

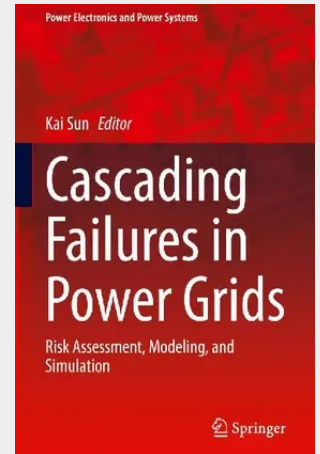
Cascading Failures in Power Grids

Risk Assessment, Modeling, and Simulation

Cascading failures as long chains of events and outages are threats to reliable operations of power grids and can lead to catastrophic blackouts with tremendous losses if not understood, prevented, or mitigated sufficiently. This book provides an in-depth and comprehensive presentation of emerging methods for risk assessment, modeling, and simulation of cascading failures in power grids. The methods are all supported by theories and experimental tests using realistic power grid models and data, and the contributors to this volume are leading scholars in the field. Specific topics covered include an introduction to cascading failures, probabilistic analytics of utility outage data and risks, quantitative influence and interaction models to understand and mitigate failure propagation, simulation of cascading failures using models of multiple time scales, and industrial criteria and practices against cascading failures.

Cascading Failures in Power Grids: Risk Assessment, Modeling, and Simulation will provide comprehensive and in-depth coverage of state-of-the-art methods for all readers interested in cascading failures and will inspire researchers and engineers to develop emerging and practical tools in the future.

Cascading failures as long chains of events and outages are threats to reliable operations of power grids and can lead to catastrophic blackouts with tremendous losses if not understood, prevented, or mitigated sufficiently. This book provides an in-depth and comprehensive presentation of emerging methods for risk assessment, modeling, and simulation of cascading failures in power grids. The methods are all supported by theories and experimental tests using realistic power grid models and data, and the contributors to this volume are leading scholars in the field. Specific topics covered include an introduction to cascading failures, probabilistic analytics of utility outage data and risks, quantitative influence and interaction models to understand and mitigate failure propagation, simulation of cascading failures using models of multiple time scales, and industrial criteria and practices against cascading failures. *Cascading Failures in Power Grids: Risk Assessment, Modeling, and Simulation* will provide comprehensive and in-depth coverage of state-of-the-art methods for all readers interested in cascading failures and will inspire researchers and engineers to develop emerging and practical tools in the future. ζ



128,39 €

119,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9783031479991

Medium: Buch

ISBN: 978-3-031-47999-1

Verlag: Springer

Erscheinungstermin: 17.02.2024

Sprache(n): Englisch

Auflage: 1. Auflage 2024

Serie: Power Electronics and Power Systems

Produktform: Gebunden

Gewicht: 711 g

Seiten: 311

Format (B x H): 160 x 241 mm

