

Electrical Engineering Ebooks B L Theraja

Differential evolution is a very simple but very powerful stochastic optimizer. Since its inception, it has proved very efficient and robust in function optimization and has been applied to solve problems in many scientific and engineering fields. In *Differential Evolution*, Dr. Qing begins with an overview of optimization, followed by a state-of-the-art review of differential evolution, including its fundamentals and up-to-date advances. He goes on to explore the relationship between differential evolution strategies, intrinsic control parameters, non-intrinsic control parameters, and problem features through a parametric study. Findings and recommendations on the selection of strategies and intrinsic control parameter values are presented. Lastly, after an introductory review of reported applications in electrical and electronic engineering fields, different research groups demonstrate how the methods can be applied to such areas as: multicast routing, multisite mapping in grid environments, antenna arrays, analog electric circuit sizing, electricity markets, stochastic tracking in video sequences, and color quantization. Contains a systematic and comprehensive overview of differential evolution Reviews the latest differential evolution research Describes a comprehensive parametric study conducted over a large test bed Shows how

methods can be practically applied to mobile communications grid computing circuits image processing power engineering Sample applications demonstrated by research groups in the United Kingdom, Australia, Italy, Turkey, China, and Eastern Europe Provides access to companion website with code examples for download Differential Evolution is ideal for application engineers, who can use the methods described to solve specific engineering problems. It is also a valuable reference for post-graduates and researchers working in evolutionary computation, design optimization and artificial intelligence. Researchers in the optimization field or engineers and managers involved in operations research will also find the book a helpful introduction to the topic.

Foundations of Electrical Engineering: Fields—Networks—Waves describes the general principles of electrical engineering, with emphasis on fields, networks, and waves. The limitations of validity are defined and methods of calculation are outlined. Examples are used to illustrate the theory and microphysical explanations based on simple models are given. This book is divided into five sections and begins with an overview of the inductive approach to Maxwell's equations, along with the uniqueness of their solution. Energy conversion in the electromagnetic field as well as the basic concepts of vector algebra and vector analysis are also considered. Subsequent chapters focus on static and steady

fields, including cylindrically symmetrical fields and magnetic fields; the laws of network analysis and network synthesis; transient phenomena; and transmission lines. The remaining sections deal with electromagnetic waves, with emphasis on boundary value problems, and further developments in electrical engineering. This monograph will be of interest to students of electrical engineering and mathematics.

A clear explanation of the technology for producing and delivering electricity *Electric Power Systems* explains and illustrates how the electric grid works in a clear, straightforward style that makes highly technical material accessible. It begins with a thorough discussion of the underlying physical concepts of electricity, circuits, and complex power that serves as a foundation for more advanced material. Readers are then introduced to the main components of electric power systems, including generators, motors and other appliances, and transmission and distribution equipment such as power lines, transformers, and circuit breakers. The author explains how a whole power system is managed and coordinated, analyzed mathematically, and kept stable and reliable. Recognizing the economic and environmental implications of electric energy production and public concern over disruptions of service, this book exposes the challenges of producing and delivering electricity to help inform public policy decisions. Its

discussions of complex concepts such as reactive power balance, load flow, and stability analysis, for example, offer deep insight into the complexity of electric grid operation and demonstrate how and why physics constrains economics and politics. Although this survival guide includes mathematical equations and formulas, it discusses their meaning in plain English and does not assume any prior familiarity with particular notations or technical jargon. Additional features include: * A glossary of symbols, units, abbreviations, and acronyms * Illustrations that help readers visualize processes and better understand complex concepts * Detailed analysis of a case study, including a Web reference to the case, enabling readers to test the consequences of manipulating various parameters With its clear discussion of how electric grids work, *Electric Power Systems* is appropriate for a broad readership of professionals, undergraduate and graduate students, government agency managers, environmental advocates, and consumers.

A thorough and exhaustive presentation of theoretical analysis and practical techniques for the small-signal analysis and control of large modern electric power systems as well as an assessment of their stability and damping performance.

The *Beginner's Guide to Engineering* series is designed to provide a very simple,

non-technical introduction to the fields of engineering for people with no experience in the fields. Each book in the series focuses on introducing the reader to the various concepts in the fields of engineering conceptually rather than mathematically. These books are a great resource for high school students that are considering majoring in one of the engineering fields, or for anyone else that is curious about engineering but has no background in the field. Books in the series: 1. The Beginner's Guide to Engineering: Chemical Engineering 2. The Beginner's Guide to Engineering: Computer Engineering 3. The Beginner's Guide to Engineering: Electrical Engineering 4. The Beginner's Guide to Engineering: Mechanical Engineering

This second edition, extensively revised and updated, continues to offer sound, practically-oriented, modularized coverage of the full spectrum of fundamental topics in each of the several major areas of electrical and electronics engineering. Circuit Theory Electrical Measurements and Measuring Instruments Electric Machines Electric Power Systems Control Systems Signals and Systems Analog and Digital Electronics including introduction to microcomputers The book conforms to the syllabi of Basic Electrical and Electronic Sciences prescribed for the first-year engineering students. It is also an ideal text for students pursuing diploma programmes in Electrical Engineering. Written in a straightforward style

with a strong emphasis on primary principles, the main objective of the book is to bring an understanding of the subject within the reach of all engineering students.

What is New to This Edition : Fundamentals of Control Systems (Chapter 24)

Fundamentals of Signals and Systems (Chapter 25) Introduction to

Microcomputers (Chapter 32) Substantial revisions to chapters on Transformer,

Semiconductor Diodes and Transistors, and Field Effect Transistors Laplace

Transform (Appendix B) Applications of Laplace Transform (Appendix C) PSpice

(Appendix E) key Features : Numerous solved examples for sound conceptual

understanding End-of-chapter review questions and numerical problems for

rigorous practice by students Answers to all end-of-chapter numerical problems

An objective type Questions Bank with answers to hone the technical skills of

students for viva voce and preparation for competitive examinations.

The book reports on advanced theories and methods in two related engineering fields: electrical and electronic engineering, and communications engineering and computing. It highlights areas of global and growing importance, such as

renewable energy, power systems, mobile communications, security and the

Internet of Things (IoT). The contributions cover a number of current research

issues, including smart grids, photovoltaic systems, wireless power transfer,

signal processing, 4G and 5G technologies, IoT applications, mobile cloud

computing, and smart grids. The book also covers the latest developments in

computing and many more. Based on the proceedings of the first International Conference on Emerging Trends in Electrical, Electronic and Communications Engineering (ELECOM 2016), held in Voila Bagatelle, Mauritius from November 25 to 27, 2016, the book provides graduate students, researchers and professionals with a snapshot of the state-of-the-art and a source of new ideas for future research and collaborations.

The book is a review of essential skills that an entry-level or experienced engineer must be able to demonstrate on a job interview and perform when hired. It will help engineers prepare for interviews by demonstrating application of basic principles to practical problems. Hiring managers will find the book useful because it defines a common ground between the student's academic background and the company's product or technology-specific needs, thereby allowing managers to minimize their risk when making hiring decisions. Ten Essential Skills contains a series of "How to" chapters. Each chapter realizes a goal, such as designing an active filter or designing a discrete servo. The primary value of these chapters, however, is that they apply engineering fundamentals to practical problems. The book is a handy reference for engineers in their first years on the job. Enables recent graduates in engineering to succeed in challenging technical interviews Written in an intuitive, easy-to-follow style for the

benefit of busy students and employers Book focuses on the intersection between company-specific knowledge and engineering fundamentals Companion website includes interview practice problems and advanced material

Written by former NASA engineer Dr David Baker, A Degree in a Book: Electrical and Mechanical Engineering is presented in an attractive landscape format in full-color. With timelines, feature spreads and information boxes, readers will quickly get to grips with the fundamentals of electrical and mechanical engineering and their practical applications. The separate ages of engineering are divided into empirical and scientific periods, then the range of possibilities provided by discovery, analysis, invention and application are covered. A final section relates the mechanical and electrical fields of applied engineering to the challenges of the future. This includes environmental responsibility and the value of an engineer in a holistic sense rather than as an isolated individual or as a team member.

ABOUT THE SERIES: Get the knowledge of a degree for the price of a book in Arcturus Publishing's A Degree in a Book series. Featuring handy timelines, information boxes, feature spreads and margin annotations, these illustrated full-color books are perfect for anyone wishing to master seemingly complex subject with ease and enjoyment.

Electrical Engineering Principles for Technicians covers the syllabus of Electrical Engineering Principles III of the C.G.L.I. Course for Electrical Technicians. It provides a basic introduction to electrical principles and their practical application. Comprised of

eight chapter, the book discusses a wide range of topics including magnetic circuits, rectifier and thermocouple instruments, direct-current machines, transformers, and electric circuits. It also explains the alternating current theory and the generation of a three-phase supply system. The book ends by discussing the rate of change of current in an inductor and a capacitor. Students taking electrical engineering and technician courses will find this book very useful.

The second edition of a bestseller, this definitive text covers all aspects of testing and maintenance of the equipment found in electrical power systems serving industrial, commercial, utility substations, and generating plants. It addresses practical aspects of routing testing and maintenance and presents both the methodologies and engineering basics needed to carry out these tasks. It is an essential reference for engineers and technicians responsible for the operation, maintenance, and testing of power system equipment. Comprehensive coverage includes dielectric theory, dissolved gas analysis, cable fault locating, ground resistance measurements, and power factor, dissipation factor, DC, breaker, and relay testing methods.

This comprehensive textbook introduces electrical engineers to the most relevant concepts and techniques in electric power systems engineering today. With an emphasis on practical motivations for choosing the best design and analysis approaches, the author carefully integrates theory and application. Key features include more than 500 illustrations and diagrams, clearly developed procedures and application

examples, important mathematical details, coverage of both alternating and direct current, an additional set of solved problems at the end of each chapter, and an historical overview of the development of electric power systems. This book will be useful to both power engineering students and professional power engineers.

Designed as a hands-on guide for labs, the hobbyist, or for the industry professional, this book covers instructions and methods for doing experiments with currents and magnetism. The book includes 49 separate experiments on electricity, magnetism, currents, voltage, generators, transformers, relays, alternators, resistance, gaps, and more. Each experiment covers: the object, method, result, and questions with answers on the experiment under discussion. A separate chapter at the end of the book has over 175 questions with answers to test your knowledge of electricity and electronics. Features:

- Covers the object, setup and method, result, and questions with answers for doing experiments with currents and magnetism
- Includes 49 separate experiments on electricity, magnetism, currents, voltage, generators, transformers, relays, alternators, resistance, gaps, and more
- Ends with a separate chapter containing over 175 questions with answers to test your general knowledge of electricity and electronics

Embedded Firmware Solutions is the perfect introduction and daily-use field guide--for the thousands of firmware designers, hardware engineers, architects, managers, and developers--to Intel's new firmware direction (including Quark coverage), showing how to integrate Intel® Architecture designs into their plans. Featuring hands-on examples

and exercises using Open Source codebases, like Coreboot and EFI Development Kit (tianocore) and Chromebook, this is the first book that combines a timely and thorough overview of firmware solutions for the rapidly evolving embedded ecosystem with in-depth coverage of requirements and optimization.

Pocket Book of Electrical Engineering Formulas provides key formulas used in practically all areas of electrical engineering and applied mathematics. This handy, pocket-sized guide has been organized by topic field to make finding information quick and easy. The book features an extensive index and is an excellent quick reference for electrical engineers, educators, and students.

Real-world engineering problems are rarely, if ever, neatly divided into mechanical, electrical, chemical, civil, and other categories. Engineers from all disciplines eventually encounter computer and electronic controls and instrumentation, which require at least a basic knowledge of electrical and other engineering specialties, as well as associated economics, and environmental, political, and social issues. Co-authored by Charles Gross—one of the most well-known and respected professors in the field of electric machines and power engineering—and his world-renowned colleague Thad Roppel, *Fundamentals of Electrical Engineering* provides an overview of the profession for engineering professionals and students whose specialization lies in areas other than electrical. For instance, civil engineers must contend with commercial electrical service and lighting design issues. Mechanical engineers have to deal with motors in HVAC

applications, and chemical engineers are forced to handle problems involving process control. Simple and easy-to-use, yet more than sufficient in rigor and coverage of fundamental concepts, this resource teaches EE fundamentals but omits the typical analytical methods that hold little relevance for the audience. The authors provide many examples to illustrate concepts, as well as homework problems to help readers understand and apply presented material. In many cases, courses for non-electrical engineers, or non-EEs, have presented watered-down classical EE material, resulting in unpopular courses that students hate and senior faculty members understandingly avoid teaching. To remedy this situation—and create more well-rounded practitioners—the authors focus on the true EE needs of non-EEs, as determined through their own teaching experience, as well as significant input from non-EE faculty. The book provides several important contemporary interdisciplinary examples to support this approach. The result is a full-color modern narrative that bridges the various EE and non-EE curricula and serves as a truly relevant course that students and faculty can both enjoy.

In today's world, there's an electronic gadget for everything and inside these gadgets are circuits, little components wired together to perform some meaningful function. Have you wondered how a led display sign works or how a calculator works or toy cars work? How is it possible All because of electrical circuits. These tiny components when arranged in certain manner can do

wonders. Fascinating isn't it? Our fascination with gadgets and reliance on machinery is only growing day by day and hence from an engineering perspective, it is absolutely crucial to be familiar with the analysis and designing of such Circuits, at the very least one should be able to identify components. Circuit analysis is one of basic subjects in engineering and particularly important for Electrical and Electronics students. So circuit analysis is a good starting point for anyone wanting to get into the field. It is a very easy subject to learn and understand, but for this reason most of us end up taking the subject lightly and therefore misunderstand many key ideas. This will lead to a lot of headache in other subjects. In this book we provide a concise introduction into basic Circuit analysis. A basic knowledge of Calculus and some Physics are the only prerequisites required to follow the topics discussed in the book. We've tried to explain the various fundamental concepts of Circuit theory in the simplest manner without an over reliance on math. Also, we have tried to connect the various topics with real life situations wherever possible. This way even first timers can learn the basics of Circuit theory with minimum effort. Hopefully the students will enjoy this different approach to Circuit Analysis. The various concepts of the subject are arranged logically and explained in a simple reader-friendly language with illustrative figures. We have covered basic topics

extensively and given an introduction to advanced topics like s- domain analysis. This book will hopefully serve as inspiration to learn Circuit theory, and in turn Electrical engineering in greater depths.

Decentralized Control of Complex Systems

This volume covers principles and applications of electrical engineering, with the help of several pedagogical features.

Fundamentals of Electrical Engineering | Orange Groove Books Practical Electrical Engineering | Springer

"Covering virtually all areas of distribution engineering, this complete reference work examines the unique behavior of utilities and provides the practical knowledge necessary to solve real-world distribution problems. "

For ease of use, this edition has been divided into the following subject sections: general principles; materials and processes; control, power electronics and drives; environment; power generation; transmission and distribution; power systems; sectors of electricity use. New chapters and major revisions include: industrial instrumentation; digital control systems; programmable controllers; electronic power conversion; environmental control; hazardous area technology; electromagnetic compatibility; alternative energy sources; alternating current generators; electromagnetic transients; power system planning; reactive power

plant and FACTS controllers; electricity economics and trading; power quality.

*An essential source of techniques, data and principles for all practising electrical engineers *Written by an international team of experts from engineering companies and universities *Includes a major new section on control systems, PLCs and microprocessors

First published in 1945, this book maintains its original aims - to reflect the state-of-the-art in electrical science and technology, and to cater for the needs of practising engineers.

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

Mathematics for Electrical Engineering and Computing embraces many applications of modern mathematics, such as Boolean Algebra and Sets and Functions, and also teaches both discrete and continuous systems - particularly vital for Digital Signal Processing (DSP). In addition, as most modern engineers are required to study software, material suitable for Software Engineering - set theory, predicate and propositional calculus, language and graph theory - is fully integrated into the book. Excessive technical detail and language are avoided, recognising that the real requirement for practising engineers is the need to understand the applications of mathematics in everyday engineering contexts. Emphasis is given to an

appreciation of the fundamental concepts behind the mathematics, for problem solving and undertaking critical analysis of results, whether using a calculator or a computer. The text is backed up by numerous exercises and worked examples throughout, firmly rooted in engineering practice, ensuring that all mathematical theory introduced is directly relevant to real-world engineering. The book includes introductions to advanced topics such as Fourier analysis, vector calculus and random processes, also making this a suitable introductory text for second year undergraduates of electrical, electronic and computer engineering, undertaking engineering mathematics courses. Dr Attenborough is a former Senior Lecturer in the School of Electrical, Electronic and Information Engineering at South Bank University. She is currently Technical Director of The Webbery - Internet development company, Co. Donegal, Ireland.

Fundamental principles of mathematics introduced and applied in engineering practice, reinforced through over 300 examples directly relevant to real-world engineering

Principles of Electrical Safety discusses current issues in electrical safety, which are accompanied by series' of practical applications that can be used by practicing professionals, graduate students, and researchers. .

- Provides extensive introductions to important topics in electrical safety
- Comprehensive overview of inductance, resistance, and capacitance as applied to the human body
- Serves as a preparatory guide for today's practicing engineers

Complete coverage of all fields of electrical engineering. The book provides workable definitions for practicing engineers, while serving as a reference and research tool for students, and offering practical information for scientists and engineers in other disciplines. Areas examined include applied electrical, microwave, control, power, and digital systems engineering, plus device electronics.

Many, in their quest for knowledge in engineering, find typical textbooks intimidating. Perhaps due to an extensive amount of physics theory, an overwhelming barrage of math, and not enough practical application of the engineering principles, laws, and equations. Therein lies the difference between this text and those voluminous and daunting conventional university engineering textbooks. This text leads the reader into more complex and abstract content after explaining the electrical engineering concepts and principles in an easy to understand fashion, supported by analogies borrowed from day-to-day examples and other engineering disciplines. Many complex electrical engineering concepts, for example, power factor, are examined from multiple perspectives, aided by diagrams, illustrations, and examples that the reader can easily relate to. Throughout this book, the reader will gain a clear and strong grasp of electrical engineering fundamentals, and a better understanding of electrical engineering terms, concepts, principles, laws, analytical techniques, solution strategies, and computational techniques. The reader will also develop the ability to communicate with professional electrical engineers, controls engineers, and electricians on their "wavelength" with greater confidence. Study of this book can help develop skills and preparation necessary for succeeding in the electrical engineering portion of various certification and licensure exams, including Fundamentals of Engineering (FE), Professional Engineering (PE), Certified Energy Manager (CEM), and many other trade certification tests. This text can serve as a compact and simplified electrical engineering desk reference. This book provides a brief introduction to the NEC®, the Arc-Flash Code, and a better understanding of electrical energy and associated cost. If you need to gain a better understanding of myriad battery alternatives available in the market, their strengths and weaknesses, and how batteries compare with capacitors as energy

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storage devices, this book can be a starting point. This book is ideal for engineers, engineering students, facility managers, engineering managers, program/project managers, and other executives who do not possess a current working knowledge of electrical engineering. Because of the simple explanations, analogies, and practical examples employed by the author, this book serves as an excellent learning tool for non-engineers, technical writers, attorneys, electrical sales professionals, energy professionals, electrical equipment procurement agents, construction managers, facility managers, and maintenance managers.

Listing: Electrical engineering without priors knowledge - Understand the basics within seven days Two in One: You will receive the eBook in PDF format free of charge when you buy the paperback! Would you like to understand electrical circuits and be able to apply the basics of electrical engineering? No problem - with the help of this electrical engineering beginner's guide, you will be able to understand the basic effects of electric current, voltage and energy in no time at all. This guide covers the basics of direct current technology. Real practical examples and small exercises alongside the text help you understand. With the help of this beginner's guide, many satisfied readers have already been able to get into the subject and expand their own skills - see for yourself! Advantages of this book: Simply explained - written in a way understandable for everyone To the point - 114 pages in a practical pocketbook format Relevant to everyday life - real practical examples Clear and structured - important remarks and formulas are highlighted Bonus chapter included What the book contains: Review of the most important mathematical and physical basics Power, current and voltage explained Electromagnetism: cause and effect Understand electrical circuit diagrams: the correct notation and structure The most important components: resistors, capacitors and many more! Bonus:

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Practical example - a real circuit to reproduce Do not hesitate any longer - order the guide now, and soon you will understand the basics of electrical engineering!

Power Electronics and Motor Drives: Advances and Trends, Second Edition is the perfect resource to keep the electrical engineer up-to-speed on the latest advancements in technologies, equipment and applications. Carefully structured to include both traditional topics for entry-level and more advanced applications for the experienced engineer, this reference sheds light on the rapidly growing field of power electronic operations. New content covers converters, machine models and new control methods such as fuzzy logic and neural network control. This reference will help engineers further understand recent technologies and gain practical understanding with its inclusion of many industrial applications. Further supported by a glossary per chapter, this book gives engineers and researchers a critical reference to learn from real-world examples and make future decisions on power electronic technology and applications. Provides many practical examples of industrial applications Updates on the newest electronic topics with content added on fuzzy logic and neural networks Presents information from an expert with decades of research and industrial experience

The Newnes Know It All Series takes the best of what our authors have written to create hard-working desk references that will be an engineer's first port of call for key information, design techniques and rules of thumb. Guaranteed not to gather dust on a shelf! Electrical engineers need to master a wide area of topics to excel. The Electrical Engineering Know It All covers every angle including Real-World Signals and Systems, Electromagnetics, and Power systems. A 360-degree view from our best-selling authors Topics include digital, analog, and power electronics, and electric circuits The ultimate hard-working desk reference; all the

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essential information, techniques and tricks of the trade in one volume

In the electronics industry today consumer demand for devices with hyper-connectivity and mobility has resulted in the development of a complete system on a chip (SoC). Using the old 'rule of thumb' design methods of the past is no longer feasible for these new complex electronic systems. To develop highly successful systems that meet the requirements and quality expectations of customers, engineers now need to use a rigorous, model-based approach in their designs. This book provides the definitive guide to the techniques, methods and technologies for electronic systems engineers, embedded systems engineers, and hardware and software engineers to carry out model-based electronic system design, as well as for students of IC systems design. Based on the authors' considerable industrial experience, the book shows how to implement the methods in the context of integrated circuit design flows. Complete guide to methods, techniques and technologies of model-based engineering design for developing robust electronic systems Written by world experts in model-based design who have considerable industrial experience Shows how to adopt the methods using numerous industrial examples in the context of integrated circuit design

This textbook provides comprehensive, in-depth coverage of the fundamental concepts of electrical engineering. It is written from an engineering perspective, with special emphasis on circuit functionality and applications. Reliance on higher-level mathematics and physics, or theoretical proofs has been intentionally limited in order to prioritize the practical aspects of electrical engineering. This text is therefore suitable for a number of introductory circuit courses for other majors such as mechanical, biomedical, aerospace, civil, architecture, petroleum, and industrial engineering. The authors' primary goal is to teach the aspiring engineering student

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all fundamental tools needed to understand, analyze and design a wide range of practical circuits and systems. Their secondary goal is to provide a comprehensive reference, for both major and non-major students as well as practicing engineers.

This textbook is intended to introduce the student of electronics to the fundamentals of digital circuits, both combinational and sequential, in a reasonable and systematic manner. It proceeds from basic logic concepts to circuits and designs.

Written by an expert electronics engineer who enjoys teaching the practical side of engineering, this book covers all the subjects that a beginning EE needs to know: intuitive circuit and signal analysis, physical equivalents of electrical components, proper use of an oscilloscope, troubleshooting both digital and analog circuits, and much more! Even engineers with years in the industry can benefit from the compendium of practical information provided within. CONTENTS: Chapter 0: What is Electricity Really? Chapter 1: Three Things They Should Have Taught in Engineering 101 Chapter 2: Basic Theory Chapter 3: Pieces Parts Chapter 4: The Real World Chapter 5: Tools Chapter 6: Troubleshooting Chapter 7: Touchy-Feely Stuff Appendix *Covers the engineering basics that have been either left out of a typical engineer's education or forgotten over time *No other book offers a wealth of "insider information" in one volume, specifically geared to help new engineers and provide a refresher for those with more experience *updated content throughout, including 2-color diagrams and a new 'Chapter 0 - What is Electricity Really?' *The accompanying CD-ROM contains a reference library of electronics information, with demo simulation software and engineering calculators

Electric power engineering has always been an integral part of electrical engineering

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education. Providing a unique alternative to existing books on the market, this text presents a concise and rigorous exposition of the main fundamentals of electric power engineering. Contained in a single volume, the materials can be used to teach three separate courses — electrical machines, power systems and power electronics, which are in the mainstream of the electrical engineering curriculum of most universities worldwide. The book also highlights an in-depth review of electric and magnetic circuit theory with emphasis on the topics which are most relevant to electric power engineering. Contents: Review of Electric and Magnetic Circuit Theory: Basic Electric Circuit Theory Analysis of Electric Circuits with Periodic Non-sinusoidal Sources Magnetic Circuit Theory Power Systems: Introduction to Power Systems Fault Analysis Transformers Synchronous Generators Power Flow Analysis and Stability of Power Systems Induction Machines Power Electronics: Power Semiconductor Devices Rectifiers Inverters DC-to-DC Converters (Choppers) Keywords: Power Systems; Electrical Machines; Power Electronics
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