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3. Record Nr. UNINA9910830579603321 Autore Xu Yan (Associate professor) **Titolo** Stability-constrained optimization for modern power system operation and planning / / Yan Xu, Yuan Chi, Heling Yuan Hoboken, New Jersey: ,: John Wiley & Sons, Inc., , [2023] Pubbl/distr/stampa ©2023 **ISBN** 1-119-84889-X 1-119-84887-3 Descrizione fisica 1 online resource (499 pages) Collana IEEE Press Series on Power and Energy Systems Series Disciplina 621.319 Soggetti Electric power system stability Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Cover -- Title Page -- Copyright Page -- Contents -- About the Nota di contenuto Authors -- Foreword -- Preface -- Part I Power System Stability Preliminaries -- List of Acronyms -- Chapter 1 Power System Stability: Definition, Classification, and Phenomenon -- 1.1 Introduction -- 1.2 Definition -- 1.3 Classification -- 1.4 Rotor Angle Stability -- 1.4.1 Large-Disturbance Rotor Angle Stability -- 1.4.2 Small-Disturbance Rotor Angle Stability -- 1.5 Voltage Stability -- 1.5.1 Large-Disturbance Voltage Stability -- 1.5.2 Small-Disturbance Voltage Stability -- 1.6 Frequency Stability -- 1.7 Resonance Stability -- 1.7.1 Torsional Resonance -- 1.7.2 Electrical Resonance -- 1.8 Converter-Driven Stability -- 1.8.1 Fast-Interaction Converter-Driven Stability --1.8.2 Slow-Interaction Converter-Driven Stability -- References --Chapter 2 Mathematical Models and Analysis Methods for Power System Stability -- 2.1 Introduction -- 2.2 General Mathematical Model -- 2.3 Transient Stability Criteria -- 2.4 Time-Domain Simulation -- 2.5 Extended Equal-Area Criterion (EEAC) -- 2.6 Trajectory Sensitivity Analysis -- 2.6.1 Basic Concept -- Nomenclature -- References --Chapter 3 Recent Large-Scale Blackouts in the World -- 3.1 Introduction -- 3.2 Major Blackouts in the World -- 3.2.1 Blackouts Triggered by Transmission Line Out-of-Service -- 3.2.1.1 U S-Canada

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