Activity Report 2011

Section Dissemination

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9. Dissemination

9.1. Animation of the scientific community

9.1.1. Editorial Activities

Since October 2001, Jens Gustedt is Editor-in-Chief of the journal *Discrete Mathematics and Theoretical Computer Science* (DMTCS). DMTCS is a journal that is published electronically by an independent association under French law. Based on a contract with INRIA, its main web-server is located at the LORIA. DMTCS has acquired a good visibility within the concerned domains of Computer Science and Mathematics, which is confirmed by a relatively high impact factor. This year, DMTCS published a special issue and proceedings volumes of noticeable events in the domain.

In 2011, Jens Gustedt has served as program committee member of the 20th Euromicro International Conference on Parallel, Distributed and network-based Processing PDP 2012, of the 3rd Workshop on Complex Networks CompleNet 2012 and of 20th RenPar (RenPar 2011).

Lucas Nussbaum was member of the organization and program committee for the Grid’5000 Spring School 2011.

Martin Quinson has served as program committee member of the 6th International Workshop on Modeling, Simulation, and Optimization of Peer-to-peer environments (MSOP2P 2012, associated to Euromicro PDP 2012).

Stéphane Genaud was member of the program committee of the 13th IEEE International Conference on High Performance Computing and Communications, HPCC 2011.

Stéphane Vialle was member of the twentieth RenPar conference committee (“Rencontres francophones du Parallélisme”) (RenPar 2011). Stéphane Vialle was also member of the program committee of the international conference on Architecture of Computing Systems (ARCS 2011 and ARCS 2012).

9.1.2. Refereeing

In 2011, members of the team served as referees for the following journals and conferences:

Journals: Concurrency and Computation: Practice and Experience, Eurasip journal on Image and Video Processing, Journal of Parallel and Distributed Computing, Parallel Computing, Engineering Applications of Artificial Intelligence, Neural Networks


Projects: Sylvain Contassot-Vivier is expert for the MEI funding program.

9.1.3. Scientific Expertise

In 2011, our team members participated to following thesis committee:

Stéphane Genaud, rapporteur, Fabrice Dupros, University of Bordeaux 1, France.

Jens Gustedt, president, Tom Leclerc, University Henri Poincaré, France

Martin Quinson, member, Ahmed Harbaoui, University of Grenoble, France.

Martin Quinson, member, Bogdan Cornea, University of Franche-Comté, France.

Sylvain Contassot-Vivier, member, Lucian Alecu, UHP University - Nancy 1, France.

Sylvain Contassot-Vivier, member, Rémy Laurent, University of Franche-Comté, France.

Sylvain Contassot-Vivier, member, Dawood Khan, INPL, France.

Sylvain Contassot-Vivier, member, Emmanuel Benard, University of Strasbourg, France.
Our members were also members of the following recruiting committees:

- Jens Gustedt, full professor position, University of Franche-Comté, France.
- Jens Gustedt, assistant professor position, University of Franche-Comté, France.
- Martin Quinson, assistant professor position, University of Nancy I.
- Martin Quinson, assistant professor position, University of Bordeaux.

9.1.4. Invitations and participations to scientific events

Stéphane Vialle was invited to participate to a panel about Graphical Processing Units (GPUs): Opportunities and Challenges at the 2011 International Conference on High Performance Computing & Simulation (HPCS’2011), Istanbul, Turkey.

Martin Quinson was invited to give a presentation entitled H*C: Performance Everywhere (or, computing getting high) at the workshop “Challenges & Pitfalls of Performance Assurance”, associated to CECMG’11 in München, Germany in March 2011.

Lucas Nussbaum was invited to give the following talks:

- Towards better experiments on Grid’5000 at Journée Grid’5000 aux Rencontres francophones du Parallélisme (RenPar’20), Saint-Malo
- Grid’5000, a scientific instrument for experiment-driven research on parallel, large-scale and distributed systems at Support for Experimental Computer Science Workshop at SC 11, Seattle
- Towards better tools for experiments on distributed systems at Support for Experimental Computer Science Workshop at SC 11, Seattle

Constantinos Makassikis was invited to give a presentation entitled A Skeletal-Based Approach for the Development of Fault-Tolerant SPMD Applications during the “Seconde journée du groupe de travail LaMHA (Langages et Mod’èles de Haut-niveau pour la programmation parallèle, distribuée, de grilles de calcul et Applications)”, December 2010.

9.1.5. Scientific Mediation

Martin Quinson acts as a member to the INRIA-Nancy Grand Est committee for Scientific Mediation. He also participated alongside with Thomas Jost and Sébastien Badia to the LORIA and INRIA-Nancy Grand Est stand at the “Fête de la Science”, proposing several activities to demonstrate the algorithmic thinking at the core of the Computer Science without requiring any computer or even electric devices.

9.2. Teaching

Participants: Sylvain Contassot-Vivier, Jens Gustedt, Constantinos Makassikis, Lucas Nussbaum, Martin Quinson, Stéphane Vialle.

- DUT Informatique (S1): System (40h), L1, Univ. Nancy 2, France
- DUT Informatique (S2): Networks (30h), L1, Univ. Nancy 2, France
- DUT Informatique (S1bis): Computer architecture (36h), L1, Univ. Nancy 2, France
- DUT Informatique (S1): Introduction to algorithmic (40h), L1, Univ. Nancy 2, France
- DUT Informatique (S1): Basic programming (48h), L1, Univ. Nancy 2, France
- DUT Informatique (AS): Networks (70h), L2, Univ. Nancy 2, France
- DUT Informatique (AS): Algorithmic (42h), L2, Univ. Nancy 2, France
- DUT Informatique (S2): Object programming (32h), L1, Univ. Nancy 2, France
- Licence pro ASRALL: Installation of Linux (20h), L3, Univ. Nancy 2, France
- Licence pro ASRALL: Administration of applications (24h), L3, Univ. Nancy 2, France
Licence: Scientific computing (22h), L3, UHP University, France
Licence: Algorithmic and programming (40h), L3, UHP University, France
Licence (1st year engineer): Programming techniques and tools (44h), L3, ÉSIAL, UHP University, France
Licence (1st year engineer): C and Shell programming (44h), L3, ÉSIAL, UHP University, France
Master 1: Algorithmic and complexity (14H), M1, UHP University, France
Master 1: Algorithmic of distributed systems (24H), M1, UHP University, France
Master (2nd year engineer): Networks and systems, System part (25h), M1, UHP University, France
Master (2nd year engineer): Algorithmic of parallel and distributed systems (32H), M1, ÉSIAL, UHP University, France
Master (2nd year engineer): Information System, SUPELEC, Paris, France
Master projects (2nd year engineer): Software Development project, SUPELEC, Metz, France
Master 2: Communicating systems (24h), M2, UHP University, France
Master 2 IMOI: Networks (23H), M2, UHP University, France
Master 2 RISE: Distributed Systems and Grids, Strasbourg University, France
Master 2 ILC: Parallelism, Distributed Systems and Grids, Strasbourg University, France
Master (3rd year engineer): High Performance Computing, SUPELEC, Metz, France
Master (3rd year engineer): High Performance Computing, SUPELEC, Paris, France
Master projects: (14H), M2, UHP University, France
Master projects (3rd year engineer): Industrial project, SUPELEC, Metz, France

In addition, Martin Quinson authored a pedagogic platform in collaboration with Gérald 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. Its advantages for the learning process are described in [32].

9.3. Advising

Participants: Sylvain Contassot-Vivier, Jens Gustedt, Lucas Nussbaum, Martin Quinson, Stéphane Vialle.

PhD: Constantinos Makassikis, Conception d’un modèle et de frameworks de distribution d’applications sur grappes de PCs avec tolérance aux pannes à faible coût, Université Henri Poincaré, defended on February, 2. 2011 (advisers: Stéphane Vialle and Virginie Galtier)

PhD: Cristian Rosa, Performance & Correctness Assessment of Distributed Systems, Université Henri Poincaré, defended on October, 24. 2011 (advisers: Stephan Merz and Martin Quinson).

PhD: Wilfried Kirschenmann Toward sustainable intensive computing kernels, Université Henri Poincaré, expected in 2012 (advisers: Stéphane Vialle and Laurent Plagne)

PhD: Soumeya Hernane, Models and Algorithms of coherent data sharing for high performance parallel and distributed computing, University of Oran, Algeria and University of Univ. Nancy 2, expected in 2012 (advisers: Jens Gustedt and Mohamed Benyettou).

PhD: Thomas Jost, Sparse direct linear solver, Université Henri Poincaré, expected in 2012 (advisers: Bruno Lévy and Sylvain Contassot-Vivier).

PhD: Marion Guthmuller, Study of Legacy Distributed Applications through Simulation and Model-Checking for the Discovery and Validation of Behavioral Properties, Université Nancy II, expected in 2014 (advisers: Sylvain Contassot-Vivier and Martin Quinson).
PhD: Tomasz Buchert, *Middleware for the orchestration of challenging large-scale experiments on distributed systems*, Université Nancy II, expected in 2014 (advisers: Jens Gustedt and Lucas Nussbaum).

master: Marion Guthmuller, *Vérification dynamique de propriétés de vivacité dans SimGrid*, ESIAL and Université Nancy I (adviser: Martin Quinson).


master: Yoanne Girardin, *Conducting experiments on a large-scale research testbed with a workflow management system*, ESIAL (advisor: Lucas Nussbaum).

engineering intern: Matías Ezequiel Vara *Ordered Read-Write Locks on Multicore Architectures* Universidad Nacional de La Plata (Argentina) (adviser Jens Gustedt)
ALICE Project-Team

9. Dissemination

9.1. Animation of the scientific community

9.1.1. Editorial activities

- Sylvain Lefebvre was a member of the paper committee of ACM SIGGRAPH and was the co-chair of the short papers program of Eurographics Symposium on Rendering.
- Bruno Lévy was a member of the paper committees of SIAM/ACM GPM, IEEE SMI, NORDIA, Pacific Graphics and SIBGRAPI.

9.1.2. Other dissemination activities

- Members of the team gave several technical demonstrations at “Palais de la découverte” (between Sept. 26 to Dec. 04).
- Vincent Nivoliers gave demonstrations at the “fête de la science” and gave several talks in schools.
- Bruno Lévy gave an invited course at ACM Siggraph Asia 2011 (with Richard Hao Zhang / Simon Fraser University).
- Bruno Lévy gave an invited talk at International Symposium on Voronoi Diagrams (ISVD 2011).

9.2. Teaching

D. Boltcheva teaches “Images numériques” in IUT Saint Dié.
V. Nivoliers teaches AP2 (algorithmics and programming), UHP, L1: basics of algorithmics and programming (Ocaml), practicals, MI1 (mathematics for computer science), Esial, first year: introducing recursion and induction, boolean functions, and the basics of language theory.
S. Lefebvre and B. Lévy teach geometric modeling and computer graphics, ENSG (School of Geology - INPL)
S. Lefebvre participates to “Computer Graphics”, Ecole Centrale de Paris (organized by G. Drettakis).
BIGS Project-Team (section vide)
8. Dissemination

8.1. Animation of the scientific community

8.1.1. Invitations at conferences and summer schools

- Emmanuel Frénod (http://www-labsticc.univ-ubs.fr/~frenod/) was invited to give lectures in
  - Cemracs 2011 Summer School on "Two Scale Convergence" at Cirm, Marseille in July 2011 (http://smai.emath.fr/cemracs/cemracs11/),

- Eric Sonnendrücker gave invited talks
  - Lawrence Berkeley National Laboratory (USA), March 16, "Semi-Lagrangian methods for the Vlasov equation",
  - Lawrence Livermore National Laboratory (USA), March 17, "Gyrokinetic simulations",
  - i4energy seminar, University of California at Berkeley, March 18, "High performance computing challenges for magnetic fusion"
  - International Conference on the Numerical Simulation of Plasmas, Long Branch (USA), September 6-9, "Semi-Lagrangian methods for the Vlasov equation",
  - mini-course of 6 hours at ICERM, Brown university (USA), September 12-16, "Vlasov simulations",
  - Vlasov Workshop, ICERM, Brown university (USA), September 19-23, "Gyrokinetic simulations",
  - NELIA workshop, Santiago de Compostella (Spain), October 25-28, "Arbitrary order discrete differential forms for Maxwell’s equations",
  - Case studies, ETH Zurich (Switzerland), November 24, "Modelling and simulation of particle accelerators".

8.1.2. Administrative duties

- Emmanuel Frénod, Michael Gutnic, Michel Mehrenberger, Eric Sonnendrücker
  - were member of selection committee for an Assistant Professor of Applied Maths position at Strasbourg.

- Eric Sonnendrücker
  - was a member of the AERES committee of M2P2 laboratory in Marseille
  - was a member of the AERES committee of mathematics laboratory of Université Technologique de Compiègne
  - was a member of CNU section 26 (applied mathematics)
  - is a member of the scientific committee of CIRM (Centre International de Rencontres Mathématiques) at Luminy,
  - was a member of a selection committee for a Professor position in Applied Mathematics in Marseille
– was a member of a selection committee for a Professor position in Applied Mathematics in Lyon.

**8.1.3. Organization of conferences**

- Michael Gutnic and Philippe Helluy were co-organizers of CEMRACS 2011 at Luminy (France).
- Eric Sonnendrücker was a member of the scientific committee for the Fusion Summer School, Paris, September 26-30.

**8.2. Teaching**

**Nicolas Besse**

- Licence: Complex analysis 18h, L3, UHP
- Licence: Analysis 80H L2, Université Henri Poincaré, France
- Licence: Integration and differential form, 35h, L1, Université Henri Poincaré, France
- Licence: Colles d’analyse 16h, L1, Université Henri Poincaré, France
- Master: Plasma modelling and numerical methods 30h, M2, Université Henri Poincaré, France

**Sever Hirstoaga**

- Analyse numérique, 70 h, L3, l’UFR Physique et Ingénierie, Université de Strasbourg, France

**Simon Labrunie**

- Licence : Mathématiques générales, 160h, L1, Université Henri Poincaré Nancy, France
- Licence : Mathématiques générales, 48h, L2, Université Henri Poincaré Nancy, France

**Vladimir Latocha**

- Découverte des mathématiques, 81 h, L1, Nancy université, France
- Méthodologie de l’exposé écrit et oral, 30 heures, L1, Nancy université, France
- Analyse numérique, 12 h, L3, Nancy université, France
- Algorithmique, 52h, L3, Nancy université, France
- Analyse complexe, 10 h, L3, ENSEM, France
- Mathématiques PACES UE4, 15h, L1, Nancy université, France

**Michel Mehrenberger**

- Licence : Optimisation non lineaire, 54h, L3, Université de Strasbourg, France
- Licence : Méthodes d’Analyse Numérique, 39h, L3, ENSIIE (ecole d’ingenieur, antenne de Strasbourg), France
- Licence : Analyse Numérique, 72h, L2, Université de Strasbourg, France
- Licence : Calcul Formel et Simulation Numérique, 18h, L2, Université de Strasbourg, France
- Licence : Compléments d’Analyse, 30h, L3, Université de Strasbourg
- Master : Spectral Analysis, 30h, M1, Université de Strasbourg, France

**Jean Roche**

- Licence : Analyse, 170h, L2, Université Henri Poincaré Nancy, France
- Master : optimisation, 24h, M1, Université Henri Poincaré Nancy, France
- Master : Décomposition de domaines, 24h, M2, Université Henri Poincaré Nancy, France
Eric Sonnendrücker

Master : Projet EDP, 30h, M2, Université de Strasbourg, France
Master : Calcul Scientifique pour l’agrégation, 60h, M2, Université de Strasbourg, France
Master : Méthodes numériques pour les EDP, 65h, M1, Université de Strasbourg, France
Master et Doctorat : Numerical methods for the Vlasov-Maxwell equations 36h, M2+D, ETH Zürich, Switzerland.

PhD & HdR:

HdR : Nicolas Crouseilles, Contributions à la simulation numérique des modèles de Vlasov en physique des plasmas, Université de Strasbourg, 14 janvier 2011
PhD : Ahmed Ratnani, L’analyse isogéométrique dans la physique des plasmas et l’électromagnétisme, Université de Strasbourg, 7 octobre 2011, Nicolas Crouseilles et Eric Sonnendrücker
PhD : Aurore Back, Etude théorique et numérique des équations de Vlasov-Maxwell dans le formalisme covariant, Université de Strasbourg, 7 novembre 2011, Advisors: Emmanuel Frénod et Eric Sonnendrücker
PhD in progress : Céline Caldini, Collisions dans les modèles gyrocinétiques, septembre 2010, Advisor: Mihai Bostan,
PhD in progress : Anaïs Crestetto, Méthode des moments pour les équations cinétiques, Advisor: Philippe Helluy,
PhD in progress : Mohammed Ghattassi, développement d’une méthode de résolution des équations de transfert radiatif couplées avec une équation de diffusion en deux et trois dimensions d'espace par des méthodes inspirées de la résolution des équations de Vlassov Poisson, septembre 2011, Advisor: Jean Roche.
PhD in progress : Mathieu Lutz, Etude théorique et numérique de l’approximation gyrocinétique, septembre 2010, Advisors: Emmanuel Frénod et Eric Sonnendrücker
PhD in progress : Sandrine Marchal, septembre 2006, Domain decomposition methods to solve a system of hyperbolic equations. Advisors: Simon Labrunie and Jean Rodolphe Roche.
PhD in progress : Christophe Steiner, Méthodes numériques pour l’équation de Vlasov, Advisors: Nicolas Crouseilles and Michel Mehrenberger
CAMUS Team

8. Dissemination

8.1. Animation of the scientific community

Vincent Loechner is one of the organizers of the *Second International Workshop on Polyhedral Compilation Techniques, IMPACT 2012*\(^1\), that will be held in January 2012 in Paris, in conjunction with the international conference HiPEAC. He also participates, with Philippe Clauss, to its program committee.

Alexandra Jimborean presented her work about code tracking and cloning in the LLVM compiler at the *First LLVM European User Group Meeting*\(^2\) in London, organized and sponsored by ARM Ltd., Sept. 16 2011.

Philippe Clauss has reviewed papers for the international conference DATE 2012, for the international workshop IMPACT 2011 and the french journal TSI. He has also reviewed projects for the ANR, and the Ile-de-France and Aquitaine Regions.

Philippe Clauss participated to the following PhD jurys in 2011:

<table>
<thead>
<tr>
<th>Date</th>
<th>Candidate</th>
<th>Place</th>
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<tr>
<td>Feb. 14</td>
<td>Khamar SAJJAD</td>
<td>Univ. Versailles</td>
<td>Rewiever</td>
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<tr>
<td>Jul. 4</td>
<td>Konrad TRIFUNOVIC</td>
<td>Univ. Paris-Sud</td>
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<tr>
<td>Sept. 30</td>
<td>Antoniu POP</td>
<td>ENSM Paris</td>
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<tr>
<td>Nov. 10</td>
<td>Khaled HAMIDOUCHE</td>
<td>Univ. Paris-Sud</td>
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Julien Narboux participated to the PhD jury of Tuan Minh Pham (INRIA Sophia-Antipolis) in 2011 as an examiner.

8.2. Teaching

- Philippe Clauss, Université de Strasbourg, France

<table>
<thead>
<tr>
<th>Intitulé du cours</th>
<th>Nombre d'heures</th>
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<tr>
<td>Architecture des ordinateurs</td>
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<tr>
<td>Compilation</td>
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</tr>
<tr>
<td>Système et programmation temps-réal</td>
<td>25</td>
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<tr>
<td>OS embarqués et réseaux industriels et de terrain</td>
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<td>M2</td>
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<td>Parallélisme</td>
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- Vincent Loechner, Université de Strasbourg, France

\(^1\) [http://impact.gforge.inria.fr/impact2012](http://impact.gforge.inria.fr/impact2012)

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<td>Programmation système et réseau</td>
<td>52</td>
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<td>Fondements des systèmes d’exploitation</td>
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- Alain Ketterlin, Université de Strasbourg, France

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<td>Programmation fonctionnelle</td>
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- Julien Narboux, Université de Strasbourg, France

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<td>Certification du Logiciel</td>
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<td>Constructions et Preuves en Géométrie</td>
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- Éric Violard, Université de Strasbourg, France

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- Nicolas Magaud, Université de Strasbourg, France

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<tr>
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<td>L2</td>
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<tr>
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<td>12</td>
<td>M1</td>
</tr>
<tr>
<td>Preuve et Certification du Logiciel</td>
<td>36</td>
<td>M2</td>
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<td>Algorithmique et Programmation</td>
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<tr>
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<tr>
<td>Génie Logiciel</td>
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<td>M1 Chemo-informatique</td>
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</table>
PhD:

PhD : Benoît Pradelle, *Static and Dynamic Polyhedral Compilation Methods for the Execution in Multi-core Environments* [12], Université de Strasbourg, December the 20th 2011, Philippe Clauss

PhD in progress : Alexandra Jimborean, *Advanced parallelization tools for multicore programming*, October 2009, Philippe Clauss and Vincent Loechner

PhD in progress : Jean-François Dollinger, *Dynamic optimizations for GPUs*, September 2011, Philippe Clauss and Vincent Loechner
8. Dissemination

8.1. Animation of the scientific community

8.1.1. Caramel seminar

Nineteen speakers were invited to our seminar in 2011: Cyril Bouvier, Sorina Ionica, Paul Zimmermann, Diego Aranha, Benoît Gaudel, Cyril Bouvier, Alain Couvreur, Christophe Mouilleron, Marion Videau, Hamza Jeljeli, Benjamin Smith, Xavier Pujol, Răzvan Bărbulescu, Alin Bostan, Martin Albrecht, Bogdan Pasca, Christophe Arène, Frederik Vercauteren, Junfeng Fan.

8.1.2. Conference organization

In 2011, the team organised the ECC 2011 workshop and a Summer School the week before. With more than 120 participants at the workshop and more than 40 participants at the school, it was a great success.

8.2. Committees memberships

- Jérémie Detrey was a member of the hiring committee for ATER positions in computer science (section 27) at Université Henri Poincaré (Nancy I).
- Pierrick Gaudry was referee for the PhD thesis of Mehdi Tibouchi (ENS, Paris 7, Luxembourg), of Vanessa Vitse (Versailles) and of Thomas Izard (Montpellier). He was a member of the PhD thesis jury of Christophe Arène (Marseille), Gaëtan Bisson (Caramel) and Guillaume Batog (Nancy). He participated to the “Comités de selection” in Paris 7, Lille 1 and Nancy 1. He is the principal investigator of a Labex proposal about computer security that have been submitted to the second call. He is deputy director of the LORIA.
- Emmanuel Thomé was a member of the program committee for the WCC2011 (Workshop in Coding and Cryptography) conference. He was elected as a member of the INRIA Evaluation Committee for the period 2011-2015. He was the advisor of Romain Cosset’s PhD thesis, and a member of his PhD jury on nov. 7th.
- Marion Videau is member of the scientific committee of the CCA seminar (Codage, Cryptologie, Algorithmes). She was a member of the PhD jury of Jean-René Reinhard (Versailles-Saint-Quentin-en-Yvelines).
- Paul Zimmermann was a member of the Habilitation thesis of David W. Ritchie (Nancy), of the PhD thesis jury of Christiane Peters (Eindhoven), and of the PhD thesis jury of Julien Cojan (Nancy).

8.3. Vulgarization

P. Gaudry, E. Thomé and P. Zimmermann wrote a vulgarisation article about the RSA-768 integer factorization record for the “Techniques de l’Ingénieur” [22].


8.4. Invited Conferences

P. Gaudry and E. Thomé both gave a one-hour invited talk at the workshop “Elliptic Curve Discrete Logarithm workshop” held in EPFL.

J. Detrey gave a one-hour invited talk at the national workshop “Codage et Cryptographie” held in April 2011 at Saint Pierre d’Oléron.
P. Zimmermann gave an invited talk “GNU MPFR: back to the future” at the MaGiX@LiX 2011 Conference in Palaiseau (France) in September.

E. Thomé gave an invited talk “CADO-NFS: an implementation of the Number Field Sieve” at the MaGiX@LiX 2011 Conference in Palaiseau (France) in September.

8.5. Teaching

- Marion Videau (from September 2011):
  Operating systems: 14 hours (lectures), 14 hours (tutorial sessions), 14 hours (practical sessions), L3, University Henri Poincaré, Nancy 1, France.
  Introduction to cryptography: 15 hours (lectures), 15 hours (tutorial sessions), M1, University Henri Poincaré, Nancy 1, France.

- Jérémie Detrey:
  Introduction to cryptology: 12 hours (lectures), M1, ESIAL, Nancy, France.
  Security of websites: 2 hours (lecture), L1, IUT Charlemagne, Nancy, France.

- Emmanuel Thomé
  Algorithmic Number Theory: 9 hours (lectures), M2, University Paris 7 (Master Parisien de Recherche en Informatique), Paris, France.
  Introduction to cryptography: 3 hours (lecture), L3, École des mines de Nancy, France.
  Factoring algorithms: 6 hours (lectures and practical sessions), M1, École des mines de Nancy, France.
CARTE Project-Team

9. Dissemination

9.1. Animation of the scientific community

Guillaume Bonfante:
- has been invited to give a talk at the Workshop on Logic and Computation, http://www.jaist.ac.jp/is/labs/ogawa-lab/wlc11.html,
- has been a referee of the PhD of Jean-Marie Borello. The thesis, dealing with virology, is entitled "Étude du métamorphisme viral : modélisation, conception et détection",
- was in the jury of the PhD of Matthieu Morey. The thesis deals with Natural Language Processing,
- contributed to the papers [23], [22] whose aim is to compute the semantics of a sentence (in a natural language) from its syntactical analysis,
- is a member of the program committee of the workshop LCC 2011, http://www.cs.swansea.ac.uk/lcc2011/.

Isabelle Gnaedig:
- is co-leader of the Carte research team,
- was co-director of the PhD thesis of Philippe Beaucamps, defended 14 November, 2011,
- is member of the scientific mediation committee of INRIA Nancy Grand-Est,
- participated to the ESIAL admission committee.

Mathieu Hoyrup:
- is the organizer of the Seminar of the Department Formal Methods (http://cassis.loria.fr/fm-departement/Wiki.jsp?page=Seminar#section-Seminar-FormalMethodsSeminar),
- gave a course (2 hours) at the École Jeunes Chercheurs en Informatique et Mathématiques in Amiens, April 2011, on computability over the real numbers.

Jean-Yves Marion:
- has been in the program committee of FOPARA 2011, CSL 2011,
- has been the chair of DICE 2011, Malware 2011,
- is co-chair of Complexity and Logic week, 30/01-03/02, at the winter school at CIRM

Romain Péchoux:
- is french coordinator of the Associated team Cristal.

9.2. Teaching

Guillaume Bonfante is teaching at the Ecole des Mines:
- "Java", L3,
- "Modelling and UML", M1,
- "Video-games", M1,
- "Semantics", M1
Safety of software, M2

Isabelle Gnaedig is teaching at ESIAL (Université Henri Poincaré):
Module “Design of Safe Software”, Coordination of the module, M2,
“Rule-based Programming”, 20 hours, M2,

Emmanuel Hainry is teaching courses
on operating systems, algorithmics, object programming, functional programming and
databases at IUT Nancy-Brabois, Université Henri Poincaré (level L1, L2)

Romain Péchoux teaches at Université Nancy 2 the following courses:

- Préparation au c2i, L1, Université Nancy 2, France
- Langage de programmation orienté objet, L3 MIAGE, UFR MI, Université Nancy 2, France
- Java avancé, M1 MIAGE, UFR MI, Université Nancy 2, France
- Base de données, L3 LSG, IAE, Université Nancy 2, France
- Complexité algorithmique, L3 MIAGE, IGA Casablanca, Maroc

Romain Péchoux was responsible of "Préparation au c2i" at Nancy 2 University up to june 2011
(approximatively 3500 students) and he is director of licence MIAGE, UFR MI, Nancy 2 University
since july 2011.

PhD : Philippe Beaucamps, Analyse de Programmes Malveillants par Abstraction de Com-
portements, Université Henri Poincaré, Nancy, defended 14th November, 2011, Directors:
Jean-Yves Marion, Isabelle Gnaedig.
9. Dissemination

9.1. Ph. D. Theses

Roméo Courbis has defended his Ph. D thesis (University of Franche Comté) entitled “Contributions à l’analyse de systèmes par approximation d’ensembles réguliers”, on September 15, 2011.

Pierre-Christophe Bué has defended his Ph. D thesis (University of Franche Comté) entitled “Contributions à la génération automatique de tests à partir de critères de sélection dynamique par abstraction de modèles”, on September 16, 2011.

Tigran Avanesov has defended his Ph. D thesis (U. Henri Poincaré) entitled “Résolution de contraintes de déductibilité. Application à la composition de services Web sécurisés”, on September 19, 2011.

Mumtaz Ahmad has defended his Ph. D thesis (U. Henri Poincaré) entitled “Stratégies d’optimisation de la mémoire pour la calcul d’applications linéaires et l’indexation de document partagés”, on November 14, 2011.

Stefan Ciobaca has defended his Ph. D thesis (École Normale Supérieure de Cachan) entitled “Verification and Composition of Security Protocols with Applications to Electronic Voting”, on December 9, 2011.

Mathilde Arnaud has defended her Ph. D thesis (École Normale Supérieure de Cachan) entitled “Vérification formelle de protocoles de routage sécurisés”, on December 13, 2011.

Anis Mohamed Mekki has defended his Ph. D thesis (U. Henri Poincaré) entitled “Synthèse et Compilation de Services Web Sécurisés”, on December 19, 2011.

9.2. Habilitation Theses

Laurent Vigneron has defended his habilitation (Université Nancy 2), entitled “Automated Deduction applied to the Analysis and Verification of Infinite State Systems”, on November 14, 2011.

9.3. Committees

F. Bouquet has been referee for the theses of LeVinh Nguyen, I3S (University of Nice and Sophia Antipolis) October 21, Youssef Ridene, (University Fau and Pays de l’Adour) September 23, and chair of the thesis committee of Sebti Mouelhi, LIFC (University of Franche-Comté) August 30, and examiner for the thesis of Céline Babouin, FEMTO-ST (University of Franche-Comté) January 27.

A. Giorgetti has been examiner for the thesis of Romeo Courbis, LIFC (University of Franche-Comté).

O. Koucharnaenko has been examiner for the thesis of Pierre-Christophe Bué, LIFC (University of Franche-Comté).

S. Kremer has been referee for the thesis of A. Baskar (CMI, India).

C. Ringeissen has been referee for the thesis of François Bobot (Paris-Sud).

M. Rusinowitch has been examiner for the thesis of Stéphane Martin (Marseille).

A. Imine has been examiner for the thesis of Mumtaz Ahmad (LORIA).

9.4. Seminars, Workshops, and Conferences

We were invited to give the following talks.

F. Bouquet, Keynote at V2CS’11 on Institute of Complex System, November 18th, Paris.


9. Dissemination

9.1. Animation of the scientific community

9.1.1. Organization of conferences

- The workshop "The Stochastic Schrödinger Equations in Selected Physics Problems", CEA, Espace de Structure Nucléaire Théorique, Saclay, was partially organized by X. Antoine, December 2011.
- The conference “Contrôle et énergie” has been organized in Nancy by T. Chambrion and G. Millerioux (CRAN, Nancy).

9.1.2. Editorial activities

- F. Alabau is a member of the editorial board of the journal Evolution Equations and Control Theory (EECT), American Institute of Mathematics and Sciences (AIMS)

9.1.3. Expertise

- F. Alabau is a member of the evaluation panel for the INDAM post-doctoral fellowship, 7th european program and member of the scientific committee of the CIMPA-UNESCO-TUNISIE "Contrôle et stabilisation des EDP", 9-19 may, Monastir, Tunisia. In may 2011, she carried out an expertise for Paris town for the program "Research in Paris", for foreign researchers. In February 2011, she carried out an expertise for promotion to the highest grade of professorship for a Research Institute in mathematics, India.

9.1.4. Invited conferences (selection)

- K. Ramdani was invited to
  - Workshop “Control of PDE and Inverse Problems” (Amiens, September 2011);
  - Workshop “Polaritons 2011” (CIRM, April 2011).
- F. Alabau took part to conferences
  - GDRE CONEDP, LATP, Marseille, 21-23 november 2011;
  - IFIP TC7 2011, Mini-symposium Analysis and control of composite PDE systems: new challenges and methods, 12-16 September 2011, Berlin;
  - Conference “Partial Differential Equations, Optimal Design and Numerics”, IV Edition, International Center of Sciences, Benasque, Espagne (Plenary conference);
  - Workshop program of INDAM, GDRE CONEDP, “New trends in Analysis and Control of Nonlinear PDEs”, 13-15 june 2011, Rome (Plenary conference);
  - Conference on Modeling and Control of Nonlinear Evolution Equations, Trieste, 24-27 may 2011, Italy. (plenary conference).
- T. Takahashi was invited to
  - Control of Partial and Differential Equations Days in Orleans, September 26-27, 2011;
– International Workshop on Control and Optimization of PDEs, Graz (Austria), October 10-14, 2011

• T. Chambrion was invited to
  – Workshop on Quantum Control, April 2011, Banff, Canada.

• J.F. Scheid was invited to
  – Seminar at the Applied Mathematics Laboratory (LJK) of the University of Grenoble, January 2011;

• X. Antoine was invited to
  – General meeting of GDR Ondes, Nice, 24-26 octobre 2011;
  – Seminar in Zurich University, Switzerland, March 2011;
  – Seminar of nuclear physics in CEA Bruyères-le-Châtel, June 2011;
  – Seminar in Genève University, Switzerland, October 2011.
  – Université de Liège, Belgique, one month stay, November-December 2011.

9.2. Teaching

9.2.1. Teaching positions

Most of the members of the team have a teaching position (192 hours a year) in one of the universities of Lorraine.

• Fatiha Alabau has a full time full professor position in the University of Metz;
• Xavier Antoine has a full time full professor position at INPL;
• Thomas Chambrion has a full time associate professor position at ESSTIN;
• Antoine Henrot has a full time full professor position at INPL;
• Bruno Pinçon has a full time associate professor position at ESIAL;
• Lionel Rosier has a full time full professor position at ESSTIN;
• Jean-François Scheid has a full time associate professor position at ESIAL;
• Marius Tucsnak has a full time full professor position at UHP;
• Julie Valein has a full time associate professor position at ESSTIN.

9.2.2. Other teaching activities

• F. Alabau gave a course on control and stabilization of PDE’s, USTBH, Algiers, Algeria (graduate level);
• F. Alabau gave a course on “Stabilization and observability of ordinary and partial differential equations” CIMPA-UNESCO-TUNISIE school on "Contrôle et stabilisation des équations aux dérivées partielles, 9-19 may, Monastir, Tunisia (graduate level);
• T. Chambrion gave a lecture on “Control of bilinear Schrödinger equations” in Würzburg, Germany (graduate level);

9.2.3. PhD & HdR

• Bertrand Thierry has defended his thesis “Analyse et Simulations Numériques du Retournement Temporel et de la Diffraction Multiple” (supervisor: X. Antoine and K. Ramdani);
Erica Schwindt defended her PhD thesis “Problèmes d’interaction entre un fluide newtonien incompressible et une structure” in cotutelle between the University of Chile and the University of Nancy 1 with Carlos Conca and Takéo Takahashi. Her work deals with two different fluid–structure interaction problems in the three dimensional case: in the first problem, she make a theoretical analysis of a problem of interaction between a deformable structure and an incompressible Newtonian fluid; in the second problem, she consider a geometrical inverse problem associated to a fluid-rigid body system.

Jérôme Loheac is a PhD student in UHP since 2010 (supervisor: M. Tucsnak);

Roberto Guglielmi is a PhD student in cotutelle with University Tor Vergata, Roma, Italy, since october 2010 (co-supervisor F. Alabau).
8. Dissemination

8.1. Animation of the scientific community

8.1.1. Responsibilities

- Principal Investigator of MATHANA (A. Hutt)
- Member of the Board of Directors in Organization of Computation Neuroscience (A. Hutt)
- Member of the steering committee of the french association for Artificial Intelligence (AFIA) (F. Alexandre)
- Member of the board of directors of the LORIA laboratory (B. Girau).
- Head of the Complex systems and AI department of the LORIA laboratory (B. Girau)
- Member of the scientific culture commission (N. Rougier)
- Elected member of the laboratory council (N. Rougier)
- Thierry Viéville is a member of the Scientific Committee of the University of Nice Sophia-Antipolis;
- Member of the “Bureau du Comité de Projets” (Steering Committee of the Project-Team Committee) (F. Alexandre)
- F. Alexandre and T. Viéville are members (and moderators) of the scientific committee of NeuroComp, the initiative to gather the french community in Computational Neuroscience (annual conference and web site: http://www.neurocomp.fr/).

8.1.2. Review activities

- Member of program committees: International Workshop on Dynamical Olfaction (D. Martinez), TAIMA (F. Alexandre)
- Reviewing (A. Hutt) for the NWO (Science Foundation Netherlands), the ANR and several french regional and territorial agencies (F. Alexandre)

8.1.3. Workshops, conferences and seminars

- Organization of the Neurocomp11 autumn school on Brain-Computer-Interfaces (L. Bougrain responsible; F. Alexandre member of the organizing committee)
- Invited talks: [ 17 ], [ 18 ]
- Seminars: talk for Cognitive Science Pole in Grenoble (F. Alexandre)

We also have a strong activity for popularization of science:

- Participation to a “café des sciences” about brain-computer-interfaces (F. Alexandre)
- Participation in the “Cordée de la réussite” between Henri-Poincaré University (Nancy), INRIA Nancy-Grand Est, Lycée Poincaré (Nancy) and Collège Bichat (Lunéville) (N. Rougier).
8.1.4. International cooperations

- in neurophysiology with MPI for Biological Cybernetics (Tubingen)
- in general anaesthesia with University of Auckland (New Zealand)
- on modeling visual attention with university of Chemnitz (Germany)
- in brain-computer interface with the Universidad Autónoma Metropolitana (UAM, Mexico)
- in spike sorting with university of Princeton (USA)

8.2. 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.
9. Dissemination

9.1. Animation of the scientific community

Olivier Festor is the Co-Chair together with Aiko Pras from University of Twente 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. He is also co-chair of the IRTF Network Management Research Group.

In march 2011, Olivier Festor has been appointed as the Co-chair together with Lisandro Zambenedetti Grandville from the Federal University of Rio Grande do Sul (UFRGS) of the Internet Research Task Force (IRTF) Network Management Research Group.

Olivier Festor chaired sessions at the following conferences: IEEE ICC CSMA symposium.

Olivier Festor served as a TPC Member of the following 2011 events: 3rd ACM Workshop on Assurable and Usable Security Configuration (SafeConfig); Security track of the 4th IFIP International Conference on New Technologies, Mobility and Security (NTMS 2011); Colloque Francophone sur l’Ingénierie des protocoles (CFIP 2011); IEEE POLICY 2011 (International Conference), ISPS 2011; International Workshop on Networks and Services Security (NSS’2011); IEEE International Conference on Communications ICC 2011 (TPC member of CISS and CSMA tracks); IEEE ICDM 2011 Workshop on Data Mining in Networks (DAMNET).

Olivier Festor has been appointed General Chair for IFIP AIMS’2011 and TPC Co-Chair for IEEE/IFIP International Conference on Network and Service Management (CNSM’2011). He was also Tutorial co-chair for the 15th IFIP/IEEE International Conference on Integrated Management (IM’2011).

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.

Olivier Festor served as an expert for the CIFRE Ph.D. programme at the ANRT. He also served as an expert for the european commission in the area of network and service management. In 2011, Olivier Festor served as an expert for the review of the french national research council. He also served on the 2011 committee for academic scientific excellence bonus allocation (+400 applications have been processed by this committee in 2011).

Isabelle Chrisment was TPC Co-chair of CFIP’2011 and of IFIP AIMS’2011. She was member of the TPC of 2th joint TC6 and TC11 International IFIP Conference on Communications and Multimedia Security (CMS’2011) and of NOTERE 2011. She was also member of the steering committee of SARSSI 2011.

Isabelle Chrisment served as an expert to evaluate projects for ANR and also for DIM Logiciel et systèmes complexes (LSC) from Île-de-France area.

9.2. 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, ESIAL and École des Mines de Nancy engineering schools. In this section, we only enumerate the courses that are directly related to our research activity.

Within the Master degree, SSR (Services, Security and Networks) specialization, Isabelle Chrisment is in charge of the course entitled Advanced Networking. This course is one of the five foundation courses given to the students that follow a research and professional cursus in Networking in Nancy.
André Schaff is the Director of the ESIAL Engineering School. Isabelle Chrisment is co-directing the school and is in charge of the students recruitment process. Remi Badonnel is heading the Telecommunications and Networks specialization of the 2nd and 3rd years at the ESIAL engineering 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. He is also co-responsible for the IPISO Master (Ecole des Mines de Paris - Nancy - Saint Etienne) and specifically the Software Architecture class. Notably, he is co-responsible for the ‘Businesses: the digital challenge Entreprises : le défi numérique, a class within the ARTEM alliance (ICN - Business School, Ecole des Mines de Nancy, Ecole d’Art / School of Art).

In 2011, Olivier Festor and Abdelkader Lahmadi did setup a new course at the ENSEM engineering school on distributed systems and distributed algorithms.

### 9.3. Tutorials, invited talks, panels, presentations

In addition to the presentation of all papers published in conferences in 2011, the team members made the following public talks:

- Olivier Festor did participate to the Dagstuhl Seminar 11042 entitled: *Learning from the Past: Implications for the Future Internet and its Management?* This seminar took place from January 27-30, 2011 in Schloss Dagstuhl, Germany.
- Alexandre Boeglin gave a presentation entitled at IETF 81 in Quebec City, Canada in the IRTF-NMRG session in july 2011.

### 9.4. Commissions

Team members participated to the following Ph.D. defense committees:

- Amélie Medem, Ph.D. in Computer Science from Université Pierre et Marie Curie - Sorbonne Universités. Title: *Conception de mécanismes d’amélioration de la gestion d’incidents dans les réseaux IP*, February 2011. (Olivier Festor)
- Patrick Battistello, Ph.D. in Computer Science from Telecom Bretagne. Title: *Protocole d’établissement d’appels sécurisés limitant les risques de (D)DOS et de SPIT à l’interconnexion entre opérateurs*, April 2011. (Olivier Festor)
- Sinan Hatahet, Ph.D. in Computer Science from University of Technology of Compiègne. Title: *Security in Unstructured P2P Systems*, April 2011. (Isabelle Chrisment)
- Gérard Wagener, joint Ph.D. in Computer Science from University of Luxembourg and INPL. Title *Self-Adaptive Honeypots Coercing and Assessing Attacker Behaviour*, June 2011. (Olivier Festor)
- Thibault Cholez, Ph.D. in Computer Science from University Henri Poincaré, Nancy 1. Title *Supervision des réseaux P2P structurés appliquée à la sécurité des contenus*, June 2011. (Isabelle Chrisment et Olivier Festor)
- Guilherme Koslovski, Ph.D. in Computer Science from ENS Lyon. Title: *Dynamically provisioned Virtual Infrastructures: specification, allocation and execution*, June 2011. (Olivier Festor)
- Tigran Avanesov, Ph.D. in Computer Science from University Henri Poincaré, Nancy 1. Title *Résolution de contraintes de déductibilité. Application à la composition de services Web sécurisés*, September 2011. (Isabelle Chrisment)
- Houssein Wehbe, Ph.D. in Computer Science from University of Rennes 1. Title *Transmission de flux vidéo en direct sur les réseaux pair à pair : optimisation de l’overlay et de la retransmission*, September 2011. (Isabelle Chrisment)
• Tony Bourdier, Ph.D. in Computer Science from University Henri Poincaré, Nancy 1. Title *Méthodes algébriques pour la formalisation et l’analyse de politiques de sécurité*, October 2011. (Isabelle Chrisment)

• Jörn Franke, Ph.D. in Computer Science from University Henri Poincaré, Nancy 1. Title *Coordination of Distributed Activities in Dynamic Situations. The Case of Inter-organizational Crisis Management*, October 2011. (Isabelle Chrisment)

• Cristian Rosa, Ph.D. in Computer Science from University Henri Poincaré, Nancy 1. Title *Performance and Correctness Assessment of Distributed Systems*, October 2011. (Isabelle Chrisment)

• Abdelhamid Salah Brahimi, Ph.D. in Computer Science from Université Pierre et Marie Curie - Sorbonne Universités. Title *Information diffusion and community structure in a blog network*, December 2011. (Isabelle Chrisment)

• Johan Mazel, Ph.D. in Computer Science from INSA Toulouse. Title: *Unsupervised Network Anomaly Detection*, December 2011. (Olivier Festor)

Team members participated in the following academic recruitment committees:

• Isabelle Chrisment did lead a Professor position in mathematics recruitment committee in Nancy University.

• Olivier Festor was member of a Professor position recruitment committee in computer science at the Joseph Fourier University in Grenoble.

• Laurent Ciarletta was member of an Associate Professor position recruitment committee in computer science in Nancy University.
7. Dissemination

7.1. Animation of the scientific community


- M.O. Berger was a member of the program committee of the following conferences: IEEE International Symposium on Mixed and Augmented Reality (ISMAR 2011), International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI 2011), the IEEE International Symposium on Biomedical Imaging (ISBI) 2011. She was also a member of the program committee of the French conference on pattern recognition (RFIA 2012) and of ORASIS 2011.

- E. Kerrien was a member of the program committee of ISMAR 2011.

- G. Simon was a member of the program committee of ISMAR 2011 and ORASIS 2011.

- F. Sur is a member of the editorial board of the journal Image Processing On Line.

- P.F. Villard was a member of the program committee of MICCAI 2011 and ISBI 2011.

- Members of the team are members of local management committees (Conseil de Laboratoire and Comité de Centre), and participate on a regular basis, to scientific awareness and mediation actions.

7.2. Teaching

Permanent members of the team are involved in the following teaching activities:

- Master: Reconnaissance des formes statistiques, 15h, M2, UHP, France
- Master: Perception de la structure et du mouvement, 15h, M2, UHP, France
- Master: Outils pour le traitement et l’analyse d’images, 21h, 2A, École des Mines de Nancy, France
- Licence: Mathématiques (analyse complexe, distributions), 20h, École des Mines de Nancy, France
- Master: Modélisation et prévision (régression linéaire, séries chronologiques), 48h, École des Mines de Nancy, France
- Master: Recherche opérationnelle, 59h, École des Mines de Nancy, France
- Master: Initiation au traitement du signal et applications, 21h, Ecole des Mines de Nancy, France
- 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: Programmation shell-script sous Linux, 30 h, L2, UHP, France
Licence: Conception et programmation langage objet, 60 h, L2, UHP, France
Licence: Programmation avancée en langage imperatif classique, 14h, L3, UHP, France
Licence: Bases géométriques de l’imagerie, 25h, L3, UHP, France
Licence: Programmation et bases de données, 35h, L3, UHP, France
Licence: Modélisation 3D, 40h, LP, UHP, France
Master: Perception et raisonnement, 50h, M1, UHP, France
Master: Réalité augmentée, 30h, M2, UHP, France
Master: Réalité augmentée, 24h, 2A, ESIAL (Ecole Superieure d’Informatique et Applications de Lorraine), France
SUPELEC: Réalité augmentée, 3h, 3A, SUPELEC Metz, France
DIU: Robotique chirurgicale, 1h, CHU Nancy Univ. Hospital, France.

PhD & HDR:

PhD: Nicolas Noury, Mise en correspondance A Contrario de points d’intérêt sous contraintes géométriques et photométriques, Université Henri Poincaré, 13 Octobre 2011, Marie-Odile Berger, Frédéric Sur [8].


PhD in progress: Ahmed Yureidini, Modélisation implicite des vaisseaux sanguins pour la simulation interactive d’actes de radiologie interventionnelle, January 2010, Erwan Kerrien, Stéphane Cotin (Shacra, Lille).
8. Dissemination

8.1. Animation of the scientific community

8.1.1. Conference organization, Program committees, Editorial boards

- Olivier Buffet is a member of the editorial board of both the “revue d’intelligence artificielle” (RIA) and the “Journal of Artificial Intelligence Research” (JAIR).
- Olivier Buffet was a reviewer for the journals: JAIR (Journal of Artificial Intelligence Research), IJAR (International Journal on Approximate Reasoning), RIA (Revue d’Intelligence Artificielle); and for the conferences IJCAI’11 (International Joint Conference on Artificial Intelligence), AAAI’11 (National Conference on Artificial Intelligence), UAI’11 (Uncertainty in Artificial Intelligence), ICRA’12 (International Conference on Robotics and Automation), IROS’11 (International Conference on Intelligent Robots and Systems), JFPDA’11 (Journées Francophones sur la Planification, la Décision et l’Action pour le contrôle de systèmes), Solstice’10 (Summer Solstice International Conference on Discrete Models of Complex Systems).

- Vincent Chevrier was a reviewer for the journals: ACM TAAS (Transactions on Autonomous and Adaptive Systems), JAAMAS (Journal of Autonomous Agents and Multi-Agent System);
- Vincent Chevrier was a member of:
  - the editorial board of Interstices \(^9\), a site to disseminate research work about computer science for French-speaking person,
  - the advisory board of JFSMA (Journées Francophones sur les Systèmes Multi-Agents)
  - the program committee of EUMAS 11 (European Workshop on Multi-Agent Systems), IAT 11 (Intelligent Agent Technology), RFIA12 (Reconnaissance des Formes et Intelligence Artificielle).

- Vincent Chevrier is the moderator of the mailing list of the French spoken community on multi-agent systems.
- Alain Dutech was a reviewer for JFPDA’11 (Journées Francophones de Planification, Décision, Apprentissage) and UAI’11 (Uncertainty in Artificial Intelligence).
- Jörg Hoffmann is an Associate Editor of the Journal of Artificial Intelligence Research (JAIR) and Area Chair for Planning of AI Communications. In 2011, he was a member of the Senior Program Committees of AAAI’11 (the American Conference on Artificial Intelligence), IJCAI’11 (International Joint Conference on Artificial Intelligence), and ICAPS’11 (International Conference on Automated Planning and Scheduling). He was a member of the Program Committees of SOCS’11 (International Symposium on Combinatorial Search) and KI’11 (German Conference on Artificial Intelligence).
- Jörg Hoffmann has been appointed to be Program Chair (together with Prof. Bart Selman, Cornell University, USA) for AAAI’12, the 26th edition of the AAAI series which is one of the two most important international conferences in the area.
- Alexis Scheuer was a reviewer for the journal MENG (Recent Patents on Mechanical Engineering, Bentham Science Publishers), as well as for the last two more important conferences in robotics, IROS’11 (IEEE-RSJ International Conference on Intelligent Robots and Systems) and ICRA’12 (International Conference on Robotics and Automation).

\(^9\) http://interstices.info
Olivier Simonin was a program committee member of SASO’2011 (Fifth IEEE International Conference on Self-Adaptive and Self-Organizing Systems), ICINCO’2011 (9th Int. Conf. on Informatics in Control, Automation and Robotics), ICRA’2012 (4th Int. Conf. on Agents and AI) and JFSMA’2011 (French conference on MAS). He also reviewed papers for IROS’2011 (International Conference on Intelligent Robots and Systems) and ICRA’2012 (International Conference on Robotics and Automation). In 2012 he will be Chair Man of the Contest track of SASO’2012.

Vincent Thomas was a reviewer for ISA2011 (Intelligent Systems and Agents) and IJCAI2011 (International Joint Conference on Artificial Intelligence).

8.1.2. Specialist Committees (commissions de spécialistes)

Vincent Chevrier was a member of the “Specialist Committees” in Université Henri Poincaré

8.1.3. PhD and HDR committees

Olivier Buffet was a member of the following PhD committees:

- (as a committee member) Arnaud Glad, *Etude de l’auto-organisation dans les algorithmes de patrouille multi-agent fondés sur les phéromones digitales*, 15 Nov. 2011, Univ. Nancy 2;
- (as a committee member) Romain Grasset-Bourdel, *Planification et replanification pour une constellation de satellites agiles d’observation de la Terre*, 30 Nov. 2011, Univ. de Toulouse;
- (as a committee member) Boris Lesner, *Planification et apprentissage par renforcement avec modèles d’actions compacts*, 8 Dec. 2011, Univ. de Caen.

Vincent Chevrier was a member of the following PhD and HDR committees:


Jörg Hoffmann was a member of the PhD committee of Etesham Zahoor (10 Nov 2011).

8.1.4. Scientific Diffusion

Jörg Hoffmann was an Invited Speaker at KI’11, the 34th Annual German Conference on Artificial Intelligence. The title of his (45 min) talk was “Everything You Always Wanted to Know About Planning (But Were Afraid to Ask)”. He also published an invited paper on this subject, in the KI’11 proceedings [24].

Jörg Hoffmann was an Invited Speaker at the 2011 International Summer School on Automated Planning and Scheduling. The title of his (90 min) talk was “Evaluating Planning Algorithms, or: How to Count Sheep?”.

8.2. Teaching

Master : “Introduction à la robotique mobile”, 37.5 HETD (A. Scheuer & O. Simonin), M1 Informatique, Univ. Henri Poincaré, Nancy 1, France.

Master : “Apprentissage Numérique”, 25 HETD (A. Dutech), M1 Sciences Cognitives, Univ. Nancy 2, France.

Master : “Agent Intelligent”, 20 HETD (V. Thomas), M1 Sciences Cognitives, Univ. Nancy 2, France.
Master: “Game Design et Serious Game”, 20 HETD (V. Thomas), M2 Sciences Cognitives, Univ. Nancy 2, France.

Master: “Intelligence Artificielle pour la robotique mobile”, 22.5 HETD (A. Scheuer & O. Simonin), M2 RAR (‘Reconnaissance, Apprentissage, Raisonnement’, *i.e.*, Recognition, Learning, Thinking), Univ. Henri Poincaré, Nancy 1, France.

Master: “Optimisation et Systèmes Dynamiques Stochastiques”, 15 HETD (V. Thomas), M2 Informatique, Univ. Henri Poincaré, Nancy 1, France.

**PhD & HdR**


PhD in progress: Antoine Bautin, “Cartographie et recherche d’objets par une flotille de robots mobiles autonomes”, Nov. 2009, F. Charpillet (advisor), O. Simonin.


PhD in progress: Manel Tagorti, “Approximating the Value Function for Heuristic Search in Factored MDPs”, Nov. 2011, J. Hoffmann (advisor), B. Scherrer, O. Buffet.

8. Dissemination

8.1. Animation of the scientific community

G. Sallet was invited speaker in “Exploratory Workshop on Emerging Infectious Diseases and Mathematical Modelling” July 11 to 15, 2011, CRM Barcelona (http://www.crm.es/)


8.2. Teaching

Master: Systèmes dynamiques monotones et applications, 29h, M2, Université Paul Verlaine, Metz, France (Abderrahman Iggidr);

Master: Equations différentielles et applications à l’épidémiologie, 30h, M2, Université Polytechnique de Bobo-Dioulasso, Burkina Faso (Abderrahman Iggidr);

Mathematical epidemiology, 2h, Pasteur Institute, Paris (Gauthier Sallet).
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 at least twice a month and is used either for general presentations of people in the team or for inviting external researchers for general interest. The BINGO seminar is held also at least 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, as members of conference program committees (ECAI, PKDD, ICFCA ...), as members of editorial boards, and finally in the organization of journal special issues.

- This year, the team was deeply involved in the organization of CLA 2011, the 8th International Conference on Concept Lattices and their Applications, held at LORIA between October 17th and October 20th (see http://cla2011.loria.fr ). Amedeo Napoli was the president of the organization committee and one of the two chairman of the Conference.

9.2. Teaching

- The members of the Orpailleur team are involved in teaching at all levels of teaching in the universities of Nancy, especially in Nancy Université including “Université Henri Poincaré Nancy-1”, “Université de Nancy-2”, “Institut Polytechnique de 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.
8. Dissemination

8.1. Animation of the scientific community

Tony Bourdier:
- Member of the scientific board of the University of Nancy 1.
- Member of the board of the Doctoral School in Computer Science and Mathematics.

Horatiu Cirstea:
- PC member of RuleML 2011 (International RuleML Symposium on Rule Interchange and Applications).
- Organisation of “Journées nationales 2011 des groupes LAC et GEOCAL du GDR Informatique Mathématique”.
- Steering committee of RULE.

Yves Guiraud:
- Reviewer for the conferences “Rewriting Techniques and Applications 2011” (RTA) and “Conference on Algebraic Informatics 2011” (CAI), for the proceedings of the conference “Operads 2010”, for the journal “Information and Computation”.

Pierre-Etienne Moreau:
- Member of the board of the Doctoral School in Computer Science and Mathematics.
- Head of the local committee for INRIA “détachements” and “délégations”.
- Head of the Computer Science department at Ecole des Mines de Nancy.

Sorin Stratulat:
- member of the LITA Laboratory Council.

8.2. Teaching

Licence : Programmation et Algorithmique, 60h, L3, Ecole des Mines de Nancy
Licence : Programmation Orientée Objet, 60h, L1, IUT Charlemagne, Nancy
Licence : Programmation Distribuée, 20h, L2, IUT Charlemagne, Nancy
Licence : Sécurité dans les bases de données, 20h, L2, IUT Charlemagne, Nancy
Licence : Services d’annuaire et d’authentification, 30h, LPro, IUT Charlemagne, Nancy
Master : Software Engineering, 15h, M1, Ecole des Mines de Nancy
Master : OO Programming, 30h, M1, Ecole des Mines de Nancy
Master : Research project, 30h, M2, Ecole des Mines de Nancy
Master : Analyse et conception de logiciels, 100h, M1, Université Henri Poincaré, Nancy
Master : Génie logiciel avancé, 30h, M2, Université Henri Poincaré, Nancy

PhD : Tony Bourdier, "Méthodes algébriques pour la formalisation et l’analyse de politiques de sécurité", Université Henri Poincaré, October 7th 2011, Horatiu Cirstea
PhD : Cody Roux, "Terminaison a base de tailles: sémantique et généralisations", June 14th 2011, Frederic Blanqui et Claude Kirchner
PhD in progress : Jean-Christophe Bach, "Transformation de
PhD in progress : Cláudia Tavares, "Un système de types pour la programmation par réécriture embarquée", October 15th 2007, Claude Kirchner et Pierre-Etienne Moreau
PAROLE Project-Team

9. Dissemination

9.1. Animation of the scientific community

- Member of editorial boards:
  - Speech Communication (J.P. Haton, D. Jouvet)
  - Computer Speech and Language (J.P. Haton)
  - EURASIP Journal on audio, Speech, and Music Processing (Y. Laprie)
- Member of scientific committee of conference:
  - TAIMA, SIIE (K. Smalii)
  - AVSP2011 (international conference on Auditory-Visual Speech Processing), (S. Ouni)
- Member of organisational conference committees:
  - Interspeech 2013, (C. Cerisara)
- Chairman of French Science and Technology Association (J.P. Haton)
- Member of “Association Française pour la Communication Parlée” (French Association for Oral Communication) board (I. Illina)
- Member of the lorrain network on specific language and Learning disabilities and in charge of the speech and language therapy expertise in the Meurthe-et-Moselle House of Handicap (MDPH) (A. Kipffer-Piquard)
- The members of the team have been invited as lecturer:
  - Slim Ouni; “Acquisition de donnies articulatoires par un articulographe” at Sorbonne Nouvelle, Journies d’études “Typologie des rhotiques”, 28-29 juin 2011
  - Agnès Piquard-Kipffer, Finnish Center of Excellence in Learning and Motivation - (Finlande, Jyväskylä).

9.2. Invited lectures

- Hugo Van Hamme (Katholieke Universiteit Leuven), TALC “Vocabulary acquisition by machines”
- Elisabeth Delais-Roussarie (LLF-Paris 7, Directeur de Recherche au CNRS), ATILF Seminar (Intonale Project).
- Philippe Martin (University Paris-Diderot Paris 7, Professor), ATILF Seminar (Intonale Project).
- Yi Xu (Department of Speech, Hearing and Phonetic Sciences, University College London), TALC seminar, on the topic of Intonale Project (Prosody modeling).
- Peter Birkholz (Clinic for Phoniatrics, Pedaudiology, and Communication Disorders, University Hospital Aachen and RWTH Aachen University), PAROLE Seminar.
9.3. Teaching

cours spécifiques en rapport avec les thèmes de l’équipe : Analyse, Traitement et reconnaissance de la parole, 30HETD, M1, université Henri Poincaré (V. Colotte and D. Langlois), Natural Language Processing (in English), 24HETD, M2 Erasmus Mundus, université Nancy2 (K. Smäli),
the professors and associate professors of the team are teaching at Henri Poincaré University, at nancy 2 university and INPL.

In addition to courses, we highlight the following activities:

• A strong involvement of the team members in education and administration (University Henri Poincaré, University Nancy 2, INPL): Master of Computer Science, IUT, MIAGE, Speech and Language Therapy School of Nancy;
• Coordinator of C2i (Certificat Informatique et Internet) at Henri Poincaré University (V. Colotte).
• Head of MIAGE Maroc (students of University Nancy 2 but having their courses in Morocco)(K. Smäli),
• Head of UFR Math-Info at University Nancy2 (K. Smäli),
• Head of Networking Speciality of University Henri Poincaré Master of Computer Science until 1st September (O. Mella).
• co-Director of DU, « Troubles du Langage et des Apprentissages », Université de Nancy 1, Faculté de Médecine (Agnès Piquard-Kipffer)

PhD & HdR (Les thèses soutenues doivent figurer dans la bibliographie) :

PhD in progress : Christian Gillot, Modèles de langue à base d’exemples pour la reconnaissance de la parole, september 2008, Christophe Cerisara
PhD in progress : Raybaud Sylvain, Traduction automatique par apprentissage discriminant, septem-ber 2008, K. Smäli (supervisor) and D. Langlois (co-supervisor)
PhD in progress : Julie Busset, Acoustic to articulatory inversion from cepstral data., september 2009, Yves Laprie
PhD in progress : Fadoua Bahja, Détecttion du fondamental de la parole : application au rehaussement de la voix pathologique, Elhassane Ibn Elhaj (supervisor) and Joseph Di Martino (co-supervisor)
PhD in progress : Othman Lachhab, Reconnaissance de la parole continue pour voix naturelle et pathologique, Elhassane Ibn Elhaj (supervisor) and Joseph Di Martino (co-supervisor)
PhD in progress : Arseniy Gorin, Handling trajectories and speaker consistency in automatic speech recognition, october 2011, Denis Jouvet
9. Dissemination

9.1. Animation of the scientific community

- Khalid Benali has been PC member of I-ESA 2011, INFORSID 2011 and of several workshops.
- Nacer Boudjlida is a member of the prime board of the program committee of CAISE (Computer Assisted Information Systems) 2011, I-ESA’2010 and I-ESA’2012 (International Conference on Interoperability of Enterprise Systems and Applications). He also acts for several years as a PC member for many international conferences and workshops (CAiSE, COOP’IS, EMMSAD, SIIE, WWS, etc.). He acted as a co-organizer and a co-scientific editor of the workshops and the doctoral symposium of I-ESA’2010. He was also a reviewer for the Enterprise Information Systems Journal and for a special volume of Springer LNBIP (Lecture Notes in Business Information Processing series).
- Gérôme Canals is the co-chair of the "Mobilité et Ubiquité” french national working group (GDR 13).
- François Charoy has been PC member of ICEBE (International Conference on Business Engineering) 2011, 4th European Conference ServiceWave (Industry Track), CTS 2011 (International Symposium on Collaborative Technologies and Systems), DG.O (International Conference on Digital Government Research) 2011, CEC 2011 (IEEE Conference on Commerce and Electronic Computing), ACIS (Australasian Conference in Information Systems) 2011, WISE 2011 (International Conference on Web Information System Engineering) 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 Collaborative Technology for Coordinating Crisis Management Track at WETICE 2011
- Jacques Lonchamp has been or is PC member of CSEDU (International Conference on Computer Supported Education) 2011, ICALT (International Conference on Advanced Learning Technologies) 2011. He reviewed papers for ”Journal of Computer-Supported Collaborative Learning”, ”Computers & Education”, ”Interacting With Computers”, ”Internet and Enterprise Management”, ”International Journal of Distance Education Technologies”.

SCORE Team
• Gérald Oster was a PC member of CoopIS 2011 (International Conference on Cooperative Information Systems). He reviewed papers for “Computer Supported Cooperative Work” and “Entreprise Information Systems” journals.

• Olivier Perrin has been Program Committee member of PALS (Process-Aware Logistics Systems) workshop of BPM 2011, Qasba (Quality Assurance for Service-based applications) workshop of ECOWS 2011, GRCIS workshop 2011). He reviewed in 2011 papers for IEEE Transactions on Services Computing and Software and Systems Modeling journals. He also gave a tutorial at BPM 2011 enterprise day.

• François Charoy is member of the Administration Council of University Henri Poincaré Nancy 1 and of ESIAL.

• Pascal Urso is member of the Scientific Council of University Henri Poincaré Nancy 1.

• Claudia-Lavinia Ignat is member of the INRIA Nancy-Grand Est COMIPERS researchers committee. She is member of the INRIA Nancy-Grand Est center committee. She was interim leader of the SCORE team in the period February-August 2011 during the leave of François Charoy at NICTA.

• Gérald Oster is member of the Administration Council of ESIAL.

• Gérôme Canals is member of the Administration Council of Nancy University Institute of Technology (IUT Nancy Charlemagne).

• Boudjlida Nacer is a member of the Council (“Conseil”) of the Scientific and Technology Faculty (FST) of the University Henri Poincaré Nancy 1 as he is a member of the council of the scientific sector MIAE (Mathematics, Informatics, Atomic, Electronic) of that FST.

SCORE members were member of the following PhD defense committees:

• Joern Franke, PhD, Université Henri Poincaré Nancy 1, October 2011 (François Charoy)
• Virginie Legrand Contes, PhD, Université de Nice, Décembre 2011 (François Charoy)
• Adeel Ahmad, PhD, Université du littoral côte d’Opale, December (Claude Godart)
• Issam Bouslimi, PhD, Université de Toulouse 1, June 2011 (Claude Godart)
• Thibault Cholez, PhD, Université Henri Poincaré Nancy 1, June 2011 (Claude Godart)
• Walid Fdhila, PhD, Université Henri Poincaré Nancy 1, October 2011 (Claude Godart)
• Mohamed-Anis Mekki, PhD, Université Henri Poincaré Nancy 1, December 2011 (Claude Godart)
• Ehtesham Zahoor, PhD, Université Nancy 2, November 2011 (Claude Godart, Olivier Perrin)
• Chantal Cherifi-Bonner, PhD, Université de Corse Pascal Paoli, December 2011 (Nacer Boudjlida)
• Mumtaz Ahmad, PhD, Université Henri Poincaré Nancy 1, November 2011 (Nacer Boudjlida)

SCORE members were members of the following Habilitation defense committee:

9.2. Teaching

SCORE members have important responsibilities and are leading teachers in several cursus in Nancy University (University Henri Poincaré Nancy 1, University Nancy 2 and INPL), at different levels, including Masters (ESIAL, ESSTIN, research and professional masters). Some members have also a lecturing activity with international partners (Algeria, Morocco, Lebanon) at the Master’s degree level. It would be too long to detail all the lectures for which Score members are responsible. In 2010/2011, members of the Score team have delivered more than 2000 hours of lectures to which can be added other activities like internship and project supervising.

• Nacer Boudjlida is the head of the Computer Science department of the Faculty of Sciences and technologies, UHP Nancy 1.
• Gérôme Canals is the head of the Computer science department of the Nancy University Institute of Technology (IUT Nancy Charlemagne), and is responsible for the professional licence degree "Web application programming" since sept. 2011.
• Jacques Lonchamp is responsible for the professional licence degree "Free and Open Source Software".
• Claude Godart is responsible for the Computer Science department of ESSTIN. He is study director of the research and professional master degree "Distributed Services, Security and Networks".
• 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 for the professional licence degree "Web application programming" until august 2011, and is now responsible of the Certificat Informatique et Internet (C2I) for University Nancy 2.
• François Charoy is responsible of the Software Engineering specialisation at the ESIAL Engineering School of University Henri Poincaré Nancy 1.
• Gérald Oster is responsible of the 3rd year internship program at the ESIAL Engineering School of University Henri Poincaré Nancy 1.

PhD & HdR :

PhD : Joern Franke, Coordination des activités réparties dans des situations dynamiques : le cas de la gestion de crise inter-organisationnel, Université Henri Poincaré Nancy 1, October 2011 (François Charoy)
PhD: Ehtesham Zahoor, Gouvernance de service: aspects sécurité et données, Université de Nancy 2, November 2011 (Olivier Perrin)
PhD: Walid Fdhila, Décentralisation Optimisée et Synchronisation des Procédés Métiers Inter-Organisationnels, Université Henri Poincaré Nancy 1, October 2011 (Claude Godart)
PhD: Aymen Baouab, Distribution de processus interentreprises basée sur une architecture orientée services en respectant les politiques de sécurité, Université Henri Poincaré Nancy 1 (Olivier Perrin)
Phd: Luc André, Rémption optimiste, Université Henri Poincaré Nancy 1 (François Charoy, Gérald Oster)
Phd: Medhi Ahmed Nacer, CRDT et nouveaux types de donnés, Université Henri Poincaré Nancy 1 (François Charoy, Pascal Urso)
8. Dissemination

8.1. Animation of the scientific community

- Maxime Amblard was part of the scientific committee of TALN 11 (Montpellier, France) and WoSS8 8th Workshop on Syntax & Semantics (Paris, France).
- Maxime Amblard is head of the master Sciences Cognitives et Applications of University Nancy 2.
- Maxime Amblard is head of the master 2 speciality Traitements Automatiques des Langues of the master SCA University Nancy 2.
- Maxime Amblard has prepared the revised version for the master SCA from 2013-2018.
- Maxime Amblard was president of the selection committee (recruitment of a permanent lecturer), for a PRCE and for a PRAG at University Nancy 2.
- Maxime Amblard was curator of the exhibit Fascination ou aversion pour le numérique : encodage/décodage at University Nancy 2.
- Maxime Amblard was member of the organization comity of the forum des Sciences Cognitives.
- Maxime Amblard joined the editorial board of InterStice.
- Maxime Amblard is vice-treasurer of the Association pour le Traitement Automatique des Langues (ATALA)
- Guy Perrier is member Opération Poste team.
- Guy Perrier is member of the editorial board of the journal Traitement Automatique des Langues.
- Guy Perrier attended the thesis defense of Mathieu Morey, Université Nancy 2, November 3, as the supervisor of the thesis.
- Guy Perrier was the local coordinator of the Erasmus Mundus Master program Language and Communication Technologies for the University of Nancy 2 until August. He organized the graduation ceremony for the whole consortium in Nancy May 26.
- Bruno Guillaume is a member of the COMIPERS (Comité de recrutement INRIA Lorraine/LORIA des personnels scientifiques contractuels) of the Nancy INRIA Research Center.
- Sylvain Pogodalla is local coordinator of the Erasmus Mundus Master program Language and Communication Technologies for the University of Nancy 2 starting from September 1st.
- Sylvain Pogodalla chaired the international conference Logical Aspects of Computational Linguistics (LACL 2011) organized in Montpellier.
- Sylvain Pogodalla is member of the editorial board of the journal T.A.L. (Traitement automatique des Langues.
- Sylvain Pogodalla reviewed papers for Transaction on Computational Logic, for Research on Language and Computation and for Synthese.
- Sylvain Pogodalla was part of the scientific committees of: TALN 2011 (Montpellier), Mathematics of Language (MOL 2011), Constraints in Discourse (CID 2011), International Conference in Computational Semantics (IWCS 2011).
- Sylvain Pogodalla is head of the Commission des Développements Technologiques of the Nancy INRIA Research Center.
• Sylvain Pogodalla participated in the jury of the thesis defense of Bruno Méry (Bordeaux University, SIGNES INRIA project team)

### 8.2. Teaching

**Licence:** *Penser les algorithmes*, 20h, L1, Université Nancy 2, France (Maxime Amblard);  
**Licence:** *Introduction au Traitement Automatique des Langues*, 20h, L2, Université Nancy 2, France (Maxime Amblard);  
**Licence:** *Algorithmique avancée*, 50h, L2, Université Nancy 2, France (Maxime Amblard);  
**Licence:** *Formalismes de représentation et raisonnement*, 20h, L3, Université Nancy 2, France (Maxime Amblard);  
**Licence:** *Outils conceptuels*, 30h, L3, Université Nancy 2, France (Guy Perrier);  
**Master:** *Algorithmique pour l’Intelligence Artificielle*, 37h, M1, Université Nancy 2, France (Maxime Amblard);  
**Master:** *Discourse and Dialogue*, 20h, M2, Université Nancy 2, France (Maxime Amblard);  
**Master:** *tools and algorithms for NLP*, 34h, M2, Université Nancy 2, France (Guy Perrier);  
**Master:** *initiation to NLP*, 30h, M1, Université Nancy 2, France (Guy Perrier);  
**Master:** *programming for NLP*, 30h, M1, Université Nancy 2, France (Guy Perrier);  
**Master:** *Grammatical formalisms*, 20h, M2, Université Nancy 2, France (Bruno Guillaume);  
**Master:** *Computational Semantics*, 20h, M2, Université Nancy 2, France (Sylvain Pogodalla);  

**PhD:** Mathieu Morey, *Étiquetage grammatical symbolique et interface syntaxe-sémantique des formalismes grammaticaux lexicalisés polarisés*, defended on November 3rd;  
**PhD in progress:** Sai Qian, *Investigation of variable accessibility in natural language semantic modelization*, since September 2009, Philippe de Groote, Maxime Amblard;  
**PhD in progress:** Florent Pompigne, *Logical Modeling of Natural Language and ACG*, since September 2008, Philippe de Groote, Sylvain Pogodalla;  
**Master 1:** Geoffrey Mougel and Cédric Beuzit, *Interface et vérification pour la modélisation de conversations schizophréniques*, Maxime Amblard;  
**Master 1:** Lorraine Tosi and Pierre Kimmel, *LEOPAR au Collège*, Bruno Guillaume.
8. Dissemination

8.1. Animation of the scientific community

- Nadia Bellalem
  - Member of the International Program Committee of ICEIS 2011 (http://www.iceis.org).
  - Gestion des stages au département Informatique de l’IUT Nancy-Charlemagne, Univ. Nancy2

- Samuel Cruz-Lara
  - Project leader of MLIF FDIS 24616 ISO TC37 / SC4 / WG3 Language Resources Management
  - Member of the SYnchronized Multimedia group (SYMM) of the World Wide Web Consortium
  - Co-editor of the Journal of Virtual Worlds Research, Volume 4, Number 3. Theme: MPEG-V and Other Virtual Worlds Standards
  - Member of the scientific committee of IEEE RITA Revista Iberoamericana de Tecnologías del Aprendizaje
  - French coordinator for the Computer Science area of the MEXPORETEC program (France - Mexico)
  - Invited talk at 3D3C Worlds Meeting, March 2011, Shefayim Kibbutz, Israel

- Alexandre Denis
  - PC member for the 13th European Workshop on Natural Language Generation (ENLG), Nancy, France.

- Christine Fay-Varnier
  - Second Vice president of the Council of studies and university life at the INPL Nancy
  - Manager of the service for Information and Communication Technology for Education of Nancy University (NUTICE)
  - Representative of Nancy University in 6 of the French thematic virtual university (UNT: http://www.universites-numeriques.fr/fr)
  - NOOJ Software tutoring at the NOOJ seminar
  - Manager of computer science course, 1st and 2nd year in National School of Geology

- Claire Gardent
  - Invited Talk at Traitement Automatique des Langues Naturelles (TALN), June 2011, Montpellier (France)
  - Invited Tutorial at Knowledge Capture (K-CAP), June 2011, Banff (Canada).
Jean Charles Lamirel

– Invited Seminar at the KRDB Research Center for Knowledge and Data, November 2011, Bolzano (Italy).
– PC Chair for the 13th European Workshop on Natural Language Generation (ENLG), Nancy, France.
– Co-editor of the Computational and Mathematical section for the Language and Linguistics Compass journal
– PC member TextInfer 2011 Workshop on Textual Entailment, Ediburgh, Scotland.
– PC member Production of Referring Expressions (PRe-CogSci), Boston, Massachusetts.
– Member of the LORIA steering committee
– Member of the Bureau de Formation Doctorale
– Local organiser for NaTAL 2011
– Local organiser for the 13th European Workshop on Natural Language Generation (ENLG), Nancy, France.
– Coordinator of the TALC theme (Computational Linguistics and Computational Approaches to Knowledge) for the MISN CPER (National and Regional Research Funding).
– Local organiser for the NaTAL 2011 workshop http://talc.loria.fr/Programme,251.html

Lina-Maria Rojas Barahona

– Member of editorial board of the new international journal “COLLNET Journal of Scientometrics and Information Management”, Taru Publications, New Delhi, India
– Member of the Algerian-French Doctoral School in Linguistics and Didactics (EDAF)
– Permanent member of the COLLNET scientific network
– Scientific supervisor in the framework of the QUAERO project for the intelligent patents management subtask
– Program chair of the 12th COLLNET meeting (Global interdisciplinary research network “Col”laboration in Science and in Technology)
– Member of the Program committee for the Twenty-fourth International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems (IEA/AIE 2011)
– Member of the Program committee for the 23rd IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2011)
– Co-organizer of the Workshop “Clustering incrémental et méthodes de détection de nouveauté et leur application à l’analyse intelligente d’information évoluant au cours du temps”, organisé à la 12ème conférence francophone "Extraction et Gestion de Connaissances” (EGC 2012), Bordeaux, France, January 2012
– Organizer of Special Session on Incremental clustering and novelty detection techniques and their application to intelligent analysis of time varying information in the framework of IEA/IAE International Conference, Syracuse, NY, USA, June 2011

8.2. Teaching

Licence: Découverte de l’informatique, 160 h, L1, UHP Nancy, France
Licence: Conception et développement, 120h, L1/L2, Ecole Superieur D’informatique Appliquée De Lorraine (ESIAL), Nancy, France
Licence: Conception de systèmes d’informations, 120h, Ecole Superieur D’informatique Appliquée De Lorraine (ESIAL), Nancy, France
Licence: Système de Gestion de Base de données, 70 h, L1, IUT Nancy-Charlemagne, Nancy, France.
Licence: Java Language Programming. 60 hours, DUT Informatique, IUT Nancy-Charlemagne, University of Lorraine, France.
Licence: C Language Programming. 30 hours, DUT Informatique, IUT Nancy-Charlemagne, University of Lorraine, France.
Licence: Web-based Mobile Applications (HTML5 and CSS3). 30 hours, LP CISII, IUT Nancy-Charlemagne, University of Lorraine, France.
Master: Cognitive Sciences and Digital Media Technologies. 22 hours, Cognitive Sciences, University of Lorraine, France.
Master: Declarative Languages and Multimedia Applications. 40 hours, Cognitive Sciences, University of Lorraine, France.
Master: Video: Streaming and Captioning. 12 hours, Cognitive Sciences, University of Lorraine, France.
Master: An Introduction to Virtual Worlds and Natural Language Processing. 12 hours, Cognitive Sciences, University of Lorraine, France.
Master: Données semi-structurées, 30 h, M1, UHP Nancy, France.
Master: Text Mining techniques applied to Linguistics, 20 h, M2, University of Alger, Algeria
Research project tutoring, Erasmus Mundus Master Computer of sciences UHP
Master: Software Project for NLP Applications, 10 hours, M2, Université Nancy 2, France.
Master: Conférence de Rentrée, 3 hours, M1 et M2, ENS Cachan.

PhD in progress : Alejandra Lorenzo, “Improving interpretation robustness and increasing system adaptivity in dialogue based, language learning systems”. Université Henri Poincaré, Nancy. From 15.10.2010. Supervisors: Claire Gardent and Christophe Cerisara
9. Dissemination

9.1. Animation of the scientific community

- 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 Andromede of the PACA Region council.
- M. Bossy is an elected member of the INRIA Evaluation Board, a member of the Suivi Doctoral Committee of INRIA Sophia Antipolis –Méditerranée, a member of the NICE Committee of INRIA Sophia Antipolis –Méditerranée.
- M. Bossy was a member of the hiring committee for Junior Researchers (Maîtres de Conférence) in the Centre de Mathématiques Appliquées at Mines ParisTech, Sophia Antipolis.
- N. Champagnat was an elected member of the Comité de Centre of INRIA Sophia Antipolis – Méditerranée until July.
- N. Champagnat was the coordinator of the Spring School Modèles Aléatoires en écologie, géné- tique et évolution of the ANR MANEGE in June in Agay http://www.cmap.polytechnique.fr/~anr-manege/StRaphael2011.html .
- N. Champagnat was a member of two hiring committees for Junior Researchers (Maîtres de Conférence) in Univ. de Nice – Sophia Antipolis and Univ. Lyon 1.
- N. Champagnat was a member of the PhD. committee of M. Salamat (Aix-Marseille Université, supervisor: E. Pardoux) in March and of M. Richard (Univ. Paris 6, supervisor: A. Lambert) in December.
- M. Deaconu is a member of the COST-GTAI (Groupe de Travail Actions Incitatives) of INRIA, of Comité des Projets and Commission des Développements Technologiques at INRIA Nancy, Grand- Est.
- M. Deaconu is a member of the Conseil de Laboratoire at Elie Cartan Institute in Nancy.
- S. Herrmann was a member of the Conseil Scientifique of the INPL University (Institut National Polytechnique de Lorraine).
- P.-E. Jabin organized the Summer School Modèles Mathématiques de la dynamique des populations in Ecole Polytechnique of Tunis, Tunisia.
- P.-E. Jabin was coordinator in Nice of the Erasmus Mundus Master Mathmods.
- A. Lejay has coordinated the organizing committee of the Journées de Probabilités 2011 in Nancy in June 2011 and was also a member of the scientific committee of this conference.
- A. Lejay is one of the three co-editors of the Séminaire de Probabilités published yearly in the Lecture Note in Mathematics series by Springer-Verlag [ 26 ], http://hal.inria.fr/inria-00541922/en .
- A. Lejay is General Secretary of the Société des Mathématiques Appliquées et Industrielles (SMAI).
- A. Lejay is a member of the COMIPERS of INRIA Nancy Grand-Est, since 2011.
- D. Talay served as the Scientific Deputy of INRIA Sophia Antipolis — Méditerranée.

• D. Talay is serving as a member of the Advisory Board of the Centro de Mathematica da Universidade do Porto (Portugal).

• D. Talay served as a member of the Scientific Committee of the 11th Colloque Franco–Roumain.

• D. Talay reported on Émmanuelle Clément’s ‘Habilitation à Diriger des Recherches’ (Paris–Est University) and on several Ph.D. theses: Julia Charrier (University of Rennes 1), Laurent Mertz (Paris 6 University), Xiaolu Tan (École Polytechnique), Denis Villemonais (École Polytechnique). He participated to other Ph.D. committees: Paul Gassiat (Paris 7 University), Julie Troyen (Paris–Est University).

• D. Talay participated to a junior position recruitment committee at Paris Dauphine University.

### 9.2. Teaching

**Master:** *Continuous Probabilistic Models with Applications in Finance*, 30h, M2 IMAFA (*Informatique et Mathématiques Appliquées à la Finance et à l’Assurance*), Ecole Polytechnique Universitaire, Univ. Nice – Sophia Antipolis, France (Mireille Bossy).

**Master:** *Risk management on energetic financial markets*, 9h, Master *Ingénierie et Gestion de l’Énergie, École des Mines de Paris* at Sophia-Antipolis, France (Mireille Bossy).

**Master:** *Stochastic Particle Methods*, 12h, M2 *Probabilités et Modèles Aléatoires* at Université Paris 6, France (Mireille Bossy).

**Master:** *Introduction to Quantitative Finance*, 9h, M1, Ecole des Mines de Nancy, France (Nicolas Champagnat).

**Master:** *Introduction to Quantitative Finance*, 18h, M1, ICN Business School Nancy-Metz, France (Nicolas Champagnat).

**Master:** *Introduction to Quantitative Finance*, 9h, M2, Ecole des Mines de Nancy, France (Nicolas Champagnat).

**Master:** *Population Genetics and Random Genealogies*, 30h, M2, Univ. Henri Poincaré, France (Nicolas Champagnat).

**Licence:** *Evaluation des méthodes d’analyse appliquées aux sciences de la vie et de la santé*, 27h, L1, Univ. Henri Poincaré, France (Paul Charton)

**Licence:** *Outils théoriques : probabilités statistiques*, 37h, L3, Univ. Henri Poincaré, France (Paul Charton)

**Licence:** Colles de mathématiques, 24h, L1, Univ. Henri Poincaré, France (Paul Charton)

**Master:** *Stochastic modeling*, 30h, M2, Université Henri Poincaré, France (Madalina Deaconu).

**Master:** *Probabilistic methods in simulation*, 30h, M1, Ecole des Mines de Nancy, France (Madalina Deaconu).

**Licence:** *Statistiques pour la Psychologie*, 50h, L2, Université de Bourgogne (Samuel Herrmann).

**Licence:** *Analyse*, 25h, L2, Université de Bourgogne (Samuel Herrmann).

**Master:** *Probabilités pour les mathématiques financières*, 45h, M1, Ecole des Mines de Nancy (Samuel Herrmann).

**Master:** *Modélisation et prévision*, 30h, M1, Ecole des Mines de Nancy (Samuel Herrmann).
Stochastic Methods and Models - Dissemination - Project-Team TOSCA

Master: Numerical methods, 15h, M2, Université Henri Poincaré, France (Antoine Lejay).

Licence: Probabilités et Statistiques, 36 h, L2 MASS, Université de Nice – Sophia Antipolis, France (Nicolas Perrin).

Licence: Probabilités, 30 h, L2 BIM, Université de Nice – SophiaAntipolis, France (Nicolas Perrin).

Master: Stochastic Numerical Methods, École Polytechnique (up to August, Denis Talay had a part time position of Professor in this elite institution).

Master: Stochastic Flows, 12h, M2 Probabilités et Applications and M2 Probabilités et Finance at Université Paris 6, France (Denis Talay).

Master: Advanced numerics for Computational Finance, 40 h, M2, UNSA (Mathmodes Erasmus Mundus), France (Etienne Tanréd).

Master: Numerical Probability in Finance, 20 h, M2, Ecole PolytechNice (IMAFA), France (Etienne Tanré).

Master: Numerical Methods in Finance, two sessions with 18 h, M2, ULB (University Certificates in Financial and Insurance Risk Modelling And Quantitative Methods in Finance), Belgium (Etienne Tanré).

Master: Continuous Probabilistic Models with Applications in Finance (exercice classes), 20h, M2 IMAFA (Informatique et Mathématiques Appliquées à la Finance et à l’Assurance), Ecole Polytechnique Universitaire, Univ. Nice, France (Laurent Violeau).

PhD in progress: Paul Charton, Hedging strategies for wind energy prices, September 2010, Madalina Deaconu and Antoine Lejay.

PhD in progress: Julien Claisse, Stochastic control of population dynamics, September 2010, N. Champagnat, D. Talay.

PhD in progress: Dalia Ibrahim, Mathematical modelling for technical analysis techniques, November 2009, D. Talay and E. Tanré.


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: Laurent Violeau, Stochastic Lagrangian Models and Applications to Downscaling in Fluid Dynamics, October 2010, M. Bossy and A. Rousseau.

9.3. Participation to congresses, conferences, invitations...

- M. Bossy gave talks at the Séminaire du CMA, in January at École des Mines de Paris, an invited session talk at ICIAM, Vancouver in July, an invited lecture at the Forum des jeunes mathématiciens, at IMT Toulouse.

- N. Champagnat gave a 4h lecture on Modèles stochastiques individu-centrés en dynamique adaptative et étude du branchement évolutif at the Summer School and Workshop Modèles mathématiques de la dynamique des populations in April at the Ecole Polytechnique of Tunis, Tunisia.


- J. Charrier gave seminar talks in Warwick and Poitiers in November.
• J. Claisse gave a talk at the ANR MANEGE Spring School in Agay, France in June.

• M. Deaconu was invited to give a talk in the International Conference on Stochastic Analysis and Applications, Hammamet, October 10-15, 2011, Tunisia. M. Deaconu also gave a talk in The Seventh Congress of Romanian Mathematicians, June 29 - July 5, 2011, Braşov, Romania, and several talks at the Institute of Mathematics of the Romanian Academy in december 2011.

• S. Herrmann gave several seminar talks in Dijon, Lyon (ISFA and Institut Camille Jordan), Nancy and gave talks in the IMPACT-Workshop in honour of Peter Imkeller’s 60th birthday in Berlin, and in the 5th International conference of stochastic analysis and its application (Bonn, Germany).

• S. Herrmann and E. Tanré participate to the Workshop on Mean-field methods and multiscale analysis of neuronal populations at CIRM (Marseille) in October 2011.

• S. Herrmann and E. Tanré gave a 12 hours talk/course during the Semester on Theoretical, Mathematical and Computational Neuroscience http://www-sop.inria.fr/manifsttations/SemesterCirm/ on Stochastic models and simulations in neuroscience.

• D. Ibrahim gave talks at the Fourth European Summer School in Financial Mathematics in Zürich, in septembre 2011.

• P.-E. Jabin gave talks at the SIAM Conference on Analysis of Partial Differential Equations (PD11), San Diego, USA, at the Vlasov Models in Kinetic Theory Semester Workshop, Brown University, USA, at the Conference on Continuum and kinetic methods in the theory of shocks, fronts, dislocations and interfaces, in honor of C. Dafermos, Crete, at the Workshop Perspectives in Mathematics and Life Sciences as a part of the school BIOMAT 2011, Granada, Spain, at the Summer School M3D, Porquerolles, France, at the 2011 Annual Kinetic FRG Meeting, Madison, Wisconsin, USA, and at the Conference on Applied Mathematics from Waves to Fluids, in honor C. Bardos, Nice.

• N. Perrin gave a talk at the Mini-symposium on Méthodes numériques en simulation moléculare of the SMAI Congress 2011 in Guidel, France in May.

• D. Talay gave a series of Minerva Foundation Lectures at Columbia University and a seminar at the Courant Institute in September. He also gave an invited lecture at the 6th International Symposium on Backward Stochastic Differential Equations at USC, Los Angeles, in June.

• E. Tanré gave talks at the Probability Seminar of Univ. of Nice – Sophia Antipolis in September, and at the Groupe de travail en mathématiques et neurosciences at Institut Henri Poincaré, Paris, in January.

9.3.1. Invitations

• M. Deaconu was invited one week by Lucian Beznea at the Institute of Mathematics of the Romanian Academy in december 2011.

• S. Herrmann was invited one week in Bielefeld university, Germany.

• P.-E. Jabin spent 3 weeks at the University of Crete, Greece.

• D. Talay spent two weeks at Columbia University.
TRIO Project-Team

7. Dissemination

7.1. Animation of the scientific community

- Françoise Simonot-Lion is director of LORIA (CNRS UMR 7503)
- Françoise Simonot-Lion is elected member of the administration board of Ecole Nationale Supérieure des Mines de Nancy.
- Jean-Pierre Thomesse is DRRT at Region Lorraine.
- Ye-Qiong Song is member the administration board of ENSEM.
- Ye-Qiong Song is head of the doctoral department of Computer Science of Lorraine.
- Liliana Cucu is the Delegate of International Relations for the INRIA Nancy-Grand Est center.
- Françoise Simonot-Lion is elected members of LORIA Laboratory Council.
- Olivier Zendra is an elected member of the Research Center Committee of INRIA Nancy Grand Est.
- Françoise Simonot-Lion chairs with Steve Hung (Clemson University, USA) the subcommittee on Automotive Electronic and Embedded Systems of the IEEE Industrial Electronic Society (IES) - Technical Committee on Factory Automation (TCFA).
- Nicolas Navet chairs with Thomas Nolte (MRTC Mälardalen) of the Sub-Committee on Real-Time Fault Tolerant Systems of the IEEE Industrial Electronic Society (IES) - Technical Committee on Factory Automation (TCFA).
- Françoise Simonot-Lion is an associate editor of IEEE Transactions on Industrial Informatics.
- Nicolas Navet is member of the Editorial Board of the Journal of Embedded Computing (IOS Press).
- Liliana Cucu is an elected member of INRIA Evaluation Commission (CE) since September 2011. This commission advices the INRIA direction on important issues like recruiting new permanent researchers, deciding strategic research direction, evaluate the work of INRIA teams. She is also member of INRIA Working Group on International Relations (GTRI-COST) and member of the Evaluation Commission and the Commission of Technological Development for the INRIA Nancy-Grand Est center.
- Olivier Zendra is head of the Documentation Committee of INRIA Nancy Grand Est, member of the Health and Safety Committee of INRIA Nancy Grand Est - LORIA, member of the Permanent Education Committee of INRIA Nancy Grand Est - LORIA, member of the new Sustainable Development Local and National Committee. He was member in 2011 of the INRIA national workgroup on professional travel.
- Ye-Qiong Song was co-chair of Track 2 of the 16th IEEE International Conference on Emerging Technologies and Factory Automation (ETFA2011), co-chair of the real-time network and QoS session of the ETR 2011 (Summer school on real-time) and seminar of Charles Hermite federation on random graphs and wireless networks.
- Ye-Qiong Song was reviewer for the PhD of Fei YANG (INSA Lyon) and of X-H. NGUYEN (LAAS Toulouse).
- Liliana Cucu was chair of the real-time sessions within EVOLVE 2011 and ROADEF 2011.

• Olivier Zendra is CIR expert for the Ministry of Research for the scientific evaluation of research in companies.

• Nicolas Navet and Françoise Simonot-Lion are steering committee members of the RTNS conference.

• 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, now in its 6th edition. He was co-chair for ICOOOLPS 2011 (The 6th Workshop on Implementation, Compilation, Optimization of Object-Oriented Languages, Programs and Systems), July 26th, Lancaster, UK.

• Olivier Zendra was program committee member of DASIP 2011 (Design and Architectures for Signal and Image Processing), Tampere, Finland, 2-4 november 2011 ; of VMIL 2011 (the 5th workshop on Virtual Machines and Intermediate Languages), 22-27 October, 2011, Portland, OR, USA.

• Nicolas Navet was Publicity Co-Chair of the 6th IEEE International Symposium on Embedded Multicore SoCs (MCSoC-11), Aizu-Wakamatsu, Japan, September 21-23, 2011.


• Olivier Zendra is Guest Editor for ICOOOLPS-MASPEGHI 2010 Special issue of The Journal of Object Technology (JOT).

• Ye-Qiong Song is one of the guest editors of the special issue on "Sensor Networks for High-Confidence Cyber-Physical Systems” of International Journal of Distributed Sensor Networks (HINDAWI).

7.2. Teaching

The permanent members of TRIO are teaching real-time systems, programming languages, safety-critical systems, communication networks at INPL, Université Henri Poincaré-Nancy 1 and Université de Nancy 2 (engineer schools and masters). The following Phds were defended or are in progress:

PhD in progress : Jamila Ben Slimane, "Optimisation inter-couche des réseaux de capteurs basés sur la technologie UWB", co-supervised thesis with INPL Nancy and SupCom Tunis, started in November 2009, supervisors: Ye-Qiong Song and Mounir Frikha.


PhD : Shahram Nourizadeh, "Un système de télésanté contextuel avec support de qualité de service pour le maintien à domicile", Institut National Polytechnique de Lorraine - INPL, defended in July 2011, supervisors: Ye-Qiong Song and Jean-Pierre Thomesse.
7. Dissemination

7.1. Animation of the scientific community

Program and Paper Committee:

- Sylvain Lazard: Program committee of the ACM Symposium on Computational Geometry 2012 (SoCG’12).

Editorial responsibilities:

- Xavier Goaoc: Editor of the *Journal of Computational Geometry*.
- Sylvain Petitjean: Editor of *Graphical Models*.

Workshop organizations:

- Sylvain Lazard co-organized with S. Whitesides (Victoria University) the 10th INRIA - McGill - Victoria Workshop on Computational Geometry\(^1\) (Bellairs Research Institute of McGill University) in Feb. (1 week workshop on invitation).

Thesis and habilitation committee:

- Sylvain Lazard: external examiner of the PhD of T. NGuyen, University of Nice; member of the PhD. committees of H-S Kim, KAIST, South Korea, and of R. Cosset, Nancy University.
- Sylvain Petitjean: member of the PhD committee of B. Nefzi, Nancy University.

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 IAE+M (since 2009). Reviewer for the Dutch National Science Foundation.
- Laurent Dupont: Director of the department Services et réseaux de communication of IUT Charlemagne, University Nancy 2 (since 2008, until July 2011). Responsible of admissions of IUT Charlemagne, University Nancy 2 (since September 2011). Member of Commission Pédagogique Nationale Infocom/SRC (since 2011). Member of Commission Information Scientifique (Inria/Loria).
- Xavier Goaoc: Correspondant Europe of INRIA Nancy Grand-Est. Chairman of the INRIA COST-GTRI committee since may 2011.
- Guillaume Moroz: Member of the organizing committee of the Olympiades académiques de mathématiques. Delegate of the Commission des Utilisateurs des Moyens Informatiques pour la Recherche.
- Sylvain Petitjean: Scientific delegate of INRIA Nancy Grand-Est and chairman of its Project committee (since 2009). Member of the Executive committee of INRIA Nancy Grand-Est, member of its Commission des dévelopements technologiques. Member of INRIA’s Evaluation committee.
- Marc Pouget: Member of the CGAL Editorial Board (since 2008).

\(^1\) Workshop on Computational Geometry
7.2. Teaching

Most of the teaching activities were carried out in Nancy, and some in South Korea and Ghana. Several members of the group, in particular the (assistant) professors and Ph.D. students, actively teach at Nancy Université, which consists of Université Nancy 2, Université Henri Poincaré Nancy 1 and several engineering schools grouped into INPL (Institut National Polytechnique de Lorraine).

Most of the teaching activities were carried out in Nancy, and some in South Korea and Ghana. The research Masters program is a joint degree with Univ. Nancy 1, Univ. Nancy 2 and the engineering school INPL. These three institutes are jointly known as University of Nancy.

Several members of the group, in particular the (assistant) professors and Ph.D. students, actively teach at Nancy Université. Inria researchers also intervene: Sylvain Lazard taught

- Licence: Algorithms and Complexity, 25h, L3, Université Nancy 2,

and Xavier Goaoc taught

- Master: Pépites Algorithmiques, 6h, cours électif, École des Mines de Nancy (INPL),
- Master: Discrete and computational geometry, 15h, master of CS, Postech, South Korea,
- Master: Introduction to discrete and computational geometry, 3h, master of geology, ENSG (INPL),
- Master: Mathematical foundations of computer science, 30h, Sandwich course, University of Cape Coast, Ghana,

Licence: C programming, 10h, formation continue, Université Nancy 2,

Laurent Dupont, assistant professor, taught at Université Nancy 2 (IUT Charlemagne)

- Licence: Concepts et Outils Internet, 30h, L1,
- Licence: Algorithmique I, 30h, L1,
- Licence: Programmation Java, 40h, L1,
- Licence: Programmation de Sites Web Dynamiques, 30h, L2,
- Licence: Programmation Objet et Évènementielle, 30h, L2,
- Licence: Intégration Multimedia, 20h, L2,
- Licence: Programmation AJAX, 20h, L2,
- Licence: Rich Internet Applications, 20h, L1,
- Licence: Content Management Systems, 20h, L2,
- Licence: Systèmes d’Information, 30h, L3.

Yacine Bouzidi, PhD student, taught at Université Nancy 2 (IUT Charlemagne)

- Licence: Algorithmique et programmation, 26h, L1,
- Licence: Systèmes d’information-php, 29h, L2,
- Licence: Ajax, 6h, L2,

PhD & HdR:

HdR: Xavier Goaoc, Transversal Helly numbers, pinning theorems and projection of simplicial complexes, Université Henri Poincaré - Nancy 1, defended on December 7th, 2011.

PhD: Guillaume Batog, Problèmes classiques en vision par ordinateur et en géométrie algorithmique revisités via la géométrie des droites, defended on December 15th, 2011, under the supervision of S. Petitjean and X. Goaoc.

PhD in progress: Yacine Bouzidi, On the topology of curves and surfaces, started in October 2010, under the supervision of S. Lazard and M. Pouget.
VERIDIS Team

9. Dissemination

9.1. Animation of the scientific community

- Pascal Fontaine co-chaired the program committee of PxTP 2011 and served on the program committee of ICTAC 2011. He is a member of an international working group designing the proof format for SMT solvers.
- Dominique Méry is
  - a member of the IFIP Working Group 1.3 on Foundations of System Specification,
  - the Head of the Doctoral School IAEM Lorraine for the four universities 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.
  - the director of international affairs at ESIAL Nancy, and
  - the president of the APCB association.
  - He served on the program committees of ICFEM 2011 and FHIES 2011.
- The academic duties of Stephan Merz include:
  - member of the IFIP Working Group 2.2 on Formal Description of Programming Concepts,
  - elected member of the evaluation committee of INRIA (until summer 2011),
  - nominated member of the Section 7 of the Comité National de la Recherche Scientifique,
  - member of the hiring committees of chaires at Université Paris Dauphine and Télécom Paris Sud (president),
  - 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,
  - program committees ICFEM, SBMF, SEFM and SSS conferences, ATE, AVoCS, ICFEM, Refinement workshops, steering committees of AVoCS and IFM,
  - expert for the French Agence Nationale de la Recherche (ANR), AERES, the German DAAD, and the Canadian NSERC, and
  - PhD committees at Aalto University, Finland (report) and at ENS Cachan Bretagne (examiner).

9.2. Teaching

The university employees of VeriDis have significant teaching obligations. We only indicate the graduate courses they have been teaching this year, as well as significant pedagogical responsibilities.
- Pascal Fontaine was head of an undergraduate program (Licence Miage) at Nancy 2 University in the academic year 2010/11.
- Dominique Méry gave courses in the Master’s program in Nancy on: formal system engineering, modelling 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’s program in Nancy.
The following PhD theses were successfully defended in 2011 or are currently in preparation:

Diego Caminha Barbosa de Oliveira: *Fragments de l’arithmétique dans une combinaison de procédures de décision*, defended on 14 march 2011, supervised by Pascal Fontaine and Stephan Merz

Cristián Rosa: *Performance and Correctness Assessment of Distributed Systems*, defended on 24 october 2011, supervised by Stephan Merz and Martin Quinson (of team AlGorille)

Sabina Akhtar: *High-Level Language for Modeling Distributed Algorithms*, since 09/2008, supervised by Stephan Merz

Henri Debrat: *Vérification formelle d’algorithmes répartis avec erreurs byzantines*, since 10/2009, supervised by Bernadette Charron-Bost (CNRS & LIX) and Stephan Merz

Tianxiang Lu: *Formal Verification of a Peer-to-Peer Algorithm*, since 05/2009, supervised by Stephan Merz and Christoph Weidenbach of MPI-INF, Saarbrücken

Hernán-Pablo Vanzetto: *Model Construction for TLA+ formulas*, since 10/2010, supervised by Kaustuv Chaudhuri (of INRIA Saclay) and Stephan Merz