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POWER SYSTEM DYNAMICS AND SIMULATION - ABHIJIT CHAKRABARTI 2013-04-08

This comprehensive textbook introduces electrical engineering students and engineers to the various aspects of power system dynamics. It focuses on explaining and analysing the dynamic performance of such systems which are important for both system operation and planning. The aim of this book is to present a comprehensive treatise in order to study the dynamics and simulation of the power networks. After going through the complete text, the students will be able to understand fundamental dynamic behaviour and controls of power systems and to perform basic stability analysis. The topics substantiated by suitable illustrations and computer programs describe analytical aspects of operation and characteristic of power system from the view point of steady state and dynamic condition. This text serves as a well-knit introduction to Power System Dynamics and is suitable for a one-semester course for the senior-level undergraduate students of electrical engineering and postgraduate students specializing in Power Systems.

Circuit and Network Theory—GATE, PSUS AND ES Examination - Satish K Karna

Test Prep for Circuit and Network Theory—GATE, PSUS AND ES Examination

Managing and Mining Graph Data - Charu C. Aggarwal 2010-02-02
Managing and Mining Graph Data is a comprehensive survey book in graph management and mining. It contains extensive surveys on a variety of important graph topics such as graph languages, indexing, clustering, data generation, pattern mining, classification, keyword search, pattern matching, and privacy. It also studies a number of domain-specific scenarios such as stream mining, web graphs, social networks, chemical and biological data. The chapters are written by well known researchers in the field, and provide a broad perspective of the area. This is the first comprehensive survey book in the emerging topic of graph data processing. Managing and Mining Graph Data is designed for a varied audience composed of professors, researchers and practitioners in industry. This volume is also suitable as a reference book for advanced-level database students in computer science and engineering.

Engineering Circuit Analysis - Hayt 2011-09

Introduction to Algorithms, third edition - Thomas H. Cormen 2009-07-31

The latest edition of the essential text and professional reference, with substantial new material on such topics as vEB trees, multithreaded algorithms, dynamic programming, and edge-based flow. Some books on algorithms are rigorous but incomplete; others cover masses of material but lack rigor. Introduction to Algorithms uniquely combines rigor and comprehensiveness. The book covers a broad range of algorithms in depth, yet makes their design and analysis accessible to all levels of readers. Each chapter is relatively self-contained and can be used as a unit of study. The algorithms are described in English and in a pseudocode designed to be readable by anyone who has done a little programming. The explanations have been kept elementary without sacrificing depth of coverage or mathematical rigor. The first edition became a widely used text in universities worldwide as well as the standard reference for professionals. The second edition featured new chapters on the role of algorithms, probabilistic analysis and randomized algorithms, and linear programming. The third edition has been revised and updated throughout. It includes two completely new chapters, on van Emde Boas trees and multithreaded algorithms, substantial additions to the chapter on recurrence (now called "Divide-and-Conquer"), and an appendix on matrices. It features improved treatment of dynamic programming and greedy algorithms and a new notion of edge-based flow in the material on flow networks. Many exercises and problems have been added for this edition. The international paperback edition is no longer available; the hardcover is available worldwide.

Circuit Theory and Networks - Bagchi Surajit 2010

Introduction|Basic Laws|Methods Of Analysis |Network Theorems|Circuit Theoremsii|Laplace Transformation And Transient Analysis|Graph Theory |Twoport Network|Analysis Of Ac Circuits|Active Filters |Ac Singlephase Circuits|Threephase Circuits|Spice

Digital Technologies and Applications - Saad Motahhir 2021-06-26

This book gathers selected research papers presented at the First International Conference on Digital Technologies and Applications (ICDTA 21), held at Sidi Mohamed Ben Abdellah University, Fez, Morocco, on 29-30 January 2021. highlighting the latest innovations in digital technologies as: artificial intelligence, Internet of things, embedded systems, network technology, information processing, and their applications in several areas such as hybrid vehicles, renewable energy, robotic, and COVID-19. The respective papers encourage and inspire researchers, industry professionals, and policymakers to put these methods into practice.

Network Analysis & Synth - Ghosh 2010

Evidence Based Validation of Traditional Medicines - Subhash C. Mandal 2021-01-18

The demand for traditional medicines, herbal health products, herbal pharmaceuticals, nutraceuticals, food supplements and herbal cosmetics etc. is increasing globally due to the growing recognition of these products as mainly non-toxic, having lesser side effects, better compatibility with physiological flora, and availability at affordable prices. In the last century, medical science has made incredible advances all over the globe. In spite of global reorganization and a very sound history of traditional uses, the promotion of traditional medicine faces a number of challenges around the globe, primarily in developed nations. Regulation and safety is the high concern for the promotion of traditional medicine. Quality issues and quality control, pharmacovigilance, scientific investigation and validation, intellectual property rights, and biopiracy are some key issues that restrain the advancement of traditional medicine around the globe. This book contains diverse and unique chapters, explaining in detail various subsections like phytomolecule, drug discovery and modern techniques, standardization and validation of traditional medicine, and medicinal plants, safety and regulatory issue of traditional medicine, pharmaceutical excipients from nature, plants for future. The contents of the book will be useful for the academicians, researchers and people working in the area of traditional medicine.

Network Analysis & Synthesis (Including Linear System Analysis) - C. L. Wadhwa 2007

This Book Has Been Designed As A Basic Text For Undergraduate Students Of Electrical, Electronics And Communication And Computer Engineering. In A Systematic And Friendly Manner, The Book Explains Not Only The Fundamental Concepts Like Circuit Elements, Kirchhoff S Laws, Network Equations And Resonance, But Also The Relatively Advanced Topics Like State Variable Analysis, Modern Filters, Active Rc Filters And Sensitivity Considerations. Salient Features * Basic Circuit Elements, Time And Periodic Signals And Different Types Of Systems Defined And Explained. * Network Reduction Techniques And Source Transformation Discussed. * Network Theorems Explained Using Typical Examples. * Solution Of Networks Using Graph Theory Discussed. * Analysis Of First Order, Second Order Circuits And A Perfect Transform Using Differential Equations Discussed. * Theory And Application Of Fourier And Laplace Transforms Discussed In Detail. * Interconnections Of Two-Port Networks And Their Performance In Terms Of Their Poles And Zeros Emphasised. * Both Foster And Cauer Forms Of Realisation Explained In Network Synthesis. * Classical And Modern Filter Theory Explained. * Z-Transform For Discrete Systems Explained. * Analogous Systems And Spice Discussed. * Numerous Solved Examples And Practice Problems For A Thorough Graph Of The Subject. * A Huge Question Bank Of Multiple Choice Questions With Answers Exhaustively

Covering The Topics Discussed. With All These Features, The Book Would Be Extremely Useful Not Only For Undergraduate Engineering Students But Also For Amie And Gate Candidates And Practising Engineers.

Network analysis - M.E. van VALKENBURG 1974

Limit Order Books - Frédéric Abergel 2016-05-09

A limit order book is essentially a file on a computer that contains all orders sent to the market, along with their characteristics such as the sign of the order, price, quantity and a timestamp. The majority of organized electronic markets rely on limit order books to store the list of interests of market participants on their central computer. A limit order book contains all the information available on a specific market and it reflects the way the market moves under the influence of its participants. This book discusses several models of limit order books. It begins by discussing the data to assess their empirical properties, and then moves on to mathematical models in order to reproduce the observed properties. Finally, the book presents a framework for numerical simulations. It also covers important modelling techniques including agent-based modelling, and advanced modelling of limit order books based on Hawkes processes. The book also provides in-depth coverage of simulation techniques and introduces general, flexible, open source library concepts useful to readers studying trading strategies in order-driven markets.

Artificial Neural Network for Drug Design, Delivery and Disposition - Munish Puri 2015-10-15

Artificial Neural Network for Drug Design, Delivery and Disposition provides an in-depth look at the use of artificial neural networks (ANN) in pharmaceutical research. With its ability to learn and self-correct in a highly complex environment, this predictive tool has tremendous potential to help researchers more effectively design, develop, and deliver successful drugs. This book illustrates how to use ANN methodologies and models with the intent to treat diseases like breast cancer, cardiac disease, and more. It contains the latest cutting-edge research, an analysis of the benefits of ANN, and relevant industry examples. As such, this book is an essential resource for academic and industry researchers across the pharmaceutical and biomedical sciences. Written by leading academic and industry scientists who have contributed significantly to the field and are at the forefront of artificial neural network (ANN) research. Focuses on ANN in drug design, discovery and delivery, as well as adopted methodologies and their applications to the treatment of various diseases and disorders. Chapters cover important topics across the pharmaceutical process, such as ANN in structure-based drug design and the application of ANN in modern drug discovery. Presents the future potential of ANN-based strategies in biomedical image analysis and much more.

Encyclopedia of Decision Making and Decision Support Technologies - Adam, Frederic 2008-04-30

As effective organizational decision making is a major factor in a company's success, a comprehensive account of current available research on the core concepts of the decision support agenda is in high demand by academicians and professionals. Through 110 authoritative contributions by over 160 of the world's leading experts the Encyclopedia of Decision Making and Decision Support Technologies presents a critical mass of research on the most up-to-date research on human and computer support of managerial decision making, including discussion on support of operational, tactical, and strategic decisions, human vs. computer system support structure, individual and group decision making, and multi-criteria decision making.

Microfluidics and Microfabrication - Suman Chakraborty 2009-12-15
Microfluidics and Microfabrication discusses the interconnect between microfluidics, microfabrication and the life sciences. Specifically, this includes fundamental aspects of fluid mechanics in micro-scale and nano-scale confinements and microfabrication. Material is also presented discussing micro-textured engineered surfaces, high-performance AFM probe-based, micro-grooving processes, fabrication with metals and polymers in bio-micromanipulation and microfluidic applications. Editor Suman Chakraborty brings together leading minds in both fields who also: Cover the fundamentals of microfluidics in a manner accessible to multi-disciplinary researchers, with a balance of mathematical details and physical principles. Discuss the explicit interconnection between microfluidics and microfabrication from an application perspective. Detail the amalgamation of microfluidics with logic circuits and applications in micro-electronics. Microfluidics and Microfabrication is an ideal book for researchers, engineers and senior-level graduate students interested in learning more about the two fields.

Network Analysis & Synthesis - Uday A. Bakshi 2020-11-01

The importance of network analysis and synthesis is well known in the various engineering fields. The book provides comprehensive coverage of the signals and network analysis, network functions and two port networks, network synthesis and active filter design. The book is structured to cover the key aspects of the course Network Analysis & Synthesis. The book starts with explaining the various types of signals, basic concepts of network analysis and transient analysis using classical approach. The Laplace transform plays an important role in the network analysis. The chapter on Laplace transform includes properties of Laplace transform and its application in the network analysis. The book includes the discussion of network functions of one and two port networks. The book covers the various aspects of two port network parameters along with the conditions of symmetry and reciprocity. It also derives the interrelationships between the two port network parameters. The network synthesis starts with the realizability theory including Hurwitz polynomial, properties of positive real functions, Sturm's theorem and maximum modulus theorem. The book covers the various aspects of one port network synthesis explaining the network synthesis of LC, RC, RL and RLC networks using Foster and Cauer forms. Then it explains the elements of transfer function synthesis. Finally, the book illustrates the active filter design. Each chapter provides the detailed explanation of the topic, practical examples and variety of solved problems. The explanations are given using very simple and lucid language. All the chapters are arranged in a specific sequence which helps to build the understanding of the subject in a logical fashion. The book explains the philosophy of the subject which makes the understanding of the concepts very clear and makes the subject more interesting.

Handbook on Constructing Composite Indicators: Methodology and User Guide - OECD 2008-08-22

A guide for constructing and using composite indicators for policy makers, academics, the media and other interested parties. In particular, this handbook is concerned with indicators which compare and rank country performance.

The Archaeology of South Asia - Robin Coningham 2015-08-31

This book offers a critical synthesis of the archaeology of South Asia from the Neolithic period (c.6500 BCE), when domestication began, to the spread of Buddhism accompanying the Mauryan Emperor Asoka's reign (third century BCE). The authors examine the growth and character of the Indus civilisation, with its town planning, sophisticated drainage systems, vast cities and international trade. They also consider the strong cultural links between the Indus civilisation and the second, later period of South Asian urbanism which began in the first millennium BCE and developed through the early first millennium CE. In addition to examining the evidence for emerging urban complexity, this book gives equal weight to interactions between rural and urban communities across South Asia and considers the critical roles played by rural areas in social and economic development. The authors explore how narratives of continuity and transformation have been formulated in analyses of South Asia's Prehistoric and Early Historic archaeological record.

Network Analysis - Uday A. Bakshi 2020-12-01

The book covers all the aspects of Network Analysis for undergraduate course. The book provides comprehensive coverage of network analysis and simplification techniques, network theorems, graph theory, transient analysis, filters, attenuators, Laplace transform, network functions and two port network parameters with the help of large number of solved problems. The book starts with explaining the various network simplification techniques including mesh analysis, node analysis and source shifting. The basics of a.c. fundamentals are also explained in support. The book covers the various network theorems. Then the book explains the graph theory, its application in network analysis along with the concept of duality. The transient analysis of various networks is also explained in the book. The book incorporates the detailed discussion of resonant circuits. The book also explains the theory of four terminal networks, filters and attenuators. The Laplace transform plays an important role in the network analysis. The chapter on Laplace transform includes properties of Laplace transform and its application in the network analysis. The book includes the discussion of network functions of one and two port networks. The book covers the various aspects of two port network parameters along with the conditions of symmetry and reciprocity. It also derives the interrelationships between the two port network parameters. The book uses plain and lucid language to explain each topic. The book provides the logical method of explaining the various complicated topics and stepwise methods to make the

understanding easy. The variety of solved examples is the feature of this book. The book explains the philosophy of the subject which makes the understanding of the subject very clear and makes the subject more interesting. The students have to omit nothing and possibly have to cover nothing more.

VLSI and Hardware Implementations using Modern Machine Learning Methods - Sandeep Saini 2021-12-31

Machine learning is a potential solution to resolve bottleneck issues in VLSI via optimizing tasks in the design process. This book aims to provide the latest machine-learning-based methods, algorithms, architectures, and frameworks designed for VLSI design. The focus is on digital, analog, and mixed-signal design techniques, device modeling, physical design, hardware implementation, testability, reconfigurable design, synthesis and verification, and related areas. Chapters include case studies as well as novel research ideas in the given field. Overall, the book provides practical implementations of VLSI design, IC design, and hardware realization using machine learning techniques. Features: Provides the details of state-of-the-art machine learning methods used in VLSI design Discusses hardware implementation and device modeling pertaining to machine learning algorithms Explores machine learning for various VLSI architectures and reconfigurable computing Illustrates the latest techniques for device size and feature optimization Highlights the latest case studies and reviews of the methods used for hardware implementation This book is aimed at researchers, professionals, and graduate students in VLSI, machine learning, electrical and electronic engineering, computer engineering, and hardware systems.

Electrical Circuit Theory and Technology - John Bird 2003-01-20
Electrical Circuit Theory and Technology is a fully comprehensive text for courses in electrical and electronic principles, circuit theory and electrical technology. The coverage takes students from the fundamentals of the subject, to the completion of a first year degree level course. Thus, this book is ideal for students studying engineering for the first time, and is also suitable for pre-degree vocational courses, especially where progression to higher levels of study is likely. John Bird's approach, based on 700 worked examples supported by over 1000 problems (including answers), is ideal for students of a wide range of abilities, and can be worked through at the student's own pace. Theory is kept to a minimum, placing a firm emphasis on problem-solving skills, and making this a thoroughly practical introduction to these core subjects in the electrical and electronic engineering curriculum. This revised edition includes new material on transients and Laplace transforms, with the content carefully matched to typical undergraduate modules. Free Tutor Support Material including full worked solutions to the assessment papers featured in the book will be available at <http://textbooks.elsevier.com/>. Material is only available to lecturers who have adopted the text as an essential purchase. In order to obtain your password to access the material please follow the guidelines in the book.

Digital Logic and Computer Design - M. Morris Mano 2017
This book presents the basic concepts used in the design and analysis of digital systems and introduces the principles of digital computer organization and design.

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

Circuits and Networks - Anant Sudhakar 2015

Networks and Systems - Ashfaq Husain 2015
This book is intended to serve as a textbook for BE., B. Tech, students of Electrical, Electronics, Computer, Instrumentation, Control and communication Engineering. It will also serve as a text reference for the students of diploma in Engineering. AMIE, GATE, UPSC Engineering services, IAS candidate would also find the book extremely useful. Subject matter in each chapter developed systematically from first principles. Written in a very simple language. Simple and clear explanation of concepts. Large number of carefully selected worked examples. Most simplified methods used. Step-by-step procedures given for solving problems. Ideally suited for self-study.

Futuristic Communication and Network Technologies - A.

Sivasubramanian 2021-10-11

This book presents select proceedings of the International Conference on Futuristic Communication and Network Technologies (CFCNT 2020) conducted at Vellore Institute of Technology, Chennai. It covers various domains in communication engineering and networking technologies. This volume comprises of recent research in areas like optical communication, optical networks, optics and optical computing, emerging trends in photonics, MEMS and sensors, active and passive RF components and devices, antenna systems and applications, RF devices and antennas for microwave emerging technologies, wireless communication for future networks, signal and image processing, machine learning/AI for networks, internet of intelligent things, network security and blockchain technologies. This book will be useful for researchers, professionals, and engineers working in the core areas of electronics and communication.

Network Analysis and Synthesis - Brian D. O. Anderson 2013-01-30
This comprehensive look at linear network analysis and synthesis explores state-space synthesis as well as analysis, employing modern systems theory to unite classical concepts of network theory. 1973 edition.

Assessment of Climate Change over the Indian Region - R. Krishnan 2020-06-12

This open access book discusses the impact of human-induced global climate change on the regional climate and monsoons of the Indian subcontinent, adjoining Indian Ocean and the Himalayas. It documents the regional climate change projections based on the climate models used in the IPCC Fifth Assessment Report (AR5) and climate change modeling studies using the IITM Earth System Model (ESM) and CORDEX South Asia datasets. The IPCC assessment reports, published every 6-7 years, constitute important reference materials for major policy decisions on climate change, adaptation, and mitigation. While the IPCC assessment reports largely provide a global perspective on climate change, the focus on regional climate change aspects is considerably limited. The effects of climate change over the Indian subcontinent involve complex physical processes on different space and time scales, especially given that the mean climate of this region is generally shaped by the Indian monsoon and the unique high-elevation geographical features such as the Himalayas, the Western Ghats, the Tibetan Plateau and the adjoining Indian Ocean, Arabian Sea, and Bay of Bengal. This book also presents policy relevant information based on robust scientific analysis and assessments of the observed and projected future climate change over the Indian region.

Neural Networks and Statistical Learning - Ke-Lin Du 2019-09-12
This book provides a broad yet detailed introduction to neural networks and machine learning in a statistical framework. A single, comprehensive resource for study and further research, it explores the major popular neural network models and statistical learning approaches with examples and exercises and allows readers to gain a practical working understanding of the content. This updated new edition presents recently published results and includes six new chapters that correspond to the recent advances in computational learning theory, sparse coding, deep learning, big data and cloud computing. Each chapter features state-of-the-art descriptions and significant research findings. The topics covered include: • multilayer perceptron; • the Hopfield network; • associative memory models; • clustering models and algorithms; • the radial basis function network; • recurrent neural networks; • nonnegative matrix factorization; • independent component analysis; • probabilistic and Bayesian networks; and • fuzzy sets and logic. Focusing on the prominent accomplishments and their practical aspects, this book provides academic and technical staff, as well as graduate students and researchers with a solid foundation and comprehensive reference on the fields of neural networks, pattern recognition, signal processing, and machine learning.

NETWORK THEORY - SMARAJIT GHOSH 2005-01-01

This book offers an excellent and practically oriented introduction to the basic concepts of modern circuit theory. It builds a thorough and rigorous understanding of the analysis techniques of electric networks, and also explains the essential procedures involved in the synthesis of passive networks. Written specifically to meet the needs of undergraduate students of electrical and electronics engineering, electronics and communication engineering, instrumentation and control engineering, and computer science and engineering, the book provides modularized coverage of the full spectrum of network theory suitable for a one-semester course. A balanced emphasis on conceptual understanding and problem-solving helps students master the basic

principles and properties that govern circuit behaviour. A large number of solved examples show students the step-by-step processes for applying the techniques presented in the text. A variety of exercises with answers at the chapter ends allow students to practice the solution methods. Besides students pursuing courses in engineering, the book is also suitable for self-study by those preparing for AMIE and competitive examinations. An objective-type question bank at the end of book is designed to see how well the students have mastered the material presented in the text.

Digital Microfluidic Biochips - Krishnendu Chakrabarty 2018-10-03
Digital Microfluidic Biochips focuses on the automated design and production of microfluidic-based biochips for large-scale bioassays and safety-critical applications. Bridging areas of electronic design automation with microfluidic biochip research, the authors present a system-level design automation framework that addresses key issues in the design, analysis, and testing of digital microfluidic biochips. The book describes a new generation of microfluidic biochips with more complex designs that offer dynamic reconfigurability, system scalability, system integration, and defect tolerance. Part I describes a unified design methodology that targets design optimization under resource constraints. Part II investigates cost-effective testing techniques for digital microfluidic biochips that include test resource optimization and fault detection while running normal bioassays. Part III focuses on different reconfiguration-based defect tolerance techniques designed to increase the yield and dependability of digital microfluidic biochips. Expanding upon results from ongoing research on CAD for biochips at Duke University, this book presents new design methodologies that address some of the limitations in current full-custom design techniques. Digital Microfluidic Biochips is an essential resource for achieving the integration of microfluidic components in the next generation of system-on-chip and system-in-package designs.

Data Mining: Know It All - Soumen Chakrabarti 2008-10-31
This book brings all of the elements of data mining together in a single volume, saving the reader the time and expense of making multiple purchases. It consolidates both introductory and advanced topics, thereby covering the gamut of data mining and machine learning tactics ? from data integration and pre-processing, to fundamental algorithms, to optimization techniques and web mining methodology. The proposed book expertly combines the finest data mining material from the Morgan Kaufmann portfolio. Individual chapters are derived from a select group of MK books authored by the best and brightest in the field. These chapters are combined into one comprehensive volume in a way that allows it to be used as a reference work for those interested in new and developing aspects of data mining. This book represents a quick and efficient way to unite valuable content from leading data mining experts, thereby creating a definitive, one-stop-shopping opportunity for customers to receive the information they would otherwise need to round up from separate sources. Chapters contributed by various recognized experts in the field let the reader remain up to date and fully informed from multiple viewpoints. Presents multiple methods of analysis and algorithmic problem-solving techniques, enhancing the reader's technical expertise and ability to implement practical solutions. Coverage of both theory and practice brings all of the elements of data mining together in a single volume, saving the reader the time and expense of making multiple purchases.

Efficient Processing of Deep Neural Networks - Vivienne Sze 2020-06-24
This book provides a structured treatment of the key principles and techniques for enabling efficient processing of deep neural networks (DNNs). DNNs are currently widely used for many artificial intelligence (AI) applications, including computer vision, speech recognition, and robotics. While DNNs deliver state-of-the-art accuracy on many AI tasks, it comes at the cost of high computational complexity. Therefore, techniques that enable efficient processing of deep neural networks to improve metrics—such as energy-efficiency, throughput, and latency—without sacrificing accuracy or increasing hardware costs are critical to enabling the wide deployment of DNNs in AI systems. The book includes background on DNN processing; a description and taxonomy of hardware architectural approaches for designing DNN accelerators; key metrics for evaluating and comparing different designs; features of the DNN processing that are amenable to hardware/algorithm co-design to improve energy efficiency and throughput; and opportunities for applying new technologies. Readers will find a structured introduction to the field as well as a formalization and organization of key concepts from contemporary works that provides insights that may spark new ideas.

Advanced Classification Techniques for Healthcare Analysis - Chakraborty, Chinmay 2019-02-22

Medical and information communication technology professionals are working to develop robust classification techniques, especially in healthcare data/image analysis, to ensure quick diagnoses and treatments to patients. Without fast and immediate access to healthcare databases and information, medical professionals' success rates and treatment options become limited and fall to disastrous levels. Advanced Classification Techniques for Healthcare Analysis provides emerging insight into classification techniques in delivering quality, accurate, and affordable healthcare, while also discussing the impact health data has on medical treatments. Featuring coverage on a broad range of topics such as early diagnosis, brain-computer interface, metaheuristic algorithms, clustering techniques, learning schemes, and mobile telemedicine, this book is ideal for medical professionals, healthcare administrators, engineers, researchers, academicians, and technology developers seeking current research on furthering information and communication technology that improves patient care.

Network Analysis and Synthesis - S. K. Bhattacharya 2015

This introductory textbook on Network Analysis and Synthesis provides a comprehensive coverage of the important topics in electrical circuit analysis. The full spectrum of electrical circuit topics such as Kirchoff's Laws Mesh Analysis Nodal Analysis RLC Circuits and Resonance to Network Theorems and Applications Laplace Transforms Network Synthesis and Realizability and Filters and Attenuators are discussed with the aid of a large number of worked-out examples and practice exercises.

Hybrid Intelligence for Smart Grid Systems - Seelam VSV Prabhu Deva Kumar 2021-10-21

This book provides an overview of distributed control and distributed optimization theory, followed by specific details on industrial applications to smart grid systems. It discusses the fundamental analysis and design schemes for developing actual working smart grids and covers all aspects concerning the conventional and nonconventional methods of their use. Hybrid Intelligence for Smart Grid Systems provides an overview of a smart grid, along with its needs, benefits, challenges, and existing structure and describes the inverter topologies adopted for integrating renewable power, and provides an overview of its needs, benefits, challenges, and possible future technologies. This pioneering book is a must-read for researchers, engineering professionals, and students, giving them the tools needed to move from the concept of a smart grid to its actual design and implementation. Moreover, it will enable regulators, policymakers, and energy executives to understand the future of energy delivery systems towards safe, economical, high-quality power delivery in a dynamic and demanding environment.

Circuits and Networks - Anant Sudhakar 2006

Part of the McGraw-Hill Core Concepts in Electrical Engineering Series, Circuits and Networks: Analysis and Synthesis designed as a textbook for an introductory circuits course at the intermediate undergraduate level. The book may also be appealing to a non-major survey course in electrical engineering course as well. A primary goal in Circuits and Networks is to establish a firm understanding of the basic laws of electrical circuits, and to provide students with a working knowledge of the commonly used methods of analysis in electrical engineering. This is a concise, less expensive alternative. This series is edited by Dick Dorf.

Basic Electrical Engineering - Ramesh L Chakrasali 2010

Power System Analysis: Operation And Control 3Rd Ed. - Abhijit Chakrabarti 2010-01-30

This comprehensive book is designed both for postgraduate students in power systems/energy systems engineering and a one-year course for senior undergraduate students of electrical engineering pursuing courses on power systems. The text gives a systematic exposition of topics such as modelling of power system components, load flow, automatic load frequency control, economic operation, voltage control and stability, study of faulted power systems, and optimal power flow. Besides giving a detailed discussion on the basic principles and practices, the text provides computer-based examples to illustrate the topics discussed. What makes the text unique is that it deals with the practice of computer for power system operation and control. This book also brings together the diverse aspects of power system operation and control and is a practical hands-on guide to theoretical developments and to the application of advanced methods in solving operational and control problems of electric power systems. The book should therefore be of

immense benefit to the industry professionals and researchers as well.

Network Analysis and Synthesis - Franklin F. Kuo 1968