

# Data Communication By Prakash C Gupta

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Social Informatics - Luca Maria Aiello 2014-11-06

This book constitutes the proceedings of the 6th International Conference on Social Informatics, SocInfo 2014, held in Barcelona, Spain, in November 2014. The 28 full papers and 14 short papers presented in this volume were carefully reviewed and selected from 147 submissions. The papers are organized in topical sections such as network, communities, and crowds; interpersonal links and gender biases; news, credibility, and opinion formation; science and technologies; organizations, society and social good.

Implementing ADSL - David Ginsburg 1999

Overviews what it takes to deploy ADSL, for decision makers and implementers in both service provider and enterprise information technology organizations. First looks at business drivers and financial models associated with ADSL implementation, then introduces the ADSL service architecture, outlining an end-to-end service model from the physical layer to the network layer and addressing crucial issues such as security and IP multicasting. Offers seven detailed implementation scenarios with bandwidth diagrams and configuration listings based on actual deployments in areas including residential and corporate Internet access, telecommuting, and media distribution. Ginsburg is director of consulting engineering for Shasta Networks. Annotation copyrighted by

Book News, Inc., Portland, OR

Computer Networks - Piotr Gaj 2018-06-05

This book constitutes the thoroughly refereed proceedings of the 25th International Conference on Computer Networks, CN 2018, held in Gliwice, Poland, in June 2018. The 34 full papers presented were carefully reviewed and selected from 86 submissions. They are organized in topical sections on computer networks; teleinformatics and telecommunications; queueing theory; cybersecurity and quality service.

CRYPTOGRAPHY AND NETWORK SECURITY - PRAKASH C. GUPTA 2014-11-01

The book is intended for the undergraduate and postgraduate students of computer science and engineering and information technology, and the students of master of computer applications. The purpose of this book is to introduce this subject as a comprehensive text which is self contained and covers all the aspects of network security. Each chapter is divided into sections and subsections to facilitate design of the curriculum as per the academic needs. The text contains numerous examples and illustrations that enhance conceptual clarity. Each chapter has set of problems at the end of chapter that inspire the reader to test his understanding of the subject. Answers to most of the problems are given at the end of the book. Key Features • The subject matter is illustrated

with about 200 figures and numerous examples at every stage of learning. • The list of recommended books, technical articles, and standards is included chapter-wise at the end of the book. • An exhaustive glossary and a list of frequently used acronyms are also given. • The book is based on the latest versions of the protocols (TLS, IKE, IPsec, S/MIME, Kerberos, X.509 etc.).

*Futuristic Trends in Network and Communication Technologies*  
Pradeep Kumar Singh 2018-12-24

This book constitutes the refereed proceedings of the First International Conference on Futuristic Trends in Network and Communication Technologies, FTNCT 2018, held in Solan, India, in February 2018. The 37 revised full papers presented were carefully reviewed and selected from 239 submissions. The prime aim of the conference is to invite researchers from different domains of network and communication technologies to a single platform to showcase their research ideas. The selected papers are organized in topical sections on communication technologies, Internet of Things (IoT), network technologies, and wireless networks.

*Building Blocks for IoT Analytics* - John Soldatos 2016-11-23

Internet-of-Things (IoT) Analytics are an integral element of most IoT applications, as it provides the means to extract knowledge, drive actuation services and optimize decision making. IoT analytics will be a major contributor to IoT business value in the coming years, as it will enable organizations to process and fully leverage large amounts of IoT data, which are nowadays largely underutilized. The Building Blocks of IoT Analytics is devoted to the presentation the main technology building blocks that comprise advanced IoT analytics systems. It introduces IoT analytics as a special case of BigData analytics and accordingly presents leading edge technologies that can be deployed in order to successfully confront the main challenges of IoT analytics applications. Special emphasis is paid in the presentation of technologies for IoT streaming and semantic interoperability across diverse IoT streams. Furthermore, the role of cloud computing and BigData technologies in IoT analytics are presented, along with practical tools for implementing, deploying and

operating non-trivial IoT applications. Along with the main building blocks of IoT analytics systems and applications, the book presents a series of practical applications, which illustrate the use of these technologies in the scope of pragmatic applications. Technical topics discussed in the book include: Cloud Computing and BigData for IoT analytics Searching the Internet of Things Development Tools for IoT Analytics Applications IoT Analytics-as-a-Service Semantic Modelling and Reasoning for IoT Analytics IoT analytics for Smart Buildings IoT analytics for Smart Cities Operationalization of IoT analytics Ethical aspects of IoT analytics This book contains both research oriented and applied articles on IoT analytics, including several articles reflecting work undertaken in the scope of recent European Commission funded projects in the scope of the FP7 and H2020 programmes. These articles present results of these projects on IoT analytics platforms and applications. Even though several articles have been contributed by different authors, they are structured in a well thought order that facilitates the reader either to follow the evolution of the book or to focus on specific topics depending on his/her background and interest in IoT and IoT analytics technologies. The compilation of these articles in this edited volume has been largely motivated by the close collaboration of the co-authors in the scope of working groups and IoT events organized by the Internet-of-Things Research Cluster (IERC), which is currently a part of EU's Alliance for Internet of Things Innovation (AIOTI).

**Elements of Programming Interviews** - Adnan Aziz 2012-10-11

The core of EPI is a collection of over 300 problems with detailed solutions, including 100 figures, 250 tested programs, and 150 variants. The problems are representative of questions asked at the leading software companies. The book begins with a summary of the nontechnical aspects of interviewing, such as common mistakes, strategies for a great interview, perspectives from the other side of the table, tips on negotiating the best offer, and a guide to the best ways to use EPI. The technical core of EPI is a sequence of chapters on basic and advanced data structures, searching, sorting, broad algorithmic principles, concurrency, and system design. Each chapter consists of a

brief review, followed by a broad and thought-provoking series of problems. We include a summary of data structure, algorithm, and problem solving patterns.

*Microstrip Lines and Slotlines, Third Edition* - Ramesh Garg 2013-05-01

Since the second edition of this book was published in 1996, planar transmission line technology has progressed considerably due to developments in ultrawideband (UWB) communications, imaging, and RFID applications. In addition, the simultaneous demands for compactness of wireless electronic devices while meeting improved performance requirements, necessitates increased use of computer-aided design, simulation, and analysis by microwave engineers. This book is written to help engineers successfully meet these challenges. Details include the development of governing equations, basis functions, Green's function and typical results. More than 1200 equations supplement the text. Special attention is given to the use of simulation software in the design of complex devices and understanding the connection between data collected from simulation software and the actual design process. The book is primarily intended for microwave design engineers and R&D specialists who need to employ planar transmission lines in designing distributed circuits and antenna systems for a wide range of wireless applications. Advanced undergraduate and graduate students in electronics and telecommunication engineering will also welcome this addition to your library.

*Advances in Smart Communication Technology and Information Processing* - Soumen Banerjee 2021-02-15

This book is a collection of best selected research papers presented at the 6th International Conference on Opto-Electronics and Applied Optics (OPTRONIX 2020) organized by the University of Engineering & Management, Kolkata, India, in June 2020. The primary focus is to address issues and developments in optoelectronics with particular emphasis on communication technology, IoT and intelligent systems, information processing and its different kinds. The theme of the book is in alignment with the theme of the conference "Advances in Smart Communication Technology and Information Processing." The purpose of

this book is to inform the scientists and researchers of this field in India and abroad about the latest developments in the relevant field and to raise awareness among the academic fraternity to get them involved in different activities in the years ahead - an effort to realize knowledge-based society.

*Remote Sensing Geology* - Ravi P. Gupta 2013-06-29

For nearly three decades there has been a phenomenal growth in the field of Remote Sensing. The second edition of this widely acclaimed book has been fully revised and updated. The reader will find a wide range of information on various aspects of geological remote sensing, ranging from laboratory spectra of minerals and rocks, ground truth, to aerial and space-borne remote sensing. This volume describes the integration of photogeology into remote sensing as well as how remote sensing is used as a tool of geo-exploration. It also covers a wide spectrum of geoscientific applications of remote sensing ranging from meso- to global scale. The subject matter is presented at a basic level, serving students as an introductory text on remote sensing. The main part of the book will also be of great value to active researchers.

*Proceedings of 2nd International Conference on Communication, Computing and Networking* - C. Rama Krishna 2018-09-07

The book provides insights from the 2nd International Conference on Communication, Computing and Networking organized by the Department of Computer Science and Engineering, National Institute of Technical Teachers Training and Research, Chandigarh, India on March 29-30, 2018. The book includes contributions in which researchers, engineers, and academicians as well as industrial professionals from around the globe presented their research findings and development activities in the field of Computing Technologies, Wireless Networks, Information Security, Image Processing and Data Science. The book provides opportunities for the readers to explore the literature, identify gaps in the existing works and propose new ideas for research.

**Data Communications** - Prakash C. Gupta 1996

*High Performance Computing for Intelligent Medical Systems* - Varun

Bajaj 2021

Modern medicine and healthcare are highly dependent on engineering, employing instrumentation and computer systems to aid investigation, diagnosis, treatment and patient management. The significant developments in the field of computational intelligence, combined with the emergence of high-performance computing is impacting society in many ways, and the health sector is no exception. The interface of high-performance computing, computational intelligence and medical science, has seen the emergence of intelligent medical systems. These systems can provide a deeper insight into many healthcare and medical problems. They can also aid in controlling, analyzing and the management of medical applications and can provide significant improvement in the quality of life and efficacy of clinical treatment. However, the successful application of high-performance computing in medicine requires in-depth knowledge and understanding of medical systems. This book focuses on the advances and applications of high-performance computing for medical systems and provides an insight into the latest developments in the field. It will help readers to understand the high-performance computing research domain as related to intelligent medical systems, its effect on our lives and its present limitations. Part of IOP Series in Next Generation Computing.

**Ad Hoc and Sensor Networks** - Carlos de Morais Cordeiro 2011

This book provides a comprehensive yet easy coverage of ad hoc and sensor networks and fills the gap of existing literature in this growing field. It emphasizes that there is a major interdependence among various layers of the network protocol stack. Contrary to wired or even one-hop cellular networks, the lack of a fixed infrastructure, the inherent mobility, the wireless channel, and the underlying routing mechanism by ad hoc and sensor networks introduce a number of technological challenges that are difficult to address within the boundaries of a single protocol layer. All existing textbooks on the subject often focus on a specific aspect of the technology, and fail to provide critical insights on cross-layer interdependencies. To fully understand these intriguing networks, one need to grasp specific solutions individually, and also the

many interdependencies and cross-layer interactions.

*Handbook of Research on Pattern Engineering System Development for Big Data Analytics* - Vivek 2018-04-20

Due to the growing use of web applications and communication devices, the use of data has increased throughout various industries. It is necessary to develop new techniques for managing data in order to ensure adequate usage. The Handbook of Research on Pattern Engineering System Development for Big Data Analytics is a critical scholarly resource that examines the incorporation of pattern management in business technologies as well as decision making and prediction process through the use of data management and analysis. Featuring coverage on a broad range of topics such as business intelligence, feature extraction, and data collection, this publication is geared towards professionals, academicians, practitioners, and researchers seeking current research on the development of pattern management systems for business applications.

*Microwave Solid State Circuit Design* - Bahl 2003-04-18

Provides detailed coverage of passive and active RF and microwave circuit design. Discusses the practical aspects of microwave circuits including fabrication technologies. Includes a treatment of heterostructure and wide-band gap devices. Examines compact and low cost circuit design methodologies.

*Introduction to Wireless and Mobile Systems* - Dharma P. Agrawal 2010-06-10

This text explains the general principles of how wireless systems work, how mobility is supported, what the underlying infrastructure is and what interactions are needed among different functional components. Designed as a textbook appropriate for undergraduate or graduate courses in Computer Science (CS), Computer Engineering (CE), and Electrical Engineering (EE), Introduction to Wireless and Mobile Systems third edition focuses on qualitative descriptions and the realistic explanations of relationships between wireless systems and performance parameters. Rather than offering a thorough history behind the development of wireless technologies or an exhaustive list of work being



**Computer and Cyber Security** - Gupta, Brij 2016-05-16

Internet usage has become a facet of everyday life, especially as more technological advances have made it easier to connect to the web from virtually anywhere in the developed world. However, with this increased usage comes heightened threats to security within digital environments. The Handbook of Research on Modern Cryptographic Solutions for Computer and Cyber Security identifies emergent research and techniques being utilized in the field of cryptology and cyber threat prevention. Featuring theoretical perspectives, best practices, and future research directions, this handbook of research is a vital resource for professionals, researchers, faculty members, scientists, graduate students, scholars, and software developers interested in threat identification and prevention.

**Advances in Communication and Computational Technology** -

Gurdeep Singh Hura 2020-08-13

This book presents high-quality peer-reviewed papers from the International Conference on Advanced Communication and Computational Technology (ICACCT) 2019 held at the National Institute of Technology, Kurukshetra, India. The contents are broadly divided into four parts: (i) Advanced Computing, (ii) Communication and Networking, (iii) VLSI and Embedded Systems, and (iv) Optimization Techniques. The major focus is on emerging computing technologies and their applications in the domain of communication and networking. The book will prove useful for engineers and researchers working on physical, data link and transport layers of communication protocols. Also, this will be useful for industry professionals interested in manufacturing of communication devices, modems, routers etc. with enhanced computational and data handling capacities.

**Information and Communication Technology for Competitive Strategies (ICTCS 2020)** - Amit Joshi 2021-07-26

This book contains the best selected research papers presented at ICTCS 2020: Fifth International Conference on Information and Communication Technology for Competitive Strategies. The conference was held at Jaipur, Rajasthan, India, during 11-12 December 2020. The book covers

state-of-the-art as well as emerging topics pertaining to ICT and effective strategies for its implementation for engineering and managerial applications. This book contains papers mainly focused on ICT for computation, algorithms and data analytics, and IT security.

Next-Generation Networks - Daya K. Lobiyal 2017-11-18

This book comprises select proceedings of the 2015 annual conference of the Computer Society of India. The book focuses on next generation networks (NGN). An NGN is a packet-based network which can provide services including telecommunication services. NGNs make use of multiple broadband, quality-of-service-enabled transport technologies in which service-related functions are independent from underlying transport-related technologies. This volume includes contributions from experts on various aspects of NGNs. The papers included cover theory, methodology and applications of ad-hoc networks, sensor networks, and the internet. The contents also delve into how the new enterprise IT landscape of cloud services, mobility, social media usage and big data analytics creates different types of network traffic to the traditional mix of in-house client-server enterprise workloads. The contents of this book will be useful to researchers and professionals alike.

*Data Communications and Networking* Behrouz A. Forouzan 2001-07

Intelligent Communication Technologies and Virtual Mobile Networks -

S. Balaji 2019-08-12

This book presents the outcomes of the Intelligent Communication Technologies and Virtual Mobile Networks Conference (ICICV 2019) held in Tirunelveli, India, on February 14-15, 2019. It presents the state of the art in the field, identifying emerging research topics and communication technologies and defining the future of intelligent communication approaches and virtual computing. In light of the tremendous growth ICT, it examines the rapid developments in virtual reality in communication technology and high-quality services in mobile networks, including the integration of virtual mobile computing and communication technologies, which permits new technologies based on the resources and services of computational intelligence, big data

analytics, Internet of Things (IoT), 5G technology, automation systems, sensor networks, augmented reality, data mining, and vehicular ad hoc networks with massive cloud-based backend. These services have a significant impact on all areas of daily life, like transportation, e-commerce, health care, secure communication, location detection, smart home, smart city, social networks and many more.

Emerging Research in Computing, Information, Communication and Applications - N. R. Shetty 2015-07-17

This proceedings volume covers the proceedings of ERCICA 2015. ERCICA provides an interdisciplinary forum for researchers, professional engineers and scientists, educators, and technologists to discuss, debate and promote research and technology in the upcoming areas of Computing, Information, Communication and their Applications. The contents of this book cover emerging research areas in fields of Computing, Information, Communication and Applications. This will prove useful to both researchers and practicing engineers.

Proceedings of the International Conference on Paradigms of Computing, Communication and Data Sciences Mayank Dave 2021-02-19

This book presents best selected papers presented at the International Conference on Paradigms of Computing, Communication and Data Sciences (PCCDS 2020), organized by National Institute of Technology, Kurukshetra, India, during 1-3 May 2020. It discusses high-quality and cutting-edge research in the areas of advanced computing, communications and data science techniques. The book is a collection of latest research articles in computation algorithm, communication and data sciences, intertwined with each other for efficiency.

Indian Book Industry 1996

Cybersecurity in Emerging Digital Era - Rajeev Agrawal 2021-08-13

This book constitutes selected and revised papers from the First International Conference on Cybersecurity in Emerging Digital Era, ICCUDE 2020, held in Greater Noida, India, in October 2020. Due to the COVID-19 pandemic the conference was held online. The 9 full papers and 2 short papers presented in this volume were thoroughly reviewed

and selected from 193 submissions. The papers are organized in topical sections on cyber security issues and challenges in emerging digital era; security resilience in contemporary applications.

Data Science and Analytics - Disha Batra 2020-05-27

This two-volume set (CCIS 1229 and CCIS 1230) constitutes the refereed proceedings of the 5th International Conference on Recent Developments in Science, Engineering and Technology, REDSET 2019, held in Gurugram, India, in November 2019. The 74 revised full papers presented were carefully reviewed and selected from total 353 submissions. The papers are organized in topical sections on data centric programming; next generation computing; social and web analytics; security in data science analytics; big data analytics.

The Functional Analysis of Quantum Information Theory Prakash Gupta 2015-05-28

This book provides readers with a concise introduction to current studies on operator-algebras and their generalizations, operator spaces and operator systems, with a special focus on their application in quantum information science. This basic framework for the mathematical formulation of quantum information can be traced back to the mathematical work of John von Neumann, one of the pioneers of operator algebras, which forms the underpinning of most current mathematical treatments of the quantum theory, besides being one of the most dynamic areas of twentieth century functional analysis. Today, von Neumann's foresight finds expression in the rapidly growing field of quantum information theory. These notes gather the content of lectures given by a very distinguished group of mathematicians and quantum information theorists, held at the IMSc in Chennai some years ago, and great care has been taken to present the material as a primer on the subject matter. Starting from the basic definitions of operator spaces and operator systems, this text proceeds to discuss several important theorems including Stinespring's dilation theorem for completely positive maps and Kirchberg's theorem on tensor products of  $C^*$ -algebras. It also takes a closer look at the abstract characterization of operator systems and, motivated by the requirements of different tensor products in

quantum information theory, the theory of tensor products in operator systems is discussed in detail. On the quantum information side, the book offers a rigorous treatment of quantifying entanglement in bipartite quantum systems, and moves on to review four different areas in which ideas from the theory of operator systems and operator algebras play a natural role: the issue of zero-error communication over quantum channels, the strong subadditivity property of quantum entropy, the different norms on quantum states and the corresponding induced norms on quantum channels, and, lastly, the applications of matrix-valued random variables in the quantum information setting.

Fundamentals of Computer Networks - SUDAKSHINA KUNDU

2008-03-09

Focused on fundamental concepts and practical applications, this book provides a strong foundation in the principles and terminology of computer networking and internet technology. This thoroughly revised second edition, incorporating some of the latest technical features in networking, is suitable for introductory one-semester courses for undergraduate students of computer science and engineering, electronics and telecommunication engineering, information technology, as well as students of computer applications (BCA and MCA). This text begins with an overview of computer networking and a discussion on data communication. Then it proceeds to explain how computer networks such as local area networks (LANs) and wide area networks (WANs) work, and how internetworking is implemented. Besides, the book provides a description of the Internet and TCP/IP protocol. With the prolific growth of networking, 'network management and security' has become an increasingly important part of the academic curriculum. This topic has been adequately dealt with in a separate chapter. The practical aspects of networking, listing the essential requirements needed for actually setting up a computer network, are thoroughly explained in the final chapter of the book. WHAT IS NEW IN THE SECOND EDITION • Wireless LAN in Chapter 4 • API and Socket Programming and End-to-End Protocol in Chapter 7 • Remote Procedure Call (RPC) Protocol in Chapter 8 • Dynamic Host Configuration Protocol -Error reporting by

ICMP -Virtual Private Network (VPN) in Chapter 9 -Network Address Translation (NAT) An appendix dealing with telephone networking, wireless networking, cellular networking and satellite and telemetry communication has been included to meet the requirements of the students.

Network Information Theory Abbas El Gamal 2011-12-08

This comprehensive treatment of network information theory and its applications provides the first unified coverage of both classical and recent results. With an approach that balances the introduction of new models and new coding techniques, readers are guided through Shannon's point-to-point information theory, single-hop networks, multihop networks, and extensions to distributed computing, secrecy, wireless communication, and networking. Elementary mathematical tools and techniques are used throughout, requiring only basic knowledge of probability, whilst unified proofs of coding theorems are based on a few simple lemmas, making the text accessible to newcomers. Key topics covered include successive cancellation and superposition coding, MIMO wireless communication, network coding, and cooperative relaying. Also covered are feedback and interactive communication, capacity approximations and scaling laws, and asynchronous and random access channels. This book is ideal for use in the classroom, for self-study, and as a reference for researchers and engineers in industry and academia.

**Fundamentals of Mobile and Pervasive Computing** - Frank Adelstein 2005-01-20

The authoritative, general reference that has been sorely missing in the field of mobile computing This book teaches all the main topics via the hottest applications in a rapidly growing field. "Big picture" explanations of ad hoc networks and service discovery Exercises, projects, and solutions to illustrate core concepts Extensive wireless security methodologies

**Introduction To Data Communication And Networking** - Tomasi 2007-09

*Advances in Data Computing, Communication and Security* Pranjay

Verma 2022-03-29

This book is a collection of high-quality peer reviewed contributions from the academicians, researchers, practitioners, and industry professionals, accepted in the International Conference on Advances in Data Computing, Communication and Security (I3CS2021) organized by the Department of Electronics and Communication Engineering in collaboration with the Department of Computer Engineering, National Institute of Technology, Kurukshetra, India during 08-10 Sep 2021. The fast pace of advancing technologies and growing expectations of the next-generation requires that the researchers must continuously reinvent themselves through new investigations and development of the new products. The theme of this conference is devised as "Embracing Innovations" for the next-generation data computing and secure communication system.

*Evolving Technologies for Computing, Communication and Smart World*  
Pradeep Kumar Singh 2020-11-25

This book presents best selected papers presented at the International Conference on Evolving Technologies for Computing, Communication and Smart World (ETCCS 2020) held on 31 January-1 February 2020 at C-DAC, Noida, India. It is co-organized by Southern Federal University,

Russia; University of Jan Wyżykowski (UJW), Polkowice, Poland; and CSI, India. C-DAC, Noida received funding from MietY during the event. The technical services are supported through EasyChair, Turnitin, MailChimp and IAC Education. The book includes current research works in the areas of network and computing technologies, wireless networks and Internet of things (IoT), futuristic computing technologies, communication technologies, security and privacy.

**Computing, Communication and Signal Processing** - Brijesh Iyer  
2018-09-14

This book highlights cutting-edge research on various aspects of human-computer interaction (HCI). It includes selected research papers presented at the Third International Conference on Computing, Communication and Signal Processing (ICCASP 2018), organized by Dr. Babasaheb Ambedkar Technological University in Lonere-Raigad, India on January 26-27, 2018. It covers pioneering topics in the field of computer, electrical, and electronics engineering, e.g. signal and image processing, RF and microwave engineering, and emerging technologies such as IoT, cloud computing, HCI, and green computing. As such, the book offers a valuable guide for all scientists, engineers and research students in the areas of engineering and technology.