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	Soggetti	Philosophy Mathematical logic Logic design Software engineering Computer logic Artificial intelligence Philosophy, general Mathematical Logic and Formal Languages Logic Design Software Engineering Logics and Meanings of Programs Artificial Intelligence
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	Nota di contenuto	Invited Talk I -- Click'n Prove: Interactive Proofs within Set Theory -- Hardware and Assembler Languages -- Formal Specification and Verification of ARM6 -- A Programming Logic for Java Bytecode Programs -- Verified Bytecode Subroutines -- Proof Automation I -- Complete Integer Decision Procedures as Derived Rules in HOL -- Changing Data Representation within the Coq System -- Applications of Polytypism in Theorem Proving -- Proof Automation II -- A Coverage Checking Algorithm for LF -- Automatic Generation of Generalization Lemmas for Proving Properties of Tail-Recursive Definitions -- Tool

Combination -- Embedding of Systems of Affine Recurrence Equations in Coq -- Programming a Symbolic Model Checker in a Fully Expansive Theorem Prover -- Combining Testing and Proving in Dependent Type Theory -- Invited Talk II -- Reasoning about Proof Search Specifications: An Abstract -- Logic Extensions -- Program Extraction from Large Proof Developments -- First Order Logic with Domain Conditions -- Extending Higher-Order Unification to Support Proof Irrelevance -- Advances in Theorem Prover Technology -- Inductive Invariants for Nested Recursion -- Implementing Modules in the Coq System -- MetaPRL – A Modular Logical Environment -- Mathematical Theories -- Proving Pearl: Knuth's Algorithm for Prime Numbers -- Formalizing Hilbert's Grundlagen in Isabelle/Isar -- Security -- Using Coq to Verify Java CardTM Applet Isolation Properties -- Verifying Second-Level Security Protocols.

| Sommario/riassunto | This volume constitutes the proceedings of the 16th International Conference on Theorem Proving in Higher Order Logics (TPHOLs 2003) held September 8–12, 2003 in Rome, Italy. TPHOLs covers all aspects of theorem proving in higher order logics as well as related topics in theorem proving and verification. TPHOLs 2003 was co-located with TABLEAUX, the International Conference on Automated Reasoning with Analytic Tableaux and Related Methods, and with Calculemus, the Symposium on the Integration of Symbolic Computation and Mechanized Reasoning. There were 50 papers submitted to TPHOLs in the full research category, each of which was refereed by at least 3 reviewers, selected by the program c- mittee. Of these submissions, 21 were accepted for presentation at the conference and publication in this volume. In keeping with tradition, TPHOLs 2003 also offered a venue for the presentation of work in progress, where researchers - vite discussion by means of a brief preliminary talk and then discuss their work at a poster session. A supplementary proceedings containing associated papers for work in progress was published by the computer science department at the Universit¨ at Freiburg. The organizers are grateful to Jean-Raymond Abrial, Patrick Lincoln, and Dale Miller for agreeing to give invited talks at TPHOLs 2003. The TPHOLs conference traditionally changes continent each year in order to maximize the chances that researchers from around the world can attend. |