

By Matthew No Sadiku Numerical Techniques In Electromagnetics With Matlab Third Edition 3rd Edition Hardcover

Electromagnetic Simulation Using the FDTD Method with Python Computational Electromagnetics for RF and Microwave Engineering Numerical Techniques in Electromagnetics with MATLAB Elements of Electromagnetics Numerical Methods for Engineering Numerical Techniques in Electromagnetics, Second Edition Handbook of Numerical Heat Transfer Engineering Electromagnetics Electromagnetic Field Theory Shelly Cashman Series Microsoft Office 365 & Access 2016: Comprehensive Signals and Systems Engineering Electromagnetics Numerical Electromagnetics My Life and Work Applied Circuit Analysis Handbook of Aerospace Electromagnetic Compatibility The Finite Difference Time Domain Method for Electromagnetics Metropolitan Area Networks My Life and Work Computational Electromagnetics Handbook of Engineering Electromagnetics Fundamentals of Electric Circuits Theory and Computation of Electromagnetic Fields Elements of Engineering Electromagnetics Principles Of Electromagnetics, 4Th Edition, International Version Analytical Techniques in Electromagnetics Monte Carlo Methods for Electromagnetics The Method of Moments in Electromagnetics, Second Edition Elements of Electromagnetics Optical and Wireless Communications Elements of Electromagnetics Problem Solving Made Almost Easy Computational Electrodynamics No-Nonsense Electrodynamics Computational Electromagnetics with MATLAB, Fourth Edition Emerging Internet-Based Technologies Elements of Electromagnetics Elements of Electromagnetics Performance Analysis of Computer Networks Practical Numerical Methods with C#

Electromagnetic Simulation Using the FDTD Method with Python

Computational Electromagnetics for RF and Microwave Engineering

Introduces CEM methods, applying the codes that implement them to real-world engineering problems.

Numerical Techniques in Electromagnetics with MATLAB

Optical and wireless technologies are being introduced into the global communications infrastructure at an astonishing pace. Both are revolutionizing the industry and will undoubtedly dominate its future, yet in the crowded curricula in most electrical engineering programs, there is no room in typical data communications courses for proper coverage of these "next generation" technologies. Optical and Wireless Communications: Next Generation Networks covers both types of networks in a unique presentation designed for a one-semester course for senior undergraduate or graduate engineering

students. Part I: Optical Networks covers optical fibers, transmitters, receivers, multiplexers, amplifiers, and specific networks, including FDDI, SONET, fiber channel, and wavelength-routed networks. Part II: Wireless Networks examines fundamental concepts and specific wireless networks, such as LAN, ATM, wireless local loop, and wireless PBXs. This section also explores cellular technologies and satellite communications. Eventually, next generation networks will be as ubiquitous as traditional telephone networks, and today's engineering students must be prepared to meet the challenges of optical and wireless systems development and deployment. Filled with illustrations, examples, and end-of-chapter problems, Optical and Wireless Communications: Next Generation Networks provides a brief but comprehensive introduction to these technologies that will help future engineers build the foundation they need for success.

Elements of Electromagnetics

The Finite-Difference Time-domain (FDTD) method allows you to compute electromagnetic interaction for complex problem geometries with ease. The simplicity of the approach coupled with its far-reaching usefulness, create the powerful, popular method presented in The Finite Difference Time Domain Method for Electromagnetics. This volume offers timeless applications and formulations you can use to treat virtually any material type and geometry. The Finite Difference Time Domain Method for Electromagnetics explores the mathematical foundations of FDTD, including stability, outer radiation boundary conditions, and different coordinate systems. It covers derivations of FDTD for use with PEC, metal, lossy dielectrics, gyrotropic materials, and anisotropic materials. A number of applications are completely worked out with numerous figures to illustrate the results. It also includes a printed FORTRAN 77 version of the code that implements the technique in three dimensions for lossy dielectric materials. There are many methods for analyzing electromagnetic interactions for problem geometries. With The Finite Difference Time Domain Method for Electromagnetics, you will learn the simplest, most useful of these methods, from the basics through to the practical applications.

Numerical Methods for Engineering

This workbook is for sale to students who wish to practice their problem solving techniques. The workbook contains a discussion of problem solving strategies and 150 additional problems with complete solutions provided.

Numerical Techniques in Electromagnetics, Second Edition

Beginning with the development of finite difference equations, and leading to the complete FDTD algorithm, this is a coherent introduction to the FDTD method (the method of choice for modeling Maxwell's equations). It provides students and professional engineers with everything they need to know to begin writing FDTD simulations from scratch and to

develop a thorough understanding of the inner workings of commercial FDTD software. Stability, numerical dispersion, sources and boundary conditions are all discussed in detail, as are dispersive and anisotropic materials. A comparative introduction of the finite volume and finite element methods is also provided. All concepts are introduced from first principles, so no prior modeling experience is required, and they are made easier to understand through numerous illustrative examples and the inclusion of both intuitive explanations and mathematical derivations.

Handbook of Numerical Heat Transfer

Provides an introduction to the Finite Difference Time Domain method and shows how Python code can be used to implement various simulations This book allows engineering students and practicing engineers to learn the finite-difference time-domain (FDTD) method and properly apply it toward their electromagnetic simulation projects. Each chapter contains a concise explanation of an essential concept and instruction on its implementation into computer code. Included projects increase in complexity, ranging from simulations in free space to propagation in dispersive media. This third edition utilizes the Python programming language, which is becoming the preferred computer language for the engineering and scientific community. Electromagnetic Simulation Using the FDTD Method with Python, Third Edition is written with the goal of enabling readers to learn the FDTD method in a manageable amount of time. Some basic applications of signal processing theory are explained to enhance the effectiveness of FDTD simulation. Topics covered in include one-dimensional simulation with the FDTD method, two-dimensional simulation, and three-dimensional simulation. The book also covers advanced Python features and deep regional hyperthermia treatment planning. Electromagnetic Simulation Using the FDTD Method with Python: Guides the reader from basic programs to complex, three-dimensional programs in a tutorial fashion Includes a rewritten fifth chapter that illustrates the most interesting applications in FDTD and the advanced graphics techniques of Python Covers peripheral topics pertinent to time-domain simulation, such as Z-transforms and the discrete Fourier transform Provides Python simulation programs on an accompanying website An ideal book for senior undergraduate engineering students studying FDTD, Electromagnetic Simulation Using the FDTD Method with Python will also benefit scientists and engineers interested in the subject.

Engineering Electromagnetics

Electromagnetic Field Theory

With the continuing success of Local Area Networks (LANs), 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 LANs, 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 communications 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 (FDDI) 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 performance analysis. Due to the capability of MANs to integrate services, a quantitative analysis of the Quality of Service (QoS) provided by these technologies is a relevant issue, and is thus covered in depth in this book.

Shelly Cashman Series Microsoft Office 365 & Access 2016: Comprehensive

In this book, Dr. Matthew N. O. Sadiku has shared the amazing story of how he rose from his humble beginnings in Nigeria. He described how he was raised in a Muslim home. After his conversion to Christianity, his drive led him to relocate to the United States for advanced degrees. He has provided a text that is lively from beginning to the end. The book provides a good understanding of his life, thought, and work. You will learn about what it takes to be a mover and shaker for God as you see Sadiku traverse the nation, rising to success in the academic and publishing worlds. The book is an essential reading for those interested in the genesis of greatness.

Signals and Systems

The author of this book has identified the seven key emerging Internet-related technologies: Internet of things, smart everything, big data, cloud computing, cybersecurity, software-defined networking, and online education. Together these technologies are transformational and disruptive. This book provides researchers, students, and professionals a comprehensive introduction, applications, benefits, and challenges for each technology. It presents the impact of these cutting-edge technologies on our global economy and its future. The word "technology" refers to "collection of techniques, skills, methods, and processes used in the production of goods or services."

Engineering Electromagnetics

As the availability of powerful computer resources has grown over the last three decades, the art of computation of

electromagnetic (EM) problems has also grown - exponentially. Despite this dramatic growth, however, the EM community lacked a comprehensive text on the computational techniques used to solve EM problems. The first edition of Numerical Techniques in Electromagnetics filled that gap and became the reference of choice for thousands of engineers, researchers, and students. The Second Edition of this bestselling text reflects the continuing increase in awareness and use of numerical techniques 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. The author also added a chapter on the method of lines. Numerical Techniques in Electromagnetics continues to teach readers how to pose, numerically analyze, and solve EM problems, give them the ability to expand their problem-solving skills using a variety of methods, and prepare them for research in electromagnetism. Now the Second Edition goes even further toward providing a comprehensive resource that addresses all of the most useful computation methods for EM problems.

Numerical Electromagnetics

My Life and Work

Despite the dramatic growth in the availability of powerful computer resources, the EM community lacks a comprehensive text on the computational techniques used to solve EM problems. The first edition of Numerical Techniques in Electromagnetics filled that gap and became the reference of choice for thousands of engineers, researchers, and students. This third edition of the bestselling text reflects the continuing increase in awareness and use of numerical techniques 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. The author also has added a chapter on the method of lines. Numerical Techniques in Electromagnetics with MATLAB®, Third Edition continues to teach 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. Now the Third Edition goes even further toward providing a comprehensive resource that addresses all of the most useful computation methods for EM problems and includes MATLAB code instead of FORTRAN.

Applied Circuit Analysis

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.

Handbook of Aerospace Electromagnetic Compatibility

Now Covers Dielectric Materials in Practical Electromagnetic Devices The Method of Moments in Electromagnetics, Second Edition explains the solution of electromagnetic integral equations via the method of moments (MOM). While the first edition exclusively focused on integral equations for conducting problems, this edition extends the integral equation framework to treat objects having conducting as well as dielectric parts. New to the Second Edition Expanded treatment of coupled surface integral equations for conducting and composite conducting/dielectric objects, including objects having multiple dielectric regions with interfaces and junctions Updated topics to reflect current technology More material on the calculation of near fields Reformatted equations and improved figures Providing a bridge between theory and software implementation, the book incorporates sufficient background material and offers nuts-and-bolts implementation details. It first derives a generalized set of surface integral equations that can be used to treat problems with conducting and dielectric regions. Subsequent chapters solve these integral equations for progressively more difficult problems involving thin wires, bodies of revolution, and two- and three-dimensional bodies. After reading this book, students and researchers will be well equipped to understand more advanced MOM topics.

The Finite Difference Time Domain Method for Electromagnetics

This textbook teaches students to create computer codes used to engineer antennas, microwave circuits, and other critical technologies for wireless communications and other applications of electromagnetic fields and waves. Worked code examples are provided for MATLAB technical computing software. It is the only textbook on numerical methods that begins at the undergraduate engineering student level but bring students to the state-of-the-art by the end of the book. It focuses on the most important and popular numerical methods, going into depth with examples and problem sets of escalating complexity. This book requires only one core course of electromagnetics, allowing it to be useful both at the senior and beginning graduate levels. Developing and using numerical methods in a powerful tool for students to learn the principles of intermediate and advanced electromagnetics. This book fills the missing space of current textbooks that either lack depth

on key topics (particularly integral equations and the method of moments) and where the treatment is not accessible to students without an advanced theory course. Important topics include: Method of Moments; Finite Difference Time Domain Method; Finite Element Method; Finite Element Method-Boundary Element Method; Numerical Optimization; and Inverse Scattering.

Metropolitan Area Networks

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. The intensive review and accuracy checking process conducted in the 4th edition will be highlighted in the preface.

My Life and Work

Engineers do not have the time to wade through rigorously theoretical books when trying to solve a problem. Beginners lack the expertise required to understand highly specialized treatments of individual topics. This is especially problematic for a field as broad as electromagnetics, which propagates into many diverse engineering fields. The time h

Computational Electromagnetics

A comprehensive resource that explores electromagnetic compatibility (EMC) for aerospace systems Handbook of Aerospace Electromagnetic Compatibility is a groundbreaking book on EMC for aerospace systems that addresses both aircraft and space vehicles. With contributions from an international panel of aerospace EMC experts, this important text deals with the testing of spacecraft components and subsystems, analysis of crosstalk and field coupling, aircraft communication systems, and much more. The text also includes information on lightning effects and testing, as well as guidance on design principles and techniques for lightning protection. The book offers an introduction to E3 models and techniques in aerospace systems and explores EMP effects on and technology for aerospace systems. Filled with the most up-to-date information, illustrative examples, descriptive figures, and helpful scenarios, Handbook of Aerospace Electromagnetic Compatibility is designed to be a practical information source. This vital guide to electromagnetic compatibility:

- Provides information on a range of topics including grounding, coupling, test procedures, standards, and requirements
- Offers discussions on standards for aerospace applications
- Addresses aerospace EMC through the use of

testing and theoretical approaches Written for EMC engineers and practitioners, Handbook of Aerospace Electromagnetic Compatibility is a critical text for understanding EMC for aerospace systems.

Handbook of Engineering 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.

Fundamentals of Electric Circuits

Theory and Computation of Electromagnetic Fields

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.

Elements of Engineering Electromagnetics

Computational Electromagnetics is a young and growing discipline, expanding as a result of the steadily increasing demand for software for the design and analysis of electrical devices. This book introduces three of the most popular numerical methods for simulating electromagnetic fields: the finite difference method, the finite element method and the method of moments. In particular it focuses on how these methods are used to obtain valid approximations to the solutions of Maxwell's equations, using, for example, "staggered grids" and "edge elements." The main goal of the book is to make the reader aware of different sources of errors in numerical computations, and also to provide the tools for assessing the

accuracy of numerical methods and their solutions. To reach this goal, convergence analysis, extrapolation, von Neumann stability analysis, and dispersion analysis are introduced and used frequently throughout the book. Another major goal of the book is to provide students with enough practical understanding of the methods so they are able to write simple programs on their own. To achieve this, the book contains several MATLAB programs and detailed description of practical issues such as assembly of finite element matrices and handling of unstructured meshes. Finally, the book aims at making the students well-aware of the strengths and weaknesses of the different methods, so they can decide which method is best for each problem. In this second edition, extensive computer projects are added as well as new material throughout. Reviews of previous edition: "The well-written monograph is devoted to students at the undergraduate level, but is also useful for practising engineers." (Zentralblatt MATH, 2007)

Principles Of Electromagnetics, 4Th Edition, International Version

A completely updated edition of the acclaimed single-volume reference for heat transfer and the thermal sciences This Second Edition of Handbook of Numerical Heat Transfer covers the basic equations for numerical method calculations regarding heat transfer problems and applies these to problems encountered in aerospace, nuclear power, chemical processes, electronic packaging, and other related areas of mechanical engineering. As with the first edition, this complete revision presents comprehensive but accessible coverage of the necessary formulations, numerical schemes, and innovative solution techniques for solving problems of heat and mass transfer and related fluid flows. Featuring contributions from some of the most prominent authorities in the field, articles are grouped by major sets of methods and functions, with the text describing new and improved, as well as standard, procedures. Handbook of Numerical Heat Transfer, Second Edition includes: * Updated coverage of parabolic systems, hyperbolic systems, integral-and integro-differential systems, Monte Carlo and perturbation methods, and inverse problems * Usable computer programs that allow quick applications to aerospace, chemical, nuclear, and electronic packaging industries * User-friendly nomenclature listings include all the symbols used in each chapter so that chapter-specific symbols are readily available

Analytical Techniques in Electromagnetics

This book presents an in-depth exposition of the various numerical methods used in real-world scientific and engineering computations. It emphasizes the practical aspects of C# numerical methods and mathematical functions programming, and discusses various techniques in details to enable you to implement these numerical methods in your .NET application. Ideal for scientists, engineers, and students who would like to become more adept at numerical methods, Practical Numerical Methods with C# familiarizes you with: - Overview of C# programming. - The mathematical background and fundamentals of numerical methods. - Math libraries for complex numbers and functions, real and complex vector and matrix operations,

and special functions. - Numerical methods for generating random numbers and random distribution functions. - Various numerical methods for solving linear and nonlinear equations. - Numerical differentiation and integration. - Interpolations and curve fitting. - Optimization of single-variable and multi-variable functions with a variety of techniques, including advanced simulated annealing and evolutionary algorithms. - Numerical techniques for solving ordinary differential equations. - Numerical methods for solving boundary value problems. - Eigenvalue problems. In addition, this book provides testing examples for every math function and numerical method to show you how to use these functions and methods in your own .NET applications in a manageable and step-by-step fashion. Please visit the author's website for more information about this book at www.drxdotnet.com

Monte Carlo Methods for Electromagnetics

In this book, Dr. Matthew Sadiku has shared the amazing story of how he rose from his humble beginnings in Nigeria. He described how he was raised in a Muslim home. After his conversion to Christianity, his drive led him to relocate to the United States for advanced degrees. He has provided a text that is lively from beginning to the end. The book provides a good understanding of his life, thought, and work. You will learn about what it takes to be a mover and shaker for God as you see Sadiku traverse the nation rising to success in the academic and publishing worlds. The book is an essential reading for those interested in the genesis of greatness.

The Method of Moments in Electromagnetics, Second Edition

Elements of Electromagnetics

This book presents a concise introduction to analytical methods in electromagnetics (EM). It is designed for researchers, practicing scientists, and engineers seeking analytical solutions to electromagnetic problems. It is important to keep a balanced view of techniques for solving EM problems. Overemphasizing the importance of analytical methods at the expense of numerical techniques would not reflect the trends in technology. The topics have been carefully selected to give the readers an appreciation of the kinds of problems that can be solved exactly.

Optical and Wireless Communications

Learning Electrodynamics doesn't have to be boring What if there was a way to learn Electrodynamics without all the usual fluff? What if there were a book that allowed you to see the whole picture and not just tiny parts of it? Thoughts like this are

the reason that No-Nonsense Electrodynamics now exists. What will you learn from this book? Get to know all fundamental electrodynamical concepts — Grasp why we can describe electromagnetism using the electric and magnetic field, the electromagnetic field tensor and the electromagnetic potential and how these concepts are connected. Learn to describe Electrodynamics mathematically — Understand the meaning and origin of the most important equations: Maxwell's equations & the Lorentz force law. Master the most important electrodynamical systems — read step-by-step calculations and understand the general algorithm we use to describe them. Get an understanding you can be proud of — Learn why Special Relativity owes its origins to Electrodynamics and how we can understand it as a gauge theory. No-Nonsense Electrodynamics is the most student-friendly book on Electrodynamics ever written. Here's why. First of all, it's is nothing like a formal university lecture. Instead, it's like a casual conversation with a more experienced student. This also means that nothing is assumed to be "obvious" or "easy to see". Each chapter, each section, and each page focusses solely on the goal to help you understand. Nothing is introduced without a thorough motivation and it is always clear where each formula comes from. The book contains no fluff since unnecessary content quickly leads to confusion. Instead, it ruthlessly focusses on the fundamentals and makes sure you'll understand them in detail. The primary focus on the readers' needs is also visible in dozens of small features that you won't find in any other textbook. In total, the book contains more than 100 illustrations that help you understand the most important concepts visually. In each chapter, you'll find fully annotated equations and calculations are done carefully step-by-step. This makes it much easier to understand what's going on in. Whenever a concept is used which was already introduced previously, there is a short sidenote that reminds you where it was first introduced and often recites the main points. In addition, there are summaries at the beginning of each chapter that make sure you won't get lost.

Elements of Electromagnetics

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.

Problem Solving Made Almost Easy

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 handling 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.

Computational Electrodynamics

Electromagnetics is too important in too many fields for knowledge to be gathered on the fly. Knowing how to apply theoretical principles to the solutions of real engineering problems and the development of new technologies and solutions is critical. Engineering Electromagnetics: Applications provides such an understanding, demonstrating how to apply the underlying physical concepts within the particular context of the problem at hand. Comprising chapters drawn from the critically acclaimed Handbook of Engineering Electromagnetics, this book supplies a focused treatment covering radar, wireless, satellite, and optical communication technologies. It also introduces various numerical techniques for computer-aided solutions to complex problems, emerging problems in biomedical applications, and techniques for measuring the biological properties of materials. Engineering Electromagnetics: Applications shares the broad experiences of leading experts regarding modern problems in electromagnetics.

No-Nonsense Electrodynamics

This extensively revised and expanded third edition of the Artech House bestseller, Computational Electrodynamics: The Finite-Difference Time-Domain Method, offers you the most up-to-date and definitive resource on this critical method for solving Maxwell's equations. There has been considerable advancement in FDTD computational technology over the past few years, and this new edition brings you the very latest details with four new invited chapters on advanced techniques for PSTD, unconditional stability, provably stable FDTD-FETD hybrids, and hardware acceleration. Moreover, you find many completely new sections throughout the book, including major updates on convolutional PML ABCs; dispersive, nonlinear, classical-gain, and quantum-gain materials; and micro-, nano-, and bio- photonics.

Computational Electromagnetics with MATLAB, Fourth Edition

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.

Emerging Internet-Based Technologies

Readers discover all of the latest advancements in Microsoft Access 2016 with MICROSOFT OFFICE 365 & ACCESS 2016: COMPREHENSIVE -- the new edition in the acclaimed Shelly Cashman Series books. For more than three decades, the Shelly Cashman Series has effectively introduced computer skills to millions. MICROSOFT OFFICE 365 & ACCESS 2016: COMPREHENSIVE continues the Series' strong history of innovation with a proven learning approach enhanced to address the varied learning styles of today's learners. A trademark, step-by-step, screen-by-screen approach encourages readers to master all aspects of Microsoft Access 2016 through experimentation, critical thought, and personalization. This new edition delivers effective educational materials specifically designed to introduce key features, improve retention, and prepare readers for success in working with the advanced features in Microsoft Access 2016. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Elements of Electromagnetics

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.

Elements of Electromagnetics

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 career in 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 and waves, 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.

Performance Analysis of Computer Networks

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-world connections, a revised math pre-test for professors to assess students' mathematical skills, and new and updated problems.

Practical Numerical Methods with C#

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.

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