

## Communication Engineering Books

This book provides a cohesive introduction to much of the vast body of knowledge central to the problems of communication engineering.

For those seeking a thorough grounding in modern communication engineering principles delivered with unrivaled clarity using an engineering-first approach Communication Engineering Principles: 2nd Edition provides readers with comprehensive background information and instruction in the rapidly expanding and growing field of communication engineering. This book is well-suited as a textbook in any of the following courses of study: Telecommunication Mobile Communication Satellite Communication Optical Communication Electronics Computer Systems Primarily designed as a textbook for undergraduate programs, Communication Engineering Principles: 2nd Edition can also be highly valuable in a variety of MSc programs. Communication Engineering Principles grounds its readers in the core concepts and theory required for an in-depth understanding of the subject. It also covers many of the modern, practical techniques used in the field. Along with an overview of communication systems, the book covers topics like time and frequency domains analysis of signals and systems, transmission media, noise in communication systems, analogue and digital modulation, pulse shaping and detection, and many others.

Technical Communication for Engineers has been written for undergraduate students of all engineering disciplines. It provides a well-researched content meticulously developed to help them become strategic assets to their organizations and have a successful career. The book covers the entire spectrum of learning required by a technical professional to effectively communicate the technicalities of his subject to other technocrats or to a non-technical person at their proper levels. It is unique inasmuch as it provides some thoughtful pedagogical tools that help the students attain proficiency in all the modes of communication. Key Features [2] Marginalia, which are spread throughout the book to clarify and highlight the key points. [2] Tech Talk passages, which throw light on the latest advancements in communication technology and their innovative use [2] Application-based Exercise, which encourages the readers to apply the concepts learnt to real-life situation [2] Language-based Exercise (Grammar & Vocabulary) to help readers assess their language competency [2] Ethical Dilemma, which poses a complex hypothetical situation of mental conflict on choosing between difficult moral imperatives [2] Experiential Learning-based Exercise (Project Work) devised to help learners 'feel' or 'experience' the concepts and theories learnt and thereby gain hands-on experience

As the world becomes increasingly globalized, today's companies expect to hire engineers who are effective in a global business environment. Although you can find many books covering globalization, most of them are aimed at business, management, or social sciences. Developed with engineers in mind, Global Engineering: Design, Decision Making, and Communication covers the theory, models, and decision making tools for incorporating globalization into engineering work. Written by a multidisciplinary team of experts in industrial, mechanical, and manufacturing engineering and organizational communications, this book is a primer on how to improve designs, make better decisions, and communicate more effectively in an international working environment. The contents of the book reflect the authors' multidisciplinary perspective and their experience in working on projects around the world. The book presents globalization as a phenomenon affecting the way companies operate and their engineering functions. It uses a case study format based on system improvement projects and real industrial projects, ranging from design to supply chain and logistics problems. This case study format allows for a natural presentation of critical technical and non-technical concepts and their complex interactions. The challenge that engineers face in a global environment results from the need to be aware of interdependencies and to be able to determine which ones are most important in each situation. Unique in its focus on engineering, this book provides a framework for how to better design, make decisions, and communicate in the new era of global competition.

A Framework for Software Developers to Become a Better Communicator and Increase Their Happiness, Productivity, and Impact.

Mobile Communications Engineering: Theory and Applications

RF and Microwave Engineering

Handbook of Laboratory Experiments in Electronics and Communication Engineering

Communication Nets

*The Institute of Electrical and Electronics Engineers (IEEE) Communications Society designed the IEEE wireless communication engineering technologies (WCET) certification program to address the wireless industry's growing need for communications professionals with practical problem-solving skills in real-world situations. Individuals who achieve this prestigious certification are recognized as possessing the required knowledge, skill, and abilities to meet wireless challenges in various industry, business, corporate, and organizational settings. Presenting contributions from 50 wireless communications experts from all corners of the world, Get Certified: A Guide to Wireless Communication Engineering Technologies provides an authoritative review of the seven areas of expertise covered on WCET exam. It supplies cutting-edge coverage of the broad range of topics related to wireless communications to facilitate the technical competency required to achieve certification. The text outlines industry agreements, standards, policies, and regulations including licenses and permits, health and safety, and compliance. With coverage ranging from basic concepts to research-grade material and future directions, the book provides a general overview of the evolution of wireless technologies, their impact on the profession, and common professional best practices. The book's well-structured presentation along with suggestions for further information and study, make it an indispensable guide for attaining WCET certification and a comprehensive source of reference for wireless professionals to keep pace with ever-evolving technology and standards in the field.*

*This textbook is for undergraduate students of electronics and telecommunication engineering and allied disciplines, as well as diploma and science courses. This book offers an introductory survey of the conceptual development of the subject. It provides a simple and lucid presentations of the essential principles, formulae and definitions of Digital Communications.*

*This book was written by a software engineer for software engineers. It provides an overview of various communication skills and techniques that are relevant to people working in the software industry. Some of the communications skills discussed in this book have a generic nature, such as self-awareness. Others are more specific for engineers, such as writing clean code. The result is a comprehensive coverage of communication as it concerns software engineers with many practical and relevant tips to follow. The book sometimes focuses on communication between engineers and at other times, it explores how to interact with others, typically in a business context. When we say "engineers" in this book, we generalize and refer to software engineers, programmers, developers, designers, engineering managers, PMs, software architects, or anyone else working in software development. In this book, each communication skill will be discussed with specific tips to improve yourself in a well-structured, constructive, and productive fashion. The end goal is to increase your impact as an engineer by focusing on "soft skills" that complement your existing coding and problem solving skills.*

*Offers concise, practical knowledge on modern communication systems to help students transition smoothly into the workplace and beyond This book presents the most relevant concepts and technologies of today's communication systems and presents them in a concise and intuitive manner. It covers advanced topics such as Orthogonal Frequency-Division Multiplexing (OFDM) and Multiple-Input Multiple-Output (MIMO) Technology, which are enabling technologies for modern communication systems such as WiFi (including the latest enhancements) and LTE-Advanced. Following a brief introduction to the field, Digital Communication for Practicing Engineers immerses readers in the theories and technologies that engineers deal with. It starts off with Shannon Theorem and Information Theory, before moving on to basic modules of a communication system, including modulation, statistical detection, channel coding, synchronization, and equalization. The next part of the book discusses advanced topics such as OFDM and MIMO, and introduces several emerging technologies in the context of 5G cellular system radio interface. The book closes by outlining several current research areas in digital communications. In addition, this text: Breaks down the subject into self-contained lectures, which can be read individually or as a whole Focuses on the pros and cons of widely used techniques, while providing references for detailed mathematical analysis Follows the current technology trends, including advanced topics such as OFDM and MIMO Touches on content this is not usually contained in textbooks such as cyclo-stationary symbol timing recovery, adaptive self-interference canceler, and Tomlinson-Harashima precoder Includes many illustrations, homework problems, and examples Digital Communication for Practicing Engineers is an ideal guide for graduate students and professionals in digital communication looking to understand, work with, and adapt to the current and future technology.*

Biomedical Engineering, Trends in Electronics

Electronics and Communication Engineering Handbook

Satellite Communication Engineering

Stochastic Message Flow and Delay

Communication Protocol Engineering

This is the book, in which the subject matter is dealt from elementary to the advance level in a unique manner. Three outstanding features can be claimed for the book viz. (i) style; the student, while going through the pages would feel as if he is attending a class room. (ii) language; that an average student can follow and (iii) approach: it takes the student from "known to unknown" and "simple to complex." The book is reader friendly, thought provoking and stimulating. It helps in clearing cobwebs of the mind. The style is lucid and un-adulterated. Unnecessary mathematics has been avoided. Note: T&F does not sell or distribute the Hardback in India, Pakistan, Nepal, Bhutan, Bangladesh and Sri Lanka.

The first four chapters of the text describe different types of signals, modulation and demodulation of these signals, various transmission channels and noise encountered by the signals during propagation from sender to receiver end. Apart from this, this part of the book also deals with different forms of line communication systems. A brief introduction of information theory is also given at the end of the text so that the students become familiar with this aspect of communication systems.

Electronics And Communication Engineering Handbook: For ECE Competitive Examinations is a comprehensive book which covers almost all the basic concepts of ECE. It is written to address the needs of the students/aspirants of the national level competitive examinations in Electronics and Communication Engineering (GATE-ECE/ IES/ BEL/ ISRO/ other PSU examinations). An extensive study of all the core subjects in electronics and communications is required to crack such examinations. In this book, each communication skill will be discussed with specific tips to improve yourself in a well-structured, constructive, and productive fashion. The end goal is to increase your impact as an engineer by focusing on "soft skills" that complement your existing coding and problem solving skills.

Engineers must possess a range of business communication skills that enable them to effectively communicate the purpose and relevance of their idea, process, or technical design. This unique business communication text is packed with practical advice that will improve your ability to—Market ideas Write proposals Generate enthusiasm for research Deliver presentations Explain a design Organize a project team Coordinate meetings Create technical reports and specifications Focusing on the three critical communication needs of engineering professionals—speaking, writing, and listening—the book delineates critical communication strategies required in many group settings and work situations. It demonstrates how to integrate a marketing strategy into every facet of engineering communication, from presentations, visual aids, proposals, and technical reports to e-mail and phone calls. Using situational examples, the book also illustrates how to use computers, graphics, and other engineering tools to effectively communicate with other engineers and managers.

Ultra Wideband Signals and Systems in Communication Engineering

Communications Engineering Desk Reference

Telecommunications Engineer's Reference Book

Applications and Innovations

*Electronics and Communications for Scientists and Engineers, Second Edition, offers a valuable and unique overview on the basics of electronic technology and the internet. Class-tested over many years with students at Northwestern University, this useful text covers the essential electronics and communications topics for students and practitioners in engineering, physics, chemistry, and other applied sciences. It describes the electronic underpinnings of the World Wide Web and explains the basics of digital technology, including computing and communications, circuits, analog and digital electronics, as well as special topics such as operational amplifiers, data compression, ultra high definition TV, artificial intelligence, and quantum computers. Incorporates comprehensive updates and expanded material in all chapters where appropriate Includes new problems added throughout the text Features an updated section on RLC circuits Presents revised and new content in Chapters 7, 8, and 9 on digital systems, showing the many changes and rapid progress in these areas since 2000*

*This Handbook is prepared after extensive simulations of circuits with some electronic and engineering software such as Multisim, Pspice, Proteus, MATLAB and Circuit Logic. The Handbook is designed basically to assist both tutors and students in the conduction of laboratory experiments. It has been proven over time that students tend to remember the experiments that they had conducted much better than the lectures that they received. The Handbook has been written in a simple technical language and the mathematics behind the experiments have been clearly derived and explained. The book is intended to add wealth of knowledge, especially in physics, electrical and electronic and communications engineering programmes for students in tertiary institutions such as Polytechnics, Monotechnics and Universities. This Handbook contains five sections and a total of thirty-three experiments which can be categorized into Basic Electronics Software, Communication System Engineering experiments and Optical Communication experiments. Each experiment contains objectives, materials, theoretical background and procedures. The procedure involves steps and questions for understanding the experiments being conducted.*

*A practical how-to book, ENGINEERING COMMUNICATION is more than a guidebook for creating clear, accurate and engaging communication -- it is a complete teaching tool that includes the use of technology to produce dynamic written, oral, and visual communication. There are numerous complete examples, many taken directly from either student or business samples. It also asks students to critically examine the goals and methods of engineering communication. Written with step-by-step instruction on how to create both written and oral communication, the pedagogy includes end-of-chapter exercises to give the students opportunity to use what they have learned, and for the instructor to assess student mastery. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.*

*Scope of science and technology is expanding at an exponential rate and so is the need of skilled professionals i.e., Engineers. To stand out of the crowd amidst rising competition, many of the engineering graduates aim to crack GATE, IES and PSUs and pursue various post graduate Programmes. Handbook series as its name suggests is a set of Best-selling Multi-Purpose Quick Revision resource books, those are devised with anytime, anywhere approach. It's a compact, portable revision aid like none other. It contains almost all useful Formulae, Equations, Terms, Definitions and many more important aspects of these subjects. Electronics and Communication Engineering Handbook has been designed for aspirants of GATE, IES, PSUs and Other Competitive Exams. Each topic is summarized in the form of key points and notes for everyday work, problem solving or exam revision, in a unique format that displays concepts clearly. The book also displays formulae and circuit diagrams clearly, places them in context and crisply identifies and describes all the variables involved. Diode, Transistor, Analog Electronics, Integrated Circuits, Industrial Device, Signals and systems, Communication Systems, Network Theory, Control Systems, Electromagnetic Field Theory, Antenna and Wave Propagation, Digital Electronics, Microprocessor, Material Science,*

Electronics Measurement and Instrumentation, Microwave Engineering

A Handbook of Electronics & Telecommunications Engineering

Fundamentals of Wireless Communication Engineering Technologies

Global Engineering

Communication Engineering Principles

What Every Engineer Should Know About Business Communication

*This text develops a queueing theory model of communications nets. Its realistic assessment of factors involved in message flow will benefit those working with computers and other communications systems. 1964 edition.*

Communication Engineering Principles John Wiley & Sons

*Presents key principles of communication that support clear exchanges in a technical context and help engineers learn effective communication skills Effective communication is a necessity for engineers. Even minor on-the-job misunderstandings can cost time, money, or worse. Yet even though recent studies show that improved communication makes for better engineers, the ability to speak clearly and listen carefully have historically been considered "soft skills" and are not typically or explicitly addressed in engineering programs. Working from basic units called microskills, Effective Interpersonal and Team Communication Skills for Engineers shows readers, one step at a time, how to engage, listen, manage conflict, and influence others with highly constructive, repeatable communication exchanges. This career-enhancing handbook: Presents communication skills for both technical issues and social situations in an engineering context Breaks skills down to elemental usage forms as microskills Includes plenty of practice exercises, case studies, and self-assessment tools Helps develop higher-level skills for more complex situations, such as dealing with confrontation and conflict negotiation Features a direct, user-friendly, practice-oriented format Effective Interpersonal and Team Communication Skills for Engineers*

*Every day, millions of people are unaware of the amazing processes that take place when using their phones, connecting to broadband internet, watching television, or even the most basic action of flipping on a light switch. Advances are being continually made in not only the transmission of this data but also in the new methods of receiving it. These advancements come from many different sources and from engineers who have engaged in research, design, development, and implementation of electronic equipment used in communications systems. This volume addresses a selection of important current advancements in the electronics and communications engineering fields, focusing on signal processing, chip design, and networking technology. The sections in the book cover: Microwave and antennas Communications systems Very large-scale integration Embedded systems Intelligent control and signal processing systems*

A Guide to Wireless Communication Engineering Technologies

Communications and Software

Digital Communication for Practicing Engineers

Introduction to Electrical , Electronics and Communication Engineering

Communication Engineering ... Second Edition

The thoroughly revised and updated second edition of Ultra Wideband Signals and Systems in Communication Engineering features new standards, developments and applications. It addresses not only recent developments in UWB communication systems, but also related IEEE standards such as IEEE 802.15 wireless personal area network (WPAN). Examples and problems are included in each chapter to aid understanding. Enhanced with new chapters and several sections including Standardization, advanced topics in UWB Communications and more applications, this book is essential reading for senior undergraduates and postgraduate students interested in studying UWB. The emphasis on UWB development for commercial consumer communications products means that any communication engineer or manager cannot afford to be without it! New material included in the second edition: Two new chapters covering new regulatory issues for UWB systems and new systems such as ad-hoc and sensor networks. MAC protocols and space-time coding for UWB systems IEEE proposals for channel models and their specifications Interference and coexistence of UWB with other systems UWB antennas and arrays, and new types of antennas for UWB systems such as printed bow-tie antennas Coverage of new companies working on UWB such as Arimi and UBI Sense UWB potential for use in medicine, including cardiology, respiratory medicine, obstetrics and gynaecology, emergency room and acute care, assistance for disabled people, and throat and vocals Companion website features a solutions manual, Matlab programs and electronic versions of all figures.

A broad introduction to the fundamentals of wirelesscommunication engineering technologies Covering both theory and practical topics, Fundamentals of Wireless Communication Engineering Technologies offers a soundsurvey of the major industry-relevant aspects of wirelesscommunication engineering technologies. Divided into four mainsections, the book examines RF, antennas, and propagation; wirelessaccess technologies; network and service architectures; and other topics, such as network management and security, policies andregulations, and facilities infrastructure. Helpfulcross-references are placed throughout the text, offeringadditional information where needed. The book provides: Coverage that is closely aligned to the IEEE's Wireless-Communication Engineering Technologies (WCET) certification programsyllabus, reflecting the author's direct involvement in the development of theprogram A special emphasis on wireless cellular and wireless LANsystems An excellent foundation for expanding existing knowledge in thewireless field by covering industry-relevant aspects of wirelesscommunication Information on how common theories are applied in real-worldwireless systems With a holistic and well-organized overview of wirelesscommunications, Fundamentals of Wireless CommunicationEngineering Technologies is an invaluable resource for anyoneinterested in taking the WCET exam, as well as practicingengineers, professors, and students seeking to increase theirknowledge of wireless communication engineering technologies.

Highlighting satellite and earth station design, links and communication systems, error detection and correction, and regulations and procedures for system modeling, integrations, testing, and evaluation, Satellite Communication Engineering provides a simple and concise overview of the fundamental principles common to information communications. It

The renowned communications theorist Robert Gallager brings his lucid writing style to the study of the fundamental system aspects of digital communication for a one-semester course for graduate students. With the clarity and insight that have characterized his teaching and earlier textbooks, he develops a simple framework and then combines this with careful proofs to help the reader understand modern systems and simplified models in an intuitive yet precise way. A strong narrative and links between theory and practice reinforce this concise, practical presentation. The book begins with data compression for arbitrary sources. Gallager then describes how to modulate the resulting binary data for transmission over wires, cables, optical fibers, and wireless channels. Analysis and intuitive interpretations are developed for channel noise models, followed by coverage of the principles of detection, coding, and decoding. The various concepts covered are brought together in a description of wireless communication, using CDMA as a case study.

Fundamentals of Wireless Communication

Fundamentals of Wireless Communications

Communication Engineering

Engineering Communication

Fundamentals of IoT Communication Technologies

From one of the field's foremost educators, here is the classic guide to mobile communication—fully revised for the 1990s and beyond. It is unique because it shows readers how to understand the differences in applying technologies between wireline communications and wireless communications. The new second edition extensively updates the basics. It also covers traffic and capacity analysis on mobile communications networks and addresses rapidly expanding new technologies, such as digital cellular, PCS, and multiple access techniques not only including FDMA, TDMA, CDMA, and SDMA, but also applying the techniques on the virtual channels.

This textbook takes a unified view of the fundamentals of wireless communication and explains cutting-edge concepts in a simple and intuitive way. An abundant supply of exercises make it ideal for graduate courses in electrical and computer engineering and it will also be of great interest to practising engineers.

A one-stop Desk Reference, for R&D engineers involved in communications engineering: this is a book that will not gather dust on the shelf. It brings together the essential professional reference content from leading international contributors in the field. Material covers a wide scope of topics including voice, computer, facsimile, video, and multimedia data technologies \* A fully searchable Mega Reference Ebook, providing all the essential material needed by Communications Engineers on a day-to-day basis. \* Fundamentals, key techniques, engineering best practice and rules-of-thumb together in one quick-reference. \* Over 2,500 pages of reference material, including over 1,500 pages not included in the print edition

Telecommunications Engineer's Reference Book maintains a balance between developments and established technology in telecommunications. This book consists of four parts. Part 1 introduces mathematical techniques that are required for the analysis of telecommunication systems. The physical environment of telecommunications and basic principles such as the teletraffic theory, electromagnetic waves, optics and vision, ionosphere and troposphere, and signals and noise are described in Part 2. Part 3 covers the political and regulatory environment of the telecommunications industry, telecommunication standards, open system interconnect reference model, multiple access techniques, and network management. The last part deliberates telecommunication applications that includes synchronous digital hierarchy, asynchronous transfer mode, integrated services digital network, switching systems, centrex, and call management. This publication is intended for practicing engineers, and as a supplementary text for undergraduate courses in telecommunications.

Modern Electronics and Communication Engineering

Design, Decision Making, and Communication

Digital Communication

Fundamentals of Communications Systems

Handbook Series of Electronics & Communication Engineering

*This textbook explores all of the protocols and technologies essential to IoT communication mechanisms. Geared towards an upper-undergraduate or graduate level class, the book is presented from a perspective of the standard layered architecture with special focus on protocol interaction and functionality. The IoT protocols are presented and classified based on physical, link, network, transport and session/application layer functionality. The author also lets readers understand the impact of the IoT mechanisms on network and device performance with special emphasis on power consumption and computational complexity. Use cases – provided throughout – provide examples of IoT protocol stacks in action. The book is based on the author's popular class "Fundamentals of IoT" at Northeastern University. The book includes examples throughout and slides for classroom use. Also included is a "hands-on" section where the topics discussed as theoretical content are built as stacks in the context of an IoT network emulator so readers can experiment.*

*Rapid technological developments in the last century have brought the field of biomedical engineering into a totally new realm. Breakthroughs in material science, imaging, electronics and more recently the information age have improved our understanding of the human body. As a result, the field of biomedical engineering is thriving with new innovations that aim to improve the quality and cost of medical care. This book is the first in a series of books that will present recent trends in biomedical engineering, with a particular focus on electronic and communication applications. More specifically: wireless monitoring, sensors, medical imaging and the management of medical information.*

*This book provides a fundamental and practical introductionto radio frequency and microwave engineering and physical aspectof wireless communication. In this book, the author addresses a wide range ofradio-frequency and microwave topics with emphasis on physicalaspects including EM and voltage waves, transmission lines, passivecircuits, antennas, radio wave propagation. Up-to-date RF designtools like RF circuit simulation, EM simulation and computerizedsmith charts, are used in various examples to demonstrate how thesemethods can be applied effectively in RF engineering practice. Design rules and working examples illustrate the theoreticalparts. The examples are close to real world problems, so the readercan directly transfer the methods within the context of their ownwork. At the end of each chapter a list of problems is given inorder to deepen the reader's understanding of the chaptermaterial and practice the new competences. Solutions are availableon the author's website. Key Features: Presents a wide range of RF topics with emphasis on physicalaspects e.g. EM and voltage waves, transmission lines, passivecircuits, antennas Uses various examples of modern RF tools that show how methods can be applied practically in RF engineering practice Incorporates various design examples using circuit andelectromagnetic (EM) simulation software Discusses the propagation of waves: their representation, theireffects, and their utilization in passive circuits and antennastructures Provides a list of problems at the end of each chapter Includes an accompanying website containing solutions to theproblems (http://www.fh-dortmund.de/gstrau\_rf\_textbook) This will be an invaluable textbook for bachelor andmasters students on electrical engineering courses/microwave engineering, basic circuit theory and electromagneticfields, wireless communications. Early-stage RF practitioners,engineers (e.g. application engineer) working in this area willalso find this book of interest.*

*The aim of this book is to present the modern design principles andanalysis of lens antennas. It gives graduates and RF/Microwaveprofessionals the design insights in order to make full use of lensantennas. Why do we want to write a book in lens antennas?Because this topic has not been thoroughly publicized, itsimportance is underestimated. As antennas play a key role incommunication systems, recent development in wirelesscommunications would indeed benefit from the characteristics of lens antennas: low profile, and low cost etc. The major advantages of lens antennas are narrow beamwidths, highgain, low sidelobes and low noise temperature. Their structures canbe more compact and weigh less than horn antennas and parabolicantennas. Lens antennas with their quasi-optical characteristics,also have low loss, particularly at near millimeter andsubmillimeter wavelengths where they have particular advantages. This book systematically conducts advanced and up-to-dateadvantages of lens antennas.*

Electronics and Communication Engineering

Principles of Digital Communication

Electronic Communication Systems

Principles of Communication Engineering

Get Certified

Electronics and Telecommunication Engineering is a field that involves complex electronic apparatus, circuits and equipments that help in executing speedy and efficient telecommunication systems. These engineers design, fabricate, maintain, supervise and manufacture electronic equipments used in entertainment industry, computer industry, communication and defence. Ever increasing pace of development in electronics, audio and video communications systems and the automation in industry have made an electronic engineer a catalyst for the change of the modern society. A Handbook of Electronics and Communication Engineering covers the engineering syllabus of several examinations. The electronics Engineering section gives details on non-linear and active electrical components which are used to design circuits, chips and devices. It also focuses on implementation of principles, applications and algorithms. Communication Engineering is divided into two parts: Analog and Digital. Handbook of Electronics and Communication Engineering deals on an extensive assortment of topics, including transistors, diodes, microprocessors, signals and systems, network theory and microwave engineering. The book highlights important terms and definitions, along with illustrated formulae to make learning easy, with appropriate diagrams, whenever it is appropriate. An extensive coverage of key points for additional information is also given.

Get a Solid Account of Physical Layer Communications Theory, Illustrated with Numerous Interactive MATLAB Mini-Projects You can rely on Fundamentals of Communications Systems for a solid introduction to physical layer communications theory, filled with modern implementations and MATLAB examples. This state-of-the-art guide covers essential theory and current engineering practice, carefully explaining the real-world tradeoffs necessary among performance, spectral efficiency, and complexity. Written by an award-winning communications expert, the book first takes readers through analog communications basics, amplitude modulations, analog angle modulation, and random processes. This essential resource then explains noise in bandpass communications systems...bandpass Gaussian random processes...digital communications basics...complexity of optimum demodulation...spectrally efficient data transmission...and more. Fundamentals of Communications Systems features: A modern approach to communications theory, reflecting current engineering applications Numerous MATLAB problems integrated throughout, with software available for download Detailed coverage of tradeoffs among performance, spectral efficiency, and complexity in engineering design Text written in four parts for easy modular presentation Inside This On-Target Communications Engineering Tool • Mathematical Foundations • Analog Communications Basics • Amplitude Modulations • Analog Angle Modulation • More Topics in Analog Communications • Random Processes • Noise in Bandpass Communications Systems • Bandpass Gaussian Random Processes • Digital Communications Basics • Optimal Single Bit Demodulation Structures • Transmitting More than One Bit • Complexity of Optimum Demodulation • Spectrally Efficient Data Transmission

As embedded systems become more and more complex, so does the challenge of enabling fast and efficient communication between the various subsystems that make up a modern embedded system. Facing this challenge from a practical standpoint, Communication Protocol Engineering outlines a hands-on methodology for developing efficient communication protocols for large-scale systems. A Complete Roadmap This book brings together the leading methods and techniques developed from state-of-the-art methodologies for protocol engineering, from specification and description methods to cleanroom engineering and agile methods. Popovic leads you from conceptualization of requirements to analysis, design, implementation, testing, and verification. He covers the four main design languages: specifications and description language (SDL); message sequence charts (MSCs); tree and tabular combined notation (TTCN); and unified modeling language (UML). Practical Tools for Real Skills Fully illustrated with more than 150 figures, this guide also serves as a finite state machine (FSM) library programmer's reference manual. The author demonstrates how to build an FSM library, explains the components of such a library, and applies the principles to FSM library-based examples. Nowhere else are the fundamental principles of communication protocols so clearly and effectively applied to real systems development than in Communication Protocol Engineering. No matter in what stage of the process you find yourself, this is the ideal tool to make your systems successful.

Modern Lens Antennas for Communications Engineering

Communication for Engineers

Technical Communication for Engineers

Electronics and Communications for Scientists and Engineers

Effective Interpersonal and Team Communication Skills for Engineers