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Descrizione fisica	1 online resource (XIV, 355 p. 147 illus., 82 illus. in color.)
Collana	Studies in Systems, Decision and Control, , 2198-4190 ; ; 105
Disciplina	338.927
Soggetti	Engineering mathematics Engineering—Data processing Renewable energy sources Application software Mathematical and Computational Engineering Applications Renewable Energy Computer and Information Systems Applications
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Vedic Mathematics as Fast Algorithms in Green Computing for Internet of Things -- Technologies for Greener Internet of Things Systems -- Secure, Green Implementation of Modular Arithmetic Operations for IoT and Cloud Applications -- Green Cyber Physical Computing as Sustainable Development Model -- Data Collection for Environmental and Humanitarian Crisis Management -- Influence of software optimization on energy consumption of embedded systems -- Energy Efficiency of 4th Gen Intel ® Core ™ Processor vs 3rd Gen Intel ® Core ™ Processor -- Malicious Software Effect on the Mobile Devices Power Consumption -- Rational Intellectualization of the Aircraft Control: resources-saving safety improvement -- Resource and Energy Optimization Oriented Development of FPGA-Based Adaptive Logical Networks for Classification Problem -- Green Experiments with FPGA -- Green Logic: Green LUT FPGA Concepts, Models and Evaluations -- The Concept of Virtual Manufacturing Enterprise Operation as a Green

Complex System -- Green-IT Approach to Design and Optimization of Thermoacoustic Waste Heat Utilization Plant Based on Soft Computing -- G. Resource-oriented approaches to implementation of traffic control technologies in safety-critical I&C systems -- Markov Models of Smart Grid Digital Substations Availability: Multi-Level Degradation and Recovery of Power Resources Issues.

Sommario/riassunto

This book presents modern approaches to improving the energy efficiency, safety and environmental performance of industrial processes and products, based on the application of advanced trends in Green Information Technologies (IT) Engineering to components, networks and complex systems (software, programmable and hardware components, communications, Cloud and IoT-based systems, as well as IT infrastructures). The book’s 16 chapters, prepared by authors from Greece, Malaysia, Russia, Slovakia, Ukraine and the United Kingdom, are grouped into four sections: (1) The Green Internet of Things, Cloud Computing and Data Mining, (2) Green Mobile and Embedded Control Systems, (3) Green Logic and FPGA Design, and (4) Green IT for Industry and Smart Grids. The book will motivate researchers and engineers from different IT domains to develop, implement and propagate green values in complex systems. Further, it will benefit all scientists and graduate students pursuing research in computer science with a focus on green IT engineering.