

# A Novel Radar Signal Recognition Method Based On Deep Learning

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**Neural Information Processing** - Jun Wang 2006-10-03

The three volume set LNCS 4232, LNCS 4233, and LNCS 4234 constitutes the refereed proceedings of the 13th International Conference on Neural Information Processing, ICONIP 2006, held in Hong Kong, China in October 2006. The 386 revised full papers presented were carefully reviewed and selected from 1175 submissions.

**Body Area Networks** - Masood Ur Rehman 2022

This book constitutes the refereed post-conference proceedings of the 16th International Conference on Body Area Networks, BodyNets 2021, held in October 2021. The conference was held virtually due to the COVID-19 pandemic. The 21 papers presented were selected from 44 submissions and issue new technologies to provide trustable measuring and communications mechanisms from the data source to medical health databases. Wireless body area networks (WBAN) are one major element in this process. Not only on-body devices but also technologies providing information from inside a body are in the focus of this conference. Dependable communications combined with accurate localization and behavior analysis will benefit WBAN technology and make the healthcare processes more effective.

**Radar Signal Processing for Autonomous Driving** - Jonah Gamba 2019-08-02

The subject of this book is theory, principles and methods used in radar algorithm development with a special focus on automotive radar signal processing. In the automotive industry, autonomous driving is currently a hot topic that leads to numerous applications for both safety and driving comfort. It is estimated that full autonomous driving will be realized in the next twenty to thirty years and one of the enabling technologies is radar sensing. This book presents both detection and tracking topics specifically for automotive radar processing. It provides illustrations, figures and tables for the reader to quickly grasp the concepts and start working on practical solutions. The complete and comprehensive coverage of the topic provides both professionals and newcomers with all the essential methods and tools required to successfully implement and evaluate automotive radar processing algorithms.

**Artificial Intelligence in China** - Qilian Liang 2022

This book brings together papers presented at the 3rd International Conference on Artificial Intelligence in China (ChinaAI), which provides a venue to disseminate the latest developments and to discuss the interactions and links between these multidisciplinary fields. Spanning topics covering all topics in Artificial Intelligence with new development in China, this book is aimed at undergraduate and graduate students in Electrical Engineering, Computer Science and Mathematics, researchers and engineers from academia and industry as well as government employees (such as NSF, DOD, DOE, etc).

**Transactions on Edutainment VII** - Zhigeng Pan 2013-11-19

This journal subline serves as a forum for stimulating and disseminating innovative research ideas, theories, emerging technologies, empirical investigations, state-of-the-art methods, and tools in all different genres of edutainment, such as game-based learning and serious games, interactive storytelling, virtual learning environments, VR-based education, and related fields. It covers aspects from educational and game theories, human-computer interaction, computer graphics, artificial intelligence, and systems design. The 27 papers of this volume deal with virtual humans; graphics rendering and 3D animation; games and 2D animation; and digital media and its applications.

**Principles and Applications of RELAX: A Robust and Universal Estimator** - Renbiao Wu 2019-03-27

The multiple signal demixing and parameter estimation problems that

result from the impacts of background noise and interference are issues that are frequently encountered in the fields of radar, sonar, communications, and navigation. Research in the signal processing and control fields has always focused on improving the estimation performance of parameter estimation methods at low SNR and maintaining the robustness of estimations in the presence of model errors. This book presents a universal and robust relaxation estimation method (RELAX), and introduces its basic principles and applications in the fields of classical line spectrum estimation, time of delay estimation, DOA estimation, and radar target imaging. This information is explained comprehensively and in great detail, and uses metaphors pertaining to romantic relationships to visualize the basic problems of parameter estimation, the basic principles of the five types of classical parameter estimation methods, and the relationships between these principles. The book serves as a reference for scientists and technologists in the fields of signal processing and control, while also providing relevant information for graduate students in the related fields.

**System Simulation and Scientific Computing, Part II** - Tianyuan Xiao 2012-10-08

The Three-Volume-Set CCIS 323, 324, 325 (AsiaSim 2012) together with the Two-Volume-Set CCIS 326, 327 (ICSC 2012) constitutes the refereed proceedings of the Asia Simulation Conference, AsiaSim 2012, and the International Conference on System Simulation, ICSC 2012, held in Shanghai, China, in October 2012. The 267 revised full papers presented were carefully reviewed and selected from 906 submissions. The papers are organized in topical sections on modeling theory and technology; modeling and simulation technology on synthesized environment and virtual reality environment; pervasive computing and simulation technology; embedded computing and simulation technology; verification, validation and accreditation technology; networked modeling and simulation technology; modeling and simulation technology of continuous system, discrete system, hybrid system, and intelligent system; high performance computing and simulation technology; cloud simulation technology; modeling and simulation technology of complex system and open, complex, huge system; simulation based acquisition and virtual prototyping engineering technology; simulator; simulation language and intelligent simulation system; parallel and distributed software; CAD, CAE, CAM, CIMS, VP, VM, and VR; visualization; computing and simulation applications in science and engineering; computing and simulation applications in management, society and economics; computing and simulation applications in life and biomedical engineering; computing and simulation applications in energy and environment; computing and simulation applications in education; computing and simulation applications in military field; computing and simulation applications in medical field.

**Wavelet Analysis and Its Applications, and Active Media Technology 2004** - Jian-Ping Li 2004

Wavelet analysis and its applications have been one of the fastest-growing research areas in the past several years. Wavelet theory has been employed in numerous fields and applications, such as signal and image processing, communication systems, biomedical imaging, radar, and air acoustics. Active media technology is concerned with the development of autonomous computational or physical entities capable of perceiving, reasoning, adapting, learning, cooperating, and delegating in a dynamic environment. This book captures the essence of the state of the art in wavelet analysis and its applications and active media technology. At the Congress, invited talks were delivered by distinguished researchers, namely Prof John Daugman of Cambridge University, UK;

Prof Bruno Torresani of INRIA, France; Prof Victor Wickerhauser of Washington University, USA, Prof Ning Zhong of the Maebashi Institute of Technology, Japan; Prof John Yen of Pennsylvania State University, USA; and Prof Sankar K Pal of the Indian Statistical Institute, India.

**Mechatronics Engineering, Computing and Information Technology** - X.D. Xu 2014-05-23

Collection of selected, peer reviewed papers from the 2014 International Conference on Mechatronics Engineering and Computing Technology (ICMECT 2014), April 9-10, 2014, Shanghai, China. Volume is indexed by Thomson Reuters CPCI-S (WoS). The 1531 papers are grouped as follows: Chapter 1: Materials Science and Materials Processing Technologies, Chapter 2: Building, Construction and Environmental Research, Chapter 3: Researches in Applied Mechanics and Mechanical Engineering, Chapter 4: Power and Electric Research, Electronics and Microelectronics, Embedded and Integrated Systems, Chapter 5: Mechatronics, Automation and Control, Chapter 6: Measurement and Instrumentation, Monitoring, Testing, Detection and Identification Technologies, Chapter 7: Computation Methods and Algorithms for Modeling, Simulation and Optimization, Data Mining and Data Processing, Chapter 8: Communication, Signal and Image Processing, Chapter 9: Information Technologies, WEB and Networks Engineering, Information Security and Software Application, Chapter 10: Modern Tendency in Area of Management, Logistics, Economics, Education, Traffic and Urban Engineering

**Proceedings of the 27th Conference of Spacecraft TT&C Technology in China** - Rongjun Shen 2014-10-06

This book collects selected papers from the 27th Conference of Spacecraft TT&C Technology in China held in Guangzhou on November 9-12, 2014. The book features state-of-the-art studies on spacecraft TT&C in China with the theme of "Wider Space for TT&C". To meet requirements of new space endeavors, especially China's deep-space programs, China's spacecraft TT&C systems shall "go farther, measure more accurately and control better with higher efficacy". Researchers and engineers in the field of aerospace engineering and communication engineering can benefit from the book.

**Methods and Techniques of Radar Recognition** - Viktor Georgievich Nebabin 1995

Here is a landmark radar reference that encompasses 25 years of critical radar recognition advances, and allows you fingertip access to information that has previously been unknown outside of Russia.

**Advances in Intelligent Computing** - De-Shuang Huang 2005-08-11  
The two-volume set LNCS 3644 and LNCS 3645 constitute the refereed proceedings of the International Conference on Intelligent Computing, ICIC 2005, held in Hefei, China, in August 2005. The program committee selected 215 carefully revised full papers for presentation in two volumes from over 2000 submissions, based on rigorous peer reviews. The first volume includes all the contributions related with perceptual and pattern recognition, informatics theories and applications computational neuroscience and bioscience, models and methods, and learning systems. The second volume collects the papers related with genomics and proteomics, adaptation and decision making, applications and hardware, and other applications.

**2018 14th International Conference on Advanced Trends in Radioelectronics, Telecommunications and Computer Engineering (TCSET)** - IEEE Staff 2018-02-20

The main purpose of the conference is presentation of the novel results in science and technology and the exchange ideas in the area of Radioelectronics, Telecommunications and Computer Engineering  
**Radar Signal Processing and Its Applications** - Jian Li 2003-03-31  
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.

**An Efficient Image Segmentation Algorithm Using Neutrosophic Graph Cut** - Yanhui Guo

Segmentation is considered as an important step in image processing and computer vision applications, which divides an input image into various non-overlapping homogenous regions and helps to interpret the

image more conveniently. This paper presents an efficient image segmentation algorithm using neutrosophic graph cut (NGC).  
*Chinese Journal of Electronics* - 2005

**Advanced Technology Related to Radar Signal, Imaging, and Radar Cross-Section Measurement** - Hirokazu Kobayashi 2020-06-16

Radar-related technology is mainly processed within the time and frequency domains but, at the same time, is a multi-dimensional integrated system including a spatial domain for transmitting and receiving electromagnetic waves. As a result of the enormous technological advancements of the pioneers actively discussed in this book, research and development in multi-dimensional undeveloped areas is expected to continue. This book contains state-of-the-art work that should guide your research.

**Advances in Multimedia Modeling** - Tat-Jen Cham 2006-12-22

The two volume set LNCS 4351 and LNCS 4352 constitutes the refereed proceedings of the 13th International Multimedia Modeling Conference, MMM 2007, held in Singapore in January 2007. Based on rigorous reviewing, the program committee selected 123 carefully revised full papers of the main technical sessions and 33 revised full papers of four special sessions from a total of 392 submissions for presentation in two volumes.

**Bispectral Methods of Signal Processing** - Alexander V. Totsky 2014-12-11

By studying applications in radar, telecommunications and digital image restoration, this monograph discusses signal processing techniques based on bispectral methods. Improved robustness against different forms of noise as well as preservation of phase information render this method a valuable alternative to common power-spectrum analysis used in radar object recognition, digital wireless communications, and jitter removal in images.

**Algorithms in Decision Support Systems** - Vicente García-Díaz 2021-03-19

This book aims to provide a new vision of how algorithms are the core of decision support systems (DSSs), which are increasingly important information systems that help to make decisions related to unstructured and semi-unstructured decision problems that do not have a simple solution from a human point of view. It begins with a discussion of how DSSs will be vital to improving the health of the population. The following article deals with how DSSs can be applied to improve the performance of people doing a specific task, like playing tennis. It continues with a work in which authors apply DSSs to insect pest management, together with an interactive platform for fitting data and carrying out spatial visualization. The next article improves how to reschedule trains whenever disturbances occur, together with an evaluation framework. The final works focus on different relevant areas of DSSs: 1) a comparison of ensemble and dimensionality reduction models based on an entropy criterion; 2) a radar emitter identification method based on semi-supervised and transfer learning; 3) design limitations, errors, and hazards in creating very large-scale DSSs; and 4) efficient rule generation for associative classification. We hope you enjoy all the contents in the book.

**Introduction to Radar Target Recognition** - P. Tait 2005

This book text provides an overview of the radar target recognition process and covers the key techniques being developed for operational systems. It is based on the fundamental scientific principles of high resolution radar, and explains how the underlying techniques can be used in real systems, taking into account the characteristics of practical radar system designs and component limitations. It also addresses operational aspects, such as how high resolution modes would fit in with other functions such as detection and tracking.

**Communications, Signal Processing, and Systems** - Qilian Liang 2019-08-14

This book brings together papers from the 2018 International Conference on Communications, Signal Processing, and Systems, which was held in Dalian, China on July 14-16, 2018. Presenting the latest developments and discussing the interactions and links between these multidisciplinary fields, the book spans topics ranging from communications, signal processing and systems. It is aimed at undergraduate and graduate electrical engineering, computer science and mathematics students, researchers and engineers from academia and industry as well as government employees.

**Advances in Intelligent Information Hiding and Multimedia Signal Processing** - Jeng-Shyang Pan 2021-04-20

This book presents selected papers from the Sixteenth International

Conference on Intelligent Information Hiding and Multimedia Signal Processing, in conjunction with the Thirteenth International Conference on Frontiers of Information Technology, Applications and Tools, held on November 5-7, 2020, in Ho Chi Minh City, Vietnam. It is divided into two volumes and discusses the latest research outcomes in the field of Information Technology (IT) including information hiding, multimedia signal processing, big data, data mining, bioinformatics, database, industrial and Internet of things, and their applications.

*Information Technology* - Yi Wan 2015-09-07

These proceedings of the symposium ISIT 2014 aim to be a platform for international exchange of the state-of-the-art research and practice in information technology. The contributions cover a wide variety of topics, ranging from theoretical and analytical studies to various applications.

Wavelet Active Media Technology and Information Processing -

*Fractal Analysis* - Fernando Brambila 2017-06-14

Fractal analysis has entered a new era. The applications to different areas of knowledge have been surprising. Let us begin with the fractional calculus-fractal geometry relationship, which allows for modeling with extreme precision of phenomena such as diffusion in porous media with fractional partial differential equations in fractal objects. Where the order of the equation is the same as the fractal dimension, this allows us to make calculations with enormous precision in diffusion phenomena—particularly in the oil industry, for new spillage prevention. Main applications to industry, design of fractal antennas to receive all frequencies and that is used in all cell phones, spacecraft, radars, image processing, measure, porosity, turbulence, scattering theory. Benoit Mandelbrot, creator of fractal geometry, would have been surprised by the use of fractal analysis presented in this book: "Part I: Petroleum Industry and Numerical Analysis"; "Part II: Fractal Antennas, Spacecraft, Radars, Image Processing, and Measure"; and "Part III: Scattering Theory, Porosity, and Turbulence." It's impossible to picture today's research without fractal analysis.

**Knowledge Engineering and Management** - Fuchun Sun 2013-07-24

These proceedings present technical papers selected from the 2012 International Conference on Intelligent Systems and Knowledge Engineering (ISKE 2012), held on December 15-17 in Beijing. The aim of this conference is to bring together experts from different fields of expertise to discuss the state-of-the-art in Intelligent Systems and Knowledge Engineering, and to present new findings and perspectives on future developments. The proceedings introduce current scientific and technical advances in the fields of artificial intelligence, machine learning, pattern recognition, data mining, knowledge engineering, information retrieval, information theory, knowledge-based systems, knowledge representation and reasoning, multi-agent systems, and natural-language processing, etc. Furthermore they include papers on new intelligent computing paradigms, which combine new computing methodologies, e.g., cloud computing, service computing and pervasive computing with traditional intelligent methods. By presenting new methodologies and practices, the proceedings will benefit both researchers and practitioners who want to utilize intelligent methods in their specific fields. Dr. Fuchun Sun is a professor at the Department of Computer Science & Technology, Tsinghua University, China. Dr. Tianrui Li is a professor at the School of Information Science & Technology, Southwest Jiaotong University, Chengdu, China. Dr. Hongbo Li also works at the Department of Computer Science & Technology, Tsinghua University, China.

**Computational Electromagnetics—Retrospective and Outlook** -

Iftikhar Ahmed 2014-08-27

The book will cover the past, present and future developments of field theory and computational electromagnetics. The first two chapters will give an overview of the historical developments and the present the state-of-the-art in computational electromagnetics. These two chapters will set the stage for discussing recent progress, new developments, challenges, trends and major directions in computational electromagnetics with three main emphases: a. Modeling of ever larger structures with multi-scale dimensions and multi-level descriptions (behavioral, circuit, network and field levels) and transient behaviours b. Inclusions of physical effects other than electromagnetic: quantum effects, thermal effects, mechanical effects and nano scale features c. New developments in available computer hardware, programming paradigms (MPI, Open MP, CUDA and Open CL) and the associated new modeling approaches These are the current emerging topics in the area of computational electromagnetics and may provide readers a comprehensive overview of future trends and directions in the area. The

book is written for students, research scientists, professors, design engineers and consultants who engaged in the fields of design, analysis and research of the emerging technologies related to computational electromagnetics, RF/microwave, optimization, new numerical methods, as well as accelerator simulator, dispersive materials, nano-antennas, nano-waveguide, nano-electronics, terahertz applications, bio-medical and material sciences. The book may also be used for those involved in commercializing electromagnetic and related emerging technologies, sensors and the semiconductor industry. The book can be used as a reference book for graduates and post graduates. It can also be used as a text book for workshops and continuing education for researchers and design engineers.

**Frontiers in Computer Education** - Yuanzhi Wang 2015-07-28

This proceedings volume contains selected papers presented at the 2014 International Conference on Frontiers in Computer Education (ICFCE 2014), which was held December 24-25, 2014, in Wuhan, China. The objective of this conference was to provide a forum for different researchers in different fields, especially Computer Education as well as Informa

Proceedings of the 12th International Conference on Computer Engineering and Networks - Qi Liu 2022-10-19

This conference proceeding is a collection of the papers accepted by the CENet2022 – the 12th International Conference on Computer Engineering and Networks held on November 4-7, 2022 in Haikou, China. The topics focus but are not limited to Internet of Things and Smart Systems, Artificial Intelligence and Applications, Communication System Detection, Analysis and Application, and Medical Engineering and Information Systems. Each part can be used as an excellent reference by industry practitioners, university faculties, research fellows and undergraduates as well as graduate students who need to build a knowledge base of the most current advances and state-of-practice in the topics covered by this conference proceedings. This will enable them to produce, maintain, and manage systems with high levels of trustworthiness and complexity.

MIMO Radar Signal Processing - Jian Li 2008-10-10

The first book to present a systematic and coherent picture of MIMO radars Due to its potential to improve target detection and discrimination capability, Multiple-Input and Multiple-Output (MIMO) radar has generated significant attention and widespread interest in academia, industry, government labs, and funding agencies. This important new work fills the need for a comprehensive treatment of this emerging field. Edited and authored by leading researchers in the field of MIMO radar research, this book introduces recent developments in the area of MIMO radar to stimulate new concepts, theories, and applications of the topic, and to foster further cross-fertilization of ideas with MIMO communications. Topical coverage includes: Adaptive MIMO radar Beampattern analysis and optimization for MIMO radar MIMO radar for target detection, parameter estimation, tracking, association, and recognition MIMO radar prototypes and measurements Space-time codes for MIMO radar Statistical MIMO radar Waveform design for MIMO radar Written in an easy-to-follow tutorial style, MIMO Radar Signal Processing serves as an excellent course book for graduate students and a valuable reference for researchers in academia and industry.

The Proceedings of the Second International Conference on Communications, Signal Processing, and Systems - Baoju Zhang 2014-01-28

The Proceedings of The Second International Conference on Communications, Signal Processing, and Systems provides the state-of-art developments of Communications, Signal Processing, and Systems. The conference covered such topics as wireless communications, networks, systems, signal processing for communications. This book is a collection of contributions coming out of The Second International Conference on Communications, Signal Processing, and Systems (CSPS) held September 2013 in Tianjin, China.

**Recent Advances in Computational Intelligence in Defense and Security** - Rami Abielmona 2015-12-21

This volume is an initiative undertaken by the IEEE Computational Intelligence Society's Task Force on Security, Surveillance and Defense to consolidate and disseminate the role of CI techniques in the design, development and deployment of security and defense solutions. Applications range from the detection of buried explosive hazards in a battlefield to the control of unmanned underwater vehicles, the delivery of superior video analytics for protecting critical infrastructures or the development of stronger intrusion detection systems and the design of military surveillance networks. Defense scientists, industry experts,

academicians and practitioners alike will all benefit from the wide spectrum of successful applications compiled in this volume. Senior undergraduate or graduate students may also discover uncharted territory for their own research endeavors.

**Proceedings of the International Computer Conference 2006 on Wavelet Active Media Technology and Information Processing** - Jian Ping Li 2006-01-01

**Symmetry, vol. 9, issue 10 / 2007 - Special Issue: Neutrosophic Theories Applied in Engineering** - Florentin Smarandache

This Special Issue presents original research papers that report on state-of-the-art and recent advancements in neutrosophic sets and logic in soft computing, artificial intelligence, big and small data mining, decision making problems, and practical achievements.

*Intelligent Computing in Signal Processing and Pattern Recognition* - De-Shuang Huang 2006-09-08

This 1179-page book assembles the complete contributions to the International Conference on Intelligent Computing, ICIC 2006: one volume of Lecture Notes in Computer Science (LNCS); one of Lecture Notes in Artificial Intelligence (LNAI); one of Lecture Notes in Bioinformatics (LNBI); and two volumes of Lecture Notes in Control and Information Sciences (LNCIS). Include are 149 revised full papers, and a Special Session on Computing for Searching Strategies to Control Dynamic Processes.

**Radar and Sonar Imaging and Processing** - Andrzej Stateczny 2021-01-22

The Special Issue "Radar and Sonar Imaging Processing" is a collection of 21 articles exploring many topics related to remote sensing with radar and sonar sensors. In this editorial, we present short introductions of the published articles. The series of articles in this SI deal with a broad profile of aspects of the use of radar and sonar images in line with the latest scientific trends while making use of the latest developments in science, including artificial intelligence. It can be said that both radar and sonar imaging and processing still remain a "hot topic" and much research in this area is being conducted worldwide. New techniques and methods for extracting information from radar and sonar sensors and data have been proposed and verified. Some of these will stimulate further research while others have reached maturity and can be considered for industrial implementation and development.

**Wavelet Analysis and Its Applications, and Active Media Technology** - Jian Ping Li 2004-05-04

Wavelet analysis and its applications have been one of the fastest-growing research areas in the past several years. Wavelet theory has been employed in numerous fields and applications, such as signal and image processing, communication systems, biomedical imaging, radar, and air acoustics. Active media technology is concerned with the development of autonomous computational or physical entities capable of perceiving, reasoning, adapting, learning, cooperating, and delegating in a dynamic environment. This book captures the essence of the state of the art in wavelet analysis and its applications and active media technology. At the Congress, invited talks were delivered by distinguished researchers, namely Prof John Daugman of Cambridge University, UK; Prof Bruno Torresani of INRIA, France; Prof Victor Wickerhauser of Washington University, USA, Prof Ning Zhong of the Maebashi Institute of Technology, Japan; Prof John Yen of Pennsylvania

State University, USA; and Prof Sankar K Pal of the Indian Statistical Institute, India. Contents: Volume 1: Keynote Presentations Theoretical Research Algorithm and Construction Image Processing and Compression Signal Processing and Communication Systems and Applications Volume 2: Keynote Presentations Theory and Algorithm Agent and Multi-Agent System Active Computer Systems and Interfaces Multi-Modal Processing, Detection, Recognition and Expressing Personalized, Pervasive System and Interface Systems and Applications Readership: Graduate students, academics, researchers, and practitioners in the areas of pattern/handwriting recognition, image analysis, computer vision and networking. Keywords: Wavelet Analysis; Image Processing; Signal Processing; Communications; Algorithms and Constructions; Intelligent Agent Technology; Multi-Agent Technology; Multi-Agent Systems; Multi-Modal Processing; Detection

**Rough Sets and Current Trends in Computing** - Shusaku Tsumoto 2004-06-16

In recent years rough set theory has attracted the attention of many researchers and practitioners all over the world, who have contributed essentially to its development and applications.

We are observing a growing research interest in the foundations of rough sets, including the various logical, mathematical and philosophical aspects of rough sets. Some relationships have already been established between rough sets and other approaches, and also with a wide range of hybrid systems. As a result, rough sets are linked with decision system modeling and analysis of complex systems, fuzzy sets, neural networks, evolutionary computing, data mining and knowledge discovery, pattern recognition, machine learning, and approximate reasoning. In particular, rough sets are used in probabilistic reasoning, granular computing (including information granule calculi based on rough mereology), intelligent control, intelligent agent modeling, identification of autonomous systems, and process specification. Methods based on rough set theory alone or in combination with other approaches have been discovered with a wide range of applications in such areas as: acoustics, bioinformatics, business and finance, chemistry, computer engineering (e.g., data compression, digital image processing, digital signal processing, parallel and distributed computer systems, sensor fusion, fractal engineering), decision analysis and systems, economics, electrical engineering (e.g., control, signal analysis, power systems), environmental studies, informatics, medicine, molecular biology, musicology, neurology, robotics, social science, software engineering, spatial visualization, Web engineering, and Web mining.

**Modeling Decisions for Artificial Intelligence** - Vicenc Torra 2004-07-16

This book constitutes the refereed proceedings of the First International Conference on Modeling Decisions for Artificial Intelligence, MDAI 2004, held in Barcelona, Spain in August 2004. The 26 revised full papers presented together with 4 invited papers were carefully reviewed and selected from 53 submissions. The papers are devoted to topics like models for information fusion, aggregation operators, model selection, fuzzy integrals, fuzzy sets, fuzzy multisets, neural learning, rule-based classification systems, fuzzy association rules, algorithmic learning, diagnosis, text categorization, unsupervised aggregation, the Choquet integral, group decision making, preference relations, vague knowledge processing, etc.