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Applications of Fuzzy Sets Theory
Francesco Masulli 2007-08-24 The 7th International Workshop on Fuzzy Logic and Applications, held in Camogli, Italy in July 2007, presented the latest findings in the field. This volume features the refereed proceedings from that meeting. It includes 84 full papers as well as three keynote speeches. The papers are organized into topical sections covering fuzzy set theory, fuzzy information access and retrieval, fuzzy machine learning, and fuzzy architectures and systems.

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Artificial Neural Networks in Finance and Manufacturing Kamruzzaman, Joarder 2006-03-31 "This book presents a variety of practical applications of neural networks in two important domains of economic activity: finance and manufacturing"-
-Provided by publisher.

Target Acquisition in Communication Electronic Warfare Systems Richard Poisel 2003-12-01 Radio communications plays an increasingly critical and growing role in today's electronic battlefield. Because more and more radio signals are deployed in electronic warfare (EW)

situations, determining which ones are friendly and which are enemy has become more difficult and crucial. This book arms defense systems designers and operators with the full array of traditional search mechanisms and advanced high-resolution techniques for targeting radio signals deployed in electronic warfare. An invaluable technical reference, the book helps professionals fully understand the tradeoffs involved in designing EW target acquisition systems with less time and effort. Moreover, practitioners learn how to establish optimum methods for acquiring communication targets for exploitation or countermeasures. The book also serves as an excellent text for graduate courses in electronic

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Transactions on Computational Science

VIII C. J. Kenneth Tan 2010-10-19 The 8th issue of the Transactions on Computational Science has been divided into two parts. Part I, prepared by Guest Editors Nadia Nedjah, Abdelhamid Bouchachia, and Luiza de Macedo Mourelle, consists of 5 detailed papers, presenting state-of-the-art research results on adaptive models for evolutionary computation and their application in various dynamic environments. The 6 papers in Part II take an in-depth look at selected computational science research in the areas of geometric computing, Euclidean distance transform, distributed systems, segmentation, visualization of monotone data, and data interpolation.

Granular, Fuzzy, and Soft Computing

Downloaded from vla.ramtech.uri.edu on October 4, 2023 by Donald m Grant

Tsau-Young Lin 2023-03-29 The first edition of the Encyclopedia of Complexity and Systems Science (ECSS, 2009) presented a comprehensive overview of granular computing (GrC) broadly divided into several categories: Granular computing from rough set theory, Granular Computing in Database Theory, Granular Computing in Social Networks, Granular Computing and Fuzzy Set Theory, Grid/Cloud Computing, as well as general issues in granular computing. In 2011, the formal theory of GrC was established, providing an adequate infrastructure to support revolutionary new approaches to computer/data science, including the challenges presented by so-called big data. For this volume of ECSS, Second Edition, many entries have been

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developments, together with new chapters on such topics as data clustering, outliers in data mining, qualitative fuzzy sets, and information flow analysis for security applications. Granulations can be seen as a natural and ancient methodology deeply rooted in the human mind. Many daily "things" are routinely granulated into sub "things": The topography of earth is granulated into hills, plateaus, etc., space and time are granulated into infinitesimal granules, and a circle is granulated into polygons of infinitesimal sides. Such granules led to the invention of calculus, topology and non-standard analysis. Formalization of general granulation was difficult but, as shown in this volume, great progress has been made in combing discrete and continuous

mathematics under one roof for a broad range of applications in data science.

Computational Intelligence for Modelling, Control & Automation

Masoud Mohammadian 1999 This edited Book is dedicated to the theory and applications of Evolutionary Computation and Fuzzy Logic for Intelligent Control, Knowledge Acquisition and Information Retrieval. The book consists of 86 selected research papers from the 1999 International Conference on Computational Intelligence for Modelling, Control and Automation - CIMCA'99 The research papers presented in this book cover new techniques and applications in the following research areas: Evolutionary Computation, Fuzzy Logic

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applications for Optimisation, Learning, Control, Scheduling and Multi-Criteria Analysis as well as Reliability Assessment, Information Retrieval and Knowledge Acquisition.

Fuzzy Chaotic Systems Zhong Li

2006-08-02 This book presents the fundamental concepts of fuzzy logic and fuzzy control, chaos theory and chaos control. It also provides a definition of chaos on the metric space of fuzzy sets. The book raises many questions and generates a great potential to attract more attention to combine fuzzy systems with chaos theory. In this way it contains important seeds for future scientific research and engineering applications.

Decision Support Systems in Urban Planning Harry Timmermans 2003-09-02

This book presents a set of selected

and edited papers presented at the 2nd and 3rd Design and Decision Support Conference. The purpose is to provide examples of innovative research in decision support systems in urban planning from throughout the world.

Quality Innovation and Sustainability

João Carlos de Oliveira Matias

2023-01-16 This book provides various approaches to complex industrial problems in sustainability, operations management and industrial engineering. It features in-depth research presented by academics, scholars, researcher and professionals at the 3rd International Conference on Quality Innovation and Sustainability (ICQIS) in the fields of quality, innovation, sustainability and operations

management and industrial engineering. It features in-depth research presented by academics, scholars, researcher and professionals at the 3rd International Conference on Quality Innovation and Sustainability (ICQIS) in the fields of quality, innovation, sustainability and operations

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as quality management systems; Lean and Six Sigma; information systems for quality management; data management and industry 4.0; innovative solutions for quality challenges; environmental quality policies and standards; circular economy and life cycle costing; occupational health; safety and welfare in manufacturing; and smart systems, among others.

Eurofuse 2011 Bernard De Baets

2011-09-25 This carefully edited book comprises the papers from EUROFUSE 2011 Workshop on Fuzzy Methods for Knowledge-based Systems. EUROFUSE was established in 1998 as the EURO (the Association of European Operational Research Societies) Working Group on Fuzzy Sets, as a successor of the former European Chapter of IFSA (the International Fuzzy Systems

Association). The present EUROFUSE 2011 workshop is held at Régua, Portugal, 21-23 September, in the World Heritage Site of the Douro Wine Region and is organised by Pedro Melo-Pinto and Pedro Couto. The workshop is devoted to Fuzzy Methods for Knowledge-based Systems. And has the goal to bring together researchers and practitioners developing and applying fuzzy techniques in preference modelling and decision making in an informal atmosphere. EUROFUSE 2011 has three distinguished invited speakers: Francisco Herrera (Granada, Spain), Radko Mesiar (Bratislava, Slovakia) and Jose Luis Garcia Lapresta (Valladolid, Spain). Next to the invited speakers, the three day program consists of 37 lectures. In

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10 countries. This edited volume contains the final revised manuscripts on the basis of which the program was put together.

Fuzzy Applications in Industrial Engineering Cengiz Kahraman

2007-05-31 After an introductory chapter explaining recent applications of fuzzy sets in IE, this book explores the seven major areas of IE to which fuzzy set theory can contribute: Control and Reliability, Engineering Economics and Investment Analysis, Group and Multi-criteria Decision-making, Human Factors Engineering and Ergonomics, Manufacturing Systems and Technology Management, Optimization Techniques, and Statistical Decision-making. Under these major areas, every chapter includes didactic numerical applications.

Knowledge Management Pasi Virtanen
2010-03-01 This book is a compilation of writings handpicked in esteemed scientific conferences that present the variety of ways to approach this multifaceted phenomenon. In this book, knowledge management is seen as an integral part of information and communications technology (ICT). The topic is first approached from the more general perspective, starting with discussing knowledge management's role as a medium towards increasing productivity in organizations. In the starting chapters of the book, the duality between technology and humans is also taken into account. In the following chapters, one may see the essence and multifaceted nature of knowledge management through branch-specific

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end of the book the ontological side of knowledge management is illuminated. The book ends with two special applications of knowledge management.

Innovative Computing Methods and Their Applications to Engineering Problems Nadia Nedjah 2011-05-25 The design of most modern engineering systems entails the consideration of a good trade-off between the several targets requirements to be satisfied along the system life such as high reliability, low redundancy and low operational costs. These aspects are often in conflict with one another, hence a compromise solution has to be sought. Innovative computing techniques, such as genetic algorithms, swarm intelligence, differential evolution, multi-objective evolutionary optimization,

just to name a few, are of great help in founding effective and reliable solution for many engineering problems. Each chapter of this book attempts to using an innovative computing technique to elegantly solve a different engineering problem.

The Fuzzy Systems Handbook Earl Cox 1999 This edition provides a comprehensive introduction to fuzzy logic, and leads the reader through the complete process of designing, constructing, implementing, verifying and maintaining a platform-independent fuzzy system model. The book has been extensively revised to bring the subject up-to-date, and features two new chapters: "Building and Using Fuzzy Cognitive Map Models" and "Building ME-OWA Models."

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1999

Artificial Intelligence Techniques for Rational Decision Making

Tshilidzi Marwala 2014-10-20 Develops insights into solving complex problems in engineering, biomedical sciences, social science and economics based on artificial intelligence. Some of the problems studied are in interstate conflict, credit scoring, breast cancer diagnosis, condition monitoring, wine testing, image processing and optical character recognition. The author discusses and applies the concept of flexibly-bounded rationality which prescribes that the bounds in Nobel Laureate Herbert Simon's bounded rationality theory are flexible due to advanced signal processing techniques, Moore's Law and artificial intelligence. Artificial

Intelligence Techniques for Rational Decision Making examines and defines the concepts of causal and correlation machines and applies the transmission theory of causality as a defining factor that distinguishes causality from correlation. It develops the theory of rational counterfactuals which are defined as counterfactuals that are intended to maximize the attainment of a particular goal within the context of a bounded rational decision making process. Furthermore, it studies four methods for dealing with irrelevant information in decision making: Theory of the marginalization of irrelevant information Principal component analysis Independent component analysis Automatic relevance determination method In the fuzzy systems studies

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group decision making and various ways of effecting group decision making within the context of artificial intelligence. Rich in methods of artificial intelligence including rough sets, neural networks, support vector machines, genetic algorithms, particle swarm optimization, simulated annealing, incremental learning and fuzzy networks, this book will be welcomed by researchers and students working in these areas.

Artificial Intelligence and Soft Computing Leszek Rutkowski 2016-05-30 The two-volume set LNAI 9692 and LNAI 9693 constitutes the refereed proceedings of the 15th International Conference on Artificial Intelligence and Soft Computing, ICAISC 2016, held in Zakopane, Poland in June 2016. The 134 revised full papers presented

were carefully reviewed and selected from 343 submissions. The papers included in the first volume are organized in the following topical sections: neural networks and their applications; fuzzy systems and their applications; evolutionary algorithms and their applications; agent systems, robotics and control; and pattern classification. The second volume is divided in the following parts: bioinformatics, biometrics and medical applications; data mining; artificial intelligence in modeling and simulation; visual information coding meets machine learning; and various problems of artificial intelligence.

Fuzzy Controllers Handbook Leon Reznik 1997-08-21 This book teaches you how to design a fuzzy controller
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design and applications. It is the perfect book for you if you want to know something about fuzzy control and fuzzy controllers, but you are not a mathematician, so what you are really interested in is the design process. As an introduction it assumes no preliminary knowledge of fuzzy theory and technology, but starts at the root of a problem and works from there. If you have some experience in fuzzy controller design but are not sure how to choose the number of membership functions, how to shape them properly, or how to debug a fuzzy controller; if you are a beginner with fuzzy logic, and so you would like to know how to apply the theory; if you are researching fuzzy logic or if you need some help with a project at work - this book is for you! The text is designed for use

both as a course companion for both teachers and students or for self-study. Leon Reznik has worked on fuzzy logic applications in a huge range of control situations including spacecraft launch control, microprocessor control, and metallurgical furnace control.

Latterly he has been teaching in the Department of Electrical and Electronic Engineering at Victoria University of Technology, Australia. His work in the area has generated a substantial volume of papers in both Russian and English. First readable book on the subject Ideal for professionals and students alike This book takes fuzzy logic out of the ivory tower and into the workplace *Modernity, Frontiers and Revolutions* Maria do Rosário Monteiro 2018-09-25

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Harmonies and Identities (PHI) - MODERNITY, FRONTIERS AND REVOLUTIONS were compiled with the intent to establish a multidisciplinary platform for the presentation, interaction and dissemination of research. It also aims to foster awareness of and discussion on the topics of Harmony and Proportion with a focus on different visions relevant to Architecture, Arts and Humanities, Design, Engineering, Social and Natural Sciences, and their importance and benefits for the sense of both individual and community identity. The idea of modernity has been a significant driver of development since the Western Early Modern Age. Its theoretical and practical foundations have become the working tools of scientists, philosophers, and artists, who seek

strategies and policies to accelerate the development process in different contexts.

Introduction to Neuro-Fuzzy Systems

Robert Fuller 2013-06-05 Fuzzy sets were introduced by Zadeh (1965) as a means of representing and manipulating data that was not precise, but rather fuzzy. Fuzzy logic provides an inference morphology that enables approximate human reasoning capabilities to be applied to knowledge-based systems. The theory of fuzzy logic provides a mathematical strength to capture the uncertainties associated with human cognitive processes, such as thinking and reasoning. The conventional approaches to knowledge representation lack the means for representing the meaning of fuzzy

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approaches based on first order logic and classical probability theory do not provide an appropriate conceptual framework for dealing with the representation of commonsense knowledge, since such knowledge is by its nature both lexically imprecise and noncategorical. The development of fuzzy logic was motivated in large measure by the need for a conceptual framework which can address the issue of uncertainty and lexical imprecision. Some of the essential characteristics of fuzzy logic relate to the following [242]. • In fuzzy logic, exact reasoning is viewed as a limiting case of approximate reasoning. • In fuzzy logic, everything is a matter of degree. • In fuzzy logic, knowledge is interpreted as a collection of elastic or, equivalently, fuzzy constraint on

a collection of variables. • Inference is viewed as a process of propagation of elastic constraints. • Any logical system can be fuzzified. There are two main characteristics of fuzzy systems that give them better performance for specific applications.

Logic and Metalogic

Handbook of Research on Fuzzy Information Processing in Databases
Galindo, Jos 2008-05-31 "This book provides comprehensive coverage and definitions of the most important issues, concepts, trends, and technologies in fuzzy topics applied to databases, discussing current investigation into uncertainty and imprecision management by means of fuzzy sets and fuzzy logic in the field of databases and data mining.

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information processing in databases"-
-Provided by publisher.

Principles of Geographical

Information Systems Peter A. Burrough
2015 Geographical data are used in so many aspects of our lives today, from disaster relief operations to finding directions on our cellphones.

Geographical Information Systems (GIS) are the software tools that turn raw data into useful information that can help us understand our world better. Principles of Geographical Information Systems presents a strong theoretical basis for GIS-often lacking in other texts-and an account of its practice. Through real-world examples, this text clearly explains the importance of spatial data and the information systems based upon them in solving a range of practical problems.

Fuzzy Expert Systems and Fuzzy Reasoning William Siler 2005-02-22
Fuzzy sets were for a long time not accepted by the AI community. Now they have become highly evolved and their techniques are well established. This book will teach the reader how to construct a fuzzy expert system to solve real-world problems. After a general discussion of expert systems, the basic fuzzy math required is presented first, requiring little more math background than high-school algebra. This book will fill a void in the market because although there are many books on expert systems, none devote more than a few pages to the notion of fuzzy sets and their applications in this domain. Therefore their use in this book is timely and should be well received.

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has ample problems with solutions, a solutions manual and an accompanying program on our ftp site. Coverage is accessible to practitioners and academic readers alike.
Design of Interpretable Fuzzy Systems Krzysztof Cpałka 2017-01-31 This book shows that the term "interpretability" goes far beyond the concept of readability of a fuzzy set and fuzzy rules. It focuses on novel and precise operators of aggregation, inference, and defuzzification leading to flexible Mamdani-type and logical-type systems that can achieve the required accuracy using a less complex rule base. The individual chapters describe various aspects of interpretability, including appropriate selection of the structure of a fuzzy system, focusing

on improving the interpretability of fuzzy systems designed using both gradient-learning and evolutionary algorithms. It also demonstrates how to eliminate various system components, such as inputs, rules and fuzzy sets, whose reduction does not adversely affect system accuracy. It illustrates the performance of the developed algorithms and methods with commonly used benchmarks. The book provides valuable tools for possible applications in many fields including expert systems, automatic control and robotics.

Do Smart Adaptive Systems Exist?
Bogdan Gabrys 2006-07-11 *Do Smart Adaptive Systems Exist?* is intended as a reference and a guide summarising and focusing on best practices when using intelligent

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requiring a degree of adaptation and intelligence. It is therefore not intended as a collection of the most recent research results, but as a practical guide for experts from other areas and industrial users interested in building solutions to their problems using intelligent techniques. One of the main issues covered is an attempt to answer the question of how to select and/or combine suitable intelligent techniques from a large pool of potential solutions. Another attractive feature of the book is that it brings together experts from neural network, fuzzy, machine learning, evolutionary and hybrid systems communities who will provide their views on how these different intelligent technologies have contributed and will contribute to

creation of smart adaptive systems of the future.

Music and AI Alexandra Bonnici

2021-03-16

Handbook of Research on Web Information Systems Quality Calero,

Coral 2008-02-28 Web information systems engineering resolves the multifaceted issues of Web-based systems development; however, as part of an emergent yet prolific industry, Web site quality assurance is a continually adaptive process needing a comprehensive reference tool to merge all cutting-edge research and innovations. The Handbook of Research on Web Information Systems Quality integrates 30 authoritative contributions by 72 of the world's leading experts on the models, measures, and methodologies of Web

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quality, and Web engineering into one practical guide to Web information systems quality, making this handbook of research an essential addition to all library collections.

Neuro-Fuzzy Architectures and Hybrid Learning Danuta Rutkowska 2012-11-13

The advent of the computer age has set in motion a profound shift in our perception of science -its structure, its aims and its evolution.

Traditionally, the principal domains of science were, and are, considered to be mathematics, physics, chemistry, biology, astronomy and related disciplines. But today, and to an increasing extent, scientific progress is being driven by a quest for machine intelligence - for systems which possess a high MIQ (Machine IQ) and can perform a wide variety of physical and mental tasks

with minimal human intervention. The role model for intelligent systems is the human mind. The influence of the human mind as a role model is clearly visible in the methodologies which have emerged, mainly during the past two decades, for the conception, design and utilization of intelligent systems. At the center of these methodologies are fuzzy logic (FL); neurocomputing (NC); evolutionary computing (EC); probabilistic computing (PC); chaotic computing (CC); and machine learning (ML). Collectively, these methodologies constitute what is called soft computing (SC). In this perspective, soft computing is basically a coalition of methodologies which collectively provide a body of concepts and techniques for

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making in an environment of imprecision, uncertainty and partial truth.

Condition Monitoring Using Computational Intelligence Methods

Tshilidzi Marwala 2012-01-23

Condition Monitoring Using Computational Intelligence Methods promotes the various approaches gathered under the umbrella of computational intelligence to show how condition monitoring can be used to avoid equipment failures and lengthen its useful life, minimize downtime and reduce maintenance costs. The text introduces various signal-processing and pre-processing techniques, wavelets and principal component analysis, for example, together with their uses in condition monitoring and details the development of effective feature

extraction techniques classified into frequency-, time-frequency- and time-domain analysis. Data generated by these techniques can then be used for condition classification employing tools such as: • fuzzy systems; rough and neuro-rough sets; neural and Bayesian networks; hidden Markov and Gaussian mixture models; and support vector machines.

Handbook of Industrial and Systems Engineering Adedeji B. Badiru

2005-12-15 Responding to the demand by researchers and practitioners for a comprehensive reference, Handbook of Industrial and Systems Engineering offers full and easy access to a wide range of industrial and systems engineering tools and techniques in a concise format. Providing state of the art coverage from more than 40

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Fuzzy Systems in Medicine Piotr S. Szczepaniak 2012-08-27 Provides an introduction to the fundamental concepts of fuzziness together with a compilation of recent advances in the application to medicine. The tutorials in the first part of the book range from basic concepts through theoretical frameworks to rule simplification through data clustering methodologies and the design of multivariate rule bases through self-learning by mapping fuzzy systems onto neural network structures. The case studies which follow are representative of the wide range of applications currently pursued in relation to medicine. The majority of applications presented in this book are about bridging the gap between low-level sensor measurements and intermediate or high-level data

representations. The book offers a comprehensive perspective from leading authorities world-wide and provides a tantalising glimpse into the role of sophisticated knowledge engineering methods in shaping the landscape of medical technology in the future.

Handbook Of Machine Learning - Volume 1: Foundation Of Artificial

Intelligence Tshilidzi Marwala
2018-10-22 This is a comprehensive book on the theories of artificial intelligence with an emphasis on their applications. It combines fuzzy logic and neural networks, as well as hidden Markov models and genetic algorithm, describes advancements and applications of these machine learning techniques and describes the problem of causality. This book

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for practitioners in artificial intelligence.

Modeling and Simulation of Systems Using MATLAB and Simulink Devendra K. Chaturvedi 2017-12-19 Not only do modeling and simulation help provide a better understanding of how real-world systems function, they also enable us to predict system behavior before a system is actually built and analyze systems accurately under varying operating conditions. *Modeling and Simulation of Systems Using MATLAB® and Simulink®* provides comprehensive, state-of-the-art coverage of all the important aspects of modeling and simulating both physical and conceptual systems. Various real-life examples show how simulation plays a key role in understanding real-world systems. The author also explains how to

effectively use MATLAB and Simulink software to successfully apply the modeling and simulation techniques presented. After introducing the underlying philosophy of systems, the book offers step-by-step procedures for modeling different types of systems using modeling techniques, such as the graph-theoretic approach, interpretive structural modeling, and system dynamics modeling. It then explores how simulation evolved from pre-computer days into the current science of today. The text also presents modern soft computing techniques, including artificial neural networks, fuzzy systems, and genetic algorithms, for modeling and simulating complex and nonlinear systems. The final chapter addresses discrete systems modeling. Preparing

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students for advanced modeling and simulation courses, this text helps them carry out effective simulation studies. In addition, graduate students should be able to comprehend and conduct simulation research after completing this book.

Practice and Theory of Automated Timetabling V Edmund Burke 2005

This volume contains a selection of papers from the 5th International Conference on the Practice and Theory of Automated Timetabling (PATAT 2004) held in Pittsburgh, USA, August 18–20, 2004. Indeed, as we write this preface, in the Summer of 2005, we note that we are about one month away from the tenth anniversary of the very first PATAT conference in Edinburgh. Since those very early days, the conference series has gone from strength to strength and this volume represents

the latest in a series of rigorously refereed volumes which showcase a broad spectrum of groundbreaking timetabling research across a very wide range of timetabling problems and applications. Timetabling is an area that unites a number of disparate fields and which cuts across a number of diverse academic disciplines. While the most obvious instances of timetabling occur in educational institutions, timetabling also appears in sports applications, transportation planning, project scheduling, and many other fields. Viewing timetabling as a unifying theme enables researchers from these various areas to learn from each other and to extend their own search and practice in new and innovative ways. This is the trend of the

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conference series to extend the definition of timetabling beyond its educational roots. In this volume, seven of the 19 papers involve domains other than education. Of course, educational timetabling remains at the core of timetabling research, and the papers in this volume represent the full range of this area including exam timetabling, room scheduling, and class rostering. **Winning Decisions** J. Edward Russo 2002-04-23 Business revolves around making decisions, often risky decisions, usually with incomplete information and too often in less time than we need. Executives at every level, in every industry, are confronted with information overload, less leeway for mistakes, and a business environment that changes rapidly. In light of this increased

pressure and volatility, the old-fashioned ways of making decisions—depending on intuition, common sense, and specialized expertise—are simply no longer sufficient. Distilling over thirty years of groundbreaking research, *Winning Decisions*, written by two seasoned business advisers and world leaders in behavioral decision studies, is a comprehensive, one-of-a-kind guide to the proven methods of making critical business decisions confidently, quickly—and correctly. Decision-making is a business skill which managers often take for granted in themselves and others—but it's not as easy as some might think. The authors, whose expertise has been sought out by over a hundred companies, including Arthur Andersen, Hewlett-Packard, IBM, and Unilever,

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contend that decision-making, like any other skill, must be developed and honed if it is to be used effectively. *Winning Decisions* offers step-by-step analyses of how people typically make decisions, and provides invaluable advice on how to improve your chances of getting your next big decision right the first time. The book is packed with worksheets, tools, questionnaires, case studies, and anecdotes analyzing major decisions made by organizations like British Airways, NASA, Shell Oil, and Pepsi. Some of the proven, straightforward techniques covered in *Winning Decisions* include how to: Reframe issues to ensure that the real problem is being addressed Improve the quality and quantity of your options Convert expert yet conflicting opinions into

useful insights Make diversity of views and conflict work to your advantage Foster efficient and effective group decision-making Learn from past decisions--your own and those of others With Winning Decisions, managers and other professionals now have access to a proven set of skills and strategies they need for making the right decision, right away.

Advances in Geophysics, Tectonics and Petroleum Geosciences Mustapha

Meghraoui 2022-04-21 This edited book is based on the best papers accepted for presentation during the 2nd Springer Conference of the Arabian Journal of Geosciences (CAJG-2), Tunisia, in 2019. It is of interest to all researchers practicing geophysics/seismology, structural,

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sections spanning a large spectrum of geological and geophysical topics with particular reference to Middle East, Mediterranean region, and Africa, this book presents a series of research methods that are nowadays in use for measuring, quantifying, and analyzing several geological domains. It starts with a subsection dedicated to the latest research studies on seismic hazard and risk assessment in Africa presented during the 2019 IGCP-659 meeting organized alongside the CAJG-2. And, it includes new research studies on earthquake geodesy, seismotectonics, archeoseismology and active faulting, well logging methods, geodesy and exploration/theoretical geophysics, petroleum geochemistry, petroleum engineering, structural geology, basement architecture and potential

data, tectonics and geodynamics, and thermicity, petroleum, and other georesources. The edited book gives insights into the fundamental questions that address the genesis and evolution of our planet, and this is based on data collection and experimental investigations under physical constitutive laws. These multidisciplinary approaches combined with the geodynamics of tectonic provinces and investigations of potential zones of natural resources (petroleum reservoirs) provide the basis for a more sustainability in the economic development.

IoT-Based Data Analytics for the Healthcare Industry Sanjay Kumar Singh 2020-12-01 IoT Based Data Analytics for the Healthcare Industry: Techniques and Applications

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analysis of healthcare industry data through IoT data analytics. The book covers the analysis of ubiquitous data generated by the healthcare industry, from a wide range of sources, including patients, doctors, hospitals, and health insurance companies. The book provides AI solutions and support for healthcare industry end-users who need to analyze and manipulate this vast amount of data. These solutions feature deep learning and a wide range of intelligent methods, including simulated annealing, tabu search, genetic algorithm, ant colony optimization, and particle swarm optimization. The book also explores challenges, opportunities, and future research directions, and discusses the data collection and pre-processing stages, challenges and

issues in data collection, data handling, and data collection set-up. Healthcare industry data or streaming data generated by ubiquitous sensors cocooned into the IoT requires advanced analytics to transform data into information. With advances in computing power, communications, and techniques for data acquisition, the need for advanced data analytics is in high demand. Provides state-of-art methods and current trends in data analytics for the healthcare industry Addresses the top concerns in the healthcare industry using IoT and data analytics, and machine learning and deep learning techniques Discusses several potential AI techniques developed using IoT for the healthcare industry Explores challenges, opportunities, and future

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the data collection and pre-processing stages
Enterprise Information Systems
Joaquim Filipe 2009-05-04 This book contains the collection of full papers accepted at the 11th International Conference on Enterprise Information Systems (ICEIS 2009), organized by the Institute for Systems and Technologies of Information Control and Communication (INSTICC) in cooperation with the Association for Advancement of Artificial Intelligence (AAAI) and ACM SIGMIS (SIG on Management Information Systems), and technically co-sponsored by the Japanese IEICE SWIM (SIG on Software Enterprise Modeling) and the Workflow Management Coalition (WfMC). ICEIS 2009 was held in Milan, Italy. This conference has grown to become a major point of

contact between research scientists, engineers and practitioners in the area of business applications of information systems. This year, five simultaneous tracks were held, covering different aspects related to enterprise computing, including: “-tabases and Information Systems Integration,” “Artificial Intelligence and Decision Support Systems,” “Information Systems Analysis and Specification,” “Software Agents and Internet Computing” and “Human–Computer Interaction”. All tracks describe research work that is often oriented toward real-world applications and hi- light the benefits of information systems and technology for industry

and services, thus making a bridge between academia and enterprise. ICEIS 2009 received 644 paper submissions from 70 countries in all continents; 81 papers were published and presented as full papers, i.e., completed research work (8 pages/30-minute oral presentation). Additional papers accepted at ICEIS, including short papers and posters, were published in the regular conference proceedings.

The Fuzzy Systems Handbook Earl Cox
1994 Fuzziness and certainty; Fuzzy sets; Fuzzy set operators; Fuzzy set hedges; Fuzzy reasoning; Fuzzy models; Fuzzy systems: Case studies; Building fuzzy systems; Using the fuzzy code libraries.