1. Record Nr. UNINA9910299580603321

Titolo	Real-Time Modelling and Processing for Communication Systems : Applications and Practices / / edited by Muhammad Alam, Wael Dghais, Yuanfang Chen
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-72215-8
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (XI, 282 p. 210 illus.)
Collana	Lecture Notes in Networks and Systems, , 2367-3370 ; ; 29
Disciplina	004
Soggetti	Electrical engineering Input-output equipment (Computers) Computer simulation Computer communication systems Communications Engineering, Networks Input/Output and Data Communications Simulation and Modeling Computer Communication Networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Real Time Modelling and Processing -- IBIS and Mpilog Modelling Frameworks for Signal Integrity Simulation -- Improved and Reduced-order I/O Devices Behavioral Modeling Solutions for SI simulation -- Neuro-Fuzzy Nonlinear Dynamic Modelling for Signal Integrity Simulation -- Fuzzy sliding mode controller design based on Euclidean particle swarm optimization -- An Electrothermal Behavior Study of the Power PiN Diode -- A Detailed Extraction Procedure of Thyristor Design Parameters -- Modeling of Memristive Devices for Neuro-morphic Application -- Modeling, Designing and Analyzing Resource Reservations in Distributed Embedded Systems -- Real-time Implementation of Light-independent Traffic Sign Recognition approach.
Sommario/riassunto	This book presents cutting-edge work on real-time modelling and processing, a highly active research field in both the research and

industrial domains. Going beyond conventional real-time systems, major efforts are required to develop accurate and computational efficient real-time modelling algorithms and design automation tools that reflect the technological advances in high-speed and ultra-low-power transceiver communication architectures based on nanoscale devices. The book addresses basic and more advanced topics, such as I/O buffer circuits for ensuring reliable chip-to-chip communication, I/O buffer behavioural modelling, multiport empirical models for memory interfaces, compact behavioural modelling for memristive devices, and resource reservation modelling for distributed embedded systems. The respective chapters detail new research findings, new models, algorithms, implementations and simulations of the above-mentioned topics. As such, the book will help both graduate students and researchers understand the latest research into real-time modelling and processing.