1. Record Nr. UNINA9910143913103321

Titolo	Hybrid Systems: Computation and Control [[electronic resource]] : 5th International Workshop, HSCC 2002, Stanford, CA, USA, March 25-27, 2002, Proceedings / / edited by Claire J. Tomlin, Mark R. Greenstreet
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2002
ISBN	3-540-45873-5
Edizione	[1st ed. 2002.]
Descrizione fisica	1 online resource (XIII, 480 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 2289
Disciplina	004.1/9
Soggetti	Computer engineering Special purpose computers Microprocessors Software engineering Computer logic Computers Computer Engineering Special Purpose and Application-Based Systems Processor Architectures Software Engineering Logics and Meanings of Programs Computation by Abstract Devices
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Abstracts of Invited Presentations -- Hybrid and Embedded Software Technologies for Production Large-Scale Systems -- Numerical Methods for Differential Systems with Algebraic Equality and Inequality Constraints -- From Models to Code: The Missing Link in Embedded Software -- Papers -- Hybrid System Models of Navigation Strategies for Games and Animations -- Hybrid Control of a Truck and Trailer Vehicle -- Reachability Analysis of Hybrid Systems via Predicate Abstraction -- Towards Computing Phase Portraits of Polygonal Differential Inclusions -- Dynamical Qualitative Analysis of Evolutionary

Systems -- Design of Observers for Hybrid Systems -- Guaranteed Overapproximations of Unsafe Sets for Continuous and Hybrid Systems: Solving the Hamilton-Jacobi Equation Using Viability Techniques -- On the Optimal Control Law for Linear Discrete Time Hybrid Systems -- A Computational Framework for the Verification and Synthesis of Force-Guided Robotic Assembly Strategies -- A Comparison of Control Problems for Timed and Hybrid Systems -- Hybrid Control Loops, A/D Maps, and Dynamic Specifications -- Switching and Feedback Laws for Control of Constrained Switched Nonlinear Systems -- Quantized Stabilization of Two-Input Linear Systems: A Lower Bound on the Minimal Quantization Density -- Analysis of Discrete-Time PWA Systems with Logic States -- Modeling and Control of Co-generation Power Plants: A Hybrid System Approach -- Exploiting Implicit Representations in Timed Automaton Verification for Controller Synthesis -- Computation of Root-Mean-Square Gains of Switched Linear Systems -- Mode Estimation of Probabilistic Hybrid Systems -- Symmetry Reduction of a Class of Hybrid Systems -- Bisimulation Based Hierarchical System Architecture for Single-Agent Multi-modal Systems -- Qualitative Modeling and Heterogeneous Control of Global System Behavior -- An Approach to Model-Based Diagnosis of Hybrid Systems -- Information-Based Alpha-Beta Search and the Homicidal Chau.eur -- Synthesis of Robust Control Systems under Resource Constraints -- Optimal Control of Quantized Input Systems -- Reconfiguration in Hierarchical Control of Piecewise-Affine Systems -- Hybrid Kernels and Capture Basins for Impulse Constrained Systems -- Ordered Upwind Methods for Hybrid Control -- Discrete-Time Refinement of Hybrid Automata -- Control of Switched Hybrid Systems Based on Disjunctive Formulations -- Composing Abstractions of Hybrid Systems -- Optimal Control of Hysteresis in Smart Actuators: A Viscosity Solutions Approach -- Series of Abstractions for Hybrid Automata.

Sommario/riassunto

This book constitutes the refereed proceedings of the 5th International Workshop on Hybrid Systems: Computation and Control, HSCC 2002, held in Stanford, California, USA, in March 2002. The 33 revised full papers presented were carefully reviewed and selected from 73 submissions. All current issues in hybrid systems are addressed including formal models and methods and computational representations, algorithms and heuristics, computational tools, and innovative applications.