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Sommario/riassunto	<p>This book presents some latest treatments of several specific, but fundamental problems about the data communication and control of smart microgrids. It provides readers some valuable insights into advanced control and communication of microgrids. With the help of mathematical tools, graduate students will benefit with a deep understanding of microgrids and explore some new research directions. In the meantime, this book gives various pictures and flowcharts to show how to address some challenges in microgrids. In addition, it provides solutions to several specific technical problems, which might be helpful as references for the R&D staff about power systems in utilities and industry. Specifically, the book introduces the applications of advanced control methods such as sliding mode control and model predictive control for microgrids. After getting in-depth understanding of these advanced control methods, the readers are able to design their own improved controllers for not only microgrids, but also for other real-world power plants. Besides, the readers will also learn how to design distributed transaction mechanisms for power market based on the cutting edge blockchain technology.</p>