

1. Record Nr.	UNINA9910299843703321
Autore	Baruah Sanjoy
Titolo	Multiprocessor Scheduling for Real-Time Systems // by Sanjoy Baruah, Marko Bertogna, Giorgio Buttazzo
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-08696-0
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (234 p.)
Collana	Embedded Systems, , 2193-0155
Disciplina	658.05
Soggetti	Electronic circuits Microprocessors Electronics Microelectronics Circuits and Systems Processor Architectures Electronics and Microelectronics, Instrumentation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction: background, scope, and context -- Preliminaries: workload and platform models -- Preliminaries: scheduling concepts and goals -- A review of selected results on uniprocessors -- Implicit-deadline (L&L) tasks -- Partitioned scheduling of L&L tasks -- Global dynamic-priority scheduling of L&L tasks -- Global Fixed-Job-Priority scheduling of L&L tasks -- Global Fixed-Task-Priority scheduling of L&L tasks.
Sommario/riassunto	This book provides a comprehensive overview of both theoretical and pragmatic aspects of resource-allocation and scheduling in multiprocessor and multicore hard-real-time systems. The authors derive new, abstract models of real-time tasks that capture accurately the salient features of real application systems that are to be implemented on multiprocessor platforms, and identify rules for mapping application systems onto the most appropriate models. New run-time multiprocessor scheduling algorithms are presented, which are demonstrably better than those currently used, both in terms of

run-time efficiency and tractability of off-line analysis. Readers will benefit from a new design and analysis framework for multiprocessor real-time systems, which will translate into a significantly enhanced ability to provide formally verified, safety-critical real-time systems at a significantly lower cost.
