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Theory and Applications of Satisfiability Testing

7th International Conference, SAT 2004
Vancouver, BC, Canada, May 10-13, 2004
Revised Selected Papers

Springer

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Preface

The 7th International Conference on Theory and Applications of Satisfiability Testing (SAT 2004) was held 10–13 May 2004 in Vancouver, BC, Canada. The conference featured 9 technical paper sessions, 2 poster sessions, as well as the 2004 SAT Solver Competition and the 2004 QBF Solver Evaluation. It also included invited talks by Stephen A. Cook (University of Toronto) and Kenneth McMillan (Cadence Berkeley Labs). The 89 participants represented no less than 17 countries and four continents. SAT 2004 continued the series of meetings which started with the Workshops on Satisfiability held in Siena, Italy (1996), Paderborn, Germany (1998) and Renesse, The Netherlands (2000); the Workshop on Theory and Applications of Satisfiability Testing held in Boston, USA (2001); the Symposium on Theory and Applications of Satisfiability Testing held in Cincinnati, USA (2002); and the 6th International Conference on Theory and Applications of Satisfiability Testing held in Santa Margherita Ligure, Italy (2003).

The International Conference on Theory and Applications of Satisfiability Testing is the primary annual meeting for researchers studying the propositional satisfiability problem (SAT), a prominent problem in both theoretical and applied computer science. SAT lies at the heart of the most important open problem in complexity theory ($\mathcal{P}$ vs $\mathcal{NP}$) and underlies many applications in, among other examples, artificial intelligence, operations research and electronic design engineering. The primary objective of the conferences is to bring together researchers from various areas and communities, including theoretical and experimental computer science as well as many relevant application areas, to promote collaboration and the communication of new theoretical and practical results in SAT-related research and its industrial applications.

The 28 technical papers contained in this volume were selected as follows. Of the 72 technical papers submitted to the SAT 2004 conference, 30 were accepted for full presentation at the conference, and a further 18 were selected for posters and short presentations. These selections were made by the Program Committee based on a strict peer-review process, in which each submission received between two and four reviews by Program Committee members or auxiliary reviewers. Authors of accepted papers were invited to submit extended versions of those papers to this volume. From these submissions, 24 were selected for inclusion in this volume, based on another round of rigorous peer reviews. Two additional papers report on the 2004 SAT Solver Competition and the 2004 QBF Solver Evaluation. These were prepared, by invitation, by the organisers of the respective events. Furthermore, authors of the three SAT solvers which placed first in one or more categories of the 2004 SAT Solver Competition were invited to submit papers. Among these latter, one team of authors declined (because their work is presented in part in a previous publication, and in part in another paper

included in this volume). These invited papers were peer-reviewed according to the same standards as the other papers in this volume.

We are very grateful to the many people who contributed to the organisation of SAT 2004, most of whom are listed on the following pages. We thank in particular Dave Tompkins for help in preparing this volume. We also thank the authors, presenters and all other attendees for making SAT 2004 a successful and memorable event.

Vancouver, Canada, 8 April 2005 Holger H. Hoos and David G. Mitchell

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