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	Nota di contenuto	Invited Presentations -- The Algorithmization of Physics: Math Between Science and Engineering -- Finite Algebras and AI: From Matrix Semantics to Stochastic Local Search -- Proof Search in Minimal Logic -- Planning and Patching Proof -- Papers -- A Paraconsistent Higher Order Logic -- Abstraction Within Partial Deduction for Linear Logic -- A Decision Procedure for Equality Logic with Uninterpreted Functions -- Generic Hermitian Quantifier Elimination -- Extending Finite Model Searching with Congruence Closure Computation -- On the Combination of Congruence Closure and Completion -- Combination of Nonlinear Terms in Interval Constraint Satisfaction Techniques -- Proving and Constraint Solving in Computational Origami -- An Evolutionary Local Search Method for Incremental Satisfiability --

Solving Equations Involving Sequence Variables and Sequence Functions -- Verified Computer Algebra in Acl2 -- Polynomial Interpretations with Negative Coefficients -- New Developments in Symmetry Breaking in Search Using Computational Group Theory -- Recognition of Whitehead-Minimal Elements in Free Groups of Large Ranks -- Four Approaches to Automated Reasoning with Differential Algebraic Structures -- Algorithm-Supported Mathematical Theory Exploration: A Personal View and Strategy -- An Expert System on Detection, Evaluation and Treatment of Hypertension -- Short Presentations -- Two Revision Methods Based on Constraints: Application to a Flooding Problem -- Abstraction-Driven Verification of Array Programs -- Singularities in Qualitative Reasoning -- From a Computer Algebra Library to a System with an Equational Prover.

Sommario/riassunto	AISC 2004, the 7th International Conference on Artificial Intelligence and Symbolic Computation, was the latest in the series of specialized biennial conferences founded in 1992 by Jacques Calmet of the Universitat ¨ Karlsruhe and John Campbell of University College London with the initial title Artificial Intelligence and Symbolic Mathematical Computing (AISMC).The M disappeared from the title between the 1996 and 1998 conferences. As the editors of the AISC 1998 proceedings said, the organizers of the current meeting decided to drop the adjective 'mathematical' and to emphasize that the conference is concerned with all aspects of symbolic computation in AI: mathematical foundations, implementations, and applications, including applications in industry and academia. This remains the intended profile of the series, and will figure in the call for papers for AISC 2006,which is intended to take place in China. The distribution of papers in the present volume over all the areas of AISC happens to be rather noticeably mathematical, an effect that emerged because we were concerned to select the best relevant papers that were offered to us in 2004, irrespective of their particular topics; hence the title on the cover. Nevertheless, we encourage researchers over the entire spectrum of AISC, as expressed by the 1998 quotation above,to be in touch with us about their interests and the possibility of eventual submission of papers on their work for the next conference in the series. The papers in the present volume are evidence of the health of the field of AISC. Additionally, there are two reasons for optimism about the continuation of this situation.