

I Ching Springer

(Hardcover) This book presents the I Ching as an example of a language, a language of the vague, and as such shows the ability of the I Ching to describe itself by reference to itself. This association with language allows for linking yang/yin with fight/flight - the language we call "emotions". Through consideration of current research into emotions, the book brings out the ability to translate the language of primary emotion into the language of yang/yin and so present a more consistent, precise, yang/yin interpretation of any situation given an emotional assessment of that situation. The appendix introduces a more general perspective on meaning derivation given our current knowledge about our neurology and the creation of symbols and metaphors.

Chou and Ching examine the processes of schooling in Taiwan amidst social, cultural, economic, and political conflict resulting from local and global dilemmas. Collectively, these issues offer a panoramic and in-depth glimpse from the past to the future of educational trends in Taiwan. Existing software applications should be redesigned if programmers want to benefit from the performance offered by multi- and many-core architectures. Performance scalability now depends on the possibility of finding and exploiting enough Thread-Level Parallelism (TLP) in applications for using the increasing numbers of cores on a chip. Video decoding is an example of an application domain with increasing computational requirements every new generation. This is due, on the one hand, to the trend towards high quality video systems (high definition and frame rate, 3D displays, etc) that results in a continuous increase in the amount of data that has to be processed in real-time. On the other hand, there is the requirement to maintain high compression efficiency which is only possible with video codes like H.264/AVC that use advanced coding techniques. In this book, the parallelization of H.264/AVC decoding is presented as a case study of parallel programming. H.264/AVC decoding is an example of a complex application with many levels of dependencies, different kernels, and irregular data structures. The book presents a detailed methodology for parallelization of this type of applications. It begins with a description of the algorithm, an analysis of the data dependencies and an evaluation of the different parallelization strategies.

Then the design and implementation of a novel parallelization is presented that is scalable to many core architectures. Experimental results on different parallel architectures are discussed in detail. Finally, an outlook is given on parallelization opportunities in the upcoming HEVC standard. Gives a clear and comprehensive introduction on how to use the 3,000 year old oracle. Includes simple instructions on making consultations.

Adaptive Web Services For Modular and Reusable Software Development: Tactics and Solutions Theory and Applications

The Fourth World Congress

ZnSe and Related II–VI Compound Semiconductors

Cloud Computing and Digital Media

Methods and Applications

Animal Coronaviruses

This volume presents the current thinking on finance and strategy inside China. It begins with research presented at the China Financial Markets Conference in 2016, jointly organized by the University of Malaya and the Sun Tzu Art of War Institute. It includes a talk by Check Teck Foo on Currency-at-War: A Longer View, as well as a highly innovative piece by Kishan on the New Chinese Paradigm in Finance, and Tianyue Lu and Wee-Yeap Lau's empirical work on China's Shadow Banking. Ignatius Roni Setoyawan and Budj Integration in ASEAN. Other topics include the intriguing proposal: integrating China into ASEAN, will determinants be the same? and Real Estate and Inflation in China by Siew Peng Lee and Mansor Isa. The book also features contributions from the 7th Global Chinese Management Conference held in 2017. Of the several papers on Sun Tzu, Seow Wah Sheh's on Modeling of the Dao of Sun Tzu for Business was chosen along with Shi Yong Song's Legal Risks inside China and Sustainability Reporting by Xin Sheng Duan and Chinese Board of Directors by Guang You Liu and Xiao Hui Wang are included. Lastly, it presents Check-Teck Foo's interview with Singaporean Chinese forecaster, Jason Tan Beng Siang discussing Chinese approaches to forecasting as well as his invention, Sun Bian Shu.

Esta versión es citada por eruditos europeos como la más rigurosamente fidedigna y clara. Tomada de la versión del sinólogo alemán Richard Wilhelm, la Dra. Hoffmann demoró 7 años en producir ésta, la versión más erudita de este clásico de sabiduría china. Cabe destacar que si bien solo se trata del Volumen I, lleva 44 páginas de notas explicativas donde se incluyen los contenidos de los Volúmenes II y III.

Recognising the benefits of improved control, the second edition of Autotuning of PID Controllers provides simple yet effective methods for improving PID controller performance. The practical issues of controller tuning are examined using numerous worked examples and case studies in association with specially written autotuning MATLAB® programs to bridge the gap between conventional tuning practice and novel autotuning methods. The extensively revised second edition covers:
• Derivation of analytical expressions for control and performance assessment.
• Autotuning for handling process nonlinearity in multiple-model-based cases.
• The impact of imperfect actuators on controller performance. This book is more than just a monograph, it is an independent learning tool applicable to the work of academic control engineers and of their counterparts in industry looking for more effective process control and automation.

Teaching the I Ching (Book of Changes) is a comprehensive and authoritative source for understanding the 3,000-year-old Book of Changes, arguably the most influential Chinese classical text. Beginning in the 1960s, as a result of the renewed interest in Asian philosophy and the availability of a readable English translation, the I Ching (Pinyin Yijing) became a countercultural classic and attracted scholarly interest as well. In China, the Yijing was alternately condemned and praised during the Mao era - though the Great China, and scholarship on the Changes has blossomed both in China and the West, stimulated by advances in reconstructing the ancient Chinese language and by the recent discovery of previously lost versions of the text. Chinese traditional culture cannot be understood without some familiarity with the Yijing, but it is one of the most difficult of the world's ancient classics. Thetext is fragmentary with many obscure allusions and conflicting interpretive traditions spanning more than two thousand years. The associated book provides the necessary background for teachers at the university level to cover the Yijing even if they are not specialists. This book also serves as an introduction for students beginning the study of the Changes and presents an up-to-date survey of recent scholarship.

Teaching the I Ching (Book of Changes)

Animals in Space

Tactics and Solutions

Advances in Computational Social Science

I Ching

Its Application for the Benefit of Human Society

A translation of a key commentary on perhaps the most broadly influential text of classical China This book is a translation of a key commentary on the Book of Changes, or Yijing (I Ching), perhaps the most broadly influential text of classical China. The Yijing first appeared as a divination text in Zhou-dynasty China (ca. 1045–256 bce) and later became a work of cosmology, philosophy, and political theory as commentators supplied it with new meanings. While many English translations of the Yijing exist itself, none are paired with a historical commentary as thorough and methodical as that written by the Confucian scholar Cheng Yi, who turned the original text into a coherent work of political theory.

Key developments in the crystal growth of bulk II–VI semiconductor materials. A fundamental, systematic, and in-depth study of the physical vapor transport (PVT) growth process is the key to producing high-quality single crystals of semiconductors. As such, the book offers a comprehensive overview of the extensive studies on ZnSe and related II–VI wide bandgap compound semiconductors, such as GaS, CdTe, ZnTe, ZnSeTe and ZnSxS. Further, it shows the detailed steps for the growth of bulk crystals enabling optical devices which can operate in the visible spectrum for applications such as blue light emitting diodes, lasers for optical displays and in the mid-IR wavelength range, high density recording, and military communications. The book then discusses the advantages of crystallization from vapor compared to the conventional melt growth: lower processing temperatures, the purification process associated with PVT, and the improved surface morphology of the grown crystals, as well as the necessary drawbacks to the PVT process, such as the low and inconsistent growth rates and the low yield of single crystals. By presenting in-situ measurements of transport rate, partial pressures and interferometry, as well as visible observations, the book provides detailed insights into in the kinetics during the PVT process. This book is intended for graduate students and professionals in materials science as well as engineers preparing and developing optical devices with semiconductors.

Markov chains are a particularly useful and widely used tool for analyzing a variety of stochastic (probabilistic) systems over time. This monograph will present a series of Markov models, starting from the basic models and then building up to higher-order models. Included in the higher-order discussions are multivariate models, higher-order multivariate models, and higher-order hidden models. In each case, the focus is on the important kinds of applications that can be made with the class of models being considered in the current chapter. Special attention is given to numerical algorithms that can efficiently solve the models. Therefore, Markov Chains: Models, Algorithms and Applications outlines recent developments of Markov chain models for modeling queuing sequences, Internet, re-manufacturing systems, reverse logistics, inventory systems, bio-informatics, DNA sequences, genetic networks, data mining, and many other practical systems.

I Ching created from keen observation of the nature in the universe. The key concepts of Yi Jing are the yin and yang duality, the four phenomena, trigram, two sets of eight trigrams, the 64 hexagrams, two sets of 64 trigrams. The yin and yang duality of the universe posited in Yi Jing correlates with the matter duality of the universe theorized in quantum mechanics. The four phenomena are two sets of four yin and yang configurations. They correlate with DNA and RNA four chemicals configuration. Trigram is the triple yin and yang configuration, it correlates with codon which is the three-chemical configuration in DNA and RNA. The two sets of 64 trigrams in Yi Jing correlate with the two sets of 64 codons in DNA and RNA. Yi Jings hexagrams and lines are the external factors of changes that offer seekers accurate advice for dilemmatic issues in oracle use.

21st International TRIZ Future Conference, TFC 2021, Bolzano, Italy, September 22–24, 2021, Proceedings

National Library of Medicine Current Catalog

Machine Learning in Dentistry

Biometric Security

El Libro de los Cambios

Fuzzy Multiple Attribute Decision Making

Scalable Parallel Programming Applied to H.264/AVC Decoding

This book offers a systematic presentation of up-to-date material scattered throughout the literature from the methodology point of view. It reviews the basic theories and methods, with many interesting problems in partial and ordinary differential equations, differential geometry and mathematical physics as applications, and provides the necessary preparation for almost all important aspects in contemporary studies. All methods are illustrated by carefully chosen examples from mechanics, physics, engineering and geometry.

With the unprecedented growth-rate at which data is being collected and stored electronically today in almost all fields of human endeavor, the efficient extraction of useful information from the data available is becoming an increasing scientific challenge and a massive economic need. This book presents thoroughly reviewed and revised full versions of papers presented at a workshop on the topic held during KDD’99 in San Diego, California, USA in August 1999 complemented by several invited chapters and a detailed introductory survey in order to provide complete coverage of the relevant issues. The contributions presented cover all major tasks in data mining including parallel and distributed mining frameworks, associations, sequences, clustering, and classification. All in all, the volume presents the state of the art in the young and dynamic field of parallel and distributed data mining methods. It will be a valuable source of reference for researchers and professionals.

This monograph is intended for an advanced undergraduate or graduate course as well as for researchers, who want a compilation of developments in this rapidly growing field of operations research. This is a sequel to our previous works: "Multiple Objective Decision Making--Methods and Applications: A state-of-the-Art Survey" (No.164 of the Lecture Notes); "Multiple Attribute Decision Making--Methods and Applications: A State-of-the-Art Survey" (No.186 of the Lecture Notes); and "Group Decision Making under Multiple Criteria--Methods and Applications" (No.281 of the Lecture Notes). In this monograph, the literature on methods of fuzzy Multiple Attribute Decision Making (MADM) has been reviewed thoroughly and critically, and classified systematically. This study provides readers with a capsule look into the existing methods, their characteristics, and applicability to the analysis of fuzzy MADM problems. The basic concepts and algorithms from the classical MADM methods have been used in the development of the fuzzy MADM methods. We give an overview of the classical MADM in Chapter II. Chapter III presents the basic concepts and mathematical operations of fuzzy set theory with simple numerical examples in an easy-to-read and easy-to-follow manner. Fuzzy MADM methods basically consist of two phases: (1) the aggregation of the performance scores with respect to all the attributes for each alternative, and (2) the rank ordering of the alternatives according to the aggregated scores.

Knowledge Representation plays an essential role in Semantic Web, in particular in automated information processing and communications among software agents. This book, entitled "Fuzzy Computational Ontologies in Contexts: Formal Models of Knowledge Representation with Membership Degree and Typicality, and Their Applications", discusses knowledge representation in Semantic Web. It introduces the relevant background knowledge, models of fuzzy ontologies, importance and priority of properties in concepts, and object typicality in fuzzy ontologies and context-aware ontologies. The book is intended for graduate students, engineers, and researchers in the field of artificial intelligence and computer science. Yi Cai is an Assistant Professor in School of Software Engineering, South China University of Technology, Guangzhou, China. Ching-man Au Yeung is a Senior Engineer in Hong Kong Applied Science and Technology Research Institute, Hong Kong, China. Ho-Fung Leung is a Professor and the Chairman of Department of Computer Science and Engineering, The Chinese University of Hong Kong, Hong Kong, China.

Vapor Crystal Growth and Characterization

How to Use the I Ching

Parallel Computing

Methods in Nonlinear Analysis

DNA and the I Ching

Autotuning of PID Controllers

A Guide to Working with the Oracle of Change

This book constitutes the refereed proceedings of the 21st International TRIZ Future Conference on Automated Invention for Smart Industries, TFC 2021, held virtually in September 2021 and sponsored by IFIP WG 5.4. The 28 full papers and 8 short papers presented were carefully reviewed and selected from 48 submissions. They are organized in the following thematic sections: inventiveness and TRIZ for sustainable development; TRIZ, intellectual property and smart technologies; TRIZ: expansion in breadth and depth; TRIZ, design, engineering, intelligence; and TRIZ use and divulgation for engineering design and beyond. Chapter "Domain Analysis with TRIZ to Define an Effective "Design for Excellence" is available open access under a Creative Commons Attribution 4.0 International License via link.springer.com.

This book is a guide to asset and risk management from a practical point of view. It is centered around two questions triggered by the global events on the stock markets since the middle of the last decade: - Why do crashes happen when in theory they should not? - How do investors deal with such crises in terms of their risk measurement and management and as a consequence, what are the implications for the chosen investment strategies? The book presents and discusses two different approaches to finance and investing, i.e., modern portfolio theory and behavioral finance, and provides an overview of stock market anomalies and historical crashes. It is intended to serve as a comprehensive introduction to asset and risk management for bachelor's and master's students in this field as well as for young professionals in the asset management industry. A key part of this book is the exercises to further demonstrate the concepts presented with examples and a step-by-step business case. An Excel file with the calculations and solutions for all 17 examples as well as all business case calculations can be downloaded at extras.springer.com.

This book is as a detailed, but highly readable and balanced account of the history of animal space flight carried out by all nations, but principally the United States and the Soviet Union. It explores the ways in which animal high-altitude and space flight research impacted on space flight biomedicine and technology, and how the results - both successful and disappointing - allowed human beings to then undertake that same hazardous journey with far greater understanding and confidence. This complete and authoritative book will undoubtedly become the ultimate authority on animal space flights.

Philosophy in Reality offers a new vision of the relation between science and philosophy in the framework of a non-propositional logic of real processes, grounded in the physics of the real world. This logical system is based on the work of the Franco-Romanian thinker Stéphane Lupasco (1900-1988), previously presented by Joseph Brenner in the book Logic in Reality (Springer, 2008). The present book was inspired in part by the ancient Chinese Book of Changes (I Ching) and its scientific-philosophical discussion of change. The emphasis in Philosophy in Reality is on the recovery of dialectics and semantics from reductionist applications and their incorporation into a new synthetic paradigm for knowledge. Through an original re-interpretation of both classical and modern Western thought, this book addresses philosophical issues in scientific fields as well as long-standing conceptual problems such as the origin, nature and role of meaning, the unity of knowledge and the origin of morality. In a rigorous transdisciplinary manner, it discusses foundational and current issues in the physical sciences - mathematics, information, communication and systems theory and their implications for philosophy. The same framework is applied to problems of the origins of society, the transformation of reality by human subjects, and the emergence of a global, sustainable information society. In summary, Philosophy in Reality provides a wealth of new perspectives and references, supporting research by both philosophers and physical and social scientists concerned with the many facets of reality.

A Guide to Modern Portfolio Management and Behavior-Driven Markets

The Yi River Commentary on the Book of Changes

JPC.

The Tao of Life

Cultural Governance in a Global Context

Modeling, Analysis, and Simulations

I Ching (Yi Jing) and Modern Science

A startling correlation between ancient knowledge and ultra-modern science is explored in DNA and the I Ching.

This volume is the result of a (mainly) instructional conference on arithmetic geometry, held from July 30 through August 10, 1984 at the University of Connecticut in Storrs. This volume contains expanded versions of almost all the instructional lectures given during the conference. In addition to these expository lectures, this volume contains a translation into English of Faltings' seminal paper which provided the inspiration for the conference. We thank Professor Faltings for his permission to publish the translation and Edward Shipz who did the translation. We thank all the people who spoke at the Storrs conference, both for helping to make it a successful meeting and enabling us to publish this volume. We thank especially the two main organizers, the late David Rohrlich, who delivered the lectures on height functions (Chapter VI) when the second editor was unavoidably detained. In addition to the editors, Michael Artin and John Tate served on the organizing committee for the conference and much of the success of the conference was due to them and their assistance. Finally, the conference was only made possible through generous grants from the Vaughn Foundation and the National Science Foundation.

From the Preface: Blending ideas from operations research, music psychology, music theory, and cognitive science, this book aims to tell a coherent story of how tonality pervades our experience, and hence our models, of music. The story is told through the developmental stages of the Spiral Array model for tonality, a geometric model designed to incorporate and represent principles of tonal cognition, thereby lending itself to practical applications of tonal recognition, segmentation, and visualization. Mathematically speaking, the coils that make up the Spiral Array model are in effect helices, a spiral referring to a curve emanating from a central point. The use of (spir)al here is inspired by spiral staircases, intertwined spiral staircases: nested double helices within an outer spiral. The book serves as a compilation of knowledge about the Spiral Array model and its applications, and is written for a broad audience, ranging from the layperson interested in music, mathematics, and computing to the music scientist-engineer interested in computational approaches to music representation and analysis, from the music-mathematical and computational sciences student interested in learning about tonality from a formal modeling standpoint to the computer musician interested in applying these technologies in interactive composition and performance. Some chapters assume no musical or technical knowledge, and some are more musically or computationally involved.

This book is a collection of selected papers presented at the 17th FAI International Conference on Engineering, Mathematical and Computational Intelligence (CEMCI 2019), held at Jabalpur Engineering College, India, from 21to23 December 2019. This book discusses mathematical, computational intelligence and engineering approaches for tourism, agriculture and health care. It is a unique combination of a wide spectrum of topics, such as tourism destination ranking, medical diagnosis-based intelligent systems, drivers for hotel objectives, irrigation systems and more, which are discussed by using fuzzy, statistical and neural network tools. This book will be valuable to faculty members, postgraduate students, research scholars as well as readers from the industrial sector.

Fundamentals, Techniques, and Applications

Cumulative Listing

Mathematical, Computational Intelligence and Engineering Approaches for Tourism, Agriculture and Healthcare

A New Book of Changes

Applied Asset and Risk Management

Mathematical and Computational Modeling of Tonality

Philosophy in Reality

Parallel computing technologies have brought dramatic changes to mainstream computing; the majority of today's PC's, laptops and even notebooks incorporate multiprocessor chips with up to four processors. Standard components are increasingly combined with GPU's (Graphics Processing Unit), originally designed for high-speed graphics processing, and FPGA's (Free Programmable Gate Array) to build parallel computers with a wide spectrum of high-speed processing functions. The scale of this powerful hardware is limited only by factors such as energy consumption and thermal control. However, in addition to hardware factors, the practical use of petascale and exascale machines is often hampered by the difficulty of developing software which will run effectively and efficiently on such architecture. This book includes selected and refereed papers, presented at the 2009 international Parallel Computing conference (ParCo2009), which set out to address these problems. It provides a snapshot of the state-of-the-art of parallel computing technologies in hardware, application and software development. Areas covered include: numerical algorithms, grid and cloud computing, programming - including GPU and cell programming. The book also includes papers presented at the six mini-symposia held at the conference.

Modern biometrics delivers an enhanced level of security by means of a "proof of property". The design and deployment of a biometric system, however, hide many pitfalls, which, when underestimated, can lead to major security weaknesses and privacy threats. Issues of concern include biometric identity theft and privacy invasion because of the strong connection between a user and his identity. This book showcases a collection of comprehensive references on the advances of biometric security technology. It compiles a total of fourteen articles, all contributed by thirty-two eminent researchers in the field, thus providing concise and accessible coverage of not only general issues, but also state-of-the-art solutions. The book is divided into five parts: (1) Biometric Template Protection, which covers cancellable biometrics and parameter management protocol; (2) Biometric Key and Encryption, focusing on biometric key generation and visual biometric cryptography; (3) Biometric Systems Analysis, dealing with biometric system security, and privacy evaluation and assessment; (4) Privacy-Enhanced Biometric Systems, covering privacy-enhanced biometric system protocol design and implementation; and (5) Other Biometric Security Technologies. The book will be of particular interest to researchers, scholars, graduate students, engineers, practitioners and developers interested in security and privacy-related issues in biometric systems. It will also be attractive to managers of various organizations with strong security needs.

Cloud Computing and Digital Media: Fundamentals, Techniques, and Applications presents the Fundamentals of cloud and media infrastructure, novel technologies that integrate digital media with cloud computing, and real-world applications that exemplify the potential of cloud computing for next-generation digital media. It brings together technologies for media/data communication, elastic media/data storage, security, authentication, cross-network media/data fusion, interdevice media interaction/reaction, data centers, PaaS, SaaS, and more. The book covers resource optimization for multimedia cloud computing—a key technical challenge in adopting cloud computing for various digital media applications. It describes several important new technologies in cloud computing and digital media, including query processing, semantic classification, music retrieval, mobile multimedia, and video transcoding. The book also illustrates the profound impact of emerging health-care and educational applications of cloud computing. Covering an array of state-of-the-art research topics, this book will help you understand the techniques and applications of cloud computing, the interaction/reaction of mobile devices, and digital media/data processing and communication.

This detailed volume provides diagnosticians and researchers with practical methodologies and approaches to tackle animal coronaviruses. It explores conventional immunohistochemistry, virus neutralization, enzyme-linked immunosorbent assays, expression and purification of recombinant viral proteins, and various molecular assays, including conventional and real-time reverse transcription-PCR, reverse genetics methodology, and next generation sequencing and sequence analyses. As part of the Springer Protocols Handbooks series, chapters contain readily reproducible laboratory protocols as well as expert tips on troubleshooting and avoiding known pitfalls. Practical and authoritative, *Animal Coronaviruses* serves as an ideal reference for researchers examining a wide variety of coronavirus species in the Coronaviridae.

The Emotional I Ching

An International Perspective on Art Organizations

From Multicores and GPU's to Petascale

Methods and Applications A State-of-the-Art Survey

Taiwan Education at the Crossroad

Formal Models of Knowledge Representation with Membership Degree and Typicality of Objects, and Their Applications

Markov Chains: Models, Algorithms and Applications

This original book explores the effects of arts and cultural institutions in eight countries across five continents. Examining strategy and decision-making at an organisational level, this is the first empirical contribution on cultural policy and management, revealing how it is applied across the globe in otherwise unexplored countries. Concerned with the assumption that "one-size fits all", the chapter authors analyse how cultural governance is managed within arts organizations in a range of countries to assess whether some locations are trying to apply unsuitable models. The chapters aim to discover and assess new practices to benefit the understanding of cultural governance and the arts sector which have as yet been excluded from the literature. As a collection of local accounts, this book offers a broad and rich perspective on managing cultural governance around the world.

This book is based on a one semester course that the authors have been teaching for several years, and includes two sets of case studies. The first includes chemostat models, predator-prey interaction, competition among species, the spread of infectious diseases, and oscillations arising from bifurcations. In developing these topics, readers will also be introduced to the basic theory of ordinary differential equations, and how to work with MATLAB without having any prior programming experience. The second set of case studies were adapted from recent and current research papers to the level of the students. Topics have been selected based on public health interest. This includes the risk of atherosclerosis associated with high cholesterol levels, cancer and immune interactions, cancer therapy, and tuberculosis. Readers will experience how mathematical models and their numerical simulations can provide explanations that guide biological and biomedical research. Considered to be the undergraduate companion to the more advanced book "Mathematical Modeling of Biological Processes" (A. Friedman, C.-Y. Kuo, Springer - 2014), this book is geared towards undergraduate students with little background in mathematics and no biological background.

Web services provide systems with great flexibility and easier maintenance which result in better ways to communicate and distribute applications. There are good procedures in place for the design, development, and management of Web services; however, there are areas in which Web service adaptation is required. To preserve the loosely coupled approach of Web services, service adaptations should be implemented appropriately. Adaptive Web Services for Modular and Reusable Software Development: Tactics and Solutions includes current research on the area of Web service adaptation and discusses the methods proposed by researchers in diversified disciplines; half of them are classical ones, but the other half have appeared recently. The basic concept, the computational procedure, and the characteristics of each of these methods are presented concisely in Part III. The computational procedure of each method is illustrated by solving a simple numerical example. Part IV of the survey deals with the applications of these MADM methods.

A new and complete treatment of semi-abelian degenerations of abelian varieties, and their application to the construction of arithmetic compactifications of Siegel moduli space, with most of the results being published for the first time. Highlights of the book include a classification of semi-abelian schemes, construction of the toroidal and the minimal compactification over the integers, heights for abelian varieties over number fields, and Eichler integrals in several variables, together with a new approach to Siegel modular forms. A valuable source of reference for researchers and graduate students interested in algebraic geometry, Shimura varieties or diophantine geometry.

Springer Handbook of Augmented Reality

A Relay Feedback Approach

Updates on Myopia

Multiple Attribute Decision Making

Degeneration of Abelian Varieties

When Globalization Meets Localization

Large-Scale Parallel Data Mining

This mono graph is intended for an advanced undergraduate or graduate course as well as for the researchers who want a compilation of developments in this rapidly growing field of operations research. This is a sequel to our previous work entitled "Multiple Objective Decision Making--Methods and Applications: A State-of-the-Art Survey," (No. 164 of the Lecture Notes). The literature on methods and applications of Multiple Attribute Decision Making (MADM) has been reviewed and classified systematically. This study provides readers with a capsule look into the existing methods, their char acteristics, and applicability to analysis of MADM problems. The basic MADM concepts are defined and a standard notation is introduced in Part II. Also introduced are foundations such as models for MADM, trans formation of attributes, fuzzy decision rules, and methods for assessing weight. A system of classifying seventeen major MADM methods is presented. These methods have been proposed by researchers in diversified disciplines; half of them are classical ones, but the other half have appeared recently. The basic concept, the computational procedure, and the characteristics of each of these methods are presented concisely in Part III. The computational procedure of each method is illustrated by solving a simple numerical example. Part IV of the survey deals with the applications of these MADM methods.

This book is open access under a CC BY 4.0 license. This open access book discusses basic clinical concepts of myopia, prevention of progression and surgical treatments for myopia and pathological myopia. It also summarises the latest evidence and best practices for managing myopia, high myopia and its complications. Written by leading experts, the book addresses clinical diagnosis and interpretation of imaging modalities, and various complications of myopia such as glaucoma, choroidal neovascularization, retinal degeneration and cataracts. It is a valuable comprehensive resource for general and sub-specialist ophthalmologists as well as residents and ophthalmologists in training. This work was published by Saint Philip Street Press pursuant to a Creative Commons license permitting commercial use. All rights not granted by the author or authors.

This book reviews all aspects of the use of machine learning in contemporary dentistry, clearly explaining its significance for dental imaging, oral diagnosis and treatment, dental designs, and dental research. Machine learning is an emerging field of artificial intelligence research and practice in which computer agents are employed to improve perception, cognition, and action based on their ability to “learn”, for example through use of big data techniques. Its application within dentistry is designed to promote personalized and precision patient care, with enhancement of diagnosis and treatment planning. In this book, readers will find up-to-date information on different machine learning tools and their applicability in various dental specialties. The selected examples amply illustrate the opportunities to employ a machine learning approach within dentistry while also serving to highlight the associated challenges. Machine Learning in Dentistry will be of value for all dental practitioners and researchers who wish to learn more about the potential benefits of using machine learning techniques in their work.

*I Ching (Yi Jing) and Modern SciencesIts Application for the Benefit of Human Society*Universe

Journal of Philosophy and Culture

Finance and Strategy Inside China

Introduction to Mathematical Biology

Creative Solutions for a Sustainable Development

Fuzzy Computational Ontologies in Contexts

From Research Rockets to the Space Shuttle

Arithmetic Geometry

The Springer Handbook of Augmented Reality presents a comprehensive and authoritative guide to augmented reality (AR) technology, its numerous applications, and its intersection with emerging technologies. This book traces the history of AR from its early development, discussing the fundamentals of AR and its associated science. The handbook begins by presenting the development of AR over the last few years, mentioning the key pioneers and important milestones. It then moves to the fundamentals and principles of AR, such as photogrammetry, optics, motion and objects tracking, and marker-based and marker-less registration. The book discusses both software toolkits and techniques and hardware related to AR, before presenting the applications of AR. This includes both end-user applications like education and cultural heritage, and professional applications within engineering fields, medicine and architecture, amongst others. The book concludes with the convergence of AR with other emerging technologies, such as Industrial Internet of Things and Digital Twins. The handbook presents a comprehensive reference on AR technology from an academic, industrial and commercial perspective, making it an invaluable resource for audiences from a variety of backgrounds.

This volume is a post-conference publication of the 4th World Congress on Social Simulation (WCSS), with contents selected from among the 80 papers originally presented at the conference. WCSS is a biennial event, jointly organized by three scientific communities in computational social science, namely, the Pacific-Asian Association for Agent-Based Approach in Social Systems Sciences (PAAA), the European Social Simulation Association (ESSA), and the Computational Social Science Society of the Americas (CSSSA). It is, therefore, currently the most prominent conference in the area of agent-based social simulation. The papers selected for this volume give a holistic view of the current development of social simulation, indicating the directions for future research and creating an important archival document and milestone in the history of computational social science. Specifically, the papers included here cover substantial progress in artificial financial markets, macroeconomic forecasting, supply chain management, bank networks, social networks, urban planning, social norms and group formation, cross-cultural studies, political party competition, voting behavior, computational demography, computational anthropology, evolution of languages, public health and epidemics, AIDS, security and terrorism, methodological and epistemological issues, empirical-based agent-based modeling, modeling of experimental social science, gaming simulation, cognitive agents, and participatory simulation. Furthermore, pioneering studies in some new research areas, such as the theoretical foundations of social simulation and categorical social science, also are included in the volume.