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Disciplina	004/.33
Soggetti	Programming languages (Electronic computers) Computer architecture Computer logic Microprocessors Computers, Special purpose Logic design Programming Languages, Compilers, Interpreters Computer System Implementation Logics and Meanings of Programs Processor Architectures Special Purpose and Application-Based Systems Logic Design
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Invited Lectures -- Stability of Discrete Sampled Systems -- Issues in the Refinement of Distributed Programs -- Challenges in the Verification of Electronic Control Units -- Model Checking -- Scaling up Uppaal -- Decidable Model Checking of Probabilistic Hybrid Automata -- Fault Tolerance -- Invariant-Based Synthesis of Fault-Tolerant Systems -- Modeling Faults of Distributed, Reactive Systems -- Threshold and Bounded-Delay Voting in Critical Control Systems -- Automating the Addition of Fault-Tolerance -- Reliability Modelling of Time-Critical Distributed Systems -- Scheduling -- A Methodology for

the Construction of Scheduled Systems -- A Dual Interpretation of “Standard Constraints” in Parametric Scheduling -- Validation -- Co-Simulation of Hybrid Systems: Signal-Simulink -- A System for Object Code Validation -- Refinement -- Real-Time Program Refinement Using Auxiliary Variables -- On Refinement and Temporal Annotations -- Generalizing Action Systems to Hybrid Systems -- Verification -- Compositional Verification of Synchronous Networks -- Modelling Coordinated Atomic Actions in Timed CSP -- Logic and Automata -- A Logical Characterisation of Event Recording Automata -- Using Cylindrical Algebraic Decomposition for the Analysis of Slope Parametric Hybrid Automata -- Probabilistic Neighbourhood Logic -- An On-the-Fly Tableau Construction for a Real-Time Temporal Logic -- Verifying Universal Properties of Parameterized Networks.

Sommario/riassunto

The six Schools and Symposia on Formal Techniques in Real Time and Fault Tolerant Systems (FTRTFT) have seen the eld develop from tentative explo- tions to a far higher degree of maturity, and from being under the scrutiny of a few interested software designers and academics to becoming a well-established area of inquiry. A number of new topics, such as hybrid systems, have been g- minated at these meetings and cross-links explored with related subjects such as scheduling theory. There has certainly been progress during these 12 years, but it is sobering to see how far and how fast practice has moved ahead in the same time, and how much more work remains to be done before the design of a mission-critical system can be based entirely on sound engineering principles underpinned by solid scienti c theory. The Sixth School and Symposium were organized by the Tata Research - velopment and Design Centre in Pune, India. The lectures at the School were given by Ian Hayes (U. of Queensland), Paritosh Pandya (Tata Institute of F- damental Research), Willem-Paul de Roever (Christian Albrechts U.) and Joseph Sifakis (VERIMAG). There were three invited lectures at the Symposium, by Werner Damm (U. of Oldenburg), Nicholas Halbwachs (VERIMAG) and Yoram Moses (Technion). A sizable number of submissions were received for the Symposium from a- hors representing 16 di erent countries.