Record Nr. UNINA9910483188903321 Automated Technology for Verification and Analysis: 14th International **Titolo** Symposium, ATVA 2016, Chiba, Japan, October 17-20, 2016. Proceedings / / edited by Cyrille Artho, Axel Legay, Doron Peled Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2016 **ISBN** 3-319-46520-1 Edizione [1st ed. 2016.] 1 online resource (XI, 530 p. 102 illus.) Descrizione fisica Programming and Software Engineering;; 9938 Collana 004.015113 Disciplina Soggetti Software engineering Programming languages (Electronic computers) Computer logic Mathematical logic Artificial intelligence Computer programming Software Engineering Programming Languages, Compilers, Interpreters Logics and Meanings of Programs Mathematical Logic and Formal Languages Artificial Intelligence **Programming Techniques** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Keynote -- Synthesizing and Completely Testing Hardware based on Templates through Small Numbers of Test Patterns -- Markov Models, Chains, and Decision Processes -- Approximate Policy Iteration for Markov Decision Processes via Quantitative Adaptive Aggregations. -Optimizing the Expected Mean Payoff in Energy Markov Decision Processes -- Parameter Synthesis for Markov Models: Faster Than Ever -- Bounded Model Checking for Probabilistic Programs -- Counter

Systems, Automata -- How Hard Is It to Verify Flat Affine Counter

Systems with the Finite Monoid Property -- Solving Language Equations

using Flanked Automata -- Spot 2.0 - a Framework for LTL and -Automata Manipulation -- MoChiBA: Probabilistic LTL Model Checking Using Limit- Deterministic Büchi Automata -- Parallelism, Concurrency -- Synchronous Products of Rewrite Systems -- Specifying and Verifying Secrecy in Workflows with Arbitrarily Many Agents -- Lazy Sequentialization for the Safety Verification of Unbounded Concurrent Programs -- Parallel SMT-Based Parameter Synthesis with Application to Piecewise Multi-Affine Systems -- Complexity, Decidability -- On Finite Domains in First-Order Linear Temporal Logic -- Decidability Results for Multi-Objective Stochastic Games -- A Decision Procedure for Separation Logic in SMT -- Solving Mean-Payoff Games on the GPU -- Synthesis, Refinement -- Synthesizing Skeletons for Reactive Systems -- Observational Refinement and Merge for Disjunctive MTSs -- Equivalence-Based Abstraction Refinement for muHORS Model Checking -- Optimization, Heuristics, Partial-Order Reductions --Greener Bits: Formal Analysis of Demand Response -- Heuristics for Checking Liveness Properties with Partial Order Reductions. - Partial-Order Reduction for GPU Model Checking -- Efficient Verification of Program Fragments: Eager POR -- Solving Procedures, Model Checking -- Skolem Functions for DQBF -- STL Model Checking of Continuous and Hybrid Systems -- Clause Sharing and Partitioning for Cloud-Based SMT Solving -- Symbolic Model Checking for Factored Probabilistic Models -- Program Analysis -- A Sketching-Based Approach for Debugging Using Test Cases -- Polynomial Invariants by Linear Algebra -- Certified Symbolic Execution -- Tighter Loop Bound Analysis. .

Sommario/riassunto

This book constitutes the proceedings of the 14th International Symposium on Automated Technology for Verification and Analysis, ATVA 2016, held in Chiba, Japan, in October 2016. The 31 papers presented in this volume were carefully reviewed and selected from 82 submissions. They were organized in topical sections named: keynote; Markov models, chains, and decision processes; counter systems, automata; parallelism, concurrency; complexity, decidability; synthesis, refinement; optimization, heuristics, partial-order reductions; solving procedures, model checking; and program analysis.