

Preface

Logic, Language, Information and Computation

The 11th Workshop on Logic, Language, Information and Computation (WoLLIC'2004) was held from July 19th to 22nd, 2004, in the Fontainebleau Campus of Université Paris 12. Web-pages: <http://www.cin.ufpe.br/~wollic/wollic2004/> and <http://www.univ-paris12.fr/lac1/Wollic04/>

It was the 11th version of a series of workshops which started in 1994 with the aim of fostering interdisciplinary research in pure and applied logic. The idea is to have a forum which is large enough in the number of possible interactions between logic and the sciences related to information and computation, and yet is small enough to allow for concrete and useful interaction among the participants.

Since the establishment of the *European Association for Logic, Language and Information (FoLLI)* back in the early 1990s there has been a great effort by its founding members to gather researchers in the interdisciplinary areas related to language and information, be it in scientific meetings or in electronic bulletins distributed across the world. One of the activities of *FoLLI* grew out of an idea of setting up an organization in London for the exchange of information on logic among the various logic-related communities. Such an organization would have the purpose of acting as an information clearing house. Founded in 1990 by Dov Gabbay and Ruy de Queiroz, the *Interest Group in Pure and Applied Logics (IGPL)*, currently with a membership of over 1000 researchers in various aspects of logic (symbolic, computational, mathematical, philosophical, etc.) from all over the world (currently, 57 countries), has consistently supported the organization of *WoLLIC*, which had usually happened in Brazil because the co-founder of *IGPL*, de Queiroz, who assisted Gabbay in the running of *IGPL*, moved back to his home country in 1993. The meeting has established itself as a truly international one since 2004 when it was held in the campus of Université Paris 12 in Fontainebleau, 60 Km south of Paris, France.

Previous versions were held at: Recife (Pernambuco) in 1994 and 1995; Salvador (Bahia) in 1996; Fortaleza (Ceará) in 1997; São Paulo in 1998; Itatiaia (Rio de Janeiro) in 1999; Natal (Rio Grande do Norte) in 2000; Brasília (Brazil) in 2001; Rio de Janeiro in 2002; Ouro Preto (Minas Gerais, Brazil) in 2003.

The workshop had the scientific sponsorship of the *Interest Group in Pure and Applied Logics (IGPL)*, (<http://www.cin.ufpe.br/~igpl>), the *European Association for Logic, Language and Information (FoLLI)*, (<http://www.folli.org>), the *Association for Symbolic Logic (ASL)*, (<http://www.aslonline.org>), the *European Association for Theoretical Computer Science (EATCS)*, (<http://www.eatcs.org>), the *Brazilian Computer Science Society (SBC)*, (<http://www.sbc.org.br>), and the *Brazilian Logic Society (SBL)*, (<http://www.cle.unicamp.br/sbl>).

Funding was given by the Institute of Technology of Fontainebleau, Université Paris 12, which has also provided the logistic support to the organising committee.

Contributions were received in the form of short papers from all areas related to logic, language, information and computation, including: pure logical systems, proof theory, model theory, algebraic logic, type theory, category theory, constructive mathematics, lambda and combinatorial calculi, program logic and program semantics, logics and models of concurrency, logic and complexity theory, proof complexity, foundations of cryptography (zero-knowledge proofs), descriptive complexity, nonclassical logics, nonmonotonic logic, logic and language, discourse representation, logic and artificial intelligence, automated deduction, foundations of logic programming, logic and computation, and logic engineering.

In 2004 the workshop had a ‘satellite’ event: the *Second Workshop on the Logic for Pragmatics* (<http://www.univ-paris12.fr/lacl/WoLP04/>) was held in the Créteil Campus of the Univ. Paris XII, from July 23rd to 24th.

All papers in the volume were reviewed by the program committee consisting of:

Zofia Adamowicz (Mathematics Institute, Polish Academy of Sciences, Poland),
 Danièle Beauquier (LACL, Univ. Paris XII, France),
 Felipe Cucker (City University of Hong Kong, Honk Kong),
 Mariangiola Dezani (Università di Torino, Italy),
 Georg Gottlob (Tech. Univ. Wien, Austria),
 Erich Grädel (RWTH Aachen, Germany),
 Etienne Grandjean (Univ. de Caen, France),
 Irene Guessarian (LIAFA et UFR d’Informatique de Paris VI),
 Gérard Huet (INRIA, France),
 Martin Hyland (Cambridge University, UK),
 Gopalan Nadathur (University of Minnesota, USA),
 Grzegorz Rozenberg (Leiden University, The Netherlands),
 Anatol Slissenko (LACL, Univ. Paris XII, France), and
 Igor Walukiewicz (Bordeaux Univ., France).

The Organizing Committee members were

Gianluigi Bellin (Univ. di Verona, Italy),
 Alessandra Carbone (Univ. Pierre et Marie Curie, France),
 Patrick Cégielski (LACL, Univ. Paris 12, France) (Co-Chair),
 Anjolina Grisi de Oliveira (Centro de Informática, Univ Fed Pernambuco, Brazil),
 and Ruy de Queiroz (Centro de Informática, Univ Fed Pernambuco, Brazil) (Co-Chair).

There were six invited talks:

Thomas Ehrhard (Institut de Mathématiques de Luminy, Univ. Marseille, France), *Differential lambda-calculi and interaction nets*.

Manfred Kerber (School of Computer Science, University of Birmingham, UK), *Living with paradoxes*.

Klaus Meer (University of Southern Denmark, Odense, Denmark), *Probabilistically checkable proofs over the reals*.

Damian Niwiński (Division of Maths, Informatics & Mechanics, Warsaw University, Poland), *Deciding nondeterministic hierarchy of deterministic tree automata*.

Luke Ong (Computing Laboratory, Oxford University, UK), *Pushdown hierarchies and the safety constraint*.

Alexander Rabinovich (School of Computer Science, Tel Aviv University, Israel), *Compositional theorems*.

The proceedings with the extended abstract version of the papers has been published as volume 123 in the series *Electronic Notes in Theoretical Computer Science (ENTCS)*. This series is published electronically through the facilities of Elsevier Science B.V. and its auspices. The volumes in the ENTCS series can be accessed at the URL:

<http://www.elsevier.com/locate/entcs>

The abstracts of papers presented at the meeting have been published in the *Logic Journal of the Interest Group in Pure and Applied Logics* (Oxford University Press, <http://www.oup.co.uk/igpl>), 12(4):335–342, July 2004, and a 1-page conference report has appeared in *The Bulletin of Symbolic Logic (ASL)*, <http://www.aslonline.org/journals-bulletin.html>, 11(1):120–121, March 2005.

This volume of *Theoretical Computer Science* contains the (journal standards refereed) full version of the invited papers, as well as a selection of (journal standards refereed) contributed papers.

Acknowledgements

We wish to thank the following people who have helped to keep the standards high: Richard Blute, Felipe Cucker, Arnaud Durand, Melvin Fitting, Serge Grigorieff, Irene Guessarian, Marc Gyssens, Prahladh Harsha, Andreas Herzig,

Martin Hyland, Michiel van Lambalgen, Christoph Lueth, Victor W. Marek, Malika More, Gopalan Nadathur, Valeria de Paiva, Makoto Tatsuta, Pawel Urzyczyn, Jacqueline Vauzeilles, Mike Wooldridge.

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