

## Preface: relational and Kleene-algebraic methods in computer science

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## Preface

This volume contains the proceedings of the *7th International Seminar on Relational Methods in Computer Science (RelMiCS 7)* and the *2nd International Workshop on Applications of Kleene Algebra*. The common meeting took place in Bad Malente (near Kiel), Germany, from May 12-17, 2003. Its purpose was to bring together researchers from various subdisciplines of Computer Science, Mathematics and related fields who use the calculi of relations and/or Kleene algebra as methodological and conceptual tools in their work.

This meeting is the joint continuation of two different series of meetings. Previous RelMiCS seminars were held in Schloss Dagstuhl (Germany) in January 1994, Parati (Brazil) in July 1995, Hammamet (Tunisia) in January 1997, Warsaw (Poland) in September 1998, Quebec (Canada) in January 2000, and Oisterwijk (The Netherlands) in October 2001. The first workshop on applications of Kleene algebra was also held in Schloss Dagstuhl in February 2001. To join these two events in a common meeting was mainly motivated by the substantial common interests and overlap of the two communities. We hope that this leads to fruitful interactions and opens new and interesting research directions.

This volume contains 23 contributions by researchers from all over the world: 21 regular papers and two invited papers *Choice Procedures in Pairwise Comparison of Multiple-Attribute Decision Making Methods* by Raymond Bisdorff and Marc Roubens and *Kleene Algebra with Relations* by Jules Desharnais. The papers show that relational algebra and Kleene algebra have wide-ranging diversity and applicability in theory and practice. Just to give an (incomplete) overview, the papers deal with problems appearing in software technology and program verification and analysis, the formal treatment of pointer algorithms and of algorithms for many problems on discrete structures, applications of relations in combination with fixed points to investigate games, questions arising in the context of databases and data mining, the relational modeling of real-world situations, many topics from artificial intelligence such as knowledge representation and acquisition, preference modeling and scaling methods, and, finally, the use of tools for prototyping and programming with relations and for relational reasoning.

We are very grateful to the members of the program committee and the external referees for their care and diligence in reviewing the submitted papers. We also want to thank Ulrike Pollakowski-Geuther, Ulf Milanese, and Frank Neumann for their assistance; they made organizing this meeting a pleasant experience. Finally, we want to thank Günther Gediga and Gunther Schmidt for their help.

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