Bimbhra Power Electronics Khanna

Thyristorised Power Controllers
Power Electronics
Proceedings of 2nd International Conference on Intelligent Computing and Applications
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Power Electronics and Renewable Energy Systems
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HULL MILES

Thyristorised Power Controllers New Age International
Offers key concepts of electrical machines embedded with solved examples, review questions, illustrations and open book questions.
Power Electronics Technical Publications
Written in plain language, Fundamentals of Power Electronics sets forth the basic principles of power electronics. Starting with the various types of devices, protection, and series and parallel operation of silicon controlled rectifiers, it details all the aspects of power electronics essential to building a strong foundation for the further study and practice of industrial or power electronics engineering. The author devotes considerable attention to a wide variety of applications, from AC and DC motors, heating, and welding to HVDC transmission and thyristor controlled electrical drives. Fundamentals of Power Electronics is filled with diagrams that clarify the concepts presented. Each chapter includes sections containing numerous examples and short questions with answers. An appendix furnishes a series of power electronics experiments that explore SCR characteristics, UJT firing circuits, voltage and current commutation, triac characteristics, and the RC triggering scheme of SCR.
Proceedings of 2nd International Conference on Intelligent Computing and Applications Pearson Education India
This book comprises the refereed proceedings of the International Conference, AIM/CCPE 2012, held in Bangalore, India, in April 2012. The papers presented were carefully reviewed and selected from numerous submissions and focus on the various aspects of research and development activities in computer science, information technology, computational engineering, mobile communication, control and instrumentation, communication system, power electronics and power engineering.
Power Electronics Springer
Special Features: · Power semiconductor devices are viewed from the physics, circuit, modeling and thermal viewpoints for a better understanding of the devices.· AC-DC, DC-DC, DC-AC converters and magnetic devices are treated from both the conceptual and design perspectives.· A separate chapter is included that addresses the analysis and design of linear regulators.· A chapter is included to address the modeling methods to obtain dynamic models of power electronics systems. The method of bond graph is introduced for modeling power electronics systems.· The design of discrete domain controllers in both classical and state space approach are included which addresses the needs of power electronic systems.· Optimal and robust control design methods as applied to power electronics systems are addressed.· Discrete numerical algorithms for digital implementation with respect to power electronics systems are addressed in a separate chapter.· A separate chapter is devoted to the thermal aspects like heat sink sizing for power electronics systems.· Design integration by specifying and designing for reliability with power electronics system examples is another unique feature of this book. · The appendices include the following:o Derivation of the area product for a saturable-core transformer.o Representative

list of commonly used core types and their physical parameters.o Representative list of commonly used wire gauges.o Laplace transforms and z-transforms of few time domain signals.o List of specifications for the induction motor used for controller design.o Description of all the object parameters for various electronic components from the reliability prediction viewpoint. Pedagogy includes:o 600+ illustrations and line diagrams.o 480+ descriptive questions.o 440+ objective questions.o 200+ unsolved problems.o 50+ explanatory examples and solved problems.Companion CD contains:· Reliability prediction toolbox· Bond graph simulation toolbox· Several circuit and design examples About The Book: This book on power electronics spans a wide knowledge base such as power devices, drives, circuit topologies, magnetics, system modeling, control configurations, digital processing, thermal and reliability aspects. The book has been broadly divided into two types of topics viz. (a) circuit-oriented aspects and (b) system-oriented aspects. The first seven chapters deal with circuit-oriented aspects of power electronics systems and the remaining chapters deal with system-oriented aspects like controls and reliability.

Cyber-Physical Microgrids KHANNA PUBLISHING HOUSE

Maintaining a stable level of power quality in the distribution network is a growing challenge due to increased use of power electronics converters in domestic, commercial and industrial sectors. Power quality deterioration is manifested in increased losses; poor utilization of distribution systems; mal-operation of sensitive equipment and disturbances to nearby consumers, protective devices, and communication systems. However, as the energy-saving benefits will result in increased AC power processed through power electronics converters, there is a compelling need for improved understanding of mitigation techniques for power quality problems. This timely book comprehensively identifies, classifies, analyses and quantifies all associated power quality problems, including the direct integration of renewable energy sources in the distribution system, and systematically delivers mitigation techniques to overcome these problems. Key features: • Emphasis on in-depth learning of the latest topics in power quality extensively illustrated with waveforms and phasor diagrams. • Essential theory supported by solved numerical examples, review questions, and unsolved numerical problems to reinforce understanding. • Companion website contains solutions to unsolved numerical problems, providing hands-on experience. Senior undergraduate and graduate electrical engineering students and instructors will find this an invaluable resource for education in the field of power quality. It will also support continuing professional development for practicing engineers in distribution and transmission system operators.

Power Electronics (5th Edition) Springer Nature

Describes the complete performance details of solid state devices of the thyristor group including GTOs and transistor family along with problems and solutions associated with their operation. Presents both theoretical and mathematical aspects of all types of thyristor converters, stipulating the thermal design for their effective utilization plus mathematical analysis. Contains a variety of numerical examples, scores of worked examples, review and multiple choice questions.

Power Electronics CRC Press

This book covers the introduction, theory, development, and applications of hybrid and electric vehicles and their charging infrastructures. It also discusses the real applications of power converters and electric drives to give the readers a flavour of how to design propulsion drives and fast charging systems for electric vehicles. It further covers important topics such as static and dynamic wireless charging systems, battery management, and battery swapping systems for electric vehicles. This book: Presents comprehensively different types of electric vehicles and their powertrain architecture. Highlights modern optimization techniques such as genetic algorithms, simulated annealing, particle swarm optimization, and ant colony optimization. Discusses different charging methods such as wired and wireless for a variety of batteries including lead acid, lithium-ion, and vanadium redox. Covers grid-to-vehicle, vehicle-to-grid, and vehicle-to-vehicle bidirectional power flow analysis. Showcases power 2X technologies such as power-to-ammonia, power-to-chemicals, power-to-fuel, power-to-gas, and power-to-hydrogen. The text is primarily written for senior undergraduate and graduate students as well as academic researchers in the fields of electrical engineering, electronics, and communications engineering.

Electric Vehicle Propulsion Drives and Charging Systems Springer Nature

Electrical Engineering Projects| Electronics Engineering Projects| Other Engineering Projects

Electrical Machines McGraw-Hill Companies

This book is written so that it serves as a text book for B.E./B.Tech degree students in general and for the institutions where AICTE model curriculum has been adopted. TOPICS COVERED IN THIS BOOK:- Magnetic field and Magnetic circuit Electromagnetic force and torque D.C. Machines D.C. Machines-Motoring and Generation SALIENT FEATURES:- Self-contained, self-explantary and simple to follow text. Numerous worked out examples. Well Explained theory parts with illustrations. Exercises, objective type question with answers at the end of each chapter.

Projects in Electrical, Electronics, Instrumentation and Computer Engineering @ ** Alpha Science International, Limited

This book discusses key concepts, challenges and potential solutions in connection with established and emerging topics in advanced computing, renewable energy and network communications. Gathering edited papers presented at MARC 2018 on July 19, 2018, it will help researchers pursue and promote advanced research in the fields of electrical engineering, communication, computing and manufacturing.

Power Electronics and Renewable Energy Systems CRC Press

The All-in-one Electronics Simplified is comprehensive treatise on the whole gamut of topics in Electronics in Q &A format. The book is primarily intended for undergraduate students of Electronics Engineering and covers six major subjects taught at the undergraduate level students of Electronics Engineering and covers six major subjects taught at the undergraduate level including Electronic Devices and Circuits, Network Analysis , Operational Amplifiers and Linear Integrated Circuits, Digital Electronics, Feedback and Control Systems and Measurements and Instrumentation. Each of the thirty chapters is configured as the Q&A part followed by a large number of Solved Problems. A comprehensive Self-Evaluation Exercise comprising multiple choice questions and other forms of objective type exercises concludes each chapter.

Electronic Tap-changer for Distribution Transformers Springer

This text provides an introduction to the field of power electronics, emphasizing real-world applications. It covers topics such as: power quality and vector control; power semiconductor devices; multiphase choppers and PWM inverters; and adjustable speed AC and DC motor drives.

Applications of Computing, Automation and Wireless Systems in Electrical Engineering KHANNA PUBLISHING HOUSE

About the Book: Electrical power system together with Generation, Distribution and utilization of Electrical Energy by the same author cover almost six to seven courses offered by various universities under Electrical and Electronics Engineering curriculum. Also, this combination has proved highly successful for writing competitive examinations viz. UPSC, NTPC, National Power Grid, NHPC, etc.

POWER ELECTRONICS: ESSENTIALS & APPLICATIONS (With CD) Cambridge University Press

A comprehensive treatment of the subject of power electronics is provided in this book. It deals with the principles of operation of various thyristorised power controllers systematically, and explains the important basic concepts for a beginner. For advanced readers and practising engineers it covers many topics such as static reactive power compensation, power factor control, current source inverter, time-sharing inverter, multiphase chopper and harmonic control in PWM inverters.

Electrical Machines-I Vikas Publishing House

This textbook provides students with an overview of cyber-physical microgrid networks and an in-depth introduction to photovoltaics, batteries, flywheel, supercapacitor, micro-turbines, wind generation, power-electronic interfaces, modeling and stability analysis of microgrids, and cyber-communication networks and security. The text helps upper-level undergraduate and graduate students gain a foundational understanding of microgrids and renewable energy, and offers an introduction to the frontier of theoretical research and practical applications of cyber-physical systems, paving the way to uncover and understand the operational mechanism of cyber-physical microgrids. The book includes examples and test systems throughout for problem-solving and will be an essential resource for students, researchers, and professionals in power engineering.

Power Electronics Springer

Second International Conference on Intelligent Computing and Applications was the annual research conference aimed to bring together researchers around the world to exchange research results and address open issues in all aspects of Intelligent Computing and Applications. The main objective of the second edition of the conference for the scientists, scholars, engineers and students from the academia and the industry is to present ongoing research activities and hence to foster research relations between the Universities and the Industry. The theme of the conference unified the picture of contemporary intelligent computing techniques as an integral concept that highlights the trends in computational intelligence and bridges theoretical research concepts with applications. The conference covered vital issues ranging from intelligent computing, soft computing, and communication to machine learning, industrial automation, process technology and robotics. This conference also provided variety of opportunities for the delegates to exchange ideas, applications and experiences, to establish research relations and to find global partners for future collaboration.

Power Electronics: Circuits, Devices, and Application (for Anna University) New Age International

"Power Electronics is intended as an introduction to the basic theory and practice of modern power electronics and in particular with the application of power electronics theory for d.c and a.c motor control." "This book not only contains teaching material on physical principles of electronic devices, but also the circuit applications of controlled rectifiers, inverters, d.c. choppers, cycloconverters, switch-mode power supply along with practical aspects relating to application of power electronics to d.c motor and a.c motor speed control." "This text is suitable for UG and postgraduate programmes in power electronics and drives in the disciplines of Electrical Engineering, Electronics and Communication Engineering and Instrumentation and Control Engineering."--BOOK JACKET.

Textbook Power Electronics Industrial PHI Learning Pvt. Ltd.

Construction as an industry sector is responsible for around one-third of the total world-wide energy usage, and about 20% of greenhouse gas emissions. The rise in number of buildings and floor space area for both residential and commercial purposes has imposed enormous pressure on existing sources of energy. Implementations like efficient usage of building energy systems, design measures, utilization of local energy resources, energy storage and renewable energy sources for meeting electricity demand are currently under development and deployment to improve the energy performance index. However, integrating all such measures and evaluation of developed nearly zero-energy and zero-emission buildings is yet to be explored. In this book, different control techniques together with intelligent building technology used to improve the energy performance of buildings have been illustrated. Every building energy control system has a two-fold objective for energy and comfort requirements to achieve a high comfort index (for thermal, visual, air quality, humidity and various plug loads) and to increase the energy performance index. The most significant aspect of the design of buildings' energy control system is modelling. All the components, methodologies and processes involved in developing a renewable energy-driven building are covered in detail. This book is intended for graduates and professionals working towards the development of sustainable built environment using renewable energy sources.

Power Electronics S. Chand Publishing

The book includes peer-reviewed papers of the International Conference on Sustainable Technology and Advanced Computing in Electrical Engineering (ICSTACE 2021). The main focus of the book is electrical engineering. The conference aims to provide a global platform to the researchers for sharing and showcasing their discoveries/findings/innovations. The book focuses on the areas related to sustainable development and includes research works from academicians and industry experts. The book discusses new challenges and provides solutions at the interface of technology, information, complex systems, and future research directions.

Power Quality Penram International Publishing (India) Pvt. Ltd.

With this revised edition we aim to present a text on Power Electronics for the UG level which will provide a comprehensive coverage of converters, choppers, inverters and motor drives. All this, with a rich pedagogy to support the conceptual understanding and integral use of PSPICE.