1. Record Nr. UNISA996465927903316

Titolo	Automated Deduction in Geometry [[electronic resource]] : 4th International Workshop, ADG 2002, Hagenberg Castle, Austria, September 4-6, 2002, Revised Papers / / edited by Franz Winkler
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2004
ISBN	1-280-30680-7 9786610306800 3-540-24616-9
Edizione	[1st ed. 2004.]
Descrizione fisica	1 online resource (VII, 229 p.)
Collana	Lecture Notes in Artificial Intelligence ; ; 2930
Disciplina	516/.00285
Soggetti	Geometry Artificial intelligence Mathematical logic Computer science—Mathematics Computer graphics Pattern recognition Artificial Intelligence Mathematical Logic and Formal Languages Discrete Mathematics in Computer Science Computer Graphics Pattern Recognition
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 at the end of each chapters and index.
Nota di contenuto	Algorithmic Tests for the Normal Crossing Property -- The Projection of Quasi Variety and Its Application on Geometric Theorem Proving and Formula Deduction -- Using Computer Algebra Tools to Classify Serial Manipulators -- MMP/Geometer – A Software Package for Automated Geometric Reasoning -- The SymbolicData GEO Records – A Public Repository of Geometry Theorem Proof Schemes -- A New Structural Rigidity for Geometric Constraint Systems -- Algebraic Representation,

Elimination and Expansion in Automated Geometric Theorem Proving -- The Nonsolvability by Radicals of Generic 3-connected Planar Graphs -- Function-Based Shape Modeling: Mathematical Framework and Specialized Language -- C 1 Spline Implicitization of Planar Curves -- Analysis of Geometrical Theorems in Coordinate-Free Form by Using Anticommutative Gröbner Bases Method -- GEOTHER 1.1: Handling and Proving Geometric Theorems Automatically -- Distance Coordinates Used in Geometric Constraint Solving.

Sommario/riassunto

This book constitutes the thoroughly refereed post-proceedings of the 4th International Workshop on Automated Deduction in Geometry, ADG 2002, held at Hagenberg Castle, Austria in September 2002. The 13 revised full papers presented were carefully selected during two rounds of reviewing and improvement. Among the issues addressed are theoretical and methodological topics, such as the resolution of singularities, algebraic geometry and computer algebra; various geometric theorem proving systems are explored; and applications of automated deduction in geometry are demonstrated in fields like computer-aided design and robotics.