Record Nr. UNINA9910299483603321 Advanced and Intelligent Control in Power Electronics and Drives / / **Titolo** edited by Teresa Orowska-Kowalska, Frede Blaabjerg, José Rodríguez Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2014 **ISBN** 9783319034010 3319034014 Edizione [1st ed. 2014.] Descrizione fisica 1 online resource (XX, 410 p. 284 illus., 161 illus. in color.) Collana Studies in Computational Intelligence, , 1860-949X;; 531 006.3 Disciplina Soggetti Computational intelligence Automatic control Artificial intelligence Power electronics Computational Intelligence Control and Systems Theory Artificial Intelligence Power Electronics, Electrical Machines and Networks Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Nota di bibliografia Includes bibliographical references. Part I: Advanced Power Electronic Control in Renewable Energy Sources Nota di contenuto -- Part II: Predictive Control of Power Converters and Drives -- Part III: Neuro and Nonlinear Control of Power Converters and Drives. Power electronics and variable frequency drives are continuously Sommario/riassunto developing multidisciplinary fields in electrical engineering, and it is practically not possible to write a book covering the entire area by one individual specialist. Especially by taking account the recent fast development in the neighboring fields like control theory, computational intelligence and signal processing, which all strongly influence new solutions in control of power electronics and drives. Therefore, this book is written by individual key specialist working on the area of modern advanced control methods which penetrates current implementation of power converters and drives. Although some of the presented methods are still not adopted by industry, they create new

solutions with high further research and application potential. The material of the book is presented in the following three parts: Part I: Advanced Power Electronic Control in Renewable Energy Sources (Chapters 1-4), Part II: Predictive Control of Power Converters and Drives (5-7), Part III: Neurocontrol and Nonlinear Control of Power Converters and Drives (8-11). The book is intended for engineers, researchers, and students in the field of power electronics and drives who are interested in the use of advanced control methods and also for specialists from the control theory area who like to explore new area of applications.