

1. Record Nr.	UNISA996466047303316
Titolo	Hybrid Systems [[electronic resource] /] / edited by Robert L. Grossman, Anil Nerode, Anders P. Ravn, Hans Rischel
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 1993
ISBN	3-540-48060-9
Edizione	[1st ed. 1993.]
Descrizione fisica	1 online resource (VIII, 476 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 736
Disciplina	004.1/9
Soggetti	Microprocessors Control engineering Computers Special purpose computers Software engineering Processor Architectures Control and Systems Theory Theory of Computation Special Purpose and Application-Based Systems Software Engineering 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 contenuto	Verifying hybrid systems -- An extended duration calculus for hybrid real-time systems -- Towards refining temporal specifications into hybrid systems -- Hybrid systems in TLA+ -- Hybrid models with fairness and distributed clocks -- A compositional approach to the design of hybrid systems -- An approach to the description and analysis of hybrid systems -- Integration Graphs: A class of decidable hybrid systems -- Hybrid automata: An algorithmic approach to the specification and verification of hybrid systems -- Hybrid Systems: the SIGNAL approach -- A dynamical simulation facility for hybrid systems -- Event identification and intelligent hybrid control -- Multiple agent hybrid control architecture -- Models for hybrid systems: Automata, topologies, controllability, observability -- Some remarks about flows

in hybrid systems -- Hybrid system modeling and autonomous control systems -- Fault accommodation in feedback control systems -- On formal support for industrial-scale requirements analysis -- A formal approach to computer systems requirements documentation.

Sommario/riassunto

Hybrid systems are networks of interacting digital and analog devices. Control systems for inherently unstable aircraft and computer aided manufacturing are typical applications for hybrid systems, but due to the rapid development of processor and circuit technology modern cars and consumer electronics use software to control physical processes. The identifying characteristic of hybrid systems is that they incorporate both continuous components governed by differential equations and also digital components - digital computers, sensors, and actuators controlled by programs. This volume of invited refereed papers is inspired by a workshop on the Theory of Hybrid Systems, held at the Technical University, Lyngby, Denmark, in October 1992, and by a prior Hybrid Systems Workshop, held at Cornell University, USA, in June 1991, organized by R.L. Grossman and A. Nerode. Some papers are the final versions of papers presented at these workshops and some are invited papers from other researchers who were not able to attend these workshops.
