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Soggetti	Programming languages (Electronic computers) Software engineering Architecture, Computer Computer logic Microprocessors Special purpose computers Programming Languages, Compilers, Interpreters Software Engineering/Programming and Operating Systems Computer System Implementation Logics and Meanings of Programs Processor Architectures Special Purpose and Application-Based Systems
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Nota di contenuto	Invited Tutorials -- UppaaL Implementation Secrets -- Software Hazard and Safety Analysis -- Invited Papers -- Real-Time Operating Systems: Problems and Novel Solutions -- Real-Time UML -- Eager Class Initialization for Java -- Applications of Formal Methods in Biology -- An Overview of Formal Verification for the Time-Triggered Architecture -- Scheduler Modeling Based on the Controller Synthesis Paradigm -- Synthesis and Scheduling -- Component-Based Synthesis of Dependable Embedded Software -- From the Specification to the

Scheduling of Time-Dependent Systems -- On Control with Bounded Computational Resources -- Timed Automata I -- Decidability of Safety Properties of Timed Multiset Rewriting -- Extending Timed Automaton and Real-Time Logic to Many-Valued Reasoning -- Fault Diagnosis for Timed Automata -- Bounded Model Checking -- Verification of Timed Automata via Satisfiability Checking -- Take It NP-Easy: Bounded Model Construction for Duration Calculus -- Towards Bounded Model Checking for the Universal Fragment of TCTL -- Verification and Conformance Testing -- A Typed Interrupt Calculus -- Parametric Verification of a Group Membership Algorithm -- A Method for Testing the Conformance of Real Time Systems -- UML Models and Model Checking -- A Probabilistic Extension of UML Statecharts -- Eliminating Queues from RT UML Model Representations -- Model Checking Timed UML State Machines and Collaborations -- Timed Automata II -- Partial Order Path Technique for Checking Parallel Timed Automata -- Constructing Test Automata from Graphical Real-Time Requirements.

Sommario/riassunto

This volume contains the proceedings of FTRTFT 2002, the International S- posium on Formal Techniques in Real-Time and Fault-Tolerant Systems, held at the University of Oldenburg, Germany, 9–12 September 2002. This sym- sium was the seventh in a series of FTRTFT symposia devoted to problems and solutions in safe system design. The previous symposia took place in Warwick 1990, Nijmegen 1992, Lub ¨ eck 1994, Uppsala 1996, Lyngby 1998, and Pune 2000. Proceedings of these symposia were published as volumes 331, 571, 863, 1135, 1486, and 1926 in the LNCS series by Springer-Verlag. This year the sym- sium was co-sponsored by IFIP Working Group 2.2 on Formal Description of Programming Concepts. The symposium presented advances in the development and use of formal techniques in the design of real-time, hybrid, fault-tolerant embedded systems, covering all stages from requirements analysis to hardware and/or software - plementation. Particular emphasis was placed on UML-based development of real-time systems. Through invited presentations, links between the dependable systems and formal methods research communities were strengthened. With the increasing use of such formal techniques in industrial settings, the conference aimed at stimulating cross-fertilization between challenges in industrial usages of formal methods and advanced research. Inresponsetothecallforpapers, 39submissionswerereceived.Eachsubm- sion was reviewed by four program committee members assisted by additional referees. At the end of the reviewing process, the program committee accepted 17 papers for presentation at the symposium.