

Control of power electronic converters and systems book pdf

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I. Iravani, Reza, 1955- II. Title. The concept of electronic (static) power conversion has gained widespread acceptance in power system applications. As such, electronic power converters are increasingly employed for power conversion and conditioning, compensation, and active filtering.

Control of Power Electronic Converters and Systems, Volume 3, explores emerging topics in the control of power electronics and converters, including the theory behind control, and the practical operation, modeling, and control of basic power system models. This book introduces the most important controller design methods, including both analog and digital procedures.

electronics industry has developed, various families of power electronic converters have evolved, often linked by power level, switching devices, and topological origins. The process of switching the electronic devices in a power electronic converter from one state to another is called modulation, and the

Control of Power Electronic Converters and Systems examines the theory behind power electronic converter control, including operation, modeling and control of basic converters. The book explores how to manipulate components of power electronics converters and systems to produce a desired effect by controlling system variables.

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This book aims to serve two purposes: (1) to give a basic, introductory knowledge of the digital control techniques applied to power converters; and (2) to raise the interest for discrete time control theory, stimulating new developments in its application to switching power converters.

Contents Author Biographies xv Preface xvii Acknowledgments xxi 1 Introduction 1 1.1 Introduction to Power Electronics 4 1.2 Power Converter Modes of Operation 7 1.3 Power Converter Topologies 9 1.4 Harmonics and Filters 10 1.5 Power Converter Operating Conditions, Modelling, and Control 12 1.6 Control of Power Electronic Systems 14 1.6.1 Open-loop Versus ...

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DC/AC Half-Bridge Converter 23.

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