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Nota di contenuto	Introduction to the Modeling and Control of Power Electronic Converters for Microgrid Applications -- Modeling and Stability Analysis of LCL-Filter based Voltage Source Inverters -- Controller Synthesis and Parameter Selection for Standalone Single-Phase PWM Inverters -- Nonlinear Stability Analysis of Digital Controlled Single-Phase Standalone Inverter -- Small-Signal Modeling and Controller Synthesis of BPF-based Droop Control for Single-Phase Islanded Microgrid -- Enhanced Droop Control Strategy for Three-Phase Islanded Microgrid without LBC Lines -- Consensus-Based Enhanced Droop Control Scheme for Accurate Power Sharing and Voltage Restoration in Islanded Microgrids -- Enhanced Hierarchical Control for Islanded Microgrid using Advanced Damping Methods.
Sommario/riassunto	This book covers the fundamentals of power electronic converter modeling and control, digital simulation, and experimental studies in

the area of renewable energy systems and AC/DC microgrid. Recent advanced control methods for voltage source inverters (VSIs) and the hierarchical controlled islanded microgrid are discussed, including the mathematical modeling, controller synthesis, parameter selection and multi-scale stability analysis, and consensus-based control strategies for the microgrid and microgrid clusters. The book will be an invaluable technical reference for practicing engineers and researchers working in the areas of renewable energy, power electronics, energy internet, and smart grid. It can also be utilized as reference book for undergraduate and postgraduate students in electrical engineering. Emphasizes controller design, stability analysis, simulation, and experimental studies; Contains case studies analyzing basic knowledge to advanced strategies; Written in accommodating, simple language with clear explanations of basic ideas.
