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KEY=NETWORK - OCONNOR BRIDGET

Innovations and Advances in Computing, Informatics, Systems Sciences, Networking and Engineering

Springer *Innovations and Advances in Computing, Informatics, Systems Sciences, Networking and Engineering This book includes a set of rigorously reviewed world-class manuscripts addressing and detailing state-of-the-art research projects in the areas of Computer Science, Informatics, and Systems Sciences, and Engineering. It includes selected papers from the conference proceedings of the Eighth and some selected papers of the Ninth International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering (CISSE 2012 & CISSE 2013). Coverage includes topics in: Industrial Electronics, Technology & Automation, Telecommunications and Networking, Systems, Computing Sciences and Software Engineering, Engineering Education, Instructional Technology, Assessment, and E-learning. · Provides the latest in a series of books growing out of the International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering; · Includes chapters in the most advanced areas of Computing, Informatics, Systems Sciences, and Engineering; · Accessible to a wide range of readership, including professors, researchers, practitioners and students.*

An Introduction to Network Modeling and Simulation for the Practicing Engineer

John Wiley & Sons *This book provides the practicing engineer with a concise listing of commercial and open-source modeling and simulation tools currently available including examples of implementing those tools for solving specific Modeling and Simulation examples. Instead of focusing on the underlying theory of Modeling and Simulation and fundamental building blocks for custom simulations, this book compares platforms used in practice, and gives rules enabling the practicing engineer to utilize available Modeling and Simulation tools. This book will contain insights regarding common pitfalls in network Modeling and Simulation and practical methods for working engineers.*

Distributed Computing and Networking

13th International Conference, ICDCN 2012, Hong Kong, China, January 3-6, 2012, Proceedings

Springer Science & Business Media *This book constitutes the refereed proceedings of the 13th International Conference on Distributed Computing and Networking, ICDCN 2012, held in Hong Kong, China, during January 3-6, 2012. The 36 revised full papers and 1 short paper presented together with 4 poster papers were carefully reviewed and selected from 100 submissions. The papers address all current issues in the field of distributed computing and networking. Being a leading forum for researchers and practitioners to exchange ideas and share best practices, ICDCN also hosts as a forum for PhD students to discuss their research ideas and get quality feedback from the well-renowned experts in the field of distributed computing and computer networking.*

Stochastic Geometry and Wireless Networks

Now Publishers Inc *This volume bears on wireless network modeling and performance analysis. The aim is to show how stochastic geometry can be used in a more or less systematic way to analyze the phenomena that arise in this context. It first focuses on medium access control mechanisms used in ad hoc networks and in cellular networks. It then discusses the use of stochastic geometry for the quantitative analysis of routing algorithms in mobile ad hoc networks. The appendix also contains a concise summary of wireless communication principles and of the network architectures considered in the two volumes.*

Advances in Grid and Pervasive Computing

6th International Conference, GPC 2011, Oulu, Finland, May 11-13, 2011. Proceedings

Springer *This book constitutes the proceedings of the 6th International Conference, GPC 2011, held in Oulu, Finland in May 2011. The 28 revised full papers were carefully revised and selected from 62 submissions and focus on the topics cloud, cluster, and grid computing; peer-to-peer computing; applications and HCI; modeling and verification; service architectures; middleware; and sensor networks.*

Computer Network Simulation Using NS2

CRC Press *Computer Network Simulations Using NS2 provides a solid foundation of computer networking knowledge and skills, covering everything from simple operating system commands to the analysis of complex network performance metrics. The book begins with a discussion of the evolution of data communication techniques and the fundamental issues associated with performance evaluation. After presenting a preliminary overview of simulation and other performance evaluation techniques, the authors: Describe a number of computer network protocols and TCP/IP and OSI models, highlighting the networking devices used Explain a socket and its use in network programming, fostering the development of network applications using C and socket API Introduce the NS2 network simulator, exhibiting its internal architecture, constituent software packages, and installation in different operating systems Delve into simulation using NS2, elaborating on the use of Tcl and OTcl scripts as well as AWK scripting and plotting with Gnuplot Show how to simulate wired and wireless network protocols step by step, layer by layer Explore the idea of simulating very large networks, identifying the challenges associated with measuring and graphing the various network parameters Include nearly 90 example programs, scripts, and outputs, along with several exercises requiring application of the theory and programming Computer Network Simulations Using NS2 emphasizes the implementation and simulation of real-world computer network protocols, affording readers with valuable opportunities for hands-on practice while instilling a deeper understanding of how computer network protocols work.*

NS Simulator for Beginners

Morgan & Claypool Publishers *Declarative Networking is a programming methodology that enables developers to concisely specify network protocols and services, which are directly compiled to a dataflow framework that executes the specifications. Declarative networking proposes the use of a declarative query language for specifying and implementing network protocols, and employs a dataflow framework at runtime for communication and maintenance of network state. The primary goal of declarative networking is to greatly simplify the process of specifying, implementing, deploying and evolving a network design. In addition, declarative networking serves as an important step towards an extensible, evolvable network architecture that can support flexible, secure and efficient deployment of new network protocols.This book provides an introduction to basic issues in declarative networking, including language design, optimization and dataflow execution. The methodology behind declarative programming of networks is presented, including roots in Datalog, extensions for networked environments, and the semantics of long-running queries over network state. The book focuses on a representative declarative networking language called Network Datalog (NDlog), which is based on extensions to the Datalog recursive query language. An overview of declarative network protocols written in NDlog is provided, and its usage is illustrated using examples from routing protocols and overlay networks.This book also describes the implementation of a declarative networking engine and NDlog execution strategies that provide eventual consistency semantics with significant flexibility in execution. Two representative declarative networking systems (P2 and its successor RapidNet) are presented. Finally, the book highlights recent advances in declarative networking, and new declarative approaches to related problems.Table of Contents: Introduction / Declarative Networking Language / Declarative Networking Overview / Distributed Recursive Query Processing / Declarative Routing / Declarative Overlays / Optimization of NDlog / Recent Advances in Declarative Networking / Conclusion*

Web Data Management

Cambridge University Press *The Internet and World Wide Web have revolutionized access to information. Users now store information across multiple platforms from personal computers to smartphones and websites. As a consequence, data management concepts, methods and techniques are increasingly focused on distribution concerns. Now that information largely resides in the network, so do the tools that process this information. This book explains the foundations of XML with a focus on data distribution. It covers the many facets of distributed data management on the Web, such as description logics, that are already emerging in today's data integration applications and herald tomorrow's semantic Web. It also introduces the machinery used to manipulate the unprecedented amount of data collected on the Web. Several 'Putting into Practice' chapters describe detailed practical applications of the technologies and techniques. The book will serve as an introduction to the new, global, information systems for Web professionals and master's level courses.*

Networking and Mobile Computing

3rd International Conference, ICCNMC 2005, Zhangjiajie, China, August 2-4, 2005, Proceedings

Springer *Welcome to Zhangjiajie for the 3rd International Conference on Computer Network and Mobile Computing (ICCNMC 2005). We are currently witnessing a proliferation in mobile/wireless technologies and applications. However, these new technologies have ushered in unprecedented challenges for the research community across the range of networking, mobile computing, network security and wireless web applications, and optical network topics. ICCNMC 2005 was sponsored by the China Computer Federation, in cooperation with the Institute for Electrical and Electronics Engineers (IEEE) Computer Society. The objective of this conference was to address and capture highly innovative and stateof-the-art research and work in the networks and mobile computing industries. ICCNMC 2005 allowed sharing of the underlying theories and applications, and the establishment of new and long-term collaborative channels aimed at developing innovative concepts and solutions geared to future markets. The highly positive response to ICCNMC 2001 and ICCNMC 2003, held in Beijing and Shanghai, respectively, encouraged us to continue this international event. In its third year, ICCNMC 2005 continued to provide a forum for researchers, professionals, and industrial practitioners from around the world to report on new advances in computer network and mobile computing, as well as to identify issues and directions for research and development in the new era of evolving technologies.*

Handbook of Algorithms for Wireless Networking and Mobile Computing

CRC Press *Most of the available literature in wireless networking and mobile computing concentrates on the physical aspect of the subject, such as spectrum management and cell re-use. In most cases, a description of fundamental distributed algorithms that support mobile hosts in a wireless environment is either not included or is only briefly discussed.*

Geometric and Topological Inference

Cambridge University Press *A rigorous introduction to geometric and topological inference, for anyone interested in a geometric approach to data science.*

Very Large Data Bases

Morgan Kaufmann *Proceedings of the 30th Annual International Conference on Very Large Data Bases held in Toronto, Canada on August 31 - September 3 2004. Organized by the VLDB Endowment, VLDB is the premier international conference on database technology.*

Persistence Theory: From Quiver Representations to Data Analysis

American Mathematical Soc. *Persistence theory emerged in the early 2000s as a new theory in the area of applied and computational topology. This book provides a broad and modern view of the subject, including its algebraic, topological, and algorithmic aspects. It also elaborates on applications in data analysis. The level of detail of the exposition has been set so as to keep a survey style, while providing sufficient insights into the proofs so the reader can understand the mechanisms at work. The book is organized into three parts. The first part is dedicated to the foundations of persistence and emphasizes its connection to quiver representation theory. The second part focuses on its connection to applications through a few selected topics. The third part provides perspectives for both the theory and its applications. The book can be used as a text for a course on applied topology or data analysis.*

Modeling and Tools for Network Simulation

Springer Science & Business Media *A crucial step during the design and engineering of communication systems is the estimation of their performance and behavior; especially for mathematically complex or highly dynamic systems network simulation is particularly useful. This book focuses on tools, modeling principles and state-of-the art models for discrete-event based network simulations, the standard method applied today in academia and industry for performance evaluation of new network designs and architectures. The focus of the tools part is on two distinct simulations engines: OmNet++ and ns-3, while it also deals with issues like parallelization, software integration and hardware simulations. The parts dealing with modeling and models for network simulations are split into a wireless section and a section dealing with higher layers. The wireless section covers all essential modeling principles for dealing with physical layer, link layer and wireless channel behavior. In addition, detailed models for prominent wireless systems like IEEE 802.11 and IEEE 802.16 are presented. In the part on higher layers, classical modeling approaches for the network layer, the transport layer and the application layer are presented in addition to modeling approaches for peer-to-peer networks and topologies of networks. The modeling parts are accompanied with catalogues of model implementations for a large set of different simulation engines. The book is aimed at master students and PhD students of computer science and electrical engineering as well as at researchers and practitioners from academia and industry that are dealing with network simulation at any layer of the protocol stack.*

Encyclopedia of Information Communication Technology

IGI Global *NetLibrary named the Encyclopedia of Information Communication Technology as their September 2008 e-book of the month! CLICK HERE to view the announcement. The Encyclopedia of Information Communication Technology (ICT) is a comprehensive resource describing the influence of information communication technology in scientific knowledge construction, with emphasis on the roles of product technologies, process technologies, and context technologies. Through 111 authoritative contributions by 93 of the world's leading experts this reference covers the materials and instruments of information technology: from ICT in education to software engineering; the influence of ICT on different environments, including e-commerce, decision support systems, knowledge management, and more; and the most pervasive presence of information technology, including studies and research on knowledge management, the human side of ICT, ICT in healthcare, and virtual organizations, among many others. Addressing many of the fundamental issues of information communication technology, the Encyclopedia of Information Communication Technology will be a top-shelf resource for any reference library.*

Introducing MLOps

O'Reilly Media *More than half of the analytics and machine learning (ML) models created by organizations today never make it into production. Some of the challenges and barriers to operationalization are technical, but others are organizational. Either way, the bottom line is that models not in production can't provide business impact. This book introduces the key concepts of MLOps to help data scientists and application engineers not only operationalize ML models to drive real business change but also maintain and improve those models over time. Through lessons based on numerous MLOps applications around the world, nine experts in machine learning provide insights into the five steps of the model life cycle--Build, Preproduction, Deployment, Monitoring, and Governance--uncovering how robust MLOps processes can be infused throughout. This book helps you: Fulfill data science value by reducing friction throughout ML pipelines and workflows Refine ML models through retraining, periodic tuning, and complete remodeling to ensure long-term accuracy Design the MLOps life cycle to minimize organizational risks with models that are unbiased, fair, and explainable Operationalize ML models for pipeline deployment and for external business systems that are more complex and less standardized*

Mapping Cyberspace

Routledge *Mapping Cyberspace is a ground-breaking geographic exploration and critical reading of cyberspace, and information and communication technologies. The book: * provides an understanding of what cyberspace looks like and the social interactions that occur there * explores the impacts of cyberspace, and information and communication technologies, on cultural, political and economic relations * charts the spatial forms of virutal spaces * details empirical research and examines a wide variety of maps and spatialisations of cyberspace and the information society * has a related website at http://www.MappingCyberspace.com. This book will be a valuable addition to the growing body of literature on cyberspace and what it means for the future.*

Object-Oriented Implementation of Numerical Methods

An Introduction with Java & Smalltalk

Morgan Kaufmann *"There are few books that show how to build programs of any kind. One common theme is compiler building, and there are shelves full of them. There are few others. It's an area, or a void, that needs filling. this book does a great job of showing how to build numerical analysis programs." -David N. Smith, IBM T J Watson Research Center Numerical methods naturally lend themselves to an object-oriented approach. Mathematics builds high- level ideas on top of previously described, simpler ones. Once a property is demonstrated for a given concept, it can be applied to any new concept sharing the same premise as the original one, similar to the ideas of reuse and inheritance in object-oriented (OO) methodology. Few books on numerical methods teach developers much about designing and building good code. Good computing routines are problem-specific. Insight and understanding are what is needed, rather than just recipes and black box routines. Developers need the ability to construct new programs for different applications. Object-Oriented Implementation of Numerical Methods reveals a complete OO design methodology in a clear and systematic way. Each method is presented in a consistent format, beginning with a short explanation and following with a description of the general OO architecture for the algorithm. Next, the code implementations are discussed and presented along with real-world examples that the author, an experienced software engineer, has used in a variety of commercial applications. Features: Reveals the design methodology behind the code, including design patterns where appropriate, rather than just presenting canned solutions. Implements all methods side by side in both Java and Smalltalk. This contrast can significantly enhance your understanding of the nature of OO programming languages. Provides a step-by-step pathway to new object-oriented techniques for programmers familiar with using procedural languages such as C or Fortran for numerical methods. Includes a chapter on data mining, a key application of numerical methods.*

The GENI Book

Springer *This book, edited by four of the leaders of the National Science Foundation's Global Environment and Network Innovations (GENI) project, gives the reader a tour of the history, architecture, future, and applications of GENI. Built over the past decade by hundreds of leading computer scientists and engineers, GENI is a nationwide network used daily by thousands of computer scientists to explore the next Cloud and Internet and the applications and services they enable, which will transform our communities and our lives. Since by design it runs on existing computing and networking equipment and over the standard commodity Internet, it is poised for explosive growth and transformational impact over the next five years. Over 70 of the builders of GENI have contributed to present its development, architecture, and implementation, both as a standalone US project and as a federated peer with similar projects worldwide, forming the core of a worldwide network. Applications and services enabled by GENI, from smarter cities to intensive collaboration to immersive education, are discussed. The book also explores the concepts and technologies that transform the Internet from a shared transport network to a collection of "slices" -- private, on-the-fly application-specific nationwide networks with guarantees of privacy and responsiveness. The reader will learn the motivation for building GENI and the experience of its precursor infrastructures, the architecture and implementation of the GENI infrastructure, its deployment across the United States and worldwide, the new network applications and services enabled by and running on the GENI infrastructure, and its international collaborations and extensions. This book is useful for academics in the networking and distributed systems areas, Chief Information Officers in the academic, private, and government sectors, and network and information architects.*

Markov Chains and Dependability Theory

Cambridge University Press *Covers fundamental and applied results of Markov chain analysis for the evaluation of dependability metrics, for graduate students and researchers.*

Dynamical Processes on Complex Networks

Cambridge University Press *The availability of large data sets has allowed researchers to uncover complex properties such as large-scale fluctuations and heterogeneities in many networks, leading to the breakdown of standard theoretical frameworks and models. Until recently these systems were considered as haphazard sets of points and connections. Recent advances have generated a vigorous research effort in understanding the effect of complex connectivity patterns on dynamical phenomena. This book presents a comprehensive account of these effects. A vast number of systems, from the brain to ecosystems, power grids and the internet, can be represented as large complex networks. This book will interest graduate students and researchers in many disciplines, from physics and statistical mechanics to mathematical biology and information science. Its modular approach allows readers to readily access the sections of most interest to them, and complicated maths is avoided so the text can be easily followed by non-experts in the subject.*

Deep Learning for Robot Perception and Cognition

Academic Press *Deep Learning for Robot Perception and Cognition introduces a broad range of topics and methods in deep learning for robot perception and cognition together with end-to-end methodologies. The book provides the conceptual and mathematical background needed for approaching a large number of robot perception and cognition tasks from an end-to-end learning point-of-view. The book is suitable for students, university and industry researchers and practitioners in Robotic Vision, Intelligent Control, Mechatronics, Deep Learning, Robotic Perception and Cognition tasks. Presents deep learning principles and methodologies Explains the principles of applying end-to-end learning in robotics applications Presents how to design and train deep learning models Shows how to apply deep learning in robot vision tasks such as object recognition, image classification, video analysis, and more Uses robotic simulation environments for training deep learning models Applies deep learning methods for different tasks ranging from planning and navigation to biosignal analysis*

Ant Colony Optimization

MIT Press *An overview of the rapidly growing field of ant colony optimization that describes theoretical findings, the major algorithms, and current applications. The complex social behaviors of ants have been much studied by science, and computer scientists are now finding that these behavior patterns can provide models for solving difficult combinatorial optimization problems. The attempt to develop algorithms inspired by one aspect of ant behavior, the ability to find what computer scientists would call shortest paths, has become the field of ant colony optimization (ACO), the most successful and widely recognized algorithmic technique based on ant behavior. This book presents an overview of this rapidly growing field, from its theoretical inception to practical applications, including descriptions of many available ACO algorithms and their uses. The book first describes the translation of observed ant behavior into working optimization algorithms. The ant colony metaheuristic is then introduced and viewed in the general context of combinatorial optimization. This is followed by a detailed description and guide to all major ACO algorithms and a report on current theoretical findings. The book surveys ACO applications now in use, including routing, assignment, scheduling, subset, machine learning, and bioinformatics problems. AntNet, an ACO algorithm designed for the network routing problem, is described in detail. The authors conclude by summarizing the progress in the field and outlining future research directions. Each chapter ends with bibliographic material, bullet points setting out important ideas covered in the chapter, and exercises. Ant Colony Optimization will be of interest to academic and industry researchers, graduate students, and practitioners who wish to learn how to implement ACO algorithms.*

Smalltalk-80

Bits of History, Words of Advice

Addison-Wesley *Focuses on Implementation of System; Provides Documentation & Covers General Software & Engineering*

The Gamification of Society

John Wiley & Sons *The applications of gamification and the contexts in which game elements can be successfully incorporated have grown significantly over the years. They now include the fields of health, education, work, the media and many others. However, the human and social sciences still neglect the analysis and critique of gamification. Research conducted in this area tends to focus on game objects and not gamifications logic as its ideological dimension. Considering that the game, as a model and a reference, laden with social value, deserves to be questioned beyond its objects, The Gamification of Society gathers together texts, observations and criticisms that question the influence that games and their mechanics have on wider society. The empirical research presented in this book (examining designers practices, early childhood, political action, the quantified self, etc.) also probes several different national contexts – those of Norway, Belgium, the United States and France, among others.*

ECAI 2014

21st European Conference on Artificial Intelligence

IOS Press *The role of artificial intelligence (AI) applications in fields as diverse as medicine, economics, linguistics, logical analysis and industry continues to grow in scope and importance. AI has become integral to the effective functioning of much of the technical infrastructure we all now take for granted as part of our daily lives. This book presents the papers from the 21st biennial European Conference on Artificial Intelligence, ECAI 2014, held in Prague, Czech Republic, in August 2014. The ECAI conference remains Europe's principal opportunity for researchers and practitioners of Artificial Intelligence to gather and to discuss the latest trends and challenges in all subfields of AI, as well as to demonstrate innovative applications and uses of advanced AI technology. Included here are the 158 long papers and 94 short papers selected for presentation at the conference. Many of the papers cover the fields of knowledge representation, reasoning and logic as well as agent-based and multi-agent systems, machine learning, and data mining. The proceedings of PAIS 2014 and the PAIS System Demonstrations are also included in this volume, which will be of interest to all those wishing to keep abreast of the latest developments in the field of AI.*

OpenMP: Portable Multi-Level Parallelism on Modern Systems

16th International Workshop on OpenMP, IWOMP 2020, Austin, TX, USA, September 22–24, 2020, Proceedings

Springer Nature *This book constitutes the proceedings of the 16th International Workshop on OpenMP, IWOMP 2020, held in Austin, TX, USA, in September 2020. The conference was held virtually due to the COVID-19 pandemic. The 21 full papers presented in this volume were carefully reviewed and selected for inclusion in this book. The papers are organized in topical sections named: performance methodologies; applications; OpenMP extensions; performance studies; tools; NUMA; compilation techniques; heterogeneous computing; and memory. The chapters 'A Case Study on Addressing Complex Load Imbalance in OpenMP' and 'A Study of Memory Anomalies in OpenMP Applications' are available open access under a Creative Commons Attribution 4.0 License via link.springer.com.*

Lectures on Runtime Verification

Introductory and Advanced Topics

Springer *The idea of this volume originated from the need to have a book for students to support their training with several tutorials on different aspects of RV. The volume has been organized into seven chapters and the topics covered include an introduction on runtime verification, dynamic analysis of concurrency errors, monitoring events that carry data, runtime error reaction and prevention, monitoring of cyber-physical systems, runtime verification for decentralized and distributed systems and an industrial application of runtime verification techniques in financial transaction systems.*

Management and Control of Production and Logistics 2004 (MCPL 2004)

A Proceedings Volume from the IFAC/IEEE/ACCA Conference, Santiago, Chile, 3-5 November 2004

Elsevier

International Symposium on Computer and Information Sciences

CRC Press *Papers from an October 2002 symposium describe research in areas including algorithms, artificial intelligence, computer graphics, computer networks, databases, evolutionary computation, graph theory, image processing, multimedia technology, software engineering, and software performance engineering. Some specific topics are packet selection in a deflection routing algorithm, honeycomb subdivision, a new image-based lighting method, visualizing transition diagrams of action language programs, and solution stability in evolutionary computation. Other subjects include control of lightpaths in heterogeneous optical networks, exploiting semantic constraints in a database browser, and bandwidth allocation in bluetooth scatternets. There is no subject index. Annotation copyrighted by Book News, Inc., Portland, OR*

A Compositional Approach to Performance Modelling

Cambridge University Press *This is the first book presenting a stochastic extension of process algebra, PEPA; this is shown to be suitable for specifying a Markov process, which can then be applied to performance modelling. The method, which is illustrated with case studies taken from the area of communication systems, can readily be used to construct a variety of models that can be analysed using standard numerical techniques. One of the major advantages of PEPA over the standard methods for specifying stochastic performance models is the inherent apparatus for reasoning about the structure and behaviour of models. In the later chapters this apparatus is exploited to define four equivalence relations over PEPA components. Each of these notions of equivalence has intrinsic interest from a process algebra perspective. However, they are also demonstrated to be useful in a performance modelling context. To conclude the book, a section has been added surveying recent results in the area and discussing open questions.*

Ad Hoc and Sensor Networks

Theory and Applications

World Scientific *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 involving 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.*

Computational Topology

An Introduction

American Mathematical Soc. *Combining concepts from topology and algorithms, this book delivers what its title promises: an introduction to the field of computational topology. Starting with motivating problems in both mathematics and computer science and building up from classic topics in geometric and algebraic topology, the third part of the text advances to persistent homology. This point of view is critically important in turning a mostly theoretical field of mathematics into one that is relevant to a multitude of disciplines in the sciences and engineering. The main approach is the discovery of topology through algorithms. The book is ideal for teaching a graduate or advanced undergraduate course in computational topology, as it develops all the background of both the mathematical and algorithmic aspects of the subject from first principles. Thus the text could serve equally well in a course taught in a mathematics department or computer science department.*

An Introduction to Computational Fluid Dynamics

The Finite Volume Method

Pearson Education *This book presents the fundamentals of computational fluid dynamics for the novice. It provides a thorough yet user-friendly introduction to the governing equations and boundary conditions of viscous fluid flows and its modelling.*

A Survey on Policy Search for Robotics

Foundations and Trends(r) in R *A Survey on Policy Search for Robotics provides an overview of successful policy search methods in the context of robot learning, where high-dimensional and continuous state-action space challenge any Reinforcement Learning (RL) algorithm. It distinguishes between model-free and model-based policy search methods.*

The Future Internet

Future Internet Assembly 2011: Achievements and Technological Promises

Springer *Irrespective of whether we use economic or societal metrics, the Internet is one of the most important technical infrastructures in existence today. It will be a catalyst for much of our innovation and prosperity in the future. A competitive Europe will require Internet connectivity and services beyond the capabilities offered by current technologies. Future Internet research is therefore a must. This book is published in full compliance with the Open Access publishing initiative; it is based on the research carried out within the Future Internet Assembly (FIA). It contains a sample of representative results from the recent FIA meetings spanning a broad range of topics, all being of crucial importance for the future Internet. The book includes 32 contributions and has been structured into the following sections, each of which is preceded by a short introduction: Foundations: architectural issues; socio-economic issues; security and trust; and experiments and experimental design. Future Internet Areas: networks, services, and content; and applications.*

Advanced Data Analytics for Power Systems

Cambridge University Press *Experts in data analytics and power engineering present techniques addressing the needs of modern power systems, covering theory and applications related to power system reliability, efficiency, and security. With topics spanning large-scale and distributed optimization, statistical learning, big data analytics, graph theory, and game theory, this is an essential resource for graduate students and researchers in academia and industry with backgrounds in power systems engineering, applied mathematics, and computer science.*

An Introduction to Search Engines and Web Navigation

John Wiley & Sons *This book is a second edition, updated and expanded to explain the technologies that help us find information on the web. Search engines and web navigation tools have become ubiquitous in our day to day use of the web as an information source, a tool for commercial transactions and a social computing tool. Moreover, through the mobile web we have access to the web's services when we are on the move. This book demystifies the tools that we use when interacting with the web, and gives the reader a detailed overview of where we are and where we are going in terms of search engine and web navigation technologies.*

Internetworking Multimedia

CRC Press *This volume aims to document the authors' prescription for the architecture, the way the component services are fitted together to provide collaborative tools for video, audio and shared workspaces. The authors have decided to take a new approach to the field by using a prescriptive rather than descriptive style. The text is aimed at technical readers such as developers, undergraduate or postgraduate (MSc) courses on multimedia and networking, and professionals. The subjects covered include the network requirements, the media encoding techniques including basic compression techniques, the protocols (rtp/rtcp, rsvp etc.), the distributed algorithms for synchronization, reliability, security and so on.*

The Quest for Artificial Intelligence

Cambridge University Press *Artificial intelligence (AI) is a field within computer science that is attempting to build enhanced intelligence into computer systems. This book traces the history of the subject, from the early dreams of eighteenth-century (and earlier) pioneers to the more successful work of today's AI engineers. AI is becoming more and more a part of everyone's life. The technology is already embedded in face-recognizing cameras, speech-recognition software, Internet search engines, and health-care robots, among other applications. The book's many diagrams and easy-to-understand descriptions of AI programs will help the casual reader gain an understanding of how these and other AI systems actually work. Its thorough (but unobtrusive) end-of-chapter notes containing citations to important source materials will be of great use to AI scholars and researchers. This book promises to be the definitive history of a field that has captivated the imaginations of scientists, philosophers, and writers for centuries.*