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Titolo	Cyber Physical Systems Approach to Smart Electric Power Grid / / edited by Siddhartha Kumar Khaitan, James D. McCalley, Chen Ching Liu
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ISBN	3-662-45928-0
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (391 p.)
Collana	Power Systems, , 1612-1287
Disciplina	621.31028558
Soggetti	Power electronics Computational intelligence Power Electronics, Electrical Machines and Networks Computational Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Modeling and Simulation of Network Aspects for Distributed Cyber-Physical Energy Systems -- A Service-Oriented, Cyber-Physical Reference Model for Smart Grid -- Real Time Modeling and Simulation of Cyber-Power System -- Cyber physical Approach to HVDC grid control -- Smart Buildings in the Smart Grid: Contract-Based Design of an Integrated Energy Management System -- Decision-Support Tools for Renewables-Rich Power Systems: A Stochastic Futures Approach -- Cyber security of smart grid communications: risk analysis and experimental testing -- Reliable and Scalable Communication for the Power Grid -- Biologically Inspired Hierarchical Cyber-Physical Multi-Agent Distributed Control Framework For Sustainable Smart Grids -- Cyber-Physical Security of Substations in a Power Grid -- Cyber-Attacks in the Automatic Generation Control -- Intrusion Detection for CPS Real-Time Controllers -- Against Data Attacks on Smart Grid Operations: Attack Mechanisms and Security Measures.
Sommario/riassunto	This book documents recent advances in the field of modeling, simulation, control, security and reliability of Cyber- Physical Systems (CPS) in power grids. The aim of this book is to help the reader gain insights into working of CPSs and understand their potential in transforming the power grids of tomorrow. This book will be useful for

all those who are interested in design of cyber-physical systems, be they students or researchers in power systems, CPS modeling software developers, technical marketing professionals and business policy-makers. .

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