1. Record Nr. UNINA9910136251903321

Titolo	Biological Sciences in Space
Pubbl/distr/stampa	Sagamihara, Japan, : Japanese Society for Biological Sciences in Space, 1987-
ISSN	1349-967X
Descrizione fisica	1 online resource
Soggetti	Space biology Space medicine Exobiology Space Flight Extraterrestrial Environment Cosmic Radiation Periodical Periodicals.
Lingua di pubblicazione	Giapponese
Formato	Materiale a stampa
Livello bibliografico	Periodico
Note generali	Refereed/Peer-reviewed

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Titolo	Automated Reasoning : Third International Joint Conference, IJCAR 2006, Seattle, WA, USA, August 17-20, 2006, Proceedings / / edited by Ulrich Furbach, Natarajan Shankar
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2006
ISBN	3-540-37188-5
Edizione	[1st ed. 2006.]
Descrizione fisica	1 online resource (XVI, 688 p.)
Collana	Lecture Notes in Artificial Intelligence, , 2945-9141 ; ; 4130
Altri autori (Persone)	FurbachUlrich ShankarN (Natarajan)
Disciplina	006.3
Soggetti	Artificial intelligence Machine theory Computer science Software engineering Artificial Intelligence Formal Languages and Automata Theory Computer Science Logic and Foundations of Programming Software Engineering
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 and index.
Nota di contenuto	Invited Talks -- Mathematical Theory Exploration -- Searching While Keeping a Trace: The Evolution from Satisfiability to Knowledge Compilation -- Representing and Reasoning with Operational Semantics -- Session 1. Proofs -- Flyspeck I: Tame Graphs -- Automatic Construction and Verification of Isotopy Invariants -- Pitfalls of a Full Floating-Point Proof: Example on the Formal Proof of the Veltkamp/Dekker Algorithms -- Using the TPTP Language for Writing Derivations and Finite Interpretations -- Session 2. Search -- Stratified Context Unification Is NP-Complete -- A Logical Characterization of Forward and Backward Chaining in the Inverse Method -- Connection Tableaux with Lazy Paramodulation -- Blocking and Other Enhancements for Bottom-Up Model Generation Methods -- Session 3. System Description 1 -- The MathServe System for Semantic Web

Reasoning Services -- System Description: GCLCprover + GeoThms -- A Sufficient Completeness Checker for Linear Order-Sorted Specifications Modulo Axioms -- Extending the TPTP Language to Higher-Order Logic with Automated Parser Generation -- Session 4. Higher-Order Logic -- Extracting Programs from Constructive HOL Proofs Via IZF Set-Theoretic Semantics -- Towards Self-verification of HOL Light -- An Interpretation of Isabelle/HOL in HOL Light -- Combining Type Theory and Untyped Set Theory -- Session 5. Proof Theory -- Cut-Simulation in Impredicative Logics -- Interpolation in Local Theory Extensions -- Canonical Gentzen-Type Calculi with (n,k)-ary Quantifiers -- Dynamic Logic with Non-rigid Functions -- Session 6. System Description 2 -- AProVE 1.2: Automatic Termination Proofs in the Dependency Pair Framework -- CEL — A Polynomial-Time Reasoner for Life Science Ontologies -- FaCT++ Description Logic Reasoner: System Description -- Importing HOL intoIsabelle/HOL -- Session 7. Search -- Geometric Resolution: A Proof Procedure Based on Finite Model Search -- A Powerful Technique to Eliminate Isomorphism in Finite Model Search -- Automation of Recursive Path Ordering for Infinite Labelled Rewrite Systems -- Session 8. Proof Theory -- Strong Cut-Elimination Systems for Hudelmaier's Depth-Bounded Sequent Calculus for Implicational Logic -- Eliminating Redundancy in Higher-Order Unification: A Lightweight Approach -- First-Order Logic with Dependent Types -- Session 9. Proof Checking -- Automating Proofs in Category Theory -- Formal Global Optimisation with Taylor Models -- A Purely Functional Library for Modular Arithmetic and Its Application to Certifying Large Prime Numbers -- Proving Formally the Implementation of an Efficient gcd Algorithm for Polynomials -- Session 10. Combination -- A SAT-Based Decision Procedure for the Subclass of Unrollable List Formulas in ACL2 (SULFA) -- Solving Sparse Linear Constraints -- Inferring Network Invariants Automatically -- A Recursion Combinator for Nominal Datatypes Implemented in Isabelle/HOL -- Session 11. Decision Procedures -- Decidability and Undecidability Results for Nelson-Oppen and Rewrite-Based Decision Procedures -- Verifying Mixed Real-Integer Quantifier Elimination -- Presburger Modal Logic Is PSPACE-Complete -- Tree Automata with Equality Constraints Modulo Equational Theories -- Session 12. CASC-J3 -- CASC-J3 The 3rd IJCAR ATP System Competition -- Session 13. Rewriting -- Matrix Interpretations for Proving Termination of Term Rewriting -- Partial Recursive Functions in Higher-Order Logic -- On the Strength of Proof-Irrelevant Type Theories -- Consistency and Completeness of Rewriting in the Calculus of Constructions -- Session 14. Description Logic -- Specifying and Reasoning About DynamicAccess-Control Policies -- On Keys and Functional Dependencies as First-Class Citizens in Description Logics -- A Resolution-Based Decision Procedure for .

Sommario/riassunto

This book constitutes the refereed proceedings of the Third International Joint Conference on Automated Reasoning, IJCAR 2006, held in Seattle, WA, USA in August 2006 as part of the 4th Federated Logic Conference, FLoC 2006. IJCAR 2006 is a merger of CADE, FroCoS, FTP, TABLEAUX, and TPHOLs. The 41 revised full research papers and 8 revised system descriptions presented together with 3 invited papers and a summary of a systems competition were carefully reviewed and selected from a total of 152 submissions. The papers address the entire spectrum of research in automated reasoning including formalization of mathematics, proof theory, proof search, description logics, interactive proof checking, higher-order logic, combination methods, satisfiability procedures, and rewriting. The papers are organized in topical sections on proofs, search, higher-order logic,

proof theory, search, proof checking, combination, decision procedures, CASC-J3, rewriting, and description logic.