1. Record Nr. UNISA996465615803316

Titolo	Computer Algebra in Scientific Computing [[electronic resource]] : 8th International Workshop, CASC 2005, Kalamata, Greece, September 12-16, 2005, Proceedings / / edited by Victor G. Ganzha, Ernst W. Mayr, Evgenii V. Vorozhtsov
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2005
Edizione	[1st ed. 2005.]
Descrizione fisica	1 online resource (XII, 504 p.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 3718
Disciplina	512.00285
Soggetti	Computer science—Mathematics Algebra Computer programming Discrete mathematics Algorithms Mathematics of Computing Symbolic and Algebraic Manipulation Programming Techniques Discrete Mathematics in Computer Science
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	On Regular and Logarithmic Solutions of Ordinary Linear Differential Systems -- Computing the Betti Numbers of Arrangements in Practice -- A MAPLE Symbolic-Numeric Program for Solving the 2D-Eigenvalue Problem by a Self-consistent Basis Method -- RelView – An OBDD-Based Computer Algebra System for Relations -- On the Use of Gröbner Bases for Computing the Structure of Finite Abelian Groups -- Normal Forms and Integrability of ODE Systems -- Resultant-Based Methods for Plane Curves Intersection Problems -- Symbolic Calculations in Studying the Stability of Dynamically Symmetric Satellite Motion -- Generation of Orthogonal Grids on Curvilinear Trimmed Regions in Constant Time -- Computer Algebra in Nanosciences: Modeling Electronic States in Quantum Dots -- Cayley-Dixon Resultant Matrices

of Multi-univariate Composed Polynomials -- A Descartes Algorithm for Polynomials with Bit-Stream Coefficients -- Real Solving of Bivariate Polynomial Systems -- Nouvelle Cuisine for the Computation of the Annihilating Ideal of f s -- Janet-Like Monomial Division -- Janet-Like Gröbner Bases -- Circulant Digraphs and Monomial Ideals -- Algebraic Topological Analysis of Time-Sequence of Digital Images -- Hilbert Stratification and Parametric Gröbner Bases -- Investigation of the Stability Problem for the Critical Cases of the Newtonian Many-Body Problem -- Symbolic-Numerical Algorithm for Solving the Time-Dependent Schrödinger Equation by Split-Operator Method -- On Some Results of Investigation of Kirchhoff Equations in Case of a Rigid Body Motion in Fluid -- On Compatibility of Discrete Relations -- Construction of Two Level Orthogonal Arrays Via Solutions of Linear Systems -- Counting Techniques Specifying the Existence of Submatrices in Weighing Matrices -- Fast Verification for Respective Eigenvalues of Symmetric Matrix -- Towards More Accurate Separation Bounds of Empirical Polynomials II -- Compiler-Enforced Memory Semantics in the SACLIB Computer Algebra Library -- Meta-Petro: An Expert System for Training Undergraduates in Metamorphic Rocks Recognition and Classification Using Photomicrographies -- The Diamond Operator – Implementation of Exact Real Algebraic Numbers -- Constructing the Numerical Method for Navier — Stokes Equations Using Computer Algebra System -- Nonlinear Waves in a Rod -- A Symbolic-Numeric Method for Solving Boundary Value Problems of Kirchhoff Rods -- Differential and Difference Equations for Products of Classical Orthogonal Polynomials -- Algorithm of Local Resolution of Singularities of a Space Curve -- Quantifier Elimination for Constraint Logic Programming -- Computation of Full Comprehensive Gröbner Bases -- Recursive Polynomial Remainder Sequence and the Nested Subresultants -- Interdependence Between the Laurent-Series and Elliptic Solutions of Nonintegrable Systems -- Solving Linear Differential Problems with Parameters -- Approximate Solution of the Dirichlet Problem for Elliptic PDE and Its Error Estimate.