DESCRIPTION

A comprehensive reference of the latest developments in MV drive technology in the area of power converter topologies

This new edition reflects the recent technological advancements in the MV drive industry, such as advanced multilevel converters and drive configurations. It includes three new chapters, Control of Synchronous Motor Drives, Transformerless MV Drives, and Matrix Converter Fed Drives. In addition, there are extensively revised chapters on Multilevel Voltage Source Inverters and Voltage Source Inverter-Fed Drives. This book includes a systematic analysis on a variety of high-power multilevel converters, illustrates important concepts with simulations and experiments, introduces various megawatt drives produced by world leading drive manufacturers, and addresses practical problems and their mitigations methods. This new edition:

• Provides an in-depth discussion and analysis of various control schemes for the MV synchronous motor drives

• Examines new technologies developed to eliminate the isolation transformer in the MV drives

• Discusses the operating principle and modulation schemes of matrix converter (MC) topology and multi-module cascaded matrix converters (CMCs) for MV drives, and their application in commercial MV drives

Bin Wu is a Professor and Senior NSERC/Rockwell Automation Industrial Research Chair in Power Electronics and Electric Drives at Ryerson University, Canada. He is a fellow of Institute of Electrical and Electronics Engineers (IEEE), Engineering Institute of Canada (EIC), and Canadian Academy of Engineering (CAE). Dr. Wu has published more than 400 papers and holds more than 30 granted/

**Mehdi Narimani** is a Postdoctoral Research Associate with the Department of Electrical and computer Engineering at Ryerson University, Canada, and Rockwell Automation Canada. He is a senior member of IEEE. Dr. Narimani is author/co-author of more than 50 technical papers and four US/European patents (issued/pending review). His current research interests include power conversion, high power converters, control of power electronics, and renewable energy systems.

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**ABOUT THE AUTHOR**

**Bin Wu** is a Professor and Senior NSERC/Rockwell Automation Industrial Research Chair in Power Electronics and Electric Drives at Ryerson University, Canada. He is a fellow of Institute of Electrical and Electronics Engineers (IEEE), Engineering Institute of Canada (EIC), and Canadian Academy of Engineering (CAE). Dr. Wu has published more than 400 papers and holds more than 30 granted/pending US/European patents. He co-authored several books including Power Conversion and Control of Wind Energy Systems and Model Predictive Control of Wind Energy Conversion Systems (both by Wiley-IEEE Press).

**Mehdi Narimani** is an Assistant Professor at the Department of Electrical and Computer Engineering at McMaster University, Canada. He is a senior member of IEEE. Dr. Narimani has published more than 55 journal and conference proceeding papers, and holds more than four issued/pending US/European patents. His current research interests include power conversion, high–power converters, control of power electronics, and renewable energy systems.

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