

1. Record Nr.	UNISA996465940403316
Titolo	Mathematical Software - ICMS 2010 [[electronic resource]] : Third International Congress on Mathematical Software, Kobe, Japan, September 13-17, 2010, Proceedings // edited by Komei Fukuda, Joris van der Hoeven, Michael Joswig, Nobuki Takayama
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2010
ISBN	3-642-15582-0
Edizione	[1st ed. 2010.]
Descrizione fisica	1 online resource (XIV, 368 p. 59 illus.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 6327
Disciplina	004.0151
Soggetti	Computer science—Mathematics Discrete mathematics Numerical analysis Software engineering Algorithms Computer science Discrete Mathematics in Computer Science Mathematical Applications in Computer Science Numerical Analysis Software Engineering Theory of Computation
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	Plenary -- Computational Discrete Geometry -- Exploiting Structured Sparsity in Large Scale Semidefinite Programming Problems -- Reliable and Efficient Geometric Computing -- The Sage Project: Unifying Free Mathematical Software to Create a Viable Alternative to Magma, Maple, Mathematica and MATLAB -- Computation of Special Functions (Invited) -- Sollya: An Environment for the Development of Numerical Codes -- Validated Special Functions Software -- The Dynamic Dictionary of Mathematical Functions (DDMF) -- Reliable Computing with GNU MPFR -- Computational Group Theory (Invited) -- Simplicial Cohomology of Smooth Orbifolds in GAP -- Computing Polycyclic Quotients of Finitely

(L-)Presented Groups via Groebner Bases -- Constructive Membership Testing in Black-Box Classical Groups -- Computational Group Theory (Contributed) -- Towards High-Performance Computational Algebra with GAP -- An Improvement of a Function Computing Normalizers for Permutation Groups -- A GAP Package for Computation with Coherent Configurations -- Computer Algebra (Invited) -- CoCoALib: A C++ Library for Computations in Commutative Algebra... and Beyond -- LinBox Founding Scope Allocation, Parallel Building Blocks, and Separate Compilation -- FGb: A Library for Computing Gröbner Bases -- Fast Library for Number Theory: An Introduction -- Exact Numeric Computation for Algebraic and Geometric Computation (Invited) -- Controlled Perturbation for Certified Geometric Computing with Fixed-Precision Arithmetic -- Exact Geometric and Algebraic Computations in CGAL -- On Solving Systems of Bivariate Polynomials -- Accurate and Reliable Computing in Floating-Point Arithmetic -- Exact Numeric Computation for Algebraic and Geometric Computation (Contributed) -- Deferring Dag Construction by Storing Sums of Floats Speeds-Up Exact Decision Computations Based on Expression Dags -- The Design of Core 2: A Library for Exact Numeric Computation in Geometry and Algebra -- Formal Proof (Invited) -- Introducing HOL Zero -- Euler's Polyhedron Formula in mizar -- Building a Library of Mechanized Mathematical Proofs: Why Do It? and What Is It Like to Do? -- Linear Programs for the Kepler Conjecture -- A Formal Proof of Pick's Theorem -- Formal Proof (Contributed) -- Evaluation of Automated Theorem Proving on the Mizar Mathematical Library -- Geometry and Visualization (Invited) -- On Local Deformations of Planar Quad-Meshes -- Construction of Harmonic Surfaces with Prescribed Geometry -- Geometry and Visualization (Contributed) -- A Library of OpenGL-Based Mathematical Image Filters -- MD-jeep: An Implementation of a Branch and Prune Algorithm for Distance Geometry Problems -- TADD: A Computational Framework for Data Analysis Using Discrete Morse Theory -- Groebner Bases and Applications (Invited) -- to Normaliz 2.5 -- Computer Algebra Methods in Tropical Geometry -- Groebner Bases and Applications (Contributed) -- A New Desingularization Algorithm for Binomial Varieties in Arbitrary Characteristic -- An Algorithm of Computing Inhomogeneous Differential Equations for Definite Integrals -- New Algorithms for Computing Primary Decomposition of Polynomial Ideals -- An Automated Confluence Proof for an Infinite Rewrite System Parametrized over an Integro-Differential Algebra -- Operadic Gröbner Bases: An Implementation -- Number Theoretical Software (Invited) -- Magma - A Tool for Number Theory -- Number Theoretical Software (Contributed) -- Enumerating Galois Representations in Sage -- NZMATH 1.0 -- Software for Optimization and Polyhedral Computation (Invited) -- Removing Redundant Quadratic Constraints -- Traversing Symmetric Polyhedral Fans -- C++ Tools for Exploiting Polyhedral Symmetries -- isl: An Integer Set Library for the Polyhedral Model -- Software for Optimization and Polyhedral Computation (Contributed) -- The Reformulation-Optimization Software Engine -- Generating Smooth Lattice Polytopes -- Reliable Computation (Invited) -- Mathemagix: Towards Large Scale Programming for Symbolic and Certified Numeric Computations -- Complex Inclusion Functions in the CoStLy C++ Class Library -- Standardized Interval Arithmetic and Interval Arithmetic Used in Libraries -- Reliable Computation (Contributed) -- Efficient Evaluation of Large Polynomials -- Communicating Functional Expressions from Mathematica to C-XSC.
