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Soggetti	Computer software Information storage and retrieval Application software Artificial intelligence Database management Computer networks Mathematical Software Information Storage and Retrieval Information Systems Applications (incl. Internet) Artificial Intelligence Database Management Computer Communication Networks
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Nota di contenuto	Copyright Issues for MKM -- Efficient Retrieval of Mathematical Statements -- Formalizing Set Theory as it Is Actually Used -- Integrated Semantic Browsing of the Mizar Mathematical Library for Authoring Mizar Articles -- Informalising Formal Mathematics: Searching the Mizar Library with Latent Semantics -- Mathematical Service Matching Using Description Logic and OWL -- C-CoRN, the Constructive Coq Repository at Nijmegen -- Classifying Differential Equations on the Web -- Managing Heterogeneous Theories within a Mathematical Knowledge Repository -- Rough Concept Analysis –

Theory Development in the Mizar System -- A Path to Faithful Formalizations of Mathematics -- Flexible Encoding of Mathematics on the Computer -- CPoint: Dissolving the Author's Dilemma -- On Diagrammatic Representation of Mathematical Knowledge -- Predicate Logic with Sequence Variables and Sequence Function Symbols -- A Graph-Based Approach Towards Discerning Inherent Structures in a Digital Library of Formal Mathematics -- Theorem Proving and Proof Verification in the System SAD -- Adaptive Access to a Proof Planner -- Modeling Interactivity for Mathematics Learning by Demonstration -- Extraction of Logical Structure from Articles in Mathematics -- Improving Mizar Texts with Properties and Requirements -- An Investigation on the Dynamics of Direct-Manipulation Editors for Mathematics -- Intuitive and Formal Representations: The Case of Matrices -- Mathematical Libraries as Proof Assistant Environments -- Efficient Ambiguous Parsing of Mathematical Formulae -- An Architecture for Distributed Mathematical Web Services -- The Categorial Type of OpenMath Objects.

Sommario/riassunto

The International Conference on Mathematical Knowledge Management has now reached its third edition, creating and establishing an original and stimulating scientific community transversal to many different fields and research topics. The broad goal of MKM is the exploration of innovative, semantically enriched, digital encodings of mathematical information, and the study of new services and tools exploiting the machine-understandable nature of the information. MKM is naturally located in the border area between digital libraries and the mec- nization of mathematics, devoting a particular interest to the new developments in information technology, and fostering their application to the realm of ma- ematical information. The conference is meant to be a forum for presenting, discussing and comparing new tools and systems, standardization e?orts, critical surveys, large experiments,and case studies. At present, we are still getting to know each other, to understand the work done by other people, and the potentialities offered by their work to our own research activity. However, the conference is rapidly acquiring scienti?c strength and academic interest, attracting more and more people and research groups, and offering a challenging alternative to older, more conservative conferences. July 2004 Andrea Asperti Grzegorz Bancerek Andrzej Trybulec Organization MKM 2004 was organized by the Institute of Computer Science, University of Bialystok in co-operation with the Faculty of Computer Science, Bialystok Technical University and the Association of Mizar Users. Program Committee Andrzej Trybulec (Chair) University of Bialystok, Poland Andrew A. Adams University of Reading, UK Andrea Asperti University of Bologna, Italy Bruno Buchberger RISC Linz, Austria Roy McCasland University of Edinburgh, UK James Davenport University of Bath, UK William M.