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Collana	Programming and Software Engineering, , 2945-9168 ; ; 8144
Disciplina	004.0151
Soggetti	Software engineering Computer programming Compilers (Computer programs) Algorithms Machine theory Computer networks Software Engineering Programming Techniques Compilers and Interpreters Formal Languages and Automata Theory Computer Communication Networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Keynote -- Lattices of Information for Security: Deterministic, Demonic, Probabilistic -- Specification -- Algebraic Laws for Process Subtyping -- Boundness Issues in CCSL Specifications -- Mining Dataflow Sensitive Specifications -- Proof -- A Proof Slicing Framework for Program Verification -- Formally Verified System Initialisation -- Verifying an Aircraft Proximity Characterization Method in Coq -- Testing -- Assisting Specification Refinement by Random Testing -- Generation of Checking Sequences Using Identification Sets -- The Circus Testing Theory Revisited in Isabelle/HOL -- Timed Systems -- A CSP Timed Input-Output Relation and a Strategy for Mechanised

Conformance Verification -- Deadline Analysis of AUTOSAR OS Periodic Tasks in the Presence of Interrupts -- Improving Model Checking Stateful Timed CSP with non-Zenoness through Clock-Symmetry Reduction -- Concurrency -- A Modular Approach for Reusing Formalisms in Verification Tools of Concurrent Systems -- A UTP Semantics for Communicating Processes with Shared Variables -- Verification of Static and Dynamic Barrier Synchronization Using-Bounded Permissions -- SysML/MDD -- Formal Models of SysML Blocks -- Towards a Process Algebra Framework for Supporting Behavioural Consistency and Requirements Traceability in SysML -- Translation from Workflow Nets to MSVL -- Verification -- Asymptotic Bounds for Quantitative Verification of Perturbed Probabilistic Systems -- Verification of Functional and Non-functional Requirements of Web Service Composition -- vTRUST: A Formal Modeling and Verification Framework for Virtualization Systems -- Application -- Formal Kinematic Analysis of the Two-Link Planar Manipulator -- Formal Modelling of Resilient Data Storage in Cloud -- Linking Operational Semantics and Algebraic Semantics for Wireless Networks -- Static Analysis -- Automated Specification Discovery via User-Defined Predicates -- Path-Sensitive Data Flow Analysis Simplified -- Reconstructing Paths for Reachable Code -- The Domain of ParametricHypercubes for Static Analysis of Computer Games Software.

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Sommario/riassunto

This book constitutes the refereed proceedings of the 15th International Conference on Formal Engineering Methods, ICFEM 2013, held in Queenstown, New Zealand, in October/November 2013. The 28 revised full papers together with 2 keynote speeches presented were carefully reviewed and selected from 88 submissions. The topics covered are abstraction and refinement, formal specification and modeling, program analysis, software verification, formal methods for software safety, security, reliability and dependability, tool development, integration and experiments involving verified systems, formal methods used in certifying products under international standards, and formal model-based development and code generation.

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