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Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Multiagent System-Based Event-Triggered Hybrid Controls for High-Security Hybrid Energy Generation Systems -- Multi-Agent Based Hierarchical Hybrid Control for Smart Microgrid -- Two-stage optimal operation strategy of isolated power system with TSK fuzzy identification of supply-security -- MOEA/D based probabilistic PBI approach for risk-based optimal operation of hybrid energy systems with intermittent power uncertainty -- Gradient decent based multi-objective cultural differential evolution for short-term hydrothermal optimal scheduling of economic emission with integrating wind power and photovoltaic power -- Event-triggered multi-agent optimization for two-layered model of hybrid energy system with price bidding based demand response -- Consensus-based economic hierarchical control strategy for islanded MG considering communication path reconstruction -- Multi-Agent-System-Based Bi-level Bidding Strategy of Microgrid with Game Theory in the Electricity Market -- Multiagent System-Based Distributed Coordinated Control for Radial DC Microgrid Considering Transmission Time Delays -- MAS-Based Distributed Cooperative Control for DC Microgrid Through Switching Topology Communication Network With Time-Varying Delays -- Multiagent System-Based Integrated Design of Security Control and Economic Dispatch for Interconnected Microgrid

Systems -- Distributed event-triggered cooperative control for frequency and voltage stability and power sharing in isolated inverter-based microgrid -- Event-triggered mechanism based distributed optimal frequency regulation of power grid -- A Virtual Complex Impedance based Droop Method for Parallel-connected Inverters in Low-voltage AC Microgrids.

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Sommario/riassunto

This book mainly investigates the cooperative optimal control of hybrid energy system, it presents security control, multi-objective optimization, distributed optimization and distributed control approaches for tackling with security, economic and stability problem of the hybrid energy system. It aims to solve some challenging problems including security issue, economic cost or benefits from both power generation side and load demand side, and coordination among different power generators. The methods proposed in this book is novel and attractive, it consists of the hierarchical optimal control strategy for the security issue, multi-objective optimization for both economic and emission issue, and distributed optimal control for coordination among power generators. Readers can learn novel methods or technique for tackling with the security issue, multiple-objective problem, and distributed coordination problem. It also may inspire readers to improve some drawbacks of existing alternatives. Some fundamental knowledge prepared to read this book includes basic principles of the multi-agents system, robust optimization, Pareto-dominance optimization, and background of electrical engineering and renewable energy.

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