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Model Checking Software

13th International SPIN Workshop Vienna, Austria, March 30 – April 1, 2006 Proceedings



Volume Editor

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Preface

The name "SPIN" refers both to a workshop on model checking and to a famous model checking tool. The SPIN workshop is an annual forum for practitioners and researchers interested in state space-based techniques for the validation and analysis of software and hardware systems, including communication protocols. It focuses on techniques based on explicit representations of state spaces, as implemented in the SPIN model checker or other tools, and techniques based on a combination of explicit representations with other representations. The SPIN model checker has proven to be particularly suited for the analysis of concurrent asynchronous systems. The workshop aims to encourage interaction and exchange of ideas with all related areas in software engineering. To promote interaction even further, many SPIN workshops have been held in conjunction with other meetings.

The 13th International SPIN Workshop on Model Checking of Software was held in Vienna, Austria, co-located with the European Joint Conferences on Theory and Practice of Software (ETAPS) 2006. The earlier SPIN workshops were held in Montreal, Canada (1995); Rutgers University, USA (1996); Twente University, The Netherlands (1997); ENST, Paris, France (1998); Trento, Italy (1999); Toulouse, France (1999); Stanford University, USA (2000); Toronto, Canada (2001); Grenoble, France (2002); Portland, Oregon, USA (2003); Barcelona, Spain (2004); and San Francisco, USA (2005). The proceedings of the Trento and Toulouse workshops were published together in Springer's Lecture Notes in Computer Science volume 1680. From then on, each SPIN proceedings has been published as an individual LNCS volume.

SPIN 2006 attracted 44 submissions, of which 5 were short tool presentations and 7 were co-authored by a member of the Program Committee. The submissions were distributed to Program Committee members for reviewing. They reviewed the papers either personally or delegated them to sub-reviewers. The sub-reviewers are listed on page VIII. Each paper received three reviews, and in one case an additional fourth review was obtained.

Submissions whose reviews were neither overwhelmingly positive nor overwhelmingly negative were discussed by the Program Committee members. Most discussions led to a consensus on the fate of the paper. In the few cases where a disagreement remained to the end, the decision followed the opinion of the majority of the Program Committee members who had participated in the processing of that submission. All accepted papers had in the end more support (scores 4 and 5) than objection (scores 2, 1 and 0), and no rejected paper had more support than objection. Program committee members who had co-authored a submission, or for some other reason declared a conflict with it, were excluded from all information regarding its processing.

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The Program Committee chose 19 submissions to be presented in the workshop and included in the proceedings. Of these, three were short tool presentations and four were co-authored by a member of the PC.

After processing the submitted papers, the Program Committee invited Roope Kaivola (Intel Corporation, USA) to give a keynote talk on the verification of microprocessors at Intel, and Stefan Edelkamp (Universität Dortmund, Germany) to give a tutorial on directed model checking.

The submission deadline of SPIN 2006 was set quite late, to position it reasonably relative to the submission deadlines of other conferences in the field. As a consequence, the Program Committee had to work in an unusually short period of time, perhaps the shortest in the recent history of SPIN. That the full number of reviews was obtained for each submission is a small miracle. I am grateful to every member of the Program Committee for their efficient and excellent work!

In addition to the Program Committee, the help of the SPIN Steering Committee, and in particular its chair, Pierre Wolper (Université de Liège, Belgium), was extremely important for the success of the paper selection process. On the practical side, the OCS Online Conference Service (originally developed by Metaframe) maintained by Martin Karusseit and Markus Bajohr at the University of Dortmund proved once again very helpful in various stages of the paper selection procedure. And, of course, without the hard work of local organizers there would not have been any workshop — our thanks to Jens Knoop, Andreas Krall, and their team.

January 2006

Antti Valmari Program Chair SPIN 2006

Organization

SPIN 2006 was the 13th International SPIN Workshop on Model Checking of Software. It was held in Vienna, Austria, March 30–April 1, 2006. It was one of the satellite events of ETAPS 2006, The European Joint Conferences on Theory and Practice of Software. On behalf of ETAPS, Jens Knoop and Andreas Krall (Vienna University of Technology) took care of the practical organization of SPIN 2006 and other satellite events.

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