Stéphane Cotin has been reviewer for the following conferences and journals:
 - Surgical Innovation (SRI)
 - Advanced Modeling and Simulation in Engineering Sciences

and member of the following program committees:

- MICCAI 2013
- IPCAI 2013

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Jeremie Dequidt, Computer Architecture, 25h, GIS3, Polytech Lille, France
 Licence : Jeremie Dequidt, Advanced Programming, 25h, IMA3, Polytech Lille, France
 Licence : Christian Duriez, Introduction to Finite Element Method, 16h, L3, ICAM, France
 Licence : Julien Bosman, Programming, 60h, L1, Univ. Lille 1, France
 Licence : Julien Bosman, Oriented Object Programming, 32h, L3, Univ. Lille 1, France
 Master : Christian Duriez, Introduction to Finite Element Method, 16h, M1 Génie Ferroviaire, ICAM, France
 Master : Christian Duriez, Advanced 3D models, 14h, M2 IVI, Univ. Lille 1, France
 Master : Christian Duriez, Medical simulation and Haptic Rendering, 3h, M2, École Centrale de Lille, France
 Master : Julien Bosman, GPU Computing introduction, 3h, M2 IVI, Univ. Lille 1, France
 Master : Jeremie Dequidt, Advanced 3D models, 2h, M2 IVI, Univ. Lille 1, France
 Master : Stephane Cotin, Course on advanced biomechanics, 10h, M2, Telecom Physique Strasbourg, France
 Master : Stephane Cotin, Course on real-time soft tissue simulation, 20h, M2, Telecom Physique Strasbourg, France

9.2.2. Supervision

PhD in progress : Hugo Talbot, Interactive Patient-Specific Simulation of Cardiac Electrophysiology, 1st October 2010, Stéphane Cotin and Hervé Delingette
 PhD in progress : Julien Bosman, Simulations à base de particules et interactions multi-physiques en temps-réel, 1st October 2011, Stéphane Cotin and Christian Duriez
 PhD in progress : Guillaume Kazmitcheff, Dynamical modeling of the middle ear and interactions between organs and medical tools to develop a simulator applied to the otological surgery, 1st March 2011, Christian Duriez
 PhD in progress : Ahmed Yureidini, Modélisation d'organes par fonctions implicites, 2009, Stéphane Cotin and Erwan Kerrien
 PhD in progress : Vincent Majorczyk, Simulation de Fluide GPU, 2010, Stéphane Cotin
 PhD in progress : Alexandre Bilger, Biomechanical simulation for Deep Brain Stimulation, 2011, Stéphane Cotin and Christian Duriez
 PhD in progress : Zhifan Jiang, Recalage d'images déformables pour la biomécanique, 2011, Stéphane Cotin, Jérémie Dequidt, Mathias Brieu
 PhD in progress : Mouhamadou Diallo, Modélisation biomécanique du prolapsus génital, 2011, Mathias Brieu, Pauline Lecomte, Christian Duriez
 PhD in progress : Nazim Haouchine, Augmented Reality Tools for Minimally Invasive Hepatic Surgery, 2012, Stéphane Cotin, Marie-Odile Berger, Jérémie Dequidt
 PhD in progress : Francois Dervaux, Image driven simulation for interventional radiology procedures, 2012, Stéphane Cotin, Jérémie Dequidt, Erwan Kerrien
 PhD in progress : Rosalie Plantefève, 2013, Stéphane Cotin

9.2.3. Juries

Christian Duriez was in the examination committee of Coralie Escande, PhD, 12/2013.

Stephane Cotin was in the examination committee of Sagar Umale (Strasbourg University, December 19th, 2012) and in the examination committee of Noura Faraj (Telecom ParisTech, June 3rd, 2013)

9.3. Popularization

9.3.1. Fête de la Science

Christian Duriez has been involved as a *Wandering Researcher* in the Fête de la science (french event that promotes science).

9.3.2. Exhibitions

Christian Duriez and Mario Sanz Lopez have been involved in the design and development of scientific and technological demonstrators for the *Plateau* (e.g. Showroom) Inria at Euratechnologies and for *The Labo* at Inria test laboratory.

9.3.3. Recontre Inria-Industrie 2013

This was a public event taking place in Paris the 11th of June 2013. The new training system dedicated to electrocardiology and the recent deformable robot was presented.

9.3.4. IHU Scientific Days

At the occasion of the IHU Scientific days, we visited the IHU Strasbourg and several talks were done by members of the team: Alexandre Bilger, Stéphane Cotin, Jeremie Dequidt, Nazim Haouchine, Igor Peterlik, and Hugo Talbot.

9.3.5. Intergovernmental seminar

The intergovernmental seminar on digital sciences was held in february at the University of Cergy-Pontoise. Within this context, the team has exhibited a demonstration of a cataract surgery simulator which is dedicated to train surgeons to a new cost-effective cataract surgery procedure MSICS (*manual small incision cataract surgery*). This simulator was developed at Inria and has been transferred to the start-up InSimo.

SIERRA Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Editorial boards

- F. Bach: Journal of Machine Learning Research, Action Editor.
- F. Bach: IEEE Transactions on Pattern Analysis and Machine Intelligence, Associate Editor.
- F. Bach: Information and Inference, Associate Editor.
- F. Bach: SIAM Journal on Imaging Sciences, Associate Editor.
- F. Bach: International Journal of Computer Vision, Associate Editor
- A. d'Aspremont: Optimization Methods and Software
- A. d'Aspremont: SIAM Journal on Optimization

9.1.2. Area chair

- F. Bach: International Conference on Machine Learning, 2013
- F. Bach: Neural Information Processing Systems, 2013

9.1.3. Workshop and conference organization

- S. Arlot, member of the program committee of the Second Workshop on Industry & Practices for Forecasting (WIPFOR), EDF R&D, Clamart. 5-7 June 2013.
- A. d'Aspremont was co-organizer of the workshop on optimization and machine learning at Les Houches in January 2013.
- F. Bach organized a workshop on "Big data: theoretical and practical challenges" - May, 14-15, 2013 - Institut Poincaré (co-organized with Michael Jordan), funded by the Fondation de Sciences Mathématiques de Paris and Inria.
- F. Bach and Michael Jordan coorganized the "Fête Parisienne in Computation, Inference and Optimization: A Young Researchers' Forum". A workshop organized in the framework of the the Schlumberger Chair for mathematical sciences at IHÉS. March 20, 2013. <http://www.di.ens.fr/~fbach/ihes.html>
- F. Bach also coorganized the "Workshop on "Succinct Data Representations and Applications", Theoretical Foundations of Big data. Simons Institute, Berkeley, September 2013.

9.1.4. Other

- S. Arlot is member of the board for the entrance exam in Ecole Normale Supérieure (mathematics, voie B/L).
- A. d'Aspremont is a member of the scientific committee of the programme Gaspard Monge pour l'optimisation (PGMO).
- A. d'Aspremont is a member of the scientific committee of Thales Alenia Space.

9.1.5. Invited presentations

- S. Arlot, "Kernel change-point detection", Workshop "Non-stationarity in Statistics and Risk Management" (CIRM, Marseille, January, 21-25, 2013).
- S. Arlot, "Sélection de modèles par validation croisée et sélection de paramètres pour la régression ridge et le Lasso", Groupe de Travail Neurospin-Select (Saclay, February, 20, 2013).

- S. Arlot, "Optimal model selection with V-fold cross-validation: how should V be chosen?", Fête Parisienne in Computation, Inference and Optimization: A Young Researchers' Forum (IHES, Bures-sur-Yvette, March, 20, 2013).
- S. Arlot, "Kernel change-point detection", Groupe de Travail de Statistique de Jussieu (Paris, November, 11, 2013).
- S. Arlot, "Analyse du biais de forêts purement aléatoires", Séminaire de l'Equipe de Probabilités et Statistiques (Institut Elie Cartan, Nancy, November, 28, 2013).
- S. Arlot, "Optimal data-driven estimator selection with minimal penalties", keynote lecture, Workshop "Mathematical Statistics with Applications in Mind" (CIRM, Marseille, December, 9-13, 2013).
- Simon Lacoste-Julien, "Harnessing the structure of data for discriminative machine learning":
 - Department of Statistics, University of Oxford, February 2013
 - Intelligent Systems Lab Amsterdam, University of Amsterdam, February 2013
 - Département d'informatique, Université de Sherbrooke, April 2013
 - School of Computer Science, McGill University, April 2013
 - Département d'Informatique, École Normale Supérieure, April 2013
- "Block-Coordinate Frank-Wolfe Optimization for Structured SVMs"
 - ICML, Atlanta, USA, June 2013
 - ICCOPT, Lisbon, Portugal, July 2013
- Simon Lacoste-Julien, "SiGMa: Simple Greedy Matching for Aligning Large Knowledge Bases", KDD, Chicago, August 2013
- Simon Lacoste-Julien, "Frank-Wolfe optimization insights in machine learning"
 - Département d'informatique, Université de Sherbrooke, August 2013
 - SMILE seminar, Paris, November 2013
 - SAIL meeting, UC Berkeley, December 2013
 - CILVR Lab, New York University, December 2013
 - Machine Learning Lab, Columbia University, December 2013
 - Reasoning and Learning Lab, McGill University, December 2013
- Simon Lacoste-Julien, "Making Sense of Big Data", CaFFEET, Stanford University, November
- Michael Jordan, Keynote Speaker, ACM Conference on Knowledge Discovery and Data Mining (SIGKDD), Beijing, China, 8/15/12
- Michael Jordan, Keynote Speaker, 21st Century Computing Conference, Tianjin, China, 10/25/12
- Michael Jordan, Keynote Speaker, ICONIP, Doha, Qatar, 11/12/12
- Michael Jordan, Invited Speaker, SAMSI Workshop on Massive Data Analysis, 9/9/12
- Michael Jordan, Invited Speaker, Méthodes Bayésiennes non Paramétriques pour le Traitement du
- Michael Jordan, Signal et des Images, Telecom ParisTech, Paris, France, 9/8/12
- Michael Jordan, Invited Speaker, Séminaire Parisien de Statistique, Paris, France, 9/17/12
- Michael Jordan, Invited Speaker, Workshop on Random Matrices and their Applications, Paris, France, 10/9/12
- Michael Jordan, Colloquium, Department of Informatique, Ecole Normale Supérieure, 10/2/12
- Michael Jordan, Vincent Meyer Colloquium, Israel Institute of Technology, 11/5/12
- Michael Jordan, Invited Speaker, Workshop on Optimization and Statistical Learning, Les Houches, France, 1/8/13
- Michael Jordan, Harry Nyquist Lecture, Department of Electrical Engineering, Yale, 1/23/13

- Michael Jordan, Invited Speaker, Simons Workshop on Big Data, New York, 1/24/13
- Michael Jordan, Keynote Speaker, Workshop on Nonsmooth Optimization in Machine Learning, Liege, Belgium, 3/4/13
- Michael Jordan, Keynote Speaker, StatLearn Workshop, Bordeaux, France, 4/8/13
- Michael Jordan, Lecture Series, Ecole Nationale de la Statistique et de l'Administration, Paris, 5/13
- Michael Jordan, Keynote Speaker, Amazon Machine Learning Conference, Seattle, 4/28/13
- Michael Jordan, Keynote Speaker, Bayesian Nonparametrics Workshop, Amsterdam, 6/10/13
- Michael Jordan, Invited Speaker, Workshop on High-Dimensional Statistics, Moscow, 6/26/13
- Michael Jordan, Distinguished Lecture, Department of Statistics, University of Oxford, 5/7/13
- Michael Jordan, Colloquium, Department of Statistics, University of Cambridge, 5/10/13
- Michael Jordan, Invited Speaker, GdR ISIS Conference, Telecom ParisTech, Paris 5/16/13
- Matthieu Solnon, "Analysis of the oracle risk in multi-task kernel ridge regression", Colloque Statistique Mathématique et Applications, Fréjus, France.
- Mark Schmidt, "Opening up the black box: Faster methods for non-smooth and big-data optimization problems". Invited talk at DeepMind Technologies, London (June 2013).
- Mark Schmidt, "Linearly-Convergent Stochastic-Gradient Methods". Invited talk at Paris 6, Paris (June 2013).
- Mark Schmidt, "Minimizing Finite Sums with the Stochastic Average Gradient Algorithm". "Invited" talk at ICCOPT, Lisbon (July 2013).
- Edouard Grave, Alpage, Inria / Paris 7, May 2013
- Edouard Grave, Criteo, September 2013
- Edouard Grave, Laboratoire de Science Cognitive et Psycholinguistique, EHESS / ENS / CNRS, November 2013
- Alexandre d'Aspremont, "Convex Relaxations for Permutation Problems"
 - Workshop on Succinct Data Representations and Applications, Simons Institute, Berkeley, Sept. 2013.
 - Workshop MAORI, Ecole Polytechnique, Nov. 2013.
- Alexandre d'Aspremont, "Phase Retrieval, MAXCUT and Complex Semidefinite Programming"
 - GdT CEREMADE, Paris Dauphine, April 2013.
 - Journée du GdR ISIS, Telecom, May 2013.
 - Journée du GdR MOA, June 2013.
- Alexandre d'Aspremont, "Approximation Bounds for Sparse PCA"
 - Workshop on Structured families of functions and applications, Oberwolfach, February 2013.
 - PACM seminar, Princeton, USA, February 2013.
 - Séminaire ENSAE, France, April 2013.
 - Big Data workshop, IHP, May 2013.
- Alexandre d'Aspremont, "An Optimal Affine Invariant Smooth Minimization Algorithm", International Workshop on Statistical Learning, Moscow, June 2013.
- F. Bach: Optimization and Statistical Learning, January 6 - 11, 2013. Les Houches, France (Invited presentation)
- F. Bach: international biomedical and astronomical signal processing (BASP) Frontiers workshop, January 2013 (Invited presentation)

- F. Bach: Convex Relaxation Methods for Geometric Problems in Scientific Computing, IPAM, Los Angeles, February 2013 (Invited presentation)
- F. Bach: Nonsmooth optimization in machine learning. March 04, 2013, University of Liège (Invited presentation)
- F. Bach: Microsoft Research Machine Learning Summit: April 22-24, 2013 (Invited presentation)
- F. Bach: International Workshop on Advances in Regularization, Optimization, Kernel Methods and Support Vector Machines: theory and applications, July 8 - 10, 2013, Leuven, Belgium (Invited presentation)
- F. Bach: European Conference on Data Analysis, Luxembourg, July 2013 (Invited presentation)
- F. Bach: European Meeting of Statisticians (EMS), Budapest, Hungary, 20-25 July 2013 (Invited presentation)
- F. Bach: Fourth Cargèse Workshop on Combinatorial Optimization. Institut d'Etudes Scientifiques de Cargèse, Corsica (France). September 30 - October 5, 2013 (Invited presentation)
- F. Bach: 9èmes Journées Nationales de la Recherche en Robotique, Annecy, October 16-18, 2013 (invited presentation)
- F. Bach: Radboud University, Nijmegen, Netherlands, November 29, 2013 (Seminar)
- F. Bach: GlobalSIP: IEEE Global Conference on Signal and Information Processing, December 3-5, 2013 (invited presentation)
- F. Bach: NIPS workshops, december 2013 (2 invited presentations)

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence: F. Bach, G. Obozinski, R. Lajugie: "Apprentissage statistique", 35h, Ecole Normale Supérieure, Filière "Math-Info", première année.

Mastère: S. Arlot and F. Bach, "Statistical learning", 24h, Mastère M2, Université Paris-Sud, France.

Mastère: F. Bach, G. Obozinski, Introduction aux modèles graphiques (30h), Master MVA (Ecole Normale Supérieure de Cachan).

Master: S. Arlot and F. Bach, "Statistical learning", 24h, Mastère M2, Université Paris-Sud, France.

Doctorat: S. Arlot, "Classification and statistical machine learning", 1h tutorial for the CEMRACS 2013, Marseille, France.

Licence : A. d'Aspremont, "Optimisation", 36h, L3, ENSAE, France.

Master M2: A. d'Aspremont, "Convex Optimization, Algorithms and Applications", 27h, M2, ENS Cachan, France.

Master M2: A. d'Aspremont, "Optimisation et simulation numérique.", 14h, M2, Paris Sud (Orsay), France.

9.2.2. Supervision

PhD: Matthieu Solnon, "Multi-task statistical learning", UPMC, November 25, 2013. Advisors: S. Arlot and F. Bach.

PhD in progress: Fajwel Fogel, "Optimisation et Apprentissage", September 2012, A. d'Aspremont.

PhD in progress: Bamdev Mishra

PhD in progress: Loic Landrieu

PhD in progress: Sesh Kumar, "Optimization and submodular functions", May 2012, F. Bach.

PhD in progress: Edouard Grave, "A Markovian approach to distributional semantics", F. Bach, G. Obozinski (defended January 20, 2014).

PhD in progress: Anil Nelakanti, "Structured sparsity and language models", F. Bach, G. Obozinski (to be defended February 11, 2014).

PhD in progress: Rémi Lajugie, September 2012, S. Arlot and F. Bach.

9.2.3. Juries

- A. d'Aspremont was a member of the PhD committee of Nicholas Boumal's thesis at the Université Catholique de Louvain.
- F. Bach was a member of the PhD committee of Clément Calauzènes (UPMC), Azadeh Khaleghi (Inria Lille), Yao-Lian Yu (University of Alberta).
- F. Bach was a member of the HDR committee of Ivan Laptev (Inria-ENS), Pawan Kumar (Ecole Centrale).

9.3. Popularization

- A. d'Aspremont, Journée Big Data, ENSAI, Rennes, November 2013.

SIMPAF Project-Team

9. Dissemination

9.1. Scientific Animation

- A. Gloria organized of a mini-symposium at the SIAM Conference on Mathematical Aspects of Materials Science (Philadelphia, June 2013)

9.2. Teaching - Supervision - Juries

9.2.1. Supervision

PhD : Émilie Soret, Accélération stochastique et thermalisation, 2011-2014, under the supervision of S. de Bièvre and T. Simon (Université Lille 1)

PhD : Pierre-Louis Colin, Theoretical and numerical study of some mathematical models of corrosion, Université Lille 1, 2012/09/01-2015/09/01, under the supervision of C. Chainais-Hillairet and I. Lacroix-Violet

9.2.2. Juries

- A. Gloria, referee for the PhD thesis of F. Ouaki (Ecole polytechnique), December 2013

9.3. Popularization

C. Calgario is in charge of the communication of "Laboratoire Paul Painlevé" and she is in charge of the relation between the University of Lille and high schools. Accordingly, she organizes various events like « Les Mathématiques itinérantes » and « Stage de seconde à contenu scientifique ». With the help of the Communication Department of Inria, C. Calgario, E. Creusé and T. Goudon produced a documentary fiction (in French) for a general audience on how research in applied mathematics is being done. The title is "Avis de recherche" (see <http://www.inria.fr/avisderecherche>).

SIROCCO Project-Team

9. Dissemination

9.1. Scientific Animation

- C. Guillemot is associate editor of the Eurasip International Journal on Image Communication.
- C. Guillemot is senior member of the editorial board of the IEEE Journal on selected topics in signal processing.
- C. Guillemot is member of the award committee of the Eurasip Image communication journal.
- C. Guillemot is member of the Selection and Evaluation Committee of the “Pôle de Compétitivité” Images and Networks of the Region of Ouest of France.
- C. Guillemot is member as scientific expert of the CRRDT (Regional Committee of Research and Technological Development) of the Brittany region.
- C. Guillemot is member of the committee in charge of the IEEE Brillouin-Glavieux award.
- C. Guillemot has been a member of technical program committees of international conferences of the field (EUSIPCO 2013, IEEE-MMSP 2013, PV-2013 and PCS-2013).
- C. Guillemot is member of the “bureau du Comité des Projets” as well as of the “commission personnels” in charge of the postdoc and delegation recruitments.
- C. Guillemot was a member of the selection committee for recruiting a Professor at KTH, Stockholm(2013).
- C. Labit is the Vice-president of the Scientific Board, in charge of Research and Innovation, for the University of Rennes1 (since June 1st, 2008)
- C. Labit is president of the Rennes-Atalante Science Park and of the start-up incubator Emergys (since April, 2007).
- C. Labit has been president of the organization committee of 2013 Grets-EEA Signal-Image-Vision thesis prize
- C. Labit is member of the GRETSI association board.
- C. Labit is member of the ICT strategic steering committee (CPS-7) of the National Research Agency (ANR).
- O. Le Meur co-organized a special session on "Visual attention and applications" at Wiamis 2013.
- A. Roumy is a member of the GRETSI association board.
- A. Roumy has been a member of the technical program committee of the international conference EUSIPCO 2013.
- A. Roumy is titular member of the National Council of Universities (CNU section 61, 2012-2015).
- A. Roumy is a local liaison officer for Eurasip.
- A. Roumy co-organized a special session on "Compressed Sensing and Sparse Representations for Visual Information Processing" at the Picture Coding Symposium (PCS), 2013.

9.2. Patents and Standardization

The team has contributed to the 3DV standardization initiatives of the ITU/MPEG joint collaborative team on video coding (JCT-VC) [40]. A joint proposal with Qualcomm and Mediatek has been adopted in the 3DV standard in July 2013 [42], [41].

Four patents have been filed jointly by Technicolor and Inria in the area of 2D video coding.

9.3. Teaching - Supervision - Juries

9.3.1. Teaching

Master: C. Guillemot, Image and video compression, 12 hours, M2 computer science, Univ. of Rennes 1, France.

Master: C. Guillemot, Image and video compression, 12 hours, M2 SISEA, Univ. of Rennes 1, France.

Master: L. Guillo, Multimedia Communication, 15 hours, M2 Network Engineering, Univ. of Rennes 1, France.

Master: O. Le Meur, Selective visual attention, 13 hours, M2, Univ. of Paris 8, France.

Master: O. Le Meur, Acquisition/Image Processing/Compression, 22 hours, M2 MITIC, Univ. of Rennes 1, France.

Master: A. Roumy, Acquisition/Image processing/Compression, 16 hours, M2 MITIC, Univ. of Rennes 1, France.

Master: A. Roumy, Magistère program, Information Theory, Computer science and telecommunications, 18 hours, Ecole Normale Supérieure de Cachan, Ker Lann campus, France.

Engineering degree: C. Guillemot, Video communication, 16 hours, Télécom Lille 1, Villeneuve-d'Ascq, France.

L1: L. Guillo, Programming, Univ. of Rennes 1, France.

Engineering degree: C. Labit, Entrepreneurship and innovation, 3 hours, ESIR, Rennes, 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.

Engineering degree: A. Roumy, Image processing and numerical analysis, 51 hours, ECAM Rennes, France.

9.3.2. Supervision

PhD in progress : J. Aghaei Mazaheri, Sparse representations and dictionary learning for satellite image compression, Oct. 2011, C. Guillemot and C. Labit (contract with Astrium)

PhD in progress : M. Bevilacqua, Image and video super-resolution using neighbor embedding algorithms, Feb. 2011, A. Roumy and C. Guillemot (contract with Alcatel/Lucent)

PhD in progress : B. Huang, Video compression with generalized lifting, Apr. 2012, C. Guillemot (Cifre contract with Orange)

PhD in progress : D. Khaustova, Objective evaluation of 3D video quality, Dec. 2011, O. Le Meur (Cifre contract with Orange)

PhD in progress : M. Ebdelli, Video inpainting for editing and loss concealment, Dec. 2010, C. Guillemot and O. Le Meur

PhD in progress : M. Alain, Spatio-temporal linear embedding for epitome-based video compression, Oct. 2012, C. Guillemot (Cifre contract with Technicolor)

PhD in progress : N. Dhollande, HEVC codec optimization based on content pre-analysis, Oct. 2012, O. Le Meur and C. Guillemot (Cifre contract with Thomson Video Networks)

PhD in progress : M. Le Pendu, HDR video compression, Dec. 2012, C. Guillemot (Cifre contract with Technicolor)

PhD in progress : Julio-Cesar Ferreira, multi-view super-resolution, Oct. 2013, C. Guillemot and O. Le Meur (Co-tutelle with University of Uberlandia, Brazil).

9.3.3. Juries

- C. Guillemot has been member (rapporteur) of the jury of the HDR committee of:
 - M. Cagnazzo, Telecom ParisTech, Sept. 2013
- C. Guillemot has been member (rapporteur) of the jury of the PhD committee of:
 - G. Pettrazuoli, Telecom ParisTech, Jan. 2013
- C. Labit has been member (as examiner) of the jury of the HDR committee of:
 - Marc Chaumont, Université de Montpellier 2, Jul. 2013
- C. Labit has been member (as president) of the jury of the PhD committee of:
 - Mikael Carlavan, Université Nice-Sophia Antipolis, June 2013

9.4. Popularization

- L. Guillo is advisor of secondary school pupils following the course "Informatique et Science du Numérique (ISN)" of the Lycée Jean Macé in Rennes, France.

SISYPHE Project-Team

9. Dissemination

9.1. Scientific Animation

P.-A. Bliman:

- Chargé de mission at Direction Générale de la Recherche et de l'Innovation, Ministère de l'Enseignement Supérieur et de la Recherche (since 2012, part-time, 60%) ; Scientist in charge of latin America at Direction des Affaires Internationales, Inria (since 2009, part-time, 20%) ; Member of the Scientific Committees of the regional collaboration program MATH AmSud and STIC AmSud (since 2009).

- Associate Editor of *Systems & Control Letters* (since 2008) ; Reviewer for *IEEE Transactions on Automatic Control, Automatica...* ; Expert for *Fonds National de la Recherche Scientifique* (FNRS), Belgium ; Member of the Conference Editorial Board of European Control Association (EUCA), actuating for 13th European Control Conference, Strasbourg, June 2014.

Frédérique Clément: Participation to INRA selection committees: CR2 2013 (admissibility and admission) "Modelling in cell biology and biology of organisms" ; DR2 2013 (admission) "Animal and plant genetics and physiology".

Appointed member of the scientific board of the BCDE (Cell Biology, Development and Evolution) ITMO (Multi Organization Thematic Institute) of the French National Alliance for Life and Health Sciences <http://www.aviesan.fr/en>.

M. Mirrahimi: Associate Editor of *Systems & Control Letters* ; Member of IFAC Technical Committee on Distributed Parameter Systems.

M. Sorine: Member of IFAC Technical Committee on the Biological and Medical Systems (IFAC TC 8.2) ; Member of the scientific board of the **ITMO Circulation, Metabolism and Nutrition** (Multi Organization Thematic Institute of the French National Alliance for Life and Health Sciences).

Q. Zhang is Member of two IFAC Technical Committees on 1/ Fault Detection, Supervision and Safety of Technical Processes ; 2/ Modelling, Identification and Signal Processing.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: P.-A. Bliman, "Advanced tools for system analysis and design by Linear Matrix Inequalities (LMI) techniques", Instituto Tecnológico de Aeronáutica, São José dos Campos (SP), Brazil (3h).

Master: S. Steer, "Modélisation et simulation des systèmes dynamiques", 20 heures, M2, Ecole Polytechnique, France.

Master: S. Steer, "Traitement numérique du signal et application aux signaux physiologiques", 32 heures, M2, Université d'Evry, France.

9.2.2. Supervision

PhD: Thiago Pereira das Chagas [33], *Stabilisation d'orbites périodiques pour des systèmes en temps discret et en temps continu*. Université Paris-Sud, Orsay, June, 25 2013. Supervisor: P.-A. Bliman.

PhD: David Marie-Luce [32], *Modélisation réduite et commande d'éléments du système de dépollution d'un groupe motopropulseur en vue des normes Euro 6 et Euro 7*. Université Paris-Sud, Orsay, March, 4 2013. [Theses.fr](http://theses.fr). Supervisor: P.-A. Bliman. Co-supervisor: M. Sorine.

PhD: Alexandre Guerrini [31], *Évaluation des performances de systèmes d'assistance au contrôle pour la réanimation : Application au contrôle de la glycémie*. Université Paris-Sud, Orsay, June, 21 2013. Supervisor: M. Sorine.

9.3. Popularization

The high profile publications in *Nature* and *Science* are popularizing the new field of quantum engineering.

SMIS Project-Team

9. Dissemination

9.1. Scientific Animation

Philippe Pucheral:

- Area Editor of the Information Systems international journal (2007-2013)
- General chair of BDA'2014
- PC member of EDBT'14, APVP'13, MOBIWIS'14

Luc Bouganim:

- PC member of EDBT'14, ICDE'14, HardDB'13
- President of the Inria Post-Doc and Delegation Commission
- Member of the Inria "Bureau du Comité des Projets" (BCP)
- Member of the Inria "Cordi-S (Inria PhD grant)" commission

Nicolas Ancaux:

- Co-chair and co-organiser of APVP'2013
- PC member of BDA 2013
- Member of the Inria "Commission des Développements Technologiques" (CDT)
- Member of the recruiting committee at Université Paris-Dauphine for the assistant professor position N°0230

Benjamin Nguyen:

- chair of BDA'2013 Demonstration Track
- co-chair and co-organiser of APVP'2013
- PC member of ICCSAMA'13 and ACOMP'2013
- Editorial Committee of TSI French Journal since 2012
- Member of the recruiting committees of Paris Dauphine and Paris VI

Iulian Sandu Popa:

- PC member of MOBILWARE'2013

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

SMIS is a joint project-team with University of Versailles St-Quentin (UVSQ) and CNRS. Hence SMIS members are naturally deeply involved in teaching.

P. Pucheral:

- Full professor at UVSQ : courses on databases, DBMS architecture and security in Master1, Master2 and engineer school ISTY
- Director of the research Master COSY (UVSQ)
- Co-Director of the future Master DataScale to be launched at Univ. Paris-Saclay (UPSay) in 2015 with UVSQ, ENSIIE, Télécom SudParis and Télécom ParisTech
- Member of the HDR committee of the STV doctoral school
- Co-founder of the "Masses de Données Distribuées" French summer school and co-organizer of its last three editions (2010, 2012, 2014)

L. Bouganim: (90h/y)

- Courses on DBMS architecture, data security, database technology in Master1 and Master2 (AFTI, Orsay) and in engineering school (ENST Paris)

B. Nguyen:

- Associate Professor at UVSQ. Courses on databases, programming in Master 2, Licence

- Responsible for the Computer Science Masters at UVSQ
- Responsible for in-house training course for Computer Science high-school teachers at UVSQ for Académie de Versailles

N. Anciaux: (90h/y)

- Courses on DBMS internal mechanisms, database technology in Master1 and Master2 (AFTI, Orsay), and in engineering school (ENSTA Paris)

I. Sandu Popa:

- Assistant professor at UVSQ. Courses on databases, DBMS architecture and security in Licence, Master1, Master2 and engineer school ISTY

9.2.2. Supervision

PhD in progress : Quoc-Cuong To, Secure Global Computations on Personal Data Servers, since November 2012, co-supervised by Benjamin Nguyen and Philippe Pucheral

PhD in progress : Saliha Lallali, Document Indexing for Embedded Personal Databases, since November 2012, co-supervised by Nicolas Anciaux, Iulian Sandu Popa and Philippe Pucheral

PhD in progress : Athanasia Katsouraki, Access and Usage Control for Personal Data in Trusted Cells, since October 2013, supervised by Luc Bouganim

PhD in progress : Matias Bjørling, Boosting IO Subsystem Performance on NVM Devices, since December 2011, co-supervised by Philippe Bonnet and Luc Bouganim

PhD in progress : Niv Dayan, Database Algorithms and Flash Internals, since December 2011, co-supervised by Philippe Bonnet and Luc Bouganim

PhD in progress : Javier Gonzalez, Trusted Cell X: A Client-side Reference Monitor for Usage Control on a Trusted Execution Environment, since November 2011, co-supervised by Philippe Bonnet and Luc Bouganim

PhD in progress : Dai-Hai Ton-That, Secure Management and Sharing of Private Personal Traces, since November 2012, co-supervised by Iulian Sandu Popa and Karine Zeitouni (Univ. of Versailles)

9.2.3. Juries

- P. Pucheral: reviewer of Adeel Anjum PhD (Univ. Nantes, June 2013).
- B. Nguyen : PhD committee member of Johann VINCENT (Univ. Caen, June 2013).
- I. Sandu Popa: PhD Proposal Defense committee member of Susan (Juan) Pan (New Jersey Institute of Technology, April 2013), PhD committee member of Susan (Juan) Pan (New Jersey Institute of Technology, December 2013).

9.3. Popularization

- "Comment préserver l'anonymat", Pour la Science, n° 433, novembre 2013.
- "Bases de données en Classe Préparatoire", séminaire à Luminy, mai 2013.
- Tutorial on experimental methodology at the BDA summer school 2014 "Masses de données distribuées".
- Participation to the "Futur en Seine" event in Paris: <http://web-tech.fr/linria-nous-devoile-ses-recherches-sur-les-smart-cities/>
- "Une nouvelle approche de la protection de nos données", My Science Work, July 8, 2013, by Abby Tabor <http://www.mysciencework.com/news/10335/une-nouvelle-approche-de-la-protection-de-nos-donnees>

SOCRATE Project-Team

9. Dissemination

9.1. Scientific Animation

- Jean-Marie Gorce is an associate editor of Telecommunications Systems (Springer) and Journal of Wireless communications and Networking (Springer). He was a member of the Program Committees of the conferences : IEEE PIMRC 2013, ICUWB 2013, ICT 2013, VTC 2013 (Las Vegas, USA) IEEE 24th Int. Symposium on Personal, Indoor and Mobile radio Communications (PIMRC2013) 8-11 September 2013, London, UK. IEEE 78th Vehicular Technology Conference (VTC2013-Fall) 2-5 September 2013, Las Vegas, USA. IEEE Int Conference on Ultra-Wideband (ICUWB2013) 15-18 September 2013, Sidney, Australia. 20th International Conference on Telecommunications (ICT 2013) 6-8 Mai 2013, Casablanca, Morocco.
- Florent de Dinechin is an associate editor of the journal *IEEE Transactions on Computers*. He was a member of the Program Committees of the conferences CompAs (Grenoble, Januar 2013), Applied Reconfigurable Computing (Los Angeles, March 2013), Highly Efficient Accelerators and Reconfigurable Technologies (Edimburgh, June 2013), Field-Programmable Logic (Porto, September 2013), Field-Programmable Technology (Kyoto, December 2013), ReConfig 2013 (Cancun, December 2013).
- Tanguy Risset is in the Program Committee of conferences IEEE SIES 2013, ISVLSI 2013.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Tanguy Risset and Jean-Marie Gorce are professors in the Telecommunications department of Insa Lyon.

Florent de Dinechin is professor in the Computer Science department of Insa Lyon.

Claire Goursaud is associate professor in the Telecommunications department of Insa Lyon.

Guillaume Salagnac and Kevin Marquet are associate professors in the Computer Science department of Insa Lyon.

Guillaume Villemaud and Florin Hutu are associate professors in the Electrical Engineering department of Insa Lyon.

Nikolai Lebedev is associate professor in the engineering school in Chemistry, Physics and Electronics, Lyon.

Tanguy Risset has been the vice-head of the Telecommunications department of Insa Lyon until september 2012.

Tanguy Risset is the responsible for the Networking program of the Master Mastria from University of Lyon.

Jean-Marie Gorce is the responsible for the Telecommunications program of the future Master EEAP from University of Lyon.

Guillaume Villemaud is responsible for international relations in the Electrical engineering département of Insa Lyon

9.2.2. Supervision

HdR: **Guillaume Villemaud**, *Les communications multi-* : contribution au développement d'architectures radio flexibles pour les réseaux sans fil hétérogènes*, Insa Lyon, 9 december 2013

PhD: **Laurent Maviel**, *Modélisation et simulation des réseaux sans fil hétérogènes et non-stationnaires. Application aux topologies de petites cellules*, CIFRE grant with SIRADEL, defended 27 may 2013.

PhD: **Meiling Luo**: *Indoor Radio Propagation Modeling For System performance prediction* MENRT grant, 17 july 2013.

PhD: **Cengiz Hasan**, *Optimization of resource allocation for small cells networks*”, Orange labs grant, 29 august 2013.

PhD: **Francois Goichon**, *Equité d'accès aux ressources dans les systèmes partagés best-effort*, 16 december 2013.

PhD: **Paul Ferrand**: *Cooperative communications in BANET*, MENRT, defended 21 june 2013.

PhD in progress: **Mickael Dardailon**, *Virtual machine for the cognitive radio*, Rhône-Alpes grant, since 10/2011.

PhD in progress: **Arturo Jimenez Guizar**: *Cooperative communications in Body Area Networks*, ANR Cormoran grant, since 09/2012.

PhD in progress: **Mathieu Lauzier**: “*Design and evaluation of information gathering systems for dense mobile wireless sensor networks*”, CIFRE/Euromedia, since 09/2011.

PhD in progress: **Baher Mawlawi**: CEA grant, since 09/2012.

PhD in progress: **Matthieu Vallerian**: “*Radio Logicielle pour réseau de capteurs*”, CIFRE/Orange, since 09/2012.

PhD in progress: **Zhaowu Zhan**: “*Full-Duplex Multimode MIMO wireless communications*”, CSC/China grant with , since 9/2012.

9.2.3. Participation in thesis Committees

Claire Goursaud Jury member for the PhD defense of Nicolas BARBOT “*Codage de canal pour les communications optiques sans fils*”, 22 nov. 2013 (U. Limoges)

Tanguy Risset:

- reviewer for the Phd of Muhammad Mahtab ALAM “*Power Aware Adaptive Techniques for Wireless Sensor Networks*”, 27 feb. 2013 (U. Rennes 1)
- reviewer for the Phd Djamel Benferhat “*Conception d’un syst’eme de communication tol’erant la connectivité intermittente pour capteurs mobiles biom’etriques*”, 2 oct. 2013 (U. Bretagne Sud)
- reviewer for the Phd Jair Gonzalez-Pina “*Application modelling and software architectures for the software defined radio*”, 14 may 2013 (Telecom-ParisTech, Nice)
- Jury president for the PhD of Antoine Morvan “*ASIP processor instruction set extension*”, 28 jun. 2013 (U. Rennes 1)
- Jury president for the PhD of Maria Isabel Vergara Gallego “*Smarter Radios for Energy Efficiency in Wireless Sensor Networks*”, 3 oct. 2013 (U. Grenoble)
- Jury president for the PhD of Hervé Yviquel “*From Dataflow-based video Coding Tools to dedicated embedded Multi-core platforms*”, 25 jun. 2013 (U. Rennes 1)
- Jury members of Habilitation à Diriger les recherches of Guillaume Villemaud, 9 dec. 2013 (U Lyon1/Insa-Lyon)

Jean-Marie Gorce has been reviewer of Phd theses:

- reviewer for the HdR of Benoit Escrig: "Communications coopératives"; 5 Juillet 2013 (INP Toulouse);
- Ziaf Khalaf: "Contribution à l'étude de détection des bandes libres dans le contexte de la radio intelligente"; 7 Février 2013 (Supelec Rennes);
- Sébastien Marcille: " Resource Allocation for HARQ based Mobile Ad hoc Networks"; 21 Février 2013 (Telecom Paris Tech);
- Aymen Ayari: "Mécanismes d'ingénieries pour la planification des réseaux de 3ème et 4ème génération"; 29 Mars 2013 (Supcom Tunis);
- Salma Bourbia: "Algorithmes de prise de décision pour la Cognitive Radio et optimisation du mapping de reconfigurabilité de l'architecture de l'implémentation numérique"; 27 Nov. 2013 (Supcom Tunis et Supélec Rennes);

Florent de Dinechin

- reviewer for the PhD of thèse de Mourad Guicem "Conception et implantation d'algorithmes efficaces pour la résolution du dilemme du fabricant de tables sur architectures parallèles." , 14 oct. 2013 (U. Paris VI)

SPADES Team

9. Dissemination

9.1. Scientific Animation

- Pascal Fradet served in the program committees of MODULARITY 2014 and of JFLA 2013 and JFLA 2014 (*Journées Francophones des Langages Applicatifs*).
- Alain Girault served in the program committees of the international conferences DAC 2013 and MSR 2013.
- Gregor Goessler served in the program committees of the international conferences Component-Based Software Engineering (CBSE) 2013 and Design, Automation, and Test in Europe (DATE) 2014 and the workshop Hybrid Systems and Biology (HSB) 2013.
- Jean-Bernard Stefani is the current Chair of IFIP Working Group WG6.1, that sponsors the international conference series DAIS, FORTE, ICTSS, and Middleware. He is the current chair of the FORTE Steering Committee and a member of the DISCOTEC joint international conference (hosting Coordination, DAIS and FORTE).

9.2. Teaching - Supervision - Juries

9.2.1. Supervision

PhD: Quentin Sabah, “Simple Isolation for An Abstract Actor Machine”, Grenoble University, 4/12/2013, advised by Jean-Bernard Stefani.

PhD: Gideon Smeding, “Verification of Weakly-Hard Requirements on Quasi-Synchronous Systems”, Grenoble University, 19/12/2013, co-advised by Gregor Goessler and Joseph Sifakis.

PhD in progress: Vagelis Bebelis, “Advanced dataflow programming for embedded systems”, Grenoble University, since 12/2011, co-advised by Pascal Fradet and Alain Girault.

PhD in progress: Dmitry Burlyaev, “Specification and synthesis of fault-tolerant circuits”, Grenoble University, since 12/2011, co-advised by Pascal Fradet and Alain Girault.

PhD in progress: Yoann Geoffroy, “Towards a general causality analysis framework”, Grenoble University, since 10/2013, co-advised by Gregor Goessler and Daniel Le Métayer (Privatics INRIA team).

9.2.2. Juries

- Alain Girault was referee for the PhD thesis of Hervé Yviquel (University of Rennes 1) and for the PhD thesis of Léonard Gérard (University of Orsay).
- Jean-Bernard Stefani was referee for the PhD thesis of Cédric Pasteur (University of Paris VI).

Specfun Team

9. Dissemination

9.1. Scientific Animation

The team started a seminar, first on an irregular basis, but with the view of running more regular sessions. It attracted researchers from teams in the neighbouring environment and had 8 sessions in 2013.

F. Chyzak is part of the scientific committee of the *Journées Nationales de Calcul Formel*, the annual meeting of the French computer algebra community.

A. Mahboubi and E. Tassi have organized the 5th edition of the Coq international workshop (satellite of the Itp 2013 conference, Rennes, July 2013).

A. Mahboubi has participated to the organization of the Lix Colloquium (November 2013) and of the satellite PSATT international workshop.

A. Mahboubi has served in the program committee of the 5th edition of the Coq international workshop.

A. Mahboubi has served in the program committee of the ITP 2013 international conference.

A. Bostan has served as the Poster Committee Chair for the ISSAC 2013 international conference.

A. Bostan has served in the program committee of the MEGA 2013 international conference.

A. Bostan has served in the program committee of the FPSAC 2013 international conference.

A. Bostan has served in the program committee of the SYNASC 2013 international conference.

A. Bostan is part of the Scientific advisory board of the MEGA conference series.

A. Mahboubi and E. Tassi have given an invited tutorial at the ITP 2013 international conference (Rennes, France).

A. Mahboubi has given an invited talk at the Calculemus 2013 conference (Bath, United Kingdom).

A. Mahboubi has given an invited talk at the Colloquium of the Institute of Mathematics at the University of Nantes (France).

A. Mahboubi has given an invited talk, joint with G. Gonthier at the Dutch Mathematical Congress 2013 (Nijmegen, Netherlands).

A. Mahboubi has given an invited talk at the British Colloquium for Theoretical Computer Sciences (Bath, United Kingdom).

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

- Master : A. Bostan, *Algorithmes efficaces en calcul formel*, 12h, M2, MPRI, France
- Master : F. Chyzak, *Algorithmes efficaces en calcul formel*, 12h, M2, MPRI, France
- Master : A. Mahboubi, *Assistants de preuves*, 18h, M2, MPRI, France
- Agrégation de Mathématiques : A. Bostan, *Préparation épreuve de modélisation, option C*, 12h, ÉNS Cachan, France

9.2.2. Supervision

- PhD: B. Morcrette, *Combinatoire analytique et modèles d'urnes*, June 2013, Ph. Flajolet, M. Soria and Ph. Dumas

- PhD in progress: A. Barillec, *Asymptotique automatique certifiée des fonctions spéciales*, September 2013, F. Chyzak and A. Mahboubi
- PhD in progress: L. Dumont, *Algorithmique efficace pour les diagonales, applications en combinatoire, physique et théorie des nombres*, September 2013, A. Bostan and B. Salvy
- PhD in progress: P. Lairez, *Algorithmique efficace pour la création télescopique, et ses applications*, September 2011, A. Bostan and B. Salvy
- L3: D. Rouhling, ÉNS Lyon, *Proof search modulo a theory in sequent calculus*, June–July 2013, S. Graham-Lengrand (CNRS, LIX) and A. Mahboubi

9.2.3. Juries

- A. Mahboubi has served as examiner in the PhD jury of Mahfuza Farooque, *Automated reasoning techniques as proof-search in sequent calculus*, December 19, 2013.
- A. Bostan has served as examiner in the PhD jury of Basile Morcrette, *Combinatoire analytique et modèles d'urnes*, Université Paris 6, June 26, 2013.

9.3. Popularization

- A. Mahboubi has given a lecture to laureates of the *Olympiades académiques de mathématiques, académie de Créteil*.
<http://maths.ac-creteil.fr/spip/spip.php?article463>.
- A. Mahboubi has been involved in the scientific committee for the elaboration of the board game *Mémoire Vive* produced by the Inria communication services.
- A. Mahboubi has given a talk at the forum STIC Paris-Saclay (Palaiseau, France) in November 2013.

STARS Project-Team

9. Dissemination

9.1. Scientific Animation

- François Brémond was reviewer for the conferences : CVPR'13-14, ICCV'13, AVSS'13, ICVS'13, ICDP'13, ICRA'13, ACM MM'13;
- François Brémond was handling editor of the international journal "Machine Vision and Application";
- François Brémond was reviewer for the journal "IEEE Computing Now";
- François Brémond was program committee member of the conferences and workshops: IEEE Workshop on Applications of Computer Vision (WACV 2013-14), ICME AAMS-PS 2013, RIVF 2013, ASROB-2013, ICCV'13 Workshop on Action Recognition (THUMOS), on Re-Identification (Re-Id 2013) and on Object Tracking VOT'2013, LACNEM-13, ACM MIIRH 2013;
- François Brémond was speaker in two thematic schools: S5 Second Spring Short School on Surveillance in Modena Italy, May 7-9 2013 and Dem@Care School on Ambient Assisted Living (DemAAL 2013), Chania, Crete, Greece (16-20 September 2013);
- François Brémond was organizer of the SPHERE workshop on Ambient Assisted Living, at Inria Sophia Antipolis, 9-10 October 2013 and a PANORAMA special session, part of VISAPP Lisbon, Portugal, 5-8 January 2014;
- François Brémond was an expert in review of research projects for France Alzheimer Association (25th May 2013), for NTU Singapore (19th August 2013) and for INSA de Lyon (4th November 201);
- François Brémond was expert for the Proposal KIC Healthy Ageing (Innolife) Expert Group1: Independent living;
- François Brémond was expert for EU European Reference Network for Critical Infrastructure Protection (ERNICIP) - Video Analytics and surveillance Group, at European Commission's Joint Research Centre in Ispra, Italy, 29 April 2013, 28-29 October, 2013;
- François Brémond was area chair of the IEEE International Conference on Advanced Video and Signal Based Surveillance, AVSS'13, Krakow, Poland on August 27-30, 2013;
- François Brémond gave invited talks at:
 - the Symposium of World Congress of Gerontology and Geriatrics (IAGG) 2013, 23-27 June, Coex, Seoul, Korea (Title: "ICT in Dementia: from assessment to stimulation.);
 - the Conference "Les Echos sur la dépendance, quelles réponses pour faire reculer la dépendance ? " in March 2013;
 - the IX Journée de la Fédération CMRR in Nice on the 29 March 2013;
 - the Journée pédo psychiatrie, Nice on the 11th October 2013 (invited by F. Azkenazy);
 - University of Central Florida, 14-15 October 2013 (invited by M. Shah);
- Guillaume Charpiat reviewed for the conferences CVPR, ICCV and Grets;
- Guillaume Charpiat reviewed for the journals CVIU (Computer Vision and Image Understanding), SIAM Journal on Imaging Sciences (SIIMS), RIA (Revue d'intelligence artificielle);
- Guillaume Charpiat gave invited talks :
 - in the TAO team (8 October 2013) about lossless image compression,
 - and in the GALEN team (9 October 2013) about energies minimizable with graph cuts.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Annie Ressousche, Critical Software Verification- Introduction to SCADE, 5h, niveau (L3), Mines Paris Tech, FR

Master : Annie Ressousche, Critical Software Verification and application to WComp Middleware , 10h, niveau (M2), Polytech'Nice School of Nice University, FR

Jean-Paul Rigault is Full Professor of Computer Science at Polytech'Nice (University of Nice): courses on C++ (beginners and advanced), C, System Programming, Software Modeling.

9.2.2. Supervision

PhD: Rim Romdhane, Event Recognition in Video Scenes with Uncertain Knowledge, 30th September 2013, François Brémond and Monique Thonnat;

PhD: Malik Souled : Suivi d'Individu à travers un Réseau de Caméras Vidéo, 20th December 2013, François Brémond ;

PhD in progress: Julien Badie, People tracking and video understanding, October 2011, François Brémond;

PhD in progress : Piotr Bilinski, Gesture Recognition in Videos, March 2010, François Brémond;

PhD in progress : Carolina Garate, Video Understanding for Group Behaviour Analysis, August 2011, François Brémond;

PhD in progress : Ratnesh Kumar, Fiber-based segmentation of videos for activity recognition, January 2011, Guillaume Charpiat and Monique Thonnat;

PhD in progress : Minh Khue Phan Tran, Man-machine interaction for older adults with dementia, May 2013, François Brémond.

9.2.3. Juries

- François Brémond was jury member of the following PhD theses:
 - Boris Meden, Lab Vision and Content Engineering, CEA Saclay – nano innov, 15 January 2013;
 - Wenjuan Gong, PhD VIVA at Computer Vision Center in Barcelona, 10th May 2013;
 - Miriam Redi, EURECOM, 29th May 2013;
 - Lyazid Sabri, Université Paris Est Créteil (UPEC), 1 July 2013;
 - Francis Martinez, Vision VLSI/System ISIR/UPMC & CNRS UMR, Université Pierre et Marie Curie (UPMC), Jussieu, Paris, 9 July 2013;
 - Hajer Fradi PhD defense, EURECOM, 28th January 2014.

9.3. Popularization

- François Brémond participated in ERCIM News 95, Special theme: "Image Understanding", Sept 2013;
- François Brémond was interviewed by magazine 01net/itv Jul 2013;
- François Brémond was interviewed on Autisme by Monaco Info TV, September 2013;
- François Brémond gave a talk at Forum de la Recherche, Nice, 22 November 2013;
- Guillaume Charpiat is part of the MASTIC commitee;
- Guillaume Charpiat wrote with Yuliya Tarabalka a popularization article about wild fire mapping from satellite images in the magazine Earthzine : <http://www.earthzine.org/2013/09/16/exploiting-temporal-coherence-for-fire-mapping-from-modis-spaceborne-observations/> [53].

STEPP Team

9. Dissemination

9.1. Scientific Animation

P. Sturm is Associate Editor of the IEEE Transactions on Pattern Analysis and Machine Intelligence, the Journal of Mathematical Imaging and Vision, and the Image and Vision Computing Journal.

P. Sturm co-edited, with S. Garlatti and O. Boissier, a special issue in Revue d'Intelligence Artificielle with the best AI papers of the conference RFIA 2012.

P. Sturm co-edited, with S. Garlatti, a special issue in Traitement du Signal with the best pattern recognition and computer vision papers of the conference RFIA 2012.

P. Sturm is member of the Scientific Council of the foundation Barcelona Media.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

P. Sturm, Informatique visuelle, 37.5h, M2, University of Grenoble, France.

P. Sturm, Computer vision, 13.5h, M2, University of Grenoble, France.

9.2.2. Supervision

PhD in progress:

Julien Alapetite, Pilotage d'une collectivité avec l'empreinte écologique, part-time PhD student who carries out part of his work in STEEP, graduation expected in 2014, advisor D. Dupré (CERAG)

Thomas Capelle, Research on optimization methods for setting up integrated models of transportation and land use, started in October 2013, P. Sturm and A. Vidard (MOISE)

Jean-Yves Courtonne, Analyse d'impacts environnementaux et aide à la décision sur des territoires locaux, du bassin d'emploi à la région, started in 2013, P.-Y. Longaretti and D. Dupré (CERAG)

Laurent Gilquin, Sensitivity analysis of a macroeconomic LUTI model, started in October 2013, E. Arnaud and C. Prieur (MOISE)

Anthony Tschirhard, Calibration and sensitivity analysis of a micro-simulation LUTI model, Oct 2012, E. Prados, E. Arnaud, P. Sturm

9.2.3. Juries

P. Sturm, President of the AFRIF Thesis Award Committee (French Association for Research in Pattern Recognition and Interpretation)

P. Sturm, Member of habilitation committee, Christophe Cudel, Université de Haute-Alsace, Mulhouse

P. Sturm, Reviewer of PhD thesis, Laurent Caraffa, Paris 6

P. Sturm, Reviewer of PhD thesis, Pedro Miraldo, Coimbra University, Portugal

P. Sturm, Reviewer of PhD thesis, Christian Unger, Technische Universität München, Germany

P. Sturm, President of PhD committee, Jordi Sanchez-Riera, Grenoble University

P. Sturm, President of PhD committee, Marion Decrouez, Grenoble University

P. Sturm, President of PhD committee, David Ok, école des Ponts ParisTech

9.3. Popularization

STEPP participated in the 2013 edition of the technological fair "Forum 4i" of the Rhône-Alps region, which was on "Intelligent mobility, usages and innovations". The forum is visited by local and regional politicians and other stakeholders as well as by the general public. We presented the activities of the team and the socio-economic issues that motivate them.

Emmanuel Prados has been invited to give the introductory talk of the conference "Journée des Mathématiques" of Grenoble organized by the "Rectorat de Grenoble" (Grenoble, March 18, 2013; Title of the presentation: "Préserver l'environnement avec l'aide des mathématiques").

SUMO Team

9. Dissemination

9.1. Scientific Animation

Éric Fabre was evaluator of the first round of the ANR call for projects, 2013. He is also a regular reviewer for the Ministry of Research and Innovation, through the Credit Impot Recherche program (support to industrial research through tax reductions).

Éric Badouel is Associate Editor of the ARIMA journal, member of the Board of SARIMA and of the Steering Committee of LIRIMA. He is the Secretary of the Permanent Committee of the CARI.

Nathalie Bertrand is elected member of the Steering Committee of QEST, international conference on Quantitative Evaluation of Systems. She is also on the Steering Committee of the international workshop QAPL. She has served this year on the Programme Committee of MSR'13, MFCS'13, QEST'13 and QAPL'13. She is member and scientific secretary of the **Gilles Kahn PhD award** committee.

Thierry Jérón was PC member of ACM SAC-SVT 2014, PECCS 2014, MAROC 2013, TAP 2013, RV 2013. He was co-chairman of a Dagstuhl seminar on Symbolic Methods in Testing (January 2013). He is member of the steering committee of Movep'2014 in Nantes (July 2014). He is member of the IFIP Working Group 10.2 on Embedded Systems. He gave an invited lecture on "Model-based conformance test generation for timed systems" at the workshop MAROC'2013.

Loïc Hérouët was co-organizer with Hervé Marchand of the MSR 2013 Conference. He is member of the program committee of the SDL conference. In 2013, he was also reviewer for the following conferences: SDL, TACAS, CONCUR, MOVEP, and journals : SOSYM, TCS. He is also scientific coordinator of the DISTOL associated team. He co-organizes (with N. Bertrand, F. Schwarzentruber, D. Cachera and J.-P. Talpin) the 68NQRT seminar at IRISA/Inria Rennes, a weekly event that proposes talks in the domain of theoretical computer science (around 40 talks each year from worldwide participants). He is *réfèrent chercheur* for the Inria Rennes research center, helping researchers that face difficulties during their career. He was part of the committee for the selection of a *maître de conférences* position at ISTIC in May 2013.

Hervé Marchand member of the IFAC Technical Committees (TC 1.3 on Discrete Event and Hybrid Systems) since 2005. He is member of the steering committee of MSR (Modélisation de systèmes réactifs). He was co-organizer with Loïc Hérouët of MSR 2013 in Rennes (13-15 November 2013). He was PC member of DCDS Conference and PC chair with Loïc Hérouët of MSR 2013. He is PC member of the forthcoming WODES conference and IFAC World Congress in 2014. He was reviewer for Automatica, Transaction automatic and control, Discrete Event dynamical systems as well as CDC, ACC conference.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Éric Fabre

Master: ASR: introduction to distributed systems and algorithms, 12h, M2, Univ. Rennes 1, France.

Master: Information theory, 30h, M1, Ecole Normale Supérieure de Rennes, France.

Nathalie Bertrand

Master: Advanced verification techniques, 15h (eq. TD), M2, ISTIC, Université de Rennes 1, France.

Agreg: Formal languages, 27h (eq. TD), M2, Ecole Normale Supérieure de Rennes, France.

Loïc Hérouët

Licence: JAVA programming, 37h, INSA Rennes, France.

Agreg: Finite automata, and flow algorithms, 8h (eq. TD), M2, ENS Rennes, France.

9.2.2. Supervision

HdR: Loïc Hérouët, *Scenario Automata: theory and applications*, Rennes 1 University, 17th May 2013.

PhD: Carole Hounkonnou, *Auto-diagnostic actif dans les réseaux de télécommunications*, Rennes 1 University, 12th July 2013, supervised by Éric Fabre.

PhD: Rouwaida Abdallah, *Implémentabilité de systèmes distribués décrits à l'aide de scénarios*, ENS Cachan antenne de Bretagne, 16th July 2013, supervised by Loïc Hérouët and Claude Jard.

PhD: Amélie Stainer, *Contribution to the Verification of Timed Automata: Determinization, Quantitative Verification and Reachability in Networks of Automata*, Rennes 1 University, 25th November 2013, supervised by Thierry Jéron and Nathalie Bertrand.

PhD: Aurore Junier, *Performance and stability analysis in telecommunication networks*, Rennes 1 University, 16th December 2013, supervised by Anne Bouillard and Claude Jard.

PhD in progress (Defense on January 7th, 2014): Sébastien Chédor, *Diagnostic, opacité et test de conformité pour des systèmes récursifs.*, started in September 2009, supervised by Thierry Jéron and Christophe Morvan.

PhD in progress: Mohamadou Lamine Diouf, *Opacité des artefacts dans un système workflow*, started in spring 2011, supervised by Éric Badouel and colocated with Dakar Université Cheik Anta Diop (Senegal).

PhD in progress: Srinivas Pinisetty, *Runtime validation of critical control-command systems*, started in December 2011, supervised by Hervé Marchand and Thierry Jéron.

PhD in progress: Paulin Fournier, *Parameterized verification of networks of probabilistic processes*, started in September 2012, supervised by Thierry Jéron and Nathalie Bertrand.

PhD in progress: Bruno Karelavic, *Approximated analysis for checking Stochastic Models and Games*, started in November 2012, supervised by Blaise Genest and Wieslaw Zielonka.

9.2.3. Juries

Éric Fabre was reviewer of the PhD thesis of Fabien Kuntz, "Optimization of the monitoring of avionic systems through enhanced diagnosis performances," LABRI and University Bordeaux 1, July 2013. He also reviewed the PhD thesis of Leila Bennacer, "Contribution to self-diagnosis methods in large scale communication networks," University Paris-Est Creteil, Dec. 2013.

Thierry Jéron was member of the PhD defense jury of Aymeric Hervieu (Dec. 2013, Université Rennes 1).

Hervé Marchand was a member of the PhD defense juries of Mohammed Ali Kammoun (LAGIS, Metz) in July 2013 and of Xin An (Inria Rhones Alpes, Grenoble) in October 2013.

9.3. Popularization

Loïc Hérouët contributed to a visit of young pupils (3e) visiting IRISA to discover a research environment in February 2012. He did a short interactive presentation (1 hour) of his research theme, and of the duties of a researcher.

Éric Fabre gave a survey presentation about failure diagnosis in telecommunication networks to the 2nd year students of ENST Bretagne (Brest) engaged in a research training track. This was followed by informal discussions about the every day life of a researcher.

TAO Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Management positions in scientific organisations

International

- THRaSH, *Theory of Randomized Search Heuristics workshop*: Anne Auger, member of Steering Committee
- ACM SIGEVO (Special Interest Group on Evolutionary Computation), Marc Schoenauer, member of Executive Board since 2000, officer (Secretary) since 2012; member of Business Committee (2011-2013).
- Parallel Problem Solving from Nature: Marc Schoenauer, Member of Steering Committee, (since 1998).
- PASCAL NoE (Pattern Analysis, Statistical modelling, Computational Learning), Michèle Sebag, member of the Steering Committee (PASCAL 2004-2008; PASCAL2, 2009-2013).
- European Machine Learning and Knowledge Discovery from Databases Steering Committee, MichèleSebag, member since 2010;
- ECCAI Fellow, Michèle Sebag, since 2011;
- Marc Schoenauer, Honorary Adjunct Professor, School of Computer Science, University of Adelaide, Australia (2009-2015).

National

- Michèle Sebag, member of the CoNRS; Senior Advisory Board CHIST-ERA; member of the CSFRS (Conseil Supérieur de la Formation et Recherche Stratégique); member of the Senate at Université Paris-Saclay; responsible for the DataSense axis in the DigiCosme Labex;
- EA – Association Evolution Artificielle: Marc Schoenauer, founding president, now member of Advisory Committee. Anne Auger, member of Executive Committee since 2008.
- SimTools Network (RNSC Network). Philippe Caillou, coordinator since 2011.

Université Paris-Sud

- Jamal Atif, “Directeur d’études” at Computer Science department of IUT d’Orsay ; membre de la CCSU 27 (membre du Bureau) since 2012; membre élu au conseil d’Institut, IUT d’Orsay ; membre du Bureau du département Informatique de l’IUT d’Orsay since 2011.
- Anne Auger, membre du Conseil du Laboratoire de Recherche en Informatique since 2012;
- Philippe Caillou, membre élu du Conseil Scientifique de l’université since 2013, directeur des études à l’IUT de Sceaux since 2009
- Cécile Germain, membre élu du Conseil Scientifique de l’université since 2012, membre du Bureau, chargée de mission à l’Informatique Scientifique.
- Michèle Sebag, membre élu du Conseil du Laboratoire de Recherche en Informatique et membre de la CCSU 27 since 2004.
- Olivier Teytaud, représentant des B pour le comité d’évaluation du LRI.

Inria Saclay

- Anne Auger, membre de la Commission de Suivi Doctoral ; représentante du centre de Saclay à la Commission des Jeunes Chercheurs.
- Marc Schoenauer, Délégué Scientifique (aka VP Research) since 2010.
- Olivier Teytaud, TAO representative at CUMI since 2008.

9.1.2. Organisation of Conferences and Scientific Events

- *BBOB Black-Box Optimization Benchmarking* workshop at the ACM GECCO Genetic and Evolutionary Computation Conference, 2013, Anne Auger and Nikolaus Hansen, co-organizers.
- Dagstuhl Seminar 13271 *Theory of Evolutionary Algorithms*, 2013: Nikolaus Hansen, co-organizer.
- ACM-GECCO, ES-EP track, Anne Auger co-chair.
- Franco-Taiwanese 2013 meeting on AI, E-learning and power systems: <https://www.lri.fr/~teytaud/france2013.html>

9.2. Teaching - Supervision - Juries**9.2.1. Teaching**

- L1 (IUT Orsay, Univ. Paris-Sud), Computer Science, Jamal Atif, approx. 192h since 2010.
- L1-3 (Ecole Centrale Paris), Stochastic Optimization, Anne Auger, 20h since 2011.
- L1 (IUT Sceaux, Univ. Paris-Sud), Computer science for Managers, Philippe Caillou, approx. 192h since 2011.
- L2, L3 (Polytech, Univ. Paris-Sud), Computer Architecture, Cécile Germain-Renaud, head of Licence, approx. 120h since 2009.
- L2 Univ Paris-Sud, Vie Artificielle, Michèle Sebag, 10h in 2013.
- L3 (ENS-Cachan), Introduction to Machine Learning, Michèle Sebag, approx. 24h since 2011.
- M1 Computer Science (U. Paris-Sud), Parallelisme, Cécile Germain-Renaud, approx. 50h since 2009.
- M1 Computer Science MPRI, Machine Learning, Michèle Sebag, 25h since 2013.
- Master 2 Recherche (U. Paris-sud), Optimisation, Anne Auger, 12h since 2011.
- Master 2 Recherche (U. Paris-Sud), Machine Learning, Michèle Sebag, 24h since 2011.
- Master 2 Recherche (U. Paris-Sud), Evolutionary Robotics, MichèleSebag, 15h since 2013.
- Master 2 Recherche (U. Paris-Sud), Multi-Agents Systems, Philippe Caillou, 27h since 2011.
- Master 2 Recherche Paris-Dauphine, Multi-Agent Based Simulation, Philippe Caillou, 3h since 2011.

9.2.2. Supervision

- HdR: Jamal Atif, *Quelques contributions à l'interprétation d'images, à l'apprentissage statistique et à la cartographie cérébrale*, Université Paris-Sud, 31/10/2013
- PhD: Ludovic Arnold, *Learning Deep Representations: toward a new understanding of the deep learning paradigm*, 25/06/2013, Hélène Pagam-Moisy et Philippe Tarroux [1]
- PhD: Jean-Baptiste Hoock, *Contributions to Simulation-based High-dimensional Sequential Decision Making*, 10/4/2013, Olivier Teytaud [3]
- PhD: Ilya Loshchilov, *Surrogate-Assisted Evolutionary Algorithms*, 6/1/2013 [4]
- PhD: Jean-Marc Montanier, *Environment-driven Distributed Evolutionary Adaptation for Collective Robotic Systems*, 1/3/2013, Nicolas Bredèche [6]

- PhD: Victorin Martin, *Modélisation Probabiliste et Inférence par l'Algorithme Belief Propagation*, 23/5/2013, Cyril Furtlehner and Jean-Marc Lasgouttes [5]
- PhD: Adrien Couétoux, *Monte Carlo Tree Search (MCTS) for Continuous and Stochastic Sequential Decision Making Problems*, 30/9/2013, Olivier Teytaud [2]
- PhD in progress: Ouassim Ait Elhara, *Stochastic Black-Box Optimization and Benchmarking in Large Dimension*, 1/10/2012, Anne Auger and Nikolaus Hansen
- PhD in progress: Riad Akrou, *Preference Based Reinforcement Learning*, 1/11/2010, Marc Schoenauer and Michèle Sebag
- Sandra Cecilia Astete Morales, *Random Processes for Optimization with Risk*, 1/9/2013, Olivier Teytaud
- PhD in progress: Asma Atamna, *Analysis, Improvement and Benchmarking of Constraint Handling for Stochastic Blackbox Continuous Optimization*, 1/11/2013, Anne Auger and Nikolaus Hansen
- PhD in progress: Jérémy Bensadon, *Information theory for learning and optimization*, 1/10/2012, Yann Ollivier
- PhD in progress: Vincent Berthier, *Unsupervised Learning and Brain Wave Data*, 1/10/2013, Jamal Atif and Michèle Sebag
- PhD in progress: Marie-Liesse Cauwet, *Noisy Optimization for Artificial Intelligence*, 1/9/2013, Olivier Teytaud
- PhD in progress: Alexandre Chotard, *Enhancement and Analysis of Evolution Strategies*, 01.10.2011, Anne Auger and Nikolaus Hansen
- PhD in progress: Jérémie Decock, *Large Scale Constrained Direct Policy Search and Applications to Power Systems*, 3/10/2011, Olivier Teytaud
- PhD in progress: Dawei Feng, *Détection et diagnostic d'anomalies dans les systèmes répartis à grande échelle*, 1/10/2010, Germain-Renaud
- PhD in progress: Nicolas Galichet, *Risk-Aware Reinforcement Learning*, 1/10/2011, Michèle Sebag
- PhD in progress: Yoann Isaac, *Une approche non-supervisée pour la passage à l'échelle des interfaces cerveau-machine*, 1/10/2011, Jamal Atif and Michèle Sebag
- PhD in progress: Jialin Liu, *Portfolios of Noisy Optimization Algorithms*, 14/03/2013, Marc Schoenauer and Olivier Teytaud
- PhD in progress: Gaetan Marceau Caron, *Global Multi-objective Optimization in Air Traffic Control*, 14/12/2010, Marc Schoenauer
- PhD in progress: Weija Wang, *Multi-Objective Reinforcement Learning*, 1/10/2010, Michèle Sebag
- PhD in progress: Yifan Yang, *Jamal*, 1/9/2013, Jamal Atif
- PhD in progress: Guohua Zhang, *Curiosity-Driven Navigation in Evolutionary Robotics*, 1/9/2011, Michèle Sebag

9.2.3. Juries

- Marc Schoenauer, reviewer for Pawan Kumar Mudigonda's HDR, Ecole Normale Supérieure de Cachan, Nov. 2013
- Marc Schoenauer, external reviewer for Martin Pilat's PhD, Charles University, Prague, Czech Republic, July 2013 ; external reviewer for Tianjun Liao's PhD, Ecole Polytechnique de l'Université Libre de Bruxelles, Belgian, June 2013; jury member for Una Blenic's PhD at Université d'Angers, France, April 2013; external jury member for José Manuel Garcia-Nieto's PhD, University of Malaga, Spain, January 2013.
- Michèle Sebag, reviewer for Yuan Yang, Telecom ParisTech, June 2013; Emilie Morvant, Université Aix Marseille, June 2013; Floarea Serban, University of Zurich, Switzerland, 2013; Darko Cerepnalkoski, Josef Stefan Institute, Slovenia, Sept. 2013.

- Marc Schoenauer, reviewer for Irish Science Foundation, Project *Multi-core Attribute Grammatical Evolution* at University Limerick, July 2013
- Michèle Sebag, jury de recrutement CR Inria Lille, April 2013; jury de recrutement TelecomParisTech, June 2013; jury de promotion TelecomParisTech, Oct. 2013.
- Jamal Atif, Michèle Sebag, Olivier Teytaud, members of juries for MDC and PR hiring at Université Paris-Sud.
- Michèle Sebag, jury AAP Digiteo, March 2013.

9.3. Popularization

- Michèle Sebag is interviewed at the *Palais de la Découverte* about Artificial Intelligence, and the video, by "Société de production Stand Alone Media", is visible on YouTube at <http://www.youtube.com/watch?v=uEW32KikKJ8>; talk in "Questions de science et enjeux citoyens" (QSEC), opération culturelle de la région Île-de-France (Ulm, May 2013);
- Yann Ollivier co-organized a bi-monthly math seminar for undergrad students on Saturdays at Institut Henri Poincaré, with 100+ participants at each session.
- Yann Ollivier takes part in the organization of the European Union Contest for Young Scientists (science fair for high school students from 30+ countries organized by the European Commission).
- Yann Ollivier was part of the scientific steering committee for the booklet *L'explosion des mathématiques* presenting a wide range of applications of mathematics, edited by the SMF and SMAI (planned diffusion: 10,000–20,000 copies).

TASC Project-Team

9. Dissemination

9.1. Scientific Animation

- **Nicolas Beldiceanu:**
 - Head of the Inria **TASC** team and **LINATASC** team.
 - Member of the program committee of **CP 2013**.
 - Member of the program committee of **CPAIOR 2013**.
 - Member of the program committee of **CPAIOR 2014**.
 - Member of the program committee of CP 2014.
 - Reviewer for the **Constraints Journal**.
- **Frédéric Benhamou:**
 - **Vice-President for Research of Nantes University**, France.
- **Gilles Chabert:**
 - Member of the program committee of **JFPC 2013**.
 - Reviewer for **CP 2013**.
 - Reviewer for **IJCAI 2013**.
 - Supervision PhD committee Aymeric Bethencourt (ENSTA Bretagne), **Gilles Chabert**.
 - Supervision PhD committee of Remy Guyonneau (ISTIA Angers), **Gilles Chabert**.
- **Sophie Demassey:**
 - Member of the application track program committee of **CP 2013**.
- Jean-Guillaume Fages:
 - Member of the program committee of **JFPC 2014**.
- **Narendra Jussien:**
 - Head of the computer science department at **EMN**.
 - Director of the series *Operations Research and Constraint Programming* from **ISTE/Wiley**.
 - Member of the program committee of **CP 2013**.
 - Member of the program committee of **CPAIOR 2013**.
- **Xavier Lorca:**
 - Member of the program committee of **JFPC 2013**.
 - Managing the topic *constraints and optimization* within the **LINA**.
 - Member of the **LINA** lab council.
 - Reviewer for **IJCAI 2013**.
 - Reviewer for **RAIRO**.
 - Reviewer for the **Constraints Journal**.
- **Eric Monfroy:**
 - Co-chair of the **ACM SAC** CSP track 2013.
 - Co-chair of the **ACM SAC** CSP track 2014.
 - Member of the program committee of **CHR 2013**.

- Member of the program committee of **JFPC 2013**.
- Reviewer for IEEE TEC.
- Reviewer for Information Sciences (Elsevier).
- Co-Editor of the CP Newsletter (until July 2013).
- Member of the *Conseil d'Administration* of the AFPC.
- Charles Prud'Homme:
 - Member of the program committee of **JFPC 2014**.
- Florian Richoux:
 - Member of the program committee of **Learning and Intelligent Optimization Conference" 2014 (LION 8)**.
 - Member of the program committee of **ACM Symposium On Applied Computing 2014 (SAC'14)**.
 - Member of the program committee of **JFPC 2014**.
 - Reviewer for the journal IEEE Transactions on Computational Intelligence and AI in games.
 - Reviewer for the conference **CP 2013**.
- Thierry Petit:
 - Co head of the LINA TASC team.
 - Member of the program committee of **CP 2013**.
 - Member of the program committee of **CPAIOR 2014**.
 - Member of the program committee of **ECAI 2014**.
 - Program chair of **JFPC 2014**.
 - Reviewer for the **Constraints Journal**.
- Charlotte Truchet:
 - Equal Opportunity Officer for Nantes University since October 2012, for gender equality issues.
 - Program chair of **JFPC 2013**.
 - Member of the program committee of **JFPC 2014**.
 - Reviewer for **IJCAI 2013**.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: **N. Beldiceanu**, Constraint (**Master ORO**), 30h, M2, Nantes University, France.

Master: **N. Beldiceanu**, Logic Programming, 32h, M2, Mines de Nantes, France.

Master: **N. Beldiceanu**, Gipad end project, 8h, M2, Mines de Nantes, France.

Licence: **N. Beldiceanu**, Imperative Programming, 12h, L3, Mines de Nantes, France.

Licence: **N. Beldiceanu**, Interface, 12h, L3, Mines de Nantes, France.

Master: **G. Chabert**, Non-linear programming, 20h, M2, Mines de Nantes, France.

Master: **G. Chabert**, Non-linear optimization, 20h, M1, Mines de Nantes, France.

Master: **G. Chabert**, Non-linear optimization, 24h, M1, Nantes University, France.

Licence: **G. Chabert**, Variational calculus, 12h, L3, Mines de Nantes, France.

Licence: **G. Chabert**, Numerical methods, 21h, L3, Mines de Nantes, France.

- Licence: **G. Chabert**, Simulation and parameter estimation, 18h, L3, Mines de Nantes, France.
- Licence: **G. Chabert**, Numerical integration, 15h, L3, Mines de Nantes, France.
- Licence: **G. Chabert**, Supervisions of projects, 66h.
- Master: **X. Lorca**, Head of the major of the Master in Engineering, Computer Science for Decision Support, 30h, M2, Mines de Nantes, France.
- Master: **X. Lorca**, Algorithms and Complexity, 20h, M1, Mines de Nantes, France.
- Master: **X. Lorca**, Data Warehouse and Data Analysis, 20h, M1, Mines de Nantes, France.
- Master: **X. Lorca**, Graph Theory, Algorithms, 20h, M1, Mines de Nantes, France.
- Master: **X. Lorca**, Business Intelligence, 20h, M2, Mines de Nantes, France.
- Master: **X. Lorca**, IT System and Software Development, 20h, M2, Mines de Nantes, France.
- Master: **X. Lorca**, Implementation Project, 20h, M2, Mines de Nantes, France.
- Licence: **E. Monfroy**, Algorithm, 40h, L1, Nantes University, France.
- Licence: **E. Monfroy**, Algorithm 2, 16h, L2, Nantes University, France.
- Licence: **E. Monfroy**, Logic, 40h, L2, Nantes University, France.
- Licence: **E. Monfroy**, Language theory, 96h, L3, Nantes University, France.
- Master: **T. Petit**, Director of the Discrete Optimization degree, M2, GIPAD, Mines Nantes, France.
- Master: **T. Petit**, Director of the Artificial Intelligence and Constraint Programming degree, M2, GIPAD, Mines Nantes, France.
- Master: **T. Petit**, Scheduling and optimization, M2, 18h, Mines de Nantes, France.
- Master: **T. Petit**, Constraint Programming in Choco, M2, 20h, Mines de Nantes, France.
- Master: **T. Petit**, Supervisor of two final 6 months projects, M2, 12h, Mines de Nantes, France.
- Licence: **T. Petit**, Data structures, L2, 20h, Mines de Nantes, France.
- Licence: **T. Petit**, SQL, L2, 19h, Mines de Nantes, France.
- Licence: **T. Petit**, HMI, L2, 13h, Mines de Nantes, France.
- Licence: **T. Petit**, Data processing integration in HMI, L2, 10h, Mines de Nantes, France.
- Licence: **T. Petit**, Java, L1, 40h, Mines de Nantes, France.
- Licence: **T. Petit**, IPIPIP project, L1, 5h, Mines de Nantes, France.
- Licence: **T. Petit**, ACDC project, L1, 7.5h, Mines de Nantes, France.
- Master: **F. Richoux**, Constraint Programming, 12h, M2, University of Nantes, France.
- Licence: **F. Richoux**, Design Patterns in Object-Oriented Programming, 86h, L3, University of Nantes, France.
- Licence: **F. Richoux**, Algorithm and Data Structures, 45h, L2, University of Nantes, France.
- Licence: **F. Richoux**, Introduction to Computer Science, 28h, L1, University of Nantes, France.
- Licence: **Charlotte Truchet**, Algorithms and Programming, 46h, L1, University of Nantes, France.

9.2.2. Supervision

- PhD: Arnaud Letort, Scalable multi-dimensional resources scheduling constraints [11], Nantes University, October 28 2013, **Nicolas Beldiceanu**.
- Internship of Julie Laniau with Charlotte Truchet on *using constraints for checking audio real time programs* (from February 2013 to June 2013).
- PhD in progress: Bruno Belin, Interactive conception of sustainable urban environments with constraints, September 2011, **Charlotte Truchet**, Marc Christie, **Frédéric Benhamou**.
- PhD in progress: Jean Guillaume Fages, Graph Theory in Constraint Programming, Theory and application to several graph covering problems, October 2011, **Xavier Lorca**, **Nicolas Beldiceanu**.

PhD in progress: **Charles Prud'Homme**, Controlling Propagation and Search within a Constraint Solver, October 2011, **Xavier Lorca**, **Narendra Jussien**, **Rémi Douence**, defense planned for February 2014.

PhD in progress: Alban Derrien, Constraint propagation with limited time complexity, October 2012, **Thierry Petit**, **Nicolas Beldiceanu**.

PhD in progress: Ignacio Sala Donoso, Packing curved shapes, May 2013, **Gilles Chabert**, **Nicolas Beldiceanu**.

PhD in progress: Alejandro Reyes Amaro, New parallel algorithms for combinatorial optimization, October 2013, **Florian Richoux**, **Eric Monfroy**.

9.2.3. Juries

- **N. Beldiceanu**, Member of the PhD committee of the thesis of Arnaud Letort (Univ. Nantes, October 28, 2013).
- **G. Chabert**, Member of the PhD committee of the thesis of Remy Guyonneau (ISTIA Angers).

9.3. Popularization

- Within the context of the **global constraint catalog**:
 - we provide more exercises (up to 55 currently) with their solution and a web version allowing some interaction will be available in spring 2014.
 - the effort for converting and completing the 900 figures of the catalog using **TikZ** has been continued up to a point where beginning 2014 only 150 figures need still to be converted.
- Within the context of the library **IBEX** the following courses were given:
 - A workshop in June and December 2013 in Brest (ENSTA).
 - A user oriented course in July 2013 at the doctoral days of the GDR Macs in Strasbourg.
 - A developer oriented course *IBEX days* in October 2013 in Paris (Ecole des Ponts, Paritech).
- A the 2013 edition of the Fête de la Science (Nantes University):
 - Two talks on *Artificial Intelligence and real time strategy games* were given by Florian Richoux.
 - One talk on *Challenges around optimizations problems* was given by Xavier Lorca.
 - One half day discussing and answering questions around the work of professor and researcher in computer science with young persons (17 years old) was spent by Nicolas Beldiceanu.

TEXMEX Project-Team

9. Dissemination

9.1. Scientific Animation

Laurent Amsaleg

- was a reviewer for TPAMI in 2013;
- was a reviewer for Information Systems in 2013;
- was a reviewer for Multimedia Tools and Applications in 2013;
- was a program committee member of ICMR 2013;
- was a program committee member of MMM 2013;
- was a program committee member of CBMI 2013;
- was a program committee member of ICME 2013;
- was a program committee member of SISAP 2013;
- was a program committee member of SITIS 2013.

Vincent Claveau

- is a member of the editorial board of the journal *Traitement Automatique des Langues*;
- is a board member of Association pour la Recherche d'Information et Applications;
- was a program committee member of Conf. francophone en Traitement automatique des langues naturelles, France;
- was a program committee member of Conf. en Recherche d'Information et Applications, Switzerland;
- was a program committee member of ISCA/IEEE Workshop on Speech, Language and Audio in Multimedia, France;
- was a reviewer for the journal *BioInformatics*;
- was a reviewer for the journal *Technique et Science Informatique*;
- was a editorial committee member of the special issue *Fouille de Données et Humanités Numériques* of the RNTI journal;
- was a reviewer for Hubert Curien program.

Teddy Furon

- was an associate editor for *IEEE Trans. on Information Forensics and Security*;
- was an associate editor for *Elsevier Digital Signal Processing Journal*;
- was an associate editor for *Hindawi Scientific World Journal*;
- was a member of the *IEEE Information Forensics and Security Technical Committee*;
- was a program committee member of *IHMMSEC 2013*;
- was a program committee member of *CMS 2013*;
- was a program committee member of *WIFS 2013*.

Guillaume Gravier

- is president of the administration council of the French-speaking speech communication association (AFCP);
- is the coordinator of the Special Interest Group Speech and Language in Multimedia of the Intl. Speech Communication Association;
- is a member of the informal coordination group of the Mediaeval benchmarking initiative;
- was a member of the steering committee of Interspeech 2013, in charge of tutorials, special sessions and program coordination;
- was the general chair of the ISCA/IEEE Workshop on Speech, Language and Audio in Multimedia;
- was a program committee member of ACM Conf. on Multimedia;
- was a program committee member of IEEE Intl. Conf. on Multimedia Signal Processing;
- was a program committee member of ISCA Intl. Workshop on Non-Linear Speech Processing;
- was a program committee member of Interspeech;
- was a program committee member of IEEE Intl. Conf. on Multimedia and Expo;
- was a program committee member of Intl. Workshop on Content-based Multimedia Indexing;
- was a program committee member of Intl. Language Resources and Evaluation Conf.;
- was a program committee member of GRETSI;

Patrick Gros

- is scientific officer of the Inria research center of Rennes – Bretagne Atlantique, and thus member of the executive board of the center;
- is a member of the scientific board of Université européenne de Bretagne;
- is a member of the Evaluation Board of Inria;
- was appointed as an expert by the French National Agency;
- was a program committee member of the Intl. Conf. on Creative Content Technologies, Spain;
- was a program committee member of Conférence en Recherche d'Information et Applications, Switzerland;
- was a Technical Program Committee member of the European Signal Processing Conf. Morocco;
- was a program committee member of the ACM Int. Conf. on Multimedia Retrieval, USA;
- was a program committee member of Int. Conf. on Machine Learning and Data Mining, Germany;
- was a program committee member of the MUSCLE Intl. Workshop on Computational Intelligence for Multimedia Understanding, Turkey;
- was a program committee member of GRETSI workshop, France.

Hervé Jégou

- has co-organized a tutorial on Large-Scale Visual Recognition at CVPR 2013;
- was a program committee member of CVPR 2013;
- was a program committee member of ICCV 2013;
- was a program committee member of CBMI 2013;
- was a program committee member of CORESA 2013;
- was a program committee member of FGCV 2013;

François Poulet

- was a program committee member of VINCI'2013;
- was a program committee member of AusDM'2013;
- was a program committee member of KDIR'2013;
- was a program committee member of KICSS'2013;
- was a program committee member of IC3K'2013;
- is a reviewing committee member of AKDM, Springer;
- was a reviewer for DAMI, Data Mining, Springer;
- was a reviewer for IJSS, International Journal of System Science;
- was a reviewer for RNTI, Revue des Nouvelles Technologies de l'Information;

Christian Raymond

- is a member of the editorial board of the journal Discours;
- was a member of the organization committee of ISCA/IEEE Workshop on Speech, Language and Audio in Multimedia;
- was a program committee member of Interspeech;
- was a reviewer for IEEE Transaction on Speech, Language and Audio Processing;
- was a reviewer for the Journal Traitement Automatique des Langues;
- was a program committee member of Conf. francophone en Traitement Automatique des Langues Naturelles;
- was a program committee member of Intl. Conf. on Machine Learning and Applications.

Pascale Sébillot

- was a member of the program committee of Conf. francophone en Traitement automatique des langues naturelles, France;
- was a member of the program committee of Workshop on Distributional Semantics, France;
- was a member of the program committee of Conf. Terminologie et Intelligence Artificielle, France;
- was a member of the program committee of ISCA/IEEE Workshop on Speech, Language and Audio in Multimedia, France;
- is a member of the permanent steering committee of Conf. francophone en Traitement automatique des langues naturelles
- is an editorial committee member of the Journal Traitement Automatique des Langues;
- was a member of the reading committee of several issues of the Journal Traitement Automatique des Langues.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

9.2.1.1. Course and track responsibilities

Ewa Kijak is head of the Image engineering track of ESIR (Ecole Supérieure d'Ingénieur de Rennes), the engineering school of University of Rennes 1, France.

Guillaume Gravier is coordinator of the course "Data analysis and probabilistic models" of the Master by research in Computer Science (2nd year), University of Rennes 1, France.

Patrick Gros is coordinator of the track "From Data to Knowledge: Machine Learning, Modeling and Indexing Multimedia Contents and Symbolic Data" of the Master by research in Computer Science (2nd year), University of Rennes 1, France.

Francois Poulet is head of Master 2 Mitic, Computer Science Methods and ICT.

9.2.1.2. List of courses

Master: Laurent Amsaleg, High-Dimensional Indexing, 13h, M2R, University Rennes 1, France

Master: Laurent Amsaleg, DataBase tuning, 10h, M2, ENSAI, France

Master: Vincent Claveau, Indexing and multimedia databases, 15h, M2, ENSSAT

Master: Vincent Claveau, Natural Language Processing, 36h, M2, Univ. Rennes 1

Master: Vincent Claveau, Data-Based Knowledge Acquisition 2: Symbolic Methods, 27 hours, M1, INSA de Rennes

Master: Vincent Claveau, Symbolic and sequential data, 10h, M2R, University of Rennes 1

Master: Vincent Claveau, Multimedia indexing and machine learning, M2, 10 hours, University Rennes 1

Master: Ewa Kijak, Image analysis and classification, 30h, M1, ESIR

Master: Ewa Kijak, Image processing, 34h, M1, ESIR

Master: Ewa Kijak, Supervised learning, 16h, M2R, University Rennes 1

Master: Ewa Kijak, Statistical data mining, 26h, M2, University Rennes 1

Master: Ewa Kijak, Indexing and multimedia databases, 15h, M2, ENSSAT

Master: Guillaume Gravier, Data analysis and probabilistic models, 20h, M2, Univ. Rennes 1

Master: Guillaume Gravier, Speech and audio processing, 4h, M1, ESILV

Master: Patrick Gros, Mathematics workshop, 12h, ISTIC, University of Rennes 1

Doctorate: Patrick Gros, Introduction to projective geometry for computer vision and imagery, 12h, University of Rennes 1

Master: François Poulet, Introduction to Data Mining, 21h, M2, ISTIC, University of Rennes 1

Master: François Poulet, Visual Data Mining, 14h, M2, ISTIC, University of Rennes 1

Master: François Poulet, Machine Learning for Multimedia Data, 28h, M2 ISTIC, University of Rennes 1

Master: François Poulet, Visual Analytics, 21h, M2, ISTIC, University of Rennes 1

Master: François Poulet, Large Scale Classification, 11h, M2, ISTIC, University of Rennes 1

Master: Pascale Sébillot, Advanced Databases and Modern Information Systems, 70h, M2, INSA de Rennes

Master: Pascale Sébillot, Data-Based Knowledge Acquisition 2: Symbolic Methods, 18h, M1, INSA de Rennes

9.2.2. Supervision

PhD: Khaoula Elagouni, Combining neural-based approaches and linguistic knowledge for text recognition in multimedia documents, INSA de Rennes, May 28, 2013, Pascale Sébillot, Christophe Garcia (LIRIS, Lyon) and Franck Mamalet (Orange Labs, Rennes)

PhD: Cédric Penet, De l'indexation d'évènements dans des films - Application à la détection de violence, Université Rennes 1, October 10, 2013, Guillaume Gravier, Patrick Gros and Claire-Hélène Demarty (Technicolor)

PhD: Gylfi Gudmunson, Parallelism and distribution for very large scale content-based image retrieval, Université Rennes 1, September 12, 2013, Laurent Amsaleg and Patrick Gros

PhD: Thanh-Nghi Doan: Large Scale Support Vector Machine Algorithms for Visual Classification, University of Rennes 1, Nov.2013, Francois Poulet

PhD in progress: Raghavendran Balu, started October 2013, Teddy Furon and Laurent Amsaleg

PhD in progress: Petra Bosilj, Video description and retrieval, started October 2012, Ewa Kijak and Sebastien Lefèvre (IRISA/SEASIDE)

PhD in progress: Mihir Jain, Video description and retrieval, started February 2011, Hervé Jegou

PhD in progress: Ludivine Kuznik, Structuration et navigation dans des archives documentaires, started April 18, 2011, Guillaume Gravier, Pascale Sébillot and Jean Carrive (INA)

PhD in progress: Abir Ncibi, Machine learning models for TV stream structuring, started October 2011, Vincent Claveau, Guillaume Gravier, Patrick Gros

PhD in progress: Bingqing Qu, Structure discovery of TV programs from an homogeneous collection, started October 2012, Guillaume Gravier and Jean Carrive (INA)

PhD in progress: Anca Roxana Simon, Hierarchical semantic structuring of video collections, started October 1, 2012, Guillaume Gravier and Pascale Sébillot

PhD in progress: Stefan Ziegler, Landmark-driven speech recognition, started September 2010, Guillaume Gravier (with PANAMA)

9.2.3. Juries

Laurent Amsaleg, PhD, Zineddine Kouahla, Univ. Nantes

Guillaume Gravier, PhD, reviewer, A. Abduraman, Eurecom

Guillaume Gravier, PhD, M. Bouallègue, Univ. Avignon

Guillaume Gravier, HDR, reviewer, P. Paroubek, Univ. Paris-Sud

Hervé Jégou, PhD, Stefan Gammeter, ETHZ

Hervé Jégou, PhD, Relja Arandjelovic, Oxford University

Hervé Jégou, PhD, Albert Gordo, UAB

Francois Poulet, PhD, reviewer, Sébastien Heymann, UMPC-LIP6

Pascale Sébillot, HDR, reviewer, Pierre Beust, Caen Basse Normandie university

Pascale Sébillot, PhD, president, Antoine Boutet, Rennes 1 university

Pascale Sébillot, PhD, reviewer, Wei Wang, Paris-Sud university

Pascale Sébillot, PhD, reviewer, Prajol Shrestha, Nantes university

Pascale Sébillot, PhD, reviewer and president, Fanny Lalleman, Toulouse university

Pascale Sébillot, PhD, reviewer, Nicolas Foucault, Paris-Sud university

9.3. Popularization

- Guillaume Gravier, Patrick Gros and Hervé Jégou: Invited talks at INA, January 2013
- Guillaume Gravier: Invited speaker at Séminaire Délégation Générale pour l'Armement, Paris
- Guillaume Gravier: Invited talk at PUC Minas, Brazil, April 2013
- Guillaume Gravier: Seminar on Speech and Audio Processing, M. Sc. Students, INSA Rennes, France
- Patrick Gros and Pascale Sébillot: Invited speakers at the workshop on Big Data, ENSAI, Rennes, France, November 2013.
- Guillaume Gravier: Invited speaker at Colloquium Rennais des Sciences du numérique, Rennes
- Hervé Jégou: Invited talk at Universita Autonoma de Barcelona, January 2013
- Hervé Jégou: Invited talk at University of Caen, January 2013
- Hervé Jégou: Invited talk at Oxford University, Visual Geometry Group, UK, November 2013

TITANE Team

9. Dissemination

9.1. Scientific Animation

Pierre Alliez, Clément Jamin, Manish Mandad and Thijs van Lankveld have contributed to the organization of Digital Heritage 2013 held in Marseille, October 28 to November 1st.

Pierre Alliez was a paper committee member of EUROGRAPHICS Symposium on Geometry Processing, ACM Virtual Reality International Conference and Shape Modeling International. He is an associate editor of ACM Transactions on Graphics since 2009, and of Elsevier Graphical Models since 2010. This year he joined the editorial board of Computer Aided Geometric Design.

David Bommès was a paper committee member of EUROGRAPHICS Symposium on Geometry Processing, Shape Modeling International, EUROGRAPHICS short papers, ACM SIGGRAPH Asia technical briefs and posters and Digital Heritage.

Florent Lafarge was a paper committee member of ISPRS workshop on City Models, Roads and Traffic, ACM SIGGRAPH Asia technical briefs and posters, CAD/Graphics, Laser Scanning, Digital Heritage and Indoor3D, and a reviewer for CVPR and ICCV.

9.2. Seminars and invited talks

Florent Lafarge gave seminars at the University of Auckland (New Zealand), UCL (United Kingdom) and ETH Zurich (Switzerland). He was a keynote speaker at ISPRS SSG'13 in Antalya (Turkey).

9.3. Teaching - Supervision - Juries

9.3.1. Teaching

Master : Pierre Alliez, Algorithmes géométriques - théorie et pratique, 9h, M2, university Nice Sophia Antipolis, France.

Master : Pierre Alliez and Florent Lafarge, 3D Meshes and Applications, 32h, M2, Ecole des Ponts ParisTech, France.

Master : Pierre Alliez, Mathématiques pour la géométrie, 30h, M2, EFREI, France.

Master : Florent Lafarge, Traitement d'images numériques, 9h, M2, university Nice Sophia Antipolis, France.

Master : Florent Lafarge, Imagerie numérique, 10h, M2, university Nice Sophia Antipolis, France.

9.3.2. Supervision

PhD : Yannick Verdie, Urban scene modeling from airborne data, University of Nice Sophia Antipolis, October 15, Florent Lafarge and Josiane Zérubia.

PhD in progress : Simon Giraudot, Noise-adaptive shape reconstruction, October 2011, Pierre Alliez.

PhD in progress : Xavier Rolland-Neviere, watermarking of 3D models, October 2011, Pierre Alliez.

PhD in progress : Manish Mandad, Shape approximation with guarantees, October 2012, Pierre Alliez.

PhD in progress : Sven Oesau, reconstruction of indoor scenes, October 2012, Florent Lafarge and Pierre Alliez.

PhD in progress : Dorothy Duan, Semantized Elevation Maps, October 2013, Florent Lafarge and Pierre Alliez.

9.3.3. Juries

Pierre Alliez:

- Thesis committee: Ricardo Uribe-Lobello (LIRIS, CNRS Lyon).
- Thesis committee: Yannick Verdie (Inria).
- Thesis reviewer: Thijs van Lankveld (Utrecht University).
- Thesis committee: Adrien Maglo (Centrale Paris).
- Thesis committee: Noura Faraj (Telecom ParisTech).
- HDR thesis reviewer: Guillaume Lavoue (Universite Lyon).

9.4. Popularization

Florent Lafarge gave talks to high school students on city modeling (Lycee Tocqueville, Lycee De La Montagne, and Stage MathC2+). He is a member of the editorial board of LISA (Inria SAM newsletter).

TOCCATA Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Event Organization

- C. Marché organizer of the first DigiCosme Spring School (<http://labex-digicosme.fr/Spring+School+2013>) whose theme is *Program Analysis and Verification* in April 2013.
- C. Paulin, organizer with D. Pichardie and S. Blazy of the 4th Conference on Interactive Theorem Proving (<http://itp2013.inria.fr/>) in July 2013.
- C. Paulin, organizer with Zhong Shao (Yale Univ.) of the workshop “Certification of high-level and low-level programs” July 7-11, 2014, as part of the Institut Henri Poincaré thematic trimester on Semantics of proofs and certified mathematics <https://ihp2014.pps.univ-paris-diderot.fr>.

9.1.2. Editorial boards

- S. Boldo, member of the editorial committee of the popular science web site *interstices*, <http://interstices.info/>.
- J.-C. Filliâtre is member of the editorial board of the *Journal of Functional Programming*.
- C. Paulin, member of the editorial board of the *Journal of Formalized Reasoning*.

9.1.3. Learned societies

- J.-C. Filliâtre is a member of IFIP Working Group 1.9/2.15 (Verified Software)

9.1.4. Program committees

- É. Contejean, member of the program committee of the 24th International Conference on Automated Deduction (CADE 24, <http://www.cade-24.info/>), member of the program committee of the ACM SIGPLAN 2014 Workshop on Partial Evaluation and Program Manipulation (PEPM 2014, <http://www.program-transformation.org/PEPM14>), and member of the program committee of the 13th International Workshop on Termination (WST 2013, <http://www.imn.htwk-leipzig.de/WST2013/>).
- C. Marché, *Tool Chair* of the program committee of the 19th International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS 2013, Rome, Italy, <http://www.etaps.org/index.php/2013/tacas>), part of the ETAPS joint Conference. The tool chair is responsible for the evaluation and selection of tool papers and tool demonstrations, following precise guidelines given in the call for papers. This initiative of TACAS aims at making the selection of such submissions more accurate (<http://www.etaps.org/index.php/2013/tacas/tacas13-tool-papers-menu>).
- C. Paulin, member of the program committees of the fourth and fifth conferences on Interactive Theorem Proving (ITP 2013, <http://itp2013.inria.fr/> and ITP 2014 <http://www.cs.uwyo.edu/~ruben/itp-2014/>).
- J.-C. Filliâtre is a member of the program committees of the 5th NASA Formal Methods Symposium (NFM 2013), Certified Programs and Proofs (CPP 2013), Symposium on Languages, Applications and Technologies (SLATE 2013), VeriSure: Verification and Assurance (2013), and the 5th Working Conference on Verified Software: Theories, Tools and Experiments (VSTTE 2013).
- A. Paskevich is a member of the program committee of the 3rd International Workshop on Proof Exchange for Theorem Proving (PxTP 2013) affiliated with the CADE-24 conference.

9.1.5. Invited Presentations

- J.-C. Filliâtre, “One logic to use them all”, CADE-24, Lake Placid, USA, June 2013 [19].

- J.-C. Filliâtre, “Deductive Program Verification”, PLMW 2013, Rome, Italy, January 2013 [18].
- S. Boldo, “Formal proofs and the 1D wave equation”, MOISE seminar, Grenoble, January 10th.
- S. Boldo, “Formal verification of numerical programs”, long talk at the Journées du GDR IM, Lyon, January 21st.
- É. Contejean, “A first Coq mechanized course in relational databases”, ANR Typex, Paris, December 17th.
- C. Lelay, “Real Analysis in Coq”, LIX PhD seminar, Palaiseau, September 27th.
- G. Melquiond, “Formal Proof of Numerical Properties and Automation”, CEA LSL seminar, Gif-sur-Yvette, February 26th.
- G. Melquiond, “Formal Proof and Interval Arithmetic, a Virtuous Circle”, College of Engineering, University of Texas, El Paso, USA, April 12th.
- G. Melquiond, “What is in Store for Coq.Interval”, ANR Tamadi, Lyon, July 16th.
- G. Melquiond, “Automations for Verifying Floating-point Algorithms in Coq”, the 5th Coq Workshop, Rennes, July 22th.
- S. Conchon, “Cubicle: Design and Implementation of an SMT based Model Checker for Parameterized Systems”, SMT Workshop 2013, Helsinki, Finland, July 9th.
- A. Paskevich, “Deductive Program Verification with Why3”, IRISA seminar, Rennes, October 10th.
- S. Conchon and A. Paskevich, “Savoir-faire et logiciels open source — Toccata”, Open World Forum, “Rencontre Inria-Industrie sur la qualité logicielle”, Montrouge, October 4th.
- C. Dross, “Defining new theories in SMT solvers using first-order axioms with triggers”, CEA LSL seminar, Gif-sur-Yvette, November 12th.

9.2. Interaction with the scientific community

9.2.1. Collective Responsibilities within Inria

- S. Boldo, elected member of the Inria Evaluation Committee. She was in the committee in charge of selecting the Inria permanent researchers (CR2) in Sophia and Saclay.
- S. Boldo was in the committee in charge of upgrading an Inria support staff at the IR level (*ingénieur de recherche*), which is the highest level for support staff.
- S. Boldo, member of the CLFP, *comité local de formation permanente*.
- S. Boldo and A. Charguéraud, members of the committee for the monitoring of PhD students (*commission de suivi des doctorants*).
- S. Boldo, scientific head for Saclay for the MECSI group for networking about computer science popularization inside Inria.
- S. Boldo, member of the popularization committee, *comité de médiation scientifique*, of Inria.

9.2.2. Collective Responsibilities outside Inria

- A. Charguéraud is vice-president of *France-IOI*, a non-profit organization in charge of the selection and the training of the French team to the International Olympiads in Informatics. France-IOI also provides online exercises in programming and algorithmics — in average, more than 70,000 such exercises are solved every month on the website.
- A. Charguéraud is a board member of the non-profit organization *Animath*, which aims at developing interest in mathematics among young students.
- É. Contejean and C. Marché, nominated members of the “*conseil du laboratoire*” of LRI since April 2010.
- É. Contejean, elected member of the “*section 6 du Comité National de la Recherche Scientifique*” since September 2012.

- C. Lelay, elected member of the “*conseil du laboratoire*” of LRI since November 2011.
- C. Lelay, elected representative of the students at the Doctoral School in Computer Science at University Paris-Sud from November 2011 to November 2013.
- C. Marché (since April 2007) and C. Paulin (since September 2010), members of the program committee of Digiteo Labs, the world-class research park in *Île-de-France* region dedicated to information and communication science and technology, <http://www.digiteo.fr/>. C. Marché, president of this committee since July 2013.
- C. Marché and S. Boldo, members of the “*jury de l’agrégation externe de mathématiques*” as experts in computer science, since 2012.
- G. Melquiond and C. Paulin, members of the “*commission consultative de spécialistes de l’université*”, Section 27, University Paris-Sud since April 2010.
- G. Melquiond, elected officer of the IEEE-1788 standardization committee on interval arithmetic since 2008.
- C. Paulin, scientific leader of Labex DigiCosme <http://labex-digicosme.fr> (Digital Worlds Distributed data, programs and architectures), a project launched by the French Ministry of research and higher education as part of the program “Investissements d’avenir”, it involves the 14 research units in computer science and communications from the “Paris-Saclay” cluster.
- C. Paulin, president of the Computer Science Department of the University Paris-Sud <https://www.dep-informatique.u-psud.fr/>, since February 2012.
- C. Paulin, president of the assembly of directors of graduate schools at the Université Paris-Sud since September 2012.
- J.-C. Filliâtre is *correcteur au concours d’entrée à l’École Polytechnique* (computer science examiner for the entrance exam at École Polytechnique) since 2008.
- A. Paskevich is in charge (together with C. Bastoul in 2012–2013 and B. Cautis in 2013–2014) of Licence professionnelle PER (L3) at IUT d’Orsay, Paris-Sud University since September 2012.

9.3. Teaching - Supervision - Juries

9.3.1. Teaching

Licence (L2): “Principes d’interprétation des langages”, C. Dross (30h), Université Paris-Sud, France

Licence (L2): “Mathématiques pour l’Informatique”, C. Paulin (64h), M. Iguernelala (10h), A. Tafat (10h), Université Paris-Sud, France

Licence (L3): “Eléments de logique pour l’informatique”, C. Paulin (32h), Université Paris-Sud, France

Licence (L3): “Programmation fonctionnelle”, C. Dross (4h), Université Paris-Sud, France

Licence Professionnelle «Programmation en environnements répartis» (LP PER): “Programmation concurrente” (L3Pro), A. Paskevich (36h), IUT d’Orsay, Université Paris-Sud, France

Licence (L3): “Programmation fonctionnelle”, M. Clochard (15h), ENSIIE, France

Master (M1): “Projet de Programmation”, A. Tafat (42h), Université Paris-Sud, France

Master (M1): “Compilation”, A. Tafat (28h), Université Paris-Sud, France

Master (M1): “Complément objet”, A. Tafat (12h), Polytech, Université Paris-Sud, France

Master (M1): “Compilation”, A. Tafat (12h), Polytech, Université Paris-Sud, France

Master (M1): “Projet de Compilation”, A. Tafat (12h), Polytech, Université Paris-Sud, France

Master (M2Pro): “XML et Programmation Internet”, A. Tafat (13h), Université Paris-Sud, France

Master (M2-agrégation): “Logique”, C. Paulin (21h), Université Paris-Sud and ENS Cachan, France

Master Parisien de Recherche en Informatique (MPRI) <https://wikimpri.dptinfo.ens-cachan.fr/doku.php>: “Automated Deduction” (M2-5), S. Conchon (9h), É. Contejean (3h), Université Paris 7, France.

Master Parisien de Recherche en Informatique (MPRI) <https://wikimpri.dptinfo.ens-cachan.fr/doku.php>: “Proofs of Programs” <http://www.lri.fr/~marche/MPRI-2-36-1/> (M2), C. Marché (12h), G. Melquiond (12h), Université Paris 7, France.

DUT (Diplôme Universitaire de Technologie): “Structures de données et algorithmique fondamentale” (S1), C. Lelay (38h, “moniteur” position), IUT d’Orsay, Université Paris-Sud, France.

DUT (Diplôme Universitaire de Technologie): “Introduction aux systèmes informatiques” (S1), A. Paskevich (97h), C. Lelay (30h), IUT d’Orsay, Université Paris-Sud, France.

DUT (Diplôme Universitaire de Technologie): “Programmation système” (S4), A. Paskevich (48h), IUT d’Orsay, Université Paris-Sud, France.

Teaching teachers (“Formation de formateurs”) S. Boldo (3h) January 17th

École Jeunes Chercheurs en Programmation (EJCP 2013): J.-C. Filliâtre, “Deductive Program Verification with Why3” (4h) <http://why3.lri.fr/ejcp-2013/>.

Licence: “Langages de programmation et compilation” (L3), J.-C. Filliâtre (36h), École Normale Supérieure, France

Licence: “INF421: Les bases de l’algorithmique et de la programmation” (L3) et “INF431” (L3), J.-C. Filliâtre (70h), École Polytechnique, France

9.3.2. Supervision

PhD: P. Herms, “Certification of a Tool Chain for Verification of C programs” [12], Univ. Paris-Sud Jan. 14, 2013, C. Marché, B. Monate (CEA-LIST)

PhD: M. Iguernelala, “Strengthening the heart of an SMT-solver: Design and implementation of efficient decision procedures” [13], Univ. Paris-Sud, June 10, 2013, S. Conchon, É. Contejean

PhD: A. Tafat, “Preuve par raffinement de programmes avec pointeurs” [14], Univ. Paris-Sud, Sep. 6, 2013, C. Marché

PhD in progress: C. Dross, “Theories and Techniques for Automated Proof of programs”, since Jan. 2011, C. Marché, A. Paskevich, and industrial supervisors Y. Moy and J. Kanig (AdaCore company)

PhD in progress: A. Mebsout, “SMT-based Model-Checking”, since Sep. 2011, F. Zaidi, S. Conchon

PhD in progress: C. Lelay, “Real numbers for the Coq proof assistant”, since Oct. 2011, S. Boldo, G. Melquiond

PhD in progress: S. Dumbrava, “Towards data certification”, since Oct. 2012, V. Benzaken (LRI), É. Contejean

PhD in progress: L. Gondelmans, “Obtention de programmes corrects par raffinement dans un langage de haut niveau”, since Oct. 2013, J.-C. Filliâtre, A. Paskevich

PhD in progress: M. Clochard, “A unique language for developing programs and prove them at the same time”, since Oct. 2013, C. Marché, A. Paskevich

9.3.3. Juries

C. Marché: president of the PhD committee of C. Keller, “A Matter of Trust: Skeptical Communication Between Coq and External Provers”, (École Polytechnique, LIX laboratory, June 19, 2013)

C. Marché: reviewer, PhD committee of X. Shi “Certification of an Instruction Set Simulator” (University Grenoble, Verimag laboratory, July 10th, 2013)

C. Marché: president of the PhD committee of E. Tushkanova “Schematic calculi for the analysis of decision procedures” (University Besançon, FEMTO-ST laboratory, July 19th, 2013)

C. Marché: reviewer, PhD committee of H. Debrat “Certification formelle de la correction d’algorithmes de Consensus” (University Nancy, LORIA laboratory, Dec 6th, 2013)

C. Marché: president of HDR committee of S. Gérard “Ingénierie dirigée par les modèles” (University Paris-Sud, LISE laboratory of CEA-LIST, Dec 17th, 2013)

S. Conchon: president of the PhD committee of L. Gerard “Programmer le parallélisme avec des futures en Heptagon un langage synchrone flot de données et étude des réseaux de Kahn en vue d’une compilation synchrone” (University Paris-Sud, ENS, Sept. 25th, 2013)

S. Conchon: president of the PhD committee of J. Cheng “Stochastic Combinatorial Optimization” (University Paris-Sud, Nov. 8th, 2013)

S. Conchon: reviewer, PhD committee of M. Farooque “Automated reasoning techniques as proof-search in sequent calculus” (École Polytechnique, Dec. 19th, 2013)

J.-C. Filliâtre: reviewer, PhD committee of David Miguel Ramalho Pereira “Towards certified program logics for the verification of imperative programs” (Universidade do Porto, April 18, 2013)

J.-C. Filliâtre: reviewer, PhD committee of Jean Fortin “BSP-Why: a Tool for Deductive Verification of BSP Programs” (Université Paris Est, October 14, 2013)

J.-C. Filliâtre: reviewer, PhD committee of Maxime Denès “Formal study of efficient algorithms in linear algebra” (Université de Nice - Sophia Antipolis, November 20, 2013)

9.4. Industrial Dissemination

- As a final result of the Hi-Lite project, the Adacore company (Paris) implemented the new environment Spark2014 for the development of critical Ada software (<http://www.spark-2014.org/>), the successor of Spark, to be released in 2014. Part of this environment is the tool GnatProve which aims at formal verification. It translates annotated Ada code into the *Why3* intermediate language and then use the *Why3* system to generate proof obligations and discharge them with Alt-Ergo, or other available back-end provers.

9.5. Education, Popularization

- S. Conchon and J.-C. Filliâtre were involved in the writing of a new book supporting the new teaching program for the “*Classes préparatoires aux grandes écoles*” [39].
- S. Boldo and A. Charguéraud belong to the organization committee of the *Castor informatique* <http://castor-informatique.fr/>, an international competition to present computer science to pupils (from *6ème* to *terminale*). More than 170,000 teenagers played on the more than 30 proposed exercises in November 2013.
- Since April 2008, S. Boldo is member of the editorial committee of the popular science web site *Interstices* (<http://interstices.info/>).
- S. Boldo, scientific head for Saclay for the MECSI group for networking about computer science popularization inside Inria.
- S. Boldo, member of the popularization committee, *comité de médiation scientifique*, of Inria.
- S. Boldo was among the authors of a document [41] that describes the present and future of popularization at Inria.
- S. Boldo is responsible for a *mission doctorale* for popularization. She is in charge of Li Gong of the LIMSI laboratory: he wrote an *Interstices* article: <http://interstices.info/traduction-automatique-statistique>.
- S. Boldo, talk at the *Fête de la science* 2013 for the laboratory, October 11th.
- S. Boldo, talk for a general audience at the Courbevoie library, February 9th
- S. Boldo, talk for teenagers at the lycée Talma de Brunoy, April 23th

- S. Boldo, talk for mathematics teachers at Rocquencourt, June 5th
- S. Boldo, “speed-dating” with teenagers at the Halle Forum, October 18th, in an event called “Science au carré(e)”.
- S. Boldo, article for the French blog celebrating 2013 as the “Mathematics of Planet Earth” year: <http://mpt2013.fr/meme-les-ordinateurs-font-des-erreurs/>.
- C. Lelay tried the 2013 mathematics test of the scientific Baccalaureate in Coq. After the test, a meeting was organized with some teachers and the produced proofs and results were presented.
- C. Paulin organised at the *Fête de la science* 2013 an action of Labex DigiCosme to promote the new course “Informatique and Sciences du Numériques” in high-school, a few selected projects developed by students as part of their curriculum were exhibited.

TOSCA Project-Team

9. Dissemination

9.1. Scientific Animation

- M. Bossy is a member of the Scientific Committee of the *École Doctorale "Sciences Fondamentales et Appliquées"* of the Université de Nice - Sophia Antipolis.
- M. Bossy is a member of the *Collectif Andromède* of the PACA Region council.
- M. Bossy is a elected member of the Inria Evaluation Board.
- M. Bossy served as an Associate Editor of *Annals of Applied Probability*.
- M. Bossy participated to the junior position recruitment committee at the University of Nice - Sophia Antipolis.
- M. Bossy has been a member of the Committee for junior permanent research positions of Inria Nancy - Grand Est.
- N. Champagnat is a member of the *Commission de Développement Technologique* of Inria Nancy - Grand Est, a substitute member of the *Comité de Centre* of Inria Nancy - Grand Est since October and a member of the *Commission bibliothèque* of IECL.
- N. Champagnat organized the Team Working Group on Probability and Statistics of IECL until January.
- N. Champagnat serves as an Associate Editor of *Stochastic Models* since October.
- N. Champagnat, with T. Lelièvre and A. Nouy, was member of the organizing committee of the *Centre d'Eté de Mathématiques et de Recherche Avancée en Calcul Scientifique* (CEMRACS 2013) held in CIRM, Luminy, from July 22nd until August 30th.
- N. Champagnat, with T. Lelièvre and A. Nouy, was member of the organizing committee of the *Special Event "Mathématiques pour la planète Terre"* held at CIRM, Luminy, on the 23rd July.
- N. Champagnat organized with D. Ritchie a *Journée Scientifique de la Fédération Charles Hermite on Ancestral Inference and Evolutionary Relationships in Biology* at Inria Nancy - Grand Est in September.
- N. Champagnat organized a mini-symposium on *Quasi-stationary distributions and Q-processes* at the *Congrès SMAI 2013* in Seignosse in May.
- M. Deaconu is member of *Comité des Projets* and *Bureau du Comité des Projets* at Inria Nancy - Grand Est.
- M. Deaconu organized with S. Herrmann the Workshop *Hitting times and exit problems for stochastic models* held in Dijon, 27-29 November.
- M. Deaconu organized with E. Vincent (Inria, Centre de recherche Nancy-Grand Est) a *Journée Scientifique de la Fédération Charles Hermite on Uncertainties: approaches and challenges* at IECL in December.
- M. Deaconu and A. Lejay were members of the organizing committee of the *Semaine d'Étude Maths-Entreprises Nancy*, 11-15 February 2013.
- A. Lejay is member of a editorial board of the collection *Séminaire de Probabilités*.
- A. Lejay is member of the scientific committee of the *Journées de Probabilités*.
- A. Lejay is General Secretary of Société des Mathématiques Appliquées et Industrielles (SMAI).
- D. Talay continued to serve as the Head of Science and Chair of the Project-Teams Committee of Inria Sophia Antipolis - Méditerranée.

- D. Talay, jointly with F. Delarue (Université Nice - Sophia Antipolis) organized the workshop ERGONUM at CIRM (Marseille) in February.
- D. Talay served as an Associate Editor of: *Stochastic Processes and their Applications*, *ESAIM Probability and Statistics*, *Stochastics and Dynamics*, *Journal of Scientific Computing*, *Monte Carlo Methods and Applications*, *Oxford IMA Journal of Numerical Analysis*, *Communications in Applied Mathematics and Computational Science*, *Éditions de l'École Polytechnique*. He also served as the Co-editor in chief of *MathematicS in Action*.
- D. Talay is serving as a member of the Advisory Board of the Centro de Mathematica da Universidade do Porto (Portugal).
- D. Talay participated to Professor position recruitment committees at Paris 6 University and Nice Sophia Antipolis University.
- D. Talay chaired the AERES Evaluation Committee of the Mathematics Department of Paris Descartes University.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Master: M. Bossy, *Continuous time stochastic models for quantitative Finance*, 45h, M2 IMAFA (Informatique et Mathématiques Appliquées à la Finance et à l'Assurance), École Polytechnique Universitaire, Univ. Nice - Sophia Antipolis, France.

Master : M. Bossy, *Risk on energetic financial markets*, 27h, Master Ingénierie et Gestion de l'Énergie, Mine ParisTech, France.

Master : M. Bossy *Stochastic Particle Methods for PDEs*, 18h, M2 Probabilité et Applications, Université Paris 6, France.

Master: N. Champagnat, *Introduction to Quantitative Finance*, 18h, M1, École des Mines de Nancy, France.

Master: N. Champagnat, *Introduction to Quantitative Finance*, 18h, M2, École des Mines de Nancy, France.

Master: N. Champagnat, *Généétique des Population et Généalogies Aléatoires*, 22.5h, M2, École supérieure des sciences et de la technologie de Hammam Sousse, Tunisia.

Master: M. Deaconu, *Simulation de variables aléatoires*, 14h, M1, École des Mines de Nancy, France.

Master: M. Deaconu, *Modélisation stochastique*, 33h, M2, Université de Lorraine, France.

Master: J. Inglis, *Advanced Numerics for Computational Finance*, 15h, M2, UNSA (Mathmods Erasmus Mundus), France.

Master: A. Lejay, *simulation des marchés financiers*, 23h, M2, Université de Lorraine, Metz.

Master : D. Talayy *Stochastic Methods for PDEs with Boundary Conditions*, 18h, M2 Probabilité et Applications, Université Paris 6, France.

Master: E. Tanré, *Advanced Numerics for Computational Finance*, 15h, M2, UNSA (Mathmods Erasmus Mundus), France.

Master: E. Tanré, *Numerical Probability in Finance*, 12h, M2, Ecole PolytechNice (IMAFA), France.

Master: E. Tanré, *Mathematical Methods for Neurosciences*, 25h, M2, ENS - Master MVA / Paris 6 - Master Maths-Bio, France.

Master: L. Violeau, *Continuous Probabilistic Models with Applications in Finance* (exercice classes), 20h, M2 IMAFA (Informatique et Mathématiques Appliquées à la Finance et à l'Assurance), École Polytechnique Universitaire, Univ. Nice - Sophia Antipolis, France.

Licence: L. Violeau, *Probabilty and Statistics* (exercice classes), 20h, L3, Ecole Polytechnique Universitaire, Univ. Nice - Sophia Antipolis, France.

9.2.2. Supervision

- PhD in progress: Maxime Bonelli, *Behavioral finance approach to risk assessment in quantitative portfolio management*, September 2013, M. Bossy.
- PhD in progress: Paul Charton, *Hedging strategies for wind energy prices*, September 2010, M. Deaconu and A. Lejay.
- PhD in progress: Julien Claisse, *Stochastic control of population dynamics*, September 2010, N. Champagnat, D. Talay.
- PhD in progress: Benoît Henry, *Modeling Evolutionary Relationships Between Three-Dimensional Protein Structures*, October 2013, N. Champagnat, D. Ritchie (ORPAILLEUR team).
- PhD : Dalia Ibrahim, *Étude théorique d'indicateurs d'analyse technique*, Université de Nice - Sophia Antipolis, November 2009, D. Talay and E. Tanré.
- PhD in progress; Lionel Lenôtre, *Simulation of processes in discontinuous media*, 2012, J. Erhel (Irisa), A. Lejay and G. Pichot (Irisa). L. Lenôtre has a grant from the MESR and stays at Rennes.
- PhD in progress: Sebastian Niklitschek-Soto, *Discretized stochastic differential equations related to one-dimensional partial differential equations of parabolic type involving a discontinuous drift coefficient*, September 2010, D. Talay.
- PhD in progress: Hernán Mardones, *Numerical Solution of Stochastic Differential Equations with Multiplicative Noise*, 2009, C. Mora (Universidad de Concepción), A. Lejay. H. Mardones spends six months in France (nov. 2013-april 2014) with a grant Becas Chile.
- PhD in progress: Khaled Salhi, *Estimation of Risk in Finance*, October 2013, M. Deaconu, A. Lejay.
- PhD in progress: Laurent Violeau, *Stochastic Lagrangian Models and Applications to Downscaling in Fluid Dynamics*, October 2010, M. Bossy and A. Rousseau.

9.2.3. Juries

- M. Bossy chaired the Committee for the Ph.D. thesis of Paul-Eric Chaudru de Raynal, *Équations différentielles stochastiques : résolubilité forte d'équations singulières dégénérées ; analyse numérique de systèmes progressifs-rétrogrades de McKean-Vlasov*, Université de Nice - Sophia Antipolis, December 2013.
- M. Deaconu served as referee for the Ph.D. thesis of O. Lupaşcu, *Probabilistic and deterministic models for fracture type phenomena*, IMAR Bucarest and Université de Paris 13, Bucarest, December 2013.
- A. Lejay serves as examiner for the Ph.D. thesis of Paul-Éric Chaudru de Raynal, *Équations différentielles stochastiques : résolubilité forte d'équations singulières dégénérées ; analyse numérique de systèmes progressifs-rétrogrades de McKean-Vlasov*, Université de Nice - Sophia Antipolis, December 2013.
- D. Talay chaired the Committees for the Habilitation à Diriger des Recherches de B. de Saporta (université Montesquieu Bordeaux 4), the Ph.D. thesis of O. Aboura (Université Paris 1 Panthéon Sorbonne), the Ph.D. thesis of C.A. Garcia Trillos (Université Nice Sophia Antipolis).
- E. Tanré reported on the Ph.D. thesis of Mauricio Tejo, Pontificia Universidad Católica de Chile (PUC).

9.3. Popularization

- M. Bossy contributed as a Guest Blogger on the Mathematics of Planet Earth 2013 web site.
- D. Talay gave lectures to scholars in Nice.

9.4. Participation to congresses, conferences, invitations...

- M. Bossy gave a seminar talk at the research sessions of the CEMRACS 2013, Luminy in August.
- M. Bossy gave an invited talk at the Focus Program on Commodities, Energy and Environmental Finance of the Fields Institute, Toronto (Canada) in August.
- M. Bossy gave an invited talk at the European Science Foundation OPTPDE Workshop "Modeling and Control of Large Interacting Dynamical Systems" in September at Université Paris-Dauphine.
- M. Bossy gave an invited talk at the workshop METEO, Université d'Orléans in October.
- N. Champagnat gave a plenary talk at the *57th Annual Meeting of the Australian Mathematical Society* in Sydney (Australia) in October.
- N. Champagnat gave talks at the Conference on *Genetic models and quasi-stationarity* at CIRM, Luminy in March, at the Conference on *Biological invasion and evolutionary biology: stochastic and deterministic models* in Lyon in March, at the *Congrès SMAI 2013* in Seignosse in May, at the *Workshop "Mathematics for Planet Earth"* of the *Fédération Charles Hermite* in Nancy in October, and at the *International Conference on Stochastic Models in Ecology, Evolution and Genetics* (SMEEG 2013) in Angers in December.
- N. Champagnat gave seminar talks at the *Mark Kac seminar on Stochastics and Physics* in Utrecht (The Netherlands) in May, and at the *Oberseminar Stochastics* of the Probability Theory and Stochastic Analysis Group of the University of Bonn (Germany) in June.
- P. Charton participated at the *Cinquième Semaine d'Étude Maths-Entreprise* at Nancy, France in February. He and his group studied the asymptotic properties of the process Garch(1,1). A report has been written [32].
- P. Charton made a poster on *Optimal operating of a windfarm equipped with a storage device* at the *Congrès SMAI 2013* in Seignosse in May. A proceeding has been written [21].
- P. Charton gave talk at the *Ninth IMACS seminar* at Annecy-le-Vieux (France) in July. A proceeding is being written.
- M. Deaconu gave a invited talk in a special session at the *Joint International Meeting of the American Mathematical Society and the Romanian Mathematical Society*, in Alba Iulia (Romania) in June.
- M. Deaconu gave a talk at the *Ninth IMACS Seminar on Monte Carlo Methods*, Annecy-le-Vieux (France) in July.
- J. Inglis gave seminar talks at the *analysis and probability seminar*, Imperial College London, in January and at the probability seminar, University of Rennes, in February.
- J. Inglis gave an invited talk at the European project MATHEMACS meeting, held at the Max-Planck Institute, Leipzig, in December.
- A. Lejay gave a 4h30 lecture on *Rough paths* at the *35th Finnish Summer School on Probability Theory and Statistics* in Finland.
- A. Lejay gave talks at the workshop *rough paths* (Berlin) *Interplay of Theory and Numerics for Deterministic and Stochastic Homogenization* (Oberwolfach, Germany) in August and at the international conferences *Stochastic processes and their statistics in Finance* (Naha, Okinawa, Japan) in October, and at the Workshop on *Hitting times and exit problems for stochastic models* (Dijon, France) in December.
- A. Lejay gave a talk at the *COMCA-2013* congress (La Serena, Chile).
- D. Talay gave a series of lectures at the Pauli Institute in June.
- D. Talay gave a talk at the University of Antwerp.
- D. Talay gave a talk at the Workshop on Extreme Events in November in Nice.
- D. Talay gave two lectures at the Conference in the honor of Etienne Pardoux (Marseille) in February.

- E. Tanré gave a talk at the Centro Interdisciplinario de Neurociencia de Valparaíso (Chile) in January.
- E. Tanré gave a talk at the conference on *Mathematical Methods and Modeling of Biophysical Phenomena* in Cabo Frio (Brazil) in March.
- E. Tanré gave a seminar talk at Toulouse in May.
- E. Tanré gave a talks at the workshop on *Hitting times and exit problems for stochastic models* at Dijon in November and at the *First Workshop CIMFAV on Stochastic Analysis and its Applications* at Valparaíso (Chile) in December.
- D. Villemonais gave a 4h lecture at the Conference on *Genetic models and quasi-stationarity* at CIRM, Luminy in March.
- D. Villemonais gave a talk at the *Congrès SMAI 2013* in Seignosse in May.

TRIO Team

8. Dissemination

8.1. Scientific Animation

- Liliana Cucu-Grosjean has been the Delegate of International Relations for the Inria Nancy-Grand Est center until September 1st 2013.
- Liliana Cucu-Grosjean is an elected member of Inria Evaluation Commission (CE).
- Liliana Cucu-Grosjean is head of the Inria Committee on Equal Opportunities
- Olivier Zendra is head of the Documentation Committee of Inria Nancy Grand Est (Commission IST); member of the Health, Safety and Work Environment of Inria and of Inria Nancy Grand Est - LORIA Committees (CNHSCT and CLHSCT); member of the Inria Committee on Prevention of Psycho-social Risks and Quality of Life at Work (PRPS-QVT); member of the Permanent Education Committee of Inria Nancy Grand Est - LORIA; member of the new Sustainable Development Local and National Committees; member of the Inria Nancy Grand Est - LORIA Committee for the selection of hardware configurations; member of the Inria Committee on Equal Opportunities
- Liliana Cucu-Grosjean was member of the selection committee at University of Lorraine (position 27MCF0387), University of Toulouse (position 61MCF0789) and Inria Nancy-Grand Est (CR2 contest)
- Olivier Zendra is CIR expert for the Ministry of Research for the scientific evaluation of research in companies.
- Liliana Cucu-Grosjean is an ANRT expert for evaluating CIFRE applications.
- Olivier Zendra was an expert for evaluating COFECUB applications in 2013.
- Olivier Zendra is founder and steering committee member of the ICOOOLPS (International Workshop on Implementation, Compilation, Optimization of Object-Oriented Languages, Programs and Systems) workshop, usually joint to ECOOP.
- Liliana Cucu-Grosjean is steering committee member of RTSOPS (joint workshop of ECRTS) and WMC (joint workshop of RTSS).
- Liliana Cucu-Grosjean was co-chair of RTSOPS (ECRTS 2012) and WMC (RTSS 2013) as well as co-editor of the respective proceedings.
- Liliana Cucu-Grosjean was program committee member of IEEE RTSS 2013, IEEE ETFA 2013, DATE 2013 and IEEE SIES'2013.
- Olivier Zendra was program committee chair of ICOOOLPS 2013.
- Olivier Zendra was program committee member for CIEL 2013.
- Olivier Zendra was workshop organization chair for the 3 collocated conferences ECOOP 2013, ECSA 2013 and ECMFA 2013.
- Olivier Zendra was organization committee member for CIEL 2013 (for which he was primary contact), GDRP GPL 2013 and AFDAL 2013.
- The permanent members of TRIO team are reviewers for numerous international Conferences and Workshops and, in particular for the following journals: IEEE Transactions on Industrial Informatics, Real-Time Systems, IEEE Computer Communications, Journal of Discrete Event Systems, Journal of Systems Architecture, Journal of Embedded Computing, Journal of Scheduling, Theoretical Computer Science, ACM Surveys, ACM Transactions on Embedded Computing Systems, Information Processing Letters, Science of Computer Programming.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Master : Liliana Cucu-Grosjean, Multiprocessor real-time systems, 30h, Master (M1), University of Lorraine, France

8.2.2. Supervision

PhD & HdR :

PhD : Dorin Maxim, Probabilistic Real-Time Systems, University of Lorraine, December 10th, 2013, Liliana Cucu-Grosjean and Françoise Simonot-Lion

TRISKELL Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Journals

9.1.1.1. Benoit Baudry

is an Associate Editor of the following journal:

- Journal of Systems and Software (JSS)
- Journal on Software and System Modeling (SoSYM)

9.1.1.2. Jean-Marc Jézéquel

is an Associate Editor of the following journal:

- IEEE Computer
- Journal of Systems and Software (JSS)
- Journal on Software and System Modeling (SoSYM)
- Journal of Object Technology: JOT

9.1.1.3. Noël Plouzeau

is chief editor of a special issue of the TSI French research journal, dedicated to software engineering.

9.1.2. Conferences

9.1.2.1. Benoit Baudry

has been chair for the program committee of ICST'13, the 6th International Conference on Software Testing Verification and Validation, Luxembourg, April 2013, and a member of the program committee of the following conferences:

- MODELS 2013 The 16th International Conference on Model Driven Engineering Languages and Systems Miami, USA, October 2013
- SEIP 2013 track, the Software Engineering in Practice track at ICSE'13, San Francisco, USA, May 2013
- AMT 2013, the 2nd International workshop on the Analysis of Model Transformations, Miami, USA, October 2013

9.1.2.2. Benoit Combemale

has been a member of the program committee of the following conferences, symposia and workshops:

- APSEC'13, The 20th Asia-Pacific Software Engineering Conference, Thailand, 2013.
- SEFM'13, The 10th International Conference on Software Engineering and Formal Methods, Spain, 2013.
- ICMT'13, The 6th International Conference on Model Transformation, Hungary, 2013.
- ECMFA'13, The 9th European Conference on Modelling Foundations and Applications, Montpellier, 2013.
- QSIC13, The 13th International Conference on Quality Software, China, 2013.
- Educators' Symposium at MODELS'13, USA, 2013.
- AMT workshop on Analysis of Model Transformations (AMT), at MODELS'13, USA, 2013.
- CMA workshop on Comparing Modeling Approaches (CMA), at MODELS'13, USA, 2013.
- CMA workshop on Comparing Modeling Approaches (CMA), at RE'13, Brazil, 2013.
- VOLT workshop on Verification Of Model Transformation (VOLT), at ICMT'13, Hungary, 2013.

Benoit Combemale has also been an external reviewer for IEEE Transactions on Software Engineering, Journal of Software and Systems Modeling (SoSyM), and ICSE'13 (International Conference on Software Engineering).

9.1.2.3. *Jean-Marc Jézéquel*

has been a member of the program board (PB) or program committee (PC) of the following conferences:

- MODELS 2013, The 16th International Conference on Model Driven Engineering Languages and Systems Miami, USA, October 2013 (PB)
- ICSE 2013 The 35th International Conference on Software Engineering, San Francisco, USA, May 18-26, 2013 (PC)
- ICSE 2013 Doctoral Symposium San Francisco, USA, May 18-26, 2013 (PC)
- MiSE 2013 5th International Workshop on Modeling in Software Engineering, San Francisco, USA, May 18-26, 2013 (PC)
- VaMoS 2013 The Seventh International Workshop on Variability Modelling of Software-intensive Systems January 23-25, 2013 - CNR, Pisa, Italy (PC)

9.1.2.4. *Olivier Barais*

has been a member of the program committee of the following conferences, symposia and workshops:

- SC'13, The 12th International Conference on Software Composition, Budapest, Hungary
- SEAA'13, The 39th Euromicro Conference on Software Engineering and Advanced Applications (SEAA 2013) Santander, Spain 2013
- SAC'13, The 28th Symposium On Applied Computing Coimbra, Portugal.
- VARICOMP'13, The 4th International Workshop on Variability & Composition @Modularity-AOSD, Fukuoka, Japan
- VAO'13, The 1st Workshop on View-Based, Aspect-Oriented and Orthographic Software Modelling, Montpellier, France
- WEITICE'2013, the 22nd IEEE International Conference on Collaboration Technologies and Infrastructure Hammamet, Tunisia
- CSMR2013 tools demo: the 17th European Conference on Software Maintenance and Reengineering tools demo track
- CIEL, the 2nd French Conference in Software Engineering. Nancy,

Olivier Barais has also been an external reviewer for IEEE Transactions on Software Engineering, Journal of Software and Systems Modeling (SoSyM), Journal of Software System (JSS), ACM TaaS (Transactions on Autonomous and Adaptive Systems), STVR (Software Testing, Verification and Reliability) and CBSE'13 (International Conference on Software Engineering).

9.1.2.5. *Arnaud Blouin*

has been external/sub reviewer for: IEEE Transactions on Software Engineering, Journal of Software and Systems Modeling (SoSyM), ICSE'13 (International Conference on Software Engineering), EICS'13 (ACM SIGCHI symposium on Engineering interactive computing systems), ICMT'13 (International Conference on Model Transformation), ASPEC'13 (Asia-Pacific Software Engineering Conference), and IHM'13 (French speaking conference on human-computer interaction).

9.1.2.6. *Mathieu Acher*

has organized the Journée ligne de produits (7th edition) in Paris (Sorbonne). He has been reviewer for ACM Surveys, International Journal on Software Tools for Technology Transfer (STTT), Journal of Systems and Software (JSS), Journal of Software and Systems Modeling (SoSyM), program committee for the Fifth International Workshop on Feature-Oriented Software Development (FOSD'13), the 1st International workshop on Reverse Variability Engineering (REVE'13).

9.1.2.7. Noël Plouzeau

has been program committee chair of the CIEL'2013 conference (the French conference on Software Engineering), Nancy, april 2013, and a member of the program committee of the CBSE 2013, Component Based Software Engineering, Seattle, USA, june 2013.

9.1.2.8. Johann Bourcier

has been in the program committee of PECCS 2013 and an external reviewer for TaaS (Transactions on Autonomous and Adaptive Systems), and JSS (Journal of Systems and Software).

9.1.3. Workshops, Tutorials and Keynotes

9.1.3.1. Benoit Combemale

was an invited keynote speaker at CIEL'13 (the French Conference on Software Engineering) and gave a talk entitled "On Modeling and Testing When Unpredictability Becomes the Pattern"¹². He also has been invited to give a talk at Neptune'13 (the French Industrial Conference on Model Driven Engineering) entitled "On the Globalization of Modeling Languages"¹³, at the french day organized by CNRS on MDE and Scientific Models¹⁴ entitled "Language and Model Composition", at the workshop AOM (Barbados) entitled "On Language Composability", and at the Università degli Studi di Milano (Italy) entitled "Model-Driven Engineering for Software Language Engineering".

Benoit Combemale also has been co-chair of the workshops GlobalDSL'13 at ECOOP (cf. <http://gemoc.org/globalds13>, published on the ACM DL), and GEMOC'13 at MODELS (cf. <http://gemoc.org/gemoc2013>, published on CEUR).

9.1.4. Expertises

9.1.4.1. Benoit Baudry

is on the scientific advisory board of the Software Verification and Validation Lab from the Security and Trust research center in Luxembourg.

9.1.4.2. Arnaud Blouin

is a member of the Advisory Board of the FNR Core project MoDEL (2013-2015, Luxembourg) that works on the use of model-driven software product line for generating and testing user interfaces.

9.1.4.3. Benoit Combemale

is the coordinator of the international GEMOC initiative, and a member of its Advisory Board.

9.1.4.4. Jean-Marc Jézéquel

is a member of the Advisory Board of the NSF REMODD Project (Repository for Model Driven Development), and of the Advisory Board of the international GEMOC initiative.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

The Triskell team bears the bulk of the teaching on Software Engineering at the University of Rennes 1 and at INSA Rennes, at the levels M1 (Project Management, Object-Oriented Analysis and Design with UML, Design Patterns, Component Architectures and Frameworks, Validation & Verification, Human-Computer Interaction) and M2 (Model driven Engineering, Aspect-Oriented Software Development, Software Product Lines, Component Based Software Development, Validation & Verification, *etc.*).

Each of Jean-Marc Jézéquel, Noël Plouzeau, Olivier Barais, Benoit Combemale, Johann Bourcier, Arnaud Blouin and Mathieu Acher teaches about 200h in these domains, with Benoit Baudry teaching about 50h, for a grand total of about 1400 hours, including several courses at ENSTB, Supelec and ENSAI Rennes.

¹²Cf. <http://people.irisa.fr/Benoit.Combemale/ciel2013>

¹³Cf. <http://people.irisa.fr/Benoit.Combemale/neptune2013>

¹⁴Cf. <http://devlog.cnrs.fr/journee-idm-et-modeles-scientifiques>

Olivier Barais (from january 2013 to august 2013) and Noël Plouzeau (september 2013) are the managers of the Master2 Pro in Computer Science at the University of Rennes.

Johann bourcier is co-manager of the Home-Automation option at the ESIR engineering school in Rennes.

The Triskell team also receives several Master and summer trainees every year.

9.2.2. Supervision

PhD : Clément Guy, *Generic Definition of Domain Specific Analysis using MDE*, thèse 2010-2013, J.-M. Jézéquel and B. Combemale

PhD : Tam Le Nhan, *Model-Driven Software Engineering for Cloud Computing*, thèse 2010-2013, J.-M. Jézéquel and G. Sunye

PhD : Nicolas Sannier, *IDM pour l'ingénierie des exigences*, thèse CIFRE avec EDF 2010-2013, B. Baudry

PhD : Aymeric Hervieu, *Model-based testing: handling performance in embedded software product lines*, thèse CIFRE avec Kereval 2010-2013, B. Baudry and A. Gotlieb

PhD : Stephen Creff, *Hierarchical Product Lines*, thèse 2009-2012, J.-M. Jézéquel and J. Champeau

PhD : François Fouquet, *Contracts for Enterprise Service Bus*, thèse 2009-2012, J.-M. Jézéquel and N. Plouzeau

PhD : Paul Istoan, *SOA Product Lines*, thèse en co-tutelle avec l'université du Luxembourg, 2009-2012, J.-M. Jézéquel and N. Guelfi

PhD : Viet-Hoa Nguyen, *Model Driven Design Methodology for Trusted Real-Time Components*, thèse 2009-2012, J.-M. Jézéquel and N. Plouzeau

PhD in progress : Emmanuelle Rouillé, *Processus Logiciels dirigés par les intentions*, thèse CIFRE avec SodiFrance, 2010-2013, J.-M. Jézéquel, B. Combemale and O. Barais

PhD in progress : Erwan Bousse, *Intégration et combinaison des techniques de V&V dans un contexte d'ingénierie système*, thèse, 2012-2015, B. Baudry and B. Combemale

PhD in progress : Julien Richard-Foy, *A DSL factory for modular Web oriented architecture*, thèse CIFRE avec Zenexity, 2011-2014, J.-M. Jézéquel and O. Barais

PhD in progress : João Bosco Ferreira Filho, *Variability modeling in software intensive systems*, thèse 2011-2014, O. Barais, B. Baudry and M. Acher

PhD in progress : Hamza Samih, *Extending model-based testing with variability and security management*, thèse CIFRE avec All4Tec, 2011-2014, B. Baudry

PhD in progress : Valéria Lelli Leitão Dantas, *On Testing Interactive Systems*, thèse 2012-2015, B. Baudry and A. Blouin

PhD in progress : Kwaku Yeboah-Antwi, *Runtime emergence of software diversity*, thèse 2013-2016, B. Baudry and O. Barais

PhD in progress : Sana Ben Nasr, *Modeling variability in regulatory requirements*, thèse 2013-2016, B. Baudry and M. Acher

PhD in progress : Mohamed Boussaa, *An Architecture for Testing Large-Scale Dynamic Distributed Systems*, thèse 2013-2016, B. Baudry and O. Barais

PhD in progress : Thomas Degueule, *Next Generation of MDE Tooling Support*, thèse 2013-2016, O. Barais and A. Blouin

PhD in progress : David Mendez Acuna, *Variability in Modeling Languages*, thèse 2013-2016, B. Baudry and B. Combemale

PhD in progress : Ivan Paez Anaya, *Proactive Adaptation in Pervasive Environment*, thèse 2012-2015, J. Bourcier, N. Plouzeau and J.-M. Jézéquel

PhD in progress : Inti Gonzalez Herrera, *Ressources reservation in Pervasive Middleware*, thèse 2012-2015, J. Bourcier, O. Barais

PhD in progress : Jacky Bourgeois, *Automatic Synchronization of Energy Production and Consumption*, thèse 2012-2015 co-tutelle avec the Open University, J.Bourcier, B. Baudry and G. Kortuem

PhD in progress : Francisco-JavierAcosta Padilla, *Automatic Deployment and Reconfigurations in Internet of Things*, thèse 2013-2016 co-encadrement avec l'équipe ACES, J. Bourcier, F. Weis

9.2.3. Juries

9.2.3.1. Benoit Baudry

was in the examination committee of the following PhD thesis:

- Walter Rudametkin Ivey, January 2013, Université de Grenoble (Referee)
- Amel Bennaceur, July 2013, Université Pierre et Marie Curie (Referee)
- Hajer Saada, December 2013, Université de Montpellier (Referee)
- Akram Ajouli, Septembre 2013, Université de Nantes (Member)

9.2.3.2. Benoit Combemale

was in the examination committee of the following PhD thesis:

- Clément Guy, December 2013, University of Rennes (Co-supervisor)
- Moussa Amrani, November 2013, University of Luxembourg (Member)
- Mounira Kezadri, July 2013, University of Toulouse (Member)
- Robert Guduvan, April 2013, University of Toulouse (Member)
- Laurent Wouters, January 2013, LIP6 (Member)

9.2.3.3. Noël Plouzeau

was in the examination committee of the following PhD thesis:

- François Fouquet, March 2013, University of Rennes (Co-supervisor)
- Nguyen Viet-Hoa, December 2013, University of Rennes (Co-supervisor)

9.2.3.4. Olivier Barais

was in the examination committee of the following PhD thesis:

- François Fouquet, March 2013, University of Rennes (Co-supervisor)
- Erwan Daubert, May 2013, University of Rennes (Co-supervisor)
- Pankesh Patel, November 2013, Université Pierre et Marie Curie (Member)

TYREX Team

8. Dissemination

8.1. Scientific Animation

C. Roisin is a member of the steering committee of the [ACM Symposium on Document Engineering](#).

C. Roisin is a member of Inria Grenoble-Rhône-Alpes Committee for selecting PhD students by CORDI-S grants.

C. Roisin is a member of LIG Committee for selecting Grenoble INP and UJF AGIR projects.

C. Roisin is a member of OpenClassrooms Pedagogical Committee.

N. Layaïda is a member of Inria Grenoble-Rhône-Alpes Committee for Employment of Scientists: Inria hiring of Post-docs, Delegates and Secondments.

N. Layaïda is a member of Scientific committee of Persyval-Lab (Labex), Advanced Data Mining.

N. Layaïda is a member of the Evaluation committee of Minalogic cluster (Pôle de compétitivité mondial Grenoble Rhône-Alpes - Micro nanotechnologies et Logiciel).

J. Lemordant is a member of the steering committee of the [European FP7 VENTURI project](#).

P. Genevès and N. Layaïda are program committee members for the 13th ACM Symposium on Document Engineering (DocEng'13).

P. Genevès is a permanent member of Inria Grenoble-Rhône-Alpes Committee for Technological Development: Inria hiring of Research Engineers.

N. Gesbert is a member of COST Action IC1201, « Behavioural Types for Reliable Large-Scale Software Systems ». He attended a meeting in Rome where he gave a talk about session types in a java-like language. He also participated in writing a state-of-the-art report about behavioural types.

P. Genevès has been a member of the COST Action IC0901, entitled “Rich-Model Toolkit - An Infrastructure for Reliable Computer Systems”. In particular he has been invited to the SVARM 2013 workshop co-located with POPL 2013, and nominated for representing France in decisions taken concerning this COST Action.

P. Genevès gave an invited talk about “A Tree Logic and an Application for the Analysis of Cascading Stylesheets” at the Laboratoire de Recherche en Informatique in Orsay in February 2013.

P. Genevès gave an invited talk about “Static Analysis for Data-Centric Web Programming” at the Qatar Computing Research Institute (QCRI), in Doha, Qatar, in November 2013.

In 2013, P. Genevès has been a referee for the following international journals: ACM Transactions on Database Systems and Theoretical Computer Science; and for the ACM symposium on User interface software and technology (UIST) 2013.

In 2013, N. Gesbert has been a referee for the following international journals: Theoretical Computer Science, and Mathematical Structures in Computer Science; as well as for the European Symposium on Programming (ESOP) 2013.

In 2013, C. Roisin has been a referee for the following international conferences: ACM Document Engineering, and Springer Multimedia Systems.

8.2. Teaching - Supervision - Juries

8.2.1. Teaching

Licence: Computer Networks, 100h/year, L2, University of Grenoble – C. Roisin
 Licence: Logic, 67h30/year, L3, University of Grenoble – N. Gesbert
 Licence: Algorithmics, 60h/year, L3, University of Grenoble – N. Gesbert
 Licence: Academic-side tutoring of an apprentice, 10h/year, University of Grenoble – N. Gesbert
 Master: Logic, 22h30/year, M1, University of Grenoble – N. Gesbert
 Master: Web development, 22h30/year, M1, University of Grenoble – N. Gesbert
 Master: Software analysis, conception and validation, 45h/year, M1, University of Grenoble – N. Gesbert
 Master: Foundations for XML: logics and automata, 18h/year, M2 (Mosig), University of Grenoble – P. Genevès
 Master: Fundamentals of Mobile Frameworks and Applications, 50h/year, M1, Polytech, University Joseph Fourier of Grenoble – J. Lemordant
 Master: Fundamentals of Mobile Frameworks and Applications, 50h/year, M2, University Scientific and technologic of Hanoi – J. Lemordant
 Master: Fundamentals of Mobile Frameworks and Applications, 36h/year, M1, MIAGE, University Joseph Fourier of Grenoble – J. Lemordant
 Master: Fundamentals of Mobile Frameworks and Applications, 36h/year, M2, University Pierre Mendes-France of Grenoble – J. Lemordant

8.2.2. Supervision

HdR: N. Layaïda, Representation and analyses of web content and processing, Université de Grenoble, 23 April 2013.
 PhD in progress: D. Graux, Large scale evaluation of semantic web queries, since November 2013, N. Layaïda and P. Genevès
 PhD in progress: N. Guido, Satisfiability for Expressive μ -calculi, since October 2012, C. Roisin and P. Genevès
 PhD in progress: M. Junedi, Query-Update Independence Analysis under Constraints, since October 2012, C. Roisin and N. Layaïda

8.3. Popularization

J. Lemordant has participated in several events to popularize recent results in the areas of accessible pedestrian navigation, namely conferences at the Osaka City University.
 J. Lemordant has participated in several events to popularize recent results in the areas of pedestrian navigation and mixed reality, namely the 6th European eAccessibility Forum and the State Of The Map 2013 conference.
 P. Genevès has contributed to the creation of a video for disseminating the obtained research results. This video was displayed during the ceremony when he received the CNRS Bronze Medal. Intended for a very wide audience, it presents the societal challenges addressed, introduces the obtained research results and their applications.
 J. Lemordant, T. Michel and M. Razafimahazo showcased indoor and outdoor navigation to Indian journalists (Education Times, Economic Times, Hindustan Times, The Hindu, NDTV) and have been interviewed by Monideepa Banerjee (NDTV). Grenoble, October 2013.
 J. Lemordant, T. Michel and M. Razafimahazo have participated to **Experimenta 2013** to present their results on the 3D audio integrated in the first year VENTURI demonstrator. Grenoble, October 2013.
 M. Razafimahazo has participated to **Museomix** and developed in 12 hours an iOS application called **Museomix#Gre** based on TYREX technologies for the Dauphinois Museum. It consists of an interactive map of the museum and visitors were able to understand the concept of virtual reality by being immersed in 5 different panoramas taken during the event. Grenoble, November 2013.

URBANET Team

9. Dissemination

9.1. Scientific Animation

- Walid Bechkit is/was reviewer for IEEE Transaction on Wireless Communications, Ad-Hoc Networks Journal, Journal of Network and Computer Applications, IEEE ICC 2013, IEEE WCN 2014.
- Walid Bechkit is in charge of seminar organization at the CITI laboratory.
- Khaled Boussetta is/was TPC member for a number of international conferences, including IEEE ICC, IEEE GlobeCom, IEEE MASS, IEEE VTC (fall/Spring), Wireless Days, Med-Hoc-Net, ICCVE, GUIS.
- Khaled Boussetta organized two technical sessions at University of Paris 13, one on Optimization for Networks in July 2013 and a second on Cloud Networks in October 2013.
- Marco Fiore was co-chair at IFIP/IEEE Wireless Days'13 for the Track Wireless Models and Simulation.
- Marco Fiore is/was TPC member for a number of international conferences, including IEEE SECON 2013/2014, IEEE WoWMoM 2013/2014, IEEE Globecom 2014, IEEE ICC 2014, IEEE VTC-Fall 2013.
- Hervé Rivano is TPC member of several international conferences, including IEEE IPDPS 2014 and IEEE ICC 2014.
- Hervé Rivano is elected member of the CITI laboratory council.
- Razvan Stanica was Local co-chair of IEEE WiMob 2013.
- Razvan Stanica was Session chair for a Networking track session at IEEE WiMob 2013.
- Razvan Stanica is/was TPC member for a number of international conferences, including IEEE ICC 2014, IEEE PIMRC 2013, IEEE VTC Spring/Fall 2013.
- Razvan Stanica is/was reviewer for IEEE Transaction on Mobile Computing, Ad-Hoc Networks Journal, IEEE Communications Magazine, Springer Wireless Networks, Vehicular Communications Journal.
- Fabrice Valois was General co-chair of IEEE WiMob 2013.
- Fabrice Valois is/was TPC member for several international conferences such as: IEEE AINA, IEEE Globecom, IEEE ICC, IEEE VTC, IEEE WCNC, IARIA SensorComm, IEEE WiMob.
- Fabrice Valois is in charge of the foreign affairs of the CITI laboratory.
- Fabrice Valois is correspondent member of the CITI laboratory for the Labex IMU.
- Fabrice Valois is elected member of the CITI laboratory council.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : Isabelle Augé-Blum, Operating Systems, 70h, L3, Telecom. Dpt. INSA Lyon, France.

Licence : Walid Bechkit, IP Networks, 10h, L3, Telecom. Dpt. INSA Lyon, France.

Licence : Razvan Stanica, Network Programming, 90h, L3, Telecom. Dpt. INSA Lyon, France.

Licence : Razvan Stanica, Advanced Wireless Networks, 20h, L3, IST / Telecom. Dpt. INSA Lyon, France (lectures given in english).

Licence : Fabrice Valois, IP Networks, 100h, L3, Telecom. Dpt. INSA Lyon, France.

Licence : Fabrice Valois, IP Networks, 20h, L3, IST / Telecom. Dpt. INSA Lyon, France (lectures given in english).

Master : Isabelle Augé-Blum, Innovation project, 30h, M1, Telecom. Dpt. INSA Lyon, France.

Master : Isabelle Augé-Blum, Bibliographical study, 30h, M1, Telecom. Dpt. INSA Lyon, France.

Master : Isabelle Augé-Blum, Real-Time Networks, 25h, M2, Telecom. Dpt. INSA Lyon, France.

Master : Isabelle Augé-Blum, Networks of the Future, 10h, M2, University of Lyon.

Master : Walid Bechkit, Network architectures, protocols and services, 12h, M1, Telecom. Dpt. INSA Lyon, France.

Master : Marco Fiore, Performance evaluation of telecom networks, 60h, M1, Telecom. Dpt. INSA Lyon, France.

Master : Razvan Stanica, Wireless local area networks, 8h, M2, University of Lyon.

Master : Razvan Stanica, Mobile Networks, 10h, M1, Telecom. Dpt. INSA Lyon, France.

Master : Fabrice Valois, Cellular Networks, 40h, M1, Telecom. Dpt. INSA Lyon, France.

Master : Fabrice Valois, Wireless Multihop networks, 10h, M2, University of Lyon.

Master : Fabrice Valois, Wireless Sensor Networks, 6h, M2, University of Grenoble.

Isabelle Augé-Blum is in charge of the foreign affairs of the Telecommunications department at INSA Lyon, coordinating all incoming and outgoing student exchange programs.

Isabelle Augé-Blum is an elected member of the Telecommunications Department Council at INSA Lyon.

Razvan Stanica is responsible for the administrative part related to all Master projects prepared by INSA Lyon Telecommunications department students.

Fabrice Valois is responsible of the networking teaching team in the Telecommunications department at INSA Lyon, coordinating all the courses in the networking domain.

Since 2006, Fabrice Valois is the head of an international teaching program focused on Internet of Things, established between INSA Lyon and Shanghai Jiao Tong University.

Fabrice Valois is an elected member of the Telecommunications Department Council at INSA Lyon.

9.2.2. Supervision

PhD : Ochirkhand Erdene-Ochir, Résilience et application aux protocoles de routage dans les réseaux de capteurs, INSA Lyon, 07/2013, Advisors: Fabrice Valois, Marine Minier (Inria Privatics).

PhD : Alexandre Mouradian, Proposition et vérification formelle de protocoles temps-réel pour les réseaux de capteurs sans fil, INSA Lyon, 11/2013, Advisors: Fabrice Valois, Isabelle Augé-Blum.

PhD : Anis Ouni, Optimisation de la capacité et de la consommation énergétique dans les réseaux maillés sans fil, INSA Lyon, 12/2013, Advisors: Fabrice Valois, Hervé Rivano.

PhD : Sandesh Uppoor, Understanding and exploiting mobility in wireless networks, INSA Lyon, 11/2013, Advisors: Marco Fiore, Fabrice Valois.

PhD in progress : Soukaina Cherkaoui, Energy-saving strategies for backhaul networks, since 11/2013. Advisors: Hervé Rivano, Fabrice Valois.

PhD in progress : Jin Cui, Aggregation: From data dynamics to network dynamics, since 11/2012. Advisor: Fabrice Valois.

PhD in progress : Rodrigue Domga Komguem, Autonomous WSN architectures for road traffic applications, since 11/2012. Advisors: Fabrice Valois, Razvan Stanica, Maurice Tchunte (Univ. Yaounde', Cameroun).

PhD in progress : Guillaume Gaillard, SLA pour réseaux de capteurs multi-services, since 12/2012. Advisor: Fabrice Valois.

PhD in progress : Quentin Lampin, QoS constraints and time constraints in WSN, since 10/2009. Advisors: Isabelle Augé-Blum, Fabrice Valois.

PhD in progress : Trista Lin, Urban mobility measurement and citizen-oriented services cartography, since 10/2012. Advisors: Frédéric Le Mouel (CITI DynaMid), Hervé Rivano, Fabrice Valois.

PhD in progress : Diala Naboulsi, Human mobility - an urban networking perspective, INSA Lyon, since 10/2012. Advisors: Razvan Stanica, Marco Fiore, Fabrice Valois.

9.2.3. Juries

- Khaled Boussetta was external examiner of the following Ph.D. defense:
 - Lionel Bertaux, Architecture Réseau pour Véhicule de transport en commun communiquant, LAAS, Université Toulouse 3 Paul Sabatier, 10/2013.
- Isabelle Augé-Blum was external examiner of the following Ph.D. defense:
 - Muhammad Adnan, Exact Worst-Case Communication Delay Analysis of AFDX Network, INP Toulouse, 11/2013.
- Fabrice Valois was external examiner of the following HDR defenses:
 - Emmanuel Chaput, Architecture et gestion de ressources dans les réseaux satellite et véhiculaires, IRIT, ENSEEIHT, INP Toulouse, 11/2013.
 - Tahiry Razafindralambo, Mouvements Autonomes : vers la Créativité dans les Réseaux sans fil, Université de Lille 1, 12/2013.
 - Rami Langar, Urban Wireless Networks : Mobility, Routing, and Resource Management Concerns, LIP6, UPMC, 12/2013.
- Fabrice Valois was external reviewer of the following PhD defenses:
 - Abbas Antoun Hatoum, Gestion des Ressources et d'Interférences dans les Réseaux FemtoCell OFDMA, LIP6, UPMC, 03/2013.
 - Julien Beaudaux, Auto-configuration et auto-adaptation de réseaux de capteurs sans-fil dans le contexte de la télémédecine, I-CUBE, Université de Strasbourg, 09/2013.
 - Jean-François Malbranque, IP sur UHF, Université de Toulon, 12/2013.
- Fabrice Valois was external examiner of the following PhD defenses:
 - Cédric Chauvenet, Protocoles de support IPv6 pour réseaux de capteurs sur courant porteur en ligne, LIG, Université de Grenoble, 10/2013.
- Fabrice Valois was president of a CoS 27 for a MCF position at INSA Lyon.
- Fabrice Valois was member of a CoS 27 for a Full Professor position at INSA Lyon.

9.3. Popularization

- Khaled Boussetta gave a keynote talk entitled "Cloud gaming: state of the art and open challenges", organized by the International Cloud Computing School (ICCS 2013), Hammamet Tunisia, in Dec 2013.
- Fabrice Valois gave an 8h course on ISN (Informatique et Sciences du Numérique). These lectures are made for the Rectorat of Lyon, the public is high school teachers.
- Trista Lin participated to *Fête de la science 2013*, between Oct 8-11. She was responsible for the animation "Best Route - Intelligent Mobility", at La Mache Highschool.
- Hervé Rivano gave a keynote talk entitled "Column Generation for optimization of wireless mesh networks", in the Optimization days of University of Paris XIII.

VEGAS Project-Team

7. Dissemination

7.1. Scientific Animation

Program and Paper Committee:

- Sylvain Lazard: Program committee of the European Workshop on Computational Geometry (EuroCG'13).

Editorial responsibilities:

- Sylvain Petitjean: Editor of *Graphical Models* (Elsevier).

Workshop organizations:

- Sylvain Lazard co-organized with S. Whitesides (Victoria University) the 12th Inria - McGill - Victoria Workshop on Computational Geometry ³ at the Bellairs Research Institute of McGill University in Feb. (1 week workshop on invitation).
- Marc Pouget co-organized the *Journées Informatiques et Géométrie*⁴ at Inria Nancy 14-15 Nov.
- Guillaume Moroz organized the session *Calcul formel et numérique* oh the *Rencontres Arithmétiques de l'Informatique Mathématique*⁵ at the *Institut Henri Poincaré* Paris 18-20 Nov.

Other responsibilities:

- Sylvain Lazard: Head of the Inria Nancy-Grand Est *PhD and Post-doc hiring committee* (since 2009). Member of the *Bureau du Département Informatique de Formation Doctorale* of the *École Doctorale IAEM* (since 2009). “Chargé de formation par la recherche” for Inria Nancy-Grand Est.
- Laurent Dupont: *Member* of Commission Pédagogique Nationale Infocom/SRC (since 2011). *Member* of Commission Information Scientifique (Inria/Loria).
- Xavier Goaoc: Chair of the Inria *COST-GTRI committee* (2011– august 2013).
- Guillaume Moroz: *Vice delegate* of the *Commission des Utilisateurs des Moyens Informatiques pour la Recherche*.
- Sylvain Petitjean: Director of the Inria Nancy Grand-Est. Member of Inria’s *Executive committee*.
- Marc Pouget: Member of the CGAL Editorial Board (since 2008).

³Workshop on Computational Geometry

⁴<http://jig2013.sciencesconf.org/>

⁵<http://raim2013.lip6.fr/>

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Licence: Laurent Dupont, *Systèmes de Gestion de Bases de Données Avancé*, 40h, L3, Université de Lorraine (IUT Charlemagne).

Licence: Laurent Dupont, *Concepts et Outils Internet*, 40h, L1, Université de Lorraine (IUT Charlemagne).

Licence: Laurent Dupont, *Programmation Objet et Évènementielle*, 40h, L2, Université de Lorraine (IUT Charlemagne).

Licence: Laurent Dupont, *Rich Internet Applications*, 40h, L2, Université de Lorraine (IUT Charlemagne).

Licence: Laurent Dupont and Yacine Bouzidi, *Programmation de Sites Web Dynamiques*, 70h, L2, Université de Lorraine (IUT Charlemagne).

Licence: Laurent Dupont, *Algorithmique*, 80h, L1, Université de Lorraine (IUT Charlemagne)

Licence: Laurent Dupont *Programmation Objet*, 40h, L1, Université de Lorraine (IUT Charlemagne)

Master: Marc Pouget, *Introduction à la géométrie algorithmique*, 10.5h, M2, École Nationale Supérieure de Géologie, France.

Doctorat: Marc Pouget, *Postdoctoral Summer: Convex hulls and point location*, 15h, IMPA, Rio de Janeiro, Brazil.

Licence: Sylvain Lazard, *Algorithms and Complexity*, 25h, L3, Université de Lorraine.

Licence: Yacine Bouzidi, *Certification informatique et internet*, 54h, L1, Université de Lorraine.

Licence: Yacine Bouzidi, *Langage orienté objet, Java*, 24h, L3, Université de Lorraine.

Licence: Yacine Bouzidi, *Langage d'interrogation des bases de données*, 20h, L3, Université de Lorraine.

7.2.2. Supervision

PhD in progress : Yacine Bouzidi, Résolution de systèmes bivariés et topologie de courbes planes, Oct. 2010, Sylvain Lazard et Marc Pouget.

7.3. Popularization

Guillaume Moroz: Member of the organizing committee of the *Olympiades académiques de mathématiques*.

VERIDIS Project-Team

9. Dissemination

9.1. Scientific Animation

- Pascal Fontaine co-chaired the International Conference on Frontiers of Combining Systems (FroCoS 2013). He served on the program committee of the workshops PxTP 2013, SMT 2013, and the International Conference on Computer Aided Deduction (CADE 2013). He is an elected member of the SMT Steering Committee, and one of three SMT-LIB managers.
- Dominique Méry is
 - a member of the IFIP Working Group 1.3 on *Foundations of System Specification*,
 - head of the Doctoral School IAEM Lorraine for the University of Lorraine,
 - head of the Formal Methods department of the LORIA laboratory,
 - an expert for the French Ministry of Education (DS9),
 - an expert for the French Agence Nationale de la Recherche (ANR) and AERES.
 - He served on the program committees of FHIES, FM, ICECCS, ICFEM, iFM, and FACS.
- The academic duties of Stephan Merz in 2013 included:
 - member of the IFIP Working Group 2.2 on *Formal Description of Programming Concepts*,
 - Inria representative in the Scientific Directorate of the International Computer Science Meeting Center in Dagstuhl,
 - delegate for the organization of conferences at Inria Nancy Grand-Est,
 - co-head of the PhD committee for computer science in Lorraine,
 - member of the program committees of iFM, Memocode, SAC, SBMF, and SEFM conferences, AFADL, AVoCS, Refinement, and SCSS workshops, member of the steering committee of AVoCS,
 - co-organizer of the VTSA summer school between Nancy, Saarbrücken, Luxembourg, and Liège,
 - president of the hiring committee for a professorship at Télécom Nancy and member of the hiring committee for professors at Université de l'Artois in Lens,
 - expert for the French Agence Nationale de la Recherche (ANR), German DFG, and Canadian NSERC.
- Thomas Sturm is a member of the Selection Committees for MSc and PhD students of the International Max-Planck Research School for Computer Science.
- Christoph Weidenbach is:
 - editor of JAR,
 - trustee of CADE Inc (elected 2009, reelected 2012),
 - member of the Appointment Decision Panel of FBK, Trento,
 - member of the Selection Committee of the Saarbruecken Graduate School in Computer Science,
 - member of Steering Committee *Bundeswettbewerb Informatik*,
 - co-organizer of the VTSA summer school between Nancy, Saarbrücken, Luxembourg, and Liège.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

The university employees of VeriDis have significant teaching obligations. We indicate the graduate courses they have been teaching this year.

- Dominique Méry gave courses in the Master program in Nancy on: formal system engineering, modeling and verification of systems, theoretical computer science, development of software systems, distributed algorithms.
- Marie Duflot-Kremer and Stephan Merz taught a course on algorithmic verification in the Master program in Nancy.
- Uwe Waldmann taught a course on Automated Reasoning at Saarland University.
- Christoph Weidenbach gave a course on Automated Reasoning II and lectured within the series “Perspektiven der Informatik” at Saarland University.

9.2.2. Supervision

- PhD: Henri Debrat, Certification formelle de la correction d’algorithmes de Consensus, Université de Lorraine. Supervised by Bernadette Charron-Bost and Stephan Merz, defended on December 6, 2013.
- PhD: Tianxiang Lu, Formal Verification of the Pastry Protocol, Université de Lorraine and Universität des Saarlandes. Supervised by Stephan Merz and Christoph Weidenbach, defended on November 27, 2013.
- PhD in progress: Manamiary Andriamiarina, Refinement Techniques for Distributed Algorithms, Université de Lorraine. Supervised by Dominique Méry, since 10/2010.
- PhD in progress: Noran Azmy, On the Automation of Proofs in TLAPS, Saarland University. Supervised by Christoph Weidenbach, since 11/2012.
- PhD in progress: Haniel Barbosa, Refutational Completeness in Satisfiability Modulo Theories, Université de Lorraine. Supervised by Pascal Fontaine and Stephan Merz, since 12/2013.
- PhD in progress: Marek Kořta, Computational Logic, Universität des Saarlandes. Supervised by Thomas Sturm, since 11/2011.
- PhD in progress: Hernán Vanzetto, SMT Techniques for TLA⁺ Proof Obligations, Université de Lorraine. Supervised by Kaustuv Chaudhuri and Stephan Merz, since 10/2010.

9.2.3. Juries

Stephan Merz wrote reports on the following PhD theses:

- Pierre-Emmanuel Cornilleau: *Certification of Static Analysis in Many-Sorted First-Order Logic*, ENS Cachan-Bretagne;
- Mélanie Jacquél: *Automatisation des preuves pour la vérification des règles de l’Atelier B*, CNAM Paris;
- Chantal Keller: *A Matter of Trust: Skeptical Communication Between Coq and External Provers*, Ecole Polytechnique;
- Yan Zhang: *Semi-Automatic Controller Design in a Java-like Language*, Université Paris 6.

He also was a member of the PhD committees of Dorin Maxim and Faqing Yang in Nancy.

Thomas Sturm was a member of the PhD committee of Evgeny Kruglov in Saarbrücken.

9.3. Popularization

Marie Duflot-Kremer, Pascal Fontaine, and Stephan Merz presented some of the subjects and techniques that underly formal verification of protocols and algorithms at events like “Fête de la Science”. Using wooden puzzles, Sudoku sheets or boxes with locks, they explained how real-life problems can be represented in logical form and then solved using automated tools based on formal logic.

Marie Duflot-Kremer presented exercise sessions for high school students on “conducting a police investigation using databases” and “discovering Turing machines with Lego bricks”. She is also a member of the steering committee preparing an itinerant exposition intended for explaining computer science to high-school students.

Thomas Sturm, Uwe Waldmann, and Christoph Weidenbach are involved in the “Computer Science Research Days” which take place every year. Gifted students from all over Germany can actively participate in current research themes within the Max Planck Institute for Informatics, the Computer Science Department of Saarland University and the German Research Center for Artificial Intelligence. The goal is to fill young people with enthusiasm for the subject of computer science as well as to discover and support the development of new talent.

VIRTUAL PLANTS Project-Team

7. Dissemination

7.1. Scientific Animation

- Christophe Godin has rendered the following services in 2013:
 - he is a member of the College de Direction of UMR AGAP
 - he is a member of the management board of IBC (Institut de Biologie Computationnelle de Montpellier)
 - he is a member of the scientific committee of the Environnement-Agromomy department at INRA
 - he is a member of the editorial board of the journal *Frontiers in Plant Sciences*
 - he is the scientific coordinator of the Inria Project Lab (former Action d'Envergure) Morphogenetics
 - he is the scientific coordinator of axis 4 of IBC on imaging and modeling (together with Patrick Lemaire)
 - he was co-chair of the 7th international conference on functional-structural models of plants (FSPM 2013) that was held in Finland in June 2013.
 - he is guest editor for the special issue on FSPMs of the journal *Annals of Botany*.
 - he gave 6 invited talks (4 abroad).
 - he was referee for papers submitted at journals: *Development*, *PNAS*, *Plos Comp Biol*.
- Yann Guédon has rendered the following services in 2013:
 - he is a member of the editorial board of *Annals of Botany* and a member of the ERCIM working group "Computing & Statistics".
 - he was a member of the program committee of the 7th International Workshop on Functional-Structural Plant Models (FSPM 13, Saariselkä, Finlande) and evaluated 8 communications.
 - he participated to the PhD committee of Pierre Gloaguen (Ifremer, Nantes) and Gustavo Malagi (Federal University of Pelotas, Brazil and Montpellier SupAgro).
 - he was a referee for papers submitted to *Signal Processing* and the *Gretsi* conference.
- Frédéric Boudon was referee for papers submitted to *SIGGRAPH*, *SIGGRAPH Asia*, *Sensors*, *Computer Graphics Forum* and *International Journal of modeling and Simulation*.
 - Christian Fournier give a invited talk on graphic programming at the JDEV2013 (Journée nationales du Développement Logiciel 4-5-6 septembre 2013 Ecole polytechnique Palaiseau/Ile-de-France)
- Christophe Pradal has rendered the following services in 2013:
 - he is the scientific coordinator of the Agropolis Foundation project 'OpenAlea software platform'.
 - he is the scientific coordinator of the Inria project ADT 'OpenAlea 2.0'.
 - he is the scientific coordinator of the modeling workpackage of the ANR Blanc Hydro-root.
 - he is a member of the board of the Epiarch network.

- he is an editor of proceeding of the conference Euroscipy [26] that appeared as a special issue of the Journal of Computational Science (JoCS) (together with Gaël Varoquaux and Hans Peter Langtangen).
- he gave 2 invited talks
- he was referee for papers submitted at journals: Journal of Scientific Computing and Annals of Botany.

7.2. Teaching - Supervision - Juries

7.2.1. Teaching

Master Biostatistics. Jointly with Montpellier 1, Montpellier 2 Universities and Agro-Montpellier. Yann Guédon teaches the stochastic modeling course (<http://www.agro-montpellier.fr/um2/um1/masterbiostatistique>). This involves 21h of M2 classes.

Christophe Godin was responsible for a class of Master 2 on 'Plant modeling' with participation of Yann Guédon, Christophe Pradal, Frédéric Boudon and Christian Fournier at the University of Montpellier 2 (M2 - 25h).

Christophe Godin gave a class of Master 2 on 'Phyllotaxy' in the Master of Biology at the University of Montpellier 2 (M2 - 4h).

Christophe Godin gave a class of Master 2 on 'Plant modeling' in the module plant and animal Morphogenesis of the Master in biology at ENS-Paris organized by Patrick Lemaire (M2 - 4h).

Christophe Godin and Yann Guédon participated to the module iPlant in the Master of bioinformatic and biomathematics (University Cheikh Anta Diop, Dakar, Sénégal) (M2 - 12h).

Christophe Pradal and Christian Fournier taught the Master class "Impact de l'architecture sur la propagation des maladies foliaires" in the module 'Démarches de modélisation' in Montpellier SupAgro (15h).

7.2.2. Supervision

PhD in progress : Mathilde Balduzzi, "*Geometric modeling of plant canopy from 3D scanner images: Combined use of 3D information and reflected intensity for meshing*", Montpellier 2 University, C. Godin, F. Tardieu.

PhD in progress : Jonathan Legrand, "*Hormon signaling and control of morphogenesis during flower development*", ENS Lyon, P. Das, Y. Guedon.

PhD : Jean Peyhardi, "*A new generalized linear model (GLM) framework for analysing categorical data; application to plant structure and development*", Montpellier 2 University. Y. Guédon, C. Trottier.

PhD in progress : Pierre Fernique, "*Hidden transition models for the phenotyping of plant architecture in relation to environmental and genetic factors*", Montpellier 2 University. Y. Guédon, J.-B. Durand.

PhD in progress : Léo Guignard, "*Segmentation, visualization and mechanical modeling of embryonic development in the ascidian*", Montpellier 2 University, C. Godin, P. Lemaire.

PhD in progress : Maryline Lièvre, "*Analysis and multiscale modeling of foliar growth in Arabidopsis thaliana in response to environmental stresses. Implication of the floral transition in the foliar expansion*", Montpellier 2 University, C. Granier, Y. Guédon.

PhD in progress : Guillaume Garin, "*Développement d'un cadre générique de modélisation du couple plante – agent pathogène dans OpenAlea et d'une méthodologie de transfert vers un Outil d'Aide à la Décision*", Montpellier 2 University, C. Robert, B. Andrieu, C. Pradal, C. Fournier.

PhD in progress : Jean-Philippe Bernard, "*Adaptive mechanical model of early flower development based on 4D imaging*", Montpellier 2 University, C. Godin, B. Gilles.

PhD in progress : Beatriz Moreno Ortega, "*Analysis and modeling of metabolic and hormonal controls of lateral root growth during their ontogeny. Application to the impact of water stress on the root architecture*", Montpellier SupAgro, B. Muller, Y. Guédon.

PhD in progress : Sixtine Passot, "*Adaptation of millet root architecture : Phenotyping and spatio-temporal analysis of growing root systems*", Montpellier 2 University, L. Laplace, Y. Guédon.

7.2.3. Juries

Frédéric Boudon was a member of the jury of the PhD defense of Jerome Guenard, from University of Toulouse. Christophe Pradal participated to the PhD committee of Christophe Lecarpentier.

Christophe Godin was a Jury member of the PhD Thesis of Julien Lavenus held in October on the Analysis of the Gene Regulatory Network Controlling Lateral Root Initiation and Patterning Using Systems Biology Approach.

7.3. Popularization

Christophe Godin gave 3 conferences for high-school pupils respectively on plants and fractals and on the Secret Code of Flowers in the context of MathC2+ and fête de la science (6h).

VISAGES Project-Team

9. Dissemination

9.1. Scientific Animation

9.1.1. Editorial board of journals

- C. Barillot is Associate Editor of IEEE Transactions on Medical Imaging (IEEE-TMI).
- C. Barillot is Associate Editor of Medical Image Analysis (MedIA).
- C. Barillot is Associate Editor of ISRN Signal Processing.
- C. Barillot is Associate Editor of Current Medical Imaging Reviews.
- C. Barillot serves in the peer review committee of the Journal of Computer Assisted Tomography.
- C. Barillot serves in the peer review committee of Neuroimage.
- P. Maurel serves in the peer review committee of Frontiers in Neurosciences

9.1.2. Workshop/Symposium Organization

- S. Prima was the co-organiser and chairman (with Antoine Balzeau from CNRS-MNHN, Paris and François Marchal from CNRS, Marseille) of the colloquium "Symmetry and asymmetries in anthropology" which took place on 24 January 2013 during the annual meeting of the Société d'Anthropologie de Paris (<http://www.sapweb.fr>).
- S. Prima was in the Steering Committee of the MICCAI workshop on Mesh Processing in Medical Image Analysis (MeshMed 2013), Nagoya, Japan, September 26, 2013 (<http://www2.imm.dtu.dk/projects/MeshMed>).
- C. Barillot was program co-chair of the Miccai 2013 international conference (<http://www.miccai2013.org/organization.html>). MICCAI 2013 Proceedings have been published as LNCS series from Springer. The volume numbers are LNCS 8149, 8150 and 8151 (<http://www.springer.com/computer/image+processing/book/978-3-642-40810-6>).

9.1.3. Peer Reviews of journals

- IEEE TIP (CB), Medical Image Analysis (CB), NeuroImage (CB), Computer Methods and Programs in Biomedicine (CB), Phys. Med. Biol. (CB), Comp. in Biol & Med. (CB), J. of Neuroscience Methods (CB), Image and Vision Computing (CB), JMIV (CB), NeuroBiology of Aging (IC).

9.1.4. Technical Program Committees (TPC) of conferences

- C. Barillot was area chair of Miccai 2012, SPIE 2012, TPC member of MICCAI workshops DCICTIA 2012, ICSS 2012, MBIA 2012, and MCV 2012, TPC member of IEEE CBMS 2012, ICPR 2012, ESMRMB 2012, SFRMBM 2012, ECR/imaGine 2011.
- S. Prima was TPC member of MeshMed'2013.
- P. Maurel was TPC member of MICCAI'2013.
- O. Commowick was TPC member of MICCAI'2013, IEEE ISBI'2013.

9.1.5. Scientific societies

- C. Barillot is member of the Board of Directors of IPMI (Information Processing in Medical Imaging)
- C. Barillot is member of IEEE EMBS
- C. Barillot is senior member of IEEE
- C. Barillot is member of the European Society of Molecular Imaging (ESMI)

- C. Barillot, O. Commowick, P Maurel and S. Prima are members of the MICCAI society
- E. Bannier, C. Barillot and I. Corouge are members of the European Society of Magnetic Resonance in Medicine and Biology (ESMRMb)

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Teaching on 3D Medical Imaging (visualization, segmentation, fusion, management, normalization) in the following tracks:

- Master 2 SIBM, University of Angers-Brest-Rennes : 26h (*C. Barillot, O. Commowick, S. Prima, I. Corouge, E. Bannier, J.-Y. Gauvrit*):
 - C. Barillot is responsible for one semester.
 - J.-Y. Gauvrit is the coordinator for the Master.
- Master 1 SIBM, University of Rennes: 5h (S. Prima)
- Elise Bannier gave 4-day lecture in fMRI and E-Prime to Emmanuelle Le Bars, MR Physicist from the University Hospital of Montpellier (February 2012, Rennes, France). This training was funded by Siemens.
- Ecole Supérieure d'Ingénieur de Rennes (ESIR): 60h in medical imaging (P. Maurel)

Other topics :

- Ecole Supérieure d'Ingénieur de Rennes (ESIR): 60h in general image processing (P. Maurel) and 60h in algorithmics and complexity (P. Maurel)
- ENS Cachan-Bretagne: 24h in introduction to image processing (P. Maurel)

9.2.2. Supervision

- PhD Hrishikesh Deshpande, Dimensionality Reduction and Statistical Learning for Computational Modelling of Natural Evolution of Brain Pathologies, Inria, December 2012, Christian Barillot, Pierre Maurel
- PhD Renaud Hedouin, Biomarker discovery in brain imaging by using diffusion MRI, Inria/Inserm, November 2013, Christian Barillot, Olivier Commowick
- PhD Yogesh Karpate, Quantitative analysis of MRI in Multiple Sclerosis in the context of the clinically isolated syndrome, INSERM, December 2011, Christian Barillot, Olivier Commowick
- PhD Camille Maumet, From Group to Patient-Specific Analysis of Brain Function in Arterial Spin Labelling and BOLD Functional MRI, University of Rennes I, defended April 2013, Christian Barillot, Pierre Maurel
- PhD Lorraine Perronnet, Neurofeedback Using Virtual Reality And Combining Eeg-Mri For Brain Rehabilitation, Inria/CominLabs Hemisfer project, from Dec 2013, Christian Barillot, Maureen Clerc (Inria Sophia-antipolis), Anatole Lecuyer (HYBRID project), Fabien Lotte (Inria Bordeaux)
- PhD H el ene Raoult, "Angio-RM morphologique et dynamique sans injection de produit de contraste dans l'exploration des pathologies neurovasculaires", CHRU Rennes, Nov. 2011, Elise Bannier, Jean-Yves Gauvrit
- PhD Aymeric Stamm, Diffusion Directions Imaging: High resolution reconstruction of white matter fascicles from low angular resolution diffusion MRI, University of Rennes I, defended Nov. 2013, Christian Barillot, Patrick Perez (Technicolor)

9.2.3. Juries

- C. Barillot: PhD reviewer, Andrea Valsecchi, University of Oviedo, Spain, Dec. 2013
- C. Barillot: PhD reviewer, Maxime Taquet, Universit  Catholique de Louvain, Belgium, Nov. 2013

- C. Barillot: PhD, Solveig Badillo, University Paris Sud, Orsay, Nov. 2013
- C. Barillot: PhD, Thomas Samaille, University PIERRE ET MARIE CURIE, Paris, June 2013
- C. Barillot: PhD reviewer, Sylvain Merlet, University of Nice-Sophia Antipolis, Nice, Sept. 2013
- C. Barillot: PhD reviewer, Stefano Baraldo, Department of Mathematics, Politecnico di Milano, Italia, June 2013
- C. Barillot: PhD, president, Tao LI, University of Rennes I, Rennes, Feb. 2013
- C. Barillot: HDR, Olivier Coulon, University of Aix-Marseille, Marseille, Sept. 2013
- C. Barillot: HDR president, Alexandre Krupa, University of Rennes I, Marseille, Dec. 2012

9.3. Popularizationn

- Inria Emergence, "Une plateforme de Neuroimagerie pour la sclerose en plaque"
- Serimedis/inserm Multimedia report (<http://www.serimedis.inserm.fr/fr/spotlight/6203/visages-vision-action-et-gestion-d-informations-en-sante/page/1/SN/techno>)
- Video production for INPI Trophee of 2013 (<http://www.bretagne-innovation.tm.fr/Temoignages/Laureats-Trophees-INPI-Bretagne-2013-Laboratoire-VisAGeS-Video>).
- Ouest Inria: "La fabuleuse histoire de Shanoir "
- Emergences Inria: "Un cloud pour l'imagerie médicale" (http://emergences.inria.fr/2012/newsletter_24/L22-IRT)

WILLOW Project-Team

9. Dissemination

9.1. Scientific Animation

- Conference and workshop organization
 - Workshop co-organizer, ICCV'13 THUMOS: The First International Workshop on Action Recognition with a Large Number of Classes, Sydney, Australia, 2013 (Ivan Laptev).
- Editorial Boards
 - International Journal of Computer Vision (I. Laptev, J. Ponce, J. Sivic and A. Zisserman).
 - Image and Vision Computing Journal (I. Laptev).
 - Foundations and Trends in Computer Graphics and Vision (J. Ponce, A. Zisserman).
 - IEEE Transactions on Pattern Analysis and Machine Intelligence (K. Alahari, co-guest editor of a special issue).
 - I. Laptev and J. Sivic co-edit a special issue on "Video representations for visual recognition" in the International Journal of Computer Vision.
 - J. Sivic co-edits a special issue on "Advances in Large-Scale Media Geo-Localization" in the International Journal of Computer Vision.
- Area Chairs
 - IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2013 (I. Laptev, J. Ponce, J. Sivic).
 - IEEE International Conference on Computer Vision (ICCV), 2013 (J. Sivic)
 - European Conference on Computer Vision (ECCV) 2014 (I. Laptev)
- Peer reviewing
 - IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2013 (K. Alahari, M. Cho, V. Delaitre, V. Kantorov).
 - IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2014 (K. Alahari, M. Cho, V. Delaitre, V. Kantorov, J. Sivic, I. Laptev).
 - IEEE International Conference on Robotics and Automation (ICRA), 2013 (J. Sivic).
 - International Conference on Neural Information Processing Systems (NIPS), 2013 (I. Laptev, J. Sivic).
 - ACM Symposium on User Interface Software and Technology (UIST) 2013 (I. Laptev).
 - ACM International Conference on Computer Graphics and Interactive Techniques (SIGGRAPH), 2013 (J. Sivic).
 - ACM International Conference on Computer Graphics and Interactive Techniques (SIGGRAPH Asia), 2013 (J. Sivic).
 - I. Laptev, reviewer for ERC grant applications (2013).
- Prizes and distinctions:
 - Sr. Member, Institut Universitaire de France (J. Ponce).
 - Inria Prime d'excellence scientifique (I. Laptev, J. Sivic).
 - ENS Prime d'excellence scientifique (J. Ponce).

9.2. Teaching - Supervision - Juries

9.2.1. HdR

- HdR: Ivan Laptev, Modeling and visual recognition of human actions and interactions, École normale supérieure

9.2.2. Teaching

Licence : J. Ponce, “Introduction to computer vision”, L3, Ecole normale supérieure, 36h.

Licence : M. Pocchiola and J. Ponce, “Geometric bases of computer science”, L3, Ecole normale supérieure, 36h.

Master : I. Laptev, J. Ponce and J. Sivic (together with C. Schmid, Inria Grenoble), “Object recognition and computer vision”, M2, Ecole normale supérieure, and MVA, Ecole normale supérieure de Cachan, 36h.

Doctorat : I. Laptev, J. Ponce, J. Sivic and A. Zisserman were speakers at the Inria/ENS Visual Recognition and Machine Learning Summer School <http://www.di.ens.fr/willow/events/cvml2013/>, Paris, 15h.

Doctorat: I. Laptev, Tutorial on human action recognition at the Inria Visual Recognition and Machine Learning Summer School, Paris, July 2013.

Doctorat: I. Laptev, Short course on Visual object and action recognition, Samsung Electronics Polska, Warsaw, Poland, November 2013.

9.2.3. Supervision

PhD in progress : Mathieu Aubry, “Visual recognition and retrieval of 3D objects and scenes”, started in 2011, J. Sivic and D. Cremers (TU Munich).

PhD in progress : Louise Benoît, started in 2009, J.Ponce.

PhD in progress : Piotr Bojanowski, “Learning to annotate dynamic video scenes”, started in 2012, I. Laptev, J. Ponce, C. Schmid and J. Sivic.

PhD in progress : Florent Couzinié-Devy, started in 2009, J.Ponce.

PhD in progress : Vincent Delaitre, “Modeling and recognition of human-object interactions”, started in 2010, I. Laptev and J. Sivic.

PhD in progress : Warith Harchaoui, “Modeling and alignment of human actions in video”, started in 2011, I. Laptev, J. Ponce 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 (MSR), I. Laptev and J. Sivic.

PhD in progress : Guillaume Seguin, “Human action recognition using depth cues”, started in 2010, J. Sivic and I. Laptev.

PhD in progress : Marc Sturzel, started in 2008, J. Ponce, A. Zisserman.

PhD in progress : Tuang Hung VU, “Learning functional description of dynamic scenes”, started in 2013, I. Laptev.

9.2.4. Juries

- PhD thesis committee:
 - Nicolas Ballas , Mines Paristech, 2013 (J. Ponce (rapporteur), J. Sivic).
 - Yanal Wazaefi (Aix Marseille), 2013 (J. Ponce).
 - Anton Andriyenko, TU Darmstadt, Germany, 2013 (I. Laptev (rapporteur)).

- HDR thesis committee:
 - Ivan Laptev, ENS Ulm, 2013 (J. Ponce).
- Other:
 - ICRA 2013 best computer vision paper award committee (J. Ponce).
 - Member of the PSL Research Council (J. Ponce).
 - Chair of the CMLA AERES evaluation committee at ENS Cachan, November 2013 (J. Ponce).
 - Member of the Mathematics and Systems Unit AERES evaluation committee at Mines ParisTech, January 2014 (J. Ponce).
 - Member of the Inria postdoc selection committee, 2012- (I. Laptev).
 - Member of Conseil de Laboratoire DI, ENS, 2013 (I. Laptev).
 - Member of Inria Commission de developpement technologique (CDT), 2012- (J. Sivic).

9.3. Inria/ENS Visual Recognition and Machine Learning Summer School 2013

<http://www.di.ens.fr/willow/events/cvml2013>

I. Laptev, J. Ponce and J. Sivic (together with C. Schmid, Inria Grenoble) co-organized a one week summer school on Visual Recognition and Machine Learning. The summer school, hosted by ENS, attracted 177 participants from 34 countries (28% France / 32% Europe / 40% other countries (including Australia, Brazil, Canada, China, India, Israel, Japan, Malaysia, Saudi Arabia, Singapore, South Korea, Turkey and USA)), and included Master students, PhD students as well as Post-docs and industrial participants. The summer school provided an overview of the state of the art in visual recognition and machine learning. Lectures were given by 14 speakers (5 USA, 1 UK, 1 Austria, 1 Germany, 6 France), which included top international experts in the area of visual recognition (J. Malik, UC Berkeley, USA; M. Hebert, CMU, USA; K. Grauman, UTexas, USA, A. Oliva, MIT, USA; Y. LeCun, NYU, USA; . Zisserman, Oxford, UK / WILLOW). Lectures were complemented by practical sessions to provide participants with hands-on experience with the discussed material. In addition, a poster session was organized for participants to present their current research.

9.4. Invited presentations

- I. Laptev, Invited talk at the 1st Workshop on Understanding Human Activities, Sydney, Australia, Dec. 2013.
- I. Laptev, Invited talk at the IEEE Workshop on Decoding Subtle Cues from Social Interactions, Sydney, Australia, Dec. 2013.
- I. Laptev, Invited talk at the Int. Workshop on Action Similarity in Unconstrained Videos, Portland, Oregon, USA, June 2013.
- I. Laptev, Seminar at Technicolor, Paris, France, June 2013.
- I. Laptev, Seminar at TU Darmstadt, Darmstadt, Germany, May 2013.
- I. Laptev, Seminar at Xerox Research Centre Europe, Grenoble, France, March 2013.
- I. Laptev, Seminar at University of Washington, Seattle, USA, Feb. 2013.
- J. Ponce, Invited talk at the 2013 Polaris Colloquium, Lille, January 2013
- J. Ponce, Invited talk at the The Google cultural center, June 2013
- J. Ponce, keynote speaker at the 2013 Annual Workshop of the Austrian Association for Pattern Recognition in Innsbruck, May 2013
- J. Ponce, 20th anniversary distinguished speaker at the Xerox Research Centre Europe in Grenoble, July 2013

- J. Sivic, ICCV AC workshop, Oxford, August 2013.
- J. Sivic, Seminar at Ecole Centrale, Paris, September 2013.
- J. Sivic, Invited talk at the Int. Workshop on Visual Analysis and Geo-Localization of Large-Scale Imagery, CVPR 2013, June 2013.
- J. Sivic, Invited talk at the 1st IEEE Workshop on Visual Analysis beyond Semantics, CVPR 2013, June 2013.
- J. Sivic, Invited talk at the IST Austria Symposium on Computer Vision and Machine Learning, Vienna, Austria, Sep. 2013.
- J. Sivic, Invited talk at the Workshop on Large-scale video search and mining, ICCV 2013.

9.5. Popularization

- J. Ponce participated in the iMatch meeting at Futur en Seine, June 2013
- J. Sivic participated in the CityLabs@Inria presentation at Futur en Seine, June 2013

WIMMICS Project-Team

9. Dissemination

9.1. Scientific Animation

Michel Buffa:

was Program Committee member of WWW Workshop about Semantic Web Collaborative Spaces (SWCS).

Elena Cabrío:

was Program Committee chair of CLEF 2013 lab Multilingual Question Answering over Linked Data (QALD-3), and of the 2nd Workshop on Argumentation in Artificial Intelligence and Philosophy: computational and philosophical perspectives (ARGAIP 2013).

She was PC member of the Extended Semantic Web Conference (ESWC 2013), the Association for Computational Linguistics conference (ACL 2013), the Workshop on Web of Linked Entities (WoLe 2013) WWW 2013, the Joint Symposium on Semantic Processing (JSSP-2013).

Olivier Corby :

was Program Committee member of: Conférence de Recherche en Informatique (CRI), Cooking with Computer Workshop at IJCAI, 3rd International Workshop on Graph Structures for Knowledge Representation and Reasoning (GKR'13) at IJCAI, 2nd International Workshop on Querying Graph Structured Data at EDBT/ICDT, Journées Ingénierie des Connaissances (IC);

was reviewer for: ISWC, workshop *Des Sources Ouvertes au Web de Données* (SOS-DLWD) at Plateforme IA;

was reviewer of a project proposal for the ANR;

was invited to give a talk on Semantic Web at a workshop organized by the AnaEE program (CNRS, INRA)¹⁷, december 5-6.

Catherine Faron Zucker :

coorganized a scientific journey on e-learning environments and artificial intelligence, sponsored by the national AFIA and ATIEF associations¹⁸,

is chairwoman of the French conference on Knowledge Engineering IC 2014 which will take place on May 2014¹⁹.

was invited for a talk and a tutorial on the Web of Data and the Semantic Web at JDEV2013 (Journées nationales du Développement Logiciel JDEV); the audience was CNRS, Inria and INRA engineers²⁰,

was invited for a talk on the Web of Data and ontology at a workshop organized by the AnaEE program at the station for experimental ecology; the audience was CNRS and INRA engineers and researchers.

is member of the board of the French association for Artificial Intelligence (AFIA) and participates to its monthly meetings.

She was member of the program committee of:

¹⁷<http://www.anaee-s.fr/>

¹⁸<http://www.irit.fr/EIAH2013/index.php?page=journee-eiah-ia>

¹⁹<http://www.irit.fr/IC2014>

²⁰<http://devlog.cnrs.fr/jdev2013>

Int. Semantic Web Conference (ISWC), Int. Joint Conference on Artificial Intelligence (IJCAI), Int. Conf. on Knowledge Engineering and Ontology Development (KEOD), Int. Conf. on Knowledge and Systems Engineering (KSE), Conférence nationale d'Ingénierie des Connaissances (IC), Workshop on Graph Structures for Representation and Reasoning (GKR), Colloque National (sénégalais) sur la Recherche en Informatique et ses Applications (CNRIA).

Fabien Gandon was:

Publicity chair for ESWC 2013,

Reviewer for Journals: *Intellectica*,

Reviewer for Conferences: EGC ²¹ ESWC ²² Hypertext ²³ IC ²⁴ ICWSM ²⁵ IJCAI ²⁶ ISWC (Senior PC) ²⁷ SAC ²⁸ TOTh ²⁹ VLDB ³⁰ WebSci ³¹ WI ³² WWW ³³

Reviewer for Workshops: MSM ³⁴ PrivOn ³⁵ QetR ³⁶ SPIM ³⁷ SSN Semantic social networks ³⁸ SemanticCities ³⁹ SWCS ⁴⁰ WebS ⁴¹.

Reviewer for project proposals at Digiteo-DigiCosme,

Reviewer of a book for Morgan Kaufmann, an imprint of Elsevier.

Alain Giboin was :

Member of the steering committee of the COOP conference series (International Conferences on the Design of Cooperative Systems),

Member of the program committee of COOP 2014,

Member of the organizing committee of COOP 2014,

Member of the program committee of IC 2013, 24èmes Journées francophones d'Ingénierie des Connaissances, 3-5 July 2013, Lille, France and I-SEMANTICS 2013, The 9th International Conference on Semantic Systems, 4-6 September 2013, Graz, Austria,

Member of the organizing committee of the colloquium eSP 2013 (e-Santé de Proximité), 31 May 2013, Roquefort-les-Pins.

Nhan Le Than organized the First National Workshop on *e-Plateforme de Santé de Proximité* Roquefort-Les-Pins, May 31, (eSP 2013) ⁴². He was AERES expert to examine the diploma projects of the "Marne la Vallée Paris-Est University".

Isabelle Mirbel was Program Committee member of:

²¹<http://www.irit.fr/EGC2013/>

²²<http://2013.eswc-conferences.org/>

²³<http://ht.acm.org/ht2013/>

²⁴<http://pfia2013.univ-lille1.fr/doku.php%3Fid=fr:ic.html>

²⁵<http://www.icwsm.org/2013/>

²⁶<http://ijcai13.org/>

²⁷<http://iswc2013.semanticweb.org/>

²⁸<http://users.marshall.edu/~hanh/SWA2013/>

²⁹<http://www.porphyre.org/toth>

³⁰<http://www.vldb.org/2013/>

³¹<http://www.websci13.org/>

³²<http://cs.gsu.edu/wic2013/wi>

³³<http://www2013.org/>

³⁴<http://oak.dcs.shef.ac.uk/msm2013/>

³⁵<http://privon.semanticweb.org/>

³⁶<http://www.irit.fr/QetR/2013/>

³⁷<http://2013.spim-workshop.org/>

³⁸<http://ufrsciencestech.u-bourgogne.fr/~abrouk/SSN/>

³⁹<http://research.ihost.com/semanticcities13/index.html>

⁴⁰<http://www.swcs2013.org/>

⁴¹<http://www.faw.jku.at/woess/webs/webs.html>

⁴²<http://hal.inria.fr/ESP13>

25th International Conference on Advanced Information Systems Engineering (CAISE 2013), 21st European Conference on Information Systems (ECIS 2013), Seventh IEEE International Conference on Research Challenges in Information Science Doctoral Consortium.

Andrea Tettamanzi served as Program co-chair of the “EvoFin” track of the EvoApplications 2013 conference, and as the chair of EvoTransfer, a technology-transfer event, now in its 2nd edition, in the framework of Evo* 2013, which took place in Vienna in April this year, and is serving in the same capacities for the next edition of 2014 in Granada. He is program co-chair for the area of fuzzy systems for IBERAMIA, the latin American conference on artificial intelligence.

He has served as a referee for the Information Sciences journal, the Applied Soft Computing Journal, the Computational Intelligence journal, the Transactions on Knowledge and Data Engineering, and the Genetic Programming and Evolvable Machines journal.

Finally, he has served or is serving in the program committees of GECCO 2013, GeLiDD 2013, IAT 2013, IJCAI 2013, and PPSN 2014 conferences.

Serena Villata was Program Chair of the 2nd Artificial Intelligence meets the Web of Data workshop (AIImWD-2013) co-located with the ESWC-2013 conference, and of the 2nd Workshop on Argumentation in Artificial Intelligence and Philosophy: computational and philosophical perspectives (ARGAIP 2013), co-located with the AI*IA-2013 Conference. She was PC member of the AAMAS-2013, IJCAI-2013, COREDEMA-2013, TAFA-2013, CLIMA XIV, PRIMA-2013, EUMAS-2013, ICAART-2013. She served as a reviewer for the following international journals: ACM Transactions on Intelligent Systems and Technology, Journal of Logic and Computation, Argument & Computation, Journal of Biomedical Informatics.

9.1.1. Invited Talk

Fabien Gandon:

Semantics and Social Networks for Business Intelligence, SOFSEM, January 28-31.

Le Web 3.0, la culture, les langues, Expolangues conference, February 2, Ministère de la Culture et de la Communication.

Le labyrinthe des évolutions du Web, Centre des Jeunes Dirigeants, Cannes Sophia Antipolis, April 10.

Semantic and Social (Intra) Webs, ICEIS, 2013: <http://www.iceis.org>

Panel *Information Systems in the Enterprise of the future: what place for Models, Services, and Semantics?*, ICEIS, 2013: <http://www.iceis.org> Panel "Open Data in Science", conference i-KNOW 2013.

Quand le lien fait sens, Conference BLEND, Lyon, October 2.

Données de la culture et culture de la donnée, Conférence Automne Numérique, *Transmettre la culture à l'ère numérique*, November 7, Ministère de la Culture et de la Communication, Microsoft Campus.

Le Web au prisme de la ressource, Séminaire Nouvelles formes d'éditorialisation, IRI, la revue Sens Public et l'Université de Montréal, centre Georges Pompidou, November 28.

Bridging formal semantics and social semantics on the Web, SMAP 2013, December 12, <http://www.smap2013.org>

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

Licence : **Nhan Le Thanh**, *Web programming*, 30h, L1 & L2, IUT UNS.

Licence : **Nhan Le Thanh**, *Design tools and programming relational DBMS*, 105h, L2, IUT UNS.

Licence : **Nhan Le Thanh**, *Theoretical basis of Computation*, 45h, L2, IUT UNS.

Licence : **Olivier Corby**, **Catherine Faron Zucker**, *Semantic Web*, 36h, L3, IUT UNS.

Licence : **Catherine Faron Zucker**, *Programmation par Objets et algorithmique*, 130h, L3, UNS.

- Licence : **Catherine Faron Zucker**, *Statistics for Data Analysis*, 39h, L3, UNS.
- Licence : **Maxime Lefrançois**, *Java*, 45H, L2, IUT UNS.
- Licence : **Maxime Lefrançois**, *SGBD Java*, 68H, L2, IUT UNS.
- Licence : **Maxime Lefrançois**, *UML*, 48H, L2, IUT UNS.
- Licence : **Maxime Lefrançois**, *Multimedia Web*, 10H, L3, IUT UNS.
- Licence : **Maxime Lefrançois**, *Semantic Web*, 20H, L3, IUT UNS.
- Licence : **Nhan Le Thanh**, *Logical Data Models and languages*, 24h, L3, IUT UNS.
- Licence : **Nhan Le Thanh**, *Design and Development of DBMS services*, 24h, L3, IUT UNS.
- Licence : **Nhan Le Thanh**, *Architecture of Software Engineering*, 12h, L3, IUT UNS.
- Licence : **Isabelle Mirbel**, *Databases*, 63h, L3, UNS.
- Licence : **Andrea Tettamanzi**, *Introduction au Web*, 37h, L1, UNS.
- Licence : **Andrea Tettamanzi**, *Algorithmique – Programmation Objet – Python*, 50h, L2, UNS.
- Master : **Michel Buffa**, *Web Technologies*, 40h, M1, UNS.
- Master : **Michel Buffa**, *Distributed Web Development*, 40h, M2, UNS.
- Master : **Michel Buffa**, *Java Certification*, 25h, M2, UNS.
- Master : **Michel Buffa**, *Plasticity of User Interfaces, HTML5* 8h, M2, Polytech UNS.
- Master : **Michel Buffa**, *New Interaction Means, HTML5*, 8h, M2, Polytech UNS.
- Master : **Elena Cabrio, Catherine Faron Zucker, Fabien Gandon, Andrea Tettamanzi, Serena Villata**, *Knowledge Engineering*, 20h, M2, PolyTech Nice, UNS.
- Master : **Elena Cabrio**, *XML Technologies*, 16h, M1, MIAGE UNS.
- Master : **Olivier Corby, Fabien Gandon, Catherine Faron Zucker**, *Semantic Web*: 45h, M2, PolyTech Nice, UNS.
- Master : **Catherine Faron Zucker**, *Document Languages: XML, XSD & XSL*, 24h, M1, UNS.
- Master : **Catherine Faron Zucker**, *Document Languages: XML, XSD & XSL*, 32h, M2, UNS.
- Master : **Catherine Faron Zucker**, *HTML 5*, 18h, M1, UNS.
- Master : **Catherine Faron Zucker**, *Network Programming*, 12h, M1, UNS.
- Master : **Fabien Gandon**, *Web Sémantique ou comment se déploient sur le Web les données liées et la sémantique de leurs schémas*, 2H, M2, Ecole Centrale Paris.
- Master : **Alain Giboin**, *Human-Computer-Interaction (HCI) Design and Evaluation*: 35h, M2, PolyTech 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**, *Economics and ICT: Ergonomics*, 15h, M2, UNS.
- Master : **Isabelle Mirbel**, *Requirement Engineering*, 42h M1, UNS.
- Master : **Isabelle Mirbel**, *Advanced databases*, 78h, M1, UNS.
- Master : **Andrea Tettamanzi**, *Distributed Systems*, 18h, M1, UNS.
- Master : **Andrea Tettamanzi**, *Concurrency and Parallelism*, 18h, M1, UNS.

Catherine Faron Zucker is responsible of the course of study *Knowledge and Information Systems* in Master 2 IFI from University of Nice Sophia Antipolis and the fifth year of the computer Science department of the engineer school Polytech Nice Sophia.

She is tutoring 3 internships of the Polytech engineering school at UNS and 4 apprentices in Master (30h).

Together with **Isabelle Mirbel, Elena Villata** supervises the “Projet de Fin d’Etudes” (PFE) of two students (i.e. Abdoul Macina (Master KIS) and Margot Bastaert (Master AL)). The subject is the design and development of a socio-semantic recommendation system for a carpooling application.

Nhan Le Thanh is responsible of Licence LPSIL IDSE (Informatique Distribuée et Systèmes d'information d'Entreprise) at UNS.

Isabelle Mirbel was *Vice-Dean* of Science departement at UNS in charge of Professional Insertion and *Vice-Head* of MIAGE at UNS.

Andrea Tettamanzi has participated in the successful submission of a proposal for an Erasmus Mundus student and staff mobility project with East Asia (EMMA East 2014, EACEA Project no. 2013-2539), wich was awarded by the European Commission a funding of EUR 3,049,575 over three years. He is now serving as deputy co-ordinator of this project, which started on October 1.

9.2.2. Tutorial

Michel Buffa:

HTML5, Online course for W3DevCapus.com, the online classrooms provided by the W3C. Sessions happened in March 2013, June 2013, September 2013 and last 6 weeks.

HTML5/JavaScript, ISN days for high school math teachers.

HTML5 course given to CNRS engineers (2-4 december 2013).

HTML5, W3C tutorial, 22nd International World Wide Web Conference (WWW 2013), May 2013, Rio de Janeiro, Bresil.

HTML5, JDEV, 4-6 September, Ecole polytechnique.

Les nouveautés de HTML5, Blend Web Mix conference, 1-2 October 2013, Lyon, France.

Les possibilités de HTML5, conférence Paris Web, 10-12 October 2013, Paris, France.

Fabien Gandon:

An Introduction to Semantic Web and Linked Data, W3C tutorial, 22nd International World Wide Web Conference (WWW 2013), May, Rio de Janeiro, Bresil.

9.2.3. PhD Supervision

PhD: **Franck Berthelon**, *Emotional State Detection from Electroencephalogram Data for "Serious Games"*, UNS, December 16, Peter Sander ;

PhD: **Khalil Bouzidi**, *Semantic Web Approach to Support the Creation of Technical Regulatory Documents in Building Industry*, UNS, CSTB, September 11, Nhan Le Thanh, Catherine Faron Zucker, Bruno Fies.

PhD: **Luca Costabello**, *Mobile Access to the Web of Data*, Inria, UNS, November 29, Fabien Gandon, Ivan Herman.

PhD: **Imen Tayari**, *Representation, Annotation and Detection of Emotions in Multimodal Signals*, Sfax, UNS, April 12, Nhan Le Thanh and Chokri Ben Amar.

PhD in progress : **Pavel Arapov**, *Semantic Application Wiki*, UNS, Michel Buffa, Nhan Le Thanh ;

PhD in progress : **Amel Ben Othmane**, *Temporal and semantic analysis of information retrieved from short and spatio-temporal messages in Social Networks*, UNS, Nhan Le Than ;

PhD in progress : **Papa Fary Diallo**, *Co-Construction of Community Ontologies and Corpus in a Limited Technological Environment*, Inria, UNS, UGB, Isabelle Mirbel, Olivier Corby, Moussa Lo;

PhD in progress : **Amosse Edouard**, *Studies of spatial semantic aspect, real time filtering mechanisms and semantic enrichment of short messages on dynamic spatio-temporal social networks*, UNS, Nhan Le Thanh ;

PhD in progress : **Corentin Follenfant**, *Usage semantics of analytics and Business Intelligence tools*, UNS, SAP, Fabien Gandon, Olivier Corby, David Trastour;

PhD in progress : **Amine Hallili**, *Assistant Conversational Agents with Natural Language and Intuition*, UNS, Catherine Faron, Fabien Gandon;

- PhD in progress : **Rakebul Hasan**, *Explanations for Social Semantic Web*, UNS, Fabien Gandon;
- PhD in progress : **Maxime Lefrançois**, *Collaborative Multilingual Management of Interlingual Knowledge Bases*, Inria, UNS, Fabien Gandon, Christian Boitet;
- PhD in progress : **Nicolas Marie**, *Pervasive sociality through social objects*, Alcatel Lucent Bell Labs, Fabien Gandon, Myriam Ribière;
- PhD in progress : **Zide Meng**, *Temporal and semantic analysis of richly typed social networks from user-generated-content sites on the Web*, UNS, Fabien Gandon, Catherine Faron Zucker;
- PhD in progress : **Thi Hoa Hue Nguyen**, *Semantic Mappings with a Dataflow-based scientific workflow : an approach to develop dataflow applications using knowledge-based systems*, Vietnam, Nhan Le Thanh;
- PhD in progress : **Tuan Anh Pham**, *Study and integrate the mechanism of workflow control in MVC architecture: design and implement an APM (Activity Process Management) platform for dynamic information systems on the networks*, UNS, Nhan Le Thanh;
- PhD in progress : **Oumy Seye**, *Rules for the Web of Data*, University Gaston Berger, Saint-Louis, Sénégal, Olivier Corby, Catherine Faron Zucker, Moussa Lo.

9.2.4. Internship

- Nafissa Belhoussine**, *Highlighting Stakeholders Communities in Collaborative Software Development Platforms*, M2 MIAGE MBDS, UNS, from Feb until Aug.
- Amel Ben Othmane**, *WikiNEXT comme Plateforme de démonstration pour des applications Web sémantiques*, Master2 MBDS UNS, from Apr until Sep.
- Thibaut Comte**, *Reador : Conception de l'IHM d'un agrégateur et analyseur de news*, Licence Miage, UNS, from May until Aug.
- Antoine Dailly**, *A Study on Semantic Similarity Metrics for a Question Answering System*, L3, École Normale Supérieure de Lyon, from June until August.
- Romain Gugert**, *Scénarisation d'interactions avec les objets du formalisme des Graphes d'Unités et prototypage d'un éditeur de définitions lexicographiques formelles*, Master 2 IAD C2IHM, University Pierre et Marie Curie (Paris VI), from Apr until Sep.
- Amine Hallili**, *Study and development of a question answering system for French*, Master MIAGE UNS, from March until Aug.
- Damien Legrand**, *Discovery Hub User Interface* from Mar until Aug.
- Abdoul Macina**, *SPIN and SQL Pretty Printing*, Master 1 UNS, from Jun until Aug.
- Bastien Maria**, *Connecteur API twitter et API du journal "The Guardian"* Master 1 UNS, from May until Aug.
- Célia Ormea**, *Caddie ou cabas comme dispositif d'assistance aux personnes âgées et fragilisées : étude d'un point de vue ergonomique*, Master "Sociologie et Ergonomie des technologies numériques", UNS, from Mar until Aug.
- Vivek Sachidananda**, *QAKiS System Multimedia Answers Visualization*, in collaboration with R. Troncy Eurecom, from Sept.
- Nicolas Sartori**, *Visualizing Stakeholders Communities in Collaborative Software Development Platforms*, L3 MIAGE UNS, from May until Aug.
- Iacopo Vagliano**, *Web Application for Shi3ld Access Control Policies* from Mar until Sep, Politecnico di Torino, Italy.

9.2.5. Juries

Fabien Gandon was member of Juries:

Andrei Vlad Sambra: *Data Ownership and Interoperability for a Decentralized Social Semantic Web*, PhD Thesis, Telecom SudParis, University Pierre et Marie Curie.

Gaoussou Camara: *Conception d'un système de veille épidémiologique à base d'ontologies – Application à la schistosomiase au Sénégal*, PhD Thesis, University Pierre et Marie Curie and University Gaston Berger.

Benjamin Renoust: *Analysis and Visualisation of Edge Entanglement in Multiplex Networks*, PhD Thesis, University of Bordeaux.

Rallou Thomopoulos : *Aide à la décision dans les filières agroalimentaires*, HdR, Université Montpellier II.

Nhan Le Thanh was reviewer of the PhD thesis of Emilien Bondu, *Contribution à la veille stratégique : Système d'aide à la capitalisation et à l'exploitation de connaissances expertes*, INSA Rouen, November 5.

Catherine Faron Zucker was jury member of the PhD thesis of Alban Gaignard, was member of a selection committee of the University of Grenoble (UPMF) for the recruitment of an associate professor.

Isabelle Mirbel was Reviewer of PhD Thesis:

Cheikh Ahmed Tidiane Niang, *Vers plus d'automatisation dans la construction de systèmes médiateurs pour le Web sémantique - une application des logiques de description*, University Gaston Berger, Saint-Louis, Sénégal, July 5th.

Michal Krzysztof Szczerbak, *Collaborative situation awareness*, Télécom Bretagne, September 18th.

Camille Pradel, *D'un langage de haut niveau à des requêtes graphes permettant d'interroger le Web sémantique*, Université Toulouse 3 Paul Sabatier, December 12th.

9.3. Popularization

Julien Cojan presented *DBpedia: Wikipédia pour les machines* at café-in seminar, Inria Sophia Antipolis, June 27, ⁴³

Fabien Gandon:

Le Web sémantique comment ça marche ?, Mines d'Alès, Nîmes, Communication science et société, February 12.

Web sémantique: ou comment se déploient sur le Web les données liées et la sémantique de leurs schémas, Total, February 27.

Le Web de Demain, médiation scientifique, Lycée Guillaume Apollinaire Nice, March 26.

Le Web Sémantique, interview Graphemeride, April 15.

Le Web sémantique, Sophia/Metropole Mag, June.

Web de données et Web sémantique, ressources ubiquitaires pour nos villes et territoires Innovative City Convention, June 18-19.

Web: terra incognita, Nuit des chercheurs, Alès, September 27.

Interview for the magazine *Documentaliste SI* Doc-SI n°3-2013 Webinaire *Roger Pédaque II*, October 10.

Maxime Lefrançois participated to the Science Festival - October 10th to 14th, 2012 - with the Association des Jeunes Chercheurs des Alpes Maritimes (AJC06). He conceived and animated scientific experiences on different energy sources.

We welcomed a scholar for a visit of one week, December 16-20.

⁴³<https://project.inria.fr/mastic/cafe-in-27-juin-wikipedia-pour-les-machines/>

ZENITH Project-Team

9. Dissemination

9.1. Scientific Animation

Participation in the editorial board of scientific journals:

- VLDB Journal: P. Valduriez.
- Journal of Transactions on Large Scale Data and Knowledge Centered Systems, R. Akbarinia.
- Proceedings of the VLDB Endowment (PVLDB): E. Pacitti.
- Distributed and Parallel Databases, Kluwer Academic Publishers: 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-Verlag): P. Valduriez.
- Ingénierie des Systèmes d’Information, Hermès : P. Valduriez.

Participation to the organization of conferences and workshops:

- Alexis Joly and Julien Champs were chair of the video program track of ACM Multimedia 2013
- Alexis Joly co-organized ImageCLEF 2013 workshop (within CLEF 2013 conference)
- Alexis Joly co-organized a special session on Image Processing and Pattern Recognition for Ecological Applications at ICIP 2013
- Alexis Joly organized a workshop in the context of the French ISIS working group on large-scale multimedia data linking and mining (Liage, structuration et fouille de grandes données multimédia)
- Alexis Joly co-organized the OT-Media Workshop on Big Data for Media Analysis

Participation in conference program committees :

- ACM SIGMOD Conf. 2014: R. Akbarinia, P. Valduriez (area chair)
- Int. Conf. on Extending DataBase Technologies (EDBT), 2014: R. Akbarinia, A. Joly, F. Masegla
- IEEE Int. Conf. on Data Engineering (ICDE) 2014: P. Valduriez
- Int. Conf. on Middleware 2012: E. Pacitti
- IDEAS 2013: P. Valduriez
- Brazilian e-Science Workshop 2013: E. Pacitti
- Journées Bases de Données Avancées (BDA) 2013: A. Joly
- Int. Workshop on Open Data, 2013: P. Valduriez
- ACM Multimedia, 2013: A. Joly
- ACM Int. Conf. on Multimedia Retrieval (ICMR), 2013: A. Joly
- CLEF 2013, 2014: A. Joly
- Int. Conf. on Multimedia Modeling 2013: Alexis Joly
- ACM Symposium On Applied Computing (ACM SAC, Data Stream track), 2013: F. Masegla
- Conférence Internationale Francophone sur l’Extraction et la Gestion de Connaissance (EGC), 2013: F. Masegla
- IEEE Int. Conf. on Data Mining (ICDM), 2013: F. Masegla
- Int. Pacific-Asia Conf. on Knowledge Discovery and Data Mining (PAKDD), 2013: F. Masegla
- Pacific-Rim Conference on Multimedia (PCM), 2013: A. Joly
- International Conference on Similarity Search and Applications (SISAP), 2013: A. Joly
- Ubiquitous Data Mining (UDM), held by the International Joint Conference on Artificial Intelligence (IJCAI) 2013 : F. Masegla
- Extraction et Gestion des Connaissances : F. Masegla

Journal reviewing:

- VLDB Journal: A. Joly
- IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI): A. Joly
- IEEE transactions on multimedia: A. Joly
- Journal of Mathematical Imaging and Vision (JMIV): A. Joly
- Transactions on Knowledge and Data Engineering: A. Joly
- EURASIP Journal on Image and Video Processing: A. Joly
- Computer Vision and Image Understanding Journal: A. Joly
- ACM Trans. on Database Systems: E. Pacitti
- Knowledge and Information Systems (KAIS): F. Masseglia

Other activities (national):

- The members of Zenith have always been strongly involved in organizing the French database research community, in the context of the I3 GDR and the BDA conference.
- Patrick Valduriez gave a seminar on “Parallel Techniques for Big Data” at IBC, Montpellier, and a tutorial on the same topic at BDA 2013. He also gave a seminar in the Morgenstern series in Sophia-Antipolis on “Cloud and Bigdata: a perfect marriage?”.

Other activities (international):

- Alexis Joly was one of the 6 panelists of ACM Multimedia 2013 panel on cross-media analysis and mining.
- Reza Akbarinia and Florent Masseglia gave a talk on BigdataNet project whose objective is to develop a hybrid P2P-Cloud platform, at the Berkeley Inria Stanford (BIS2013) workshop at Stanford in May.
- Esther Pacitti and Patrick Valduriez gave talks on search and recommendation, and scientific workflow management, respectively, at LBL, Berkeley, in June.

9.2. Teaching - Supervision - Juries

9.2.1. Teaching

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

Reza Akbarinia:

- Master Research: Large scale data management, 7.5h, level M2, Faculty of Science, UM2
- Master : Distributed Data Management, 9h, level M1, Faculty of Science, UM2
- Licence: Computing Tools, 54h, Level L3, Faculty of Science, UM2

Florent Masseglia:

- Master Research: Large scale data management, 3h, level M2, Faculty of Science, UM2

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
- Master Research: Large scale data management, 4,5h, level M2, Faculty of Science, UM2

Didier Parigot:

Master Research: Large scale data management, 9h, level M2, Faculty of Science, UM2

Patrick Valduriez:

Master Research: Large scale data management, 12h, level M2, Faculty of Science, UM2

Professional: Distributed Information Systems, 50h, level M2, Capgemini Institut

Professional: XML, 40h, level M2, Orsys Formation

Alexis Joly:

Master Research: Large scale data management, 6h, level M2, Faculty of Science, UM2

9.2.2. Supervision

- PhD in progress: Yoann Couillec, Langages de programmation et données ouvertes, started oct. 2012, Univ. Nice Sophia-Antipolis, Advisors: Manuel Serrano and Patrick Valduriez
- PhD in progress : Ji Liu, Scientific Workflows in Multisite Cloud, started oct. 2013, UM2, Advisors: Esther Pacitti and Patrick Valduriez
- PhD in progress : Saber Salah, Optimizing a Cloud for Data Mining Primitives, started nov. 2012, UM2, Advisor: Florent Masegla, co-advisor: Reza Akbarinia
- PhD in progress : Maximilien Servajean, Decentralized and Personalized Recommendation Protocols for Content Sharing: application to phenotyping, started oct. 2011, UM2, Advisor: Esther Pacitti, co-advisor: Pascal Neveu
- PhD in progress : Naser Ayat, Uncertain Data Integration, started sept. 2010, University of Amsterdam, Netherlands, Advisors: Hamideh Afsarmanesh and Patrick Valduriez, co-advisor: Reza Akbarinia
- PhD in progress : Valentin Leveau, Supervised content-based information retrieval in big multimedia data, started April 2013, University of Montpellier, Advisor: Patrick Valduriez, co-advisor: Alexis Joly and Olivier Buisson

9.2.3. Juries

Members of the team participated to the following Ph.D. committees:

- R. Akbarinia: Miguel Liroz (UM2);
- F. Masegla: Cassio Melo (Ecole Centrale Paris, committee chair), Yasin Amanullah (Polytech Nantes, Reviewer);
- E. Pacitti: Mohamed Reda Bouadjenek (UVSQ), Miguel Liroz (UM2), Housseem Chihoub (Univ. Rennes 1) ;
- P. Valduriez: Jonas Dias (UFRJ, Rio de Janeiro), Gylfi por Gudmundsson (Univ. Rennes 1, Reviewer), Miguel Liroz (UM2), Asterios Katsifodimos (Univ. Paris Sud), Viet-Trung Tran (ENS Rennes).

9.3. Popularization

Zenith participated to the following events in France:

- “La fête de la science” (Montpellier), with the animation of a stand at Genopolys (a science village). We received 7 groups from Oct. 10 to Oct. 11, and then a wider audience on Oct. 12. With this stand, we have participated in the effort of relaunching LIRMM’s activities for this major event in science popularization.
- “Futur en Seine 2013” (Paris, <http://www.futur-en-seine.fr/fens2013/>) with the co-animation of the stand for the presentation of Interstices’ activities.
- annual seminar of the “mecsci” workgroup of Inria, Paris (CNAM) on January 30 and 31 [47].

F. Masegla is a member of the editorial committee, and contributor, of *interstices* (<https://interstices.info>), and a member of the scientific committee for the edition of “Datagramme”, the game from Inria on science popularization. He has given a 3 days training to elementary school teachers. This event, called “Graines de sciences” (Ecole de Physique des Houches, <http://www.fondation-lamap.org/fr/graines-de-sciences>) was funded by “La main à la pâte” (<http://www.fondation-lamap.org/>), a French foundation dedicated to science popularization based on manual activities. The goal, here, was to give a 3h training to groups of a dozen of teachers, by mainly using games and activities they would be able to transfer in their classrooms.

A. Joly presented the PI@ntNet project and the resulting iPhone application in several events including the "Salon de l'agriculture 2013", "Les assises de la biodiversité", "Journée thématique du CNRS autour des usages mobiles de l'information scientifique dans l'Enseignement Supérieur et la Recherche", "Rencontres Agropolis", "journée des nouveaux arrivants de l'Inria", "journées INRA/Inria", etc. Many news media articles, blogs, TV news and twitts also reported on PI@ntNet (typing "PI@ntNet" on Google is the best way to get most of them). Finally a movie was realized in collaboration with *Interstices* (⁸).

⁸<http://videotheque.inria.fr/videotheque/media/browse/2>