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Collana	Programming and Software Engineering, , 2945-9168 ; ; 12913
Disciplina	005.1
Soggetti	Computer science Computer systems Computers, Special purpose Software engineering Operating systems (Computers) Computer networks Computer Science Logic and Foundations of Programming Computer System Implementation Special Purpose and Application-Based Systems Software Engineering Operating Systems Computer Communication Networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Fast and Efficient Bit-Level Precision Tuning -- Backward Symbolic Execution with Loop Folding -- Accelerating Program Analyses in Datalog by Merging Library Facts -- Abstract Interpretation -- Verified Functional Programming of an Abstract Interpreter -- Disjunctive Interval Analysis -- Static analysis of ReLU neural networks with tropical polyhedral -- Exploiting Verified Neural Networks via Floating Point Numerical Error.-Verifying Low-dimensional Input Neural Networks via Input Quantization -- Data Abstraction: A General Framework to Handle Program -- Verification of Data Structures --

Toward Neural-Network-Guided Program Synthesis and Verification -- Selective Context-Sensitivity for k-CFA with CFL-Reachability -- Selectively-Amortized Resource Bounding -- Reduced Products of Abstract Domains for Fairness Certification of Neural Networks -- A Multi-Language Static Analysis of Python Programs with Native C Extensions -- Automated Verification of the Parallel Bellman–Ford Algorithm -- Improving Thread-Modular Abstract Interpretation -- Thread-modular Analysis of Release-Acquire Concurrency -- Symbolic Automatic Relations and Their Applications to SMT and CHC Solving -- Compositional Verification of Smart Contracts Through Communication Abstraction -- Automatic Synthesis of Data-Flow Analyzer.

Sommario/riassunto

This book constitutes the refereed proceedings of the 28th International Symposium on Static Analysis, SAS 2021, held in Chicago, IL, USA, in October 2021. The 18 regular and 4 short papers, carefully reviewed and selected from 48 submissions, are presented in this book together with 1-page summaries of the three invited talks. The papers cover topics such as static program analysis, abstract domain, abstract interpretation, automated deduction, debugging techniques, deductive methods, model checking, data science, program optimizations and transformations, program synthesis, program verification, and security analysis.
