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Relations and Kleene Algebra in Computer Science

9th International Conference on Relational Methods in Computer Science
and 4th International Workshop on Applications of Kleene Algebra, RelMiCS/AKA 2006
Manchester, UK, August/September, 2006
Proceedings

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Preface

This volume contains the joint proceedings of the 9th International Conference on Relational Methods in Computer Science (RelMiCS-9) and the 4th International Workshop on Applications of Kleene Algebra (AKA 2006). The joint event was hosted by the School of Computer Science at the University of Manchester, UK, from August 29 to September 2, 2006. RelMiCS/AKA is the main forum for the relational calculus as a conceptual and methodological tool and for topics related to Kleene algebras. Within this general theme, the conference series is devoted to the theory of relation algebras, Kleene algebras and related formalisms as well as to their diverse applications in software engineering, databases and artificial intelligence. This year, special focus was on formal methods, logics of programs and links with neighboring disciplines. This diversity is reflected by the contributions to this volume.

The Programme Committee selected 25 technical contributions out of 44 initial submissions from 14 countries. Each paper was refereed by at least three reviewers on its originality, technical soundness, quality of presentation and relevance to the conference. The programme included three invited lectures by distinguished experts in the area: "Weak Kleene Algebra and Computation Trees" by Ernie Cohen (Microsoft, USA), "Finite Symmetric Integral Relation Algebras with no 3-Cycles" by Roger Maddux (Iowa State University, USA), and "Computations and Relational Bundles" by Jeff Sanders (Oxford, UK). In addition, for the first time, a PhD programme was co-organized by Georg Struth. It included the invited tutorials "Foundations of Relation Algebra and Kleene Algebra" by Peter Jipsen (Chapman University, USA), and "Relational Methods for Program Refinement" by John Derrick (Sheffield University, UK).

As in previous years, the RelMiCS Conference and the AKA Workshop were co-organized because of their considerable overlap. Previous RelMiCS meetings were held in 1994 at Dagstuhl, Germany, in 1995 at Parati, Brazil, in 1997 at Hammamet, Tunisia, in 1998 at Warsaw, Poland, in 1999 at Québec, Canada, in 2001 at Oisterwijk, The Netherlands, in 2003 at Malente, Germany and in 2005 at St.Catharines, Canada. The AKA Workshop has been held jointly with RelMiCS since 2003, after an initial Dagstuhl Seminar in 2001.

I would like to thank the many people without whom the meeting would not have been possible. First, I would like to thank all authors who submitted papers, all participants of the conference as well as the invited keynote speakers and the invited tutorial speakers for their contributions. I am very grateful to the members of the Programme Committee and the external referees for carefully reviewing and selecting the papers. I thank my colleagues on the Steering Committee for their advice and the support for the changes introduced for this year's event. Special thanks go to the members of the local organization team in the School of Computer Science at the University of Manchester for all their

help: the staff in the ACSO office, especially Bryony Quick and Iain Hart, the staff of the finance office, and the technical staff, as well as Zhen Li and David Robinson. Moreover, I am extremely grateful to Georg Struth for his tremendous amount of effort—as Programme Chair he helped with every aspect of the planning and organization of RelMiCS/AKA 2006 and the PhD Programme. Finally, it is my pleasure to acknowledge the generous support by: the UK Engineering and Physical Sciences Research Council (grant EP/D079926/1), the London Mathematical Society, the British Logic Colloquium, the University of Manchester (President's Fund), and the School of Computer Science, University of Manchester.

Manchester, June 2006

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