

Power Electronics Khanchandani And Singh

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 Information and Communication Technology for Competitive Strategies (ICTCS 2020)
 Power Electronics: Circuits, Devices & Industrialapplications
 Power Electronics
 Power Electronics
 Proceeding of International Conference on Intelligent Communication, Control and Devices
 Power Electronics Handbook
 Power Quality
 Advances in Power Systems and Energy Management
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TALAN SANFORD

Fundamentals of Power Electronics McGraw-Hill Companies

This book is a collection of research articles and critical review articles, describing the overall approach to energy management. The book emphasizes the technical issues that drive energy efficiency in context of power systems. This book contains case studies with and without solutions on modelling, simulation and optimization techniques. It covers some innovative topics such as medium voltage (MV) back-to-back (BTB) system, cost optimization of a ring frame unit in textile industry, rectenna for radio frequency (RF) energy harvesting, ecology and energy dimension in infrastructural designs, 2.4 kW three-phase inverter for aircraft application, study of automatic generation control (AGC) in a two area hydrothermal power system, energy-efficient and reliable depth-based routing protocol for underwater wireless sensor network, and power line communication using LabVIEW. This book is primarily targeted at researchers and senior graduate

students, but is also highly useful for the industry professional and scientists.

Power Electronics CRC Press

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:· Derivation of the area product for a saturable-core transformer.· Representative list of commonly used core types and their physical parameters.· Representative list of commonly used wire gauges.· Laplace transforms and z-transforms of few time domain signals.· List of specifications for the induction motor used for controller design.· Description of all the object parameters for various electronic components from the reliability prediction viewpoint. Pedagogy includes:· 600+ illustrations and line diagrams.· 480+ descriptive questions.· 440+ objective questions.· 200+ unsolved problems.· 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.

Emerging ICT for Bridging the Future - Proceedings of the 49th Annual Convention of the Computer Society of India (CSI) Volume 1 Springer

This book contains the best selected research papers presented at ICTCS 2020: Fifth International Conference on Information and Communication Technology for Competitive Strategies. The conference was held at Jaipur, Rajasthan, India, during 11–12 December 2020. The book covers state-of-the-art as well as emerging topics pertaining to ICT and effective strategies for its implementation for engineering and managerial applications. This book contains papers mainly focused on ICT for computation, algorithms and data analytics, and IT security.

Power Electronics PHI Learning Pvt. Ltd.

This book gathers selected research papers presented at the International Conference on Power, Control and Communication Infrastructure 2019 (ICPCCI 2019), organized by the Institute of Infrastructure, Technology, Research and Management (IITRAM), Ahmedabad, Gujarat, India, on July 4–5, 2019. It highlights the latest advances, trends and challenges in electrical power generation-integration-transmission-distribution-conversion-storage-control, electrical machines, power quality, energy management, electrical infrastructure of future grids-buildings-cities-transportation, energy conversion, plasma technology, renewable energy & grid integration, energy storage systems, power electronic converters, power system protection & security, FACTS and HVDC, power quality, power system operation & control, computer applications in power systems, energy management, energy policies & regulation, power & energy education, restructured power system, future grids, buildings, cities & resiliency, microgrids, electrical machines & drives, transportation electrification, optimal operation, electricity-gas-water coordination, condition monitoring & predictive maintenance of electric equipment, and asset management. The solutions discussed here will encourage and inspire researchers, industry professionals and policymakers to put these methods into practice.

Power Electronics PHI Learning Pvt. Ltd.

Power semiconductor devices are discussed in first chapter. SCR, GTO, LASCR, RCT, MCT, characteristics, rating turn-off and turn-on is presented. Power BJT, MOSFET, IGBT, driving circuits, protection and snubber circuits are also discussed. Commutation circuits and series and parallel operation are presented. Single and three phase controlled converters are given in second chapter. Half wave, full wave, midpoint, semiconverters, full converters, dual converters and effect of source inductance is also given. Operation with resistive and inductive load is discussed. Third chapter presents AC voltage controllers and cycloconverters. On-off control, phase control, triac based controllers are given. Cycloconverters and operations with inductive as well as resistive load are discussed. Choppers are given in fourth chapter. Step down, step up, voltage, current and load commutated choppers are given. Classification is also discussed. Last chapter presents inverters. Half bridge, full bridge, quasi square wave, push-pull, thyristorized inverters with resistive and inductive loads are given. Switching techniques for PWM inverters are also given.

Power Electronics GRIN Verlag

Professorial Dissertation from the year 2014 in the subject Electrotechnology, grade: Master, Hohai University, course: Power Electronics, language: English, abstract: The main study innovation-objective of this thesis is to develop a novel high-efficiency battery charger with ZCS PWM buck topology which has simple circuit structure, low switching losses, easy control and high charging efficiencies. Beside, this project is about to investigate the action of efficient performance in charging shaping to gain the high output charging efficiency of the battery charger.

Advanced Power Electronics Converters for Future Renewable Energy Systems Springer Science & Business Media

Market_Desc: · Electrical Engineering Students · Electrical Engineering Instructors · Power Electronics Engineers Special Features: · Easy to follow step-by-step in depth treatment of all the theory. · Computer simulation chapter describes the role of computer simulations in power electronics. Examples and problems based on Pspice and MATLAB are included. · Introductory chapter offers a review of basic electrical and magnetic circuit concepts. · A new CD-ROM contains the following: · Over 100 of new problems of varying degrees of difficulty for homework assignments and self-learning. · PSpice-based simulation examples, which illustrate basic concepts and help in design of converters. · A newly-developed magnetic component design program that demonstrates design trade-offs. · PowerPoint-based slides, which will improve the learning experience and the ease of using the book About The Book: The text includes cohesive presentation of power electronics fundamentals for applications and design in the power range of

500 kW or less. It describes a variety of practical and emerging power electronic converters made feasible by the new generation of power semiconductor devices. Topics included in this book are an expanded discussion of diode rectifiers and thyristor converters as well as chapters on heat sinks, magnetic components which present a step-by-step design approach and a computer simulation of power electronics which introduces numerical techniques and commonly used simulation packages such as PSpice, MATLAB and EMTP.

Power Semiconductor Drives S. Chand Publishing

I May observed that recent developments in power electronics have proceeded in two different directions, namely, low power range power supplies using high frequency PWM technique and medium to high power range energy control systems to serve specific Purpose.

A Novel Battery Charger System & Appended ZCS (PWM) Resonant Converter Dc-Dc Buck Springer

The book presents high-quality research papers presented at the first international conference, ICICCD 2016, organised by the Department of Electronics, Instrumentation and Control Engineering of University of Petroleum and Energy Studies, Dehradun on 2nd and 3rd April, 2016. The book is broadly divided into three sections: Intelligent Communication, Intelligent Control and Intelligent Devices. The areas covered under these sections are wireless communication and radio technologies, optical communication, communication hardware evolution, machine-to-machine communication networks, routing techniques, network analytics, network applications and services, satellite and space communications, technologies for e-communication, wireless Ad-Hoc and sensor networks, communications and information security, signal processing for communications, communication software, microwave informatics, robotics and automation, optimization techniques and algorithms, intelligent transport, mechatronics system, guidance and navigation, algorithms, linear/non-linear control, home automation, sensors, smart cities, control systems, high performance computing, cognition control, adaptive control, distributed control, prediction models, hybrid control system, control applications, power system, manufacturing, agriculture cyber physical system, network control system, genetic control based, wearable devices, nano devices, MEMS, bio-inspired computing, embedded and real-time software, VLSI and embedded systems, FPGA, digital system and logic design, image and video processing, machine vision, medical imaging, and reconfigurable computing systems.

Power Electronic Converters Springer

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.

Power Electronics KHANNA PUBLISHING HOUSE

This volume contains 73 papers presented at CSI 2014: Emerging ICT for Bridging the Future: Proceedings of the 49th Annual Convention of Computer Society of India. The convention was held during 12–14, December, 2014 at Hyderabad, Telangana, India. This volume contains papers mainly focused on Fuzzy Systems, Image Processing, Software Engineering, Cyber Security and Digital Forensic, E-Commerce, Big Data, Cloud Computing and ICT applications.

POWER ELECTRONICS New Age International

Provides a step-by-step method for the development of a virtual interactive power electronics laboratory. The book is suitable for undergraduates and graduates for their laboratory course and projects in power electronics. It is equally suitable for professional engineers in the power electronics industry. The reader will learn to develop interactive virtual power electronics laboratory and perform simulations of their own, as well as any given power electronic converter design using SIMULINK with advanced system model and circuit component level model. Features Examples and Case Studies included throughout. Introductory simulation of power electronic converters is performed using either PSIM or MICROCAP Software. Covers interactive system model developed for three phase Diode Clamped Three Level Inverter, Flying Capacitor Three Level Inverter, Five Level Cascaded H-Bridge Inverter, Multicarrier Sine Phase Shift PWM and Multicarrier Sine Level Shift PWM. System models of power electronic converters are verified for performance using interactive circuit component level models developed using Simscape-Electrical, Power Systems and Specialized Technology block set. Presents software in the loop or Processor in the loop simulation with a power electronic converter examples.

Modern Power Electronics Springer

Power electronics, which is a rapidly growing area in terms of research and applications, uses modern electronics technology to convert electric power from one form to another, such as ac-dc, dc-dc, dc-ac, and ac-ac with a variable output magnitude and frequency. Power electronics has many applications in our every day life such as air-conditioners, electric cars, sub-way trains, motor drives, renewable energy sources and power supplies for computers. This book covers all aspects of switching devices, converter circuit topologies, control techniques, analytical methods and some examples of their applications. * 25% new content * Reorganized and revised into 8 sections comprising 43 chapters * Coverage of numerous applications, including uninterruptable power supplies and automotive electrical systems * New content in power generation and distribution, including solar power, fuel cells, wind turbines, and flexible transmission

Power Electronics with MATLAB Cambridge University Press

"Discusses the essential concepts of power electronics through MATLAB examples and simulations"--

Power Electronics CRC Press

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.

Proceedings of the International Conference on Intelligent Systems and Signal Processing Alpha Science Int'l Ltd.

This book describes the techniques for control of DC and AC motors. It presents a brief introduction of solid state power control techniques and power semiconductor devices. It also describes firing and commutation circuits, AC to AC voltage control techniques, DC to DC choppers, and DC to AC inverters.

Thyristorised Power Controllers Springer

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 Tata McGraw-Hill Education

The book is primarily intended for B.E./B.Tech. students of Electrical Engineering/Electrical and Electronics Engineering having courses in Electric Drives/Power Semiconductor Drives. It will also be highly useful for M.E./M.Tech. students of these disciplines specializing in Power Electronics/Industrial Drives/Electric Drives. The text is divided into eight chapters. The first two chapters cover the control of dc motors by using various kinds of converters. The third chapter focuses on dual converters and various braking techniques. Chopper control fed dc motors are discussed in the fourth chapter. The next three chapters are devoted to control methods for induction motors. The eighth chapter deals with the control of synchronous motor drives fed from VSI converters and cycloconverters.

Systems Thinking Approach for Social Problems Vikas Publishing House

This book constitutes the refereed proceedings of the Second International Conference on Advances in Power Electronics and Instrumentation Engineering, PEIE 2011, held at Nagpur, India,

in April 2011. The 9 revised full papers presented together with 4 short papers and 7 poster papers were carefully reviewed and selected from numerous submissions. The papers address current issues in the field of power electronics, communication engineering, instrumentation engineering, digital electronics, electrical power engineering, electrical machines, information technology, control systems, and the like.

Electronic Measurements and Instrumentation Springer Nature

Best Sellers - Books :

- [The Seven Husbands Of Evelyn Hugo: A Novel](#)
- [Feel-good Productivity: How To Do More Of What Matters To You By Ali Abdaal](#)
- [Our Class Is A Family \(our Class Is A Family & Our School Is A Family\)](#)
- [Twisted Lies \(twisted, 4\)](#)
- [Happy Place By Emily Henry](#)
- [Young Forever: The Secrets To Living Your Longest, Healthiest Life \(the Dr. Hyman Library, 11\)](#)
- [Things We Never Got Over \(knockemout\) By Lucy Score](#)
- [Remarkably Bright Creatures: A Read With Jenna Pick](#)
- [Jackie: Public, Private, Secret By J. Randy Taraborrelli](#)
- [Things We Hide From The Light \(knockemout Series, 2\) By Lucy Score](#)

This book narrates an assessment of numerous advanced power converters employed on primitive phase to enhance the efficiency of power translation pertaining to renewable energy systems. It presents the mathematical modelling, analysis, and control of recent power converters topologies, namely, AC/DC, DC/DC, and DC/AC converters. Numerous advanced DC-DC Converters, namely, multi-input DC-DC Converter, Cuk, SEPIC, Zeta and so forth have been assessed mathematically using state space analysis applied with an aim to enhance power efficiency of renewable energy

systems. The book: Explains various power electronics converters for different types of renewable energy sources Provides a review of the major power conversion topologies in one book Focuses on experimental analysis rather than simulation work Recommends usage of MATLAB, PSCAD, and PSIM simulation software for detailed analysis Includes DC-DC converters with reasonable peculiar power rating This book is aimed at researchers, graduate students in electric power engineering, power and industrial electronics, and renewable energy.