Le Computing The Springer International Series In Engineering And Computer Science

Winner of a 2013 CHOICE Outstanding Academic Title Award The third edition of a groundbreaking reference, The Human-Computer Interaction Handbook: Fundamentals, Evolving Technologies, and Emerging Applications raises the bar for handbooks in this field. It is the largest, most complete compilation of HCI theories, principles, advances, case st

Suitable for self study Use real examples and real data sets that will be familiar to the audience Introduction to the bootstrap is included – this is a modern method missing in many other books

This book constitutes the refereed post-conference proceedings of the 7th International Conference on Nature of Computation and Communication, ICTCC 2021, held in October 2021. Due to COVID-19 pandemic the conference was held virtually. The 17 revised full papers presented were carefully selected from 43 submissions. The papers of ICTCC 2021 cover formal methods for self-adaptive systems and discuss natural approaches and techniques for natural computing systems and their applications.

Explanation-Based Learning (EBL) can generally be viewed as substituting background knowledge for the large training set of exemplars needed by conventional or empirical machine learning systems. The background knowledge is used automatically to construct an explanation of a few training exemplars. The learned concept is generalized directly from this explanation. The first EBL systems of the modern era were Mitchell's LEX2, Silver's LP, and De Jong's KIDNAP natural language system. Two of these systems, Mitchell's and De Jong's, have led to extensive follow-up research in EBL. This book outlines the significant steps in EBL research of the Illinois group under De Jong. This volume describes theoretical research and computer systems that use a broad range of formalisms: schemas, production systems, qualitative reasoning models, non-monotonic logic, situation calculus, and some home-grown ad hoc representations. This has been done consciously to avoid sacrificing the ultimate research significance in favor of the expediency of any particular formalism. The ultimate goal, of course, is to adopt (or devise) the right formalism.

Nature of Computation and Communication7th EAI International Conference, ICTCC 2021, Virtual Event, October 28–29, 2021, ProceedingsSpringer Nature

Nature of Computation and Communication

Distributed Computing and Internet Technology

9th Conference, JCC-BD&ET, La Plata, Argentina, June 22-25, 2021, Proceedings

Building Ontologies with Basic Formal Ontology

Cloud Computing, Big Data & Emerging Topics

Investigating Explanation-Based Learning

"Neutrosophic Sets and Systems" has been created for publications on advanced studies in neutrosophy, neutrosophic set, neutrosophic logic, neutrosophic probability, neutrosophic statistics that started in 1995 and their applications in any field, such as the neutrosophic structures developed in algebra, geometry, topology, etc.

These are the proceedings of the fifth international conference, Formal Methods in Computer-Aided Design (FMCAD), held 15-17 November 2004 in Austin, Texas, USA. The conference provides a forum for presenting state-of-the-art tools, methods, algorithms, and theory for the application of formalized reasoning to all aspects of computer-aided system design, including specification, verification, synthesis, and testing. FMCAD's heritage dates back 20 years to some of the earliest conferences on the subject of formal reasoning and computer-aided design. Since 1996,FMCAD has assumed its present form, held biennially in North America, alternating with its sister conference CHARME in Europe. We are delighted to report that our research community continues to flourish: we received 69 paper submissions, with many more high-quality papers than we had room to accept. After a rigorous review process, in which each paper received at least three, and typically four or more, independent reviews, we accepted 29 papers for the conference and inclusion in this volume. The conference also included invited talks from Greg Spirakis of Intel Corporation and Wayne Wolf of Princeton University. A conference of this size requires the contributions of numerous people. On the technical side, we are grateful to the program committee and the additional reviewers for their countless hours reviewing submissions and ensuring the intellectual quality of the conference. We would also like to thank the steering committee for their wisdom and guidance. On the logistical side, we thank Christa Mace for designing our website and attending to countless organizational tasks. And we thank our corporate sponsors - AMD, IBM, Intel, and Synopsys - for financial support that helped make this conference possible.

This book constitutes the refereed post-conference proceedings of 9 workshops held at the 35th International ISC High Performance 2021 Conference, in Frankfurt, Germany, in June-July 2021: Second International Workshop on the Application of Machine Learning Techniques to Computational Fluid Dynamics and Solid Mechanics Simulations and Analysis; HPC-IODC: HPC I/O in the Data Center Workshop; Compiler-assisted Correctness Checking and Performance Optimization for HPC; Machine Learning on HPC Systems;4th International Workshop on Interoperability of Supercomputing and Cloud Technologies;2nd International Workshop on Monitoring and Operational Data Analytics;16th Workshop on Virtualization in High-Performance Cloud Computing; Deep Learning on Supercomputers; 5th International Workshop on In Situ Visualization. The 35 papers included in this volume were carefully reviewed and selected. They cover all aspects of research, development, and application of large-scale, high performance experimental and commercial systems. Topics include high-performance computing (HPC), computer architecture and hardware, programming models, system software, performance analysis and modeling, compiler analysis and optimization techniques, software sustainability, scientific applications, deep learning.

This book constitutes the proceedings of the 6th International Conference on Business Intelligence, CBI 2021, which took place in Beni Mellal, Morocco, during May 27-29, 2021. The 26 full and 6 poster papers included in this book were carefully reviewed and selected from a total of 60 submissions. They were organized in topical sections as follows: decision support, information systems and NLP; big data, datamining, Web services and Web semantics; optimization and decision support; signal, image and vision computing; networking, cloud computing

and networking architectures in cloud.

This book constitutes the refereed post-conference proceedings of the International Conferences ICCASA and ICTCC 2019, held in November 2019 in My Tho, Vietnam. The 20 revised full papers presented were carefully selected from 33 submissions. The papers of ICCASA cover a wide spectrum in the area of context-aware-systems. CAS is characterized by its self-facets such as self-organization, self-configuration, self-healing, self-optimization, self-protection used to dynamically control computing and networking functions. The papers of ICTCC cover formal methods for self-adaptive systems and discuss natural approaches and techniques for computation and communication.

Intelligent Computing Paradigm and Cutting-edge Technologies

New Directions in Third Wave Human-Computer Interaction: Volume 1 - Technologies

Proceedings of the International Conference GTSD2020

Stochastically-Based Semantic Analysis

Medical Image Computing and Computer Assisted Intervention – MICCAI 2020

Human Computer Interaction Handbook

17th International Conference, ICDCIT 2021, Bhubaneswar, India, January 7– 10, 2021, Proceedings

This book presents a detailed review of the state of the art in deep learning approaches for semantic object detection and segmentation in medical image computing, and large-scale radiology database mining. A particular focus is placed on the application of convolutional neural networks, with the theory supported by practical examples. Features: highlights how the use of deep neural networks can address new questions and protocols, as well as improve upon existing challenges in medical image computing; discusses the insightful research experience of Dr. Ronald M. Summers; presents a comprehensive review of the latest research and literature; describes a range of different methods that make use of deep learning for object or landmark detection tasks in 2D and 3D medical imaging; examines a varied selection of techniques for semantic segmentation using deep learning principles in medical imaging; introduces a novel approach to interleaved text and image deep mining on a large-scale radiology image database.

As the first extensive exploration of contemporary third wave HCI, this handbook covers key developments at the leading edge of human-computer interactions. Now in its second decade as a major current of HCI research, the third wave integrates insights from the humanities and social sciences to emphasize human dimensions beyond workplace efficiency or cognitive capacities. The earliest HCI work was strongly based on the concept of human-machine coupling, which expanded to workplace collaboration as computers came into mainstream professional use. Today HCI can connect to almost any human experience because there are new applications for every aspect of daily life. Volume 1 – Technologies covers technical application areas related to artificial intelligence, metacreation, machine learning, perceptual computing, 3D printing, critical making, physical computing, the internet of things, accessibility, sonification, natural language processing, multimodal display, and virtual reality.

La mise en place d'un logiciel sans défaut reste primordiale pour plusieurs domaines qui requièrent des applications dites de sécurité comme les transports. La réalisation d'un modèle formel est l'approche la plus efficace pour atteindre l'objectif du zéro défaut, que ce soit en termes de temps ou de maîtrise de la complexité. Ce modèle permet d'analyser et de vérifier le comportement d'un logiciel. Cet ouvrage présente la méthode B, une méthode formelle s'appuyant sur la preuve de propriétés qui, sur la base d'une spécification et de la notion de raffinement, permet d'aller jusqu'à la production automatique de code. Différents outils découlant de cette méthode ainsi que des exemples concrets d'utilisations industrielles de différentes tailles sont aussi exposés dans des domaines tels que l'avionique ou les systèmes manufacturiers.

This book constitutes the refereed proceedings of the 10th International Conference on Games and Learning Alliance, GALA 2021, held in La Spezia, Italy, in December 2021. The 21 full papers and 10 short papers were carefully reviewed and selected from 50 submissions. The papers cover a broad spectrum of topics: Serious Games Applications; Serious Game to Improve Literacy; Technology used for Serious Games; Serious Game Usage; Serious Games Design.Chapters "Cards and Roles: Co-designing Privacy Serious Games with an Online Role-Playing Boardgame" and "An Authoring Tool to Engage Younger Audiences in the Development of Nature Preservation Games: The G4N Toolkit to Game Design " are available open access under a Creative Commons Attribution 4.0 International License via link.springer.com.

This book is a selected collection of 54 peer-reviewed original scientific research papers of the 5th International Conference on

Green Technology and Sustainable Development (GTSD2020) organised in Vietnam in 2020. It highlights the importance of sustainability as well as promotes up-to-date innovation and research for green development in technologies, economics and education among countries. The conference provides an international platform for researchers, practitioners, policymakers and entrepreneurs to present their advances, knowledge and experience on various interdisciplinary topics related to the theme of "Green technology and sustainable development in industrial revolution 4.0". The book is a valuable resource for researchers, analysts, engineers, practitioners and policymakers who are interested in the latest findings in artificial intelligence, cyber systems, robotics, green energy and power systems, mechanical and computational mechanic models and advanced civil engineering. This book has 05 sessions consisting of both theoretical and practical aspects, and numerical and experimental analyses in various engineering disciplines.

Quantitative Magnetic Resonance Imaging

Handbook of Medical Image Computing and Computer Assisted Intervention

Rough Set-Based Classification Systems

Mobile and Fixed Services

Computational Intelligence Methods for Green Technology and Sustainable Development

Context-Aware Systems and Applications, and Nature of Computation and Communication

Proceedings of the Second International Conference on Innovative Computing and Cutting-edge Technologies (ICICCT 2020)

This book constitutes the revised selected papers of the 9th International Conference on Cloud Computing, Big Data & Emerging Topics, JCC-BD&ET 2021, held in La Plata, Argentina, in June 2021. The 12 full papers and 2 short papers presented were carefully reviewed and selected from a total of 37 submissions. The papers are organized in topical sections on parallel and distributed computing; machine and deep learning; big data; web and mobile computing; visualization.. *The conference was held virtually due to the COVID-19 pandemic.*

The Encyclopedia of Big Data Technologies provides researchers, educators, students and industry professionals with a comprehensive authority over the most relevant Big Data Technology concepts. With over 300 articles written by worldwide subject matter experts from both industry and academia, the encyclopedia covers topics such as big data storage systems, NoSQL database, cloud computing, distributed systems, data processing, data management, machine learning and social technologies, data science. Each peer-reviewed, highly structured entry provides the reader with basic terminology, subject overviews, key research results, application examples, future directions, cross references and a bibliography. The entries are expository and tutorial, making this reference a practical resource for students, academics, or professionals. In addition, the distinguished, international editorial board of the encyclopedia consists of well-respected scholars, each developing topics based upon their expertise.

The seven-volume set LNCS 12261, 12262, 12263, 12264, 12265, 12266, and 12267 constitutes the refereed proceedings of the 23rd International Conference on Medical Image Computing and Computer-Assisted Intervention, MICCAI 2020, held in Lima, Peru, in October 2020. The conference was held virtually due to the COVID-19 pandemic. The 542 revised full papers presented were carefully reviewed and selected from 1809 submissions in a double-blind review process. The papers are organized in the following topical sections: Part I: machine learning methodologies Part II: image reconstruction; prediction and diagnosis; cross-domain methods and reconstruction; domain adaptation; machine learning applications; generative adversarial networks Part III: CAI applications; image registration; instrumentation and surgical phase detection; navigation and visualization; ultrasound imaging; video image analysis Part IV: segmentation; shape models and landmark detection Part V: biological, optical, microscopic imaging; cell segmentation and stain normalization; histopathology image analysis; opthalmology Part VI: angiography and vessel analysis; breast imaging; colonoscopy; dermatology; fetal imaging; heart and lung imaging; musculoskeletal imaging Part VI: brain development and atlases; DWI and tractography; functional brain networks; neuroimaging; positron emission tomography

An introduction to the field of applied ontology with examples derived particularly from biomedicine, covering theoretical components, design practices, and practical applications. In the era of "big data," science is increasingly information driven, and the potential for computers to store, manage, and integrate massive amounts of data has given rise to such new disciplinary fields as biomedical informatics. Applied ontology offers a strategy for the organization of scientific information in computer-tractable form, drawing on concepts not only from computer and information science but also from linguistics, logic, and philosophy. This book provides an introduction to the field of applied ontology that is of particular relevance to biomedicine, covering theoretical components of ontologies, best practices for ontology design, and examples of biomedical ontologies in use. After defining an ontology as a representation of the types of entities in a given domain, the

book distinguishes between different kinds of ontologies and taxonomies, and shows how applied ontology draws on more traditional ideas from metaphysics. It presents the core features of the Basic Formal Ontology (BFO), now used by over one hundred ontology projects around the world, and offers examples of domain ontologies that utilize BFO. The book also describes Web Ontology Language (OWL), a common framework for Semantic Web technologies. Throughout, the book provides concrete recommendations for the design and construction of domain ontologies. This book constitutes the refereed proceedings of the Third International Conference on Pervasive Computing, PERVASIVE 2005, held in Munich, Germany in May 2005. The 20 revised full papers presented were carefully reviewed and selected from 130 submissions. The papers are organized in topical sections on location techniques, activity and context, location and privacy, handheld devices, sensor systems, and user interaction.

Computational Collective Intelligence
Service-Oriented Computing
8th EAI International Conference, ICCASA 2019, and 5th EAI International Conference, ICTCC 2019, My Tho City, Vietnam, November 28-29, 2019, Proceedings
Neutrosophic Sets and Systems: An International Book Series in Information Science and Engineering, vol. 24 / 2018
7th EAI International Conference, ICTCC 2021, Virtual Event, October 28-29, 2021, Proceedings
The Convergence of Telecom and Internet: Technologies and Ecosystems
Business Intelligence

Designing Distributed Learning Environments with Intelligent Software Agents reports on the most recent advances in agent technologies for distributed learning. Chapters are devoted to the various aspects of intelligent software agents in distributed learning, including the methodological and technical issues on where and how intelligent agents can contribute to meeting distributed learning needs today and tomorrow. This book benefits the AI (artificial intelligence) and educational communities in their research and development, offering new and interesting research issues surrounding the development of distributed learning environments in the Semantic Web age. In addition, the ideas presented in the book are applicable to other domains such as Agent-Supported Web Services, distributed business process and resource integration, computer-supported collaborative work (CSCW) and e-Commerce.

This proceedings book contains 37 papers selected from the submissions to the 6th International Conference on Computer Science, Applied Mathematics and Applications (ICCSAMA 2019), which was held on 19-20 December, 2019, in Hanoi, Vietnam. The book covers theoretical and algorithmic as well as practical issues connected with several domains of Applied Mathematics and Computer Science, especially Optimization and Data Science. The content is divided into four major sections: Nonconvex Optimization, DC Programming & DCA, and Applications; Data Mining and Data Processing; Machine Learning Methods and Applications; and Knowledge Information and Engineering Systems. Researchers and practitioners in related areas will find a wealth of inspiring ideas and useful tools & techniques for their own work.

This book constitutes the proceedings of the 19th International Conference on Service-Oriented Computing, ICSOC 2020, which is held virtually in November 2021. The 29 full, 28 short, and 3 vision papers included in this volume were carefully reviewed and selected from 189 submissions. They were organized in topical sections named: Blockchains and smart contracts, Architectures, microservices and APIs, Applications, Internet-of-Things, crowdsourced, social, and conversational services, Service composition and recommendation, Cloud computing, and Edge computing.

Handbook of Medical Image Computing and Computer Assisted Intervention presents important advanced methods and state-of-the art research in medical image computing and computer assisted intervention, providing a comprehensive reference on current technical approaches and solutions, while also offering proven algorithms for a variety of essential medical imaging applications. This book is written primarily for university researchers, graduate students and professional practitioners (assuming an elementary level of linear algebra, probability and statistics, and signal processing) working on medical image computing and computer assisted intervention. Presents the key research challenges in medical image computing and computer-assisted intervention Written by leading authorities of the Medical Image Computing and Computer Assisted Intervention (MICCAI) Society Contains state-of-the-art technical approaches to key challenges Demonstrates proven algorithms for a whole range of essential medical imaging applications Includes source codes for use in a plug-and-play manner Embraces future directions in the fields of medical image computing and computer-assisted intervention

This book, "3D Printing", is divided into two parts: the first part is devoted to the relationship between 3D printing and engineering, and the second part shows the impact of 3D printing on the medical sector in general. There are five sections in the first part (sections are dedicated to stereolithography, new techniques of high-resolution 3D printing, application of 3D printers in architecture and civil

engineering, the additive production with the metal components and the management of production by using previously mentioned technology in more complex ways). There are four chapters in the second part with the following topics: education of medical staff through surgical simulations, tissue engineering and potential applications of 3D printing in ophthalmology and orthopedics.

Encyclopedia of Big Data Technologies

23rd International Conference, Lima, Peru, October 4–8, 2020, Proceedings, Part I

Formal Methods in Computer-Aided Design

Advanced Computational Methods for Knowledge Engineering

3D Printing

Deep Learning and Convolutional Neural Networks for Medical Image Computing

Emerging Topics and Technologies in Information Systems

This text discusses how to find the location of mobile devices in the wireless Internet, specifically those that involve the determination of the geographic location of mobile devices. It offers exclusive coverage of the technical aspects of privacy such as linkability, anonymity and identity management.

This book constitutes the proceedings of the 17th International Conference on Distributed Computing and Internet Technology, ICDCIT 2020, held in Bhubaneswar, India, in January 2021. The 13 full papers presented together with 4 short papers were carefully reviewed and selected from 99 submissions. The papers were organized in topical sections named: invited talks, cloud computing and networks, distributed algorithms, concurrency and parallelism, graph algorithms and security, social networks and machine learning, and short papers.

Dependable Network Computing provides insights into various problems facing millions of global users resulting from the `internet revolution'. It covers real-time problems involving software, servers, and large-scale storage systems with adaptive fault-tolerant routing and dynamic reconfiguration techniques. Also included is material on routing protocols, QoS, and dead- and live-lock free related issues. All chapters are written by leading specialists in their respective fields. Dependable Network Computing provides useful information for scientists, researchers, and application developers building networks based on commercially off-the-shelf components.

This book aims to bring together Researchers, Scientists, Engineers, Scholars and Students in the areas of computer engineering and information technology, and provides a forum for the dissemination of original research results, new ideas, Research and development, practical experiments, which concentrate on both theory and practices, for the benefit of the society. The book also provides a premier interdisciplinary platform for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of Computer Science and Information Technology in the context of Distributed computing, Big data, High performance computing, Internet-of-Things, and digital pedagogy. It is becoming increasingly important to develop adaptive, intelligent computing-centric, energy-aware, secure and privacy-aware mechanisms in high performance computing and IoT applications. This book aspires to convey researchers' experiences, to present excellent result analysis, future scopes, and challenges facing the field of computer science, information technology, telecommunication, and digital pedagogy. This book aims to attract researchers and practitioners who are working in Information Technology and Computer Science. This book is about basics and high level concepts regarding intelligent computing paradigm, communications, and digital learning process. The book serves as a useful guide for Undergraduates, Postgraduates and Research Scholar in the field of Computer Science, Information Technology, and Electronics Engineering. We believe that this volume not only presents novel and interesting ideas but also will stimulate interesting discussions from the participants and inspire new ideas.

"This book communicates the various challenges and great opportunities that information systems research produces"--Provided by publisher.

High Performance Computing

Evolution of Telecommunication Services

Dependable Network Computing

Designing Distributed Learning Environments with Intelligent Software Agents

Monte Carlo Strategies in Scientific Computing

13th International Conference, ICCCI 2021, Rhodes, Greece, September 29 – October 1, 2021, Proceedings

Geographic Location in the Internet

Coded-Modulation Techniques for Fading Channels provides the reader with a sound background for the application of bandwidth-efficient coded-modulation techniques in fading channels. The bo recent developments in the field, which has grown rapidly in recent years, and provides a solid frame of reference for further research in this area. During the past decade there has been a prolif

bandwidth-efficient coded-modulation techniques. The primary advantage of these schemes over modulation schemes employing traditional error correcting codes is their ability to improve the pe system without bandwidth expansion. This property makes them a suitable choice for channels which are limited in both power and bandwidth. A typical example of such channels is a mobile sate to accommodate a large number of users in a given bandwidth with a power which is constrained by the physical size of the satellite and by the vehicle's antenna. Coded-Modulation Techniques f excellent reference for researchers and practicing engineers, and may be used as a text for advanced courses on the subject.

Quantitative Magnetic Resonance Imaging is a 'go-to' reference for methods and applications of quantitative magnetic resonance imaging, with specific sections on Relaxometry, Perfusion, and Dif with an explanation of the basic techniques for mapping the tissue property in question, including a description of the challenges that arise when using these basic approaches. For properties wh ways, each of these basic methods will be described in separate chapters. Following the basics, a chapter in each section presents more advanced and recently proposed techniques for quantitati concluding chapter on clinical applications. The reader will learn: The basic physics behind tissue property mapping How to implement basic pulse sequences for the quantitative measurement of ti and limitations to the basic and more rapid methods for mapping the magnetic relaxation properties T1, T2, and T2* The pros and cons for different approaches to mapping perfusion The methods and how this approach can be used to generate diffusion tensor maps and more complex representations of diffusion How flow, magneto-electric tissue property, fat fraction, exchange, elastogra are performed How fast imaging approaches including parallel imaging, compressed sensing, and Magnetic Resonance Fingerprinting can be used to accelerate or improve tissue property mapping mapping is used clinically in different organs Structured to cater for MRI researchers and graduate students with a wide variety of backgrounds Explains basic methods for quantitatively measuri including T1, T2, perfusion, diffusion, fat and iron fraction, elastography, flow, susceptibility - enabling the implementation of pulse sequences to perform measurements Shows the limitations of t challenges to the clinical adoption of these traditional methods, presenting the latest research in rapid quantitative imaging which has the possibility to tackle these challenges Each section conta basics of novel ideas for quantitative mapping, such as compressed sensing and Magnetic Resonance Fingerprinting-based approaches

This book constitutes the refereed post-conference proceedings of 10 workshops held at the 35th International ISC High Performance 2020 Conference, in Frankfurt, Germany, in June 2020: Firs Correctness Checking and Performance Optimization for HPC (C3PO); First International Workshop on the Application of Machine Learning Techniques to Computational Coral Fluid Dynamics Simulations HPC I/O in the Data Center Workshop (HPC-IODC); First Workshop \Machine Learning on HPC Systems" (MLHPCS); First International Workshop on Monitoring and Data Analytics (MODA); 15th Wo Virtualization in High-Performance Cloud Computing (VHPC). The 25 full papers included in this volume were carefully reviewed and selected. They cover all aspects of research, development, and a high performance experimental and commercial systems. Topics include high-performance computing (HPC), computer architecture and hardware, programming models, system software, performa compiler analysis and optimization techniques, software sustainability, scientific applications, deep learning.

Stochastically-Based Semantic Analysis investigates the problem of automatic natural language understanding in a spoken language dialog system. The focus is on the design of a stochastic parse to a conventional rule-based method. Stochastically-Based Semantic Analysis will be of most interest to researchers in artificial intelligence, especially those in natural language processing, compu recognition. It will also appeal to practicing engineers who work in the area of interactive speech systems.

We have reached the double conclusion: that invention is choice, that this choice is imperatively governed by the sense of scientific beauty. Hadamard (1945), Princeton University Press, by permi sources and amplifiers of microwave energy, and all devices for receiving or detecting microwaves, use a semiconductor active element. The development of microwave semiconductor devices, de proceeded from the simpler, two-terminal, devices such as GUNN or IMPATT devices, which originated in the 1960s, to the sophisticated monolithic circuit MESFET three-terminal active elements, microwave field has experienced a renais sance in electrical engineering departments in the last few years, and much of this growth has been associated with microwave semiconductor devices. T has recently developed a well recognized program in microwave engineering. Much of the momentum for this pro gram has been provided by interaction with industrial companies, and the influx o supported students. This program had a need for a course in microwave semiconductor devices, which covered the physical aspects, as well as the aspects of interest to the engineer who incorp It was also felt that it would be im portant to introduce the most recently developed devices (HFETs, HBTs, and other advanced devices) as early as possible.

Signal Processing and Networking for Big Data Applications

Coded-Modulation Techniques for Fading Channels

Pervasive Computing

Fundamentals, Evolving Technologies, and Emerging Applications, Third Edition

Precision Medicine, High Performance and Large-Scale Datasets

A Modern Introduction to Probability and Statistics

ISC High Performance 2020 International Workshops, Frankfurt, Germany, June 21–25, 2020, Revised Selected Papers

Satellite Communications: Mobile and Fixed Services is based on the premise that designers of future satellite systems must take account of the strong competition that satellites face from optical fibers. In future years, satellites will continue to be commercially viable media for telecommunications only if systems designers take account of the unique features that satellites have to offer. Accordingly, Satellite Communications places more emphasis on satellite mobile services and broadcasting, and less emphasis on fixed, point-to-point, high-capacity services than traditional textbooks in the field. Also, an emphasis is given in the book to design issues. Numerous illustative system design examples and numerical problems are provided. The particular attention given to methods of design of satellite mobile communications systems should make it an indispensable resource for workers in this field. The book also contains some recent results of propagation modelling and system design studies which should be of particular value to researchers and designers of satellite systems for mobile communications services. Satellite Communications is suitable for use as a textbook for advanced courses on satellite communications, and is a valuable reference for all those working in the field.

This unique text helps make sense of big data in engineering applications using tools and techniques from signal processing. It presents fundamental signal processing theories and software implementations, reviews current research trends and challenges, and describes the techniques used for analysis, design and optimization. Readers will learn about key theoretical issues such as data modelling and representation, scalable and low-complexity information processing and optimization, tensor and sublinear algorithms, and deep learning and software architecture, and their application to a wide range of engineering scenarios. Applications discussed in detail include wireless networking, smart grid systems, and sensor networks and cloud computing. This is the ideal text for researchers and practising engineers wanting to solve practical problems involving large amounts of data, and for students looking to grasp the fundamentals of big data analytics.

This book constitutes the refereed proceedings of the 13th International Conference on Computational Collective Intelligence, ICCCI 2021, held in September/October 2021. The conference was held virtually due to the COVID-19

pandemic. The 58 full papers were carefully reviewed and selected from 230 submissions. The papers are grouped in topical issues on knowledge engineering and semantic web; social networks and recommender systems; collective decision-making; cooperative strategies for decision making and optimization; data mining and machine learning; computer vision techniques; natural language processing; Internet of Things: technologies and applications; Internet of Things and computational technologies for collective intelligence; computational intelligence for multimedia understanding.

This book provides an up-to-date treatment of the Monte Carlo method and develops a common framework under which various Monte Carlo techniques can be "standardized" and compared. It can be used as a textbook for a graduate-level course on Monte Carlo methods.

In the telecom world, services have usually been conceived with a specific mindset. This mindset has defined the traditional characteristics of these services; services distinguished by their linkage with the access network, tight control over service use (e.g., authentication, billing), lack of deep personalization capabilities (mass services only) and reliance on standardization to achieve end-to-end interoperability between all the actors of the value chain (e.g., operators, platform manufacturers, device manufactures). This book offers insights into this complex but exciting world of telecommunications characterized by constant evolution, and approaches it from technology as well as business perspectives. The book is appropriately structured in three parts: (a) an overview of the state-of-the-art in fixed/mobile NGN and standardization activities; (b) an analysis of the competitive landscape between operators, device manufactures and OTT providers, emphasizing why network operators are challenged on their home turf; and (c) opportunities for business modeling and innovative telecom service offers.

6th International Conference, CBI 2021, Beni Mellal, Morocco, May 27–29, 2021, Proceedings

Mise en oeuvre de la méthode B ; Traité RTA, série Informatique et Systèmes d'Information

10th International Conference, GALA 2021, La Spezia, Italy, December 1–2, 2021, Proceedings

ISC High Performance Digital 2021 International Workshops, Frankfurt am Main, Germany, June 24 – July 2, 2021, Revised Selected Papers

Third International Conference, PERVASIVE 2005, Munich, Germany, May 8-13, 2005, Proceedings

5th International Conference, FMCAD 2004, Austin, Texas, USA, November 15-17, 2004, Proceedings

19th International Conference, ICSOC 2021, Virtual Event, November 22–25, 2021, Proceedings

This book demonstrates an original concept for implementing the rough set theory in the construction of decision-making systems. It addresses three types of decisions, including those in which the information or input data is insufficient. Though decision-making and classification in cases with missing or inaccurate data is a common task, classical decision-making systems are not naturally adapted to it. One solution is to apply the rough set theory proposed by Prof. Pawlak. The proposed classifiers are applied and tested in two configurations: The first is an iterative mode in which a single classification system requests completion of the input data until an unequivocal decision (classification) is obtained. It allows us to start classification processes using very limited input data and supplementing it only as needed, which limits the cost of obtaining data. The second configuration is an ensemble mode in which several rough set-based classification systems achieve the unequivocal decision collectively, even though the systems cannot separately deliver such results.

Proceedings of the 6th International Conference on Computer Science, Applied Mathematics and Applications, ICCSAMA 2019

Games and Learning Alliance

Satellite Communications

Understanding Why and How

Microwave Semiconductor Devices