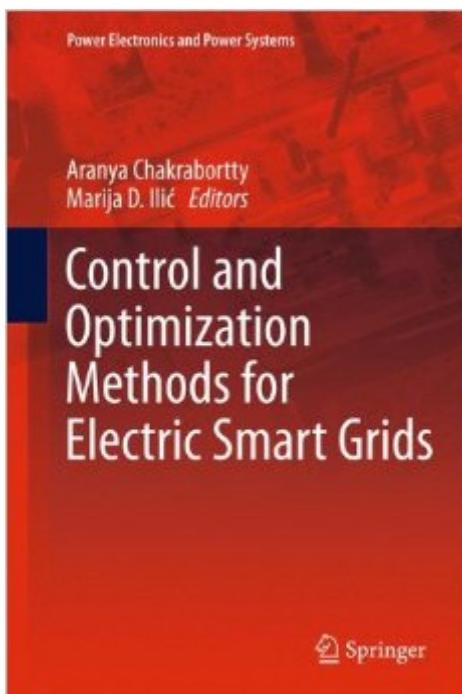


The book was found

Control And Optimization Methods For Electric Smart Grids (Power Electronics And Power Systems)



Synopsis

Control and Optimization Methods for Electric Smart Grids brings together leading experts in power, control and communication systems, and consolidates some of the most promising recent research in smart grid modeling, control and optimization in hopes of laying the foundation for future advances in this critical field of study. The contents comprise eighteen essays addressing wide varieties of control-theoretic problems for tomorrowâ™s power grid. Topics covered include control architectures for power system networks with large-scale penetration of renewable energy and plug-in vehicles, optimal demand response, new modeling methods for electricity markets, cyber-security, data analysis and wide-area control using synchronized phasor measurements.

Book Information

Series: Power Electronics and Power Systems (Book 3)

Hardcover: 372 pages

Publisher: Springer; 2012 edition (December 16, 2011)

Language: English

ISBN-10: 1461416043

ISBN-13: 978-1461416043

Product Dimensions: 6.1 x 0.9 x 9.2 inches

Shipping Weight: 1.6 pounds (View shipping rates and policies)

Average Customer Review: 4.0 out of 5 starsÂ See all reviewsÂ (1 customer review)

Best Sellers Rank: #1,024,791 in Books (See Top 100 in Books) #69 inÂ Books > Computers & Technology > Hardware & DIY > Microprocessors & System Design > Control Systems #127 inÂ Books > Engineering & Transportation > Engineering > Energy Production & Extraction > Power Systems #152 inÂ Books > Engineering & Transportation > Engineering > Electrical & Electronics > Electric Machinery & Motors

Customer Reviews

Chakrabortty, Aranya, IliÃ„Â‡, Marija D. (Eds.), Control and Optimization Methods for Electric Smart Grids, Springer, 2012. ISBN 978-1-4614-1605-0Reviewed by D. Subbaram Naidu, Idaho State University (formerly Book Review Editor: IEEE Transactions on Automatic Control; Wiley International Journals of Robust and Nonlinear Control and Optimal Control: Applications and Methods and Elsevier International Journal Mechatronics: The Science of Intelligent Machines). The Âœhunger for powerÂœ by both developed and developing emerging markets and recent catastrophes such as the major blackout in the Northeastern USA in 2003 brought electrical power

grid to the forefront in the 21st century with two challenging of making the grid green and smart. The word smart or intelligent has almost become ubiquitous in every field of humanities, sciences and engineering and anything that is embedded with some kind of human intelligence-like feature by using soft computing tools such as neural networks, fuzzy logic, genetic algorithms and other evolutionary tools, is dubbed as smart. The twin driving forces to make electric grid are control and static and dynamic optimization requiring modeling, identification, estimation, robustness, resilience, safety and security. This edited book, composed of contributions from leading researchers in power, control and communication systems, has three broad categories of Architectures and Integration, Modeling and Analysis, and Communication and Control. An important and recent topic on vulnerability and cyber-security of power grids is presented. Other important topics are renewable energy and plug-in vehicles and wide-area monitoring and control using synchronized phasor measurements. The targeted audience for this book is graduate students in power and control as reference material. the book will be also of interest to researchers and engineers working in electric power industry. This volume is a welcome addition to the family some recent books in the field of smart grids [1,2]. References:[1] Cuellar, Jorge (Ed.), Smart Grid Security, Springer, New York, NY, 2013[2] Pappu, Vijay, Carvalho, Marco, Pardalos, Panos (Eds.), Optimization and Security Challenges in Smart Power Grids, Springer, New York, NY, 2013

[Download to continue reading...](#)

Control and Optimization Methods for Electric Smart Grids (Power Electronics and Power Systems)
Plug In Electric Vehicles in Smart Grids: Charging Strategies (Power Systems) Hybrid Particle Swarm Algorithm for Multiobjective Optimization: Integrating Particle Swarm Optimization with Genetic Algorithms for Multiobjective Optimization Show Networks and Control Systems: Formerly "Control Systems for Live Entertainment" Electricity, Electronics, and Control Systems for HVAC (4th Edition) Shocking! Where Does Electricity Come From? Electricity and Electronics for Kids - Children's Electricity & Electronics Principles of Electric Machines and Power Electronics SEO 2016 Learn Search Engine Optimization With Smart Internet Marketing Strategies: Learn SEO with smart internet marketing strategies SEO+Clickbank (Search Engine Optimization 2016): Use The Power of Search Engine Optimization 2016+ Clickbank The Power Brokers: The Struggle to Shape and Control the Electric Power Industry (MIT Press) Control Self-Assessment: Reengineering Internal Control (Enterprise Governance, Control, Audit, Security, Risk Management and Business Continuity) WordPress: A Beginner to Intermediate Guide on Successful Blogging and Search Engine Optimization. (Blogging, SEO, Search Engine Optimization, Free Website, WordPress,

WordPress for Dummies) Seo 2017: Search Engine Optimization for 2017. On Page SEO, Off Page SEO, Keywords (SEO Books, Search Engine Optimization 2016) SEO 2017: Search Engine Optimization for 2017. On Page SEO, Off Page SEO, Keywords (SEO Books, Search Engine Optimization 2017) Networks and Grids: Technology and Theory (Information Technology: Transmission, Processing and Storage) Gifts of Mother Earth: Earth Energies, Vortexes, Lines, and Grids Crystal Grids: How to Combine & Focus Crystal Energies to Enhance Your Life Basics Design 07: Grids, 2nd Edition ELVIS: Pure Gold (Arrangement for Mixed Chorus SATB with Piano, Electric Guitar, Electric Bass and Percussion) Electric Pressure Cooker Cookbook: 25 Best Electric Pressure Cooker Recipes for Busy People

[Dmca](#)