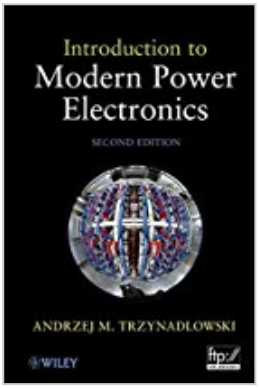

Introduction to Modern Power Electronics

By Andrzej M. Trzynadlowski

Introduction to Modern Power Electronics By Andrzej M. Trzynadlowski

A Thorough Overview of the Tools and Techniques of Modern Power Electronics—Now Fully Updated

Over the past decade, the field of power electronics has seen a surge of new trends and novel applications—from the growing significance of PWM rectifiers and multilevel inverters to the widespread use of power converters in electric and hybrid vehicles and renewable energy systems. This new edition of *Introduction to Modern Power Electronics* provides comprehensive coverage of everything from the basic principles and methods of electronic power conversion to the latest developments in the field.

More concise and user-friendly than other textbooks on the subject, this streamlined guide presents essential material that can be covered easily in a one-semester course. It defines the basic types of power conversion and control, presents the electronic converters that process power for a variety of applications, and describes the various semiconductor power switches and complimentary components and systems of the converters. This *Second Edition* also features:

- In-depth discussions of all power conversion types: ac-to-dc, ac-to-ac, dc-to-dc, and dc-to-ac
- An overview of advanced control methods used in today's power electronic converters
- A new chapter on the applications of power electronics in clean energy systems
- An extensive body of examples, exercises, computer assignments, and simulations
- An Instructor's Manual with solutions to all problems

In addition, a companion set of forty-eight PSpice text files of typical power conversion circuits is available online, constituting a virtual laboratory of power electronics. This valuable teaching tool contains models of most of the converters covered in the book, giving students the opportunity to tinker with the converters and see how they actually work.

Ideal for undergraduate students specializing in electrical engineering, industrial engineering, or renewable energy, *Introduction to Modern Power Electronics* is also a handy reference tool for graduate students and practicing engineers.

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Editorial Review

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