1. Record Nr. UNISA996204726603316

Titolo	Computer Aided Verification [[electronic resource]] : 27th International Conference, CAV 2015, San Francisco, CA, USA, July 18-24, 2015, Proceedings, Part I / / edited by Daniel Kroening, Corina S. Psreanu
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-21690-2
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (XXIII, 677 p. 141 illus.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 9206
Disciplina	004
Soggetti	Computer science Software engineering Machine theory Computer engineering Computer networks Computer Science Logic and Foundations of Programming Software Engineering Formal Languages and Automata Theory Computer Engineering and Networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	A Trusted Mechanised Specification of JavaScript: One Year On -- Model Checking and Refinements -- On Automation of CTL* Verification for Infinite-State Systems -- Algorithms for Model Checking HyperLTL and HyperCTL -- Fairness Modulo Theory: A New Approach to LTL Software Model Checking -- Model Checking Parameterized Asynchronous Shared-Memory Systems -- SMT and POR Beat Counter Abstraction: Parameterized Model Checking of Threshold-Based Distributed Algorithms -- Skipping Refinement -- Quantitative Reasoning -- Percentile Queries in Multi-dimensional Markov Decision Processes -- Faster Algorithms for Quantitative Verification in Constant Treewidth Graphs -- Counterexample Explanation by Learning Small Strategies in Markov Decision Processes -- Symbolic Polytopes for Quantitative Interpolation and Verification -- Adaptive Aggregation of

Markov Chains: Quantitative Analysis of Chemical Reaction Networks -- PROPhESY: A PRObabilistic ParamEter SYnthesis Tool -- Software Analysis -- Effective Search-Space Pruning for Solvers of String Equations, Regular Expressions and Length Constraints -- Automata-Based Model Counting for String Constraints -- OpenJDK's Java.utils. Collection.sort() Is Broken: The Good, the Bad and the Worst Case -- Tree Buffers -- Learning Commutativity -- Specifications -- Angelic Verification: Precise Verification Modulo Unknowns -- The SeaHorn Verification Framework -- Automatic Rootcausing for Program Equivalence Failures in Binaries -- Fine-Grained Caching of Verification Results -- Predicting a Correct Program in Programming by Example -- Abstract Interpretation with Higher-Dimensional Ellipsoids and Conic Extrapolation -- Lightning Talks -- ADAM: Causality-Based Synthesis of Distributed Systems -- Alchemist: Learning Guarded Affine Functions -- OptiMathSAT: A Tool for Optimization Modulo Theories -- Systematic Asynchrony Bug Exploration for Android Apps -- Norn: An SMT Solver for String Constraints -- PVSio-web 2.0: Joining PVS to HCI -- The Hanoi Omega-Automata Format -- The Open-Source LearnLib: A Framework for Active Automata Learning -- BBS: A Phase-Bounded Model Checker for Asynchronous Programs -- Time-Aware Abstractions in HybridSal -- A Type-Directed Approach to Program Repair -- Formal Design and Safety Analysis of AIR6110 Wheel Brake System -- Meeting a Powertrain Verification Challenge -- Synthesising Executable Gene Regulatory Networks from Single-Cell Gene Expression Data -- Empirical Software Metrics for Benchmarking of Verification Tools -- Interpolation, IC3/PDR, and Invariants Property-Directed Inference of Universal Invariants or Proving Their Absence -- Efficient Anytime Techniques for Model-Based Safety Analysis -- Boosting k-induction with Continuously-Refined Invariants -- Fast Interpolating BMC -- Counterexample-Guided Polynomial Loop Invariant Generation by Lagrange Interpolation.

Sommario/riassunto

The two-volume set LNCS 9206 and LNCS 9207 constitutes the refereed proceedings of the 27th International Conference on Computer Aided Verification, CAV 2015, held in San Francisco, CA, USA, in July 2015. The total of 58 full and 11 short papers presented in the proceedings was carefully reviewed and selected from 252 submissions. The papers were organized in topical sections named: model checking and refinements; quantitative reasoning; software analysis; lightning talks; interpolation, IC3/PDR, and Invariants; SMT techniques and applications; HW verification; synthesis; termination; and concurrency.