

3 Phase Bldc Motor With Hall Sensors And Speed Closed Loop

This book presents the select proceedings of the International Conference on Automation, Instrumentation and Control (i-CASIC) 2020. The book mainly focuses on emerging technologies in electrical systems, IoT-based instrumentation, advanced industrial automation and advanced image and signal processing. It also includes studies on the analysis, design and implementation of instrumentation systems, and high-accuracy and energy-efficient control. The contents of this book will be useful for beginners, researchers as well as professionals interested in instrumentation and control, and other allied fields.

This book includes best selected, high-quality research papers presented at the International Conference on Intelligent Manufacturing and Energy Sustainability (ICIMES 2020) held at the Department of Mechanical Engineering, Malla Reddy College of Engineering & Technology (MRCET), Maisammaguda, Hyderabad, India, during August 21-22, 2020. It covers topics in the areas of automation, manufacturing technology and energy sustainability and also includes original works in the intelligent systems, manufacturing, mechanical, electrical, aeronautical, materials, automobile, bioenergy and energy sustainability.

The proceedings covers advanced and multi-disciplinary research on design of smart control and informatics. The theme of the book broadly focuses on various innovation paradigms, system knowledge, intelligence and sustainability that may be applied to provide realistic

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solution to varied problems in society, environment and industries. The volume publishes work pertaining to the scope of the conference which is extended towards deployment of emerging computational and knowledge transfer approaches, optimizing solutions in various disciplines of science, technology and healthcare.

This book constitutes the refereed proceedings of the 52nd Annual Convention of the Society of India, CSI 2017, held in Kolkata, India, in January 2018. The 59 revised papers presented were carefully reviewed and selected from 157 submissions. The theme of CSI 2017, Social Transformation – Digital Way, was selected to highlight the importance of technology to both central and state governments at their respective levels to achieve doorstep connectivity with its citizens. The papers are organized in the following topical sections: Signal processing; microwave and communication engineering; circuits and systems; data science and data analytics; bio computing; social computing; mobile, nano, quantum computing; data mining; security and forensics; digital image processing; and computational intelligence.

Micro-Electronics and Telecommunication Engineering

Selected Papers from the 2011 International Conference on Electric and Electronics (E&E 2011) in Nanchang, China on June 20-22, 2011, Volume 1

Energy Efficiency in Electric Motors, Drives, Power Converters and Related Systems
Fundamentals, Theory, and Design, Second Edition

Sensorless Field Oriented Control (FOC) for a 3-phase BLDC Motor

AsiaSim 2014

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Advances in Power Systems and Energy Management

This book covers the complete syllabi prescribed for undergraduate courses in electrical, electronics, mechanical and instrumentation engineering offered by various Indian universities. The objective of this text is to provide thorough knowledge in the emerging field of special electrical machines. It discusses the stepper motor, switched reluctance motor, permanent magnet dc and ac motors, brushless dc motors, single phase special electric motors, servomotors, linear electric machines and permanent magnet axial flux machines. Key Features • Chapter on permanent magnet axial flux machines (not available in other Indian authors' books) • Numerous worked-out examples • Based on classroom tested materials • Simplified mathematical analysis Besides undergraduate students, the book will also be useful to the postgraduate students specialising in drives and control, power electronics, control systems and mechatronics. This reference acquaints professionals with trends and

challenges in the development of more electric vehicles (MEVs) using detailed examples and comprehensive discussions on advanced MEV power system architectures, characteristics, and dynamics. The book focuses on real-world applications and highlights issues related to system stability, as well as challenges faced during and after implementation. Heralding a new wave of advances in power system technology, Vehicular Electric Power Systems probes innovations in the development of more electric vehicles for improved maintenance, support, endurance, safety, and cost-efficiency in automotive, aerospace, and marine vehicle engineering. The hard disk drive is one of the finest examples of the precision control of mechatronics, with tolerances less than one micrometer achieved while operating at high speed. Increasing demand for higher data density as well as disturbance-prone operating environments continue to test designers' mettle. Explore the challenges presented by modern hard disk drives and learn how to overcome them with Hard Disk Drive: Mechatronics and Control. Beginning with an

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overview of hard disk drive history, components, operating principles, and industry trends, the authors thoroughly examine the design and manufacturing challenges. They start with the head positioning servomechanism followed by the design of the actuator servo controller, the critical aspects of spindle motor control, and finally, the servo track writer, a critical technology in hard disk drive manufacturing. By comparing various design approaches for both single- and dual-stage servomechanisms, the book shows the relative pros and cons of each approach. Numerous examples and figures clarify and illustrate the discussion. Exploring practical issues such as models for plants, noise reduction, disturbances, and common problems with spindle motors, Hard Disk Drive: Mechatronics and Control avoids heavy theory in favor of providing hands-on insight into real issues facing designers every day.

Electric Motor Control: DC, AC, and BLDC Motors introduces practical drive techniques of electric motors to enable stable and efficient control of many application systems,

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also covering basic principles of high-performance motor control techniques, driving methods, control theories and power converters. Electric motor drive systems play a critical role in home appliances, motor vehicles, robotics, aerospace and transportation, heating ventilating and cooling equipment's, robotics, industrial machinery and other commercial applications. The book provides engineers with drive techniques that will help them develop motor drive system for their applications. Includes practical solutions and control techniques for industrial motor drive applications currently in use Contains MATLAB/Simulink simulation files Enables engineers to understand the applications and advantages of electric motor drive systems

A Practical Design Guide

Industrial Applications of Power Electronics

Advances in Energy Technology

Vehicle and Automotive Engineering 3

Proceedings of ICIMES 2020

Energy Storage Systems and Power Conversion Electronics for

E-Transportation and Smart Grid

Fundamentals of Mechatronics, SI Edition

This book comprises select proceedings of the international conference ETAEERE 2020, and focuses on contemporary issues in energy management and energy efficiency in the context of power systems. The contents cover modeling, simulation and optimization based studies on topics like medium voltage BTB system, cost optimization of a ring frame unit in textile industry, rectenna for RF energy harvesting, ecology and energy dimension in infrastructural designs, study of AGC in two area hydro thermal power system, energy-efficient and reliable depth-based routing protocol for underwater wireless sensor network, and power line communication. This book can be beneficial for students, researchers as well as industry professionals.

Dynamics and Advanced Motion Control of Unmanned Ground Off-Road Vehicles details both theoretical concepts such as planning and perception when working with UGVs, as well as more practical, hands-on aspects such as torque vectoring control. The book also covers related technologies such as intelligent and electrification of ground vehicles. After an introduction, initial chapters include an exploration of wheel-soil and track-soil interaction mechanisms, motion stability, motion control, fault detection and identification, and fault

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tolerance control. This book offers readers a detailed understanding of Unmanned Ground Vehicles by combining theory, applications and further developments. Topics are covered in such a way that readers will be well versed on the current field of UGVs and will be able to implement future design and research in a feasible and effective way. Gives a comprehensive analysis and introduction to the dynamics and advanced motion control of unmanned ground off-road vehicles Covers key related technology concepts, such as intelligent and electrification of ground vehicles Details the entire control framework of off-road UGVs and the implementation of controller design

This book features selected papers presented at Third International Conference on Nanoelectronics, Circuits and Communication Systems (NCCS 2017).

Covering topics such as MEMS and nanoelectronics, wireless communications, optical communication, instrumentation, signal processing, Internet of Things, image processing, bioengineering, green energy, hybrid vehicles, environmental science, weather forecasting, cloud computing, renewable energy, RFID, CMOS sensors, actuators, transducers, telemetry systems, embedded systems, and sensor network applications in mines, it is a valuable resource for young scholars, researchers, and academics.

The book is a collection of high-quality peer-reviewed research papers presented

in the Proceedings of International Conference on Power Electronics and Renewable Energy Systems (ICPERES 2014) held at Rajalakshmi Engineering College, Chennai, India. These research papers provide the latest developments in the broad area of Power Electronics and Renewable Energy. The book discusses wide variety of industrial, engineering and scientific applications of the emerging techniques. It presents invited papers from the inventors/originators of new applications and advanced technologies.

Mechatronics and Control

Harmony Search and Nature Inspired Optimization Algorithms

Theory and Applications, ICHSA 2018

Smart Intelligent Computing and Applications

Social Transformation – Digital Way

Select Proceedings of i-CASIC 2020

Electric Motor Control

The 3rd International Conference on Foundations and Frontiers in Computer, Communication and Electrical Engineering is a notable event which brings together academia, researchers, engineers and students in the fields of Electronics and Communication, Computer and Electrical Engineering making the conference a perfect platform to share experience, f

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This book presents the proceedings of the third Vehicle and Automotive Engineering conference, reflecting the outcomes of theoretical and practical studies and outlining future development trends in a broad field of automotive research. The conference's main themes included design, manufacturing, economic and educational topics.

In recent years, power electronics have been intensely contributing to the development and evolution of new structures for the processing of energy. They can be used in a wide range of applications ranging from power systems and electrical machines to electric vehicles and robot arm drives. In conjunction with the evolution of microprocessors and advanced control theories, power electronics are playing an increasingly essential role in our society. Thus, in order to cope with the obstacles lying ahead, this book presents a collection of original studies and modeling methods which were developed and published in the field of electrical energy conditioning and control by using circuits and electronic devices, with an emphasis on power applications and industrial control. Researchers have contributed 19 selected and peer-reviewed papers covering a wide range of topics by addressing a wide variety of themes, such as motor drives, AC-DC and DC-DC converters, multilevel converters, varistors, and electromagnetic compatibility, among others. The overall result is a book that represents a cohesive collection of inter-/multidisciplinary works regarding the industrial applications of power electronics.

Air pollution, global warming, and the steady decrease in petroleum resources

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continue to stimulate interest in the development of safe, clean, and highly efficient transportation. Building on the foundation of the bestselling first edition, *Modern Electric, Hybrid Electric, and Fuel Cell Vehicles: Fundamentals, Theory, and Design, Second Edition* updates and expands its detailed coverage of the vehicle technologies that offer the most promising solutions to these issues affecting the automotive industry. Proven as a useful in-depth resource and comprehensive reference for modern automotive systems engineers, students, and researchers, this book speaks from the perspective of the overall drive train system and not just its individual components. New to the second edition: A case study appendix that breaks down the Toyota Prius hybrid system Corrections and updates of the material in the first edition Three new chapters on drive train design methodology and control principles A completely rewritten chapter on Fundamentals of Regenerative Braking Employing sufficient mathematical rigor, the authors comprehensively cover vehicle performance characteristics, EV and HEV configurations, control strategies, modeling, and simulations for modern vehicles. They also cover topics including: Drive train architecture analysis and design methodologies Internal Combustion Engine (ICE)-based drive trains Electric propulsion systems Energy storage systems Regenerative braking Fuel cell applications in vehicles Hybrid-electric drive train design The first edition of this book gave practicing engineers and students a systematic reference to fully understand the essentials of this new technology. This edition introduces newer topics and offers deeper treatments than those included in the first. Revised many

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times over many years, it will greatly aid engineers, students, researchers, and other professionals who are working in automotive-related industries, as well as those in government and academia.

The Power Electronics Handbook

Mobile Communication and Power Engineering

Select Proceedings of ETAEERE 2020

SPECIAL ELECTRICAL MACHINES

Land, Sea, Air, and Space Vehicles

Proceedings of 4th ICMETE 2020

Optimizing Small Multi-Rotor Unmanned Aircraft

Electric vehicles/hybrid electric vehicles (EV/HEV) commercialization is still a challenge in industries in terms of performance and cost. The performance along with cost reduction are two tradeoffs which need to be researched to arrive at an optimal solution. This book focuses on the convergence of various technologies involved in EV/HEV. The book brings together the research that is being carried out in the field of EV/HEV whose leading role is by optimization techniques with artificial intelligence (AI). Other featured research includes green drive schemes which involve the possible renewable energy sources integration to develop eco-friendly green vehicles, as well as Internet of Things (IoT)-based techniques for EV/HEVs. Electric vehicle research involves multi-disciplinary expertise from electrical, electronics, mechanical engineering and computer science. Consequently, this book serves as a point of convergence wherein all these domains are addressed and merged and will serve as a potential resource for industrialists and researchers working in the domain of electric vehicles.

This design guide was written to capture the author's practical experience of designing, building and testing

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multi-rotor drone systems over the past decade. The lack of one single source of useful information meant that the past 10 years has been a steep learning curve, a lot of self-tuition and many trial and error tests. Lessons learnt the hard way are not always the best way to learn. This book will be useful for the amateur drone pilot who wants to build their own system from first principles, as well as the academic researcher investigating novel design concepts and future drone applications.

This is a reprint in book form of the Energies MDPI Journal Special Issue , entitled “Energy Storage Systems and Power Conversion Electronics for E-Transportation and Smart Grid”. The Special Issue was managed by two Guest Editors from Italy and Norway: Professor Sergio Saponara from the University of Pisa and Professor Lucian MIHET-POPA from Østfold University College, in close cooperation with the Editors from Energies. The papers published in this SI are related to the emerging trends in energy storage and power conversion electronic circuits and systems, with a specific focus on transportation electrification, and on the evolution from the electric grid to a smart grid. An extensive exploitation of renewable energy sources is foreseen for the smart grid, as well as a close integration with the energy storage and recharging systems of the electrified transportation era. Innovations at the levels of both algorithmic and hardware (i.e., power converters, electric drives, electronic control units (ECU), energy storage modules and charging stations) are proposed. Research and technology transfer activities in energy storage systems, such as batteries and super/ultra-capacitors, are essential for the success of electric transportation, and to foster the use of renewable energy sources. Energy storage systems are the key technology to solve these issues, and to increase the adoption of renewable energy sources in the smart grid.

This volume represents the proceedings of the 2013 International Conference on Innovation, Communication and Engineering (ICICE 2013). This conference was organized by the China University of Petroleum (Huadong/East China) and the Taiwanese Institute of Knowledge Innovation, and was held in

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Qingdao, Shandong, P.R. China, October 26 - November 1, 2013. The conference received 653 submitted papers from 10 countries, of which 214 papers were selected by the committees to be presented at ICICE 2013. The conference provided a unified communication platform for researchers in a wide range of fields from information technology, communication science, and applied mathematics, to computer science, advanced material science, design and engineering. This volume enables interdisciplinary collaboration between science and engineering technologists in academia and industry as well as networking internationally. Consists of a book of abstracts (260 pp.) and a USB flash card with full papers (912 pp.).

*Foundations and Frontiers in Computer, Communication and Electrical Engineering
Instruments, Measurement, Electronics and Information Engineering*

Vehicular Electric Power Systems

*52nd Annual Convention of the Computer Society of India, CSI 2017, Kolkata, India, January 19-21, 2018,
Revised Selected Papers*

Permanent Magnet Brushless DC Motor Drives and Controls

Advances in Automation, Signal Processing, Instrumentation, and Control

Proceedings of the 3rd International Conference C2E2, Mankundu, West Bengal, India, 15th-16th January, 2016.

This book presents the peer-reviewed proceedings of the Sixth International Conference on Intelligent Computing and Applications (ICICA 2020), held at Government College of Engineering, Keonjhar, Odisha, India, during December 22-24, 2020. The book includes the latest research on advanced computational methodologies such as neural networks, fuzzy systems,

evolutionary algorithms, hybrid intelligent systems, uncertain reasoning techniques, and other machine learning methods and their applications to decision-making and problem-solving in mobile and wireless communication networks.

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.

This book presents select proceedings of International Conference on Energy, Material Sciences and Mechanical Engineering (EMSME) 2020, held at National Institute of Technology Delhi. Various topics covered in this book include clean materials, solar energy systems, wind energy systems, power optimization, grid integration of renewable energy, smart energy storage technologies, artificial intelligence in solar and wind system, analysis of clean energy material in environment, converter topology, modelling and simulation. This book will be useful for researchers and professionals working in the areas of solar material science, electrical

engineering, and energy technologies.

The book covers different aspects of real-world applications of optimization algorithms. It provides insights from the Fourth International Conference on Harmony Search, Soft Computing and Applications held at BML Munjal University, Gurgaon, India on February 7-9, 2018. It consists of research articles on novel and newly proposed optimization algorithms; the theoretical study of nature-inspired optimization algorithms; numerically established results of nature-inspired optimization algorithms; and real-world applications of optimization algorithms and synthetic benchmarking of optimization algorithms.

Get Set Glow

Hard Disk Drive

Second international Joint Conference, AIM/CCPE 2012, Bangalore, India, April 27-28, 2012. Revised Papers

Discover how to Bring Out Your Natural Radiance

Dynamics and Advanced Motion Control of Off-Road UGVs

Official Gazette of the United States Patent and Trademark Office

Modern Electric, Hybrid Electric, and Fuel Cell Vehicles

Dynamics is a science concerned with movement and changes. In the most general approach it relates to life processes as well as behavior in nature in

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rest. It governs small particles, technical objects, conversion of matter and materials but also concerns people, groups of people in their individual and, in particular, social dimension. In dynamics we always have to do with causes or stimuli for motion, the rules of reaction or behavior and its result in the form of trajectory of changes. This book is devoted to dynamics of a wide class of specific but very important objects such as electromechanical systems. This is a very rigorous discipline and has a long tradition, as its theoretical bases were formulated in the first half of the XIX century by d' Alembert, Lagrange, Hamilton, Maxwell and other prominent scientists, but their crucial results were based on previous pioneering research of others such as Copernicus, Galileo, Newton... This book in its theoretical foundations is based on the principle of least action which governs classical as well as relativistic mechanics and electromagnetism and leads to Lagrange's equations which are applied in the book as universal method to construct equations of motion of electromechanical systems. It gives common and coherent grounds to formulate mathematical models for all lumped parameters' electromechanical systems, which are vital in our contemporary industry and civilized everyday life. From these remarks it seems that the book is general and theoretical but in fact it is a very practical one concerning modern electrical drives in a broad

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sense, including electromechanical energy conversion, induction motor drives, brushless DC drives with a permanent magnet excitation and switched reluctance machines (SRM). And of course their control, which means shaping of their trajectories of motion using modern tools, their designed autonomy in keeping a track according to our programmed expectations. The problems presented in the book are widely illustrated by characteristics, trajectories, dynamic courses all computed by use of developed simulation models throughout the book. There are some classical subjects and the history of the discipline is discussed but finally all modern tools and means are presented and applied. More detailed descriptions follow in abstracts for the particular chapters. The author hopes kind readers will enjoy and profit from reading this book.

Less expensive, lighter, and smaller than its electromechanical counterparts, power electronics lie at the very heart of controlling and converting electric energy, which in turn lies at the heart of making that energy useful. From household appliances to space-faring vehicles, the applications of power electronics are virtually limitless. Until now, however, the same could not be said for access to up-to-date reference books devoted to power electronics. Written by engineers for engineers, The Power Electronics Handbook covers

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the full range of relevant topics, from basic principles to cutting-edge applications. Compiled from contributions by an international panel of experts and full of illustrations, this is not a theoretical tome, but a practical and enlightening presentation of the usefulness and variety of technologies that encompass the field. For modern and emerging applications, power electronic devices and systems must be small, efficient, lightweight, controllable, reliable, and economical. The Power Electronics Handbook is your key to understanding those devices, incorporating them into controllable circuits, and implementing those systems into applications from virtually every area of electrical engineering.

An advanced introduction to the simulation and hardware implementation of BLDC motor drives A thorough reference on the simulation and hardware implementation of BLDC motor drives, this book covers recent advances in the control of BLDC motor drives, including intelligent control, sensorless control, torque ripple reduction and hardware implementation. With the guidance of the expert author team, readers will understand the principle, modelling, design and control of BLDC motor drives. The advanced control methods and new achievements of BLDC motor drives, of interest to more advanced readers, are also presented. Focuses on

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the control of PM brushlessDC motors, giving readers the foundations to the topic that they can build on through more advanced reading Systematically guides readers through the subject, introducing basic operational principles before moving on to advanced control algorithms and implementations Covers special issues, such as sensorless control, intelligent control, torque ripple reduction and hardware implementation, which also have applications to other types of motors Includes presentation files with lecture notes and Matlab 7 coding on a companion website for the book

The use of high-temperature materials in current and future applications, including silicone materials for handling hot foods and metal alloys for developing high-speed aircraft and spacecraft systems, has generated a growing interest in high-temperature technologies. High Temperature Materials and Mechanisms explores a broad range of issues related to high-temperature materials and mechanisms that operate in harsh conditions. While some applications involve the use of materials at high temperatures, others require materials processed at high temperatures for use at room temperature. High-temperature materials must also be resistant to related causes of damage, such as oxidation and corrosion, which are accelerated with increased temperatures. This book examines high-temperature materials and

mechanisms from many angles. It covers the topics of processes, materials characterization methods, and the nondestructive evaluation and health monitoring of high-temperature materials and structures. It describes the application of high temperature materials to actuators and sensors, sensor design challenges, as well as various high temperature materials and mechanisms applications and challenges. Utilizing the knowledge of experts in the field, the book considers the multidisciplinary nature of high temperature materials and mechanisms, and covers technology related to several areas including energy, space, aerospace, electronics, and metallurgy. Supplies extensive references at the end of each chapter to enhance further study Addresses related science and engineering disciplines Includes information on drills, actuators, sensors and more A comprehensive resource of information consolidated in one book, this text greatly benefits students in materials science, aerospace and mechanical engineering, and physics. It is also an ideal resource for professionals in the industry.

Proceeding of NCCS 2017

Select Proceedings of EMSME 2020

Advances and Technologies in High Voltage Power Systems Operation, Control, Protection and Security

Artificial Intelligent Techniques for Electric and Hybrid Electric Vehicles

Proceedings of ICPERES 2014

Intelligent Manufacturing and Energy Sustainability

Special Volume of the World Congress on Engineering 2012

Collection of selected, peer reviewed papers from the 2013 International Conference on Precision Mechanical Instruments and Measurement Technology (ICPMIMT 2013), May 25-26, 2013, Shenyang, Liaoning, China. The 804 papers are grouped as follows: Chapter 1: Mechatronics, Control and Management, Measurement and Instrumentation, Monitoring Technologies; Chapter 2: Materials Science and Manufacturing Engineering; Chapter 3: Power Systems, Electronics and Microelectronics, Embedded and Integrated Systems, Communication; Chapter 4: Computational Methods and Algorithms, Applied Information Technologies.

Today, there is a great deal of attention focused on sustainable growth worldwide. The increase in efficiency in the use of energy may even, in this historical moment, bring greater benefit than the use of renewable energies.

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Electricity appears to be the most sustainable of energies and the most promising hope for a planet capable of growing without compromising its own health and that of its inhabitants. Power electronics and electrical drives are the key technologies that will allow energy savings through the reduction of energy losses in many applications. This Special Issue has collected several scientific contributions related to energy efficiency in electrical equipment. Some articles are dedicated to the use and optimization of permanent magnet motors, which allow obtaining the highest level of efficiency. Most of the contributions describe the energy improvements that can be achieved with power electronics and the use of suitable control techniques. Last but not least, some articles describe interesting solutions for hybrid vehicles, which were created mainly to save energy in the smartest way possible.

This book presents selected papers from the 4th International Conference on Micro-Electronics and Telecommunication Engineering, held at SRM Institute of

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Science and Technology, Ghaziabad, India, during 26–27 September 2020. It covers a wide variety of topics in micro-electronics and telecommunication engineering, including micro-electronic engineering, computational remote sensing, computer science and intelligent systems, signal and image processing, and information and communication technology. The objective of FUNDAMENTALS OF MECHATRONICS is to cover both hardware and software aspects of mechatronics systems in a single text, giving a complete treatment to the subject matter. The text focuses on application considerations and relevant practical issues that arise in the selection and design of mechatronics components and systems. The text uses several programming languages to illustrate the key topics. Different programming platforms are presented to give instructors the choice to select the programming language most suited to their course objectives. A separate laboratory book, with additional exercises is provided to give guided hands-on experience with many of the topics covered in the text. Important Notice: Media content

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referenced within the product description or the product text may not be available in the ebook version.

Proceedings of the Second International Conference on SCI 2018, Volume 1

DC, AC, and BLDC Motors

Proceedings of the 3rd VAE2020, Miskolc, Hungary

Power Electronics and Renewable Energy Systems

14th International Conference on Systems Simulation,

Kitakyushu, Japan, October 26–30, 2014. Proceedings

IAENG Transactions on Engineering Technologies

High Temperature Materials and Mechanisms

This book contains fifty-eight revised and extended research articles written by prominent researchers participating in the Advances in Engineering Technologies and Physical Science conference, held in London, U.K., 4-6 July, 2012. Topics covered include Applied and Engineering Mathematics, Computational Statistics, Mechanical Engineering, Bioengineering, Internet Engineering, Wireless Networks, Knowledge Engineering, Computational

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Intelligence, High Performance Computing, Manufacturing Engineering, and industrial applications. The book offers the state of art of tremendous advances in engineering technologies and physical science and applications, and also serves as an excellent reference work for researchers and graduate students working on engineering technologies and physical science and applications.

This book constitutes the refereed proceedings of the 14th International Conference on Systems Simulation, Asia Simulation 2014, held in Kitakyushu, Japan, in October 2014. The 32 revised full papers presented were carefully reviewed and selected from 69 submissions. The papers are organized in topical sections on modeling and simulation technology; network simulation; high performance computing and cloud simulation; numerical simulation and visualization; simulation of instrumentation and control application; simulation technology in diversified higher education; general purpose simulation.

This volume includes extended and revised versions of a set

of selected papers from the International Conference on Electric and Electronics (EEIC 2011) , held on June 20-22 , 2011, which is jointly organized by Nanchang University, Springer, and IEEE IAS Nanchang Chapter. The objective of EEIC 2011 Volume 1 is to provide a major interdisciplinary forum for the presentation of new approaches from Electronics and Signal Processing, to foster integration of the latest developments in scientific research. 133 related topic papers were selected into this volume. All the papers were reviewed by 2 program committee members and selected by the volume editor Prof. Wensong Hu. We hope every participant can have a good opportunity to exchange their research ideas and results and to discuss the state of the art in the areas of the Electronics and Signal Processing. The electrical demands in several countries around the world are increasing due to the huge energy requirements of prosperous economies and the human activities of modern life. In order to economically transfer electrical powers from the generation side to the demand side, these powers

need to be transferred at high-voltage levels through suitable transmission systems and power substations. To this end, high-voltage transmission systems and power substations are in demand. Actually, they are at the heart of interconnected power systems, in which any faults might lead to unsuitable consequences, abnormal operation situations, security issues, and even power cuts and blackouts. In order to cope with the ever-increasing operation and control complexity and security in interconnected high-voltage power systems, new architectures, concepts, algorithms, and procedures are essential. This book aims to encourage researchers to address the technical issues and research gaps in high-voltage transmission systems and power substations in modern energy systems.

Brushless Permanent Magnet Motor Design

Sixth International Conference on Intelligent Computing and Applications

Patents

Nanoelectronics, Circuits and Communication Systems
Innovation, Communication and Engineering
Dynamics and Control of Electrical Drives
Electronics and Signal Processing