

Sakamoto Method

The Elsevier book series *Advances in Biomembranes and Lipid Self-Assembly* (previously titled *Advances in Planar Lipid Bilayers and Liposomes*), provides a global platform for a broad community of experimental and theoretical researchers studying cell membranes, lipid model membranes, and lipid self-assemblies from the micro- to the nanoscale. Planar lipid bilayers are widely studied due to their ubiquity in nature and find their application in the formulation of biomimetic model membranes and in the design of artificial dispersion of liposomes. Moreover, lipids self-assemble into a wide range of other structures including micelles and the liquid crystalline hexagonal and cubic phases. Consensus has been reached that curved membrane phases do play an important role in nature as well, especially in dynamic processes such as vesicles fusion and cell communication. Self-assembled lipid structures have enormous potential as dynamic materials ranging from artificial lipid membranes to cell membranes, from biosensing to controlled drug delivery, from pharmaceutical formulations to novel food products to mention a few. An assortment of chapters in this volume represents both original research as well as comprehensive reviews written by world leading experts and young researchers. Surveys recent theoretical and experimental results on lipid micro- and nanostructures Presents potential uses of applications like clinically relevant diagnostic and therapeutic procedures, biotechnology, pharmaceutical engineering, and food products Provides both original research as well as comprehensive reviews written by world leading experts and young researchers Provides a global platform for a broad community of experimental and theoretical researchers studying cell membranes, lipid model membranes, and lipid self-assemblies from the micro- to the nanoscale.

This book is a snapshot of the current state of the art of research and development on the properties and characteristics of silk and their use in medicine and industry. The field encompasses backyard silk production from ancient time to industrial methods in the modern era and includes an example of efforts to maintain silk production on Madagascar. Once revered as worth its weight in gold, silk has captured the imagination from its mythical origins onwards. The latest methods in molecular biology have opened new descriptions of the underlying properties of silk. Advances in technological innovation have created silk production by microbes as the latest breakthrough in the saga of silk research and development. The application of silk to biomaterials is now very active on the basis of excellent properties of silks including recombinant silks for biomaterials and the accumulated structural information.

This book describes algorithms and hardware implementations of computer holography, especially in terms of fast calculation. It summarizes the basics of holography and computer holography and describes how conventional diffraction calculations play a central role. Numerical implementations by actual codes will also be discussed. This book will explain new fast diffraction calculations, such as scaled scalar diffraction. Computer Holography will also explain acceleration algorithms for computer-generated hologram (CGH) generation and digital holography with 3D objects composed of point clouds, using look-up table-(LUT) based algorithms, and a wave front recording plane. 3D objects composed of polygons using tilted plane diffraction, expressed by multi-view images and RGB-D images, will be explained in this book. Digital holography, including inline, off-axis, Gabor digital holography, and phase shift digital holography, will also be explored. This book introduces applications of computer holography, including phase retrieval algorithm, holographic memory, holographic projection, and deep learning in computer holography, while explaining hardware implementations for computer holography. Recently, several parallel processors have been released (for example, multi-core CPU, GPU, Xeon Phi, and FPGA). Readers will learn how to apply algorithms to these processors. Features Provides an introduction of the basics of holography and computer holography Summarizes the latest advancements in computer-generated holograms Showcases the latest researchers of digital holography Discusses fast CGH algorithms and diffraction calculations, and their actual codes Includes hardware implementation for computer holography, and its actual codes and quasi-codes

This comprehensive overview of lattice sums is long overdue for a topic that is important in diverse areas of science.

Health Benefits of Fermented Foods and Beverages discusses the functionality and myriad health benefits of fermented foods and beverages of the world. It examines health-promoting and therapeutic properties, covering the molecular process of fermentation and the resulting benefit to nutritional value and long-term health. Exploring a range of ferme

Includes annual cumulative index of inventors and patentees.

Technical plasmas have a wide range of industrial applications. The *Encyclopedia of Plasma Technology* covers all aspects of plasma technology from the fundamentals to a range of applications across a large number of industries and disciplines. Topics covered include nanotechnology, solar cell technology, biomedical and clinical applications, electronic materials, sustainability, and clean technologies. The book bridges materials science, industrial chemistry, physics, and engineering, making it a must have for researchers in industry and academia, as well as those working on application-oriented plasma technologies. Also Available Online This Taylor & Francis encyclopedia is also available through online subscription, offering a variety of extra benefits for researchers, students, and librarians, including: Citation tracking and alerts Active reference linking Saved searches and marked lists HTML and PDF format options Contact Taylor and Francis for more information or to inquire about subscription options and print/online combination packages. US: (Tel) 1.888.318.2367; (E-mail) e-reference@taylorandfrancis.com International: (Tel) +44 (0) 20 7017 6062; (E-mail) online.sales@tandf.co.uk

This book presents the proceedings of an International Conference on Advances in Engineering Structures, Mechanics & Construction, held in Waterloo, Ontario, Canada, May 14-17, 2006. The contents include contains the texts of all three plenary presentations and all seventy-three technical papers by more than 153 authors, presenting the latest advances in engineering structures, mechanics and construction research and practice.

Now ubiquitous in public discussions about cutting-edge science and technology, nanoscience has generated many advances and inventions, from the development of new quantum mechanical methods to far-reaching applications in electronics and medical diagnostics. Ushering in the next technological era, *Fundamentals of Picoscience* focuses on the instrumentation and experiments emerging at the picometer scale. One picometer is the length of a trillionth of a meter. Compared to a human cell of typically ten microns, this is roughly ten million times smaller. In this state-of-the-art book, international scientists and researchers at the forefront of the field present the materials and methods used at the picoscale. They address the key challenges in developing new instrumentation and techniques to visualize and measure structures at this sub-nanometer level. With numerous figures, the book will help you: Understand how picoscience is an extension of nanoscience Determine which experimental technique to use in your research Connect basic studies to the development of next-generation picoelectronic devices The book covers various approaches for detecting, characterizing, and imaging at the picoscale. It then presents picoscale methods ranging from scanning tunneling microscopy (STM) to spectroscopic approaches at sub-nanometer spatial and energy resolutions. It also covers novel picoscale structures and picometer positioning systems. The book concludes with picoscale device

applications, including single molecule electronics and optical computers. Introductions in each chapter explain basic concepts, define technical terms, and give context to the main material.

This book presents original contributions on the theories and practices of emerging Internet, Data and Web technologies and their applications in businesses, engineering and academia. As a key feature, it addresses advances in the life-cycle exploitation of data generated by digital ecosystem technologies. The Internet has become the most proliferative platform for emerging large-scale computing paradigms. Among these, Data and Web technologies are two of the most prominent paradigms, manifesting in a variety of forms such as Data Centers, Cloud Computing, Mobile Cloud, Mobile Web Services, and so on. These technologies altogether create a digital ecosystem whose cornerstone is the data cycle, from capturing to processing, analysis and visualization. The need to investigate various research and development issues in this digital ecosystem has been made even more pressing by the ever-increasing demands of real-life applications, which are based on storing and processing large amounts of data. Given its scope, the book offers a valuable asset for all researchers, software developers, practitioners and students interested in the field of Data and Web technologies.

This book constitutes the refereed proceedings of the 10th International Symposium on Web and Wireless Geographical Information Systems, W2GIS 2011, held in Kyoto, Japan, in March 2011. A total of 13 full and 3 short papers plus 2 short keynote papers presented were carefully reviewed and selected from 36 submissions. The papers cover a wide range of topics including geographic information retrieval on the web, geo-spatial semantic and sensor web, location-based services, advanced GIS visualization techniques, personalization and adjustment for mobile GIS applications, and geo-spatial data quality and context processing.

This book constitutes the refereed proceedings of the 24th Annual Symposium on Combinatorial Pattern Matching, CPM 2013, held in Bad Herrenalb (near Karlsruhe), Germany, in June 2013. The 21 revised full papers presented together with 2 invited talks were carefully reviewed and selected from 51 submissions. The papers address issues of searching and matching strings and more complicated patterns such as trees, regular expressions, graphs, point sets, and arrays. The goal is to derive non-trivial combinatorial properties of such structures and to exploit these properties in order to either achieve superior performance for the corresponding computational problem or pinpoint conditions under which searches cannot be performed efficiently. The meeting also deals with problems in computational biology, data compression and data mining, coding, information retrieval, natural language processing, and pattern recognition. This book provides the latest research findings, and discusses, from both theoretical and practical perspectives, innovative research methods and development techniques related to intelligent social networks and collaborative systems, intelligent networking systems, mobile collaborative systems and secure intelligent cloud systems. It also presents the synergies among various paradigms in such a multi-disciplinary field of intelligent collaborative systems. With the rapid development of the Internet, we are experiencing a shift from the traditional sharing of information and applications as the main purpose of the Web to an emergent paradigm, which locates people at the very centre of networks and exploits the value of individuals' connections, relations and collaboration. Social networks are also playing a major role in the dynamics and structure of intelligent Web-based networking and collaborative systems. Virtual campuses, virtual communities and organizations strongly leverage intelligent networking and collaborative systems by means of a great variety of formal and informal electronic relations, such as business-to-business, peer-to-peer and various types of online collaborative learning interactions, including the emerging e-learning systems. This has resulted in entangled systems that need to be managed efficiently and autonomously. In addition, the latest, powerful technologies based on grid and wireless infrastructure as well as cloud computing are currently enhancing collaborative and networking applications significantly, but are also facing new issues and challenges. The principal purpose of the research and development community is to stimulate research that will lead to the creation of responsive environments for networking and, in the longer term, the development of adaptive, secure, mobile, and intuitive intelligent systems for collaborative work and learning.

Index of Patents Issued from the United States Patent and Trademark Office Official Gazette of the United States Patent and Trademark Office Patents Multimedia Information Systems in Practice Springer

The development of biodegradable implants which can remain in the human body to fix a problem and subsequently dissolve, or be absorbed, consumed or excreted, without warranting a secondary surgery, is very appealing to scientists. Due to their excellent biocompatibility and biodegradability, magnesium implants provide a viable option many problems associated with permanent metallic implants such as, restenosis, thrombosis, permanent physical irritation, and inability to adapt to growth and changes in human body. Volume 2 of this important new book explores practical issues of magnesium and magnesium alloys, physical and mechanical modification and coatings to enhance this material for biomedical applications. Includes expert analysis on chemical solution deposition of hydroxyapatite (HAp) and octacalcium (OCP) phosphate coatings for magnesium Comprehensive coverage of biomimetic modifications, surface functionalization of biomolecules, natural, conducting and biodegradable polymeric coatings Lucid dissection of chemical, physical, mechanical and electromechanical modifications of magnesium and its alloys for biomedical applications 1988

The Singapore Mathematics Calendar is a three-book series that provides an informal yet creative way for both parents and homeschoolers to support their child succeed in math. This calendar is designed in such a way that the answer to the problem on each day is the date on which the problem appears. Hints and solutions are also provided for nonroutine or brain-unfriendly questions. Besides, each month begins with some elements of enrichment or recreational math. The Singapore Mathematics Calendar Series aims to convey the message that mathematics needn't be drill-and-kill exercises—it can be fun, yet challenging for students to be exposed to the beauty and joy of mathematics.

This book constitutes the refereed proceedings of the 9th International Conference on Asian Digital Libraries, ICADL 2006, held in Kyoto, Japan in November 2006. The 46 revised full papers, 14 revised short papers, and 6 poster papers include coverage of information extraction, information retrieval, metadata, architectures for digital libraries and archives, ontologies, information seeking, cultural heritage and e-learning.

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Non-Destructive Testing (NDT) is an activity closely related to the quality and reliability of products, and to the reliable and safe operation of industrial plants. Physical measuring techniques are used to examine parts of constructional assemblies for hidden imperfections and defects. A wide choice of measuring techniques is available to meet the demand of examining a wide variety of materials such as metals, plastics, rocks, as well as different structures and sizes ranging from semiconductor chips to nuclear reactors and off-shore oil platforms. Activities in the field of NDT encompass: Fundamental research to understand and describe the way in which reactions of certain imperfections to a physical measuring technique can be optimized and used to assess type and grade of imperfection; Methods to characterize materials and materials properties; Applications in product quality control; Applications in plant inspection to ensure a reliable operation of components, avoiding damage to both man and environment, as well as financial losses; Personnel education and qualification schemes; The spread of NDT applications to newly industrialized countries. The two proceedings volumes contain over 400 review and specialist papers. The most recent developments in the field of NDT are presented with contributions by outstanding experts from all over the world. Papers are grouped according to technique for those dealing with fundamental research and to field of application for the more practical oriented ones. In this way each chapter provides an easy overview of related current research. Extensive keyword indexes have been included to facilitate the retrieval of information according to individual requirements. The high technical level of the papers and their up-to-date content will make them an indispensable source of information for students, researchers and professionals in the areas covered.

"Reviews specific enzymes and enzyme groups studied in recent years, delves into the relationship between enzymes and seafood quality, covers the application of enzymes as seafood processing aids, and focuses on the recovery of useful enzymes as by-products from seafood waste. Details the control of enzyme activity in seafood products."

With the help of advanced technology in telecommunications, the benefits of multimedia applications have become even more significant than when it was used as just as a form for strategic advantage by individuals. The International Conference on Multimedia and Telecommunications Management, held December 17-19, 1998, highlights the recent significant research in the areas of multimedia and telecommunications applications in industry. This book collects the 58 reviewed papers from 18 countries, that were chosen out of 140 submissions for presentation at the conference. An introductory paper entitled "Multimedia in Facet: A Facet of Hong Kong Environment" by Wing S Chow et al., is included as an introductory chapter to render readers a better understanding of the study subjects. This volume is useful for researchers, practitioners and students alike for an update on the most recent developments in the ever-changing and significant field of multimedia and telecommunications.

Concrete is ubiquitous and unique, found in every developed and developing country. Indeed, there are no alternatives to concrete as a volume construction material for infrastructure. This raises important questions of how concrete should be designed and constructed for cost effective use in the the short and long term, and to encourage further radical development. Equally, it must be environmentally friendly during manufacture, in an aesthetic presentation in structures and in the containment of harmful materials.; The central theme of the Congress is Concrete in the Service of Mankind, under which five self-contained Conferences, each dealing with a particular aspect, are planned. The Congress offers opportunity to discuss how to improve and extend this service to mankind using responsible exploitation, underwritten by sound technical understanding and research base. It brings together the shared skills and experience of the various disciplines involved in the construction process world wide.; This major publication continues the tradition established by Dundee University of organizing major international conferences every three years dealing with some aspect of concrete and also the link between Spon and Dundee University for publication of the proceedings.; This book should be of interest to concrete technologists; contractors; civil engineers; consultants; government agencies; research organizations.

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