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Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 2885
Disciplina	005.13/1
Soggetti	Software engineering Programming languages (Electronic computers) Computer logic Mathematical logic Software Engineering/Programming and Operating Systems Software Engineering Programming Languages, Compilers, Interpreters Logics and Meanings of Programs Mathematical Logic and Formal Languages
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Invited Talks -- Programs as Paths: An Approach to Timing Constraint Analysis -- Model Based Code Verification -- Adding Formalism to Methods or Where and When Will Industry Use Formal Reasoning? -- Testing and Validation -- Using Formal Methods to Serialize Synchronization Events -- An AMBA-ARM7 Formal Verification Platform -- Formalization, Testing and Execution of a Use Case Diagram -- Service-Based Systems Engineering: Consistent Combination of Services -- State Diagrams -- Using State Diagrams to Describe Concurrent Behaviour -- The Equivalence of Statecharts -- Generic Interacting State Machines and Their Instantiation with Dynamic Features -- PVS/HOL -- Using PVS to Prove Properties of Systems Modelled in a

Synchronous Dataflow Language -- Formalising an Integrated Language in PVS -- Refinement -- Modeling SystemC Fixed-Point Arithmetic in HOL -- Adding Action Refinement to Stochastic True Concurrency Models -- Incremental Derivation of Abstraction Relations for Data Refinement -- Comparison of Data and Process Refinement -- Compilation by Refinement for a Practical Assembly Language -- Hybrid Systems -- Java Card Code Generation from B Specifications -- Efficient Path Finding with the Sweep-Line Method Using External Storage -- Formal Development of a Distributed Logging Mechanism Supporting Disconnected Updates -- Formal Proof of a Polychronous Protocol for Loosely Time-Triggered Architectures -- Z/Object-Z -- A Z Based Approach to Verifying Security Protocols -- A Refinement Tool for Z -- The Common Semantic Constructs of XML Family -- Petri Nets -- Controller Synthesis for Object Petri Nets -- Towards a Workflow Model of Real-Time Cooperative Systems -- New Developments in Closed-Form Computation for GSPN Aggregation -- Timed Automata -- On Clock Difference Constraints and Termination in Reachability Analysis of Timed Automata -- Analyzing the Redesign of a Distributed Lift System in UPPAAL -- Verification of Timeliness QoS Properties in Multimedia Systems -- System Modeling and Checking -- A Calculus for Set-Based Program Development -- Compositional Verification of a Switch Fabric from Nortel Networks -- Constraint-Based Model Checking of Data-Independent Systems -- A Formal Model for the Block Device Subsystem of the Linux Kernel -- Semantics and Synthesis -- A Mathematical Framework for Safecharts -- A Relational Model for Formal Object-Oriented Requirement Analysis in UML -- From Specification to Hardware Device: A Synthesis Algorithm.

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## Sommario/riassunto

This volume contains the proceedings of the 2003 International Conference on Formal Engineering Methods (ICFEM 2003). The conference was the 7th in a series that began in 1997. ICFEM 2003 was held in Singapore during 5–7 November 2003. ICFEM 2003 aimed to bring together researchers and practitioners from industry, academia, and government to advance the state of the art in formal engineering methods and to encourage a wider uptake of formal methods in industry. The Program Committee received 91 submissions from more than 20 countries in various regions. After each paper was reviewed by at least three referees in each relevant field, 34 high-quality papers were accepted based on originality, technical content, presentation and relevance to formal methods and software engineering. We wish to sincerely thank all authors who submitted their work for consideration. We would also like to thank the Program Committee members and other reviewers for their great efforts in the reviewing and selecting process. We are indebted to the three keynote speakers, Prof. Ian Hayes of the University of Queensland, Prof. Mathai Joseph of the Tata Research, Development and Design Centre, and Dr. Colin O'Halloran of QinetiQ, for accepting our invitation to address the conference.

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