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Disciplina	004/.33
Soggetti	Programming languages (Electronic computers) Architecture, Computer Computers Computer logic Microprocessors Special purpose computers Programming Languages, Compilers, Interpreters Computer System Implementation Theory of Computation Logics and Meanings of Programs Processor Architectures Special Purpose and Application-Based Systems
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Nota di contenuto	Challenges in the utilization of formal methods -- On the need for practical formal methods -- A general framework for the composition of timed systems -- Operational and logical semantics for polling real-time systems -- A finite-domain semantics for testing temporal logic specifications -- Duration Calculus of Weakly Monotonic Time -- Reuse in requirements engineering: Discovery and application of a real-time requirement pattern -- A modular visual model for hybrid systems -- Integrating real-time structured design and formal techniques --

Duration Calculus in the specification of safety requirements -- Automated stream-based analysis of fault-tolerance -- Designing a provably correct robt control system using a ‘lean’ formal method -- Static analysis to identify invariants in RSML specifications -- Partition refinement in real-time model checking -- Formal verification of stabilizing systems -- Synchronizing clocked transition systems -- Some decidability results for duration calculus under synchronous interpretation -- Fair synchronous transition systems and their liveness proofs -- Dynamical properties of timed automata -- An algorithm for the approximative analysis of rectangular automata -- On checking parallel real-time systems for linear duration properties -- A practical and complete algorithm for testing real-time systems -- Mechanical verification of clock synchronization algorithms -- Compiling graphical real-time specifications into silicon -- Towards a formal semantics of verilog using duration calculus -- The ICOS synthesis environment -- Kronos: A model-checking tool for real-time systems -- SGLOT: A visual tool for structural LOTOS specifications -- Discrete-time Promela and Spin -- Moby/PLC — Graphical development of PLC-automata -- Predictability in critical systems.

Sommario/riassunto

This book constitutes the refereed proceedings of the 5th International Symposium on Formal Techniques in Real-Time and Fault-Tolerant Systems, FTRTFT'98, held in Lyngby, Denmark, in September 1998. The 22 revised full papers presented were carefully selected and reviewed for inclusion in the book. Also included are four invited contributions and five tool demonstrations. The papers address the current aspects of the hot topic of embedded systems, in particular temporal logic, requirements engineering, analysis techniques, verification, model checking, and applications.