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Nota di contenuto	-- Protocol Conformance of Collaborative SPARQL using Multiparty Session Types. -- Composition Machines: Programming Self-Organising Software Models for the Emergence of Sequential Program Spaces. -- Slicing Assisted Program Verification: An Empirical Study. -- An approach to improving reliability of parallel graph computation. -- Safe and Infinite Resource Scheduling Using Energy Timed Automata. -- Intrathread Method Orders Based Adaptive Testing of Concurrent Objects. -- An Abstract Interpretation-Based Data Leakage Static Analysis. -- On The Decidability Of Disassembling Binaries. -- Finding Deep-hidden Bugs in Android Apps via Functional Semantics Guided Exploration. -- Detecting Vulnerabilities via Explicitly Leveraging Vulnerability Features on Program Slices. -- Fuzzing for Stateful Protocol Implementations: Are We There Yet?. -- CtxFuzz: Discovering Heap-based Memory Vulnerabilities Through Context Heap Operation Sequence Guided Fuzzing. -- An Adaptive Real-Time Garbage Collection Method Based on File Write Prediction. -- Tree-Based Synthesis of Web Test Sequences From Manual Actions. -- Gradual Typing Performance, Micro Configurations and Macro Perspectives. -- ISS-Scenario: Scenario-based Testing in CARLA. -- Verified Validation for Affine Scheduling in Polyhedral Compilation. -- A Formally Verified Scheme for Security Protocols with the Operational

Semantics of Strand Space. -- Empirically Scalable Invariant Generation Leveraging Divide-and Conquer with Pruning. -- DEEPCDCL: A CDCL-based Neural Network Verification Framework. -- Energy-Efficient Motion Planning for Autonomous Vehicles Using Uppaal Stratego. -- CFStra: Enhancing Configurable Program Analysis Through LLM-driven Strategy Selection Based on Code Features. -- Improved Incremental Verification for Neural Networks. -- Automatic construction of HD maps for simulation-based testing of autonomous driving systems. -- Managing traceability for software life cycle processes. -- A Natural Formalized Proof Language. -- Strong Forgetting in Hennessy-Milner Logic.

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Sommario/riassunto

This book constitutes the refereed proceedings of the 18th International Symposium on Theoretical Aspects of Software Engineering, TASE 2024, held in Guiyang, China, during July 29–August 1, 2024. The 24 full papers, 2 short papers, 1 invited abstract and 1 invited papers were carefully selected from 76 submissions. The papers presented new results on innovative advances in software engineering, as well as the latest developments in formal and theoretical software engineering methods and techniques.

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