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Fluid Power with Applications Linear Algebra with Applications, Alternate Edition Methods in Sustainability Science Digital Signal Processing with Field Programmable Gate Arrays Paint and Coating Testing Manual ESPES Manual of Pediatric Minimally Invasive Surgery Solving Applied Mathematical Problems with MATLAB Manual of Childhood Infections *Manual of Clinical Microbiology* **Minimally Invasive Techniques in Pediatric Urology Paint Testing Manual** Paint Testing Manual **Innovations in Applied Artificial Intelligence Foundations of Intelligent Systems** *Advances in Data Science: Methodologies and Applications* CTI SYMPOSIUM 2018 Alternative Disinfectants and Oxidants Guidance Manual *Clinical Manual of Youth Addictive Disorders* **Building Web Solutions with ASP.NET and ADO.NET Between Data Science and Applied Data Analysis** *Learning Structure and Schemas from Documents* High performance computing for solving large sparse systems. Optical diffraction tomography as a case of study *Modern Web Development* **Fundamentals of Antitrust Law Forthcoming Books Machine Learning: ECML 2004** Reactive Programming for .NET Developers **AB Bookman's Weekly Operative Manual for Endoscopic Abdominal Surgery** *Quantum Gravity, Quantum Cosmology, and Lorentzian Geometries Verbal and Nonverbal Features of Human-Human and Human-Machine Interaction* **Scientific Computing with MATLAB United States Government Publications Monthly Catalog Working with Underachieving Students in Higher Education** Intelligent Techniques and Applications in Science and Technology **Ex-foliations AI*IA 2017 Advances in Artificial Intelligence Digital Libraries and Archives Manual on the Sex Offender and the Law** *Technical Abstract Bulletin*

Machine Learning: ECML 2004 Sep 04 2020 The proceedings of ECML/PKDD 2004 are published in two separate, albeit - tertwined,volumes:theProceedingsofthe 15thEuropeanConferenceonMac- ne Learning (LNAI 3201) and the Proceedings of the 8th European Conferences on Principles and Practice of Knowledge Discovery in Databases (LNAI 3202). The two conferences were co-located in Pisa, Tuscany, Italy during September 20–24, 2004. It was the fourth time in a row that ECML and PKDD were co-located. - ter the successful co-locations in Freiburg (2001), Helsinki (2002), and Cavtat- Dubrovnik (2003), it became clear that researchersstrongly supported the or- nization of a major scienti?c event about machine learning and data mining in Europe. We are happy to provide some statistics about the conferences. 581 di?erent papers were submitted to ECML/PKDD (about a 75% increase over 2003); 280 weresubmittedtoECML2004only,194weresubmittedtoPKDD2004only,and 107weresubmitted to both.Aroundhalfofthe authorsforsubmitted papersare from outside Europe, which is a clear indicator of the increasing attractiveness of ECML/PKDD. The Program Committee members were deeply involved in what turned out to be a highly competitive selection process. We assigned each paper to 3 - viewers, deciding on the appropriate PC for papers submitted to both ECML and PKDD. As a result, ECML PC members reviewed 312 papers and PKDD PC members reviewed 269 papers. We accepted for publication regular papers (45 for ECML 2004 and 39 for PKDD 2004) and short papers that were as- ciated with poster presentations (6 for ECML 2004 and 9 for PKDD 2004). The globalacceptance ratewas14.5%for regular papers(17% if we include the short papers).

Manual on the Sex Offender and the Law Jul 22 2019

Advances in Data Science: Methodologies and Applications Aug 15 2021 Big data and data science are transforming our world today in

ways we could not have imagined at the beginning of the twenty-first century. The accompanying wave of innovation has sparked advances in healthcare, engineering, business, science, and human perception, among others. The tremendous advances in computing power and intelligent techniques have opened many opportunities for managing data and investigating data in virtually every field, and the scope of data science is expected to grow over the next decade. These future research achievements will solve old challenges and create new opportunities for growth and development. Thus, the research presented in this book is interdisciplinary and covers themes embracing emotions, artificial intelligence, robotics applications, sentiment analysis, smart city problems, assistive technologies, speech melody, and fall and abnormal behavior detection. The book is directed to the researchers, practitioners, professors and students interested in recent advances in methodologies and applications of data science. An introduction to the topic is provided, and research challenges and future research opportunities are highlighted throughout.

Foundations of Intelligent Systems Sep 16 2021 This book constitutes the refereed proceedings of the 16th International Symposium on Methodologies for Intelligent Systems, ISMIS 2006. The book presents 81 revised papers together with 3 invited papers. Topical sections include active media human-computer interaction, computational intelligence, intelligent agent technology, intelligent information retrieval, intelligent information systems, knowledge representation and integration, knowledge discovery and data mining, logic for AI and logic programming, machine learning, text mining, and Web intelligence.

Reactive Programming for .NET Developers Aug 03 2020 Get up and running with reactive programming paradigms to build fast, concurrent, and powerful applications About This Book Get to grips with the core design principles of reactive programming Learn about Reactive Extensions for .NET through real-world examples Improve your problem-solving ability by applying functional programming Who This Book Is For If you are a .NET developer who wants to implement all the reactive programming paradigm techniques to create better and more efficient code, then this is the book for you. No prior knowledge of reactive programming is expected. What You Will Learn Create, manipulate, and aggregate sequences in a functional-way Query observable data streams using standard LINQ query operators Program reactive observers and observable collections with C# Write concurrent programs with ease, scheduling actions on various workers Debug, analyze, and instrument Rx functions Integrate Rx with CLR events and custom scheduling Learn Functional Reactive Programming with F# In Detail Reactive programming is an innovative programming paradigm focused on time-based problem solving. It makes your programs better-performing, easier to scale, and more reliable. Want to create fast-running applications to handle complex logics and huge datasets for financial and big-data challenges? Then you have picked up the right book! Starting with the principles of reactive programming and unveiling the power of the pull-programming world, this book is your one-stop solution to get a deep practical understanding of reactive programming techniques. You will gradually learn all about reactive extensions, programming, testing, and debugging observable sequence, and integrating events from CLR data-at-rest or events. Finally, you will dive into advanced techniques such as manipulating time in data-flow, customizing operators and providers, and exploring functional reactive programming. By the end of the book, you'll know how to apply reactive programming to solve complex problems and build efficient programs with reactive user interfaces. Style and approach This is a concise reference manual for reactive programming with Rx for C# and F# using real-world, practical examples.

Solving Applied Mathematical Problems with MATLAB Apr 23 2022 This textbook presents a variety of applied mathematics topics in science and engineering with an emphasis on problem solving techniques using MATLAB. The authors provide a general overview of the MATLAB language and its graphics abilities before delving into problem solving, making the book useful for readers without prior MATLAB

experi

AI*IA 2017 Advances in Artificial Intelligence Sep 23 2019 This book constitutes the refereed proceedings of the 16th International Conference of the Italian Association for Artificial Intelligence, AI*IA 2017, held in Bari, Italy, in November 2017. The 37 full papers presented were carefully reviewed and selected from 91 submissions. The papers are organized in topical sections on applications of AI; natural language processing; knowledge representation and reasoning; knowledge engineering, ontologies and the semantic web; machinelearning; philosophical foundations, metacognitive modeling and ethics; and planning and scheduling.

Learning Structure and Schemas from Documents Feb 09 2021 The rapidly growing volume of available digital documents of various formats and the possibility to access these through Internet-based technologies, have led to the necessity to develop solid methods to properly organize and structure documents in large digital libraries and repositories. Due to the extremely large volumes of documents and to their unstructured form, most of the research efforts in this direction are dedicated to automatically infer structure and schemas that can help to better organize huge collections of documents and data. This book covers the latest advances in structure inference in heterogeneous collections of documents and data. The book brings a comprehensive view of the state-of-the-art in the area, presents some lessons learned and identifies new research issues, challenges and opportunities for further research agenda and developments. The selected chapters cover a broad range of research issues, from theoretical approaches to case studies and best practices in the field. Researcher, software developers, practitioners and students interested in the field of learning structure and schemas from documents will find the comprehensive coverage of this book useful for their research, academic, development and practice activity.

Alternative Disinfectants and Oxidants Guidance Manual Jun 13 2021

Ex-foliations Oct 25 2019 Terry Harpold offers a sophisticated consideration of technologies of reading in the digital age.

Digital Libraries and Archives Aug 23 2019 This book constitutes the thoroughly refereed proceedings of the 8th Italian Research Conference on Digital Libraries, held in Bari, Italy, in February 2012. The 22 full papers, included together with 4 panel papers, were selected from extended versions of the presentations given at the conference, following an additional round of reviewing and revision after the event. The topics covered are as follows: legacy documents and cultural heritage; systems interoperability and data integration; formal and methodological foundations of digital libraries; semantic web and linked data for digital libraries; multilingual information access; digital library infrastructures; metadata creation and management; search engines for digital library systems; evaluation and log data; handling audio/visual and non-traditional objects; user interfaces and visualization; digital library quality; policies and copyright issues in digital libraries; scientific data curation, citation and scholarly publication, user behavior and modeling; and preservation and curation.

Quantum Gravity, Quantum Cosmology, and Lorentzian Geometries Apr 30 2020

Technical Abstract Bulletin Jun 20 2019

Manual of Childhood Infections Mar 22 2022 This manual gives information on the causative organisms, epidemiology and clinical features of all important childhood infections. It includes guidance on the clinical management of the infections and on steps to be taken to prevent future cases.

Paint Testing Manual Nov 18 2021

Minimally Invasive Techniques in Pediatric Urology Jan 20 2022 In the last 10 years, the management of paediatric urological pathologies has been radically transformed; over 70% of all cases can now be treated with minimally invasive techniques. This book is unique in its format, because for each pathology it explores all MIS techniques available for its treatment (laparoscopy, retroperitoneoscopy, robotics, prone position, pneumovesicoscopy, endourology, laser, fetoendoscopy, etc.). Each technique is described in a dedicated chapter, which includes a video of the procedure that can be viewed online. Written by internationally renowned paediatric urology experts, the book offers a valuable toolkit for surgeons,

paediatricians and urologists.

ESPES Manual of Pediatric Minimally Invasive Surgery May 24 2022 This book is devoted to all the aspects of pediatric minimally invasive surgery and is written under the patronage of the European Society of Pediatric Endoscopic Surgery (ESPES) with the participation of leading international experts on Pediatric MIS. Comprising more than 50 chapters, the book begins with an introductory section describing the general and technical aspects of MIS approaches including laparoscopy, thoracoscopy, retroperitoneoscopy and robotic surgery. The main part of the book is divided into five subsections, each of which focuses on a specific system: thorax, abdomen, urology, gynecology and varia. For each subsection, the book examines several pathologies, accurately describing their clinical and diagnostic aspects and providing detailed information on the operative techniques, tips and tricks used in their treatment. Further, the book addresses potential complications in MIS and better ways to manage and prevent them. The volume will be of interest for pediatric surgeons, pediatric urologists or other professionals that need to access accurate descriptions of the MIS approaches adopted for the different surgical pathologies. At the same time, it addresses the needs of novices, including trainees, looking for general information on the management of the various diseases encountered in the pediatric population.

Fundamentals of Antitrust Law Nov 06 2020 The hands-on guide to antitrust issues that todayand’s courts confront most often, with guidance on developing litigation strategy, counseling clients on compliance, representing clients before regulators, and advising on mergers and acquisitions; confidently advise clients on Sherman Act compliance, Hart Scott Rodino, distribution and pricing issues, and complex commercial litigation. By Herbert Hovenkamp and Phillip E. Areeda. Now published in a single-volume with an annual update, Fundamentals of Antitrust Law, Fourth Edition provides sophisticated coverage of the topics most cited or litigated in the field. Whether you are developing litigation strategy, counseling clients on compliance, representing clients before regulators, or advising on mergers and acquisitions, Fundamentals of Antitrust Law, Fourth Edition has all the information you need, at your fingertips. Turn to this invaluable volume when: Advising clients on specific aspects to comply with the Sherman Act Developing litigation strategies Representing clients before regulators Advising clients on mergers and acquisitions Advising clients on Hart Scott Rodino Handling complex commercial litigation Handling distribution and pricing issues for clients And more Organized by issue, Fundamentals of Antitrust Law, Fourth Edition covers the full range of anticompetitive conduct, as well as procedural issues. It is keyed to the leading Areeda and& Hovenkamp treatise, Antitrust Law: An Analysis of Antitrust Principles and Their Application and includes extensive cross references, organization that follows the main work, and a thorough index that allow you to get to the information you need quickly and easily.

Linear Algebra with Applications, Alternate Edition Sep 28 2022 Building upon the sequence of topics of the popular 5th Edition, Linear Algebra with Applications, Alternate Seventh Edition provides instructors with an alternative presentation of course material. In this edition earlier chapters cover systems of linear equations, matrices, and determinates. The vector space Rn is introduced in chapter 4, leading directly into general vector spaces and linear transformations. This order of topics is ideal for those preparing to use linear equations and matrices in their own fields. New exercises and modern, real-world applications allow students to test themselves on relevant key material and a MATLAB manual, included as an appendix, provides 29 sections of computational problems.

Modern Web Development Dec 07 2020 Master powerful new approaches to web architecture, design, and user experience This book presents a pragmatic, problem-driven, user-focused approach to planning, designing, and building dynamic web solutions. You’ll learn how to gain maximum value from Domain-Driven Design (DDD), define optimal supporting architecture, and succeed with modern UX-first design approaches. The author guides you through choosing and implementing specific technologies and addresses key user-experience topics,

including mobile-friendly and responsive design. You'll learn how to gain more value from existing Microsoft technologies such as ASP.NET MVC and SignalR by using them alongside other technologies such as Bootstrap, AJAX, JSON, and JQuery. By using these techniques and understanding the new ASP.NET Core 1.0, you can quickly build advanced web solutions that solve today's problems and deliver an outstanding user experience. Microsoft MVP Dino Esposito shows you how to: Plan websites and web apps to mirror real-world social and business processes Use DDD to dissect and master the complexity of business domains Use UX-Driven Design to reduce costs and give customers what they want Realistically compare server-side and client-side web paradigms Get started with the new ASP.NET Core 1.0 Simplify modern visual webpage construction with Bootstrap Master practical, efficient techniques for running ASP.NET MVC projects Consider new options for implementing persistence and working with data models Understand Responsive Web Design's pros, cons, and tradeoffs Build truly mobile-friendly, mobile-optimized websites About This Book For experienced developers and solution architects who want to plan and develop web solutions more effectively Assumes basic familiarity with the Microsoft web development stack

Operative Manual for Endoscopic Abdominal Surgery Jun 01 2020

Manual of Clinical Microbiology Feb 21 2022 First published in 1970, previous edition in 1985. MCM5 is enlarged and restructured to keep pace with new developments and technology. Users must have knowledge of the fundamentals of microbiology and possess basic laboratory skills. Operational and organizational chapters address topics ranging from collecting and managing clinical specimens to selecting the best methodological approach for determining strain identity. Subsequent chapters deal with specific microorganisms as etiologic agents and with the clinical microbiologic laboratory in various treatment and research functions. Member price, $64. Annotation copyrighted by Book News, Inc., Portland, OR

Verbal and Nonverbal Features of Human-Human and Human-Machine Interaction Mar 30 2020 This book is dedicated to the dreamers, their dreams, and their perseverance in research work. This volume brings together the selected and peer–reviewed contributions of the p- ticipants at the COST 2102 International Conference on Verbal and Nonverbal F- tures of Human–Human and Human–Machine Interaction, held in Patras, Greece, October 29–31, 2007, hosted by the 19th IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2008). The conference was sponsored by COST (European Cooperation in the Field of Scientific and Technical Research, www.cost.esf.org) in the domain of Information and Communication Technologies (ICT) for disseminating the advances of the - search activity developed within COST Action 2102: "Cross-Modal Analysis of V- bal and Nonverbal Communication"(www.cost2102.eu). COST Action 2102 is a network of about 60 European and 6 overseas laboratories whose aim is to develop "an advanced acoustical, perceptual and psychological analysis of verbal and non-verbal communication signals originating in spontaneous face-to-face interaction, in order to identify algorithms and automatic procedures capable of identifying the human emotional states. Particular care is devoted to the recognition of emotional states, gestures, speech and facial expressions, in antici- tion of the implementation of intelligent avatars and interactive dialogue systems that could be exploited to improve user access to future telecommunication services"(see COST 2102 Memorandum of Understanding (MoU) www.cost2102.eu).

United States Government Publications Monthly Catalog Jan 28 2020

Fluid Power with Applications Oct 29 2022 Fluid Power with Applications, Seventh Edition presents broad coverage of fluid power technology in a readable and understandable fashion. An extensive array of industrial applications is provided to motivate and stimulate students' interest in the field. Balancing theory and applications, this book is updated to reflect current technology; it focuses on the design, analysis, operation, and maintenance of fluid power systems. It also includes an Automation Studio(tm) CD (produced by Famic Technologies Inc.) that contains simulations and animations of many of

the fluid power circuits presented throughout the book as well as a variety of additional fluid power applications.

Paint and Coating Testing Manual Jun 25 2022

Methods in Sustainability Science Aug 27 2022 Methods in Sustainability Science: Assessment, Prioritization, Improvement, Design and Optimization presents cutting edge, detailed methodologies needed to create sustainable growth in any field or industry, including life cycle assessments, building design, and energy systems. The book utilized a systematic structured approach to each of the methodologies described in an interdisciplinary way to ensure the methodologies are applicable in the real world, including case studies to demonstrate the methods. The chapters are written by a global team of authors in a variety of sustainability related fields. Methods in Sustainability Science: Assessment, Prioritization, Improvement, Design and Optimization will provide academics, researchers and practitioners in sustainability, especially environmental science and environmental engineering, with the most recent methodologies needed to maintain a sustainable future. It is also a necessary read for postgraduates in sustainability, as well as academics and researchers in energy and chemical engineering who need to ensure their industrial methodologies are sustainable. Provides a comprehensive overview of the most recent methodologies in sustainability assessment, prioritization, improvement, design and optimization Sections are organized in a systematic and logical way to clearly present the most recent methodologies for sustainability and the chapters utilize an interdisciplinary approach that covers all considerations of sustainability Includes detailed case studies demonstrating the efficacies of the described methods

Building Web Solutions with ASP.NET and ADO.NET Apr 11 2021 Most Web applications follow a simple “3F” pattern: fetch, format, and forward to the browser. With this in-depth guide, you'll take your ASP.NET and ADO.NET skills to the next level and learn key techniques to develop more complex Web applications. Discover how to build applications for ad-hoc and effective Web reporting, applications that work disconnected from the data source and use XML to communicate with non-.NET systems, and general-purpose applications that take advantage of the data abstraction of ADO.NET. Along the way, you'll learn how to take advantage of code reusability, user controls, code-behind, custom Web controls, and other time-saving techniques employed by ASP.NET experts. Topics covered include: Data-bound .NET controls Templated and editable data grids Code reusability in .NET Advanced reporting Disconnected applications Interoperable applications XML Web services .NET Managed Providers CD-ROM FEATURES: A fully searchable electronic copy of the book Sample code written in Microsoft® Visual C#™ .NET and Visual Basic® .NET A Note Regarding the CD or DVD The print version of this book ships with a CD or DVD. For those customers purchasing one of the digital formats in which this book is available, we are pleased to offer the CD/DVD content as a free download via O'Reilly Media's Digital Distribution services. To download this content, please visit O'Reilly's web site, search for the title of this book to find its catalog page, and click on the link below the cover image (Examples, Companion Content, or Practice Files). Note that while we provide as much of the media content as we are able via free download, we are sometimes limited by licensing restrictions. Please direct any questions or concerns to booktech@oreilly.com.

Paint Testing Manual Dec 19 2021

Clinical Manual of Youth Addictive Disorders May 12 2021 Thoroughly updated and expanded, the book focuses on the clinical implications of beginning substance use and the pathways to substance use disorders (SUDs) and coexisting disorders among adolescents and college-age emerging adults (ages 12--25 years). This new manual not only captures the advances made in the youth substance use and SUD domains covered in the previous manual, but also includes new and critically important topics that have emerged.

Innovations in Applied Artificial Intelligence Oct 17 2021 “Intelligent systems are those which produce intelligent o?springs.” AI researchers have been focusing on developing and employing strong methods that are capable

of solving complex real-life problems. The 18th International Conference on Industrial & Engineering Applications of Arti?cial Intelligence & Expert Systems (IEA/AIE 2005) held in Bari, Italy presented such work performed by many scientists worldwide. The Program Committee selected long papers from contributions presenting more complete work and posters from those reporting ongoing research. The Committee enforced the rule that only original and unpublished work could be considered for inclusion in these proceedings. The Program Committee selected 116 contributions from the 271 subm- ted papers which cover the following topics: arti?cial systems, search engines, intelligent interfaces, knowledge discovery, knowledge-based technologies, na- ral language processing, machine learning applications, reasoning technologies, uncertainty management, applied data mining, and technologies for knowledge management. The contributions oriented to the technological aspects of AI and the quality of the papers are witness to a research activity clearly aimed at consolidating the theoretical results that have already been achieved. The c- ference program also included two invited lectures, by Katharina Morik and Roberto Pieraccini. Manypeoplecontributedindi?erentwaystothesuccessoftheconferenceand to this volume. The authors who continue to show their enthusiastic interest in applied intelligence research are a very important part of our success. We highly appreciate the contribution of the members of the Program Committee, as well as others who reviewed all the submitted papers with e?ciency and dedication.

Intelligent Techniques and Applications in Science and Technology Nov 25 2019 This book provides innovative ideas on achieving sustainable development and using green technologies to conserve our ecosystem. Innovation is the successful exploitation of a new idea. Through innovation, we can achieve MORE while using LESS. Innovations in science & technology will not only help mankind as a whole, but also contribute to the economic growth of individual countries. It is essential that the global problem of environmental degradation be addressed immediately, and thus, we need to rethink the concept of sustainable development. Indeed, new environmentally friendly technologies are fundamental to attaining sustainable development. The book shares a wealth of innovative green technological ideas on how to preserve and improve the quality of the environment, and how to establish a more resource-efficient and sustainable society. The book provides an interdisciplinary approach to addressing various technical issues and capitalizing on advances in computing & optimization for scientific & technological development, smart information, communication, bio-monitoring, smart cities, food quality assessment, waste management, environmental aspects, alternative energies, sustainable infrastructure development, etc. In short, it offers valuable information and insights for budding engineers, researchers, upcoming young minds and industry professionals, promoting awareness for recent advances in the various fields mentioned above.

Working with Underachieving Students in Higher Education Dec 27 2019 Working with Underachieving Students in Higher Education: Fostering Inclusion through Narration and Reflexivity presents an international and interdisciplinary approach to the study of the relationships between narrative devices and reflexivity in higher education. Stemming from a collaborative European research project called INSTALL (Innovative Solutions to Acquire Learning to Learn), it focuses on an innovative model aimed at promoting personal resources and reflective competencies in non-traditional, disadvantaged and underachieving students. The book is divided into three parts, with the first providing an exploration of the key theoretical issues that formed the basis of the theoretical and methodological approaches in the INSTALL Project. The second part presents an innovative narrative methodology and discusses the most significant phases of the training process and of the main products. The third and last part provides a broad discussion of higher education policies and of the need to encourage innovation and reforms to improve the academic inclusion of underachieving students. Chapters in the collection examine interventions in Italy, Romania, Ireland and Spain, using a broad transnational, intercultural and comparative

approach, to consider narrative tools using four channels: metaphoric, iconographic, writing, and the body. This book provides theoretical insights and practical methodologies which can be used to enhance quality teaching and innovation, as well as to help adapt to diversity in higher education. It will, therefore, be of key interest to academics, researchers and postgraduate students in the fields of higher education; sociology of education; education policy and politics; cultural and developmental psychology; and narrative research, as well as to those studying counselling, mentoring and coaching

Scientific Computing with MATLAB Feb 27 2020 Scientific Computing with MATLAB®, Second Edition improves students' ability to tackle mathematical problems. It helps students understand the mathematical background and find reliable and accurate solutions to mathematical problems with the use of MATLAB, avoiding the tedious and complex technical details of mathematics. This edition retains the structure of its predecessor while expanding and updating the content of each chapter. The book bridges the gap between problems and solutions through well-grouped topics and clear MATLAB example scripts and reproducible MATLAB-generated plots. Students can effortlessly experiment with the scripts for a deep, hands-on exploration. Each chapter also includes a set of problems to strengthen understanding of the material.

Forthcoming Books Oct 05 2020

Digital Signal Processing with Field Programmable Gate Arrays Jul 26 2022 A practical and fascinating book on a topic at the forefront of communications technology. Field-Programmable Gate Arrays (FPGAs) are on the verge of revolutionizing digital signal processing. Novel FPGA families are replacing ASICs and PDSPs for front-end digital signal processing algorithms at an accelerating rate. The efficient implementation of these algorithms is the main goal of this book. It starts with an overview of today's FPGA technology, devices, and tools for designing state-of-the-art DSP systems. Each of the book's chapter contains exercises. The VERILOG source code and a glossary are given in the appendices.

CTI SYMPOSIUM 2018 Jul 14 2021 Every year, the international transmission and drive community meets up at the International CTI SYMPOSIA – automotive drivetrains, intelligent, electrified – in Germany, China and USA to discuss the best strategies and technologies for tomorrow's cars, busses and trucks. From efficiency, comfort or costs to electrification, energy storage and connectivity, these premier industry meetings cover all the key issues in depth.

Between Data Science and Applied Data Analysis Mar 10 2021 The volume presents new developments in data analysis and classification and gives an overview of the state of the art in these scientific fields and relevant applications. Areas that receive considerable attention in the book are clustering, discrimination, data analysis, and statistics, as well as applications in economics, biology, and medicine it provides recent technical and methodological developments and a large number of application papers demonstrating the usefulness of the newly developed techniques.

AB Bookman's Weekly Jul 02 2020

High performance computing for solving large sparse systems. Optical diffraction tomography as a case of study Jan 08 2021 This thesis, entitled €High Performance Computing for solving large sparse systems. Optical Diffraction Tomography as a case of study€ investigates the computational issues related to the resolution of linear systems of equations which come from the discretization of physical models described by means of Partial Differential Equations (PDEs). These physical models are conceived for the description of the space-temporary behavior of some physical phenomena f(x, y, z, t) in terms of their variations (partial derivative) with respect to the dependent variables of the phenomena. There is a wide variety of discretization methods for PDEs. Two of the most well-known methods are the Finite Difference Method (FDM) and the Finite Element Method (FEM). Both methods result in an algebraic description of the model that can be translated into the approach of a linear system of equations of type (Ax = b), where A is a sparse matrix (a high percentage of zero elements) whose size depends on the required accuracy of the modeled phenomena. This thesis begins with the algebraic description of the model associated with the physical phenomena, and the work herein has been

focused on the design of techniques and computational models that allow the resolution of these linear systems of equations. The main interest of this study is specially focused on models which require a high level of discretization and usually generate sparse matrices, A, which have a highly sparse structure and large size. Literature characterizes these types of problems by their high demanding computational requirements (because of their fine degree of discretization) and the sparsity of the matrices involved, suggesting that these kinds of problems can only be solved using High Performance Computing techniques and architectures. One of the main goals of this thesis is the research of the possible alternatives which allow the implementation of routines to solve large and sparse linear systems of equations using High Performance Computing (HPC). The use of massively parallel platforms (GPUs) allows the acceleration of these routines, because they have several advantages for vectorial computation schemes. On the other hand, the use of distributed memory platforms allows the resolution of problems defined by matrices of enormous size. Finally, the combination of both techniques, distributed computation and multi-GPUs, will allow faster resolution of interesting problems in which large and sparse matrices are involved. In this line, one of the goals of this thesis is to supply the scientific community with implementations based on multi-GPU clusters to solve sparse linear systems of equations, which are the key in many scientific computations. The second part of this thesis is focused on a real physical problem of Optical Diffractional Tomography (ODT) based on holographic information. ODT is a non-damaging technique which allows the extraction of the shapes of objects with high accuracy. Therefore, this technique is very suitable to the in vivo study of real specimens, microorganisms, etc., and it also makes the investigation of their dynamics possible. A preliminary physical model based on a bidimensional reconstruction of the seeding particle distribution in fluids was proposed by J. Lobera and J.M. Coupland. However, its high computational cost (in both memory requirements and runtime) made compulsory the use of HPC techniques to extend the implementation to a three dimensional model. In the second part of this thesis, the implementation and validation of this physical model for the case of three dimensional reconstructions is carried out. In such implementation, the resolution of large and sparse linear systems of equations is required. Thus, some of the algebraic routines developed in the first part of the thesis have been used to implement computational strategies capable of solving the problem of 3D reconstruction based on ODT.