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Nota di contenuto	Assessing control of battery-super capacitor hybrid storage system in photovoltaic based DC microgrid -- Batteries, energy storage technologies, energy-efficient systems, power conversion topologies, and related control techniques -- Generation expansion planning using renewable energy sources using storage -- A Smart Grid Ontology for Africa -- Smart Microgrid Energy Management with Renewable Energy Sources and Local SCADA -- Improving electricity supply reliability: a case study of remote communities of Limpopo in South Africa -- Control of grid-connected voltage source converters during unsymmetrical faults -- Power quality control of a PV assisted realistic microgrid structure -- Harmonics Reduction by Distributed Power Flow Control Using FACTs Devices in Power Supply -- Advances in protection and testing of power distribution systems within emerging markets -- Green energy for sustainable agriculture: design and testing of an innovative greenhouse with an energy-efficient cooling system

powered by a hybrid energy system for urban agriculture -- Comparative study of solar and geothermal renewable energy resources for desalination of sea water with latest case studies -- The impact of market-based policies on access to electricity and sustainable development in Sub-Saharan Africa -- Development of OTP based switch system for power system Infrastructure security and personnel safety -- Artificial neural net based performance index for voltage security assessment -- Multi-class classification of power network states using multi-dimensional neural network -- Data farming in a smart low voltage distribution system -- Decision making approach using fuzzy logic and rough set theory for power quality monitoring index of microgrids -- Enabling technologies in IoT: energy, sensors, cloud computing, communication, integration, standards -- Secure group communication among IoT components in smart cities -- SCPS: An IoT based smart car parking system -- A Comprehensive summary of the contributions and quintessence of this book.

Sommario/riassunto	This edited book proposes a collection of recently undertaken technical work on topics from various aspects of power engineering, energy systems as well as integrated smart technologies and related challenges. The scientific nature of the topics to be discussed in this book ranges from novel concepts to innovative implementations of smart technologies for promoting sustainable economic growth and development. Furthermore, this book substantially contributes to the relevant literature's advancement and possibly serves as a platform for future research endeavors and publications. In addition, knowledge enrichment and expansion of power engineering and energy systems in the context of the Fourth Industrial Revolution, such as to be portrayed in this book, fundamentally appeal to researchers, power system engineers, energy specialists, data scientists, decision-makers as well as professionals involved in the various sectors that constitute the United Nations Sustainable Development Goals.