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Sommario/riassunto	This book aims to present some advanced control methodologies for power converters. Power electronic converters have become indispensable devices for plenty of industrial applications over the last decades. Composed by controllable power switches, they can be controlled by effective strategies to achieve desirable transient response and steady-state performance, to ensure the stability, reliability and safety of the system. The most popular control strategy of power converters is the linear proportional-integral-derivative series control which is adopted as industry standard. However, when there exist parameter changes, nonlinearities and load disturbances in the system, the performance of the controller will be significantly degraded. To overcome this problem, many advanced control methodologies and techniques have been developed to improve the converter performance. This book presents the research work on some advanced control methodologies for several types of power converters, including three-phase two-level AC/DC power converter, three-phase NPC AC/DC power converter, and DC/DC buck converter. The

effectiveness and advantage of the proposed control strategies are verified via simulations and experiments. The content of this book can be divided into two parts. The first part focuses on disturbance observer-based control methods for power converters under investigation. The second part investigates intelligent control methods. These methodologies provide a framework for controller design, observer design, stability and performance analysis for the considered power converter systems.