1. Record Nr.   UNINA9910151782503321

   Autore   Ahmed Jameel

   Titolo   Fuzzy Logic Based Power-Efficient Real-Time Multi-Core System / / by
                      Jameel Ahmed, Mohammed Yakoob Siyal, Shaheryar Najam, Zohaib
                      Najam

   Pubbl/distr/stampa Singapore : , : Springer Singapore : , : Imprint : Springer, , 2017

   ISBN   981-10-3120-7

   Edizione   [1st ed. 2017.]

   Descrizione fisica 1 online resource (IX, 62 p. 40 illus., 22 illus. in color.)

   Collana   SpringerBriefs in Computational Intelligence, , 2625-3704

   Disciplina   006.3

   Soggetti   Computational intelligence
                      Microprocessors
                      Electronic circuits
                      Computational Intelligence
                      Processor Architectures
                      Circuits and Systems

   Lingua di pubblicazione Inglese

   Formato   Materiale a stampa

   Livello bibliografico Monografia

   Nota di bibliografia Includes bibliographical references.

   Nota di contenuto Multiprocessors and Cache Memory -- Energy Delay Product and
                      Throughput -- Challenges and Issues in Modern Computer
                      Architectures -- Real-Time Power And Performance Aware System --
                      Fuzzy Logic Theory. .

   Sommario/riassunto This book focuses on identifying the performance challenges involved
                      in computer architectures, optimal configuration settings and analysing
                      their impact on the performance of multi-core architectures. Proposing
                      a power and throughput-aware fuzzy-logic-based reconfiguration for
                      Multi-Processor Systems on Chip (MPSoCs) in both simulation and real-
                      time environments, it is divided into two major parts. The first part
                      deals with the simulation-based power and throughput-aware fuzzy
                      logic reconfiguration for multi-core architectures, presenting the
                      results of a detailed analysis on the factors impacting the power
                      consumption and performance of MPSoCs. In turn, the second part
                      highlights the real-time implementation of fuzzy-logic-based power-
                      efficient reconfigurable multi-core architectures for Intel and Leone3
                      processors. .