1. Record Nr. UNINA9910913777303321

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Titolo	Formal Methods and Software Engineering : 25th International Conference on Formal Engineering Methods, ICFEM 2024, Hiroshima, Japan, December 2–6, 2024, Proceedings / / edited by Kazuhiro Ogata, Dominique Mery, Meng Sun, Shaoying Liu
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024
ISBN	9789819606177 9819606179
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (421 pages)
Collana	Lecture Notes in Computer Science, , 1611-3349 ; ; 15394
Altri autori (Persone)	MeryDominique SunMeng LiuShaoying
Disciplina	004.0151
Soggetti	Computer science Computer programming Software engineering Compilers (Computer programs) Application software Natural language processing (Computer science) Theory of Computation Programming Techniques Software Engineering Compilers and Interpreters Computer and Information Systems Applications Natural Language Processing (NLP)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	-- NL2CTL: Automatic Generation of Formal Requirements Specifications via Large Language Models. -- Repairing Event-B Models through Quantifier Elimination. -- Tuning Trains Speed in Railway Scheduling. -- The Bright Side of Timed Opacity. -- Clock-Dependent Probabilistic Timed Automata with One Clock and No Memory. -- Efficient State Estimation of Discrete-Timed Automata. -- LRNN: A

Formal Logic Rules-Based Neural Network for Software Defect Prediction. -- Quantitative Symbolic Robustness Verification for Quantized Neural Networks. -- Graph Convolutional Network Robustness Verification Algorithm Based on Dual Approximation. -- Formal Kinematic Analysis of Epicyclic Bevel Gear Trains. -- Deciding the synthesis problem for hybrid games through bisimulation. -- Formal Analysis of FreeRTOS Scheduler on ARM Cortex-M4 Cores. -- Differential Property Monitoring for Backdoor Detection. -- MemSpate: Memory Usage Protocol Guided Fuzzing. -- The Continuum Hypothesis Implies the Existence of Non-Principal Arithmetical Ultrafilters – A Coq Formal Verification. -- Observability of Boolean Control Networks: New Definition and Verification Algorithm. -- Formalizing Potential Flows using the HOL Light Theorem Prover. -- On-the-Fly Proof-Based Verification of Reachability in Autonomous Vehicle Controllers Relying on Goal-Aware RSS. -- Efficient SMT-Based Model Checking for HyperTWTL. -- A Tableau-based Approach to Model Checking Linear Temporal Properties. -- Simple LTL Model Checking on Finite and Infinite Traces over Concrete Domains. -- Model Checking Concurrency in Smart Contracts with a Case Study of Safe Remote Purchase.

Sommario/riassunto

This volume LNCS 15394 constitutes the refereed proceedings of 25th International Conference on Formal Engineering Methods, ICFEM 2024, in Hiroshima, Japan, in December 2024. The 22 full papers presented were carefully reviewed and selected from 50 submissions. The conference focuses on wide range of research areas, covering both theoretical foundations and practical applications of formal engineering methods.