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[Bulletin of the Institution of Engineers \(India\)](#). Institution of Engineers (India) 1978

**Course in Electrical Machine Design** A.K Sawhney 2006

**Journal of the Institution of Engineers (India). Electrical Engineering Division** 1984

**Soft Computing Techniques in Voltage Security Analysis** Kabir Chakraborty 2015-03-04 This book focuses on soft computing techniques for enhancing voltage security in electrical power networks. Artificial neural networks (ANNs) have been chosen as a soft computing tool, since such networks are eminently suitable for the study of voltage security. The different architectures of the ANNs used in this book are selected on the basis of intelligent criteria rather than by a “brute force” method of trial and error. The fundamental aim of this book is to present a comprehensive treatise on power system security and the simulation of power system security. The core concepts are substantiated by suitable illustrations and computer methods. The book describes analytical aspects of operation and characteristics of power systems from the viewpoint of voltage security. The text is self-contained and thorough. It is intended for senior undergraduate students and postgraduate students in electrical engineering. Practicing engineers, Electrical Control Center (ECC) operators and researchers will also find the book useful.

**Journal of the Institution of Engineers (India)**. 2000

**An Introduction to Reactive Power Control and Voltage Stability in Power Transmission Systems** Abhijit Chakrabarti 2010-01-30 This text, intended for the students pursuing postgraduate programmes in Electrical Engineering, focuses special attention on the implications of reactive power in voltage stability of transmission systems. The basic concepts of power system stability and other operational aspects have been discussed. Both the advanced and the practical aspects have been highlighted. Modern concepts and applications, theoretical as well as simulated study, have been presented wherever necessary. In brief, the text presents a complete overview of the research and engineering aspects of the problem of stability, suitable both for academics and practising engineers, along with a brief historical review of the concerned topics. In some instances the authors have included some of their own research results while maintaining the uniformity of overall treatment of the book. The text is replete with examples and is backed up by analytical derivations and physical interpretations, wherever considered necessary.

[Indian Science Abstracts](#) 2002

**AETA 2015: Recent Advances in Electrical Engineering and Related Sciences** Vo Hoang Duy 2016-03-09 This proceeding book consists of 10 topical areas of selected papers like: telecommunication, power systems, robotics, control system, renewable energy, power electronics, computer science and more. All selected papers represent interesting ideas and state of the art overview. Readers will find interesting papers of those areas about design and implement of dynamic positioning control system for USV, scheduling problems, motor control, backtracking search algorithm for distribution network and others. All selected papers represent interesting ideas and state of art overview. The proceeding book will also be a resource and material for practitioners who want to apply discussed problems to solve real-life problems in their challenging applications. It is also devoted to the studies of common and related subjects in intensive research fields of modern electric, electronic and related technologies. For these reasons, we believe that this proceeding book will be useful for scientists and engineers working in the above-mentioned fields of research applications.

[Principles in Noisy Optimization](#) Pratyusha Rakshit 2018-11-20 Noisy optimization is a topic of growing interest for researchers working on mainstream optimization problems. Although several techniques for dealing with stochastic noise in optimization problems are covered in journals and conference proceedings, today there are virtually no books that approach noisy optimization from a layman’s perspective; this book remedies that gap. Beginning with the foundations of evolutionary optimization, the book subsequently explores the principles of noisy optimization in single and multi-objective settings, and presents detailed illustrations of the principles developed for application in real-world multi-agent coordination problems. Special emphasis is given to the design of intelligent algorithms for noisy optimization in real-time applications. The book is unique in terms of its content, writing style and above all its simplicity, which will appeal to readers with a broad range of backgrounds. The book is divided into 7 chapters, the first of which provides an introduction to Swarm and Evolutionary Optimization algorithms. Chapter 2 includes a thorough review of agent architectures for multi-agent coordination. In turn, Chapter 3 provides an extensive review of noisy optimization, while Chapter 4 addresses issues of noise handling in the context of single-objective optimization problems. An illustrative case study on multi-robot path-planning in the presence of measurement noise is also highlighted in this chapter. Chapter 5 deals with noisy multi-objective optimization and includes a case study on noisy multi-robot box-pushing. In Chapter 6, the authors examine the scope of various algorithms in noisy optimization problems. Lastly, Chapter 7 summarizes the main results obtained in the previous chapters and elaborates on the book’s potential with regard to real-world noisy optimization problems.

[Advances in Greener Energy Technologies](#) Akash Kumar Bhoi 2020-05-15 This book presents ongoing research activities of currently available renewable energy technologies and the approaches towards clean technology for enabling a socio-economic model for the present and future generations to live in a clean and healthy environment. The book provides chapter wise implementation of research works in the area of green energy technologies with proper methods used with solution strategies and energy efficiency approaches by combining theory and practical applications. Readers are introduced to practical problems of green computation and hybrid resources optimization with solution based approaches from the current research outcomes. The book will be of use to researchers, professionals, and policy-makers alike.

[ICOL-2019](#) Kehar Singh 2021-04-12 This book presents peer-reviewed articles from the International Conference on Optics and Electro-optics, ICOL-2019, held at Dehradun in India. It brings together leading researchers and professionals in the field of optics/optical engineering/optical materials and provides a platform to present and establish collaborations in this important area, with the theme “Trends in Electro-optics Instrumentation for Strategic Applications”. Topics covered but not limited to are Optical Engineering, Optical Thin Films, Optical Materials, IR Sensors, Image Processing & Systems, Photonic Band Gap Materials, Adaptive Optics, Optical Image Processing & Holography, Lasers, Fiber Lasers & its Applications, Diffractive Optics, Innovative packaging of Optical Systems, Nanophotonics Devices and Applications, Optical Interferometry & Metrology, Terahertz, Millimeter Wave & Microwave Photonics, Fiber, Integrated & Nonlinear Optics and Optics and Electro-optics for Strategic Applications.

[Electrical Engineering and Control](#) Min Zhu 2011-06-21 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 2 is to provide a major interdisciplinary forum for the presentation of new approaches from Electrical engineering and controls, 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. Min Zhu. 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 Electrical engineering and controls.

**Offshore Semi-Submersible Platform Engineering** Srinivasan Chandrasekaran 2020-12-23 Offshore Semi-Submersible Platform Engineering presents a primer on the analysis and design of semi-submersible platforms, in particular, while also covering general analysis and design guidelines of offshore compliant platforms. It introduces general structural designs and also examines the details of the various environmental impacts that act upon them, such as

fatigue, fire, collisions, and water waves. Features Provides thorough coverage of the dynamic analysis and design of semi-submersible platforms Assists readers through detailed analysis methods using MATLAB® as well as other computer programs used to carry out structural analysis Explains impact loading and dynamic response through numerical analysis and examines the various factors that affect semi-submersibles Presented in a coursework teaching style, the content is explained in a step-by-step manner using color figures, photos, screen shots, and illustrations, thereby enabling students, researchers, and practicing engineers to carry out analysis with ease Offshore Semi-Submersible Platform Engineering serves as a practical guide for upper-level students and graduates of various engineering disciplines, for example, naval architecture, and structural, mechanical, pipeline, and offshore engineering. Further, it can also be used as a reference for practicing professionals, as the book covers a broad range of scholarships and applications.

**Engineering Innovation and Design** Artde Donald Kin-Tak Lam 2019-05-31 This volume represents the proceedings of the 7th International Conference on Innovation, Communication and Engineering (ICICE 2018), which was held in P.R. China, November 9-14, 2018. The conference aimed to provide an integrated communication platform for researchers in a wide range of fields including information technology, communication science, applied mathematics, computer science, advanced material science, and engineering. Hopefully, the conference and resulting proceedings will enhance interdisciplinary collaborations between science and engineering technologists in academia and industry within this unique international network.

**Analog Communication Systems** P. Chakrabarti 2005-01-01

**Power Transmission System Analysis Against Faults and Attacks** Tamalika Chowdhury 2021-04-13 The present-day power grid is basically a complex power transmission network with risks of failure due to unplanned attacks and contingencies, and therefore, assessment of vulnerability of transmission network is important and the process is based on contingency approach. This book deals with the methods of assessment of the grid network vulnerability and addresses the grid collapse problem due to cascaded failures of the transmission network following an attack or an unplanned contingency. Basic mitigation aspects for the network has been explored and the immunity of such a power transmission network against vulnerable collapse has been described using mathematical models.

[Machine Intelligence and Data Science Applications](#) Vaclav Skala 2022-08-01 This book is a compilation of peer reviewed papers presented at International Conference on Machine Intelligence and Data Science Applications (MIDAS 2021), held in Comilla University, Cumilla, Bangladesh during 26 – 27 December 2021. The book covers applications in various fields like image processing, natural language processing, computer vision, sentiment analysis, speech and gesture analysis, etc. It also includes interdisciplinary applications like legal, healthcare, smart society, cyber physical system and smart agriculture, etc. The book is a good reference for computer science engineers, lecturers/researchers in machine intelligence discipline and engineering graduates.

**Scientific and Technical Aerospace Reports** 1995

**Communication, Devices, and Computing** Jaydeb Bhaumik 2018-04-07 This book provides insights into the First International Conference on Communication, Devices and Computing (ICCDC 2017), which was held in Haldia, India on November 2-3, 2017. It covers new ideas, applications and the experiences of research engineers, scientists, industrialists, scholars and students from around the globe. The proceedings highlight cutting-edge research on communication, electronic devices and computing, and address diverse areas such as 5G communication, spread spectrum systems, wireless sensor networks, signal processing for secure communication, error control coding, printed antennas, analysis of wireless networks, antenna array systems, analog and digital signal processing for communication systems, frequency selective surfaces, radar communication, and substrate integrated waveguide and microwave passive components, which are key to state-of-the-art innovations in communication technologies.

[Strained Silicon Heterostructures](#) C. K. Maiti 2001 In recent years, the development of powerful epitaxial growth techniques such as molecular beam epitaxy (MBE), ultra-high vacuum chemical vapour deposition (UHVCVD) and other low temperature epitaxy techniques have given rise to a new area of research of bandgap engineering in silicon based materials. This development has paved the way for heterojunction bipolar and field effect transistors, as well as for novel quantum devices. This title provides a comprehensive introduction to silicon heterostructures, including growth and characterization of materials and descriptions of new heterostructure devices, making it a useful reference for postgraduate students, researchers and scientists.

*Computer, Communication and Electrical Technology* Debatosh Guha 2017-03-16 The First International Conference on Advancement of Computer, Communication and Electrical Technology focuses on key technologies and recent progress in computer vision, information technology applications, VLSI, signal processing, power electronics & drives, and application of sensors & transducers, etc. Topics in this conference include: Computer Science This conference encompassed relevant topics in computer science such as computer vision & intelligent system, networking theory, and application of information technology. Communication Engineering To enhance the theory & technology of communication engineering, ACCET 2016 highlighted the state-of-the-art research work in the field of VLSI, optical communication, and signal processing of various data formatting. Research work in the field of microwave engineering, cognitive radio and networks are also included. Electrical Technology The state-of-the-art research topic in the field of electrical & instrumentation engineering is included in this conference such as power system stability & protection, non-conventional energy resources, electrical drives, and biomedical engineering. Research work in the area of optimization and application in control, measurement & instrumentation are included as well.

**Engineering Design Synthesis** Amaresh Chakrabarti 2013-03-09 This book brings together some of the most influential pieces of research undertaken around the world in design synthesis. It is the first comprehensive work of this kind and covers all three aspects of research in design synthesis: - understanding what constitutes and influences synthesis; - the major approaches to synthesis; - the diverse range of tools that are created to support this crucial design task. With its range of tools and methods covered, it is an ideal introduction to design synthesis for those intending to research in this area as well as being a valuable source of ideas for educators and practitioners of engineering design.

**Advances in Communication, Devices and Networking** Rabindranath Bera 2018-05-23 The book provides insights of International Conference in Communication, Devices and Networking (ICCDN 2017) organized by the Department of Electronics and Communication Engineering, Sikkim Manipal Institute of Technology, Sikkim, India during 3 – 4 June, 2017. The book discusses latest research papers presented by researchers, engineers, academicians and industry professionals. It also assists both novice and experienced scientists and developers, to explore newer scopes, collect new ideas and establish new cooperation between research groups and exchange ideas, information, techniques and applications in the field of electronics, communication, devices and networking.

*Foundations and Frontiers in Computer, Communication and Electrical Engineering* Aritra Acharyya 2016-05-05 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

**Impact of Ion Implantation on Quantum Dot Heterostructures and Devices** Arjun Mandal 2017-06-02 This book looks at the effects of ion implantation as an effective post-growth technique to improve the material properties, and ultimately, the device performance of In(Ga)As/GaAs quantum dot (QD) heterostructures. Over the past two decades, In(Ga)As/GaAs-based QD heterostructures have marked their superiority, particularly for application in lasers and photodetectors. Several in-situ and ex-situ techniques that improve material quality and device performance have already been reported. These

techniques are necessary to maintain dot density and dot size uniformity in QD heterostructures and also to improve the material quality of heterostructures by removing defects from the system. While rapid thermal annealing, pulsed laser annealing and the hydrogen passivation technique have been popular as post-growth methods, ion implantation had not been explored largely as a post-growth method for improving the material properties of In(Ga)As/GaAs QD heterostructures. This work attempts to remedy this gap in the literature. The work also looks at introduction of a capping layer of quaternary alloy InAlGaAs over these In(Ga)As/GaAs QDs to achieve better QD characteristics. The contents of this volume will prove useful to researchers and professionals involved in the study of QDs and QD-based devices.

**Interdisciplinary Research in Technology and Management** Satyajit Chakrabarti 2021-09-14 The conference on "Interdisciplinary Research in Technology and Management" was a bold experiment in deviating from the traditional approach of conferences which focus on a specific topic or theme. By attempting to bring diverse inter-related topics on a common platform, the conference has sought to answer a long felt need and give a fillip to interdisciplinary research not only within the technology domain but across domains in the management field as well. The spectrum of topics covered in the research papers is too wide to be singled out for specific mention but it is noteworthy that these papers addressed many important and relevant concerns of the day.

**Optimisation of ZnO Thin Films** Saurabh Nagar 2017-05-22 This monograph describes the different implantation mechanisms which can be used to achieve strong, reliable and stable p-type ZnO thin films. The results will prove useful in the field of optoelectronics in the UV region. This book will prove useful to research scholars and professionals working on doping and implantation of ZnO thin films and subsequently fabricating optoelectronic devices. The first chapter of the monograph emphasises the importance of ZnO in the field of optoelectronics for ultraviolet (UV) region and also discusses the material, electronic and optical properties of ZnO. The book then goes on to discuss the optimization of pulsed laser deposited (PLD) ZnO thin films in order to make successful p-type films. This can enable achievement of high optical output required for high-efficiency devices. The book also discusses a hydrogen implantation study on the optimized films to confirm whether the implantation leads to improvement in the optimized results.

**Fundamental Research in Electrical Engineering** Shahram Montaser Kouhsari 2018-07-25 This volume presents the selected papers of the First International Conference on Fundamental Research in Electrical Engineering, held at Khwarazmi University, Tehran, Iran in July, 2017. The selected papers cover the whole spectrum of the main four fields of Electrical Engineering (Electronic, Telecommunications, Control, and Power Engineering).

**Materiaalkunde** Kenneth G. Budinski 2009 In Materiaalkunde komen alle belangrijke materialen die toegepast worden in werktuigbouwkundige constructies aan de orde, zoals metalen, kunststoffen en keramiek. Per materiaalgroep behandelen de auteurs: · de belangrijkste eigenschappen; · de manier van verwerking; · de beperkingen; · de belangrijkste keuzeaspecten met betrekking tot constructies; · de manier van specificatie in een technische tekening of een ontwerp. De eerste editie van Materiaalkunde verscheen alweer dertig jaar geleden. In de tussentijd is het voortdurend aangepast aan de nieuwste ontwikkelingen en het mag dan ook met recht een klassieker genoemd worden.

**Engineering Chemistry-I: Concepts and Applications** Jit Chakraborty & Asimesh Dutta Gupta and Ravikanth Kamlekar Engineering Chemistry – I: Concepts and Applications is a textbook that offers an exclusive coverage of the topics and proper explanation of concepts as per the present day and future needs of the students. The book provides the theoretical (Chapters 1-7) as well as practical (Chapter 8) aspects of the paper Chemistry-I (BSC102) as per the latest AICTE curriculum. It will be useful to not only the first-year engineering and technology students of all streams but also the professors for guiding their students.

**Structural, Optical and Spectral Behaviour of InAs-based Quantum Dot Heterostructures** Saumya Sengupta 2017-08-04 This book explores the effects of growth pause or ripening time on the properties of quantum dots(QDs). It covers the effects of post-growth rapid thermal annealing (RTA) treatment on properties of single layer QDs. The effects of post-growth rapid thermal annealing (RTA) treatment on properties of single layer QDs are discussed. The book offers insight into InAs/GaAs bilayer QD heterostructures with very thin spacer layers and discusses minimum spacer thickness required to grow electronically coupled bilayer QD heterostructures. These techniques make bilayer QD heterostructures a better choice over the single layer and uncoupled multilayer QD heterostructure. Finally, the book discusses sub-monolayer (SML) growth technique to grow QDs. This recent technique has been proven to improve the device performance significantly. The contents of this monograph will prove useful to researchers and professionals alike.

**Intelligent Electrical Systems:** Satyajit Chakrabarti 2021-04-15 The conference aims to provide a premier platform for Engineers, researchers, scientists and academicians to present their work in the emerging areas such as Renewable Energy, Energy storage, Power Electronics & drives, Smart devices and communication systems, Artificial Intelligence, Robotics, Networks an IoT, Control and automation etc.

**Research into Design for Communities, Volume 2** Amaresh Chakrabarti 2017-04-13 This book showcases cutting-edge research papers from the 6th International Conference on Research into Design (ICoRD 2017) – the largest in India in this area – written by eminent researchers from across the world on design process, technologies, methods and tools, and their impact on innovation, for supporting design for communities. While design traditionally focused on the development of products for the individual, the emerging consensus on working towards a more sustainable world demands greater attention to designing for and with communities, so as to promote their sustenance and harmony - within each community and across communities. The special features of the book are the insights into the product and system innovation process, and the host of methods and tools from all major areas of design research for the enhancement of the innovation process. The main benefit of the book for researchers in various areas of design and innovation are access to the latest quality

research in this area, with the largest collection of research from India. For practitioners and educators, it is exposure to an empirically validated suite of theories, models, methods and tools that can be taught and practiced for design-led innovation. The contents of this volume will be of use to researchers and professionals working in the areas on industrial design, manufacturing, consumer goods, and industrial management.

**ENERGY ENGINEERING AND MANAGEMENT** CHAKRABARTI, AMLAN 2018-11-01 The textbook is designed for B.Tech students of Electrical/Mechanical/Industrial Engineering and M.Tech students of Power System/Energy Engineering/Energy Management. It will also be useful for MBA courses on Energy Management conducted by some universities through distance education mode. The book, now in its Second Edition, offers an exhaustive discussion of the energy analysis methodologies and tools to optimize the utilization of energy and how to enhance efficiency during conversion of energy from one form to another. It illustrates the energy analysis methods used in factories, transportation systems and buildings highlighting the various forms of use. It also discusses the thermodynamic principles of energy conversion and constitution of energy balance equation for such systems. The book examines the energy costs in our everyday life in terms of energy inputs in food cultivation. It also discusses similar energy costs of using fuels, other goods and services in our daily life **KEY FEATURES** • Includes numerous questions and answers on Energy Management • Contains problems and solutions on Energy Management • Provides MCQs for the preparation of certified energy auditor examination conducted by the Bureau of Energy Efficiency, Gol • Includes Case Studies **NEW TO THE SECOND EDITION** • Includes new chapters on Electrical Systems, Transformers, Electric Motors, Pumps and Fans, Compressors, Water Heaters, Electrolytic Processes, and Energy Control Centre • Incorporates latest topics in the existing chapters • Provides critical case studies

**Quaternary Capped In(Ga)As/GaAs Quantum Dot Infrared Photodetectors** Sourav Adhikary 2017-09-06 This book introduces some alternative methods for enhancing the performance of In(Ga)As/GaAs-based quantum dot infrared photodetectors (QDIPs). In(Ga)As/GaAs-based QDIPs and focal plane array (FPA) cameras have wide application in fields such as military and space science. The core of the study uses a combination of quaternary In<sub>0.21</sub>Al<sub>0.21</sub>Ga<sub>0.58</sub>As and GaAs spacer as a capping layer on In(Ga)As/GaAs quantum dots in the active region of the detector structure. For the purposes of optimization, three types of samples growths are considered with different capping thicknesses. The results presented include TEM, XRD and photoluminescence studies that compare combination barrier thickness and its effect on structural and optical properties. Compressive strain within the heterostructure, thermal stability in high temperature annealing, spectral response, shifts in PL peaks peak, and responsivity and detectivity are all considered. The results also present a narrow spectral width that was obtained by using InAs QDs which is very useful for third generation FPA camera application. The book details effect of post-growth rapid thermal annealing on device characteristics and methods to enhance responsivity and peak detectivity. The contents of this book will be useful to researchers and professionals alike.

**Dielectric Materials for Electrical Engineering** Juan Martinez-Vega 2013-03-04 Part 1 is particularly concerned with physical properties, electrical ageing and modeling with topics such as the physics of charged dielectric materials, conduction mechanisms, dielectric relaxation, space charge, electric ageing and life end models and dielectric experimental characterization. Part 2 concerns some applications specific to dielectric materials: insulating oils for transformers, electrorheological fluids, electrolytic capacitors, ionic membranes, photovoltaic conversion, dielectric thermal control coatings for geostationary satellites, plastics recycling and piezoelectric polymers.

**Design Frameworks for Wireless Networks** Santosh Kumar Das 2019-08-10 This book provides an overview of the current state of the art in wireless networks around the globe, focusing on utilizing the latest artificial intelligence and soft computing techniques to provide design frameworks for wireless networks. These techniques play a vital role in developing a more robust algorithm suitable for the dynamic and heterogeneous environment, making the network self-managed, self-operational, and self-configurational, and efficiently reducing uncertainties and imprecise information.

**Handbook of Medical Imaging** 2000-10-09 In recent years, the remarkable advances in medical imaging instruments have increased their use considerably for diagnostics as well as planning and follow-up of treatment. Emerging from the fields of radiology, medical physics and engineering, medical imaging no longer simply deals with the technology and interpretation of radiographic images. The limitless possibilities presented by computer science and technology, coupled with engineering advances in signal processing, optics and nuclear medicine have created the vastly expanded field of medical imaging. The Handbook of Medical Imaging is the first comprehensive compilation of the concepts and techniques used to analyze and manipulate medical images after they have been generated or digitized. The Handbook is organized in six sections that relate to the main functions needed for processing: enhancement, segmentation, quantification, registration, visualization as well as compression storage and telemedicine. \* Internationally renowned authors (Johns Hopkins, Harvard, UCLA, Yale, Columbia, UCSF) \* Includes imaging and visualization \* Contains over 60 pages of stunning, four-color images

**Nuclear Science Abstracts** 1975

**Nanoelectronic Materials and Devices** Christophe Labbé 2017-11-27 This book gathers a collection of papers by international experts that were presented at the International Conference on NextGen Electronic Technologies (ICNETS2-2016). ICNETS2 encompassed six symposia covering all aspects of the electronics and communications domains, including relevant nano/micro materials and devices. Highlighting the latest research on nanoelectronic materials and devices, the book offers a valuable guide for researchers, practitioners and students working in the core areas of functional electronics nanomaterials, nanocomposites for energy application, sensing and high strength materials and simulation of novel device design structures for ultra-low power applications.