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Soggetti	Software engineering Computer science Microprogramming Computer systems Programming languages (Electronic computers) Natural language processing (Computer science) Software Engineering Theory of Computation Control Structures and Microprogramming Computer System Implementation Programming Language Natural Language Processing (NLP) Enginyeria de programari Congressos Llibres electrònics
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Nota di contenuto	FASE Contributions -- Information-flow Interfaces -- A Survey-Based Feature Model for Software Traceability -- Construction of Veri er

Combinations Based on Off-the-Shelf Verifiers -- On the Detection of Doped Software by Falsification -- Estimating Worst-case Resource Usage by Resource-usage-aware Fuzzing -- Quantitative Program Sketching using Lifted Static Analysis -- SixthSense: Debugging Convergence Problems in Probabilistic Programs via Program Representation Learning -- Finding Semantic Bugs Fast -- SMC4PEP: Stochastic Model Checking of Product Engineering Processes -- Symbolic Predictive Cache Analysis for Out-of-Order Execution -- PEQtest: Testing Functional Equivalence -- An Institutional Approach to Communicating UML State Machines -- Semantic Code Search in Software Repositories using Neural Machine Translation -- AequoVox: Automated Fairness Testing of Speech Recognition Systems -- SMT-Based Planning Synthesis for Distributed System Reconfigurations -- Semantic Clone Detection via Probabilistic Software Modeling -- QMaxUSE: A Query-based Verification Tool for UML Class Diagrams with OCL Invariants -- Test-Comp Contributions -- Advances in Automatic Software Testing: Test-Comp 2022 -- FuSeBMC v4: Smart Seed Generation for Hybrid Fuzzing (Competition Contribution) -- VeriFuzz: Good Seeds for Fuzzing (Competition Contribution).

Sommario/riassunto

This open access book constitutes the proceedings of the 25th International Conference on Fundamental Approaches to Software Engineering, FASE 2022, which was held during April 4-5, 2022, in Munich, Germany, as part of the European Joint Conferences on Theory and Practice of Software, ETAPS 2022. The 17 regular papers presented in this volume were carefully reviewed and selected from 64 submissions. The proceedings also contain 3 contributions from the Test-Comp Competition. The papers deal with the foundations on which software engineering is built, including topics like software engineering as an engineering discipline, requirements engineering, software architectures, software quality, model-driven development, software processes, software evolution, AI-based software engineering, and the specification, design, and implementation of particular classes of systems, such as (self-)adaptive, collaborative, AI, embedded, distributed, mobile, pervasive, cyber-physical, or service-oriented applications.
