1. Record Nr. UNISA996466439203316

Titolo	Automated Deduction – CADE 27 [[electronic resource]] : 27th International Conference on Automated Deduction, Natal, Brazil, August 27–30, 2019, Proceedings / / edited by Pascal Fontaine
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-29436-6
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (XXIII, 582 p. 1901 illus., 56 illus. in color.)
Collana	Lecture Notes in Artificial Intelligence ; ; 11716
Disciplina	511.36028563
Soggetti	Artificial intelligence Software engineering Computer system failures Mathematical logic Computer logic Artificial Intelligence Software Engineering System Performance and Evaluation Mathematical Logic and Formal Languages Logics and Meanings of Programs
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Automated Reasoning for Security Protocols -- Computer Deduction and (Formal) Proofs in Mathematics -- From Counter-Model-based Quantifier Instantiation to Quantifier Elimination in SMT -- The CADE-27 ATP System Competition - CASC-27 -- Unification modulo Lists with Reverse - Relation with Certain Word Equations -- On the Width of Regular Classes of Finite Structures -- Extending SMT solvers to Higher-Order Logic -- Superposition with Lambdas -- Restricted Combinatory Unification -- dLi: Definite Descriptions in Differential Dynamic Logic -- SPASS-SATT { A CDCL(LA) Solver -- GRUNGE: A Grand Unified ATP Challenge -- Model Completeness, Covers and Superposition -- A Tableaux Calculus for Default Intuitionistic Logic -- NIL: Learning Nonlinear Interpolants -- ENIGMA-NG: Efficient Neural

and Gradient-Boosted Inference Guidance for E -- Towards Physical Hybrid Systems -- SCL -- Clause Learning from Simple Models -- Names are not just Sound and Smoke: Word Embeddings for Axiom Selection -- Computing Expected Runtimes for Constant Probability Programs -- Automatic Generation of Logical Models with AGES -- Automata Terms in a Lazy WSkS Decision Procedure -- Confluence by Critical Pair Analysis Revisited -- Composing Proof Terms -- Combining ProVerif and Automated Theorem Provers for Security Protocol Verification -- Towards Bit-Width-Independent Proofs in SMT Solvers -- On Invariant Synthesis for Parametric Systems -- The Aspect Calculus -- Uniform Substitution At One Fell Swoop -- A Formally Verified Abstract Account of Gödel's Incompleteness Theorems -- Old or Heavy? Decaying Gracefully with Age/Weight Shapes -- Induction in Saturation-Based Proof Search -- Faster, Higher, Stronger: E 2.3 -- Certified Equational Reasoning via Ordered Completion -- JGXYZ - An ATP System for Gap and Glut Logics -- GKC: a Reasoning System for Large Knowledge Bases -- Optimization Modulo the Theory of Floating-Point Numbers -- FAME(Q): An Automated Tool for Forgetting in Description Logics with Qualified Number Restrictions. .

Sommario/riassunto

This book constitutes the proceeding of the 27th International Conference on Automated Deduction, CADE 27, held in Natal, Brazil, in August 2019. The 27 full papers and 7 system descriptions presented were carefully reviewed and selected from 65 submissions. CADE is the major forum for the presentation of research in all aspects of automated deduction, including foundations, applications, implementations, and practical experience. .

2. Record Nr. UNINA9910861995303321

Autore	Eberly Dave
Titolo	Robust and Error-Free Geometric Computing
Pubbl/distr/stampa	[Place of publication not identified] : , : CRC Press (Unlimited) : , : CRC Press, , 2020
ISBN	1-000-05664-3 0-429-33050-2 1-000-05662-7
Edizione	[1st ed.]
Descrizione fisica	1 online resource (xxiv, 363 pages)
Disciplina	516.08 516.00285
Soggetti	Geometric programming
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover -- Half Title -- Title Page -- Copyright Page -- Contents -- Preface -- Trademarks -- List of Figures -- List of Tables -- Listings -- 1 Introduction -- 1.1 Eigendecomposition for 3 × 3 Symmetric Matrices -- 1.1.1 Computing the Eigenvalues -- 1.1.2 Computing the Eigenvectors -- 1.1.3 A Nonrobust Floating-Point Implementation -- 1.1.4 A Robust Floating-Point Implementation -- 1.1.4.1 Computing the Eigenvalues -- 1.1.4.2 Computing the Eigenvectors -- 1.1.5 An Error-Free Implementation -- 1.2 Distance between Line Segments -- 1.2.1 Nonparallel Segments -- 1.2.2 Parallel Segments -- 1.2.3 A Nonrobust Floating-Point Implementation -- 1.2.4 A Robust Floating-Point Implementation -- 1.2.4.1 Conjugate Gradient Method -- 1.2.4.2 Constrained Conjugate Gradient Method -- 1.2.5 An Error-Free Implementation -- 2 Floating-Point Arithmetic -- 2.1 Binary Encodings -- 2.2 Binary Encoding of 32-bit Floating-Point Numbers -- 2.3 Binary Encoding of 64-bit Floating-Point Numbers -- 2.4 Rounding of Floating-Point Numbers -- 2.4.1 Round to Nearest with Ties to Even -- 2.4.2 Round to Nearest with Ties to Away -- 2.4.3 Round toward Zero -- 2.4.4 Round toward Positive -- 2.4.5 Round toward Negative -- 2.4.6 Rounding Support in C++ -- 3 Arbitrary-Precision Arithmetic -- 3.1 Binary Scientific Notation -- 3.2 Binary Scientific Numbers -- 3.2.1 Addition -- 3.2.2 Subtraction -- 3.2.3 Multiplication -- 3.3 Binary

Sommario/riassunto

"This is a how-to book for solving problems in actual practice. The contents and accompanying source code are based on the feature requests and feedback received from industry and academics who want

both the descriptions and source code for hard-to-find implementations of geometric algorithms. The code is robust, as required by the applications they work on"--