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Titolo	Sustainable Interdependent Networks II : From Smart Power Grids to Intelligent Transportation Networks // edited by M. Hadi Amini, Kianoosh G. Boroojeni, S. S. Iyengar, Panos M. Pardalos, Frede Blaabjerg, Asad M. Madni
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Soggetti	Electrical engineering Power electronics Computational intelligence Application software Computer security Communications Engineering, Networks Power Electronics, Electrical Machines and Networks Computational Intelligence Information Systems Applications (incl. Internet) Systems and Data Security
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Nota di contenuto	Introduction -- A System of Systems: Engineering Framework for Active Distribution Grids Operation -- Clustering Algorithms in Wireless Sensor Networks: Challenges, Solutions, and Future Research Trends -- Laboratory-Scale Microgrid System for Control of Power Distribution in Local Energy Networks -- Impact of Strategic Behavior of the Electrical Consumers on the Power System Reliability -- Reactive Power Dispatch Strategies for Loss Minimization in a DFIG based Wind Farm -- Distributed State Estimation and Energy Management in Smart Grids: A Consensus + Innovations Approach -- Promises of Intelligent Transportation Systems in Future Smart Cities -- High Performance and Scalable Graph Computation on GPUs for Smart Power Grids and

Transportation System Applications -- A Comprehensive Review on Emerging Methods for Integration of Electric Vehicles into Power Systems -- A Comprehensive Overview of Distributed/Decentralized Control and Optimization Strategies of AC and DC Microgrids -- Hopf Bifurcation Control of Large-Scale Complex Nonlinear Dynamical Systems Via a Dynamic State Feedback Controller: The Tale of Power Networks -- Conclusion.

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Sommario/riassunto

This book paves the way for researchers working on the sustainable interdependent networks spread over the fields of computer science, electrical engineering, and smart infrastructures. It provides the readers with a comprehensive insight to understand an in-depth big picture of smart cities as a thorough example of interdependent large-scale networks in both theory and application aspects. The contributors specify the importance and position of the interdependent networks in the context of developing the sustainable smart cities and provide a comprehensive investigation of recently developed optimization methods for large-scale networks. In the second volume of Sustainable Interdependent Networks book, the authors focus on the interdependencies of optimal operation of power and transportation networks; they discuss the optimization methods to deal with the computational complexity of them, and their role in future smart cities. The book is suitable for senior undergraduate students, graduate students interested in research in multidisciplinary areas related to future sustainable networks, and the researchers working in the related areas. It also covers the application of interdependent networks which makes it a perfect source of study for audience out of academia to obtain a general insight of interdependent networks.

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