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Bayesian Networks *Optical Networks* **Neural Networks** *Linear Programming and Algorithms for Communication Networks* *Optical Networks: A Practical Perspective, 2e* **Neural Network PC Tools** *Neural Networks: Best Practice In Europe - Proceedings Of The Stichting Neurale Netwerken Conference 1997, Progre* *Practical Network Design Techniques, Second Edition* **Sensor Networks A Practical Approach to Corporate Networks Engineering** *Wissensmanagement durch Communities of Practice* *Designing Storage Area Networks* **Practical Big Data Analytics** **Quantum Key Distribution Networks** **Practical Telecommunications and Wireless Communications for Business and Industry** *Official Journal of the European Communities* **Designing Wide Area Networks and Internetworks** **Network Reliability in Practice** *The Networking Survival Guide, Second Edition* **Network Security** **Practical Network Security Monitoring** **The Practice of System and Network Administration** **Network Management** *The Practical Guide to Local Area Networks* *Practical TCP/IP Principles and Practice of Constraint Programming* *Networking of Theories as a Research Practice in Mathematics Education* *Understanding and Using the Controller Area Network Communication Protocol* **Network Analysis Literacy** **Management of Network Organizations** **Opportunistic Communication for Wireless Networks** **Someone to Talk To A Practical Guide to Computer Communications and Networking** **Data Communications and Computer Networks: A Business User's Approach** **The Wireless Networking Starter Kit** **Deep Learning with PyTorch Practice, Learning and Change** **Managing Modern Healthcare** **Wireless Sensor Networks** *Community Practice*

Optical Networks Oct 04 2022 Covering optical networks from building to building, city to city, and country to country, this book takes an in-depth look at optimization, design, and management of the components and transmission of optical networks.

Official Journal of the European Communities Jul 21 2021

Designing Wide Area Networks and Internetworks Jun 19 2021 "Designing Wide Area Networks and Internetworks clarifies this complex task by outlining a top-down, step-by-step process for constructing a WAN or internetwork that is effective for your organization. This book will guide you through the steps of determining requirements, designing the network structure, choosing appropriate technologies, and evaluating results. The author's practical approach distills exactly what you need to know about networking theory and technological background in order to accomplish a given task."--BOOK JACKET.

Wireless Sensor Networks Jul 29 2019 Although there are many books available on WSNs, most are low-level, introductory books. The few available for advanced readers fail to convey the breadth of knowledge required for those aiming to develop next-generation solutions for WSNs. Filling this void, *Wireless Sensor Networks: From Theory to Applications* supplies comprehensive coverage of WS

Wissensmanagement durch Communities of Practice Dec 26 2021 Was sind Communities of Practice (CoPs) und was kennzeichnet CoPs in Unternehmen? Welche Faktoren beeinflussen die Interaktion zwischen den Mitgliedern einer Community? Worauf gründet sich das Potential von CoPs? Welche konkreten Auswirkungen können CoPs haben? Katja Zboralski zeigt, dass CoPs nützliche Instrumente des Wissensmanagements sind. Darüber hinaus verdeutlicht sie die Bedeutung einer aktiven Managementunterstützung sowie des Community-Brokers.

Practical Network Security Monitoring Feb 13 2021 This book is intended to guide beginner through intermediate users how to use free software to collect, monitor, and analyze network traffic to detect and identify potential threats. Network Security Monitoring is complex but with a few tools and basic knowledge of your network, you can detect, identify, and defend against cyber threats to your network. This book provides practical exercises to learn how to use free software to identify threats to your network. The practical exercises provide step-by-step instructions allowing you to install, configure, and use the free tools. This book is not intended to be an all-inclusive guide to defending your network and assets, but is intended to provide you with the hands-on experience to analyze your network traffic and determine if traffic is malicious.

Data Communications and Computer Networks: A Business User's Approach Jan 03 2020 Data communications and computer networks are becoming increasingly more important--today's business world could not function without either. *DATABASE COMMUNICATIONS AND COMPUTER NETWORKS* offers a balance between technical and practical aspects of data communication. Business managers, computer programmers, system designers, and home computer users alike need a through understanding of the basic features, operations, and limitations of different types of computer networks. *DATA COMMUNICATIONS AND COMPUTER NETWORKS* introduces concepts that help the reader

achieve an in-depth understanding of the often complex topic of data communications and computer networks by balancing the more technical aspects and the everyday practical aspects. The sixth edition retains many of the elements that made the fifth edition so popular, including readability and coverage of the most current technologies. This book offers full coverage of wireless technologies, industry convergence, compression techniques, network security, LAN technologies, VoIP, and expanded coverage of error detection and correction. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Neural Networks: Best Practice In Europe - Proceedings Of The Stichting Neurale Netwerken Conference 1997, Progre Apr 29 2022 The area of automorphic representations is a natural continuation of studies in number theory and modular forms. A guiding principle is a reciprocity law relating the infinite dimensional automorphic representations with finite dimensional Galois representations. Simple relations on the Galois side reflect deep relations on the automorphic side, called "liftings". This book concentrates on two initial examples: the symmetric square lifting from $SL(2)$ to $PGL(3)$, reflecting the 3-dimensional representation of $PGL(2)$ in $SL(3)$; and basechange from the unitary group $U(3, E/F)$ to $GL(3, E)$, $[E : F] = 2$. The book develops the technique of comparison of twisted and stabilized trace formulae and considers the "Fundamental Lemma" on orbital integrals of spherical functions. Comparison of trace formulae is simplified using "regular" functions and the "lifting" is stated and proved by means of character relations. This permits an intrinsic definition of partition of the automorphic representations of $SL(2)$ into packets, and a definition of packets for $U(3)$, a proof of multiplicity one theorem and rigidity theorem for $SL(2)$ and for $U(3)$, a determination of the self-contragredient representations of $PGL(3)$ and those on $GL(3, E)$ fixed by transpose-inverse-bar. In particular, the multiplicity one theorem is new and recent. There are applications to construction of Galois representations by explicit decomposition of the cohomology of Shimura varieties of $U(3)$ using Deligne's (proven) conjecture on the fixed point formula.

Managing Modern Healthcare Aug 29 2019 Until now, research has given us only a limited understanding of how managers actually make sense of and apply management knowledge; how networks of interaction amongst managers help or hinder processes of knowledge diffusion and the sharing of best practice; and how these processes are all influenced both by the organisations in which managers act and by the professional communities of practice they belong to. *Managing Modern Healthcare* fills these important gaps in our understanding by drawing upon an in-depth study of management networks and practice in three healthcare organisations in the UK. It draws from the primary research a number of important and grounded lessons about how management networks develop and influence the spread of management knowledge and practice; how management training and development relates to the needs of managers facing challenging conditions; and how those conditions are themselves shaping the nature of management in healthcare. This book reveals how managers in practice are responding to the many contemporary challenges facing healthcare (and the NHS in particular) and how they are able or not to effectively exploit sources of knowledge, learning and best practice through the networks of practice they engage in to improve healthcare delivery and healthcare

organisational performance. Managing Modern Healthcare makes a number of important theoretical contributions as well as practical recommendations. The theoretical and empirical contributions the book makes relate to wider work on networks and networking, management knowledge, situated learning/communities of practice, professionalization/professional identity and healthcare management more generally. The practical contribution comes in the form of recommendations for healthcare management practitioners and policy makers that are intended to impact upon and help enhance healthcare management delivery and performance.

Networking of Theories as a Research Practice in Mathematics

Education Aug 10 2020 How can we deal with the diversity of theories in mathematics education? This was the main question that led the authors of this book to found the Networking Theories Group. Starting from the shared assumption that the existence of different theories is a resource for mathematics education research, the authors have explored the possibilities of interactions between theories, such as contrasting, coordinating, and locally integrating them. The book explains and illustrates what it means to network theories; it presents networking as a challenging but fruitful research practice and shows how the Group dealt with this challenge considering five theoretical approaches, namely the approach of Action, Production, and Communication (APC), the Theory of Didactical Situations (TDS), the Anthropological Theory of the Didactic (ATD), the approach of Abstraction in Context (AiC), and the Theory of Interest-Dense Situations (IDS). A synthetic presentation of each theory and their connections shows how the activity of networking generates questions at the theoretical, methodological and practical levels and how the work on these questions leads to both theoretical and practical progress. The core of the book consists of four new networking case studies which illustrate what exactly can be gained by this approach and what kind of difficulties might arise.

Practical Telecommunications and Wireless Communications for Business and Industry

Aug 22 2021 The technology and structure of telecommunications networks has changed dramatically over the past few years. These developments have changed the equipment you purchase, the services you use, the providers you can choose, and the methods available for transporting data. Practical Telecommunications and Wireless Communications for Engineers and Technicians will be of particular benefit to those who want to take full advantage of the latest and most effective telecommunications technology and services. This book provides a grounding in the fundamentals of modern telecommunications systems in use in industrial, engineering and business settings. From networking for control systems to the use of Wireless LANs for enhanced on-site communications systems. This is a cutting-edge book on the fundamentals of telecommunications for anyone looking for a complete understanding of the essentials of the terms, jargon and technologies used. It has been designed for those who require a basic grounding in telecommunications for industrial, engineering and business applications. · Gain an understanding of the fundamentals of modern industrial, engineering and business telecommunications systems, from networking for industrial control to the use of Wireless LANs for enhanced on-site communications systems · Learn to take full advantage of the latest and most effective telecommunications technology and services · Provides a thorough grounding in the terms, jargon and technologies involved in data communications

Optical Networks: A Practical Perspective, 2e Jul 01 2022

Practical TCP/IP Oct 12 2020 In-depth explanations of networking and TCP/IP protocols simplify the process of learning to build, maintain, and troubleshoot networks in this hands-on technology guide. Covering both Linux and Windows, this book is applicable to almost any network, and includes visual information in the form of diagrams and screenshots, making ideas easier to understand. A reprint of the 2003 edition, this thorough reference also explains how to easily build small test networks to practice on and includes troubleshooting information throughout to help users solve complex problems with a deep understanding of the concepts. A focus on what users will need to know in their day-to-day work keeps the range of topics narrow while many detailed appendices provide extra insight into broader issues.

The Networking Survival Guide, Second Edition Apr 17 2021 Praise for the first edition of The Networking Survival Guide “Any way you look at it, other people are your greatest resource. Diane Darling’s in-depth, easy-to-follow instructions will fill your life with opportunities to meet these people and reap the rewards.” Nicholas Boothman, author of How to Make People Like You in 90 Seconds or Less and How to Connect in Business in 90 Seconds or Less Network your way to the highest levels of

success! No matter how smart and talented you are, you need the help of others to reach your true potential. Solid connections with the right people are just as important as being good at what you do. This fully revised edition of The Networking Survival Guide reveals tried and- true networking tactics, as well as new ways to harness the extraordinary influence of social networking sites like Facebook, LinkedIn, and Twitter. It teaches you how to: Identify and develop mutually beneficial relationships Create a strategy so your network is in place before you need it Succeed at networking even if you’re an introvert Use the proper etiquette in any situation Turn conversations into opportunities Become a resource for fellow networkers

Practice, Learning and Change Sep 30 2019 The three concepts central to this volume—practice, learning and change—have received very different treatments in the educational literature, an oversight directly confronted here. While learning and change have been extensively theorised, their various contexts articulated and analysed, practice is notably underrepresented. Where much of the literature on learning and change takes the notion of ‘practice’ as an unexamined given, its co-location as a term with various classifiers, as in ‘legal practice’ and ‘teaching practice’, render it curiously devoid of semantic force. In this book, ‘practice’ is the super-ordinate organising idea. Drawing on what has been termed the ‘practice turn in contemporary theory’, the work develops a conceptual framework for researching learning in, and on, practice. It challenges received notions of practice, questioning the assumptions, elisions, connotations and silences on the subject. In so doing, it offers fresh insights into learning and change, and how they relate to practice. In tandem with this conceptual work, the book details site-ontological studies of practice and learning in diverse professional and workplace contexts, examining the work of occupations as various as doctors, chefs and orchestral musicians. It demonstrates the value of theorising practice, learning and change, as well as exploring the connections between them amid our evolving social and institutional structures.

Neural Network PC Tools May 31 2022 This is the first practical guide that enables you to actually work with artificial neural networks on your personal computer. It provides basic information on neural networks, as well as the following special features: source code listings in C**actual case studies in a wide range of applications, including radar signal detection, stock market prediction, musical composition, ship pattern recognition, and biopotential waveform classification**CASE tools for neural networks and hybrid expert system/neural networks**practical hints and suggestions on when and how to use neural network tools to solve real-world problems.

Management of Network Organizations May 07 2020 Effective management is crucial to the success of network organizations and can reduce the risk inherently associated with cooperative strategy. This contributed volume addresses the management of network organizations from both theoretical and practical perspectives, as well as an international standpoint in the form of selected cases from various Central European countries. The authors claim that without some type of network management, irrespective of the type of network, it is impossible to effectively compete with other companies and/or networks. As network organizations are representative of a broad range of possible network types, i.e. alliance networks, clusters, outsourcing, and virtual organizations, this book presents various perspectives on the management of network organizations. The book features articles from different scholars who have practical experience in network organizations, written in simple and easy-to-follow language, with a wide application of practical cases. Given its successful combination of theory and practice, together with the nature of the texts presented, the book offers a valuable resource for a broad readership, including scholars, managers and management science students.

Principles and Practice of Constraint Programming Sep 10 2020 This book constitutes the refereed conference proceedings of the 22nd International Conference on Principles and Practice of Constraint Programming, CP 2016, held in Toulouse, France, in September 2016. The 63 revised regular papers presented together with 4 short papers and the abstracts of 4 invited talks were carefully reviewed and selected from 157 submissions. The scope of CP 2016 includes all aspects of computing with constraints, including theory, algorithms, environments, languages, models, systems, and applications such as decision making, resource allocation, scheduling, configuration, and planning. The papers are grouped into the following tracks: technical track; application track; computational sustainability track; CP and biology track; music track; preference, social choice, and optimization track; testing and verification

track; and journal-first and sister conferences track.

Neural Networks Sep 03 2022 If you're looking to become familiar with the basics of a neural network, then you have found a resource to help you accomplish that goal.

Network Analysis Literacy Jun 07 2020 This book presents a perspective of network analysis as a tool to find and quantify significant structures in the interaction patterns between different types of entities. Moreover, network analysis provides the basic means to relate these structures to properties of the entities. It has proven itself to be useful for the analysis of biological and social networks, but also for networks describing complex systems in economy, psychology, geography, and various other fields. Today, network analysis packages in the open-source platform R and other open-source software projects enable scientists from all fields to quickly apply network analytic methods to their data sets. Altogether, these applications offer such a wealth of network analytic methods that it can be overwhelming for someone just entering this field. This book provides a road map through this jungle of network analytic methods, offers advice on how to pick the best method for a given network analytic project, and how to avoid common pitfalls. It introduces the methods which are most often used to analyze complex networks, e.g., different global network measures, types of random graph models, centrality indices, and networks motifs. In addition to introducing these methods, the central focus is on network analysis literacy - the competence to decide when to use which of these methods for which type of question. Furthermore, the book intends to increase the reader's competence to read original literature on network analysis by providing a glossary and intensive translation of formal notation and mathematical symbols in everyday speech. Different aspects of network analysis literacy - understanding formal definitions, programming tasks, or the analysis of structural measures and their interpretation - are deepened in various exercises with provided solutions. This text is an excellent, if not the best starting point for all scientists who want to harness the power of network analysis for their field of expertise.

Network Management Dec 14 2020 This edition is thoroughly updated and expanded to address broadband network management and the latest trends in the network management technology and standards. The author's unique approach thoroughly illustrates the theoretical and practical aspects of network management, and the technologies and the tools that academics and network managers simply must know. Network management extended to telecommunications management Maps the concept of eTOM with TMN Extensive treatment on the design of an NMS with practical perspective Focuses on management of wired, fixed wireless and mobile broadband access, and home networks including evolving management protocols and MIBs Elucidates management of Optical and MPLS networks widely deployed in the telecommunications network Web-, CORBA-, and XML-based technologies addressed along with NGOSS technology

A Practical Guide to Computer Communications and Networking Feb 02 2020

Designing Storage Area Networks Nov 24 2021 This is a complete revision of Clark's bestseller "Designing Storage Area Networks." The new book provides guidelines for implementing SANs to solve existing networking problems in large-scale corporate networks.

Network Security Mar 17 2021 First Published in 2002. Routledge is an imprint of Taylor and Francis, an informa company.

[The Practical Guide to Local Area Networks](#) Nov 12 2020 Explains how to select, install, and use a local area network, evaluates five popular networks, and discusses standards and applications

Practical Big Data Analytics Oct 24 2021 Get command of your organizational Big Data using the power of data science and analytics Key Features A perfect companion to boost your Big Data storing, processing, analyzing skills to help you take informed business decisions Work with the best tools such as Apache Hadoop, R, Python, and Spark for NoSQL platforms to perform massive online analyses Get expert tips on statistical inference, machine learning, mathematical modeling, and data visualization for Big Data Book Description Big Data analytics relates to the strategies used by organizations to collect, organize and analyze large amounts of data to uncover valuable business insights that otherwise cannot be analyzed through traditional systems. Crafting an enterprise-scale cost-efficient Big Data and machine learning solution to uncover insights and value from your organization's data is a challenge. Today, with hundreds of new Big Data systems, machine learning packages and BI Tools, selecting the right combination of technologies is an even greater challenge. This book will help you do that. With the help of this guide, you will be able to bridge the gap between the theoretical

world of technology with the practical ground reality of building corporate Big Data and data science platforms. You will get hands-on exposure to Hadoop and Spark, build machine learning dashboards using R and R Shiny, create web-based apps using NoSQL databases such as MongoDB and even learn how to write R code for neural networks. By the end of the book, you will have a very clear and concrete understanding of what Big Data analytics means, how it drives revenues for organizations, and how you can develop your own Big Data analytics solution using different tools and methods articulated in this book. What you will learn - Get a 360-degree view into the world of Big Data, data science and machine learning - Broad range of technical and business Big Data analytics topics that caters to the interests of the technical experts as well as corporate IT executives - Get hands-on experience with industry-standard Big Data and machine learning tools such as Hadoop, Spark, MongoDB, KDB+ and R - Create production-grade machine learning BI Dashboards using R and R Shiny with step-by-step instructions - Learn how to combine open-source Big Data, machine learning and BI Tools to create low-cost business analytics applications - Understand corporate strategies for successful Big Data and data science projects - Go beyond general-purpose analytics to develop cutting-edge Big Data applications using emerging technologies Who this book is for The book is intended for existing and aspiring Big Data professionals who wish to become the go-to person in their organization when it comes to Big Data architecture, analytics, and governance. While no prior knowledge of Big Data or related technologies is assumed, it will be helpful to have some programming experience.

The Practice of System and Network Administration Jan 15 2021 Shares the six key principles of site design and support practices: simplicity, clarity, generality, automation, communication, and basics first. This book provides advice on topics which include the key elements your networks/systems need that will make all other services run better, and building and running reliable, scalable services.

Community Practice Jun 27 2019 For almost two decades, Community Practice has been a definitive text for social workers, community practitioners, and students eager to help individuals contribute to and use community resources or work to change oppressive community structures. In this third edition, a wealth of new charts and cases spotlight the linkages between theoretical orientations and practical skills, with an enhanced emphasis on the inherently political nature of social work and community practice. Boxes, examples, and exercises illustrate the range of skills and strategies available to savvy community practitioners in the 21st century, including networking, marketing and staging, political advocacy, and leveraging information and communication technologies. Other features include: - New material on community practice ethics, critical practice skills, community assessment and assets inventory and mapping, social problem analysis, and applying community practice skills to casework practice - Consideration of post-9/11 community challenges - Discussion on the changing ethnic composition of America and what this means for practitioners - An exploration of a vastly changed political landscape following the election of President Obama, the Great Recession, the rise of the Tea Party, and the increasing political and corporate use of pseudo-grassroots endeavors - A completely revamped instructor's manual available online at www.oup.com/us/communitypractice This fully revised classic text provides a comprehensive and integrated overview of the community theory and skills fundamental to all areas of social work practice. Broad in scope and intensive in analysis, it is suitable for undergraduate as well as graduate study. Community Practice offers students and practitioners the tools necessary to promote the welfare of individuals and communities by tapping into the ecological foundations of community and social work practice.

Network Reliability in Practice May 19 2021 This book contains selected peer-reviewed papers that were presented at the Fourth International Symposium on Transportation Network Reliability (INSTR) Conference held at the University of Minnesota July 22-23, 2010. International scholars, from a variety of disciplines—engineering, economics, geography, planning and transportation—offer varying perspectives on modeling and analysis of the reliability of transportation networks in order to illustrate both vulnerability to day-to-day and unpredictability variability and risk in travel, and demonstrates strategies for addressing those issues. The scope of the chapters includes all aspects of analysis and design to improve network reliability, specifically user perception of unreliability of public transport, public policy and reliability of travel times, the valuation and economics of reliability, network reliability modeling and estimation, travel behavior

and vehicle routing under uncertainty, and risk evaluation and management for transportation networks. The book combines new methodologies and state of the art practice to model and address questions of network unreliability, making it of interest to both academics in transportation and engineering as well as policy-makers and practitioners.

Understanding and Using the Controller Area Network Communication Protocol Jul 09 2020 This book offers a hands-on guide to designing, analyzing and debugging a communication infrastructure based on the Controller Area Network (CAN) bus. Although the CAN bus standard is well established and currently used in most automotive systems, as well as avionics, medical systems and other devices, its features are not fully understood by most developers, who tend to misuse the network. This results in lost opportunities for better efficiency and performance. These authors offer a comprehensive range of architectural solutions and domains of analysis. It also provides formal models and analytical results, with thorough discussion of their applicability, so that it serves as an invaluable reference for researchers and students, as well as practicing engineers.

The Wireless Networking Starter Kit Dec 02 2019 Offers background information on wireless and wired networks and step-by-step installation and configuration instructions.

Quantum Key Distribution Networks Sep 22 2021 This book focuses on practical implementation details, telecommunication techniques, security and technology challenges and approaches to implementing quantum technology in modern telecommunication systems. The authors use their extensive practical academic and industrial experience in network technologies and provide details from international projects in quantum cryptography in which they actively participate. Using a variety of examples, analogies, illustrations, tables, and features from practical quantum network realizations, the authors provide a unique view of quantum technology from an engineering telecommunication standpoint, allowing the reader to identify the advantages and challenges of quantum technology. This book also addresses challenges posed by quantum technology such as network organization, passive and active eavesdropping, and future trends in QKD such as Software Defined Networking (SDN) with QKD and application QKD in 5G networks. It is conceived through eight chapters by treating the following thematic units separately: Fundamentals of Quantum Key Distribution, QoS architecture/mode, QoS MAC layer, QoS signaling techniques for key management and session negotiation purpose and QoS routing protocols that minimize the consumption of key material through the equitable utilization of network resources when finding an optimal path. Through numerous information on practical solutions, simulation examples, illustrations, and analysis, readers can easily distinguish the specificity of quantum technology and understand the challenges and methods of practical implementation of quantum cryptography in common telecommunications standards. Researchers working in quantum technology and applied networking security as well as advanced-level students studying computer science and electrical engineering will benefit from this book. Professionals working within these related fields will also benefit from this book.

Opportunistic Communication for Wireless Networks Apr 05 2020 The impact of wireless communication on our everyday life is of major significance. Wireless communication, despite the hype of the popular press, is a field that has been around for more than hundred years, starting around 1897 with Marconi's successful demonstrations of wireless telegraphy. Rapid progress in technology has also been around for quite a while. Wireless communication without any doubt is a paradigm shift, enabling multimedia communications between people and devices from any location. In an evolving Wireless World, there is demand of systems that possess great engineering challenge. It can be met only with efficient, reliable and robust Multi-user Wireless systems. This text emphasizes the Opportunistic Communication: a most recent technique used for enhancement of wireless systems performance in many ways. The book highlights the salient features of Opportunistic Communication and its benefit for utilizing it in Multiuser Scenarios. The book also covers advance topics such as Multiple Input Multiple Output (MIMO) Systems, Multiuser Diversity, Multiuser Beamforming and its exploitation in throughput enhancement of Wireless Networks.

A Practical Approach to Corporate Networks Engineering Jan 27 2022 A Practical Approach to Corporate Networks Engineering is dedicated to corporate network design and engineering, covering the different levels of network design and deployment. The main theoretical concepts are explained and the different functioning mechanisms are

illustrated with practical experiments. Using an open source network simulator that is able to emulate real network equipment and run concrete network scenarios (Graphical Network Simulator), the authors present several realistic network scenarios that illustrate the different network protocols and mechanisms and can be easily replicated by readers at home. Readers will be able to configure the different network equipments, run the scenarios and capture traffic at the different network links on their own, ordinary PC, acquiring a deep knowledge of the underlying network protocols and mechanisms. This interactive and practical teaching approach is very motivating and effective, since students can easily follow the explanations that are given throughout the book, making this work a valuable addition to the existing literature.

Sensor Networks Feb 25 2022 The idea of this book comes from the observation that sensor networks represent a topic of interest from both theoretical and practical perspectives. The title underlines that sensor networks offer the unique opportunity of clearly linking theory with practice. In fact, owing to their typical low-cost, academic researchers have the opportunity of implementing sensor network testbeds to check the validity of their theories, algorithms, protocols, etc., in reality. Likewise, a practitioner has the opportunity of understanding what are the principles behind the sensor networks under use and, thus, how to properly tune some accessible network parameters to improve the performance. On the basis of the observations above, the book has been structured in three parts: Part I is denoted as "Theory," since the topics of its chapters are apparently "detached" from real scenarios; Part II is denoted as "Theory and Practice," since the topics of its three chapters, although theoretical, have a clear connection with specific practical scenarios; Part III is denoted as "Practice," since the topics of its chapters are clearly related to practical applications.

Bayesian Networks Nov 05 2022 Bayesian Networks, the result of the convergence of artificial intelligence with statistics, are growing in popularity. Their versatility and modelling power is now employed across a variety of fields for the purposes of analysis, simulation, prediction and diagnosis. This book provides a general introduction to Bayesian networks, defining and illustrating the basic concepts with pedagogical examples and twenty real-life case studies drawn from a range of fields including medicine, computing, natural sciences and engineering. Designed to help analysts, engineers, scientists and professionals taking part in complex decision processes to successfully implement Bayesian networks, this book equips readers with proven methods to generate, calibrate, evaluate and validate Bayesian networks. The book: Provides the tools to overcome common practical challenges such as the treatment of missing input data, interaction with experts and decision makers, determination of the optimal granularity and size of the model. Highlights the strengths of Bayesian networks whilst also presenting a discussion of their limitations. Compares Bayesian networks with other modelling techniques such as neural networks, fuzzy logic and fault trees. Describes, for ease of comparison, the main features of the major Bayesian network software packages: Netica, Hugin, Elvira and Discoverer, from the point of view of the user. Offers a historical perspective on the subject and analyses future directions for research. Written by leading experts with practical experience of applying Bayesian networks in finance, banking, medicine, robotics, civil engineering, geology, geography, genetics, forensic science, ecology, and industry, the book has much to offer both practitioners and researchers involved in statistical analysis or modelling in any of these fields.

Someone to Talk To Mar 05 2020 "In Someone To Talk To, Mario L. Small follows a group of graduate students as they cope with stress, overwork, self-doubt, failure, relationships, children, health care, and poverty. He unravels how they decide whom to turn to for support. and he then confirms his findings based on representative national data on adult Americans."--Jacket.

Deep Learning with PyTorch Oct 31 2019 Build neural network models in text, vision and advanced analytics using PyTorch Key Features Learn PyTorch for implementing cutting-edge deep learning algorithms. Train your neural networks for higher speed and flexibility and learn how to implement them in various scenarios; Cover various advanced neural network architecture such as ResNet, Inception, DenseNet and more with practical examples; Book Description Deep learning powers the most intelligent systems in the world, such as Google Voice, Siri, and Alexa. Advancements in powerful hardware, such as GPUs, software frameworks such as PyTorch, Keras, Tensorflow, and CNTK along with the availability of big data have made it easier to implement solutions to problems in the areas of text, vision, and advanced analytics. This book will get you up and running with one of the most cutting-edge deep

learning libraries—PyTorch. PyTorch is grabbing the attention of deep learning researchers and data science professionals due to its accessibility, efficiency and being more native to Python way of development. You'll start off by installing PyTorch, then quickly move on to learn various fundamental blocks that power modern deep learning. You will also learn how to use CNN, RNN, LSTM and other networks to solve real-world problems. This book explains the concepts of various state-of-the-art deep learning architectures, such as ResNet, DenseNet, Inception, and Seq2Seq, without diving deep into the math behind them. You will also learn about GPU computing during the course of the book. You will see how to train a model with PyTorch and dive into complex neural networks such as generative networks for producing text and images. By the end of the book, you'll be able to implement deep learning applications in PyTorch with ease. What you will learn Use PyTorch for GPU-accelerated tensor computations Build custom datasets and data loaders for images and test the models using torchvision and torchtext Build an image classifier by implementing CNN architectures using PyTorch Build systems that do text classification and language modeling using RNN, LSTM, and GRU Learn advanced CNN architectures such as ResNet, Inception, Densenet, and learn how to use them for transfer learning Learn how to mix multiple models for a powerful ensemble model Generate new images using GAN's and generate artistic images using style transfer Who this book is for This book is for machine learning engineers, data analysts, data scientists interested in deep learning and are looking to explore implementing advanced algorithms in PyTorch. Some knowledge of machine learning is helpful but not a mandatory need. Working knowledge of Python programming is expected.

Practical Network Design Techniques, Second Edition Mar 29 2022 The authors of Practical Network Design Techniques, Second Edition: A Complete Guide for WANs and LANs build upon the popular first edition by combining pre-existing network design fundamentals with new material on LAN devices and topologies, wireless local networks, and LAN internetworking issues. This new edition has two parts. The first part focuses on wide area networks; the second, which is entirely new, focuses on local area networks. Because Ethernet emerged victorious in the LAN war, the second section pays particular attention to Ethernet

design and performance characteristics. The volume retains much valuable information from the first edition, and integrates and prominently highlights WAN information that is also relevant to the LAN design process. To maximize the book's utility, the authors include a number of practical networking problems and their solutions, along with examples of methods needed to perform economic comparisons among differing communications services and hardware configurations. The second edition provides a thorough understanding of major network design problems and is an invaluable reference for data communications professionals.

Linear Programming and Algorithms for Communication Networks Aug 02 2022 Explaining how to apply to mathematical programming to network design and control, Linear Programming and Algorithms for Communication Networks: A Practical Guide to Network Design, Control, and Management fills the gap between mathematical programming theory and its implementation in communication networks. From the basics all the way through to more advanced concepts, its comprehensive coverage provides readers with a solid foundation in mathematical programming for communication networks. Addressing optimization problems for communication networks, including the shortest path problem, max flow problem, and minimum-cost flow problem, the book covers the fundamentals of linear programming and integer linear programming required to address a wide range of problems. It also: Examines several problems on finding disjoint paths for reliable communications Addresses optimization problems in optical wavelength-routed networks Describes several routing strategies for maximizing network utilization for various traffic-demand models Considers routing problems in Internet Protocol (IP) networks Presents mathematical puzzles that can be tackled by integer linear programming (ILP) Using the GNU Linear Programming Kit (GLPK) package, which is designed for solving linear programming and mixed integer programming problems, it explains typical problems and provides solutions for communication networks. The book provides algorithms for these problems as well as helpful examples with demonstrations. Once you gain an understanding of how to solve LP problems for communication networks using the GLPK descriptions in this book, you will also be able to easily apply your knowledge to other solvers.