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Disciplina	004.01/51
Soggetti	Computer science System theory Control theory Computer programming Software engineering Compilers (Computer programs) Machine theory Computer Science Logic and Foundations of Programming Systems Theory, Control Programming Techniques Software Engineering Compilers and Interpreters Formal Languages and Automata Theory
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Interdisciplinary Foundations for Open Cyber-Physical Systems -- Saftless Procedures for Timed Specifications -- Property-Based Monitoring of Analog and Mixed-Signal Systems -- A Framework for Verification of Software with Time and Probabilities -- Synchrony and Time in Fault-Tolerant Distributed Algorithms -- Reconciling Urgency

and Variable Abstraction in a Hybrid Compositional Setting --
Computing Equilibria in Two-Player Timed Games via Turn-Based Finite
Games -- Natural Domain SMT: A Preliminary Assessment -- Robust
Satisfaction of Temporal Logic over Real-Valued Signals -- Combining
Symbolic Representations for Solving Timed Games -- Expected
Reachability-Time Games -- Diagnosis Using Unfoldings of Parametric
Time Petri Nets -- From Mtl to Deterministic Timed Automata --
Unambiguity in Timed Regular Languages: Automata and Logics -- A
Process Algebraic Framework for Modeling Resource Demand and
Supply -- Memory Event Clocks -- Simulation and Bisimulation for
Probabilistic Timed Automata -- Layered Composition for Timed
Automata -- A Conformance Testing Relation for Symbolic Timed
Automata.

Sommario/riassunto

This volume contains the papers that were presented at the 8th International Conference on Formal Modeling and Analysis of Timed Systems (FORMATS 2010), held September 8–10, 2010, at IST (Institute of Science and Technology) Austria, in Klosterneuburg, Austria. The modeling and analysis of timing aspects of systems is a key problem that has been treated independently in several different communities in computer science and related areas. Researchers interested in semantics, verification, re-timing, and performance analysis study models such as timed automata and timed Petri nets, the digital design community focuses on propagation and switching delays, and designers of embedded controllers need to take into account the time required by controllers to compute their responses after sampling the environment. Although the timing-related questions in these separate communities have their own specific nature, there is a growing awareness that there are basic problems that are common to all of them. In particular, all of these disciplines model and analyze systems whose behavior depends on combinations of logical and timing constraints between occurrences of events. The aim of FORMATS is to promote the study of fundamental and practical aspects of timed systems, and to bring together researchers from different disciplines that share an interest in the modeling and analysis of timed systems. Typical topics include (but are not limited to): – Foundations and Semantics: theoretical foundations of timed systems and languages; comparison between different models (timed automata, timed Petri nets, hybrid automata, timed process algebra, max-plus algebra, probabilistic models).
