1. Record Nr. UNISA996465748303316

Titolo	Interactive Theorem Proving [[electronic resource]] : Third International Conference, ITP 2012, Princeton, NJ, USA, August 13-15, 2012. Proceedings / / edited by Lennart Beringer, Amy Felty
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2012
ISBN	3-642-32347-2
Edizione	[1st ed. 2012.]
Descrizione fisica	1 online resource (XI, 419 p. 37 illus.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 7406
Disciplina	005.131
Soggetti	Machine theory Artificial intelligence Computer science Software engineering Data protection Formal Languages and Automata Theory Artificial Intelligence Computer Science Logic and Foundations of Programming Software Engineering Data and Information Security Theory of Computation
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	MetiTarski: Past and Future -- Computer-Aided Cryptographic Proofs -- A Differential Operator Approach to Equational Differential Invariants -- Abella: A Tutorial -- A Cantor Trio: Denumerability, the Reals, and the Real Algebraic Numbers -- Construction of Real Algebraic Numbers in Coq -- A Refinement-Based Approach to Computational Algebra in Coq -- Bridging the Gap: Automatic Verified Abstraction of C -- Abstract Interpretation of Annotated Commands -- Verifying and Generating WP Transformers for Procedures on Complex Data -- Bag Equivalence via a Proof-Relevant Membership Relation -- Applying Data Refinement for Monadic Programs to Hopcroft's Algorithm -- Synthesis of Distributed Mobile Programs Using Monadic

Types in Coq -- Towards Provably Robust Watermarking -- Priority Inheritance Protocol Proved Correct -- Formalization of Shannon's Theorems in SSReflect-Coq -- Stop When You Are Almost-Full: Adventures in Constructive Termination -- Certification of Nontermination Proofs -- A Compact Proof of Decidability for Regular Expression Equivalence -- Using Locales to Define a Rely-Guarantee Temporal Logic -- Charge! - A Framework for Higher-Order Separation Logic in Coq -- Mechanised Separation Algebra -- Directions in ISA Specification -- More SPASS with Isabelle: Superposition with Hard Sorts and Configurable Simplification -- A Language of Patterns for Subterm Selection -- Numerical Analysis of Ordinary Differential Equations in Isabelle/HOL -- Proof Pearl: A Probabilistic Proof for the Girth-Chromatic Number Theorem -- Standalone Tactics Using OpenTheory -- Functional Programs: Conversions between Deep and Shallow Embeddings.

Sommario/riassunto

This book constitutes the thoroughly refereed proceedings of the Third International Conference on Interactive Theorem Proving, ITP 2012, held in Princeton, NJ, USA, in August 2012. The 21 revised full papers presented together with 4 rough diamond papers, 3 invited talks, and one invited tutorial were carefully reviewed and selected from 40 submissions. Among the topics covered are formalization of mathematics; program abstraction and logics; data structures and synthesis; security; (non-)termination and automata; program verification; theorem prover development; reasoning about program execution; and prover infrastructure and modeling styles.