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Coordination Models and Languages

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Foreword

In 2010 the international federated conferences on Distributed Computing Techniques (DisCoTec) took place in Amsterdam, during June 7–9. It was hosted and organized by the Centrum voor Wiskunde en Informatica.

DisCoTec conferences jointly cover the complete spectrum of distributed computing subjects ranging from theoretical foundations to formal specification techniques to practical considerations. The 12th International Conference on Coordination Models and Languages (Coordination) focused on the design and implementation of models that allow compositional construction of large-scale concurrent and distributed systems, including both practical and foundational models, run-time systems, and related verification and analysis techniques. The 10th IFIP International Conference on Distributed Applications and Interoperable Systems in particular elicited contributions on architectures, models, technologies and platforms for large-scale and complex distributed applications and services that are related to the latest trends for bridging the physical/virtual worlds based on flexible and versatile service architectures and platforms. The 12th Formal Methods for Open Object-Based Distributed Systems and the 30th Formal Techniques for Networked and Distributed Systems together emphasized distributed computing models and formal specification, testing and verification methods.

Each of the three days of the federated event began with a plenary speaker nominated by one of the conferences. The first day Joe Armstrong (Ericsson Telecom AB) gave a keynote speech on Erlang-style concurrency, the second day Gerard Holzmann (Jet Propulsion Laboratory, USA) discussed the question "Formal Software Verification: How Close Are We?" The third and last day Joost Roelands (Director of Development Netlog) presented the problem area of distributed social data. In addition, there was a joint technical session consisting of one paper from each of the conferences and an industrial session with presentations by A. Stam (Almende B.V., Information Communication Technologies) and M. Verhoef (CHESS, Computer Hardware & System Software) followed by a panel discussion.

There were four satellite events: the Third DisCoTec Workshop on Context-aware Adaptation Mechanisms for Pervasive and Ubiquitous Services (CAMPUS), the First International Workshop on Interactions Between Computer Science and Biology (CS2BIO) with keynote lectures by Luca Cardelli (Microsoft Research, Cambridge, UK) and Jérôme Feret (INRIA and École Normale Suprieure, Paris, France), the First Workshop on Decentralized Coordination of Distributed Processes (DCDP) with a keynote lecture by Tyler Close (Google), and the Third Interaction and Concurrency Experience Workshop with keynote lectures by T. Henzinger (IST, Austria) and J.-P. Katoen (RWTH Aachen University, Germany).

I hope this rich program offered every participant interesting and stimulating events. It was only possible thanks to the dedicated work of the Publicity Chair Gianluigi Zavattaro (University of Bologna, Italy), the Workshop Chair Marcello Bonsangue (University of Leiden, The Netherlands) and the members of the Organizing Committee—Susanne van Dam, Immo Grabe, Stephanie Kemper and Alexandra Silva. To conclude I want to thank the sponsorship of the International Federation for Information processing (IFIP), the Centrum voor Wiskunde & Informatica and The Netherlands Organization for Scientific research (NWO).

June 2010   Frank S. de Boer

Preface

The 12th International Conference on Coordination Models and Languages, part of the IFIP federated event on Distributed Computing Techniques, took place in Amsterdam, The Netherlands, June 7–10, 2010. In this age of multicore platforms, service-oriented computing and the Internet of Things, COORDINATION remains a relevant forum for the discussion of new techniques and models for programming and reasoning about distributed and concurrent software systems.

The Program Committee received 28 submissions covering a range of topics including the application of coordination in wireless systems, multicore scheduling, sensor networks, event processing, data flow networks and railway interlocking. Each submission was reviewed by at least three Program Committee members. Papers submitted by Program Committee members received additional scrutiny. The review process included a shepherding phase whereby half of the papers received detailed attention in order to produce higher-quality final submissions.

After a careful and thorough review process, the Program Committee selected 12 papers for publication, based on their significance, originality and technical soundness. The program was topped off by a captivating invited talk by Joe Armstrong of Ericsson Telecom AB on Erlang-style concurrency.

The success of COORDINATION 2010 was due to the dedication of many people. We thank the authors for submitting high-quality papers, and the Program Committee and external reviewers for their careful reviews and thorough and balanced deliberations during the selection process. We thank the providers of the EasyChair conference management system, which was used to run the review process and to facilitate the preparations of these proceedings. Finally, we thank the Distributed Computing Techniques Organizing Committee.

June 2010
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