From Ntu Eee

"The book discusses new aspects of digital watermarking in a worldwide context"--Provided by publisher.

High-performance computing (HPC) describes the use of connected computing units to perform complex tasks. It relies on parallelization techniques and algorithms to synchronize these disparate units in order to perform faster than a single processor could, alone. Used in industries from medicine and research to military and higher education, this method of computing allows for users to complete complex data-intensive tasks. This field has undergone many changes over the past decade, and will continue to grow in popularity in the coming years. Innovative Research Applications in Next-Generation High Performance Computing aims to address the future challenges, advances, and applications of HPC and related technologies. As the need for such processors increases, so does the importance of developing new ways to optimize the performance of these supercomputers. This timely publication provides comprehensive information for researchers, students in ICT, program developers, military and government organizations, and business professionals.

The contributed volume aims to explicate and address the difficulties and challenges for the seamless integration of two core disciplines of computer science, i.e., computational intelligence and data mining. Data Mining aims at the automatic discovery of underlying non-trivial knowledge from datasets by applying intelligent analysis techniques. The interest in this research area has experienced a considerable growth in the last years due to two key factors: (a) knowledge hidden in organizations' databases can be exploited to improve strategic and managerial decision-making; (b) the large volume of data managed by organizations makes it impossible to carry out a manual analysis. The book addresses different methods and techniques of integration for enhancing the overall goal of data mining. The book helps to disseminate the knowledge about some innovative, active research directions in the field of data mining, machine and computational intelligence, along with some current issues and applications of related topics.

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difficulties and challenges that of seamless integration of the two core disciplines of computer science, i.e., computational intelligence and data mining. Data Mining aims at the automatic discovery of underlying non-trivial knowledge from datasets by applying intelligent analysis techniques. The interest in this research area has experienced a considerable growth in the last years due to two key factors: (a) knowledge hidden in organizations' databases can be exploited to improve strategic and managerial decision-making; (b) the large volume of data managed by organizations makes it impossible to carry out a manual analysis. The book addresses different methods and techniques of integration for enhancing the overall goal of data mining. The book helps to disseminate the knowledge about some innovative, active research directions in the field of data mining, machine and computational intelligence, along with some current issues and applications of related topics.

Semiconductor Technology (ISTC 2001)

Architecture of Computing Systems – ARCS 2019

Intelligent Sensory Evaluation

Heat Transfer Equipment Design

Proceedings of the International Conference on CIDM, 20-21 December 2014

Hopes on the Line

An early crossroad in life is choosing a field of study at the university. That will lay the foundation for the rest of our lives. This book recorded the career choices of the first batch of 557 engineering graduates from the Nanyang Technological Institute (NTI) as NTU was known in 1985. Engineering was then the only discipline offered. The passage of 25 years yielded deep insights as these pioneers reflected on the impact of their engineering education on their careers.Demonstrating the reach and significance of engineering will arouse the curiousity and imagination of the young, especially those good at maths and science. Our lIfe stories showcase the options open to an engineering graduate. If this book inspires some to take up an engineering education in general and at NTU in particular, it will have achieved its purpose.

From the ox carts and pottery wheels the spacecrafts and disk drives, efficiency and quality has always been dependent on the engineer's ability to anticipate and control the effects of vibration. And while progress in negating the noise, wear, and inefficiency caused by vibration has been made, more is needed.

Modeling and Control of Vibration in Mechanical Systems answers the essential needs of practitioners in systems and control with the most comprehensive resource available on the subject. Written as a reference for those working in high precision systems, this uniquely accessible volume: Differentiates between kinds of vibration and their various characteristics and effects Offers a close-up look at mechanical actuation systems that are achieving remarkably high precision positioning performance Includes techniques for rejecting vibrations of different frequency ranges Covers the theoretical developments and principles of control design with detail elaborate enough that readers will be able to apply the techniques with the help of MATLAB® Details a wealth of practical working examples as well as a number of simulation and experimental results with comprehensive evaluations The modern world's ever-growing spectra of sophisticated engineering systems such as hard disk drives, aeronautic systems, and manufacturing systems have little tolerance for unanticipated vibration of even the slightest magnitude. Accordingly, vibration control continues to draw intensive focus from top control engineers and modelers. This resource demonstrates the remarkable results of that focus to date, and most importantly gives today's researchers the technology that they need to build upon into the future. Chunling Du is currently researching modeling and advanced servo control of hard disk drives at the Data Storage Institute in Singapore. Lihua Xie is the Director of the Centre for Intelligent Machines and a professor at Nanyang Technological University in Singapore.

Here are the refereed proceedings of the 5th International IFIP-TC6 Networking Conference, NETWORKING 2006. The 88 revised full papers and 31 poster papers are organized in topical sections on caching and content management, mobile ad-hoc networks, mobility/handoff, monitoring/measurements, multicast, multimedia, optical networks, peer-to-peer, resource management and QoS, routing, topology and location awareness, traffic engineering, transport protocols, wireless networks, and wireless sensor networks.

This book describes the current state of the art in big-data analytics, from a technology and hardware architecture perspective. The presentation is designed to be accessible to a broad audience, with general knowledge of hardware design and some interest in big-data analytics. Coverage includes emerging technology and devices for data-analytics, circuit design for data-analytics, and architecture and algorithms to support data-analytics. Readers will benefit from the realistic context used by the authors, which demonstrates what works, what doesn't

work, and what are the fundamental problems, solutions, upcoming challenges and opportunities. Provides a single-source reference to hardware architectures for big-data analytics; Covers various levels of big-data analytics hardware design abstraction and flow, from device, to circuits and systems; Demonstrates how non-volatile memory (NVM) based hardware platforms can be a viable solution to existing challenges in hardware architecture for big-data analytics.

One Degree, Many Choices

Secure Data Management

Evolutionary Scheduling

Comprising Those of Zanzibar, Mozambique, the Zambesi, Kafirland, Benguela, Angola, the Congo, the Ogowe, the Cameroons, the Lake Region, Etc

Potential Game Theory

Nanotube-based Devices

This book offers a thorough examination of potential game theory and its applications in radio resource management for wireless communications systems and networking. The book addresses two major research goals: how to identify a given game as a potential game, and how to design the utility functions and the potential functions with certain special properties in order to formulate a potential game. After proposing a unifying mathematical framework for the identification of potential games, the text surveys existing applications of this technique within wireless communications and networking problems found in OFDMA 3G/4G/WiFi networks, as well as next-generation systems such as cognitive radios and dynamic spectrum access networks. Professionals interested in understanding the theoretical aspect of this specialized field will find Potential Game Theory a valuable resource, as will advanced-level engineering students. It paves the way for extensive and rigorous research exploration on a topic whose capacity for practical applications is vast but not yet fully exploited.

Concepts like ubiquitous computing and ambient intelligence that exploit - creasingly interconnected networks and mobility put new requirements on data management. An important element in the connected world is that data will be accessible anytime anywhere. This also has its downside in that it becomes easier to get unauthorized data access. Furthermore, it will become easier to collect, store, and search personal information and endanger people’s privacy. As a result security and privacy of data becomes more and more of an issue. Therefore, secure data management, which is also privacy-enhanced, turns out to be a challenging goal that will also seriously in?uence the acceptance of ub- uitous computing and ambient intelligence concepts by society. With the above in mind, we organized the SDM 2004 workshop to initiate and promote secure data management as one of the important interdisciplinary - search ?elds that brings together people from the security research community and the data management research community. The call for papers attracted 28 submissions both from universities and industry. The program committee selected 15 researchpapers for presentation at the workshop.The technical c- tributions presented at the SDM workshop are collected in this

volume, which,
wehope,willserveasavaluableresearchandreferencebookinyourprofessional life.
Professional Services and CollaborationsASEAN Space ProgramsHistory and Way ForwardSpringer Nature
This book presents the first-ever comprehensive analysis of ASEAN space development programs. Written by prominent actors in the region, it goes beyond a mere exposé of the history, current status and future plans of ASEAN space technology development and utilization programs, by analyzing the conditions in which a space program can be initiated in the region. It does so in two ways: on the one hand, it questions the relevance of and motivations behind the inception of space development programs in developing countries, and on the other hand, it focuses on the very specific context of ASEAN (a highly disaster-prone area shaped by unique political alliances with a distinctive geopolitical ecosystem and enormous economic potential, etc.). Last but not least, after having analyzed established and emerging space programs in the region, it provides concrete recommendations for any regional or extra-regional developing nation eager to gain a foothold in space. As such, this book offers a valuable resource for researchers and engineers in the field of space technology, as well as for space agencies and government policymakers.
Electromagnetic Noise and Quantum Optical Measurements
History and Way Forward
Emerging Technology and Architecture for Big-data Analytics
The Newark Teacher Strikes
Heat Pump Fundamentals
32nd International Conference, Copenhagen, Denmark, May 20–23, 2019, Proceedings
Even since computers were invented, many researchers have been trying to understand how human beings learn and many interesting paradigms and approaches towards emulating human learning abilities have been proposed. The ability of learning is one of the central features of human intelligence, which makes it an important ingredient in both traditional Artificial Intelligence (AI) and emerging Cognitive Science. Machine Learning (ML) draws upon ideas from a diverse set of disciplines, including AI, Probability and Statistics, Computational Complexity, Information Theory, Psychology and Neurobiology, Control Theory and Philosophy. ML involves broad topics including Fuzzy Logic, Neural Networks (NNs), Evolutionary Algorithms (EAs), Probability and Statistics, Decision Trees, etc. Real-world applications of ML are widespread such as Pattern Recognition, Data Mining, Gaming, Bio-science, Telecommunications, Control and Robotics applications. This books reports the latest developments and futuristic trends in ML.

Radar Signal Processing and Its Applications brings together in one place important contributions and up-to-date research results in this fast-moving area. In twelve selected chapters, it describes the latest advances in architectures, design methods, and applications of radar signal processing. The contributors to this work were selected from the leading researchers and practitioners in the field. This work, originally published as Volume 14, Numbers 1–3 of the journal, Multidimensional Systems and Signal Processing, will be valuable to anyone working or researching in the field of radar signal processing. It serves as an excellent reference, providing insight into some of the most challenging issues being examined today.

In today's industrial companies, sensory evaluation is widely used in quality inspection of products, in marketing study and in many other fields such as risk evaluation, investment evaluation and safety evaluation. This book collects a number of representative methods on sensory evaluation. The book reports recent research results and provides a state of the art on intelligent techniques-based sensory evaluation in industrial applications. The focus is especially on theoretical/analytical solutions to the problems of real interest in intelligent techniques with applications to engineers and managers of different industrial departments such as production, quality inspection, product design and development and marketing.

"Presents the fundamentals of momentum, heat, and mass transfer from both a microscopic and a macroscopic perspective. Features a large number of idealized and real-world examples that we worked out in detail."

Directory

To Minimise the Problem in Locating Specific Equipment in EEE Communication Division

EE2001, Circuit Analysis

ASEAN Space Programs

5th European Conference on Computer Vision, Freiburg, Germany, June 2–6, 1998, Proceedings

VLDB 2004 Workshop, SDM 2004, Toronto, Canada, August 30, 2004, Proceedings

This book constitutes the refereed proceedings of the First Asia-Pacific Conference on Web Intelligence, WI 2001, held in Maebashi City, Japan, in October 2001. The 28 revised full papers and 45 revised short papers presented were

carefully reviewed and selected from 153 full-length paper submissions. Also included are an introductory survey and six invited presentations. The book offers topical sections on Web information systems environments and foundations, Web human-media engineering, Web information management, Web information retrieval, Web agents, Web mining and farming, and Web-based applications.

Inspired by the Darwinian framework of evolution through natural selection and adaptation, the field of evolutionary computation has been growing very rapidly, and is today involved in many diverse application areas. This book covers the latest advances in the theories, algorithms, and applications of simulated evolution and learning techniques. It provides insights into different evolutionary computation techniques and their applications in domains such as scheduling, control and power, robotics, signal processing, and bioinformatics. The book will be of significant value to all postgraduates, research scientists and practitioners dealing with evolutionary computation or complex real-world problems.This book has been selected for coverage in:• Index to Scientific & Technical Proceedings (ISTP CDROM version / ISI Proceedings)• CC Proceedings — Engineering & Physical Sciences

For three weeks in 1970 and for eleven weeks in 1971, the schools in Newark, New Jersey, were paralyzed as the teachers went on strike. In the wake of the 1971 strike, almost two hundred were arrested and jailed. The Newark Teachers Union said their members wanted improved education for students. The Board of Education claimed the teachers primarily desired more money. After interviewing more than fifty teachers who were on the front lines during these strikes, historian Steve Golin concludes that another, equally important agenda was on the table, and has been ignored until now. These professionals wanted power, to be allowed a voice in the educational agenda. Through these oral histories, Golin examines the hopes of the teachers as they picketed, risking arrest and imprisonment. Why did they strike? How did the union represent them? How did their action—and incarceration—change them? Did they continue to teach in impoverished schools? Golin also discusses the tensions arising during that period. These include differences in attitudes toward unions among black, Jewish, and Italian teachers; different organizing strategies of men

and women; and conflict between teachers' professional and working-class identities. The first part of the book sets the stage by exploring the experience of teachers in Newark from World War II to the 1970 strike. After covering both strikes, Golin brings the story up to 1995 in the epilogue, which traces the connection between educational reform and union democracy. Teacher Power enhances our understanding of what has worked and what hasn't worked in attempts at reforming urban schools. Equally importantly, the teachers' vivid words and the author's perceptive analysis enables us to view the struggles of not just Newark, but the entire United States during a turbulent time.

This book constitutes the proceedings of the 32nd International Conference on Architecture of Computing Systems, ARCS 2019, held in Copenhagen, Denmark, in May 2019. The 24 full papers presented in this volume were carefully reviewed and selected from 40 submissions. ARCS has always been a conference attracting leading-edge research outcomes in Computer Architecture and Operating Systems, including a wide spectrum of topics ranging from embedded and real-time systems all the way to large-scale and parallel systems. The selected papers are organized in the following topical sections: Dependable systems; real-time systems; special applications; architecture; memory hierarchy; FPGA; energy awareness; NoC/SoC. The chapter 'MEMPower: Data-Aware GPU Memory Power Model' is open access under a CC BY 4.0 license at link.springer.com.

Web Intelligence: Research and Development

Image and Video Retrieval

Gaming and Simulations: Concepts, Methodologies, Tools and Applications

Computer Vision - ECCV'98

Innovative Research and Applications in Next-Generation High Performance Computing

Touting the "strong potential of nanotubes for industrial applications" such as electrical leads, rectifiers, transistors, actuators, and cold electron sources, a team of materials scientists from France, South Korea, Germany, and the U.S. present the 33 papers from the April 2003 meeting. The papers have been organized according to the themes of nanotube devices, synthesis, structural and electrical characterization, functionalization and engineering, and composite devices. Annotation : 2004 Book News, Inc., Portland, OR (booknews.com).

This thesis covers a broad range of interdisciplinary topics concerning electromagnetic-acoustic (EM-Acoustic) sensing and imaging, mainly addressing three aspects: fundamental physics, critical biomedical applications, and sensing/imaging system design. From the fundamental physics perspective, it introduces

several highly interesting EM-Acoustic sensing and imaging methods, which can potentially provide higher sensitivity, multi-contrast capability, and better imaging performance with less distortion. From the biomedical applications perspective, the thesis introduces useful techniques specifically designed to address selected challenging biomedical applications, delivering rich contrast, higher sensitivity and finer spatial resolution. Both phantom and ex vivo experiments are presented, and in vivo validations are progressing towards real clinical application scenarios. From the sensing and imaging system design perspective, the book proposes several promising sensing/imaging prototypes. Further, it offers concrete suggestions that could bring these systems closer to becoming "real" products and commercialization, such as replacing costly lasers with portable laser diodes, or integrating transmitting and data recording on a single board.

Here are the refereed proceedings of the 5th International Conference on Image and Video Retrieval, CIVR 2006, held in Singapore in July 2006. Presents 18 revised full papers and 30 poster papers, together with extended abstracts of 5 papers of 1 special session and those of 10 demonstration papers. These cover interactive image and video retrieval, semantic image retrieval, visual feature analysis, learning and classification, image and video retrieval metrics, and machine tagging.

This book constitutes the refereed proceedings of the International Conference on Biometrics, ICB 2007, held in Seoul, Korea, August 2007. Biometric criteria covered by the papers are assigned to face, fingerprint, iris, speech and signature, biometric fusion and performance evaluation, gait, keystrokes, and others. In addition, the volume also announces the results of the Face Authentication Competition, FAC 2006.

Computational Intelligence in Data Mining - Volume 1

Symposium Held April 22-25, 2003, San Francisco, California, U.S.A.

Radar Signal Processing and Its Applications

Applications in Radio Resource Allocation

A Comparative Grammar of the South African Bantu Language

Theory and Novel Applications of Machine Learning

From the reviews: "Haus book provides numerous insights on topics of wide importance, and contains much material not available elsewhere in book form. [...] an indispensable resource for those working in quantum optics or electronics." Optics & Photonics News

The ?fth campaign of the Cross-Language Evaluation Forum (CLEF) for Eu- pean languages was held from January to September 2004. Participation in the CLEF campaigns has increased each year and CLEF 2004 was no exception: 55 groups submitted results for one or more of the di?erent tracks compared with 42 groups in the previous year. CLEF 2004 also marked a breaking point with respect to previous campaigns. The focus was no longer mainly concentrated on multilingual document retrieval as in previous years but was diversi?ed to include di?erent kinds of text retrieval across languages (e. g. , exact answers in the question-answering track) and retrieval on di?erent kinds of media (i. e. , not just plain text but collections containing image and speech as well). In ad- tion, increasing attention was given to issues that regard system usability and user satisfaction with tasks to measure the e?ectiveness of interactive systems or system components being included in both the cross-language question - swering and image retrieval tasks with the collaboration of the coordinators of the interactive track. The campaign culminated in a two-and-a-half-day workshop held in Bath, UK, 15–17 September, immediately following the 8th European Conference on Digital Libraries. The workshop was attended by nearly 100 researchers and s- tem developers.

This book contains the texts of the lectures which were givenat the Nato Advanced Study Institute on Advanced Heat Pumns which was heldat Espinho, Portugal in September 1980. Aprevious NATO Advanced Study Institute on the topic of heat pumps had been held in 1975. The significance of heat pumps with respect to energy conservation was the main topic of this Institute. In 1980it was felt that considerable research had to be done in order to be able to produce more energy efficient, less costly and more widely ap~licableheat ~umos. This requires a good understanding of the functioning of the types of heat pumps available. The simultaneous coverage of the basic funda mentals of heat pumps of different drive in one lecture series therefore was the goal of the 1980 Advanced Study Institute. Only a few lectures were devoted to heat pump applications. The lectures on heat pump applications were intended to ~ive only a short overview. They were supplemented by lectures on the latest developments on vapour compression as well as sorption systems.

"This book set unites fundamental research on the history, current directions, and implications of gaming at individual and organizational levels, exploring all facets of game design and application and describing how this emerging discipline informs and is informed by society and culture"--Provided by publisher.

Methodologies and Applications

Computational Intelligence in Data Mining - Volume 2

Troika! The Remarkable Ascent of a Great Global University, Nanyang Technological University Singapore, 2003–2017

Advances in Pattern Recognition ICAPR2003

Modeling and Control of Vibration in Mechanical Systems

Proceedings of the 1st International Conference on Semiconductor Technology

The present book has been throughly revised and lot of useful material has been added .saveral photographs of electronic devices and their specifications sheets have been included.This will help the students to have a better understanding of the electrinic devices and circuits from application point of view.the mistake and misprints,which has crept in,have been eliminated in this edition.

Evolutionary scheduling is a vital research domain at the interface of artificial intelligence and operational research. This edited book gives an overview of many of the current developments in the large and growing field of evolutionary scheduling. It demonstrates the applicability of evolutionary computational techniques to solve scheduling problems, not only to small-scale test problems, but also fully-fledged real-world problems.

This two-volume set constitutes the refereed proceedings of the 5th European Conference on Computer Vision, ECCV'98, held in Freiburg, Germany, in June 1998. The 42 revised full papers and 70 revised posters presented were carefully selected from a total of 223 papers submitted. The papers are organized in sections on multiple-view geometry, stereo vision and calibration, geometry and invariances, structure from motion, colour and indexing, grouping and segmentation, tracking, condensation, matching and registration, image sequences and video, shape and shading, motion and flow, medical imaging, appearance and recognition, robotics and active vision, and motion segmentation.

5th Workshop of the Cross-Language Evaluation Forum, CLEF 2004, Bath, UK, September 15-17, 2004, Revised Selected Papers

Digital Watermarking for Digital Media

Momentum, Heat, and Mass Transfer Fundamentals
5th Internatinoal Conference, CIVR 2006, Tempe, AZ, USA, July 13-15, 2006, Proceedings
First Asia-Pacific Conference, WI 2001, Maebashi City, Japan, October 23-26, 2001, Proceedings
Advances in Biometrics