

Table of Contents

Invited Talks

Formal Methods at NASA Langley	1
<i>Ricky Butler</i>	
Higher Order Unification 30 Years Later	3
<i>Gérard Huet</i>	

Regular Papers

Combining Higher Order Abstract Syntax with Tactical Theorem Proving and (Co)Induction	13
<i>Simon J. Ambler, Roy L. Crole, Alberto Momigiano</i>	
Efficient Reasoning about Executable Specifications in Coq	31
<i>Gilles Barthe, Pierre Courtieu</i>	
Verified Bytecode Model Checkers	47
<i>David Basin, Stefan Friedrich, Marek Gawkowski</i>	
The 5 Colour Theorem in Isabelle/Isar	67
<i>Gertrud Bauer, Tobias Nipkow</i>	
Type-Theoretic Functional Semantics	83
<i>Yves Bertot, Venanzio Capretta, Kuntal Das Barman</i>	
A Proposal for a Formal OCL Semantics in Isabelle/HOL	99
<i>Achim D. Brucker, Burkhart Wolff</i>	
Explicit Universes for the Calculus of Constructions	115
<i>Judicaël Courant</i>	
Formalised Cut Admissibility for Display Logic	131
<i>Jeremy E. Dawson, Rajeev Goré</i>	
Formalizing the Trading Theorem for the Classification of Surfaces	148
<i>Christophe Dehlinger, Jean-François Dufourd</i>	
Free-Style Theorem Proving	164
<i>David Delahaye</i>	
A Comparison of Two Proof Critics: Power vs. Robustness	182
<i>Louise A. Dennis, Alan Bundy</i>	

Two-Level Meta-reasoning in Coq	198
<i>Amy P. Felty</i>	
PuzzleTool: An Example of Programming Computation and Deduction . .	214
<i>Michael J.C. Gordon</i>	
A Formal Approach to Probabilistic Termination	230
<i>Joe Hurd</i>	
Using Theorem Proving for Numerical Analysis	246
<i>Micaela Mayero</i>	
Quotient Types: A Modular Approach	263
<i>Aleksey Nogin</i>	
Sequent Schema for Derived Rules	281
<i>Aleksey Nogin, Jason Hickey</i>	
Algebraic Structures and Dependent Records	298
<i>Virgile Prevosto, Damien Doligez, Thérèse Hardin</i>	
Proving the Equivalence of Microstep and Macrostep Semantics	314
<i>Klaus Schneider</i>	
Weakest Precondition for General Recursive Programs Formalized in Coq .	332
<i>Xingyuan Zhang, Malcolm Munro, Mark Harman, Lin Hu</i>	
Author Index	349



<http://www.springer.com/978-3-540-44039-0>

Theorem Proving in Higher Order Logics
15th International Conference, TPHOLs 2002, Hampton,
VA, USA, August 20-23, 2002. Proceedings
Carreno, V.A.; Munoz, C.A.; Tahar, S. (Eds.)
2002, X, 347 p., Softcover
ISBN: 978-3-540-44039-0