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Random Signals K. Sam Shanmugan 1988-05-20 This treatise develops the theory of random processes and its application to the study of systems and the analysis of random data. It covers the fundamentals of random process models, the applications of probabilistic models and statistical estimation.
High-Performance Modelling and Simulation for Big Data Applications Joanna Ko?odziej 2019-03-25 This open access book was prepared as a Final Publication of the COST Action IC1406 "High-Performance Modelling and Simulation for Big Data Applications (cHiPSet)" project. Long considered important pillars of the scientific method, Modelling and Simulation have evolved from traditional discrete numerical methods to complex data-intensive continuous analytical optimisations. Resolution, scale, and accuracy have become essential to predict and analyse natural and complex systems in science and engineering. When their level of abstraction raises to have a better discernment of the domain at hand, their representation gets increasingly demanding for computational and data resources. On the other hand, High Performance Computing typically entails the effective use of parallel and distributed processing units coupled with efficient storage, communication and visualisation systems to underpin complex data-intensive applications in distinct scientific and technical domains. It is then arguably required to have a seamless interaction of High Performance Computing with Modelling and Simulation in order to store, compute, analyse, and visualise large data sets in science and engineering. Funded by the European Commission, cHiPSet has provided a dynamic trans-European forum for their members and distinguished guests to openly discuss novel perspectives and topics of interests for these two communities. This cHiPSet compendium presents a set of selected case studies related to healthcare, biological data, computational advertising, multimedia, finance, bioinformatics, and telecommunications.
Desk Encyclopedia of Microbiology Moselio Schaechter 2010-04-19 The Desk

Encyclopedia of Microbiology, Second Edition is a single-volume comprehensive guide to microbiology for the advanced reader. Derived from the six volume e-only Encyclopedia of Microbiology, Third Edition, it bridges the gap between introductory texts and specialized reviews. Covering topics ranging from the basic science of microbiology to the current "hot" topics in the field, it will be invaluable for obtaining background information on a broad range of microbiological topics, preparing lectures and preparing grant applications and reports. * The most comprehensive single-volume source providing an overview of microbiology to non-specialists * Bridges the gap between introductory texts and specialized reviews. * Provides concise and general overviews of important topics within the field making it a helpful resource when preparing for lectures, writing reports, or drafting grant applications

Digital and Analog Communication Systems Leon W. Couch 1987 For second and third year introductory communication systems courses for undergraduates, or an introductory graduate course. This revision of Couch's authoritative text provides the latest treatment of digital communication systems. The author balances coverage of both digital and analog communication systems, with an emphasis on design. Students will gain a working knowledge of both classical mathematical and personal computer methods to analyze, design, and simulate modern communication systems. MATLAB is integrated throughout.

An Introduction To Analog And Digital Communications Haykin 2009-07 An introductory treatment of communication theory as applied to the transmission of information-bearing signals with attention given to both analog and digital communications. Chapter 1 reviews basic concepts. Chapters 2 through 4 pertain to the characterization of signals and systems. Chapters 5 through 7 are concerned with transmission of message signals over communication channels. Chapters 8 through 10 deal with noise in analog and digital communications. Each chapter (except chapter 1) begins with introductory remarks and ends with a problem set. Treatment is self-contained with numerous worked-out examples to support the theory.· Fourier Analysis · Filtering and Signal Distortion · Spectral Density and Correlation · Digital Coding of Analog Waveforms · Intersymbol Interference and Its Cures · Modulation Techniques · Probability Theory and Random Processes · Noise in Analog Modulation · Optimum Receivers for Data Communication

Introduction to Digital Communications Ali Grami 2015-02-25 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

British Books in Print 1984

Structural Health Monitoring Damage Detection Systems for Aerospace Markus G. R.

Sause 2021 This open access book presents established methods of structural health monitoring (SHM) and discusses their technological merit in the current aerospace environment. While the aerospace industry aims for weight reduction to improve fuel efficiency, reduce environmental impact, and to decrease maintenance time and operating costs, aircraft structures are often designed and built heavier than required in order to accommodate unpredictable failure. A way to overcome this approach is the use of SHM systems to detect the presence of defects. This book covers all major contemporary aerospace-relevant SHM methods, from the basics of each method to the various defect types that SHM is required to detect to discussion of signal processing developments alongside considerations of aerospace safety requirements. It will be of interest to professionals in industry and academic researchers alike, as well as engineering students.

Bone and Joint Infections W. Zimmerli 2015-01-27 Infections of the bones (osteomyelitis) and joints (septic arthritis) are serious health problems which require antibiotics and often surgery. Awareness among health professionals of the causes and treatment options for various types of bone and joint infections is essential for effective resolution. Bone and Joint Infections takes a multidisciplinary approach in covering the diagnostic and therapeutic treatment of osteomyelitis and septic arthritis, including different types of implant-associated infections. Correct and rapid diagnosis of bone and joint infection is crucial and requires the input of a variety of specialists. Bone and Joint Infections takes a similarly collaborative and comprehensive approach, including chapters authored by clinicians, laboratory specialists, and surgeons. Covering the basic microbiology and clinical aspects of bone and joint infection, this book will be a valuable resource both for researchers in the lab and for physicians and surgeons seeking a comprehensive reference on osteomyelitis and septic arthritis. • Covers bone and joint infections with and without different types of implants from a multidisciplinary perspective • Each chapter covers the microbiology, clinical features, imaging procedures, diagnostics, and treatment for a given condition • Includes both adult and pediatric bone and joint infection • Discusses implant-associated infections as well as native infections

Swami and Friends R. K. Narayan 2012-07-25 R. K. Narayan (1906—2001) witnessed nearly a century of change in his native India and captured it in fiction of uncommon warmth and vibrancy. Swami and Friends introduces us to Narayan's beloved fictional town of Malgudi, where ten-year-old Swaminathan's excitement about his country's initial stirrings for independence competes with his ardor for cricket and all other things British. Written during British rule, this novel brings colonial India into intimate focus through the narrative gifts of this master of literary realism.

3D Printed Microfluidic Devices Savas Tasoglu 2019-01-10 This book is a printed edition of the Special Issue "3D Printed Microfluidic Devices" that was published in Micromachines

Communication Systems Engineering John G. Proakis 2002 Thorough coverage of basic digital communication system principles ensures that readers are exposed to all basic relevant topics in digital communication system design. The use of CD player and JPEG image coding standard as examples of systems that employ modern communication principles allows readers to relate the theory to practical systems. Over 180 worked-out examples throughout the book aids readers in understanding basic

concepts. Over 480 problems involving applications to practical systems such as satellite communications systems, ionospheric channels, and mobile radio channels gives readers ample opportunity to practice the concepts they have just learned. With an emphasis on digital communications, Communication Systems Engineering, Second Edition introduces the basic principles underlying the analysis and design of communication systems. In addition, this book gives a solid introduction to analog communications and a review of important mathematical foundation topics. New material has been added on wireless communication systems—GSM and CDMA/IS-94; turbo codes and iterative decoding; multicarrier (OFDM) systems; multiple antenna systems. Includes thorough coverage of basic digital communication system principles—including source coding, channel coding, baseband and carrier modulation, channel distortion, channel equalization, synchronization, and wireless communications. Includes basic coverage of analog modulation such as amplitude modulation, phase modulation, and frequency modulation as well as demodulation methods. For use as a reference for electrical engineers for all basic relevant topics in digital communication system design.

Modern Digital and Analog Communication Systems B. P. Lathi 1995 With exceptionally clear writing, Lathi takes students step by step through a history of communications systems from elementary signal analysis to advanced concepts in communications theory. The first four chapters of the text present basic principles, subsequent chapters offer ample material for flexibility in course content and level. All Topics are covered in detail, including a thorough treatment of frequency modulation and phase modulation. Numerous worked examples in each chapter and over 300 end-of-chapter problems and numerous illustrations and figures support the content.

The Prokaryotes Edward F. DeLong 2014-10-30 The Prokaryotes is a comprehensive, multi-authored, peer reviewed reference work on Bacteria and Archaea. This fourth edition of The Prokaryotes is organized to cover all taxonomic diversity, using the family level to delineate chapters. Different from other resources, this new Springer product includes not only taxonomy, but also prokaryotic biology and technology of taxa in a broad context. Technological aspects highlight the usefulness of prokaryotes in processes and products, including biocontrol agents and as genetics tools. The content of the expanded fourth edition is divided into two parts: Part 1 contains review chapters dealing with the most important general concepts in molecular, applied and general prokaryote biology; Part 2 describes the known properties of specific taxonomic groups. Two completely new sections have been added to Part 1: bacterial communities and human bacteriology. The bacterial communities section reflects the growing realization that studies on pure cultures of bacteria have led to an incomplete picture of the microbial world for two fundamental reasons: the vast majority of bacteria in soil, water and associated with biological tissues are currently not culturable, and that an understanding of microbial ecology requires knowledge on how different bacterial species interact with each other in their natural environment. The new section on human microbiology deals with bacteria associated with healthy humans and bacterial pathogenesis. Each of the major human diseases caused by bacteria is reviewed, from identifying the pathogens by classical clinical and non-culturing techniques to the biochemical mechanisms of the disease process. The 4th edition of The Prokaryotes is

the most complete resource on the biology of prokaryotes.

Solutions Manual to Accompany Digital and Analog Communication Systems K. Sam Shanmugam 1980

The British National Bibliography Arthur James Wells 1979

Finance for Non-Finance Executives Anurag Singal 2020-08-06 This book is intended to help professionals gain an extensive working knowledge of critical financial principles in an easy-to-follow manner. This book is intended to help professionals, especially from functional areas other than finance—such as sales, marketing, human resource, research and development, production, and procurement—to gain an extensive working knowledge of critical financial principles in an easy-to-follow manner, enabling them to make critical business decisions involving cost-savings, budgets, new projects decisions, and growth strategies. The author introduces the key concepts of finance so you can contribute to the success of your business. These will help you understand the language used by accountants and how financial statements fit together. Furthermore, you will understand how to use ratio analysis to get a sense of the company's performance. In addition, readers will learn the concepts of management accounting and various kinds of decisions, including make-or-buy and shutdown. Readers will gain an understanding of how to implement budgeting and working capital management. The exciting part is also the chapter on investment appraisal, where readers will learn how to evaluate business proposals from a return standpoint.

Books in Print 1993

Simulation of Communication Systems Michel C. Jeruchim 2006-04-11 Since the first edition of this book was published seven years ago, the field of modeling and simulation of communication systems has grown and matured in many ways, and the use of simulation as a day-to-day tool is now even more common practice. With the current interest in digital mobile communications, a primary area of application of modeling and simulation is now in wireless systems of a different flavor from the `traditional' ones. This second edition represents a substantial revision of the first, partly to accommodate the new applications that have arisen. New chapters include material on modeling and simulation of nonlinear systems, with a complementary section on related measurement techniques, channel modeling and three new case studies; a consolidated set of problems is provided at the end of the book.

Business Applications of Operations Research Bodhibrata Nag 2013-12-09 Operations Research is a bouquet of mathematical techniques which have evolved over the last six decades, to improve the process of business decision making. Operations Research offers tools to optimize and find the best solutions to myriad decisions that managers have to take in their day to day operations or while carrying out strategic planning. Today, with the advent of operations research software, these tools can be applied by managers even without any knowledge of the mathematical techniques that underlie the solution procedures. The book starts with a brief introduction to various tools of operations research, such as linear programming, integer programming, multi-objective programming, queuing theory and network theory together with simple examples in each of the areas. Another introductory chapter on handling the operations research software, along with examples is also provided. The book intends to make the readers aware of the power and potential of operations research in addressing decision making in areas of operations, supply chain, financial and marketing management. The

approach of this book is to demonstrate the solution to specific problems in these areas using operations research techniques and software. The reader is encouraged to use the accompanying software models to solve these problems, using detailed do-it-yourself instructions. The intended outcome for readers of this book will be gaining familiarity and an intuitive understanding of the various tools of operations research and their applications to various business situations. It is expected that this will give the reader the ability and confidence to devise models for their own business needs.

Superhydrophobic Surfaces Mehdi Khodaei 2020-07

Whitaker's Cumulative Book List 1981

Proceedings of International Conference on Remote Sensing for Disaster Management Peddada Jagadeeswara Rao 2018-06-23 The natural disasters are the killer agents which can/can't be predicted even though we have modern technology. Every year, in one place or another, disasters striking which is devastating the area and surroundings, leading to ecological disruption besides huge loss of life and property. India is vulnerable to cyclones, landslides/avalanches, earthquakes, floods, droughts, forest fires, epidemics, etc. The 5700-km long coast of India, with its dense population is vulnerable to cyclones/low depressions, tsunamis, etc. The 2400-km long rugged Himalayan terrain is vulnerable to landslides, avalanches and earthquakes. India is not only vulnerable to natural disasters, it is also experiencing industrial accidents. The Bhopal Gas tragedy is one of the major man-made disasters in the world. The state of Andhra Pradesh has 970-km long coastline with two major rivers, etc. The conference is conducted in Visakhapatnam, is famous for industries and tourism. Recently, several industrial accidents took place, besides major natural disasters like Hud-Hud, etc. Disaster management shall be implemented from the grass root level in vulnerable areas to improve the capacity building, so as to minimize the losses. The capacity building coupled with technology results in reduction of loss of life and property.

Proceedings of Integrated Intelligence Enable Networks and Computing Krishan Kant Singh Mer 2021-04-23 This book presents best selected research papers presented at the First International Conference on Integrated Intelligence Enable Networks and Computing (IIENC 2020), held from May 25 to May 27, 2020, at the Institute of Technology, Gopeshwar, India (Government Institute of Uttarakhand Government and affiliated to Uttarakhand Technical University). The book includes papers in the field of intelligent computing. The book covers the areas of machine learning and robotics, signal processing and Internet of things, big data and renewable energy sources.

Biochemistry David E. Metzler 2003-04 Biochemistry: The Chemical Reactions of Living Cells is a well-integrated, up-to-date reference for basic biochemistry, associated chemistry, and underlying biological phenomena. Biochemistry is a comprehensive account of the chemical basis of life, describing the amazingly complex structures of the compounds that make up cells, the forces that hold them together, and the chemical reactions that allow for recognition, signaling, and movement. This book contains information on the human body, its genome, and the action of muscles, eyes, and the brain. * Thousands of literature references provide introduction to current research as well as historical background * Contains twice the number of chapters of the first edition * Each chapter contains boxes of information on topics of general interest

DIGITAL AND ANALOG COMMUNICATION SYSTEMS Shanmugam 2006-08 About

The Book: The book provides a detailed, unified treatment of theoretical and practical aspects of digital and analog communication systems, with emphasis on digital communication systems. It integrates theory-keeping theoretical details to a minimum-with over 60 practical, worked examples illustrating real-life methods. The text emphasizes deriving design equations that relate performance of functional blocks to design parameters. It illustrates how to trade off between power, band-width and equipment complexity while maintaining an acceptable quality of performance. Material is modularized so that appropriate portions can be selected to teach several different courses. The book also includes over 300 problems and an annotated bibliography in each chapter.

Books in Print Supplement 1985

Feasibility Analysis for Sustainable Technologies Scott Herriott 2014-12-17 Feasibility Analysis for Sustainable Technologies will lead you into a professional feasibility analysis for a renewable energy or energy efficiency project. The analysis begins with an understanding of the basic engineering description of technology in terms of capacity, efficiency, constraints, and dependability. It continues in modeling the cash flow of a project, which is affected by the installed cost, the revenues or expenses avoided by using the technology, the operating expenses of the technology, available tax credits and rebates, and laws regarding depreciation and income tax. The feasibility study is completed by discounted cash flow analysis, using an appropriate discount rate and a proper accounting for inflation, to evaluate the financial viability of the project. The elements of this analysis are illustrated using numerous examples of solar, wind and hydroelectric power, biogas digestion, energy storage, biofuels, and energy-efficient appliances and buildings.

Publishers' Trade List Annual 1995

Cancer Nanotechnology Stephen R. Grobmyer 2016-08-23 Early detection of cancer at the cellular level, even before anatomic anomalies are visible, is critical to more efficacious and cost effective diagnosis and therapeutic advances. In Cancer Nanotechnology: Methods and Protocols, an international panel of experts provide the most recent, cutting-edge, "how-to" approaches developed and employed by researchers in a variety of disciplines to identify cancer specific biomarkers, construct suitable multifunctional targeted nanostructure platforms, along with enhanced imaging and therapeutic applications. Covering such topics as multifunctional and multimodal nanoparticles, nanoparticle mediated cancer theranostics, molecular targets for cancer nanotechnology, and nanoparticles for non-invasive image-guided cancer therapy, the volume addresses the key challenges of the field today, specifically targeted and localized delivery of the drugs. As a volume in the highly successful Methods in Molecular BiologyTM series, the protocols chapters include brief introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and notes on troubleshooting and avoiding known pitfalls. Authoritative and cutting-edge, Cancer Nanotechnology: Methods and Protocols integrates cancer biology, clinical oncology, molecular cancer imaging, materials science and chemical engineering, biomedical engineering, toxicology, computer science, electrical engineering, chemistry, physics, and mathematics in order to achieve the vital goals of nanotechnology-mediated early cancer detection and more

efficacious and less toxic therapies for these devastating diseases.

World Development Indicators 2014 World Bank 2014-05-12 World Development Indicators (WDI) is the World Bank s premier annual compilation of data about development. This year s print edition and e-book have been redesigned to allow users the convenience of easily linking to the latest data on-line.

Pediatric Hepatology and Liver Transplantation Lorenzo D'Antiga 2019-04-29 This book is the first to provide balanced examination of both pediatric liver disease and liver transplantation – two topics that are inherently related, given that most chronic liver disorders eventually require organ replacement. The different forms of liver disease encountered in the pediatric age group are first discussed in a series of disease-specific chapters that have a reader-friendly, uniform structure covering pathophysiology, diagnostic and treatment algorithms, clinical cases, and transition to adult care. Key topics in the field of liver transplantation are then addressed. Examples include indications and contraindications, surgical techniques and complications, immunosuppression, in pediatric liver transplantation, acute and chronic rejection and allograft dysfunction, and CMV and EBV infection in transplant recipients, long-term graft injury and tolerance. A section on pediatric hepatology across the world includes chapters presenting the features and management of pediatric liver disease in South-America, Africa and Asia. A closing section considers what the future holds for pediatric liver disease and its management, including novel genetic testing, cell therapy and gene therapy. Pediatric Hepatology and Liver Transplantation will be of value for a range of practitioners, from residents making their first approach to pediatric liver disease through to specialists working in transplantation centers.

Very High Resolution (VHR) Satellite Imagery Francisco Eugenio 2019-11-06 Recently, growing interest in the use of remote sensing imagery has appeared to provide synoptic maps of water quality parameters in coastal and inner water ecosystems;, monitoring of complex land ecosystems for biodiversity conservation; precision agriculture for the management of soils, crops, and pests; urban planning; disaster monitoring, etc. However, for these maps to achieve their full potential, it is important to engage in periodic monitoring and analysis of multi-temporal changes. In this context, very high resolution (VHR) satellite-based optical, infrared, and radar imaging instruments provide reliable information to implement spatially-based conservation actions. Moreover, they enable observations of parameters of our environment at greater broader spatial and finer temporal scales than those allowed through field observation alone. In this sense, recent very high resolution satellite technologies and image processing algorithms present the opportunity to develop quantitative techniques that have the potential to improve upon traditional techniques in terms of cost, mapping fidelity, and objectivity. Typical applications include multi-temporal classification, recognition and tracking of specific patterns, multisensor data fusion, analysis of land/marine ecosystem processes and environment monitoring, etc. This book aims to collect new developments, methodologies, and applications of very high resolution satellite data for remote sensing. The works selected provide to the research community the most recent advances on all aspects of VHR satellite remote sensing.

The Use of Remote Sensing in Hydrology Frédéric Frappart 2018-06-01 This book is a printed edition of the Special Issue "The Use of Remote Sensing in Hydrology" that was

published in Water

Australian Books in Print 1991

Principles of Communication Systems Simulation with Wireless Applications William H. Tranter 2004 This volume presents an overview of computer-based simulation models and methodologies for communication systems. Topics covered include probability, random, process, and estimation theory and roles in the design of computer-based simulations.

Subject Guide to Books in Print 1990

Scientific and Technical Books and Serials in Print 1984

Handbook of Sports Medicine and Science, Volleyball Jonathan C. Reeser 2008-04-15 This addition to the Handbook series is presented in five sections. The first sections covers basic and applied science, including biomechanics, the physiologic demands of volleyball, conditioning and nutrition. The second section looks at the role of the medical professional in volleyball, covering team physicians, pre-participation examination, medical equipment at courtside and emergency planning. The third section looks at injuries - including prevention, epidemiology, upper and lower limb injuries and rehabilitation. The next section looks at those volleyball players who require special consideration: the young, the disabled, and the elite, as well as gender issues. Finally, section five looks at performance enhancement.

Bacterial Physiology and Metabolism Byung Hong Kim 2008-02-21 Recent determination of genome sequences for a wide range of bacteria has made in-depth knowledge of prokaryotic metabolic function essential in order to give biochemical, physiological, and ecological meaning to the genomic information. Clearly describing the important metabolic processes that occur in prokaryotes under different conditions and in different environments, this advanced text provides an overview of the key cellular processes that determine bacterial roles in the environment, biotechnology, and human health. Prokaryotic structure is described as well as the means by which nutrients are transported into cells across membranes. Glucose metabolism through glycolysis and the TCA cycle are discussed, as well as other trophic variations found in prokaryotes, including the use of organic compounds, anaerobic fermentation, anaerobic respiratory processes, and photosynthesis. The regulation of metabolism through control of gene expression and control of the activity of enzymes is also covered, as well as survival mechanisms used under starvation conditions.