1. Record Nr.   UNINA9910821671903321

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   Titolo   Modeling and analysis of doubly fed induction generator wind energy
                       systems / / Lingling Fan and Zhixin Miao

   Pubbl/distr/stampa Amsterdam, [Netherlands] : , : Academic Press, , 2015
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   ISBN   0-12-802969-2

   Edizione   [1st edition]

   Descrizione fisica 1 online resource (154 p.)

   Disciplina   621.3136

   Soggetti   Induction generators - Mathematical models
                       Induction generators - Automatic control

   Lingua di pubblicazione   Inglese

   Formato   Materiale a stampa

   Livello bibliografico   Monografia

   Note generali   Description based upon print version of record.

   Nota di bibliografia   Includes bibliographical references at the end of each chapters.

   Nota di contenuto   ""Front Cover""; ""Modeling and Analysis of Doubly Fed Induction
                       Generator Wind Energy Systems""; ""Copyright""; ""Dedication"";
                       ""Chapter 1: Introduction""; ""1.1 Wind Energy Integration Issues""; ""1.2
                       Objectives of This Book""; ""1.3 Structure of the Book""; ""References"";
                       ""Chapter 2: AC Machine Modeling""; ""2.1 Space Vector and Complex
                       Vector Explanation""; ""2.1.1 Examples of Space Vector""; ""2.2
                       Derivation of an Induction Machine Modeling in Space Vector and
                       Complex Vector""; ""2.2.1 Induction Machine Modeling in Space
                       Vector""; ""2.2.1.1 Per Unit System""
                       ""2.2.2 Induction Machine Modeling in Complex Vector""""2.2.2.1 Model
                       in Per-Unit System""; ""2.2.3 Swing Equation""; ""2.3 DFIG Modeling"";
                       ""2.3.1 Wind Turbine Aerodynamics Model""; ""2.4 Examples""; ""2.4.1
                       Example 1: Free Acceleration""; ""2.4.1.1 Induction Machine Simulink
                       Model""; ""2.4.2 Example 2: DFIG Stator Voltage Drop""; ""References"";
                       ""Chapter 3: Modeling of Doubly Fed Induction Generation (DFIG)
                       Converter Controls""; ""3.1 Rotor Flux-Oriented Induction Machine
                       Control""; ""3.1.1 Torque/Flux Control""; ""3.1.2 Inner Current
                       Control""; ""3.2 DFIG Rotor Side Converter Control""
                       ""3.2.1 Outer Control""""3.2.2 Inner Current Control""; ""3.2.3 Maximum
                       Power Point Tracking""; ""3.3 GSC Control""; ""3.3.1 Outer Control"";
                       ""3.3.2 Inner Current Control""; ""3.4 Complete DFIG Modeling Blocks"";
                       ""3.5 Examples""; ""3.5.1 Example 1: PSCAD Simulation of a Two-Level

Sommario/riassunto	Wind Energy Systems: Modeling, Analysis and Control with DFIG provides key information on machine/converter modelling strategies based on space vectors, complex vector, and further frequency-domain variables. It includes applications that focus on wind energy grid integration, with analysis and control explanations with examples. For those working in the field of wind energy integration examining the potential risk of stability is key, this edition looks at how wind energy is modelled, what kind of control systems are adopted, how it interacts with the grid, as well as suitable study approaches. Not only giving principles behind the dynamics of wind energy grid integration system, but also examining different strategies for analysis, such as frequency-domain-based and state-space-based approaches. Focuses on real and reactive power control Supported by PSCAD and Matlab/Simulink examples Considers the difference in control objectives between ac drive systems and grid integration systems