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Disciplina	629.8/9
Soggetti	Architecture, Computer Computers Microprocessors Special purpose computers Software engineering Computer logic Computer System Implementation Theory of Computation Processor Architectures Special Purpose and Application-Based Systems Software Engineering Logics and Meanings of Programs
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Nota di contenuto	Equations on timed languages -- Hybrid control for automotive engine management: The cut-off case -- Hybrid control of automotive powertrain systems: A case study -- On the composition of hybrid systems -- An equivalence between a control network and a switched hybrid system -- Hybrid cc with interval constraints -- Reachability analysis via face lifting -- Automotive control revisited linear inequalities as approximation of reachable sets -- Switching controllers based on neural network estimates of stability regions and controller

performance -- A logic for the specification of continuous systems -- Integrating projections -- Lyapunov stability of continuous-valued systems under the supervision of discrete-event transition systems -- Reachability verification for hybrid automata -- Subanalytic stratifications and bisimulations -- Integrated design and simulation of hybrid systems -- Hierarchical hybrid systems: Partition deformations and applications to the acrobot system -- Formal verification of safety-critical hybrid systems -- Strings of vehicles: Modeling and safety conditions -- An approach to the verification of the Center-TRACON automation system -- Deductive verification of hybrid systems using step -- Reduction and decomposition of differential automata: Theory and applications -- Optimization of generalized solutions of nonlinear hybrid (discrete-continuous) systems -- Information-based optimization approaches to dynamical system safety verification -- Synthesizing controllers for nonlinear hybrid systems -- A sufficient condition for controllability of a class of hybrid systems -- Hybrid regular expressions -- Stabilization of systems with changing dynamics.

Sommario/riassunto

This book constitutes the refereed proceedings of the First International Workshop on Hybrid Systems: Computation and Control, held in Berkeley, California, USA, in April 1998. The volume presents 27 revised full papers selected from a total of 55 submissions. The papers focus on mathematical methods for the rigorous and systematic design and analysis of hybrid systems. Hybrid systems consist of digital devices that interact with analog environments; they are particularly important in context with safety-critical systems and dependable computing. The present volume extends the line of hybrid systems research documented in volumes 736, 999, 1066, 1201, and 1273 of the LNCS series.
