

1. Record Nr.	UNINA9910144920503321
Titolo	Hybrid Systems IV // edited by Panos Antsaklis, Wolf Kohn, Anil Nerode, Shankar Sastry
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 1997
ISBN	3-540-69523-0
Edizione	[1st ed. 1997.]
Descrizione fisica	1 online resource (X, 410 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 1273
Disciplina	629.8/95
Soggetti	Computer logic Computers Computer architecture Computers, Special purpose Software engineering Algorithms Logics and Meanings of Programs Theory of Computation Computer System Implementation Special Purpose and Application-Based Systems Software Engineering Algorithm Analysis and Problem Complexity
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Bumpless switching in hybrid systems -- A toolbox for proving and maintaining hybrid specifications -- Simulation of hybrid systems -- Application of the Kohn-Nerode control law extraction procedure to the inverted pendulum problem -- Decidability of hybrid systems with linear and nonlinear differential inclusions -- Reliable implementation of hybrid control systems for advanced avionics -- SHIFT: A formalism and a programming language for dynamic networks of hybrid automata -- Synthesis of minimally restrictive legal controllers for a class of hybrid systems -- Control theory, modal logic, and games -- Agent based velocity control of highway systems -- A computational analysis

of the reachability problem for a class of hybrid dynamical systems --
A class of rectangular hybrid systems with computable reach set --
Safe implementations of supervisory commands -- Hybrid system
games: Extraction of control automata with small topologies -- Hybrid
control design for a three vehicle scenario demonstration using
overlapping decompositions -- Towards continuous abstractions of
dynamical and control systems -- A totally ordered set of discrete
abstractions for a given hybrid or continuous system -- Comparing
timed and hybrid automata as approximations of continuous systems
-- Hybrid control models of next generation air traffic management.

Sommario/riassunto

This book constitutes the thoroughly refereed post-conference documentation of the Fourth International Conference on Hybrid Systems held in Ithaca, NY, USA, in October 1996. The volume presents 19 carefully revised full papers selected from numerous submissions. Hybrid systems research focuses on modeling, design, and validation of interacting systems (plants) and computer programs (control automata). This volume is devoted to hybrid systems models, formal verification, computer simulation, goal reachability, algorithms for extracting hybrid control programs, and application models for avionics, highway traffic control, and air traffic control.
