Solution Manual Sadiku Engineering Electromagnetics

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NetworkingClassical MechanicsSignal Processing and
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Electromagnetic Field Theory

Until now, novices had to painstakingly dig through the literature to discover how to use Monte Carlo techniques for solving electromagnetic problems. Written by one of the foremost researchers in the field, Monte Carlo Methods for Electromagnetics provides a solid understanding of these methods and their applications in electromagnetic computation. Including much of his own work, the author brings together essential information from several different publications. Using a simple, clear writing style, the author begins with a historical background and review of electromagnetic theory. After addressing probability and statistics, he introduces the finite difference method as well as the fixed and floating random walk Monte Carlo methods. The text then applies the Exodus method to Laplace's and Poisson's equations and presents Monte Carlo techniques for handing Neumann problems. It also deals with whole field computation using the Markov chain, applies Monte Carlo methods to time-varying diffusion problems, and explores wave scattering due to random rough surfaces. The final chapter covers multidimensional integration. Although numerical techniques have become the standard tools for solving practical, complex electromagnetic problems, there is no book currently available that focuses

exclusively on Monte Carlo techniques for electromagnetics. Alleviating this problem, this book describes Monte Carlo methods as they are used in the field of electromagnetics.

Fundamentals of Electromagnetics with Engineering Applications

You too can understand the statistics of life, even if you're math-challenged! What do you need to calculate? Manufacturing output? A curve for test scores? Sports stats? You and Excel can do it, and this non-intimidating guide shows you how. It demystifies the different types of statistics, how Excel functions and formulas work, the meaning of means and medians, how to interpret your figures, and more — in plain English. Getting there — learn how variables, samples, and probability are used to get the information you want Excel tricks — find out what's built into the program to help you work with Excel formulas Playing with worksheets — get acquainted with the worksheet functions for each step Graphic displays — present your data as pie graphs, bar graphs, line graphs, or scatter plots What's normal? — understand normal distribution and probability Hyping hypotheses — learn to use hypothesis testing with means and variables When regression is progress — discover when and how to use regression for forecasting What are the odds — work with probability, random variables, and binomial distribution Open the book and find: Ten statistical and graphical tips and traps The difference between descriptive and inferential statistics Why graphs are

good How to measure variations What standard scores are and why they're used When to use two-sample hypothesis testing How to use correlations Different ways of working with probability

Multimedia Communications and Networking

Classical Mechanics

Signal Processing and Linear Systems

With the rapid growth of wireless technologies, more and more people are trying to gain a better understanding of electromagnetics. After all, electromagnetic fields have a direct impact on reception in all wireless applications. This text explores electromagnetics, presenting practical applications for wireless systems, transmission lines, waveguides, antennas, electromagnetic interference, and microwave engineering. It is designed for use in a one- or two-semester electromagnetics sequence for electrical engineering students at the junior and senior level. The first book on the subject to tackle the impact of electromagnetics on wireless applications: Includes numerous worked-out example problems that provide you with hands-on experience in solving electromagnetic problems. Describes a number of practical applications that show how electromagnetic theory is put into practice. Offers a concise summary at the end of each chapter that reinforces the key

points. Detailed MATLAB examples are integrated throughout the book to enhance the material.

Principles of Modern Communication Systems

Fundamentals of Electrical Engineering

Thoroughly updated and revised, this third edition of Sadiku's Elements of Electromagnetics is designed for the standard sophomore/junior level electromagnetics course taught in departments of electrical engineering. It takes a two-semester approach to fundamental concepts and applications in electromagnetics beginning with vecotr analysis- which is then applied throughout the text. A balanced presentation of time-varying fields and static fields prepares students for employment in today's industrial and manufacturing sectors. Mathematical theorems are treated separately from physical concepts. Students, therefore, do not need to review any more mathematics than their level of proficiency requires. Sadiku is well-known for his excellent pedagogy, and this edition refines his approach even further. Student-oriented pedagogy comprises: chapter introductions showing how the forthcoming material relates to the previous chapter, summaries, boxed formulas, and multiple choice review questions with answers allowing students to gauge their comprehension. Many new problems have been added throughout the text, as well as a new chapter on "Modern Topics" covering microwaves,

electromagnetic interference and compatability, and optical fibers. This book is appropriate for sophomore/junior level students in electrical engineering. It will also be accompanied by a Solutions Manual, available free to adopters of the main text.

Monte Carlo Methods for Electromagnetics

An accessible, yet mathematically rigorous, one-semester textbook, engaging students through use of problems, examples, and applications.

Advanced Engineering Electromagnetics

This book provides students with a thorough theoretical understanding of electromagnetic field equations and it also treats a large number of applications. The text is a comprehensive two-semester textbook. The work treats most topics in two steps – a short, introductory chapter followed by a second chapter with in-depth extensive treatment; between 10 to 30 applications per topic; examples and exercises throughout the book; experiments, problems and summaries. The new edition includes: modifications to about 30-40% of the end of chapter problems; a new introduction to electromagnetics based on behavior of charges; a new section on units; MATLAB tools for solution of problems and demonstration of subjects; most chapters include a summary. The book is an undergraduate textbook at the Junior level, intended for required classes in

electromagnetics. It is written in simple terms with all details of derivations included and all steps in solutions listed. It requires little beyond basic calculus and can be used for self-study. The wealth of examples and alternative explanations makes it very approachable by students. More than 400 examples and exercises, exercising every topic in the book Includes 600 end-of-chapter problems, many of them applications or simplified applications Discusses the finite element, finite difference and method of moments in a dedicated chapter

Loose Leaf for Fundamentals of Electric Circuits

The result of decades of research and international project experience, Multimedia Communications and Networking provides authoritative insight into recent developments in multimedia, digital communications, and networking services and technologies. Supplying you with the required foundation in these areas, it illustrates the means that will allow

Computational Electromagnetics with MATLAB, Fourth Edition

Taking a vector-first approach, this text provides a balanced presentation of a host of topics including electrostatics, magnetostatics, fields, waves, and applications like transmission lines, waveguides, and antennas. The new edition includes new Application Notes detailing real-worldconnections, a revised math pre-test for professors to assess students'

mathematical skills, and new and updated problems.

Elements of Electromagnetics

This title is intended to present circuit analysis to engineering technology students in a manner that is clearer, more interesting and easier to understand than other texts. The book may also be used for a one-semester course by a proper selection of chapters and sections by the instructor.

Schaum's Outline of Electromagnetics, 4th Edition

Engineering Electromagnetics

Based on the successful Modelling and Control of Robot Manipulators by Sciavicco and Siciliano (Springer, 2000), Robotics provides the basic know-how on the foundations of robotics: modelling, planning and control. It has been expanded to include coverage of mobile robots, visual control and motion planning. A variety of problems is raised throughout, and the proper tools to find engineering-oriented solutions are introduced and explained. The text includes coverage of fundamental topics like kinematics, and trajectory planning and related technological aspects including actuators and sensors. To impart practical skill, examples and case studies are carefully worked out and interwoven through the text, with frequent resort to simulation. In addition, end-of-chapter exercises are proposed, and

the book is accompanied by an electronic solutions
manual containing the MATLAB® code for computer
problems; this is available free of charge to those
adopting this volume as a textbook for courses.

Principles Of Electromagnetics, 4Th Edition, International Version

Gregory's Classical Mechanics is a major new
textbook for undergraduates in mathematics and
physics. It is a thorough, self-contained and highly
readable account of a subject many students find
difficult. The author's clear and systematic style
promotes a good understanding of the subject: each
concept is motivated and illustrated by worked
examples, while problem sets provide plenty of
practice for understanding and technique. Computer
assisted problems, some suitable for projects, are also
included. The book is structured to make learning the
subject easy; there is a natural progression from core
topics to more advanced ones and hard topics are
treated with particular care. A theme of the book is
the importance of conservation principles. These
appear first in vectorial mechanics where they are
proved and applied to problem solving. They reappear
in analytical mechanics, where they are shown to be
related to symmetries of the Lagrangian, culminating
in Noether's theorem.

Newnes Engineering Science Pocket Book

A clearly written introduction to the key physical and

engineering principles of electromagnetics, first published in 2000.

Elements Of Electromagnetics 3E

Reviews the fundamental concepts behind the theory and computation of electromagnetic fields The book is divided in two parts. The first part covers both fundamental theories (such as vector analysis, Maxwell's equations, boundary condition, and transmission line theory) and advanced topics (such as wave transformation, addition theorems, and fields in layered media) in order to benefit students at all levels. The second part of the book covers the major computational methods for numerical analysis of electromagnetic fields for engineering applications. These methods include the three fundamental approaches for numerical analysis of electromagnetic fields: the finite difference method (the finite difference time-domain method in particular), the finite element method, and the integral equation-based moment method. The second part also examines fast algorithms for solving integral equations and hybrid techniques that combine different numerical methods to seek more efficient solutions of complicated electromagnetic problems. Theory and Computation of Electromagnetic Fields, Second Edition: Provides the foundation necessary for graduate students to learn and understand more advanced topics Discusses electromagnetic analysis in rectangular, cylindrical and spherical coordinates Covers computational electromagnetics in both frequency and time domains Includes new and

updated homework problems and examples Theory
and Computation of Electromagnetic Fields, Second
Edition is written for advanced undergraduate and
graduate level electrical engineering students. This
book can also be used as a reference for professional
engineers interested in learning about analysis and
computation skills.

Introductory Quantum Optics

Fundamentals of Electric Circuits continues in the
spirit of its successful previous editions, with the
objective of presenting circuit analysis in a manner
that is clearer, more interesting, and easier to
understand than other, more traditional texts.
Students are introduced to the sound, six-step
problem solving methodology in chapter one, and are
consistently made to apply and practice these steps
in practice problems and homework problems
throughout the text. A balance of theory, worked &
extended examples, practice problems, and real-
world applications, combined with over 468 new or
changed homework problems complete this edition.
Robust media offerings, renders this text to be the
most comprehensive and student-friendly approach to
linear circuit analysis out there. This book retains the
"Design a Problem" feature which helps students
develop their design skills by having the student
develop the question, as well as the solution. There
are over 100 "Design a Problem" exercises integrated
into problem sets in the book. McGraw-Hill
Education's Connect, is also available as an optional,
add on item. Connect is the only integrated learning

system that empowers students by continuously adapting to deliver precisely what they need, when they need it, how they need it, so that class time is more effective. Connect allows the professor to assign homework, quizzes, and tests easily and automatically grades and records the scores of the student's work. Problems are randomized to prevent sharing of answers an may also have a "multi-step solution" which helps move the students' learning along if they experience difficulty.

Elements of Electromagnetics

Newnes Engineering Science Pocket Book provides a readily available reference to the essential engineering science formulae, definitions, and general information needed during studies and/or work situation. This book consists of three main topics— general engineering science, electrical engineering science, and mechanical engineering science. In these topics, this text specifically discusses the atomic structure of matter, standard quality symbols and units, chemical effects of electricity, and capacitors and capacitance. The alternating currents and voltages, three phase systems, D.C. machines, and A.C. motors are also elaborated. This compilation likewise covers the linear momentum and impulse, effects of forces on materials, and pressure in fluids. This publication is useful for technicians and engineers, as well as students studying for technician certificates and diplomas, GCSE, and A levels.

Applied Electromagnetics

The basic objective of this highly successful text--to present the concepts of electromagnetics in a style that is clear and interesting to read--is more fully-realized in this Second Edition than ever before.Thoroughly updated and revised, this two-semester approach to fundamental concepts and applications in electromagnetics begins with vector analysis--which is then applied throughout the text. A balanced presentation of time-varying fields and static fields prepares students for employment in today's industrial and manufacturing sectors.Mathematical theorems are treated separately from physical concepts.Students, therefore, do not need to review any more mathematics than their level of proficiency requires. Sadiku is well-known for his excellent pedagogy, and this edition refines his approach even further. Student-oriented pedagogy comprises: chapter introductions showing how the forthcoming material relates to the previous chapter, summaries, boxed formulas, and multiple choice review questions with answers allowing students to gauge their comprehension. Many new problems have been added throughout the text.

Electromechanical Motion Devices

Publisher Description

Non-Binary Error Control Coding for Wireless Communication and Data Storage

For use in an introductory circuit analysis or circuit

theory course, this text presents circuit analysis in a clear manner, with many practical applications. It demonstrates the principles, carefully explaining each step.

Fundamentals of Electric Circuits

With the continuing success of Local Area Networks (IANs), there is an increasing demand to extend their capabilities towards higher data rates and wider areas. This, together with the progress in fiber-optic technology, has given rise to the so-called Metropolitan Area Networks (MANs). MANs can span much greater distances than current LAN s, and offer data rates on the order of hundreds of Megabits/sec (Mbps). The success of MANs is mainly due to the opportunity they provide to develop new networking products capable of providing high-speed commu nications between applications at competitive prices, which nonetheless give an adequate return on the manufacturers' investments. A major factor in of appropriate networking standards. achieving this goal is the availability Fiber Distributed Data Interface (FDDl) and Distributed Queue Dual Bus (DQDB) are the two standard technologies for MANs for which industrial products are already available. For this reason, this book focuses mainly on these two standards. Nowadays there are several books dealing with MANs, and these look mainly at FDDI (e.g., [2], [92], [118], [141]). These books focus primarily on the architectures and protocols, whereas they pay little attention to per formance analysis. Due to the capability of MANs to integrate services, a

quantitative analysis of the Quality of Service (QoS) provided by these tech nologies is a relevant issue, and is thus covered in depth in this book.

Elements of Electromagnetics

This fourth edition of the text reflects the continuing increase in awareness and use of computational electromagnetics and incorporates advances and refinements made in recent years. Most notable among these are the improvements made to the standard algorithm for the finite-difference time-domain (FDTD) method and treatment of absorbing boundary conditions in FDTD, finite element, and transmission-line-matrix methods. It teaches the readers how to pose, numerically analyze, and solve EM problems, to give them the ability to expand their problem-solving skills using a variety of methods, and to prepare them for research in electromagnetism. Includes new homework problems in each chapter. Each chapter is updated with the current trends in CEM. Adds a new appendix on CEM codes, which covers commercial and free codes. Provides updated MATLAB code.

Metropolitan Area Networks

Signals and Systems: A Primer with MATLAB® provides clear, interesting, and easy-to-understand coverage of continuous-time and discrete-time signals and systems. Each chapter opens with a historical profile or career talk, followed by an introduction that states the chapter objectives and links the chapter to

the previous ones. All principles are presented in a lucid, logical, step-by-step approach. As much as possible, the authors avoid wordiness and detail overload that could hide concepts and impede understanding. In recognition of the requirements by the Accreditation Board for Engineering and Technology (ABET) on integrating computer tools, the use of MATLAB® is encouraged in a student-friendly manner. MATLAB is introduced in Appendix B and applied gradually throughout the book. Each illustrative example is immediately followed by a practice problem along with its answer. Students can follow the example step by step to solve the practice problem without flipping pages or looking at the end of the book for answers. These practice problems test students' comprehension and reinforce key concepts before moving on to the next section. Toward the end of each chapter, the authors discuss some application aspects of the concepts covered in the chapter. The material covered in the chapter is applied to at least one or two practical problems or devices. This helps students see how the concepts are applied to real-life situations. In addition, thoroughly worked examples are given liberally at the end of every section. These examples give students a solid grasp of the solutions as well as the confidence to solve similar problems themselves. Some of the problems are solved in two or three ways to facilitate a deeper understanding and comparison of different approaches. Ten review questions in the form of multiple-choice objective items are provided at the end of each chapter with answers. The review questions are intended to cover the "little tricks" that the examples and end-of-chapter problems may not cover. They serve as a self-

test device and help students determine chapter mastery. Each chapter also ends with a summary of key points and formulas. Designed for a three-hour semester course on signals and systems, Signals and Systems: A Primer with MATLAB® is intended as a textbook for junior-level undergraduate students in electrical and computer engineering. The prerequisites for a course based on this book are knowledge of standard mathematics (including calculus and differential equations) and electric circuit analysis.

Electromagnetic Field Interaction with Transmission Lines

Balanis' second edition of Advanced Engineering Electromagnetics – a global best-seller for over 20 years – covers the advanced knowledge engineers involved in electromagnetic need to know, particularly as the topic relates to the fast-moving, continually evolving, and rapidly expanding field of wireless communications. The immense interest in wireless communications and the expected increase in wireless communications systems projects (antenna, microwave and wireless communication) points to an increase in the number of engineers needed to specialize in this field. In addition, the Instructor Book Companion Site contains a rich collection of multimedia resources for use with this text. Resources include: Ready-made lecture notes in Power Point format for all the chapters. Forty-nine MATLAB® programs to compute, plot and animate some of the wave phenomena Nearly 600 end-of-chapter

problems, that's an average of 40 problems per chapter (200 new problems; 50% more than in the first edition) A thoroughly updated Solutions Manual 2500 slides for Instructors are included.

Applied Circuit Analysis

This text examines applications and covers statics with an emphasis on the dynamics of engineering electromagnetics. This edition features a new chapter on electromagnetic principles for photonics, and sections on cylindrical metallic waveguides and losses in waveguides and resonators.

Engineering Electromagnetics

"This text presents a comprehensive treatment of signal processing and linear systems suitable for undergraduate students in electrical engineering, It is based on Lathi's widely used book, Linear Systems and Signals, with additional applications to communications, controls, and filtering as well as new chapters on analog and digital filters and digital signal processing.This volume's organization is different from the earlier book. Here, the Laplace transform follows Fourier, rather than the reverse; continuous-time and discrete-time systems are treated sequentially, rather than interwoven. Additionally, the text contains enough material in discrete-time systems to be used not only for a traditional course in signals and systems but also for an introductory course in digital signal processing. In Signal Processing and Linear Systems Lathi emphasizes the

physical appreciation of concepts rather than the mere mathematical manipulation of symbols. Avoiding the tendency to treat engineering as a branch of applied mathematics, he uses mathematics not so much to prove an axiomatic theory as to enhance physical and intuitive understanding of concepts. Wherever possible, theoretical results are supported by carefully chosen examples and analogies, allowing students to intuitively discover meaning for themselves"--

Elements of Electromagnetics

Elements of Electromagnetics is designed for a first course in Electromagnetics for students towards an electrical engineering degree. This core course is usually required of all ECE majors. A split occurs in the market between professors who present vectors first and professors who present transmission lines first, Sadiku's text takes the vectors-first approach. The 5th edition is primarily focused on adding new and revised homework problems, particularly problems that focus on real-world practical examples. MATLAB exercises have been incorporated into each chapter for extended practice. Theintensive review and accuracy checking process conductedin the 4th edition will be highlighted in the preface.

Problems & Solutions In Electromagnetics

Theory and Computation of

Electromagnetic Fields

Numerical Techniques in Electromagnetics

Tough Test Questions? Missed Lectures? Not Enough Time? Fortunately, there's Schaum's. This all-in-one-package includes more than 350 fully solved problems, examples, and practice exercises to sharpen your problem-solving skills. Plus, you will have access to 20 detailed videos featuring instructors who explain the most commonly tested problems--it's just like having your own virtual tutor! You'll find everything you need to build confidence, skills, and knowledge for the highest score possible. More than 40 million students have trusted Schaum's to help them succeed in the classroom and on exams. Schaum's is the key to faster learning and higher grades in every subject. Each Outline presents all the essential course information in an easy-to-follow, topic-by-topic format. You also get hundreds of examples, solved problems, and practice exercises to test your skills. This Schaum's Outline gives you 351 fully solved problems Exercises to help you test your mastery of electromagnetics Support for all the major textbooks for electromagnetic courses Fully compatible with your classroom text, Schaum's highlights all the important facts you need to know. Use Schaum's to shorten your study time--and get your best test scores! Schaum's Outlines--Problem Solved.

Elements of Engineering
Electromagnetics

The evaluation of electromagnetic field coupling to
transmission lines is an important problem in
electromagnetic compatibility. Traditionally, use is
made of the TL approximation which applies to
uniform transmission lines with electrically small cross-
sectional dimensions, where the dominant mode of
propagation is TEM. Antenna-mode currents and
higher-order modes appearing at higher frequencies
are neglected in TL theory. The use of the TL
approximation has permitted to solve a large range of
problems (e.g. lightning and EMP interaction with
power lines). However, the continual increase in
operating frequency of products and higher frequency
sources of disturbances (such as UWB systems)
makes that the TL basic assumptions are no longer
acceptable for a certain number of applications. In the
last decade or so, the generalization of classical TL
theory to take into account high frequency effects has
emerged as an important topic of study in
electromagnetic compatibility. This effort resulted in
the elaboration of the so-called 'generlized' or 'full-
wave' TL theory, which incorporates high frequency
radiation effects, while keeping the relative simplicity
of TL equations. This book is organized in two main
parts. Part I presents consolidated knowledge of
classical transmission line theory and different field-to-
transmission line coupling models. Part II presents
different approaches developed to generalize TL
Theory.

Engineering Electromagnetics

STUDENT COMPANION SITE Every new copy of Stuart Wentworth's Applied Electromagnetics comes with a registration code which allows access to the Student's Book Companion Site. On the BCS the student will find: * Detailed Solutions to Odd-Numbered Problems in the text * Detailed Solutions to all Drill Problems from the text * MATLAB code for all the MATLAB examples in the text * Additional MATLAB demonstrations with code. This includes a Transmission Lines simulator created by the author. * Weblinks to a vast array of resources for the engineering student. Go to www.wiley.com/college/wentworth to link to Applied Electromagnetics and the Student Companion Site. ABOUT THE PHOTO Passive RFID systems, consisting of readers and tags, are expected to replace bar codes as the primary means of identification, inventory and billing of everyday items. The tags typically consist of an RFID chip placed on a flexible film containing a planar antenna. The antenna captures radiation from the reader's signal to power the tag electronics, which then responds to the reader's query. The PENI Tag (Product Emitting Numbering Identification Tag) shown, developed by the University of Pittsburgh in a team led by Professor Marlin H. Mickle, integrates the antenna with the rest of the tag electronics. RFID systems involve many electomagnetics concepts, including antennas, radiation, transmission lines, and microwave circuit components. (Photo courtesy of Marlin H. Mickle.)

Essentials of Electromagnetics for Engineering

A good understanding of electromagnetics is vital to anyone working with electrical currents. Electromagnetics, electrostatics, and magnetostatics are the foundation for microwaves, biomedical imaging, and circuit design. Understanding this foundation well is the basis for a successful careerin electromagnetics-related fields. Sadiku's Elements of Electromagnetics, fourth edition, is designed for the introductory course in electromagnetics for electrical and computer engineering undergraduates. Taking a vector-first approach, Sadiku explains electrostatics, magnetostatics, fields andwaves, as well as applications like transmission lines, waveguides, and antennas. It provides a balanced presentation of time-varying fields and static fields, preparing students for employment in today's industrial and manufacturing sectors.

Robotics

Statistical Analysis with Excel For Dummies

This text provides a basic treatment of modern electric machineanalysis that gives readers the necessary background forcomprehending the traditional applications and operatingcharacteristics of electric machines—as well as theiremerging applications in modern power systems and electric

drives,such as those used in hybrid and electric vehicles. Through the appropriate use of reference frame theory,Electromagnetic Motion Devices, Second Edition introducesreaders to field-oriented control of induction machines,constant-torque, and constant-power control of dc, permanent-magnetac machines, and brushless dc machines. It also discussessteady-state and transient performance in addition to theirapplications. Electromagnetic Motion Devices, Second Editionpresents: The derivations of all machine models, starting with a commonfirst-principle approach (based upon Ohm's, Faraday's, Ampere's,and Newton's/Euler's laws) A generalized two-phase approach to reference frame theory thatcan be applied to the ac machines featured in the book The influences of the current and voltage constraints in thetorque-versus-speed profile of electric machines operated with anelectric drive Complete with slides, videos, animations, problems &solutions Thoroughly classroom tested and complete with a supplementarysolutions manual and video library, Electromagnetic MotionDevices, Second Edition is an invaluable book for anyoneinterested in modern machine theory and applications. If youwould like access to the solutions manual and video library, pleasesend an email to: ahref="mailto:ieeeproposals @wiley.com"ieeeproposals@wiley.com/a.

Elements of Electromagnetics

Analytical Techniques in Electromagnetics is designed for researchers, scientists, and engineers seeking analytical solutions to electromagnetic (EM) problems.

The techniques presented provide exact solutions that can be used to validate the accuracy of approximate solutions, offer better insight into actual physical processes, and can be utilized

Analytical Techniques in Electromagnetics

Comprehensive introduction to non-binary error-correction coding techniques Non-Binary Error Control Coding for Wireless Communication and Data Storage explores non-binary coding schemes that have been developed to provide an alternative to the Reed – Solomon codes, which are expected to become unsuitable for use in future data storage and communication devices as the demand for higher data rates increases. This book will look at the other significant non-binary coding schemes, including non-binary block and ring trellis-coded modulation (TCM) codes that perform well in fading conditions without any expansion in bandwidth use, and algebraic-geometric codes which are an extension of Reed-Solomon codes but with better parameters. Key Features: Comprehensive and self-contained reference to non-binary error control coding starting from binary codes and progressing up to the latest non-binary codes Explains the design and construction of good non-binary codes with descriptions of efficient non-binary decoding algorithms with applications for wireless communication and high-density data storage Discusses the application to specific cellular and wireless channels, and also magnetic storage

channels that model the reading of data from the magnetic disc of a hard drive. Includes detailed worked examples for each coding scheme to supplement the concepts described in this book Focuses on the encoding, decoding and performance of both block and convolutional non-binary codes, and covers the Kötter-Vardy algorithm and Non-binary LDPC codes This book will be an excellent reference for researchers in the wireless communication and data storage communities, as well as development/research engineers in telecoms and storage companies. Postgraduate students in these fields will also find this book of interest.

Signals and Systems

Engineering Electromagnetics provides a solid foundation in electromagnetics fundamentals by emphasizing physical understanding and practical applications. Electromagnetics, with its requirements for abstract thinking, can prove challenging for students. The authors' physical and intuitive approach has produced a book that will inspire enthusiasm and interest for the material. Benefiting from a review of electromagnetic curricula at several schools and repeated use in classroom settings, this text presents material in a rigorous yet readable manner. FEATURES/BENEFITS Starts with coverage of transmission lines before addressing fundamental laws, providing a smooth transition from circuits to electromagnetics. Emphasizes physical understanding and the experimental bases of fundamental laws. Offers detailed examples and numerous practical end-

of-chapter problems, with each problem's topical content clearly identified. Provides historical notes, abbreviated biographies, and hundreds of footnotes to motivate interest and enhance understanding. Back Cover Benefiting from a review of electromagnetics curricula at several schools and repeated use in classroom settings, this text presents material in a comprehensive and practical yet readable manner. Features: Starts with coverage of transmission lines before addressing fundamental laws, providing a smooth transition from circuits to electromagnetics. Emphasizes physical understanding and the experimental bases of fundamental laws. Offers detailed examples and numerous practical end-of-chapter problems, with each problem's topical content clearly identified. Provides historical notes, abbreviated biographies, and hundreds of footnotes to motivate interest and enhance understanding.

ROMANCE ACTION & ADVENTURE MYSTERY & THRILLER BIOGRAPHIES & HISTORY CHILDREN'S YOUNG ADULT FANTASY HISTORICAL FICTION HORROR LITERARY FICTION NON-FICTION SCIENCE FICTION