Premkumar Basic Electric Engineering

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ZnO Nanocrystals and Allied Materials M S Ramachandra Rao 2013-09-12 ZnO has been the central theme of research in the past decade due to its various applications in band gap engineering, and textile and biomedical industries. In nanostructured form, it offers ample opportunities to realize tunable optical and optoelectronic properties and it was also termed as a potential material to realize room temperature ferromagnetism. This book presents 17 high-quality contributory chapters on ZnO related systems written by experts in this field. These chapters will help researchers to understand and explore the varied physical properties to envisage device applications of ZnO in thin film, heterostructure and nanostructure forms.

Basic Electrical, Electronics and Computer Engineering N. Premkumar 1996

Intelligent Control of Robotic Systems Laxmidhar Behera 2020-04-07 This book illustrates basic principles, along with the development of the advanced algorithms, to realize smart robotic systems. It speaks to strategies by which a robot (manipulators, mobile robot, quadrotor) can learn its own kinematics and dynamics from data. In this context, two major issues have been dealt with; namely, stability of the systems and experimental validations. Learning algorithms and techniques as covered in this book easily extend to other robotic systems as well. The book contains MATLAB- based examples and c-codes under robot operating systems (ROS) for experimental validation so that readers can replicate these algorithms in robotics platforms.

Computational Methodologies for Electrical and Electronics Engineers Singh, Rajiv 2021-03-18 Artificial intelligence has been applied to many areas of science and technology, including the power and energy sector. Renewable energy in particular has experienced the tremendous positive impact of these developments. With the recent evolution of smart energy technologies, engineers and scientists working in this sector need an exhaustive source of current knowledge to effectively cater to the energy needs of citizens of developing countries. Computational Methodologies for Electrical and Electronics Engineers is a collection of innovative research that provides a complete insight and overview of the application of intelligent computational techniques in power and energy. Featuring research on a wide range of topics such as artificial neural networks, smart grids, and soft computing, this book is ideally designed for programmers, engineers, technicians, ecologists, entrepreneurs, researchers, academicians, and students.

Advances in Electrical and Computer Technologies Thangaprakash Sengodan 2022-07-27 This book comprises select proceedings of the International Conference on Advances in Electrical and Computer Technologies 2021 (ICAECT 2021). The papers presented in this book are peer-reviewed and cover the latest research in electrical, electronics, communication, and computer engineering. Topics covered include smart grids, soft computing techniques in power systems, smart energy management systems, power electronics, feedback control systems, biomedical engineering, geographic information systems, grid computing, data mining, image and signal processing, video processing, computer vision, pattern recognition, cloud computing, pervasive computing, intelligent systems, artificial intelligence, neural network and fuzzy logic, broadband communication, mobile and optical communication, network security, VLSI, embedded systems, optical networks, and wireless communication. The book is useful for students and researchers working in the different overlapping areas of electrical, electronics, and communication engineering.

Proceedings of First International Conference on Computational Electronics for Wireless Communications Sanyog Rawat 2022-01-04 This book includes high-quality papers presented at Proceedings of First International Conference on Computational Electronics for Wireless Communications (ICCWC 2021), held at National Institute of Technology, Kurukshetra, Haryana, India, during June 11—12, 2021. The book presents original research work of academics and industry professionals to exchange their knowledge of the state-of-the-art research and development in computational electronics with an emphasis on wireless communications. The topics covered in the book are radio frequency and microwave, signal processing, microelectronics and wireless networks.

Roots and Wings Shantha Mohan 2018-08-31 Are you wondering if engineering, science, or business will work as a career choice for a young woman? Do you question if a woman can pursue a successful career in these fields while enjoying a satisfying family life and still find a way to make meaningful social contributions? Then this book, which chronicles the lives and careers of women who managed to do just that, is the one for you. These 29 women all graduated from the oldest engineering college in India sometime between 1943 and 1971. This was a difficult time for these pioneering women to pursue their chosen path, yet they all went on to make their mark in their unique ways in various fields of work in India as well as the USA. Overcoming several obstacles to their careers, they managed to find a good balance between family and work. A few were, and are, also great community leaders. Their lives are models of courage, initiative, perseverance, innovation, entrepreneurship, resilience and flexibility. Enjoy the stories of these courageous women and be inspired.

Intelligent Systems and Control: Principles and Applications Laxmidhar Behera 2009-12-24 Intelligent Systems and Control: Principles and Applications is a textbook for undergraduate level courses on intelligent control, intelligent systems, adaptive control, and non-linear control. The book covers primers in neural networks, fuzzy logic, and non-linear control so that readers can easily follow intelligent control techniques.

Intelligent Autonomous Systems Dilip Kumar Pratihar

2010-02-24 This research book contains a sample of most recent research in the area of intelligent autonomous systems. The contributions include: General aspects of intelligent autonomous systems Design of intelligent autonomous robots Biped robots Robot for stair-case navigation Ensemble learning for multi-source information fusion Intelligent autonomous systems in psychiatry Condition monitoring of internal combustion engine Security management of an enterprise network High dimensional neural nets and applications This book is directed to engineers, scientists, professor and the undergraduate/postgraduate students who wish to explore this field further.

Materials Science of DNA Jung-II Jin 2016-04-19 The field of materials science and technology has undergone revolutionary advances due to the development of novel analytical tools, functional materials, and multidisciplinary approaches to engineering. Additionally, theoretical predictions combined with increasingly improved models and computational capabilities are making impressive contribution

Optical and Wireless Technologies Vijay Janyani 2020-06-02 This volume presents selected papers from the 3rd International Conference on Optical and Wireless Technologies, conducted from 16th to 17th March, 2019. It focuses on extending the limits of currently used systems encompassing optical and wireless domains, and explores the latest developments in applications like photonics, high speed communication systems and networks, visible light communication, nano-photonics, wireless, and MIMO systems. The proceedings contain high quality scholarly articles, giving insight into the analytical, experimental, and developmental aspects of systems, techniques, and devices in these spheres. This volume will prove useful to researchers and professionals alike.

Advances in VLSI, Communication, and Signal Processing David Harvey 2020-12-03 This book comprises select peer-reviewed papers from the International Conference on VLSI, Communication and Signal processing (VCAS) 2019, held at Motilal Nehru National Institute of Technology (MNNIT) Allahabad, Prayagraj, India. The contents focus on latest research in different domains of electronics and communication engineering, in particular microelectronics and VLSI design, communication systems and networks, and signal and image processing. The book also discusses the emerging applications of novel tools and techniques in image, video and multimedia signal processing. This book will be useful to students, researchers and professionals working in the electronics and communication domain.

Natural Language Processing with AWS AI Services Mona M 2021-11-26 Work through interesting real-life business use cases to uncover valuable insights from unstructured text using AWS AI services Key FeaturesGet to grips with AWS AI services for NLP and find out how to use them to gain strategic insightsRun Python code to use Amazon Textract and Amazon Comprehend to accelerate business outcomesUnderstand how you can integrate human-in-the-loop for custom NLP use cases with Amazon A2IBook Description Natural language processing (NLP) uses machine learning to extract information from unstructured data. This book will help you to move quickly from business questions to high-performance models in production. To start with, you'll understand the importance of NLP in today's business applications and learn the features of Amazon Comprehend and Amazon Textract to build NLP models using Python and Jupyter Notebooks. The book then shows you how to integrate AI in applications for accelerating business outcomes with just a few lines of code. Throughout the book, you'll cover use cases such as smart text search, setting up compliance and controls when processing confidential documents, real-time text analytics, and much more to understand various NLP scenarios. You'll deploy and

monitor scalable NLP models in production for real-time and batch requirements. As you advance, you'll explore strategies for including humans in the loop for different purposes in a document processing workflow. Moreover, you'll learn best practices for auto-scaling your NLP inference for enterprise traffic. Whether you're new to ML or an experienced practitioner, by the end of this NLP book, you'll have the confidence to use AWS AI services to build powerful NLP applications. What you will learnAutomate various NLP workflows on AWS to accelerate business outcomesUse Amazon Textract for text, tables, and handwriting recognition from images and PDF filesGain insights from unstructured text in the form of sentiment analysis, topic modeling, and more using Amazon ComprehendSet up end-to-end document processing pipelines to understand the role of humans in the loopDevelop NLP-based intelligent search solutions with just a few lines of codeCreate both real-time and batch document processing pipelines using PythonWho this book is for If you're an NLP developer or data scientist looking to get started with AWS AI services to implement various NLP scenarios quickly, this book is for you. It will show you how easy it is to integrate AI in applications with just a few lines of code. A basic understanding of machine learning (ML) concepts is necessary to understand the concepts covered. Experience with Jupyter notebooks and Python will be helpful.

Nanoelectronics, Circuits and Communication Systems Vijay Nath 2021-12-02 This book features selected papers presented at the Fifth International Conference on Nanoelectronics, Circuits and Communication Systems (NCCS 2019). It covers a range of topics, including nanoelectronic devices, microelectronics devices, material science, machine learning, Internet of things, cloud computing, computing systems, wireless communication systems, advances in communication 5G and beyond. Further, it discusses VLSI circuits and systems, MEMS, IC design and testing, electronic system design and manufacturing, speech signal processing, digital signal processing, FPGA-based wireless communication systems and FPGA-based system design, Industry 4.0, e-farming, semiconductor memories, and IC fault detection and correction.

Coherence and Quantum Optics VI J.H. Eberly 2012-12-06 The conference, held at the U. of Rochester in June 1989, was a sequel to five earlier meetings in this series, held in 1960, 1966, 1972, 1977 and 1983. This volume contains abbreviated versions of most of the 252 papers presented, addressing such topics as laser spectroscopy, photon statistics, pha

Textbook of Craniofacial Growth Sridhar Premkumar 2011-06-01 Step by step guide through the stages of craniofacial growth, with comprehensive flow charts and well-illustrated diagrams.

Basic Electrical and Electronics Engineering N. Premkumar 2007

Advances in Materials Research G. Kumaresan 2021-02-04 This book comprises select peer-reviewed proceedings of the International Conference on Advances in Materials Research (ICAMR 2019). The contents cover latest research in materials and their applications relevant to composites, metals, alloys, polymers, energy and phase change. The indigenous properties of materials including mechanical, electrical, thermal, optical, chemical and biological functions are discussed. The book also elaborates the properties and performance enhancement and/or deterioration in order of the modifications in atomic particles and structure. This book will be useful for both students and professionals interested in the development and applications of advanced materials.

Futuristic Sustainable Energy & Technology Rajesh Singh 2022-05-01 Futuristic Sustainable Energy and Technology provides a structured overview of the concept of Futuristic Sustainable Energy and Technology. It also explores the promotion of the sustainable development of

renewable energy from the perspectives of technology, modelling, application, sustainability and policy. This book is dedicated to the advancement of energy efficiency to mitigate consumption, ensure and replenish, expand and reuse elective energy supplies, and to replicate the damage caused by previous energy initiatives. This book has offered a large stage of experimentation for practitioners, experts, researchers and teachers to incorporate and analyze their latest developments, as well as the trends and difficulties encountered and the ongoing evolution of the stage in these areas.

Power Electronics and Renewable Energy Systems C. Kamalakannan 2014-11-19 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.

High Voltage and Electrical Insulation Engineering Ravindra Arora 2022-03-10 High Voltage and Electrical Insulation Engineering A comprehensive graduate-level textbook on high voltage insulation engineering, updated to reflect emerging trends and techniques in the field High Voltage and Electrical Insulation Engineering presents systematic coverage of the behavior of dielectric materials. This classic textbook opens with clear explanations of fundamental terminology, electric-field classification, and field estimation techniques. Subsequent chapters describe the field dependent performance of gaseous, vacuum, liquid, and solid dielectrics under different classified field conditions, and illustrate the monitoring of electrical insulation conditions by both single and continuous online methods. Throughout the text, numerous tables, figures, diagrams, and images are provided to strengthen understanding of all material. Fully revised to incorporate the most current technological application techniques, the second edition offers an entirely new section on condition monitoring of electrical insulation. Updated chapters discuss recent developments in gas-filled power apparatus, present-day trends in the use replacement of liquid insulating materials, the latest applications of new solid dielectrics in high voltage engineering, vacuum technology and liquid insulating materials, and more. This edition features a brand-new case study exploring the estimation of clearance requirements for 25 kV electric traction. Readers will also find the new edition: Provides new coverage of advances in the field, such as the application of polymer insulators and the use of SF6 gas and its mixtures in gas-insulated systems/substations (GIS) Uses a novel approach that explores the field dependent behavior of dielectrics Explains the "weakly nonuniform field," a unique concept introduced both conceptually and analytically in Germany A separate chapter provides the new approach to the mechanism of lightning phenomenon, which also includes the phenomenon of "Ball Lightning" The dielectric properties of vacuum and the development in the application of vacuum technology in power circuit breakers is covered in an exclusive chapter In-depth coverage of the performance of the sulphur-hexafluoride gas and its mixtures applicable to the design of Gas Insulated Systems including dry power transformers High Voltage and Electrical Insulation Engineering, Second Edition, remains the perfect textbook for graduate students, teachers, academic researchers, and utility and power industry engineers and scientists involved in the field.

Basic Electrical and Electronics Engineering: S.K. Bhattacharya Basic Electrical and Electronics Engineering provides an overview of the basics of electrical and electronic engineering that are required at the undergraduate level. The book allows students outside electrical and electronics engineering to easily **Residue Number Systems** Amos R. Omondi 2007 Residue number systems (RNSs) and arithmetic are useful for several reasons. First, a great deal of computing now takes place in embedded processors, such as those found in mobile devices, for which high speed and low-power consumption are critical; the absence of carry propagation facilitates the realization of high-speed, low-power arithmetic. Second, computer chips are now getting to be so dense that full testing will no longer be possible; so fault tolerance and the general area of computational integrity have become more important. RNSs are extremely good for applications such as digital signal processing, communications engineering, computer security (cryptography), image processing, speech processing, and transforms, all of which are extremely important in computing today. This book provides an up-to-date account of RNSs and arithmetic. It covers the underlying mathematical concepts of RNSs; the conversion between conventional number systems and RNSs; the implementation of arithmetic operations; various related applications are also introduced. In addition, numerous detailed examples and analysis of different implementations are provided. Sample Chapter(s). Chapter 1: Introduction (301 KB). Contents: Introduction; Mathematical Fundamentals; Forward Conversion; Addition; Multiplication; Comparison, Overflow-Detection, Sign-Determination, Scaling, and Division; Reverse Conversion; Applications. Readership: Graduate students, academics and researchers in computer engineering and electrical & electronic engineering.

Multilevel Converters: Control Techniques for Renewable Energy Resources Sudhakar Babu Thanikanti 2022-01-13

Basic Electric Circuit Theory Isaak D. Mayergoyz 2012-12-02 This is the only book on the market that has been conceived and deliberately written as a one-semester text on basic electric circuit theory. As such, this book employs a novel approach to the exposition of the material in which phasors and ac steady-state analysis are introduced at the beginning. This allows one to use phasors in the discussion of transients excited by ac sources, which makes the presentation of transients more comprehensive and meaningful. Furthermore, the machinery of phasors paves the road to the introduction of transfer functions, which are then used in the analysis of transients and the discussion of Bode plots and filters. Another salient feature of the text is the consolidation into one chapter of the material concerned with dependent sources and operational amplifiers. Dependent sources are introduced as linear models for transistors on the basis of small signal analysis. In the text, PSpice simulations are prominently featured to reinforce the basic material and understanding of circuit analysis. Key Features * Designed as a comprehensive one-semester text in basic circuit theory * Features early introduction of phasors and ac steady-state analysis * Covers the application of phasors and ac steady-state analysis * Consolidates the material on dependent sources and operational amplifiers * Places emphasis on connections between circuit theory and other areas in electrical engineering * Includes PSpice tutorials and examples * Introduces the design of active filters * Includes problems at the end of every chapter * Priced well below similar books designed for year-long courses

Basic Electrical & Electronics Engineering J. Gnanavadivel 2008

Advanced Nanomaterials Kurt E. Geckeler 2009-11-10 In this first comprehensive compilation of review chapters on this hot topic, more than 30 experts from around the

world provide in-depth chapters on their specific areas of expertise, covering such essential topics as: * Block Copolymer Systems, Nanofibers and Nanotubes * Helical Polymer-Based Supramolecular Films * Synthesis of Inorganic Nanotubes * Gold Nanoparticles and Carbon Nanotubes * Recent Advances in Metal Nanoparticle-Attached Electrodes * Oxidation Catalysis by Nanoscale Gold, Silver, and Copper * Concepts in Self-Assembly * Nanocomposites * Amphiphilic Poly(Oxyalkylene)-Amines * Mesoporous Alumina * Nanoceramics for Medical Applications * Ecological Toxicology of Engineered Carbon Nanoparticles * Molecular Imprinting * Near-Field Raman Imaging of Nanostructures and Devices * Fullerene-Rich Nanostructures * Interactions of Carbon Nanotubes with Biomolecules * Nanoparticle-Cored Dendrimers and Hyperbranched Polymers * Nanostructured Organogels via Molecular Self-Assembly * Structural DNA Nanotechnology With its coverage of all such important areas as self-assembly, polymeric materials, bionanomaterials, nanotubes, photonic and environmental aspects, this is an essential reference for materials scientists, engineers, chemists, physicists and biologists wishing to gain an in-depth knowledge of all the disciplines involved.

Basic Electrical and Electronics Engineering B. R. Patil 2012

Operations Research D S Hira 1992 The author have used numerical examples as the means for presentation of the underlying ideas of different operations research techniques.Accordingly,a large number of comprehensive solved examples,taken from a variety of fields,have been added in every chapter and they are followed by a set of unsolved problems with answers(and hints wherever required)through which readers can test their understanding of the subject matter.The book,in its present form,contains around 650,examples,1,280 illustrative diagrams.

Intelligent and Efficient Electrical Systems M.C. Bhuvaneswari 2017-12-21 This book presents selected papers from International Conference on Intelligent and Efficient Electrical Systems (ICIEES'17). The volume brings together content from both industry and academia. The book focuses on energy efficiency in electrical systems and covers en trende topics such as control of renewable energy systems. The collaborative industry-academia perspective of the conference ensures that equal emphasis is laid on novel topics and practical applications. The contents of this volume will prove useful to researchers and practicing engineers alike.

Plant Tissue Culture: An Introductory Text Sant Saran Bhojwani 2013-03-20 Plant tissue culture (PTC) is basic to all plant biotechnologies and is an exciting area of basic and applied sciences with considerable scope for further research. PTC is also the best approach to demonstrate the totipotency of plant cells, and to exploit it for numerous practical applications. It offers technologies for crop improvement (Haploid and Triploid production, In Vitro Fertilization, Hybrid Embryo Rescue, Variant Selection), clonal propagation (Micropropagation), virus elimination (Shoot Tip Culture), germplasm conservation, production of industrial phytochemicals, and regeneration of plants from genetically manipulated cells by recombinant DNA technology (Genetic Engineering) or cell fusion (Somatic Hybridization and Cybridization). Considerable work is being done to understand the physiology and genetics of in vitro embryogenesis and organogenesis using model systems, especially Arabidopsis and carrot, which is likely to enhance the efficiency of in vitro regeneration protocols. All these aspects are covered extensively in the present book. Since the first book on Plant Tissue Culture by Prof. P.R. White in 1943, several volumes describing different aspects of PTC have been published. Most of these are compilation of invited articles by different experts or proceedings of

conferences. More recently, a number of books describing the Methods and Protocols for one or more techniques of PTC have been published which should serve as useful laboratory manuals. The impetus for writing this book was to make available a complete and up-to-date text covering all basic and applied aspects of PTC for the students and early-career researchers of plant sciences and plant / agricultural biotechnology. The book comprises of nineteen chapters profusely illustrated with self-explanatory illustrations. Most of the chapters include well-tested protocols and relevant media compositions that should be helpful in conducting laboratory experiments. For those interested in further details, Suggested Further Reading is given at the end of each chapter, and a Subject and Plant Index is provided at the end of the book.

Technology Innovation in Mechanical Engineering Prem Kumar Chaurasiya 2022-04-29 This book comprises select papers presented at the conference on Technology Innovation in Mechanical Engineering (TIME-2021). The book discusses the latest innovation and advanced research in the diverse field of Mechanical Engineering such as materials, manufacturing processes, evaluation of materials properties for the application in automotive, aerospace, marine, locomotive and energy sectors. The topics covered include advanced metal forming, Energy Efficient systems, Material Characterization, Advanced metal forming, bending, welding & casting techniques, Composite and Polymer Manufacturing, Intermetallics, Future generation materials, Laser Based Manufacturing, High-Energy Beam Processing, Nano materials, Smart Material, Super Alloys, Powder Metallurgy and Ceramic Forming, Aerodynamics, Biological Heat & Mass Transfer, Combustion & Propulsion, Cryogenics, Fire Dynamics, Refrigeration & Air Conditioning, Sensors and Transducers, Turbulent Flows, Reactive Flows, Numerical Heat Transfer, Phase Change Materials, Micro- and Nano-scale Transport, Multi-phase Flows, Nuclear & Space Applications, Flexible Manufacturing Technology & System, Non-Traditional Machining processes, Structural Strength and Robustness, Vibration, Noise Analysis and Control, Tribology. In addition, it discusses industrial applications and cover theoretical and analytical methods, numerical simulations and experimental techniques in the area of Mechanical Engineering. The book will be helpful for academics, including graduate students and researchers, as well as professionals interested in interdisciplinary topics in the areas of materials, manufacturing, and energy sectors.

Proceedings of First International Conference on Computational Electronics for Wireless Communications Sanyog Rawat 2022-01-03 This book includes high-quality papers presented at Proceedings of First International Conference on Computational Electronics for Wireless Communications (ICCWC 2021), held at National Institute of Technology, Kurukshetra, Haryana, India, during June 11–12, 2021. The book presents original research work of academics and industry professionals to exchange their knowledge of the state-of-the-art research and development in computational electronics with an emphasis on wireless communications. The topics covered in the book are radio frequency and microwave, signal processing, microelectronics and wireless networks.

A Textbook of Applied Electronics RS Sedha 2008-02 The present book has been throughly revised and lot of useful material has been added .saveral photographs of electronic devices and their specifications sheets have been included.This will help the students to have a better understanding of the electrinic devices and circuits from application point of view.the mistake and misprints,which has crept in,have been eliminated in this edition.

Gender and Hindu Nationalism Prem Kumar Vijayan 2019-09-11 This book presents an innovative approach to

gender, nationalism, and the relations between them, and analyses the broader social base of Hindu nationalist organisation to understand the growth of 'Hindutva', or Hindu nationalism, in India. Arguing that Hindu nationalist thought and predilections emerge out of, and, in turn, feed, pre-existing gendered tendencies, the author presents the new concept of 'masculine hegemony', specifically Brahmanical masculine hegemony. The book offers a historical overview of the processes that converge in the making of the identity 'Hindu', in the making of the religion 'Hinduism', and in the shaping of the movement known as 'Hindutva'. The impact of colonialism, social reform, and caste movements is explored, as is the role of key figures such as Mohandas Gandhi, Indira Gandhi, and Narendra Modi. The book sheds light on the close, yet uneasy, relations that Hindu nationalist thought and practice have with conceptions of 'modernity', 'development' and women's movements, and politics, and the future of Hindu nationalism in India. A new approach to the study of Hindu nationalism, this book offers a theoretically innovative understanding of Indian history and socio-politics. It will be of interest to academics working in the field of Gender studies and Asian Studies, in particular South Asian history and politics.

Fascinating Facts about Phytonutrients in Spices and Healthy Food Louis S. Premkumar, PhD 2014-03-25 For centuries, there have been claims that healthy food garnished with exotic spices and condiments provides vital nutrients that help ward off diseases, especially preventable diseases such as diabetes and heart disease (hypertension, coronary artery disease) and promote longevity. The purpose of writing this book is to update the public about the health benefits of ingredients (phytochemicals) in spices and healthy food using existing scientific evidence. The ultimate proof of health benefits will be deciphered by the isolation and identification of specific phytochemicals acting on specific receptors in the body exerting their biological effects. The important point being emphasized is that if the physiological effect of an ingredient is glaring, it is considered to elicit a significant response. However, when the effect of an ingredient is significant, yet the effect is not readily perceivable then the usefulness goes unnoticed and can be questioned as a myth. For example, coffee has several ingredients, but only caffeine acting on the adenosine receptors stimulates the central nervous system and promotes wakefulness. Similarly, the specific active ingredient in hot chili pepper, capsaicin, activates a member of a recently identified family of receptors called transient receptor potential (TRP) channels. TRP vanilloid 1 (TRPV1), which is involved in certain modalities of pain, promotes the release of hormones in the gastrointestinal (GI) tract. Although, the bioavailability of the active ingredients is low, it is important to realize that these ingredients can cause significant local effects in the GI tract by preventing cholesterol regeneration by subduing microbiota, inhibiting precancerous growth by promoting calcium influx and stimulating nerve endings to transmit information and to release of gut hormones that are involved in regulating a variety of functions including appetite and satiety.

Advances in Smart Grid Technology Pierluigi Siano 2020-09-22 This book comprises the select proceedings of the International Conference on Power Engineering Computing and Control (PECCON) 2019. This volume focuses on the different renewable energy sources which are integrated in a smart grid and their operation both in the grid connected mode and islanded mode. The contents highlight the role of power converters in the smart grid environment, battery management, electric vehicular

technology and electric charging station as a load for the power network. This book can be useful for beginners, researchers as well as professionals interested in the area of smart grid technology.

Practical Troubleshooting of Electrical Equipment and Control Circuits Mark Brown 2004-10-21 There is a large gap between what you learn in college and the practical knowhow demanded in the working environment, running and maintaining electrical equipment and control circuits. Practical Troubleshooting of Electrical Equipment and Control Circuits focuses on the hands-on knowledge and rules-of-thumb that will help engineers and employers by increasing knowledge and skills, leading to improved equipment productivity and reduced maintenance costs. Practical Troubleshooting of Electrical Equipment and Control Circuits will help engineers and technicians to identify, prevent and fix common electrical equipment and control circuits. The emphasis is on practical issues that go beyond typical electrical principles, providing a tool-kit of skills in solving electrical problems, ranging from control circuits to motors and variable speed drives. The examples in the book are designed to be applicable to any facility. Discover the practical knowhow and rules-of-thumb they don't teach you in the classroom Diagnose electrical problems 'right first time' Reduce downtime

Algorithmic Foundations of Robotics XII Ken Goldberg 2021-05-21 This book presents the outcomes of the 12th International Workshop on the Algorithmic Foundations of Robotics (WAFR 2016). WAFR is a prestigious, single-track, biennial international meeting devoted to recent advances in algorithmic problems in robotics. Robot algorithms are an important building block of robotic systems and are used to process inputs from users and sensors, perceive and build models of the environment, plan low-level motions and high-level tasks, control robotic actuators, and coordinate actions across multiple systems. However, developing and analyzing these algorithms raises complex challenges, both theoretical and practical. Advances in the algorithmic foundations of robotics have applications to manufacturing, medicine, distributed robotics, human—robot interaction, intelligent prosthetics, computer animation, computational biology, and many other areas. The 2016 edition of WAFR went back to its roots and was held in San Francisco, California — the city where the very first WAFR was held in 1994. Organized by Pieter Abbeel, Kostas Bekris, Ken Goldberg, and Lauren Miller, WAFR 2016 featured keynote talks by John Canny on "A Guided Tour of Computer Vision, Robotics, Algebra, and HCI," Erik Demaine on "Replicators, Transformers, and Robot Swarms: Science Fiction through Geometric Algorithms," Dan Halperin on "From Piano Movers to Piano Printers: Computing and Using Minkowski Sums," and by Lydia Kavraki on "20 Years of Sampling Robot Motion." Furthermore, it included an Open Problems Session organized by Ron Alterovitz, Florian Pokorny, and Jur van den Berg. There were 58 paper presentations during the three-day event. The organizers would like to thank the authors for their work and contributions, the reviewers for ensuring the high quality of the meeting, the WAFR Steering Committee led by Nancy Amato as well as WAFR's fiscal sponsor, the International Federation of Robotics Research (IFRR), led by Oussama Khatib and Henrik Christensen. WAFR 2016 was an enjoyable and memorable event.

Problems in Operation Research (Principles & Solution) D S Hira 1991 We take great pleasure in presenting to the readers the second throughly revised edition of the book after a number of reprints.The suggestions received from the readers have been carefully incorporated in this edition and almost the entire subject matter has been reorganised,revised and rewritten.