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Titolo	Computational Intelligence in Digital and Network Designs and Applications / / edited by Mourad Fakhfakh, Esteban Tlelo-Cuautle, Patrick Siarry
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Descrizione fisica	1 online resource (360 p.)
Collana	Lecture Notes in Geosystems Mathematics and Computing
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Soggetti	Computer hardware Computational intelligence Electrical engineering Electronic circuits Computer Hardware Computational Intelligence Electrical Engineering Electronic Circuits and Devices
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Sizing Digital Circuits Using Convex Optimization Techniques -- A Fabric Component-Based Approach to the Architecture and Design Automation of High-Performance Integer Arithmetic Circuits on FPGA -- Design Intelligence for Interconnection Realization in Power-Managed SoCs -- Introduction to Optimization Under Uncertainty Techniques for High-Performance Multicore Embedded Systems Compilation -- Digital IIR Filter Design with Fix-Point Representation Using Effective Evolutionary Local Search Enhanced Differential Evolution -- Applying Operations Research to Design for Test Insertion Problems -- Low-Power NoC Using Optimum Adaptation -- Decoupling Network Optimization by Swarm Intelligence -- The Impact of Sensitive Inputs on the Reliability of Nanoscale Circuits -- Pin Count and Wire Length Optimization for Electrowetting-on-Dielectric Chips: A Metaheuristics-Based Routing Algorithm -- Quantum Dot Cellular

	Automata: A Promising Paradigm Beyond Moore -- Smart Videocapsule for Early Diagnosis of Colorectal Cancer: Toward Embedded Image Analysis.
Sommario/riassunto	This book explains the application of recent advances in computational intelligence – algorithms, design methodologies, and synthesis techniques – to the design of integrated circuits and systems. It highlights new biasing and sizing approaches and optimization techniques and their application to the design of high-performance digital, VLSI, radio-frequency, and mixed-signal circuits and systems. This second of two related volumes addresses digital and network designs and applications, with 12 chapters grouped into parts on digital circuit design, network optimization, and applications. It will be of interest to practitioners and researchers in computer science and electronics engineering engaged with the design of electronic circuits.