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Titolo	Automated Deduction - CADE-21 : 21st International Conference on Automated Deduction, Bremen, Germany, July 17-20, 2007, Proceedings // edited by Frank Pfenning
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ISBN	3-540-73595-X
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Collana	Lecture Notes in Artificial Intelligence, , 2945-9141 ; ; 4603
Disciplina	511.3
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	Session 1. Invited Talk: Colin Stirling -- Games, Automata and Matching -- Session 2. Higher-Order Logic -- Formalization of Continuous Probability Distributions -- Compilation as Rewriting in Higher Order Logic -- Barendregt's Variable Convention in Rule Inductions -- Automating Elementary Number-Theoretic Proofs Using Gröbner Bases -- Session 3. Description Logic -- Optimized Reasoning in Description Logics Using Hypertableaux -- Conservative Extensions in the Lightweight Description Logic -- An Incremental Technique for Automata-Based Decision Procedures -- Session 4. Intuitionistic Logic -- Bidirectional Decision Procedures for the Intuitionistic Propositional Modal Logic IS4 -- A Labelled System for IPL with Variable Splitting -- Session 5. Invited Talk: Ashish Tiwari -- Logical Interpretation: Static Program Analysis Using Theorem Proving -- Session 6. Satisfiability Modulo Theories -- Solving Quantified Verification Conditions Using

Satisfiability Modulo Theories -- Efficient E-Matching for SMT Solvers  
-- Decision by Decomposition -- Towards Efficient Satisfiability  
Checking for Boolean Algebra with Presburger Arithmetic -- Session 7.  
Induction, Rewriting, and Polymorphism -- Improvements in Formula  
Generalization -- On the Normalization and Unique Normalization  
Properties of Term Rewrite Systems -- Handling Polymorphism in  
Automated Deduction -- Session 8. First-Order Logic -- Automated  
Reasoning in Kleene Algebra -- SRASS - A Semantic Relevance Axiom  
Selection System -- Labelled Clauses -- Automatic Decidability and  
Combinability Revisited -- Session 9. Invited Talk: K. Rustan M. Leino  
-- Designing Verification Conditions for Software -- Session 10. Model  
Checking and Verification -- Encodings of Bounded LTL Model  
Checking in Effectively Propositional Logic -- Combination Methods for  
Satisfiability and Model-Checking of Infinite-State Systems -- The KeY  
system 1.0 (Deduction Component) -- KeY-C: A Tool for Verification of  
C Programs -- The Bedwyr System for Model Checking over Syntactic  
Expressions -- System for Automated Deduction (SAD): A Tool for Proof  
Verification -- Session 11. Invited Talk: Peter Baumgartner -- Logical  
Engineering with Instance-Based Methods -- Session 12. Termination  
-- Predictive Labeling with Dependency Pairs Using SAT -- Dependency  
Pairs for Rewriting with Non-free Constructors -- Proving Termination  
by Bounded Increase -- Certified Size-Change Termination -- Session  
13. Tableaux and First-Order Systems -- Encoding First Order Proofs in  
SAT -- Hyper Tableaux with Equality -- System Description: E-  
KRHyper -- System Description: Spass Version 3.0.

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#### Sommario/riassunto

A veritable one-stop-shop for anyone looking to get up to speed on what is going down in the field of automated deduction right now. This book contains the refereed proceedings of the 21st International Conference on Automated Deduction, CADE-21, held in Bremen, Germany, in July 2007. The 28 revised full papers and 6 system descriptions presented were selected from 64 submissions. All current aspects of automated deduction are addressed, ranging from theoretical and methodological issues to presentation and evaluation of theorem provers and logical reasoning systems.

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