Theory And Applications Of Digital Speech Processing Ebook Free

Digital PrivacyDirect Digital SynthesizersAdvanced Digital Signal ProcessingExamining Paratextual Theory and its Applications in Digital CultureInteractive Digital NarrativeDetection TheoryDigital Signal Processing for Measurement SystemsTheory and Application of Digital ControlTheory and Design of Digital Communication SystemsDigital and Social Media MarketingDigital Signal ProcessingDigital CommunicationTheory and Applications of OFDM and CDMAExamining Paratextual Theory and its Applications in Digital CultureFundamentals of Digital ForensicsDigital ImagingResearch and Advanced Technology for Digital LibrariesNumber Theory in Science and CommunicationMulti-Carrier Digital CommunicationsThe Theory and Craft of Digital PreservationDigital Transformation in Business and SocietyDigital Communications with Emphasis on Data ModemsApplying Color Theory to Digital Media and VisualizationDigital and Microprocessor FundamentalsPotential Game TheoryHandbook of Applications of Chaos TheoryTheory and Application of Digital Signal ProcessingComputational PhotographyGNSS Remote SensingApplied Digital Signal ProcessingDigital Signal Processing AlgorithmsIntroduction to Digital Speech ProcessingDigital PhotogrammetryDiscover Digital LibrariesTheory and Applications of Automatic ControlsTheory of Digital AutomataTheory and Applications of Digital Speech ProcessingDigital Communication: Theory, Techniques and Applications (2e)Digital Signal ProcessingCybercrime Prevention

Digital Privacy

This book constitutes the proceedings of the 19th International Conference on Theory and Practice of Digital Libraries, TPDL 2015, held in Poznań, Poland, in September 2015. The 22 full papers and 14 poster and demo papers presented in this volume were carefully reviewed and selected from 61 submissions. They were organized in topical sections named: interoperability and information integration; multimedia information management and retrieval and digital curation; personal information management and personal digital libraries; exploring semantic web and linked data; user studies for and evaluation of digital library systems and applications; applications of digital libraries; digital humanities; and social-technical perspectives of digital information.

Direct Digital Synthesizers

A comprehensive and mathematically accessible introduction to digital signal processing, covering theory, advanced topics, and applications.

Advanced Digital Signal Processing

This book offers a thorough examination of potential game theory and its applications in radio resource management for wireless communications systems and networking. The book addresses two major research goals: how to identify a given game as a potential game, and how to design the utility functions and the potential functions with certain special properties in order to formulate a potential game. After proposing a unifying mathematical framework for the identification of potential games, the text surveys existing applications of this technique within wireless communications and networking problems found in OFDMA 3G/4G/WiFi networks, as well as next-generation systems such as cognitive radios and dynamic spectrum access networks. Professionals interested in understanding the theoretical aspect of this specialized field will find Potential Game Theory a valuable resource, as will advanced-level engineering students. It paves the way for extensive and rigorous research exploration on a topic whose capacity for practical applications is vast but not yet fully exploited.

Examining Paratextual Theory and its Applications in Digital Culture

In addition to explaining and modeling unexplored phenomena in nature and society, chaos uses vital parts of nonlinear dynamical systems theory and established chaotic theory to open new frontiers and fields of study. Handbook of Applications of Chaos Theory covers the main parts of chaos theory along with various applications to diverse areas. Expert contributors from around the world show how chaos theory is used to model unexplored cases and stimulate new applications. Accessible to scientists, engineers, and practitioners in a variety of fields, the book discusses the intermittency route to chaos, evolutionary dynamics and deterministic chaos, and the transition to phase synchronization chaos. It presents important contributions on strange attractors, self-exciting and hidden attractors, stability theory, Lyapunov exponents, and chaotic analysis. It explores the state of the art of chaos in plasma physics, plasma harmonics, and overtone coupling. It also describes flows and turbulence, chaotic interference versus decoherence, and an application of microwave networks to the simulation of quantum graphs. The book proceeds to give a detailed presentation of the chaotic, rogue, and noisy optical dissipative solitons; parhelic-like circle and chaotic light scattering; and interesting forms of the hyperbolic prism, the Poincaré disc, and foams. It also covers numerous application areas, from the analysis of blood pressure data and clinical digital pathology to chaotic pattern recognition to economics to musical arts and research.

Interactive Digital Narrative

Continuous Signals and Systems with MATLAB is the first undergraduate text fully focused on continuous systems. It presents all of the material needed to master the subject and its related MATLAB problem-solving techniques. The authors cover all of the traditional topics and include chapters on system design, state-space techniques, linearizing nonlinear systems, and the design and analysis of analog filters. They also discuss the five representations of continuous systems and explain how to go from one representation to another.

Detection Theory

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Theory and Applications of Digital Speech Processing is ideal for graduate students in digital signal processing, and undergraduate students in Electrical and Computer Engineering. With its clear, up-to-date, hands-on coverage of digital speech processing, this text is also suitable for practicing engineers in speech processing. This new text presents the basic concepts and theories of speech processing with clarity and currency, while providing hands-on computer-based laboratory experiences for students. The material is organized in a manner that builds a strong foundation of basics first, and then concentrates on a range of signal processing methods for representing and processing the speech signal.

Digital Signal Processing for Measurement Systems

Discover Digital Libraries: Theory and Practice is a book that integrates both research and practice concerning digital library development, use, preservation, and evaluation. The combination of current research and practical guidelines is a unique strength of this book. The authors bring in-depth expertise on different digital library issues and synthesize theoretical and practical perspectives relevant to researchers, practitioners, and students. The book presents a comprehensive overview of the different approaches and tools for digital library development, including discussions of the social and legal issues associated with digital libraries. Readers will find current research and the best practices of digital libraries, providing both US and international perspectives on the development of digital libraries and their components, including collection, digitization, metadata, interface design, sustainability, preservation, retrieval, and evaluation of digital libraries. Offers an overview of digital libraries and the conceptual and practical understanding of digital libraries Presents the lifecycle of digital library design, use, preservation and evaluation, including collection development, digitization of static and multimedia resources, metadata, digital library development and interface design, digital information searching, digital preservation, and digital library evaluation Synthesizes current research and the best practices of digital libraries, providing both US and international perspectives on the development of digital libraries Introduces new developments in the area of digital libraries, such as large-scale digital libraries, social media applications in digital libraries, multilingual digital libraries, digital curation, linked data, rapid capture, guidelines for the digitization of multimedia resources Highlights the impact, challenges, suggestions for overcoming these challenges, and trends of present and future development of digital libraries Offers a comprehensive bibliography for each chapter

Theory and Application of Digital Control

This excellent Senior undergraduate/graduate textbook offers an unprecedented measurement of science perspective on DSP theory and applications, a wealth of definitions and real-life examples making it invaluable for students, while practical.

Theory and Design of Digital Communication Systems

Theory and Applications of OFDM and CDMA is an ideal foundation textbook for those seeking a sound knowledge of this fast-developing field of wideband communications. The advanced transmission techniques of OFDM, applied in wireless LANs and in digital and video broadcasting, and CDMA, the foundation of 3G mobile communications, have been part of almost every communication system that has been designed in recent years, with both offering a high degree of flexibility in adjusting the system to the requirements of the application and to the impairments caused by the transmission channel. Starting from the basics of digital transmission theory, the reader gains a comprehensive overview of the underlying ideas of these techniques and their strengths and weaknesses under various conditions. In this context, the specific requirements of the mobile radio channel and their relevance for the design of digital transmission systems are discussed and related to the items of channel coding and modulation. Clear explanation of the basics of digital communications, mobile radio channels, coding and modulation, OFDM as a multicarrier system and CDMA as an application of spread spectrum techniques Discusses the most important mobile radio and digital broadcasting systems that use OFDM and CDMA, and explains in detail the underlying ideas for the choice of system parameters Progresses from the fundamentals of wideband communication through to modern applications Includes a Companion Website featuring a solutions manual, electronic versions of the figures and other useful resources This volume will be an invaluable resource to advanced undergraduate students and first/second year postgraduates of electrical and engineering and telecommunications. It will also appeal to practising engineers, researchers and those in academia who wish to expand their knowledge on modern aspects of digital communications and systems in a mobile radio environment.

Digital and Social Media Marketing

This book articulates how crime prevention research and practice can be reimagined for an increasingly digital world. This ground-breaking work explores how criminology can apply longstanding, traditional crime prevention techniques to the digital realm. It provides an overview of the key principles, concepts and research literature associated with crime prevention, and discusses the interventions most commonly applied to crime problems. The authors review the theoretical underpinnings of these and analyses evidence for their efficacy. Cybercrime Prevention is split into three sections which examine primary prevention, secondary prevention and tertiary prevention. It provides a thorough discussion of what works and what does not, and offers a formulaic account of how traditional crime prevention interventions can be reimagined to apply to the digital realm.

Digital Signal Processing

This book examines issues and implications of digital and social media marketing for emerging markets. These markets necessitate substantial adaptations of developed theories and approaches employed in the Western world. The book investigates problems specific to emerging markets, while identifying new theoretical constructs and practical applications of digital marketing. It addresses topics such as electronic word of mouth (eWOM), demographic differences in digital marketing, mobile marketing, search engine advertising, among others. A radical increase in both temporal and geographical reach is empowering consumers to exert influence on brands, products, and services. Information and Communication Technologies (ICTs) and digital media are having a significant impact on the way people communicate and fulfil their socio-economic, emotional and material needs. These technologies are also being harnessed by businesses for various purposes including distribution and selling of goods, retailing of consumer services, customer relationship management, and influencing consumer behaviour by employing digital marketing practices. This book considers this, as it examines the practice and research related to digital and social media marketing.

Digital Communication

The digital traces that people leave behind as they conduct their daily lives provide a powerful resource for businesses to better understand the dynamics of an otherwise chaotic society. Digital technologies have become omnipresent in our lives and we still do not fully know how to make the best use of the data these technologies could harness. Businesses leveraging big data appropriately could definitely gain a sustainable competitive advantage. With a balanced mix of texts and cases, this book discusses a variety of digital technologies and how they transform people and organizations. It offers a debate on the societal consequences of the yet unfolding technological revolution and proposes alternatives for harnessing disruptive technologies for the greater benefit of all. This book will have wide appeal to academics in technology management, strategy, marketing, and human resource management.

Theory and Applications of OFDM and CDMA

Master the basic concepts and methodologies of digital signal processing with this systematic introduction, without the need for an extensive mathematical background. The authors lead the reader through the fundamental mathematical principles underlying the operation of key signal processing techniques, providing simple arguments and cases rather than detailed general proofs. Coverage of practical implementation, discussion of the limitations of particular methods and plentiful MATLAB illustrations allow readers to better connect theory and practice. A focus on algorithms that are of theoretical importance or useful in real-world applications ensures that students cover material relevant to engineering

practice, and equips students and practitioners alike with the basic principles necessary to apply DSP techniques to a variety of applications. Chapters include worked examples, problems and computer experiments, helping students to absorb the material they have just read. Lecture slides for all figures and solutions to the numerous problems are available to instructors.

Examining Paratextual Theory and its Applications in Digital Culture

From one of this burgeoning field's true pioneers, here is a much-needed guide to digital image processing that is both authoritative and accessible. Howard Burdick's book/CD-ROM package delivers the basic knowledge and the sample programs you need to utilize digital imaging techniques in a wide variety of real-world situations. More than just another technical cookbook weighed down by mathematical abstractions, Digital Imaging paints a complete picture of the subject in terms anyone can understand. The accompanying CD-ROM provides many complete programming examples, plus sample images that serve to illustrate an array of practical algorithms and processing techniques and provide a springboard from which to create your own applications.

Fundamentals of Digital Forensics

Focusing on the must know essentials, this text is designed for one-semester consolidated courses in digital and microprocessor fundamentals, or one-semester courses in digital fundamentals followed by one-semester courses in microprocessor fundamentals.

Digital Imaging

This hands-on textbook provides an accessible introduction to the fundamentals of digital forensics. The text contains thorough coverage of the theoretical foundations, explaining what computer forensics is, what it can do, and also what it can't. A particular focus is presented on establishing sound forensic thinking and methodology, supported by practical guidance on performing typical tasks and using common forensic tools. Emphasis is also placed on universal principles, as opposed to content unique to specific legislation in individual countries. Topics and features: introduces the fundamental concepts in digital forensics, and the steps involved in a forensic examination in a digital environment; discusses the nature of what cybercrime is, and how digital evidence can be of use during criminal investigations into such crimes; offers a practical overview of common practices for cracking encrypted data; reviews key artifacts that have proven to be important in several cases, highlighting where to find these and how to correctly interpret them; presents a survey of various different search techniques, and several forensic tools that are available for free; examines the functions of AccessData Forensic

Toolkit and Registry Viewer; proposes methods for analyzing applications, timelining, determining the identity of the computer user, and deducing if the computer was remote controlled; describes the central concepts relating to computer memory management, and how to perform different types of memory analysis using the open source tool Volatility; provides review questions and practice tasks at the end of most chapters, and supporting video lectures on YouTube. This easy-to-follow primer is an essential resource for students of computer forensics, and will also serve as a valuable reference for practitioners seeking instruction on performing forensic examinations in law enforcement or in the private sector.

Research and Advanced Technology for Digital Libraries

Digital Communications: Theory, Techniques and Applications is written for students of both undergraduate and post-graduate degree programs in engineering for a course on digital communication. In the first four chapters the book builds the theoretical background necessary to understand the principal ideas of digital communication systems. Thereafter, the book in chapters 5 through 9 discusses the core concepts such as digital coding, multiplexing and multiple access, digital modulation, demodulation and detection. The last chapter of the book discusses the applications of digital communication in the domains of satellite, optical and wireless communication systems. Heavily illustrated with more than 500 figures to help understand and relate to theoretical concepts better, the book also provides graded solved problems, challenging review questions, and numerical exercises for the practice.

Number Theory in Science and Communication

This book provides an overview of the application of color theory concepts to digital media and visualization. It highlights specific color concepts like color harmony and shows how to apply the concept with case study examples and usage of actual online and mobile color tools. Color deficiencies are reviewed and discussed are color tools for examining how a specific color map design will look to someone with the deficiency. Other books on color examine artists' use of color, color management, or color science. This book applies fundamental color concepts to digital media and visualization solutions. It is intended for digital media and visualization content creators and developers.

Multi-Carrier Digital Communications

The Theory and Craft of Digital Preservation

Multi-carrier modulation, in particular orthogonal frequency division multiplexing (OFDM), has been successfully applied to a

wide variety of digital communications applications for several years. Although OFDM has been chosen as the physical layer standard for a diversity of important systems, the theory, algorithms, and implementation techniques remain subjects of current interest. This book is intended to be a concise summary of the present state of the art of the theory and practice of OFDM technology. This book offers a unified presentation of OFDM theory and high speed and wireless applications. In particular, ADSL, wireless LAN, and digital broadcasting technologies are explained. It is hoped that this book will prove valuable both to developers of such systems, and to researchers and graduate students involved in analysis of digital communications, and will remain a valuable summary of the technology, providing an understanding of new advances as well as the present core technology.

Digital Transformation in Business and Society

Theory and Application of Digital Control contains the proceedings of the IFAC Symposium held at New Delhi, India on January 5-7, 1982. This book particularly presents the texts of the five plenary talks and the 110 papers of the symposium. This book organizes the papers into 109 chapters, with nearly one-third of the papers focus on digital control, particularly, software and hardware of control using microcomputers; computer-aided design; and adaptive control and modeling for digital control. Another set of papers deal with several applications of digital control techniques in solving interesting problems of socio economic systems, electrical power systems, bio systems, and artificial satellites. The reader will benefit hugely from the topics in this book that span several important theoretical and applied areas of the fast-changing topic of digital control.

Digital Communications with Emphasis on Data Modems

The versatile and available GNSS signals can detect the Earth's surface environments as a new, highly precise, continuous, all-weather and near-real-time remote sensing tool. This book presents the theory and methods of GNSS remote sensing as well as its applications in the atmosphere, oceans, land and hydrology. Ground-based atmospheric sensing, space-borne atmospheric sensing, reflectometry, ocean remote sensing, hydrology sensing as well as cryosphere sensing with the GNSS will be discussed per chapter in the book.

Applying Color Theory to Digital Media and Visualization

Number Theory in Science and Communication introductes non-mathematicians to the fascinating and diverse applications of number theory. This best-selling book stresses intuitive understanding rather than abstract theory. This revised fourth edition is augmented by recent advances in primes in progressions, twin primes, prime triplets, prime quadruplets and

quintruplets, factoring with elliptic curves, quantum factoring, Golomb rulers and "baroque" integers.

Digital and Microprocessor Fundamentals

Digital Signal Processing Algorithms describes computational number theory and its applications to deriving fast algorithms for digital signal processing. It demonstrates the importance of computational number theory in the design of digital signal processing algorithms and clearly describes the nature and structure of the algorithms themselves. The book has two primary focuses: first, it establishes the properties of discrete-time sequence indices and their corresponding fast algorithms; and second, it investigates the properties of the discrete-time sequences and the corresponding fast algorithms for processing these sequences. Digital Signal Processing Algorithms examines three of the most common computational tasks that occur in digital signal processing; namely, cyclic convolution, acyclic convolution, and discrete Fourier transformation. The application of number theory to deriving fast and efficient algorithms for these three and related computationally intensive tasks is clearly discussed and illustrated with examples. Its comprehensive coverage of digital signal processing, computer arithmetic, and coding theory makes Digital Signal Processing Algorithms an excellent reference for practicing engineers. The authors' intent to demystify the abstract nature of number theory and the related algebra is evident throughout the text, providing clear and precise coverage of the quickly evolving field of digital signal processing.

Potential Game Theory

Introduction to Digital Speech Processing highlights the central role of DSP techniques in modern speech communication research and applications. It presents a comprehensive overview of digital speech processing that ranges from the basic nature of the speech signal, through a variety of methods of representing speech in digital form, to applications in voice communication and automatic synthesis and recognition of speech. Introduction to Digital Speech Processing provides the reader with a practical introduction to the wide range of important concepts that comprise the field of digital speech processing. It serves as an invaluable reference for students embarking on speech research as well as the experienced researcher already working in the field, who can utilize the book as a reference guide.

Handbook of Applications of Chaos Theory

While traveling the data highway through the global village, most people, if they think about it at all, consider privacy a non-forfeitable right. They expect to have control over the ways in which their personal information is obtained, distributed, shared, and used by any other entity. According to recent surveys, privacy, and anonymity are the fundamental issues of

concern for most Internet users, ranked higher than ease-of-use, spam, cost, and security. Digital Privacy: Theory, Techniques, and Practices covers state-of-the-art technologies, best practices, and research results, as well as legal, regulatory, and ethical issues. Editors Alessandro Acquisti, Stefanos Gritzalis, Costas Lambrinoudakis, and Sabrina De Capitani di Vimercati, established researchers whose work enjoys worldwide recognition, draw on contributions from experts in academia, industry, and government to delineate theoretical, technical, and practical aspects of digital privacy. They provide an up-to-date, integrated approach to privacy issues that spells out what digital privacy is and covers the threats, rights, and provisions of the legal framework in terms of technical counter measures for the protection of an individual's privacy. The work includes coverage of protocols, mechanisms, applications, architectures, systems, and experimental studies. Even though the utilization of personal information can improve customer services, increase revenues, and lower business costs, it can be easily misused and lead to violations of privacy. Important legal, regulatory, and ethical issues have emerged, prompting the need for an urgent and consistent response by electronic societies. Currently there is no book available that combines such a wide range of privacy topics with such a stellar cast of contributors. Filling that void, Digital Privacy: Theory, Techniques, and Practices gives you the foundation for building effective and legal privacy protocols into your business processes.

Theory and Application of Digital Signal Processing

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.

Computational Photography

Provides a detailed treatment of the concepts and applications of advanced digital signal processing.

GNSS Remote Sensing

The paratext framework is now used in a variety of fields to assess, measure, analyze, and comprehend the elements that provide thresholds, allowing scholars to better understand digital objects. Researchers from many disciplines revisit paratextual theories in order to grasp what surrounds text in the digital age. Examining Paratextual Theory and its Applications in Digital Culture suggests a theoretical and practical tool for building bridges between disciplines interested in conducting joint research and exploration of digital culture. Helping scholars from different fields find an interdisciplinary framework and common language to study digital objects, this book serves as a useful reference for academics, librarians, professionals, researchers, and students, offering a collaborative outlook and perspective.

Applied Digital Signal Processing

Many people believe that what is on the Internet will be around forever. At the same time, warnings of an impending "digital dark age"â€”where records of the recent past become completely lost or inaccessibleâ€"appear with regular frequency in the popular press. It's as if we need a system to safeguard our digital records for future scholars and researchers. Digital preservation experts, however, suggest that this is an illusory dream not worth chasing. Ensuring long-term access to digital information is not that straightforward; it is a complex issue with a significant ethical dimension. It is a vocation. In The Theory and Craft of Digital Preservation, librarian Trevor Owens establishes a baseline for practice in this field. In the first section of the book, Owens synthesizes work on the history of preservation in a range of areas (archives, manuscripts, recorded sound, etc.) and sets that history in dialogue with work in new media studies, platform studies, and media archeology. In later chapters, Owens builds from this theoretical framework and maps out a more deliberate and intentional approach to digital preservation. A basic introduction to the issues and practices of digital preservation, the book is anchored in an understanding of the traditions of preservation and the nature of digital objects and media. Based on extensive reading, research, and writing on digital preservation, Owens's work will prove an invaluable reference for archivists, librarians, and museum professionals, as well as scholars and researchers in the digital humanities.

Digital Signal Processing Algorithms

Theory And Applications Of Automatic Controls Is Written In A Simple Style As A Text-Book, Based On The Author'S Experience Of Teaching The Subject To Undergraduate And Postgraduate Students In Mechanical Engineering. It Would Be Useful To The Students Of Various Disciplines Including Mechanical, Electrical, Chemical, Aerospace, Production, Textile Engineering Etc. And Also For Practicing Engineers From Industry.Salient Features * Chapter 10 Has Been Expanded To Cover Topics On Design Of Digital Controllers, Process Delays And Digital Controller For Dead Beat Response. * A Detailed Treatment Is Given For Ladder Diagrams, Hydraulic And Pneumatic Actuation Systems. * Programmable Logic Controller And Its Ladder Diagram And Programming Have Been Covered. * A Number Of Examples And Exercise Problems Have Been

Added. * Omissions And Corrections Have Been Taken Care Of.

Introduction to Digital Speech Processing

This book uses a practical approach in the application of theoretical concepts to digital communications in the design of software defined radio modems. This book discusses the design, implementation and performance verification of waveforms and algorithms appropriate for digital data modulation and demodulation in modern communication systems. Using a building-block approach, the author provides an introductory to the advanced understanding of acquisition and data detection using source and executable simulation code to validate the communication system performance with respect to theory and design specifications. The author focuses on theoretical analysis, algorithm design, firmware and software designs and subsystem and system testing. This book treats system designs with a variety of channel characteristics from very low to optical frequencies. This book offers system analysis and subsystem implementation options for acquisition and data detection appropriate to the channel conditions and system specifications, and provides test methods for demonstrating system performance. This book also: Outlines fundamental system requirements and related analysis that must be established prior to a detailed subsystem design Includes many examples that highlight various analytical solutions and case studies that characterize various system performance measures Discusses various aspects of atmospheric propagation using the spherical 4/3 effective earth radius model Examines Ionospheric propagation and uses the Rayleigh fading channel to evaluate link performance using several robust waveform modulations Contains end-of-chapter problems, allowing the reader to further engage with the text Digital Communications with Emphasis on Data Modems is a great resource for communication-system and digital signal processing engineers and students looking for in-depth theory as well as practical implementations.

Digital Photogrammetry

Designed for graduate students and signal processing practitioners with an introductory background in DSP, this new text gives representative coverage of advanced topics (orthogonal expansions, optimal filters, and two-dimensional DSP), and advanced aspects of familiar topics (fast transforms beyond the FFT, non-uniform sampling and quantization). Providing a self-contained blending of DSP theory, applications to speech and image processing, and state-of-the-art DSP hardware, Digital Signal Processing includes: introductory DSP concepts summarized in five appendixes; DSP filter algorithms - e.g.subband and median filters; least squares, optimal, and adaptive filters spectral estimation and deconvolution; speech and image processing applications; and DSP hardware realizations.

Discover Digital Libraries

A major advantage of a direct digital synthesizer is that its output frequency, phase and amplitude can be precisely and rapidly manipulated under digital processor control. This book was written to find possible applications for radio communication systems.

Theory and Applications of Automatic Controls

This book serves a dual purpose: firstly to combine the treatment of circuits and digital electronics, and secondly, to establish a strong connection with the contemporary world of digital systems. The need for this approach arises from the observation that introducing digital electronics through a course in traditional circuit analysis is fast becoming obsolete. Our world has gone digital. Automata theory helps with the design of digital circuits such as parts of computers, telephone systems and control systems. A complete perspective is emphasized, because even the most elegant computer architecture will not function without adequate supporting circuits. The focus is on explaining the real-world implementation of complete digital systems. In doing so, the reader is prepared to immediately begin design and implementation work. This work serves as a bridge to take readers from the theoretical world to the everyday design world where solutions must be complete to be successful.

Theory of Digital Automata

Computational photography refers broadly to imaging techniques that enhance or extend the capabilities of digital photography. This new and rapidly developing research field has evolved from computer vision, image processing, computer graphics and applied optics—and numerous commercial products capitalizing on its principles have already appeared in diverse market applications, due to the gradual migration of computational algorithms from computers to imaging devices and software. Computational Photography: Methods and Applications provides a strong, fundamental understanding of theory and methods, and a foundation upon which to build solutions for many of today's most interesting and challenging computational imaging problems. Elucidating cutting-edge advances and applications in digital imaging, camera image processing, and computational photography, with a focus on related research challenges, this book: Describes single capture image fusion technology for consumer digital cameras Discusses the steps in a camera image processing pipeline, such as visual data compression, color correction and enhancement, denoising, demosaicking, super-resolution reconstruction, deblurring, and high dynamic range imaging Covers shadow detection for surveillance applications, camera-driven document rectification, bilateral filtering and its applications, and painterly rendering of digital images Presents machine-learning methods for automatic image colorization and digital face beautification Explores light field acquisition and processing, space-time light field rendering, and dynamic view synthesis with an array of cameras Because of the urgent challenges associated with emerging digital camera applications, image processing methods for

computational photography are of paramount importance to research and development in the imaging community. Presenting the work of leading experts, and edited by a renowned authority in digital color imaging and camera image processing, this book considers the rapid developments in this area and addresses very particular research and application problems. It is ideal as a stand-alone professional reference for design and implementation of digital image and video processing tasks, and it can also be used to support graduate courses in computer vision, digital imaging, visual data processing, and computer graphics, among others.

Theory and Applications of Digital Speech Processing

The paratext framework is now used in a variety of fields to assess, measure, analyze, and comprehend the elements that provide thresholds, allowing scholars to better understand digital objects. Researchers from many disciplines revisit paratextual theories in order to grasp what surrounds text in the digital age. Examining Paratextual Theory and its Applications in Digital Culture suggests a theoretical and practical tool for building bridges between disciplines interested in conducting joint research and exploration of digital culture. Helping scholars from different fields find an interdisciplinary framework and common language to study digital objects, this book serves as a useful reference for academics, librarians, professionals, researchers, and students, offering a collaborative outlook and perspective.

Digital Communication: Theory, Techniques and Applications (2e)

The book is concerned with narrative in digital media that changes according to user input—Interactive Digital Narrative (IDN). It provides a broad overview of current issues and future directions in this multi-disciplinary field that includes humanities-based and computational perspectives. It assembles the voices of leading researchers and practitioners like Janet Murray, Marie-Laure Ryan, Scott Rettberg and Martin Rieser. In three sections, it covers history, theoretical perspectives and varieties of practice including narrative game design, with a special focus on changes in the power relationship between audience and author enabled by interactivity. After discussing the historical development of diverse forms, the book presents theoretical standpoints including a semiotic perspective, a proposal for a specific theoretical framework and an inquiry into the role of artificial intelligence. Finally, it analyses varieties of current practice from digital poetry to location-based applications, artistic experiments and expanded remakes of older narrative game titles.

Digital Signal Processing

Photogrammetry is a science based technology with more than a century of history and development. During this time, the techniques used to get information about objects represented in photos have changed dramatically from pure optic

mechanical equipment to a fully digital workflow in our days. Parallel to this, the handling became easier, and so its possible also for non-photogrammetrists to use these methods today. This book is especially written for potential users which have no photogram metric education but would like to use the powerful capabilities from time to time or in smaller projects: Geographers, Geologists, Cartographers, Forest Engineers who would like to come into the fascinating field of photogrammetry via "learning by doing". For this reason, this book is not a textbook - for more and deeper the ory, there exists a lot ofliterature, and it is suggested to use some ofthis. A special recommendation should be given to the newest book from KONECNY (2002) for basic theory and the mathematical backgrounds or to the book from SCHENK (1999) for the particular situation in digital photogrammetry. For a quick reference especially to algorithms and technical terms see also the Photogrammetric Guide from ALBERTZ & KREILING (1989). This book includes a CD-ROM which contains all you need from software and data to learn about the various methods from the beginning (scanning of the pho tos) to final products like ortho images or mosaics.

Cybercrime Prevention

Digital Communications: Theory, Techniques and Applications 2e is written for students of undergraduate degree programs in engineering for a course on digital communication.

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