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Nota di contenuto	Those Electrifying Women -- Attracting, Training, and Retaining a Skilled, Diverse Energy Workforce in the U.S. -- Electricity Regulation in the U.S. -- Algorithms for Energy Justice -- Reliability Centered Asset Management with models for maintenance optimization and predictive maintenance - including case studies for wind turbines -- Security of electricity supply in the future intelligent and integrated power system -- Preparing the Power Grid for Extreme Weather Events: Resilience Modeling and Optimization -- Power Systems Operation and Control: Contributions at the Liège group, 1970-2000 -- Reinforcement Learning for Decision-Making and Control in Power Systems -- System Protection -- Interaction Variables-based Modeling and Control of

Energy Dynamics -- Facilitating Interdisciplinary Research in Smart Grid -- Substation Automation -- Electric Power Distribution Systems: Time-Window Selection and Feasible Control Sequence Methods for Advanced Distribution Automation -- Intelligent and self-sufficient control for time controllable consumers in low voltage grids -- Discrete-Time Sliding Mode Control for Electrical Drives and Power Converters -- Self-Healing Shipboard Power Systems.

Sommario/riassunto

This enlightening volume examines core areas of development in electric power systems, emphasizing the pivotal contributions of women engineers to the industry's evolution. The authors cover a broad spectrum of key topics, including generation technologies, transmission and distribution progress, environmental challenges, worldwide electrification, and workforce issues. Advances in conventional and renewable energy technologies, in parallel with growing environmental concerns, and in conjunction with the aging of both the infrastructure itself and the workforce, have led to imposing and fascinating challenges for the engineers of tomorrow. This book documents the critical role of women engineers and their pioneering discoveries, relates their stories of success and struggle in their own words, and shares their perspectives on how these challenges will be addressed in the decades ahead. • Covers the issues at the heart of the electric utility industry,highlighting women leaders addressing those areas of endeavor, from renewable energy integration to power system security; • Explains the immense challenges faced by modern power systems planners, engineers and operators, and offers templates for successfully overcoming those challenges; • Places environmental and workforce issues at the forefront of the discussion, contextualizing technological information within the realm of practical, and principled, implementation.