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Disciplina	005.1
Soggetti	Software engineering Operating systems (Computers) Computer science Microprogramming Computer systems Natural language processing (Computer science) Software Engineering Operating Systems Theory of Computation Control Structures and Microprogramming Computer System Implementation Natural Language Processing (NLP)
Lingua di pubblicazione	Inglese
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Nota di contenuto	From Mechanized Semantics to Verified Compilation: The Clight Semantics of CompCert -- Foundations for Query-based Runtime Monitoring of Temporal Properties over Runtime Models -- Probabilistic Runtime Enforcement of Executable BPMN Processes -- Integrating Look-ahead Design-time and Run-time Control-synthesis for Graph Transformation Systems -- Formal Specification of Trusted Execution Environment APIs -- Monitoring the Future of Smart Contracts -- Comprehending Object State via Dynamic Class Invariant

Learning -- Detection for Large-Scale Online Service Systems Using Multi-Channel Data -- Refinement Verification of OS Services based on a Verified Preemptive Microkernel -- Fuzzy quantitative attack tree analysis -- Towards Reliable SQL Synthesis: Fuzzing-Based Evaluation and Disambiguation -- Invariant-based Program Repair -- Can ChatGPT support software verification -- Combining Deductive Verification with Shape Analysis -- First Steps towards Deductive Verification of LLVM IR -- FDSE: Enhance Symbolic Execution by Fuzzing-based Pre-Analysis (Competition Contribution) -- Fizzer: New Gray-Box Fuzzer (Competition Contribution) -- KLEEF: Symbolic Execution Engine (Competition Contribution) -- TracerX: Pruning Dynamic Symbolic Execution with Deletion and Weakest Precondition Interpolation (Competition Contribution) -- Ultimate TestGen: Test Case Generation with Automata-based Software Model Checking (Competition Contribution).

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## Sommario/riassunto

This open access book constitutes the proceedings of the 27th International Conference on Fundamental Approaches to Software Engineering, FASE 2024, held in conjunction with ETAPS 2024 which took place in Luxembourg in April 2024. The 14 full papers included in this book were carefully reviewed and selected from 41 submission. The proceedings also include 5 short papers from the Test-Comp 2024 event that was hosted by FASE. They deal with the broad field of software engineering, focusing on requirements, design, architecture, modeling, applications of AI to software engineering and software engineering for AI-based systems, quality, model-driven engineering, processes, and software evolution. .

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