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Descrizione fisica	1 online resource (XX, 458 p. 111 illus.)
Collana	Lecture Notes in Artificial Intelligence ; ; 8543
Disciplina	512
Soggetti	Computer science—Mathematics Artificial intelligence Mathematical logic Natural language processing (Computer science) Information storage and retrieval Symbolic and Algebraic Manipulation Artificial Intelligence Math Applications in Computer Science Mathematical Logic and Formal Languages Natural Language Processing (NLP) Information Storage and Retrieval
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Invited Talks.-What International Studies Say about the Importance and Limitations of Using Computers to Teach Mathematics in Secondary Schools -- Towards Robust Hyperlinks for Web-Based Scholarly Communication -- Computable Data, Mathematics, and Digital Libraries in Mathematica and Wolfram Alpha -- Calculemus -- Towards the Formal Reliability Analysis of Oil and Gas Pipelines -- Problem Formulation for Truth-Table Invariant Cylindrical Algebraic Decomposition by Incremental Triangular Decomposition -- A Tableaux-Based Decision Procedure for Multi-parameter Propositional Schemata -- Detecting Unknobs via Equational Reasoning, I: Exploration

-- Applying Machine Learning to the Problem of Choosing a Heuristic to Select the Variable Ordering for Cylindrical Algebraic Decomposition -- Hipster: Integrating Theory Exploration in a Proof Assistant -- Formalization of Complex Vectors in Higher-Order Logic -- A Mathematical Structure for Modeling Inventions -- Digital Mathematics Library -- Search Interfaces for Mathematicians -- A Data Model and Encoding for a Semantic, Multilingual Terminology of Mathematics -- PDF/A-3u as an Archival Format for Accessible Mathematics -- Which One Is Better: Presentation-Based or Content-Based Math Search? -- POS Tagging and Its Applications for Mathematics -- Mathoid: Robust, Scalable, Fast and Accessible Math Rendering for Wikipedia -- Mathematical Knowledge Management -- Set Theory or Higher Order Logic to Represent Auction Concepts in Isabelle? -- Realms: A Structure for Consolidating Knowledge about Mathematical Theories -- Matching Concepts across HOL Libraries -- Mining State-Based Models from Proof Corpora -- Querying Geometric Figures Using a Controlled Language, Ontological Graphs and Dependency Lattices -- Flexary Operators for Formalized Mathematics -- Interactive Simplifier Tracing and Debugging in Isabelle -- Towards an Interaction-based Integration of MKM Services into End-User Applications -- Towards Knowledge Management for HOL Light -- Automated Improving of Proof Legibility in the Mizar System -- A Vernacular for Coherent Logic -- An Approach to Math-Similarity Search -- Systems and Projects -- Digital Repository of Mathematical Formulae -- NNexus Reloaded -- E-books and Graphics with LATEXml -- System Description: MathHub.info -- Developing Corpus-Based Translation Methods between Informal and Formal Mathematics: Project Description -- System Description: A Semantics-Aware LATEX-to-Office Converter -- Math Indexer and Searcher Web Interface: Towards Fulfillment of Mathematicians' Information Needs -- SAT-Enhanced Mizar Proof Checking -- A Framework for Formal Reasoning about Geometrical Optics.

Sommario/riassunto

This book constitutes the joint refereed proceedings of Calculemus 2014, Digital Mathematics Libraries, DML 2014, Mathematical Knowledge Management, MKM 2014, and Systems and Projects, S&P 2014, held in Coimbra, Portugal, during July 7-11, 2014 as four tracks of CICM 2014, the Conferences on Intelligent Computer Mathematics. The 26 full papers and 9 Systems and Projects descriptions presented together with 5 invited talks were carefully reviewed and selected from a total of 55 submissions. The Calculemus track of CICM examines the integration of symbolic computation and mechanized reasoning. The Digital Mathematics Libraries track - evolved from the DML workshop series - features math-aware technologies, standards, algorithms and processes towards the fulfillment of the dream of a global DML. The Mathematical Knowledge Management track of CICM is concerned with all aspects of managing mathematical knowledge in the informal, semi-formal, and formal settings. The Systems and Projects track presents short descriptions of existing systems or on-going projects in the areas of all the other tracks of the conference.
