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Descrizione fisica	1 online resource (XI, 281 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 958
Disciplina	006.3
Soggetti	Computers Artificial intelligence Computer science—Mathematics Numerical analysis Combinatorics Theory of Computation Artificial Intelligence Symbolic and Algebraic Manipulation Numerical Analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Interactive theorem proving and computer algebra -- A practical algorithm for geometric theorem proving -- Combining theorem proving and symbolic mathematical computing -- Tools for solving problems in the scope of algebraic programming -- Planning a proof of the intermediate value theorem -- A general technique for automatically optimizing programs through the use of proof plans -- Datalog and TwoGroups and C++ -- Linear logic and real closed fields: A way to handle situations dynamically -- A proof environment for arithmetic with the omega rule -- Using commutativity properties for controlling coercions -- Theories = signatures + propositions used as types -- The ideal structure of Gröbner base computations -- Modeling cooperating agents scenarios by deductive planning methods and

logical fiberings -- Propagation of mathematical constraints in subdefinite models -- Combining computer algebra and rule based reasoning -- Algebraic specification of empirical inductive learning methods based on rough sets and matroid theory -- Subsymbolic processing using adaptive algorithms -- An interpretation of the propositional Boolean algebra as a  $k$ -algebra. Effective calculus -- Subdefinite computations and symbolic transformations in the uniCalc solver.

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Sommario/riassunto

This volume contains thoroughly revised full versions of the best papers presented at the Second International Conference on Artificial Intelligence and Symbolic Mathematical Computation, held in Cambridge, UK in August 1994. The 19 papers included give clear evidence that now, after a quite long period when AI and mathematics appeared to have arranged an amicable separation, these fields are growing together again as an area of fruitful interdisciplinary activities. This book explores the interaction between mathematical computation and clears the ground for future concentration on topics that can further unify the field.

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