

Table of Contents

Invited Talk:

High-Level Verification Using Theorem Proving and Formalized Mathematics (Extended Abstract)	1
<i>John Harrison</i>	

Session 1:

Machine Instruction Syntax and Semantics in Higher Order Logic	7
<i>Neophytos G. Michael and Andrew W. Appel</i>	
Proof Generation in the Touchstone Theorem Prover	25
<i>George C. Necula and Peter Lee</i>	
Wellfounded Schematic Definitions	45
<i>Konrad Slind</i>	

Session 2:

Abstract Congruence Closure and Specializations	64
<i>Leo Bachmair and Ashish Tiwari</i>	
A Framework for Cooperating Decision Procedures	79
<i>Clark W. Barrett, David L. Dill, and Aaron Stump</i>	
Modular Reasoning in Isabelle	99
<i>Florian Kammüller</i>	
An Infrastructure for Intertheory Reasoning	115
<i>William M. Farmer</i>	

Session 3:

Gödel's Algorithm for Class Formation	132
<i>Johan Gijsbertus Frederik Belinfante</i>	
Automated Proof Construction in Type Theory Using Resolution	148
<i>Marc Bezem, Dimitri Hendriks, and Hans de Nivelle</i>	
System Description: TPS: A Theorem Proving System for Type Theory ..	164
<i>Peter B. Andrews, Matthew Bishop, and Chad E. Brown</i>	

The Nuprl Open Logical Environment	170
<i>Stuart F. Allen, Robert L. Constable, Rich Eaton, Christoph Kreitz, and Lori Lorigo</i>	

System Description: ARA - An Automatic Theorem Prover for Relation Algebras	177
<i>Carsten Sinz</i>	

Invited Talk:

Scalable Knowledge Representation and Reasoning Systems	183
<i>Henry Kautz</i>	

Session 4:

Efficient Minimal Model Generation Using Branching Lemmas	184
<i>Ryuzo Hasegawa, Hiroshi Fujita, and Miyuki Koshimura</i>	

FDPLL — A First Order Davis–Putnam–Longeman–Loveland Procedure .	200
<i>Peter Baumgartner</i>	

Rigid <i>E</i> -Unification Revisited	220
<i>Ashish Tiwari, Leo Bachmair, and Harald Ruess</i>	

Invited Talk:

Connecting Bits with Floating-Point Numbers: Model Checking and Theorem Proving in Practice	235
<i>Carl-Johan Seger</i>	

Session 5:

Reducing Model Checking of the Many to the Few	236
<i>E. Allen Emerson and Vineet Kahlon</i>	

Simulation Based Minimization	255
<i>Doran Bustan and Orna Grumberg</i>	

Rewriting for Cryptographic Protocol Verification	271
<i>Thomas Genet and Francis Klay</i>	

System Description: *SAT: A Platform for the Development of Modal Decision Procedures	291
<i>Enrico Giunchiglia and Armando Tacchella</i>	

System Description: DLP	297
<i>Peter Patel-Schneider</i>	

Two Techniques to Improve Finite Model Search	302
<i>Gilles Audemard, Belaid Benhamou, and Laurent Henocque</i>	

Session 6:

Eliminating Dummy Elimination	309
<i>Jürgen Giesl and Aart Middeldorp</i>	

Extending Decision Procedures with Induction Schemes	324
<i>Deepak Kapur and Mahadavan Subramaniam</i>	

Complete Monotonic Semantic Path Orderings	346
<i>Cristina Borralleras, Maria Ferreira, and Albert Rubio</i>	

Session 7:

Stratified Resolution	365
<i>Anatoli Degtyarev and Andrei Voronkov</i>	

Support Ordered Resolution	385
<i>Bruce Spencer and Joseph D. Horton</i>	

System Description: IVY	401
<i>William McCune and Olga Shumsky</i>	

System Description: SystemOnTPTP	406
<i>Geoff Sutcliffe</i>	

System Description: PTP+GLiDes: Semantically Guided PTP	411
<i>Marianne Brown and Geoff Sutcliffe</i>	

Session 8:

A Formalization of a Concurrent Object Calculus up to α -Conversion	417
<i>Guillaume Gillard</i>	

A Resolution Decision Procedure for Fluted Logic	433
<i>Renate A. Schmidt and Ulrich Hustadt</i>	

ZRES: The Old Davis–Putman Procedure Meets ZBDD	449
<i>Philippe Chatalic and Laurent Simon</i>	

System Description: MBASE, an Open Mathematical Knowledge Base	455
<i>Andreas Franke and Michael Kohlhase</i>	

System Description: TRAMP: Transformation of Machine-Found Proofs into ND-Proofs at the Assertion Level	460
<i>Andreas Meier</i>	

Session 9:

On Unification for Bounded Distributive Lattices	465
<i>Viorica Sofronie-Stokkermans</i>	

Reasoning with Individuals for the Description Logic <i>SHIQ</i>	482
<i>Ian Horrocks, Ulrike Sattler, and Stephan Tobies</i>	

System Description: Embedding Verification into Microsoft Excel	497
<i>Graham Collins and Louise A. Dennis</i>	

System Description: Interactive Proof Critics in XBarnacle	502
<i>Mike Jackson and Helen Lowe</i>	

Tutorials:

Tutorial: Meta-logical Frameworks	507
<i>Carsten Schürmann</i>	

Tutorial: Automated Deduction and Natural Language Understanding ...	509
<i>Stephen Pulman</i>	

Tutorial: Using TPS for Higher-Order Theorem Proving and ETPS for Teaching Logic	511
<i>Peter B. Andrews and Chad E. Brown</i>	

Workshops:

Workshop: Model Computation - Principles, Algorithms, Applications	513
<i>Peter Baumgartner, Chris Fermueller, Nicolas Peltier, and Hantao Zhang</i>	

Workshop: Automation of Proofs by Mathematical Induction	514
<i>Carsten Schürmann</i>	

Workshop: Type-Theoretic Languages: Proof-Search and Semantics	515
<i>Didier Galmiche</i>	

Workshop: Automated Deduction in Education	516
<i>Erica Melis</i>	
Workshop: The Role of Automated Deduction in Mathematics	517
<i>Simon Colton, Volker Sorge, and Ursula Martin</i>	
Author Index	519

Automated Deduction - CADE-17

17th International Conference on Automated Deduction

Pittsburgh, PA, USA, June 17-20, 2000 Proceedings

McAllester, D. (Ed.)

2000, XIV, 526 p., Softcover

ISBN: 978-3-540-67664-5