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Secure Digital Communications Jun 03 2020

Theory and Design of Digital Communication Systems Dec 10 2020 Providing the underlying principles of digital communication and the design techniques of real-world systems, this textbook prepares senior undergraduate and graduate students for the engineering practices required in industry. Covering the core concepts, including modulation, demodulation, equalization, and channel coding, it provides step-by-step mathematical derivations to aid understanding of background material. In addition to describing the basic theory, the principles of system and subsystem design are introduced, enabling students to visualize the intricate connections between subsystems and understand how each aspect of the design supports the overall goal of achieving reliable communications. Throughout the book, theories are linked to practical applications with over 250 real-world examples, whilst 370 varied homework problems in three levels of difficulty enhance and extend the text material. With this textbook, students can understand how digital communication systems operate in the real world, learn how to design subsystems, and evaluate end-to-end performance with ease and confidence.

Handbook of Research on Digital Communications, Internet of Things, and the Future of Cultural Tourism Dec 30 2019 Digital communication is significantly expanding new opportunities and challenges in the tourism industry. Tourists, now more frequently than ever, bring their smartphones with them to every destination, and cultural tourists are particularly motivated to utilize a variety of services and platforms as they are especially open and interested in understanding in detail the places and heritage of the places they visit. Thus, researchers, educators, and professionals in the tourism and hospitality field should take advantage of this opportunity to propose new ways of presenting better content and creating a more immersive and optimized experience for tourists. The Handbook of Research on Digital Communications, Internet of Things, and the Future of Cultural Tourism shares research and experiences on the convergence between digital communication and cultural tourism, specifically the migration and creative appropriation of these technologies for increased tourist engagement and their role in destination marketing and strategic planning and decision making. Covering topics such as big data, e-tourism, and social media platforms, this major reference work is an invaluable resource for researchers, students, professors, academicians, government entities, museum managers, professionals, and cultural tourism managers and facilitators.

Introduction to Digital Communications Feb 09 2021 This book offers students, scientists, and engineers an extensive introduction to the theoretical fundamentals of digital communications, covering single-input single-output (SISO), multiple-input multiple-output (MIMO), and time-variant systems. Further, the main content is supplemented by a wealth of representative examples and computer simulations. The book is divided into three parts, the first of which addresses the principles of wire-line and wireless digital transmission over SISO links. Digital modulation, intersymbol interference, and various detection methods are discussed; models for realistic time-variant, wireless channels are introduced; and the equivalent time-variant baseband system model is derived. This book covers two new topics such as blockwise signal transmission and multicarrier modulation with orthogonal frequency-division multiplexing (OFDM) systems. Since not all readers may be familiar with this topic, Part II is devoted to the theory of linear time-variant systems. The generalized convolution is derived, and readers are introduced to impulse response, the delay spread function, and system functions in the frequency domain. In addition, randomly changing systems are discussed. Several new examples and graphs have been added to this book. In turn, Part III deals with MIMO systems. It describes MIMO channel models with and without spatial correlation, including the Kronecker model. Both linear and nonlinear MIMO receivers are investigated. The question of how many bits per channel use can be transmitted is answered, and maximizing channel capacity is addressed. Principles of space–time coding are outlined in order to improve transmission quality and increase data rates. In closing, the book describes multi-user MIMO schemes, which reduce interference when multiple users in the same area transmit their signals in the same time slots and frequency bands.

Routledge Handbook of Digital Media and Communication Jul 25 2019 What are we to make of our digital social lives and the forces that shape it? Should we feel fortunate to experience such networked connectivity? Are we privileged to have access to unimaginable amounts of information? Is it easier to work in a digital global economy? Or is our privacy and freedom under threat from digital surveillance? Our security and welfare being put at risk? Our politics undermined by hidden algorithms and misinformation? Written by a distinguished group of leading scholars from around the world, the Routledge Handbook of Digital Media and Communication provides a comprehensive, unique, and multidisciplinary exploration of this rapidly growing and vibrant field of study. The Handbook adopts a three-part structural framework for understanding the sociocultural impact of digital media: the artifacts or physical devices and systems that people use to communicate; the communicative practices in which they engage to use those devices, express themselves, and share meaning; and the organizational and institutional arrangements, structures, or formations that develop around those practices and artifacts. Comprising a series of essay-chapters on a wide range of topics, this volume crystallizes current knowledge, provides historical context, and critically articulates the challenges and implications of the emerging dominance of the network and normalization of digitally mediated relations. Issues explored include the power of algorithms, digital currency, gaming culture, surveillance, social networking, and connective mobilization. More than a reference work, this Handbook delivers a comprehensive, authoritative overview of the state of new media scholarship and its most important future directions that will shape and animate current debates.

Principles of Digital Communication Nov 01 2022 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.

The Routledge Handbook of Language and Digital Communication Aug 30 2022 The Routledge Handbook of Language and Digital Communication provides a comprehensive, state of the art overview of language-focused research on digital communication, taking stock and registering the latest trends that set the agenda for future developments in this thriving and fast moving field. The contributors are all leading figures or established authorities in their areas, covering a wide range of topics and concerns in the following seven sections: • Methods and Perspectives; • Language Resources, Genres, and Discourses; • Digital Literacies; • Digital Communication in Public; • Digital Selves and Online-Offline Lives; • Communities, Networks, Relationships; • New debates and Further directions. This volume showcases critical syntheses of the established literature on key topics and issues and, at the same time, reflects upon and engages with cutting edge research and new directions for study (as emerging within social media). A wide range of languages are represented, from Japanese, Greek, German and Scandinavian languages, to computer-mediated Arabic, Chinese and African languages. The Routledge Handbook of Language and Digital Communication will be an essential resource for advanced undergraduates, postgraduates and researchers within English language and linguistics, applied linguistics and media and communication studies.

How Digital Communication Technology Shapes Markets Mar 01 2020 This Palgrave Pivot explores how communication technology such as the Internet has changed the nature of trade, focusing especially on economy-wide reductions in company size (granularity) and the role of retailers (disintermediation). By increasing access to comparative data, influencing conceptions of time, and reducing the number of intermediaries between creator and consumer, technological connectivity is changing the very definition of competition. In the new network economy, disintermediation and granularity are turning cooperative information gathering and sharing into a vital market institution. To exemplify the effects of communication technology, Bhatt focuses on two markets with particularly powerful effects on the economy: labor and education, and CIME (communication, information services, media, and entertainment). Mobile connectivity is radically changing the extent, capabilities, and operations of these markets, both in terms of the services they provide and how they interact with consumers. Bhatt also explores how these benefits intersect with new concerns about privacy and security when the line between public and private information is becoming ever more fluid.

Digital Communications May 27 2022 Revised to reflect all the current trends in the digital communications field, this all-inclusive guide delivers an outstanding introduction to the analysis and design of digital communication systems. Includes expert coverage of new topics: Turbocodes, Turboequalization, Antenna Arrays, Digital Cellular Systems, and Iterative Detection. Convenient, sequential organization begins with a look at the historyo and classification of channel models and builds from there.

Digital Communications Dec 22 2021 Digital communications plays an important role in numerical transmission systems due to the proliferation of radio beams, satellite, optic fibbers, radar, and mobile wireless systems. This book provides the fundamentals and basic design techniques of digital communications with an emphasis on the systems of telecommunication and the principles of baseband transmission. With a focus on examples and exercises, this book will prepare you with a practical and real-life treatment of communication problems. A complete analysis of the structures used for emission or reception technology A set of approaches for implementation in current and future circuit design A summary of the design steps with examples and exercises for each circuit

A Foundation in Digital Communication Feb 21 2022 This intuitive yet rigorous introduction derives the core results of digital communication from first principles. Theory, rather than industry standards, motivates the engineering approaches, and key results are stated with all the required assumptions. The book emphasizes the geometric view, opening with the inner product, the matched filter for its computation, Parseval's theorem, the sampling theorem as an orthonormal expansion, the isometry between passband signals and their baseband representation, and the spectral-efficiency optimality of quadrature amplitude modulation (QAM). Subsequent chapters address noise, hypothesis testing, Gaussian stochastic processes, and the sufficiency of the matched filter outputs. Uniquely, there is a treatment of white noise without generalized functions, and of the power spectral density without artificial random jitters and random phases in the analysis of QAM. This systematic and insightful book, with over 300 exercises, is ideal for graduate courses in digital communication, and for anyone asking 'why' and not just 'how'.

Principles of Digital Communication Sep 30 2022 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.

Advances in Design and Digital Communication Jan 23 2022 This book reports on research findings and practical lessons featuring advances in: digital and interaction design; graphic design and branding; design strategies and methodologies; design education; society and communication in design practice; and other related areas. Gathering the proceedings of the 4th International Conference on Digital Design and Communication, Digicom 2020, held virtually on November 5-6, 2020, the book describes cutting-edge perspectives on and analysis of and solutions to challenges digital communication is currently presenting to society, institutions and brands. It offers a timely guide and a source of inspiration for designers of all kinds, including graphic, digital and web designers, UI, UX and social media designers, and to researchers, advertisers, artists, and entrepreneurs, as well as brand or corporate communication managers.

Digital Communication and Learning Jan 29 2020 This edited book collects papers with perspectives from scholars and practitioners in Asia, Australia, and Europe to reveal the pros and cons, chances and challenges, constraints, and potential risks that educators and learners are facing as the new paradigm for communication and learning takes place, with a view to shedding light on the global education climate in the midst of the pandemic. Since the onset of the global pandemic, education has been revolutionized in almost every aspect. The emergency precautionary measures which were once supposed to be temporary school arrangements only have now become the new normal, reshaping our understanding of learning environments, redefining the pedagogic standards in terms of teaching practices, learning designs, teacher–student interaction, feedback, and assessment. Online teaching, distanced learning, flipped classrooms, and self-paced e-learning have all played an increasingly vital role in shaping a new education culture in various education settings, affecting school management, teachers, students, and parents alike. While ICT in education, alongside new media, has provided ample benefits and convenience for educators and students, communication and virtual lessons conducted in the socially distanced classroom appear to have brought issues such as the digital divide, e-mental health, insufficient technical support, inefficient classroom management, reduced interaction between teachers and students, not to mention the growing concerns over privacy and security.

Digital Communications Nov 20 2021 Digital Communications is a classic book in the area that is designed to be used as a senior or graduate level text. The text is flexible and can easily be used in a one semester course or there is enough depth to cover two semesters. Its comprehensive nature makes it a great book for students to keep for reference in their professional careers. This all-inclusive guide delivers an outstanding introduction to the analysis and design of digital communication systems. Includes expert coverage of new topics: Turbocodes, Turboequalization, Antenna Arrays, Digital Cellular Systems, and Iterative Detection. Convenient, sequential organization begins with a look at the history and classification of channel models and builds from there.

Chaos-Based Digital Communication Systems May 15 2021 One of the first books in this area, this text focuses on important aspects of the system operation, analysis and performance evaluation of selected chaos-based digital communications systems – a hot topic in communications and signal processing.

Digital Communication Mar 13 2021

Introduction to Digital Communication Systems Jul 17 2021 Combining theoretical knowledge and practical applications, this advanced-level textbook covers the most important aspects of contemporary digital communication systems. Introduction to Digital Communication Systems focuses on the rules of functioning digital communication system blocks, starting with the performance limits set by the information theory. Drawing on information relating to turbo codes and LDPC codes, the text presents the basic methods of error correction and detection, followed by baseband transmission methods, and single- and multi-carrier digital modulations. The basic properties of several

physical communication channels used in digital communication systems are explained, showing the transmission and reception methods on channels suffering from intersymbol interference. The text also describes the most recent developments in the transmission techniques specific to wireless communications used both in wireline and wireless systems. The case studies are a unique feature of this book, illustrating elements of the theory developed in each chapter. Introduction to Digital Communication Systems provides a concise approach to digital communications, with practical examples and problems to supplement the text. There is also a companion website featuring an instructors' solutions manual and presentation slides to aid understanding. Offers theoretical and practical knowledge in a self-contained textbook on digital communications Explains basic rules of recent achievements in digital communication systems such as MIMO, turbo codes, LDPC codes, OFDMA, SC-FDMA Provides problems at the end of each chapter with an instructors' solutions manual on the companion website Includes case studies and representative communication system examples such as DVB-S, GSM, UMTS, 3GPP-LTE

Introduction to Digital Communications Jan 11 2021 Introduction to Digital Communications explores the basic principles in the analysis and design of digital communication systems, including design objectives, constraints and trade-offs. After portraying the big picture and laying the background material, this book lucidly progresses to a comprehensive and detailed discussion of all critical elements and key functions in digital communications. The first undergraduate-level textbook exclusively on digital communications, with a complete coverage of source and channel coding, modulation, and synchronization. Discusses major aspects of communication networks and multiuser communications Provides insightful descriptions and intuitive explanations of all complex concepts Focuses on practical applications and illustrative examples. A companion Web site includes solutions to end-of-chapter problems and computer exercises, lecture slides, and figures and tables from the text

Perspectives on Design and Digital Communication II Jul 05 2020 This book gathers new empirical findings fostering advances in the areas of digital and communication design, web, multimedia and motion design, graphic design, branding, and related ones. It includes original contributions by authoritative authors based on the best papers presented at the 4th International Conference on Digital Design and Communication, Digicom 2020, together with some invited chapters written by leading international researchers. They report on innovative design strategies supporting communication in a global, digital world, and addressing, at the same time, key individual and societal needs. This book is intended to offer a timely snapshot of technologies, trends and challenges in the area of design, communication and branding, and a bridge connecting researchers and professionals of different disciplines, such as graphic design, digital communication, corporate, UI Design and UX design.

Exploring Digital Communication Sep 18 2021 Routledge Introductions to Applied Linguistics is a series of introductory level textbooks covering the core topics in Applied Linguistics, primarily designed for those beginning postgraduate studies or taking an introductory MA course, as well as advanced undergraduates. Titles in the series are also ideal for language professionals returning to academic study. The books take an innovative 'practice to theory' approach, with a 'back-to-front' structure. This leads the reader from real-world problems and issues, through a discussion of intervention and how to engage with these concerns, before finally relating these practical issues to theoretical foundations. Exploring Digital Communication aims to discuss real-world issues pertaining to digital communication, and to explore how linguistic research addresses these challenges. The text is divided into three sections (Problems and practices; Interventions; and Theory), each of which is further divided into two subsections which reflect linguistic issues relating to digital communication. The author seeks to demystify any perceived divide between online and offline communication, arguing that issues raised in relation to digital communication throw light on language use and practices in general, and thus linguistic interventions in this area have implications not only for users of digital communication but for linguists' general understanding of language and society. Including relevant research examples, tasks and a glossary, this textbook is an invaluable resource for postgraduate and upper undergraduate students taking New Media or Communication Studies modules within Applied Linguistics and English Language courses.

The Routledge Handbook of Language and Digital Communication Mar 25 2022 The Routledge Handbook of Language and Digital Communication provides a comprehensive, state-of-the-art overview of language-focused research on digital communication, taking stock and registering the latest trends that set the agenda for future developments in this thriving and fast-moving field. The contributors are all leading figures or established authorities in their areas, covering a wide range of topics and concerns in the following seven sections: - Methods and perspectives - Language resources, genres, and discourses - Digital literacies - Digital communication in public - Digital selves and online-offline lives - Communities, networks, relationships - New debates and further directions. This volume showcases critical syntheses of the established literature on key topics and issues and, at the same time, reflects upon and engages with cutting edge research and new directions for study (as emerging within social media). A wide range of languages are represented, from Japanese, Greek, German and Scandinavian languages, to computer-mediated Arabic, Chinese and African languages. The Routledge Handbook of Language and Digital Communication is an essential resource for advanced undergraduates, postgraduates and researchers within English language and linguistics, applied linguistics and media and communication studies.

Fundamentals of Digital Communication Jul 29 2022 This is a concise presentation of the concepts underlying the design of digital communication systems, without the detail that can overwhelm students. Many examples, from the basic to the cutting-edge, show how the theory is used in the design of modern systems and the relevance of this theory will motivate students. The theory is supported by practical algorithms so that the student can perform computations and simulations. Leading edge topics in coding and wireless communication make this an ideal text for students taking just one course on the subject. Fundamentals of Digital Communications has coverage of turbo and LDPC codes in sufficient detail and clarity to enable hands-on implementation and performance evaluation, as well as 'just enough' information theory to enable computation of performance benchmarks to compare them against. Other unique features include space-time communication and geometric insights into noncoherent communication and equalization.

Introduction to Analog and Digital Communication Aug 25 2019 This book primarily focuses on the design of analog and digital communication systems; and has been structured to cater to the second year engineering undergraduate students of Computer Science, Information Technology, Electrical Engineering and Electronics and Communication departments. For better understanding, the basics of analog communication systems are outlined before the digital communication systems section. The content of this book is also suitable for the students with little knowledge in communication systems. The book is divided into five modules for efficient presentation, and it provides numerous examples and illustrations for the detailed understanding of the subject, in a thorough manner.

Digital Communication for Practicing Engineers Jun 23 2019 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.

Analogue and Digital Communication Techniques Oct 27 2019 The rapid expansion of digital communications, particularly in the fields of TV and mobile telephones does not overide the need for a clear understanding of analogue frequencies. Moreover, analogue technology will play an important role in communications well into the 21st century. Covering the principles behind analogue and digital communication systems, this book takes a less mathematical approach than is often found at this level. It begins with basic principles such as information systems, data compression and error detection before moving on to more advanced topics such as Pulse Code Modulation systems and

digital microwave systems. Data protocols are also given so that the reader can gain a good understanding of more complex communication systems. 'Analogue and Digital Communication Techniques' has been designed for students studying HND electronic communication courses but will also be useful to junior undergraduates on similar courses. Some knowledge of basic elctronics is assumed.

Handbook of Research on Narrative Advertising Apr 01 2020 Narration can be conceptualized as conveying two or more events (or an event with a situation) that are logically interrelated and take place over time and have a consistent topic. The concept includes every storytelling text. The advertisement is one of the text types that includes a story, and the phenomenon conceptualized as advertising narration has gained new dimensions with the widespread use of digital media. The Handbook of Research on Narrative Advertising is an essential reference source that investigates fundamental marketing concepts and addresses the new dimensions of advertising with the universal use of digital media. Featuring research on topics such as branding, mobile marketing, and consumer engagement, business professionals, copywriters, students, and practitioners will find this text useful in furthering their research exposure to evolutionary techniques in advertising.

Modeling of Digital Communication Systems Using SIMULINK Oct 08 2020 A comprehensive and detailed treatment of the program SIMULINK® that focuses on SIMULINK® for simulations in Digital and Wireless Communications Modeling of Digital Communication Systems Using SIMULINK® introduces the reader to SIMULINK®, an extension of the widely-used MATLAB modeling tool, and the use of SIMULINK® in modeling and simulating digital communication systems, including wireless communication systems. Readers will learn to model a wide selection of digital communications techniques and evaluate their performance for many important channel conditions. Modeling of Digital Communication Systems Using SIMULINK® is organized in two parts. The first addresses Simulink® models of digital communications systems using various modulation, coding, channel conditions and receiver processing techniques. The second part provides a collection of examples, including speech coding, interference cancellation, spread spectrum, adaptive signal processing, Kalman filtering and modulation and coding techniques currently implemented in mobile wireless systems. Covers case examples, progressing from basic to complex Provides applications for mobile communications, satellite communications, and fixed wireless systems that reveal the power of SIMULINK modeling Includes access to useable SIMULINK® simulations online All models in the text have been updated to R2018a; only problem sets require updating to the latest release by the user Covering both the use of SIMULINK® in digital communications and the complex aspects of wireless communication systems, Modeling of Digital Communication Systems UsingSIMULINK® is a great resource for both practicing engineers and students with MATLAB experience.

Principles Of Digital Communication System & Computer Network Jun 15 2021 A Comprehensive coverage of Digital communication, Data Communication Protocols and Mobile ComputingCovers:" Multiplexing & Multiple accesses" Radio Communications- Terrestrial & Satellite" Error Detection & Correction" ISO/ OSI Protocol Architecture" Wired Internet DNS, RADIUS, Firewalls, VPN" Cellular Mobile Communication" GPS, CTI, Wireless Internet" Multimedia Communication over IP Networks

A First Course in Digital Communications Apr 13 2021 A concise introduction to the core concepts in digital communication, providing clarity and depth through examples, problems and MATLAB exercises. Its simple structure maps a logical route to understand the most basic principles in digital communication, and also leads students through more in-depth treatment with examples and step-by step instructions.

Digital Communications Apr 25 2022 This is a modern textbook on digital communications and is designed for senior undergraduate and graduate students, whilst also providing a valuable reference for those working in the telecommunications industry. It provides a simple and thorough access to a wide range of topics through use of figures, tables, examples and problem sets. The author provides an integrated approach between RF engineering and statistical theory of communications. Intuitive explanations of the theoretical and practical aspects of telecommunications help the reader to acquire a deeper understanding of the topics. The book covers the fundamentals of antennas, channel modelling, receiver system noise, A/D conversion of signals, PCM, baseband transmission, optimum receiver, modulation techniques, error control coding, OFDM, fading channels, diversity and combining techniques, MIMO systems and cooperative communications. It will be an essential reference for all students and practitioners in the electrical engineering field.

Digital Communications Sep 06 2020 Digital communications is the foundation of modern telecommunications and digital signal processing. The second edition of Digital Communications is updated to include current techniques and systems used in the rapidly expanding field of fixed and mobile communications. The text has comprehensive coverage of digital communications without going into unnecessary detail or irrelevant topics. Its main aims are to develop the mathematical theory behind signal processing and use this knowledge to develop fixed and mobile data communications systems. This text is geared towards students who already have a technical understanding of electrical engineering from their introductory years at university and who wish to focus on digital communications. It covers everything these students will need to know, including modern techniques.

Digital Communication Nov 28 2019 The authors give a detailed summary about the fundamentals and the historical background of digital communication. This includes an overview of the encoding principles and algorithms of textual information, audio information, as well as images, graphics, and video in the Internet. Furthermore the fundamentals of computer networking, digital security and cryptography are covered. Thus, the book provides a well-founded access to communication technology of computer networks, the internet and the WWW. Numerous pictures and images, a subject-index and a detailed list of historical personalities including a glossary for each chapter increase the practical benefit of this book that is well suited as well as for undergraduate students as for working practitioners.

Communication and Learning in an Age of Digital Transformation Aug 06 2020 Communication and Learning in an Age of Digital Transformation provides cross-disciplinary perspectives on digitization as social transformation and its impact on communication and learning. This work presents openness within its interpretation of the digital and its impact on learning and communication, acknowledging historical contexts and contemporary implications emerging from discourse on digitization. The book presents a triangulation of different research perspectives. These perspectives, which range from digital resistance parks and cyber-religious questions to cultural-scientific media-theoretical reflections, point to the performative openness of the analysis. The book represents an interdisciplinary approach and opens a space for understanding the social complexity of digital transformations in teaching and learning. This book will be of great interest to academics, post graduate students and researchers in the field of digital learning, communication and education research.

Digital Communication Jun 27 2022 This textbook is for undergratuate students of electronics and telecommunication engineering and allied disciplines, as well as diploma and science courses. This book offers on 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.

Digital Communication Oct 20 2021 This book concerns digital communication. Specifically, we treat the transport of bit streams from one geographical location to another over various physical media, such as wire pairs, coaxial cable, optical fiber, and radio waves. Further, we cover the mul tiplexing, multiple access, and synchronization issues relevant to constructing com munication networks that simultaneously transport bit streams from many users. The material in this book is thus directly relevant to the design of a multitude of digital communication systems, including for example local and metropolitan area data net works, voice and video telephony systems, the integrated services digital network (ISDN), computer communication systems, voiceband data modems, and satellite communication systems. We extract the common principles underlying these and other applications and present them in a unified framework. This book is intended for designers and would-be designers of digital communication systems. To limit the scope to manageable proportions we have had to be selective in the topics covered and in the depth of coverage. In the case of advanced information, coding, and detection theory, for example, we have not tried to duplicate the in-depth coverage of many advanced textbooks, but rather have tried to cover those aspects directly relevant to the design of digital communication systems.

Chaotic Signals in Digital Communications May 03 2020 Chaotic Signals in Digital Communications combines fundamental background knowledge with state-of-the-art methods for using chaotic signals and systems in digital communications. The book builds a bridge between theoretical works and practical implementation to help researchers attain consistent performance in realistic environments. It shows the possible shortcomings of the chaos-based communication systems proposed in the literature, particularly when they are subjected to non-ideal conditions. It also presents a toolbox of techniques for researchers working to actually implement such systems. A Combination of Tutorials and In-Depth, Cutting-Edge Research Featuring contributions by active leading researchers, the book begins with an introduction to communication theory, dynamical systems, and chaotic communications suitable for those new to the field. This lays a solid foundation for the more applied chapters that follow. A Toolbox of Techniques—Including New Ways to Tackle Channel Imperfections The book covers typical chaos communication methods,

namely chaotic masking, chaotic modulation, chaotic shift key, and symbolic message bearing, as well as bidirectional communication and secure communication. It also presents novel methodologies to deal with communication channel imperfections. These tackle band-limited channel chaos communication, radio channels with fading, and the resistance of a special chaotic signal to multipath propagations. In addition, the book addresses topics related to engineering applications, such as optical communications, chaotic matched filters and circuit implementations, and microwave frequency-modulated differential chaos shift keying (FM-DCSK) systems. Insights for Both Theoretical and Experimental Researchers Combining theory and practice, this book offers a unique perspective on chaotic communication in the context of non-ideal conditions. Written for theoretical and experimental researchers, it tackles the practical issues faced in implementing chaos-based signals and systems in digital communications applications.

Perspectives on Design and Digital Communication Aug 18 2021 This book shares new research findings and practical lessons learned that will foster advances in digital design, communication design, web, multimedia and motion design, graphic design and branding, and other related areas. It gathers the best papers presented at the 3rd International Conference on Digital Design and Communication, DIGICOM 2019, held on November 15–16, 2019, in Barcelos, Portugal. The respective contributions highlight new theoretical perspectives and practical research directions in design and communication, aimed at promoting their use in a global, digital world. The book offers a timely guide and a source of inspiration for designers of all kinds (Graphic, Digital, Web, UI & UX Design and Social Media), for researchers, advertisers, artists, entrepreneurs, and brand or corporate communication managers, and for teachers and advanced students.

Digital Communication over Fading Channels Sep 26 2019 The four short years since Digital Communication over FadingChannels became an instant classic have seen a virtual explosion ofsignificant new work on the subject, both by the authors and bynumerous researchers around the world. Foremost among these is agreat deal of progress in the area of transmit diversity andspace-time coding and the associated multiple input-multiple output(MIMO) channel. This new edition gathers these and other results,previously scattered throughout numerous publications, into asingle convenient and informative volume. Like its predecessor, this Second Edition discusses in detailcoherent and noncoherent communication systems as well as a largevariety of fading channel models typical of communication linksfound in the real world. Coverage includes single- and multichannelreception and, in the case of the latter, a large variety ofdiversity types. The moment generating function (MGF)-basedapproach for performance analysis, introduced by the authors in thefirst edition and referred to in literally hundreds ofpublications, still represents the backbone of the book'spresentation. Important features of this new edition include: * An all-new, comprehensive chapter on transmit diversity,space-time coding, and the MIMO channel, focusing on performanceevaluation * Coverage of new and improved diversity schemes * Performance analyses of previously known schemes in new anddifferent fading scenarios * A new chapter on the outage probability of cellular mobile radiosystems * A new chapter on the capacity of fading channels * And much more Digital Communication over Fading Channels, Second Edition is anindispensable resource for graduate students, researchersinvestigating these systems, and practicing engineers responsiblefor evaluating their performance.

Principles of Digital Communication Nov 08 2020 A comprehensive text that takes a unique top-down approach to teaching the fundamentals of digital communication for a one-semester course.