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Preface

This volume contains the proceedings of the *17th International SPIN Workshop on Model Checking Software* (SPIN 2010). The workshop was organized by and held at the University of Twente, The Netherlands, on 27–29 September 2010. The workshop was co-located with the *5th International Conference on Graph Transformation* (ICGT 2010) and several of its satellite workshops, and with the joint PDMC and HiBi workshops, on *Parallel and Distributed Methods for verifiCation* and on *High-performance computational systems Biology*.

The SPIN workshop is a forum for practitioners and researchers interested in state-space analysis of software-intensive systems. This is applicable in particular to concurrent and asynchronous systems, including protocols. The name of the workshop reflects the SPIN model checking tool by Gerard J. Holzmann, which won the ACM System Software Award 2001, and is probably the most widely used industrial-strength model checker around.

The focus of the workshop is on theoretical advances and extensions, algorithmic improvements, and empirical evaluation studies of (mainly) state-based model checking techniques, as implemented in the SPIN model checker and other tools. The workshop encourages interaction and exchange of ideas with all related areas in software engineering. To this end, we co-located SPIN 2010 with the graph transformation, and high-performance analysis communities.

This year, we received 33 submissions, divided between 29 regular and 4 tool papers. Each paper was rigorously reviewed by at least four reviewers, and judged on its quality and its significance and relevance for SPIN. We accepted 13 regular papers, and 2 tool papers for presentation and for publication in this volume. The papers cover the topics of the workshop, as reflected by the following six sessions:

- Satisfiability Modulo Theories for Model Checking,
- Model Checking in Context (Simulation, Testing, UML)
- Implementation and Performance of Model Checking
- LTL and Büchi Automata
- Extensions to Infinite-State Systems
- Concurrent Software

In addition to the submitted papers, the workshop featured three invited speakers, whose extended abstracts can be found in this volume as well. The invited speakers of this year were: Alessandro Cimatti (FBK-IRST, Italy) on *SMT-Based Software Model Checking*, Darren Cofer (Rockwell Collins, USA) on *Model Checking: Cleared for Take Off*, and Javier Esparza (TU Munich, Germany), on *A False History of True Concurrency: from Petri to Tools*. The latter lecture was a joint invited lecture together with the ICGT conference.

We would like to thank all authors of submitted papers, the invited speakers, the Program Committee members, the external reviewers (who are listed

elsewhere in this volume), and the Steering Committee, for their help in composing a strong program. Special thanks go to the SC chair Stefan Leue for his guidance throughout the SPIN 2010 organization, to Theo Ruys for his involvement in the initial preparations of this workshop, and to Arend Rensink for the overall coordination of the ICGT+SPIN event. Finally, we thank EasyChair for supporting the electronic submission and reviewing process, Springer for their willingness to publish these proceedings in their Lecture Notes in Computer Science Series, and our sponsors for their financial contribution.

Our special thoughts go to Amir Pnueli (1941–2009), who was one of the founding members of the SPIN Steering and Advisory Committee. We are thankful for Amir's inspiring intellectual contribution to the verification community, and in particular for his involvement in the SPIN workshop series.

July 2010

Jaco van de Pol
Michael Weber

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