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	Collana	Programming and Software Engineering ; ; 5014
	Disciplina	005.1
	Soggetti	Software engineering
		Computer engineering
		Computer programming
		Computer logic
		Programming languages (Electronic computers)
		Software Engineering/Programming and Operating Systems
		Computer Engineering
		Programming Techniques
		Software Engineering
		Logics and Meanings of Programs
		Programming Languages, Compilers, Interpreters
	Lingua di pubblicazione	Inglese
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	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	Session 1. Invited Talks -- Aspects and Formal Methods -- Getting Formal Verification into Design Flow -- Lessons in the Weird and Unexpected: Some Experiences from Checking Large Real Systems -- Simulation, Orchestration and Logical Clocks -- Session 2. Programming Language Analysis -- CoVaC: Compiler Validation by Program Analysis of the Cross-Product -- Lazy Behavioral Subtyping -- Checking Well-Formedness of Pure-Method Specifications -- Session 3. Verification -- Verifying Dynamic Pointer-Manipulating Threads -- Proofs and Refutations for Probabilistic Refinement -- Assume-Guarantee Verification for Interface Automata -- Session 4. Real-Time and Concurrency -- Automated Verification of Dense-Time MTL

Specifications Via Discrete-Time Approximation -- A Model Checking Language for Concurrent Value-Passing Systems -- Session 5. Grand Challenge Problems -- Verification of Mondex Electronic Purses with KIV: From a Security Protocol to Verified Code -- Incremental Development of a Distributed Real-Time Model of a Cardiac Pacing System Using VDM -- Session 6. FM Practice -- Industrial Use of Formal Methods for a High-Level Security Evaluation -- Secret Ninja Formal Methods -- Specification and Checking of Software Contracts for Conditional Information Flow -- Session 7. Runtime Moitoring and Analysis -- JML Runtime Assertion Checking: Improved Error Reporting and Efficiency Using Strong Validity -- Provably Correct Runtime Monitoring -- Session 8. Communication -- A Schedulerless Semantics of TLM Models Written in SystemC Via Translation into LOTOS -- A Rigorous Approach to Networking: TCP, from Implementation to Protocol to Service -- Session 9. Constraint Analysis -- Constraint Prioritization for Efficient Analysis of Declarative Models -- Finding Minimal Unsatisfiable Cores of Declarative Specifications -- Precise Interval Analysis vs. Parity Games -- Session 10. Design -- Introducing Objects through Refinement -- Masking Faults While Providing Bounded-Time Phased Recovery -- Towards Consistent Specifications of Product Families -- Session 11. Industry Day -- Formal Methods for Trustworthy Skies: Building Confidence in the Security of Aircraft Assets Distribution -- An Industrial Case: Pitfalls and Benefits of Applying Formal Methods to the Development of a Network-Centric RTOS -- Software Engineering with Formal Methods: Experiences with the Development of a Storm Surge Barrier Control System -- Application of a Formal Specification Language in the Development of the "Mobile FeliCa" IC Chip Firmware for Embedding in Mobile Phone -- Safe and Reliable Metro Platform Screen Doors Control/Command Systems.

| Sommario/riassunto | This book presents the refereed proceedings of the 15th International Symposium on Formal Methods, FM 2008, held in Turku, Finland in May 2008. The 23 revised full papers presented together with 4 invited contributions and extended abstracts of 5 invited industrial presentations were carefully reviewed and selected from 106 submissions. The papers are organized in topical sections on programming language analysis, verification, real-time and concurrency, grand chellenge problems, fm practice, runtime monitoring and analysis, communication, constraint analysis, and design. |