Record Nr. UNINA9910144159203321 Relational and Kleene-Algebraic Methods in Computer Science: 7th **Titolo** International Seminar on Relational Methods in Computer Science and 2nd International Workshop on Applications of Kleene Algebra, Bad Malente, Germany, May 12-17, 2003, Revised Selected Papers // edited by R. Berghammer, Bernhard Möller, Georg Struth Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, Pubbl/distr/stampa , 2004 1-280-30809-5 **ISBN** 9786610308095 3-540-24771-8 Edizione [1st ed. 2004.] Descrizione fisica 1 online resource (X, 286 p.) Collana Lecture Notes in Computer Science, , 0302-9743;; 3051 004 Disciplina Soggetti Number theory Logic, Symbolic and mathematical Software engineering Computer logic Computer science—Mathematics Artificial intelligence **Number Theory** Mathematical Logic and Formal Languages Software Engineering Logics and Meanings of Programs Symbolic and Algebraic Manipulation Artificial Intelligence Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Invited Papers -- Choice Procedures in Pairwise Comparison Multiple-Attribute Decision Making Methods -- Kleene Algebra with Relations --Contributed Papers -- Integrating Model Checking and Theorem

Proving for Relational Reasoning -- Fixed-Point Characterisation of Winning Strategies in Impartial Games -- Checking the Shape Safety of

Pointer Manipulations -- Applying Relational Algebra in 3D Graphical Software Design -- Investigating Discrete Controllability with Kleene Algebra -- Tracing Relations Probabilistically -- Pointer Kleene Algebra -- Kleene Modules -- The Categories of Kleene Algebras, Action Algebras and Action Lattices Are Related by Adjunctions -- Towards a Formalisation of Relational Database Theory in Constructive Type Theory -- SCAN Is Complete for All Sahlqvist Formulae -- Relations and GUHA-Style Data Mining II -- A Note on Complex Algebras of Semigroups -- Calculational Relation-Algebraic Proofs in Isabelle/Isar -- A Calculus of Typed Relations -- Greedy-Like Algorithms in Modal Kleene Algebra -- Rasiowa-Sikorski Style Relational Elementary Set Theory -- Relational Data Analysis -- Two Proof Systems for Peirce Algebras -- An Institution Isomorphism for Planar Graph Colouring -- Decomposing Relations into Orderings.

Sommario/riassunto

This volume contains the proceedings of the 7th International Seminar on - lational Methods in Computer Science (RelMiCS 7) and the 2nd International Workshop on Applications of Kleene Algebra. Thecommonmeetingtookplacein Bad Malente (near Kiel), Germany, from May May 12–17,2003. Its purpose was to bring together researchers from various subdisciplines of Computer Science, Mathematics and related ?elds who use the calculi of relations and/or Kleene algebra as methodological and conceptual tools in their work. This meeting is the ioint continuation of two di?erent series of meetings. Previous RelMiCS seminars were held in Schloss Dagstuhl (Germany) in J- uary 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 ?rst workshop on appli- tions 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 sstantialcommoninterestsandoverlapofthetwocommunities. Wehopethatthis leads to fruitful interactions and opens new and interesting research directions.