Discovering Stock Price Prediction Rules Using Hybrid Models New Ways To Predict Canadian Stock Index Based On Grey Theory Arima Model And Wavelet Transformation

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Artificial Intelligence in Asset Management - Söhnke M. Bartram 2020-08-28
Artificial intelligence (AI) has grown in presence in asset management and has revolutionized the sector in many ways. It has improved portfolio management, trading, and risk management practices by increasing efficiency, accuracy, and compliance. In particular, AI techniques help construct portfolios based on more accurate risk and return forecasts and more complex constraints. Trading algorithms use AI to devise novel trading signals and execute trades with lower transaction costs. AI also improves risk modeling and forecasting by generating insights from new data sources. Finally, robo-advisors owe a large part of their success to AI techniques. Yet the use of AI can also create new risks and challenges, such as those resulting from model opacity, complexity, and reliance on data integrity.
Advances in Computing and Information Technology - Natarajan Meghanathan 2012-08-13
The international conference on Advances in Computing and Information technology (ACITY 2012) provides an excellent international forum for both academics and professionals for sharing knowledge and results in theory, methodology and applications of Computer Science and Information Technology. The Second International Conference on Advances in Computing and Information technology (ACITY 2012), held in Chennai, India, during July 13-15, 2012, covered a number of topics in all major fields of Computer Science and Information Technology including: networking and communications, network security and applications, web and internet computing, ubiquitous computing, algorithms, bioinformatics, digital image processing and pattern recognition, artificial intelligence, soft computing and applications. Upon a strength review process, a number of high-quality, presenting not only innovative ideas but also a founded evaluation and a strong argumentation of the same, were selected and collected in the present proceedings, that is composed of three different volumes.
Data Mining Applications for Empowering Knowledge Societies - Rahman, Hakikur 2008-07-31
Presents an overview of the main issues of data

mining, including its classification, regression, clustering, and ethical issues. Provides readers with knowledge enhancing processes as well as a wide spectrum of data mining applications.

Bio-Inspired Hybrid Intelligent Systems for Image Analysis and Pattern Recognition - Patricia Melin 2009-09-30
Bio-Inspired Hybrid Intelligent Systems for Image Analysis and Pattern Recognition comprises papers on diverse aspects of bio-inspired models, soft computing and hybrid intelligent systems. The articles are divided into four main parts. The first one consists of papers that propose new fuzzy and bio-inspired models to solve general problems. The second part deals with the main theme of modular neural networks in pattern recognition, which are basically papers using bio-inspired techniques. The third part contains papers that apply hybrid intelligent systems to the problem of time series analysis and prediction, while the fourth one shows papers dealing with bio-inspired models in optimization and robotics applications. An edited book in which both theoretical and application aspects are covered.

Chance Discovery - Yukio Ohsawa 2013-03-09
Chance discovery means discovering chances - the breaking points in systems, the marketing windows in business, etc. It involves determining the significance of some piece of information about an event and then using this new knowledge in decision making. The techniques developed combine data mining methods for finding rare but important events with knowledge management, groupware, and social psychology. The reader will find many applications, such as finding information on the Internet, recognizing changes in customer behavior, detecting the first signs of an imminent earthquake, etc. This first book dedicated to chance discovery covers the state of the art in the theory and methods and examines typical scenarios, and it thus appeals to researchers working on new techniques and algorithms and also to professionals dealing with real-world applications.

BIG DATA ANALYTICAL ALGORITHM BASED ON SCALING GRAPHICAL & PREDICTIVE MODAL - Ashad Ullah Qureshi
Volatility in critical socio-economic indices can have a significant negative impact on global development. This thesis presents a suite of novel big data analytics algorithms that operate on unstructured Web data streams to automatically infer events, knowledge graphs and predictive models to understand, characterize and predict the volatility of socioeconomic indices. This thesis makes four important research contributions. First, given a large volume of diverse unstructured news streams, we present new models for capturing events and learning spatiotemporal characteristics of events from news streams. We specifically explore two types of event models in this thesis: one centered around the concept of event triggers and a probabilistic metaevent model that explicitly delineates named entities from text streams to learn a generic class of meta-events. The second contribution focuses on learning several different types of knowledge graphs from news streams and events: a) Spatiotemporal article graphs capture intrinsic relationships between different news articles; b) Event graphs characterize relationships between events and given a news query, provide a succinct summary of a timeline of events relating to a query; c) Event-phenomenon graphs that provide a condensed representation of classes of events that relate to a given phenomena at a given location and time; d) Causality testing on word-word graphs which can capture strong spatio-temporal relationships between word occurrences in news streams; e) Concept graphs that capture relationships between different word concepts that occur in a given text stream. The third contribution focuses on connecting the different knowledge graph representations and structured time series data corresponding to a socio-economic index to automatically learn event-driven predictive models for the given socio-economic index to predict future volatility. We propose several types of predictive models centered around our two event models: event triggers and probabilistic meta-events. The final contribution focuses on a broad spectrum of inference case studies for different types of socio-economic indices including food prices, stock prices, disease outbreaks and interest rates. Across all these indices, we show that event-driven predictive models provide significant improvements in prediction accuracy over state-

of-the-art techniques.

Identifying Patterns in Financial Markets -
João Leitão 2017-12-26
This book describes a new pattern discovery approach based on the combination among rules between Perceptually Important Points (PIPs) and the Symbolic Aggregate approximation (SAX) representation optimized by Genetic Algorithm (GA). The proposed approach was tested with real data from S&P500 index and all the results obtained outperform the Buy&Hold strategy. Three different case studies are presented by the authors.

New Concepts and Trends of Hybrid Multiple Criteria Decision Making - Gwo-Hshiung Tzeng 2017-08-15
When people or computers need to make a decision, typically multiple conflicting criteria need to be evaluated; for example, when we buy a car, we need to consider safety, cost and comfort. Multiple criteria decision making (MCDM) has been researched for decades. Now as the rising trend of big-data analytics in supporting decision making, MCDM can be more powerful when combined with state-of-the-art analytics and machine learning. In this book, the authors introduce a new framework of MCDM, which can lead to more accurate decision making. Several real-world cases will be included to illustrate the new hybrid approaches.

Knowledge Management and Acquisition for Smart Systems and Services - Debbie Richards 2010-08-12
th The 11 International Workshop on Knowledge Management and Acquisition for Smart Systems and Services (PKAW 2010) has provided a forum for the past two decades for researchers and practitioners working in the area of machine intelligence. PKAW covers a spectrum of techniques and approaches to implement smartness in IT applications. As evidenced in the papers in this volume, machine intelligence solutions incorporate many areas of AI such as ontological engineering, agent-based techn- ogy, robotics, image recognition and the Semantic Web as well as many other fields of computing such as software engineering, security, databases, the Internet, information retrieval, language technology and game technology. PKAW has evolved to embrace and foster advances in theory, practice and te- nology not only in knowledge acquisition and capture but all aspects of knowledge management including reuse, sharing, maintenance, transfer, merging, reconciliation, creation and dissemination. As many nations strive to be knowledge economies and organizations seek to maximize their knowledge assets and usage, solutions to handle the complex task of knowledge management are more important than ever. This v- ume contributes towards this goal. This volume seeks to disseminate the latest solutions from the International Wo- shop on Knowledge Management and Acquisition for Smart Systems and Services (PKAW 2010) held in Daegu, Korea during August 30–31, 2010 in conjunction with the Pacific Rim International Conference on Artificial Intelligence (PRICAI 2010).

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.

Transactions on Rough Sets XVII - James F. Peters 2014-03-03
The LNCS journal Transactions on Rough Sets is devoted to the entire spectrum of rough sets related issues, from logical and mathematical foundations, through all aspects of rough set theory and its applications, such as data mining, knowledge discovery and intelligent information processing, to relations between rough sets and other approaches to uncertainty, vagueness, and incompleteness, such as fuzzy sets and theory of evidence. Volume XVII is a continuation of a number of research streams which have grown out of the seminal work by Zdzislaw Pawlak during the first decade of the 21st century. The research streams represented in the papers cover both theory and applications of rough, fuzzy and near sets as well as their combinations.

Rough Sets and Knowledge Technology - JingTao Yao 2007-06-26
This book constitutes the refereed proceedings of the Second International Conference on Rough Sets and Knowledge Technology, RSKT 2007, held in Toronto, Canada in May 2007 in conjunction with the 11th International Conference on Rough Sets, Fuzzy Sets, Data

Mining, and Granular Computing, RSFDGrC 2007, both as part of the Joint Rough Set Symposium, JRS 2007.

Stock price Prediction a referential approach on how to predict the stock price using simple time series... - Dr.N.Srinivasan This book is about the various techniques involved in the stock price prediction. Even the people who are new to this book, after completion they can do stock trading individually with more profit.

Emerging Trends in Data Driven Computing and Communications - Rajeev Mathur 2021-09-27 This book includes best selected, high-quality research papers presented at International Conference on Data Driven Computing and IoT (DDCIoT 2021) organized jointly by Geetanjali Institute of Technical Studies (GITS), Udaipur, and Rajasthan Technical University, Kota, India, during March 20–21, 2021. This book presents influential ideas and systems in the field of data driven computing, information technology, and intelligent systems.

Modern Advances in Applied Intelligence - Moonis Ali 2014-05-20 The two volume set LNAI 8481 and 8482 constitutes the refereed conference proceedings of the 27th International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems, IEA/AIE 2014, held in Kaohsiung, Taiwan, in June 2014. The total of 106 papers selected for the proceedings were carefully reviewed and selected from various submissions. The papers deal with a wide range of topics from applications of applied intelligent systems to solve real-life problems in all areas including engineering, science, industry, automation and robotics, business and finance, medicine and biomedicine, bioinformatics, cyberspace and human-machine interaction.

Rough Set Theory: A True Landmark in Data Analysis - Ajith Abraham 2009-02-26 Part 1 of this book deals with theoretical contributions of rough set theory, and parts 2 and 3 focus on several real world data mining applications. The book thoroughly explores recent results in rough set research.

Advances in Information Technology - Borworn Papasratorn 2010-11-01 It was our intention to organize IAIT 2010 as the place where researchers and ind- trial practitioners could share their work and achievements in information technology, both theoretical and in application. This is the fourth time we have organized IAIT to serve as a venue to foster collaboration among industry and academia from different parts of the world. A lot has been achieved since the launch of the first IAIT in 2005; however, many challenges remain to be addressed in the years to come. IAIT 2010 drew attendance from leading professionals in both industry and academes, as in IAIT 2009. In addition to the relevant program offered by IAIT 2010, the conference p- vided an excellent environment to meet peers in the IT profession, build relationships, and exchange lessons learned. During the conference, participants presented and d- cussed the latest topics in information technology, ranging from technical knowledge and experimentation to future strategic directions. As the Internet continues to reach out even further, almost everything in our daily life is accessible via IP addresses, our societies need to recognize that we need new knowledge to make this advancement become a benefit to all life in this world. It is almost impossible to gain this new knowledge without contributions from our c- leagues, working in various aspects of information technology. Some times, new knowledge found in one area can help simplify difficult task in another. Together we can make our world better by creating applications from information technology.

Discovery Science - Sašo Džeroski 2014-09-27 This book constitutes the proceedings of the 17th International Conference on Discovery Science, DS 2014, held in Bled, Slovenia, in October 2014. The 30 full papers included in this volume were carefully reviewed and selected from 62 submissions. The papers cover topics such as: computational scientific discovery; data mining and knowledge discovery; machine learning and statistical methods; computational creativity; mining scientific data; data and knowledge visualization; knowledge discovery from scientific literature; mining text, unstructured and multimedia data; mining structured and relational data; mining temporal and spatial data; mining data streams; network analysis; discovery informatics; discovery and experimental workflows; knowledge capture and

scientific ontologies; data and knowledge integration; logic and philosophy of scientific discovery; and applications of computational methods in various scientific domains.

Case-Based Reasoning on Images and Signals - Petra Perner 2008
This book is the ?rst edited book that deals with the special topic of signals and images within case-based reasoning (CBR). Signal-interpreting systems are becoming increasingly popular in medical, industrial, ecological, biotechnological and many other applications. Existing statisticalandknowledge-basedtechniqueslackrobustness,accuracy,and?-ibility. New strategies are needed that can adapt to changing environmental conditions, signal variation, user needs and process requirements. Introducing CBRstrategiesintosignal-interpretingsystemscansatisfytheserequirements. CBR can be used to control the signal-processing process in all phases of a signal-interpreting system to derive information of the highest possible qu- ity. Beyond this CBR o?ers di?erent learning capabilities, for all phases of a signal-interpretingsystem,thatsatisfydi?erentneedsduringthedevelopment process of a signal-interpreting system. In the outline of this book we summarize under the term "signal" signals of 1-dimensional, 2-dimensional or 3-dimensional nature. The unique data and the necessary computation techniques require ext- ordinary case representations, similarity measures and CBR strategies to be utilised. Signalinterpretation(1D,2D,or3Dsignalinterpretation)istheprocessof mapping the numerical representation of a signal into logical representations suitable for signal descriptions. A signal-interpreting system must be able to extract symbolic features from the raw data e.g., the image (e.g., irregular structure inside the nodule, area of calci?cation, and sharp margin). This is a complex process; the signal passes through several general processing steps before the ?nal symbolic description is obtained. The structure of the book is divided into a theoretical part and into an application-oriented part.

Advances in Knowledge Discovery and Data Mining - Zhi-Hua Zhou 2007-04-27
This book constitutes the refereed proceedings of the 11th Pacific-Asia Conference on

Knowledge Discovery and Data Mining, PAKDD 2007, held in Nanjing, China, May 2007. It covers new ideas, original research results and practical development experiences from all KDD-related areas including data mining, machine learning, data warehousing, data visualization, automatic scientific discovery, knowledge acquisition and knowledge-based systems.

Proceedings of the Institute of Industrial Engineers Asian Conference 2013 Yi-Kuei Lin 2013-07-12
This book is based on the research papers presented during The Institute of Industrial Engineers Asian Conference 2013 held at Taipei in July 2013. It presents information on the most recent and relevant research, theories and practices in industrial and systems engineering. Key topics include: Engineering and Technology Management Engineering Economy and Cost Analysis Engineering Education and Training Facilities Planning and Management Global Manufacturing and Management Human Factors Industrial & Systems Engineering Education Information Processing and Engineering Intelligent Systems Manufacturing Systems Operations Research Production Planning and Control Project Management Quality Control and Management Reliability and Maintenance Engineering Safety, Security and Risk Management Supply Chain Management Systems Modeling and Simulation Large scale complex systems

Knowledge Discovery, Knowledge Engineering and Knowledge Management - Ana Fred 2015-10-27
This book constitutes the thoroughly refereed proceedings of the 6th International Joint Conference on Knowledge Discovery, Knowledge Engineering and Knowledge Management, IC3K 2014, held in Rome, Italy, in October 2014. The 37 full papers presented were carefully reviewed and selected from 287 submissions. The papers are organized in topical sections on knowledge discovery and information retrieval; knowledge engineering and ontology development; knowledge management and information sharing.

Computational Intelligence Juan Julián Merelo 2021-07-01
This present book includes a set of selected revised and extended versions of the best papers

presented at the 11th International Joint Conference on Computational Intelligence (IJCCI 2019) – held in Vienna, Austria, from 17 to 19 September 2019. The authors focus on three outstanding fields of Computational Intelligence through the selected panel, namely Evolutionary Computation, Fuzzy Computation and Neural Computation. Besides presenting the recent advances of the selected areas, the book aims to aggregate new and innovative solutions for confirmed researchers and, on the other hand, to provide a source of information and/or inspiration for young interested researchers or learners in the ever-expanding and current filed of Computational Intelligence. It constitutes a precious provision of knowledge for individual researchers as well as represents a valuable sustenance for collective use in academic libraries (of universities and engineering schools) relating innovative techniques in various fields of applications.

Forecasting Financial Markets in I-n Rudra Prakash Pradhan 2009
Papers presented at the Forecasting Financial Markets in India, held at Kharagpur during 29-31 December 2008.

Investment Strategies Optimization based on a SAX-GA Methodology - António M.L. Canelas 2012-09-28
This book presents a new computational finance approach combining a Symbolic Aggregate approximation (SAX) technique with an optimization kernel based on genetic algorithms (GA). While the SAX representation is used to describe the financial time series, the evolutionary optimization kernel is used in order to identify the most relevant patterns and generate investment rules. The proposed approach considers several different chromosomes structures in order to achieve better results on the trading platform The methodology presented in this book has great potential on investment markets.

Artificial Intelligence: Methodology, Systems, and Applications Allan Ramsay 2012-08-29
This book constitutes the refereed proceedings of the 15th International Conference on Artificial Intelligence: Methodology, Systems, and Applications, AIMSA 2012, held in Varna, Bulgaria in September 2012. The 36 revised full papers presented were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on natural language processing, social networks, knowledge representation and reasoning, machine learning, planning and agents, search, and computer vision.

Communication and Intelligent Systems - Harish Sharma 2022-08-18
This book gathers selected research papers presented at the Third International Conference on Communication and Intelligent Systems (ICCIS 2021), organized by National institute of Technology, Delhi, India, during December 18–19, 2021. This book presents a collection of state-of-the-art research work involving cutting-edge technologies for communication and intelligent systems. Over the past few years, advances in artificial intelligence and machine learning have sparked new research efforts around the globe, which explore novel ways of developing intelligent systems and smart communication technologies. The book presents single- and multi-disciplinary research on these themes in order to make the latest results available in a single, readily accessible source.

Artificial Higher Order Neural Networks for Economics and Business - Zhang, Ming 2008-07-31
"This book is the first book to provide opportunities for millions working in economics, accounting, finance and other business areas education on HONNs, the ease of their usage, and directions on how to obtain more accurate application results. It provides significant, informative advancements in the subject and introduces the HONN group models and adaptive HONNs"--Provided by publisher.

New Trends in Computational Vision and Bio-inspired Computing - S. Smys 2020-09-27
This volume gathers selected, peer-reviewed original contributions presented at the International Conference on Computational Vision and Bio-inspired Computing (ICCVBIC) conference which was held in Coimbatore, India, on November 29-30, 2018. The works included here offer a rich and diverse sampling of recent developments in the fields of Computational Vision, Fuzzy, Image Processing and Bio-inspired Computing. The topics covered include computer vision; cryptography and digital privacy; machine learning and artificial neural

networks; genetic algorithms and computational intelligence; the Internet of Things; and biometric systems, to name but a few. The applications discussed range from security, healthcare and epidemic control to urban computing, agriculture and robotics. In this book, researchers, graduate students and professionals will find innovative solutions to real-world problems in industry and society as a whole, together with inspirations for further research.

Data Mining in Finance - Boris Kovalerchuk 2006-04-18
Data Mining in Finance presents a comprehensive overview of major algorithmic approaches to predictive data mining, including statistical, neural networks, ruled-based, decision-tree, and fuzzy-logic methods, and then examines the suitability of these approaches to financial data mining. The book focuses specifically on relational data mining (RDM), which is a learning method able to learn more expressive rules than other symbolic approaches. RDM is thus better suited for financial mining, because it is able to make greater use of underlying domain knowledge. Relational data mining also has a better ability to explain the discovered rules - an ability critical for avoiding spurious patterns which inevitably arise when the number of variables examined is very large. The earlier algorithms for relational data mining, also known as inductive logic programming (ILP), suffer from a relative computational inefficiency and have rather limited tools for processing numerical data. Data Mining in Finance introduces a new approach, combining relational data mining with the analysis of statistical significance of discovered rules. This reduces the search space and speeds up the algorithms. The book also presents interactive and fuzzy-logic tools for `mining' the knowledge from the experts, further reducing the search space. Data Mining in Finance contains a number of practical examples of forecasting S&P 500, exchange rates, stock directions, and rating stocks for portfolio, allowing interested readers to start building their own models. This book is an excellent reference for researchers and professionals in the fields of artificial intelligence, machine learning, data mining,

knowledge discovery, and applied mathematics.
Hybrid Artificial Intelligence Systems - Emilio Corchado 2008-09-10
This volume constitutes the proceedings of the Third International Workshop on Hybrid Artificial Intelligence Systems, HAIS 2008, held in Burgos, Spain, during September 24-26, 2008. The 93 papers presented, together with 4 invited talks, were carefully reviewed and selected from 280 submissions. The topics covered are agents and multi-agent systems; evolutionary computation; connectionist models; optimization sysetms; fuzzy logic systems; classification and classifiers; cluster analysis; video and image analysis; learning systems, algorithms and applications; hybrid systems based on negotiation and social network modelling; real world applications of HAIS under uncertainty; hybrid intelligent systems for multi-robot and multi-agent systems; applications of hybrid artificial intelligence in bioinformatics; and novel approaches to genetic fuzzy systems.

Database Technologies: Concepts, Methodologies, Tools, and Applications - Erickson, John 2009-02-28
"This reference expands the field of database technologies through four-volumes of in-depth, advanced research articles from nearly 300 of the world's leading professionals"--Provided by publisher.

Data Mining and Knowledge Discovery Handbook - Oded Maimon 2010-09-10
This book organizes key concepts, theories, standards, methodologies, trends, challenges and applications of data mining and knowledge discovery in databases. It first surveys, then provides comprehensive yet concise algorithmic descriptions of methods, including classic methods plus the extensions and novel methods developed recently. It also gives in-depth descriptions of data mining applications in various interdisciplinary industries.

Agent and Multi-agent Technology for Internet and Enterprise Systems - Anne Hakansson 2010-07-14
Research in multi-agent systems offers a promising technology for problems with networks, online trading and negotiations but also social structures and communication. This is a book on agent and multi-agent technology for internet and enterprise systems. The book is a

pioneer in the combination of the fields and is based on the concept of developing a platform to share ideas and presents research in technology in the field and application to real problems. The chapters range over both applications, illustrating the possible uses of agents in an enterprise domain, and design and analytic methods, needed to provide the solid foundation required for practical systems.

Intelligent Information and Database Systems - Ali Selamat 2013-02-26
The two-volume set LNAI 7802 and LNAI 7803 constitutes the refereed proceedings of the 5th Asian Conference on Intelligent Information and Database Systems, ACIIDS 2013, held in Kuala Lumpur, Malaysia in March 2013. The 108 revised papers presented were carefully reviewed and selected from numerous submissions. The papers included are grouped into topical sections on: innovations in intelligent computation and applications; intelligent database systems; intelligent information systems; tools and applications; intelligent recommender systems; multiple modal approach to machine learning; engineering knowledge and semantic systems; computational biology and bioinformatics; computational intelligence; modeling and optimization techniques in information systems, database systems and industrial systems; intelligent supply chains; applied data mining for semantic Web; semantic Web and ontology; integration of information systems; and conceptual modeling in advanced database systems.

Enterprise Business Modeling, Optimization Techniques, and Flexible Information Systems Papajorgji, Petraq 2013-04-30
Many factors can impact large-scale enterprise management systems, and maintaining these systems can be a complicated and challenging process. Therefore, businesses can benefit from an assortment of models and management styles to track and collect data for processes. Enterprise Business Modeling, Optimization Techniques, and Flexible Information Systems supplies a wide array of research on the intersections of business modeling, information systems, and optimization techniques. These various business models and structuring methods are proposed to provide ideas, methods, and points of view for managers,

practitioners, entrepreneurs, and researchers on how to improve business processes.

Mathematical and Statistical Methods for Actuarial Sciences and Finance - Marco Corazza 2017-12-28
This volume gathers selected peer-reviewed papers presented at the international conference "MAF 2016 – Mathematical and Statistical Methods for Actuarial Sciences and Finance", held in Paris (France) at the Université Paris-Dauphine from March 30 to April 1, 2016. The contributions highlight new ideas on mathematical and statistical methods in actuarial sciences and finance. The cooperation between mathematicians and statisticians working in insurance and finance is a very fruitful field, one that yields unique theoretical models and practical applications, as well as new insights in the discussion of problems of national and international interest. This volume is addressed to academicians, researchers, Ph.D. students and professionals.

Recent Advances in Technology Research and Education - Dumitru Luca 2017-09-08
This book presents selected contributions to the 16th International Conference on Global Research and Education Inter-Academia 2017 hosted by Alexandru Ioan Cuza University of Iași, Romania from 25 to 28 September 2017. It is the third volume in the series, following the editions from 2015 and 2016. Fundamental and applied research in natural sciences have led to crucial developments in the ongoing 4th global industrial revolution, in the course of which information technology has become deeply embedded in industrial management, research and innovation – and just as deeply in education and everyday life. Materials science and nanotechnology, plasma and solid state physics, photonics, electrical and electronic engineering, robotics and metrology, signal processing, e-learning, intelligent and soft computing have long since been central research priorities for the Inter-Academia Community (I-AC) – a body comprising 14 universities and research institutes from Japan and Central/East-European countries that agreed, in 2002, to coordinate their research and education programs so as to better address today's challenges. The book is intended for use in academic, government, and industrial R&D departments as a reference tool

in research and technology education. The 42 peer-reviewed papers were written by more than 119 leading scientists from 14 countries, most of them affiliated to the I-AC.

Soft-Computing in Capital Market - Jibendu Kumar Mantri 2014-06-03
Computational Finance, an exciting new cross-disciplinary research area, depends extensively on the tools and techniques of computer science, statistics, information systems and financial economics for educating the next generation of financial researchers, analysts, risk managers, and financial information technology professionals. This new discipline, sometimes also referred to as "Financial Engineering" or "Quantitative Finance" needs professionals with extensive skills both in finance and mathematics along with specialization in computer science. Soft-Computing in Capital Market hopes to fulfill the need of applications of this offshoot of the technology by providing a diverse collection of cross-disciplinary research. This edited volume covers most of the recent, advanced research and practical areas in computational finance, starting from traditional fundamental analysis using algebraic and geometric tools to the logic of science to explore information from financial data without prejudice. Utilizing various methods, computational finance researchers aim to determine the financial risk with greater precision that certain financial instruments create. In this line of interest, twelve papers dealing with new techniques and/or novel applications related to computational intelligence, such as statistics, econometrics, neural- network, and various numerical algorithms are included in this volume.

Action-Based Quality Management Marta Peris-Ortiz 2014-06-13
Featuring case studies from the industrial and tourism sectors, this book provides an interdisciplinary perspective on the effect of total quality management on business and innovation strategies. The principles of Total Quality Management (TQM) have been widely researched and analyzed as an essential tool for businesses to compete in a globalized economy. This book presents the latest research on the applications of TQM across different functions such as customer service, human resources management and cost control. It demonstrates how the utilization of TQM tools, such as the SERVQUAL model, Eco-Management and Audit Scheme (EMAS), High Involvement Practices (HIWP) and the EFQM excellence model, impacts a firm's performance, enhances productivity and innovation and reduces cost, thereby allowing them to compete more effectively in the global market. Building on the extensive literature on the relationship between TQM and business performance, the authors argue that quality acts as a powerful competitive tool that companies should embrace in their corporate strategy. By promoting activities that result in greater efficiency, improved control and management of the organization (internal quality), firms can achieve significant improvement in customer satisfaction, employee satisfaction, social impact and business results (external quality) and exceed expectations in these areas.