

1. Record Nr.	UNINA9910554834303321
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Titolo	Advanced control of doubly fed induction generator for wind power systems // Dehong Xu, Frede Blaabjerg, Wenjie Chen, Nan Zhu
Pubbl/distr/stampa	Hoboken, New Jersey : , : John Wiley & Sons, , [2018] [Piscataway, New Jersey] : , : IEEE Xplore, , [2018]
ISBN	1-119-17208-X 1-119-17207-1 1-119-17209-8
Descrizione fisica	1 online resource (489 pages)
Disciplina	621.313
Soggetti	Induction generators Induction generators - Automatic control Wind turbines - Equipment and supplies
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Front Matter -- Introduction to Wind Power Generation. Introduction -- Basics of Wind Power Generation System -- Grid Codes for Wind Power Generation Systems -- Modeling and Control of DFIG. Modeling of DFIG Wind Power Systems -- Control of DFIG Power Converters -- Operation of DFIG Under Distorted Grid Voltage. Analysis of DFIG Under Distorted Grid Voltage -- Multiple-Loop Control Of DFIG Under Distorted Grid Voltage -- Resonant Control of DFIG Under Grid Voltage Harmonics Distortion -- DFIG Under Unbalanced Grid Voltage -- Control of DFIG Wind Power System Under Unbalanced Grid Voltage -- Grid Fault Ride-Through of DFIG. Dynamic Model of DFIG Under Grid Faults -- Grid Fault Ride-Through Of DFIG -- Thermal Control of Power Converter in Normal and Abnormal Operations -- DFIG Test Bench. DFIG Test Bench.
Sommario/riassunto	Covers the fundamental concepts and advanced modeling techniques of doubly fed induction generators accompanied by analyses and simulation results Filled with illustrations, problems, models, analyses, case studies, selected simulation and experimental results, Advanced Control of Doubly Fed Induction Generator for Wind Power Systems provides the basic concepts for modeling and controlling of doubly fed

induction generator "DFIG" wind power systems and their power converters. Other topics of this book include thermal analysis of DFIG wind power converters under grid faults; implications of the DFIG test bench; advanced control of DFIG under harmonic distorted grid voltage, including multiple-loop and resonant control; modeling of DFIG and GSC under unbalanced grid voltage; the LVRT of DFIG, including the recurring faults ride through of DFIG; and more. In addition, this resource: . Explores the challenges and concerns of doubly fed induction generators "DFIG" under non-ideal grid. Discusses basic concepts of DFIG wind power system and vector control schemes of DFIG. Introduces control strategies under a non-ideal grid. Includes case studies and simulation and experimental results Advanced Control of Doubly Fed Induction Generator for Wind Power Systems is an ideal book for graduate students studying renewable energy and power electronics as well as for research and development engineers working with wind power converters.
