

Environmental Studies By Deswal Databy

Mathematical Models for Decision Support Handbook of Solid Waste Management Civil Engineering Materials The Role of Functional Food Security in Global Health Biorefineries Peroxiredoxin Systems Numerical Optimization in Engineering and Sciences Smart Homes and Health Telematics, Designing a Better Future: Urban Assisted Living International Conference on Innovative Computing and Communications Risk Adjustment for Measuring Health Care Outcomes Biologic and Systemic Agents in Dermatology Proceedings of International Ethical Hacking Conference 2018 Uses of Epidemiology Teacher Burnout Encyclopedia of Criminology and Criminal Justice Diagnostic Issues in Depression and Generalized Anxiety Disorder The Weak Hydrogen Bond Atomic Switch Dengue Virus Engineering Geology and Construction Cancer Mortality and Morbidity Patterns in the U.S. Population Workshop Practice Manual Heart Rate Variability, Health and Well-being: A Systems Perspective Stevioside Killer Fat Advances in Communication and Computational Technology Proceedings of the International Conference on Signal, Networks, Computing, and Systems Genetic Enhancement of Crops for Tolerance to Abiotic Stress: Mechanisms and Approaches Metaheuristics in Water, Geotechnical and Transport Engineering Models, Methods, Concepts & Applications of the Analytic Hierarchy Process Interpol's Forensic Science Review Principles of Biochemistry and Genetic Engineering Blacks in Medicine Plant Membrane Proteomics Self-Organizing Maps Pediatric Incontinence Climate Change and Agriculture in India: Impact and Adaptation Professional Issues in Forensic Science Nanobiotechnology Applications in Plant Protection Emerging Energetic Materials: Synthesis, Physicochemical, and Detonation Properties

Mathematical Models for Decision Support

This book contains a broad survey on the peroxiredoxins. It involves almost all groups that contributed significant insights into the emerging field. Coverage discusses the diverse biological roles of the new protein family in the context of other antioxidant systems like those based on heme or selenium catalysis. In addition, the book highlights related future perspectives.

Handbook of Solid Waste Management

This book provides the most recent understanding about climate change and its effects on agriculture in India. Further in-depth research is showcased regarding important allied sectors such as horticulture and fisheries, and examines the effect of climate change on different cereal crops. The individual chapters discuss the different mitigation strategies for climate change impacts and detail abiotic and biotic stresses in relation to climate change. The book provides an insight into environmentally safe and modern technologies approaches such as nanotechnology and utilization of underutilized crops under a changing climate. This book provides a solid foundation for the discussion of climate resilience in agricultural systems and the requirements to keep improving agricultural production. This book is an excellent resource for researchers, instructors, students in agriculture, horticulture and environmental science.

Civil Engineering Materials

This book constitutes the proceedings of the 16th International Conference on Smart Homes and Health Telematics, ICOST 2018, held in Singapore, Singapore, in July 2018. The theme of this year volume is "Designing a better Future: Urban Assisted Living", focusing on quality of life of dependent people not only in their homes, but also in outdoor living environment to improve mobility and social interaction in the city. The 21 regular papers and 11 short papers included in this volume focus on research in the design, development, deployment and evaluation of smart urban environments, assistive technologies, chronic disease management, coaching and health telematics systems.

The Role of Functional Food Security in Global Health

This volume provides comprehensive and detailed protocols that discuss proteomic techniques, plant endosomes, and isolation of organelles and subcellular fractions. The chapters in this book explore numerous plant species and cover topics, such as isolation and purity assessment of membranes from Norway spruce; proteomic analysis of nuclei; analyzing the vacuolar membrane (tonoplast) proteome; isoforms of a thylakoid-bound protein; assay of plasma membrane H⁺-ATPase in plant tissue under abiotic stresses; and identification and characterization of plant membrane proteins using ARAMEMNON. Written in the highly successful Methods in Molecular Biology series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls. Practical and thorough, Plant Membrane Proteomics: Methods and Protocols is a valuable resource that promotes the use of plant membrane proteomics to develop the future of the field.

Biorefineries

This booklet presents articles that deal with identifying signs of stress and methods of reducing work-related stressors. An introductory article gives a summary of the causes, consequences, and cures of teacher stress and burnout. In articles on recognizing signs of stress, "Type A" and "Type B" personalities are examined, with implications for stressful behavior related to each type, and a case history of a teacher who was beaten by a student is given. Methods of overcoming job-related stress are suggested in eight articles: (1) "How Some Teachers Avoid Burnout"; (2) "The Nibble Method of Overcoming Stress"; (3) "Twenty Ways I Save Time"; (4) "How To Bring Forth The Relaxation Response"; (5) "How To Draw Vitality From Stress"; (6) "Six Steps to a Positive Addiction"; (7) "Positive Denial: The Case For Not Facing Reality"; and (8) "Conquering Common Stressors". A workshop guide is offered for reducing and preventing teacher burnout by establishing support groups, reducing stressors, changing perceptions of stressors, and improving coping abilities. Workshop roles of initiator, facilitator, and members are discussed. An annotated bibliography of twelve books about stress is included. (FG)

Peroxiredoxin Systems

Written by the inventors and leading experts of this new field, the book results from the International Symposium on “Atomic Switch: Invention, Practical use and Future Prospects” which took place in Tsukuba, Japan on March 27th - 28th, 2017. The book chapters cover the different trends from the science and technology of atomic switches to their applications like brain-type information processing, artificial intelligence (AI) and completely novel functional electronic nanodevices. The current practical uses of the atomic switch are also described. As compared with the conventional semiconductor transistor switch, the atomic switch is more compact ($\sim 1/10$) with much lower power consumption ($\sim 1/10$) and scarcely influenced by strong electromagnetic noise and radiation including cosmic rays in space ($\sim 1/100$). As such, this book is of interest to researchers, scholars and students willing to explore new materials, to refine the nanofabrication methods and to explore new and efficient device architectures.

Numerical Optimization in Engineering and Sciences

Worksheets are included to act as observation book for taking readings. Tips on practical application of the tools and instruments are given. Adages found in each page are unique for motivation and personality development of the students. Illustrations of the tools used in various sections of workshop are provided.

Smart Homes and Health Telematics, Designing a Better Future: Urban Assisted Living

International Conference on Innovative Computing and Communications

The book is a collection of high-quality peer-reviewed research papers presented in the first International Conference on Signal, Networks, Computing, and Systems (ICSNCS 2016) held at Jawaharlal Nehru University, New Delhi, India during February 25–27, 2016. The book is organized in two volumes and primarily focuses on theory and applications in the broad areas of communication technology, computer science and information security. The book aims to bring together the latest scientific research works of academic scientists, professors, research scholars and students in the areas of signal, networks, computing and systems detailing the practical challenges encountered and the solutions adopted.

Risk Adjustment for Measuring Health Care Outcomes

The Analytic Hierarchy Process (AHP) is a prominent and powerful tool for making decisions in situations involving multiple objectives. Models, Methods, Concepts and Applications of the Analytic Hierarchy Process, 2nd Edition applies the AHP in order to solve problems focused on the following three themes: economics, the social sciences, and the linking of measurement with human values. For economists, the AHP offers a substantially different approach to dealing with economic problems through ratio scales. Psychologists and political scientists can use the methodology to quantify and derive measurements for intangibles. Meanwhile researchers in the physical and engineering sciences can apply the AHP

methods to help resolve the conflicts between hard measurement data and human values. Throughout the book, each of these topics is explored utilizing real life models and examples, relevant to problems in today's society. This new edition has been updated and includes five new chapters that includes discussions of the following: - The eigenvector and why it is necessary - A summary of ongoing research in the Middle East that brings together Israeli and Palestinian scholars to develop concessions from both parties - A look at the Medicare Crisis and how AHP can be used to understand the problems and help develop ideas to solve them.

Biologic and Systemic Agents in Dermatology

This book includes high-quality research papers presented at the Third International Conference on Innovative Computing and Communication (ICICC 2020), which is held at the Shaheed Sukhdev College of Business Studies, University of Delhi, Delhi, India, on 21-23 February, 2020. Introducing the innovative works of scientists, professors, research scholars, students and industrial experts in the field of computing and communication, the book promotes the transformation of fundamental research into institutional and industrialized research and the conversion of applied exploration into real-time applications.

Proceedings of International Ethical Hacking Conference 2018

The Role of Functional Food Security in Global Health presents a collective approach to food security through the use of functional foods as a strategy to prevent under nutrition and related diseases. This approach reflects the views of the Food and Agriculture Organization of the United Nations, the World Health Organization, the World Heart Federation and the American Heart Association who advise Mediterranean, Paleolithic, plant food based diets, and European vegetarian diets for the prevention of cardiovascular disease. In addition, the book also emphasizes the inclusion of spices, herbs and millets, as well as animal foods. This book will be a great resource to the food industry as it presents the most efficient ways to use technology to manufacture slowly absorbed, micronutrient rich functional foods by blending foods that are rich in healthy nutrients. Provides greater knowledge on functional food security Highlights the necessary changes to the western diet that are needed to achieve food security Explains the utility and necessity of functional food security in the prevention of noncommunicable diseases Presents policy changes in food production for farmers and the larger food industry Offers suggestions on what can be done to enhance functional food production while simultaneously decreasing production costs

Uses of Epidemiology

The Encyclopedia of Criminology and Criminal Justice is an international, comprehensive reference tool for the field of Criminology and Criminal Justice that is both cutting edge as well as of very high scientific quality and prestige. This 10-volume work provides a complete and systematic coverage of the field that is unprecedented. The Encyclopedia "defines the field" through its choice of organization and entries. It identifies and brings emerging ideas and trends to the forefront. The Encyclopedia covers Criminology and Criminal Justice in ten broad

areas, with leading researchers writing substantive contributions within their area of expertise: Corrections and Criminal Justice Supervision in the Community Courts, Sentencing and the Judicial System Crimes, Criminals and Victims Crime Places and Situations Explanations for Criminal Behavior Forensic Science Data, Methods, and Statistics Police and Law Enforcement Psychology of Law Social Interventions and Prevention This work features approximately 600 entries, organized in alphabetical order. The work is comprised under the direction of two Editors-in-Chief in consultation with 12 Associate Editors and more than 180 Area Editors. It is an essential and dynamic reference for researchers in the fields of Criminology and Criminal Justice, as well as useful a research tool for those in related fields of the social and behavioral sciences.

Teacher Burnout

Encyclopedia of Criminology and Criminal Justice

In a world where waste incinerators are not an option and landfills are at over capacity, cities are hard pressed to find a solution to the problem of what to do with their solid waste. Handbook of Solid Waste Management, 2/e offers a solution. This handbook offers an integrated approach to the planning, design, and management of economical and environmentally responsible solid waste disposal system. Let twenty industry and government experts provide you with the tools to design a solid waste management system capable of disposing of waste in a cost-efficient and environmentally responsible manner. Focusing on the six primary functions of an integrated system--source reduction, toxicity reduction, recycling and reuse, composting, waste- to-energy combustion, and landfilling--they explore each technology and examine its problems, costs, and legal and social ramifications.

Diagnostic Issues in Depression and Generalized Anxiety Disorder

The fourth edition of Risk Adjustment for Measuring Health Care Outcomes presents the fundamental principles and concepts of risk adjustment for comparing outcomes of care and explains why risk adjustment is a critical tool for measuring quality and setting reimbursement rates. This book is a comprehensive guide to the issues raised by risk adjustment, including the pros and cons of different data sources, the validity and reliability of risk adjustment methods, the effects of various statistical modeling approaches, and concerns relating to special populations. The fourth edition features: A new chapter on the role of risk adjustment in managing healthcare organizations New information on risk factors, including genetics and social and environmental determinants of health Perspectives on electronic health records and new health information technologies Explanations of new statistical methods for comparing provider outcomes and their implications for risk adjustment Instructor Resources: Discussion questions and PowerPoint slides of the book exhibits. To see a sample, click on the Instructor Resource sample tab above.

The Weak Hydrogen Bond

The weak or non-conventional hydrogen bond has been subject of intense scrutiny over recent years in several fields, in particular in structural chemistry, structural biology, and also in the pharmaceutical sciences. There is today a large body of experimental and theoretical evidence confirming that hydrogen bonds like C-HO, N-Hpi, C-Hpi and even bonds like O-Hmetal play distinctive roles in molecular recognition, guiding molecular association, and in determining molecular and supramolecular architectures. The relevant compound classes include organometallic complexes, organic and bio-organic systems, and also DNA and proteins. The book provides a comprehensive assessment of this interaction type, and is of interest to all those interested in structural and supramolecular science, including fields as crystal engineering and drug design.

Atomic Switch

This socially conscious, culturally relevant book explores the little-known history and present climate of Black people in the medical field. It reveals the deficiencies in the American healthcare structure that have contributed to the mismanagement of healthcare in the Black population, and examines cross-currents that intersect with the major events in minority medical history. Illustrated across 10 expertly written chapters, this text features a longitudinal timeline with the presentation of evidence-based information drawn from historical, political, and clinical sources. The book begins with an analysis of diseases particularly prevalent in the Black community due to socioeconomic inequalities in available medical care. These diseases include sickle cell anemia, hypertension, heart failure, drug addiction, and HIV/AIDS. Bolstered by profiles of historically well-known Black physicians, stories of success in medical education, and the remarkable impact of Black medical organizations, subsequent chapters address the triumphs and tribulations of the Black medical professional in America. Concluding with an examination of the current health status of Black people in the United States, the book makes a case for future systemic improvements in healthcare delivery to minority communities. A unique, noteworthy reference, *Blacks in Medicine: Clinical, Demographic, and Socioeconomic Correlations* is written for a broad range of physicians and health providers, as well as professionals in the social sciences and public health.

Dengue Virus

Nanobiotechnology Applications in Plant Protection: Volume 2 continues the important and timely discussion of nanotechnology applications in plant protection and pathology, filling a gap in the literature for nano applications in crop protection. Nanopesticides and nanobioformulations are examined in detail and presented as powerful alternatives for eco-friendly management of plant pathogens and nematodes. Leading scholars discuss the applications of nanobiomaterials as antimicrobials, plant growth enhancers and plant nutrition management, as well as nanodiagnostic tools in phytopathology and magnetic and supramagnetic nanostructure applications for plant protection. This second volume includes exciting new content on the roles of biologically synthesized nanoparticles in seed germination and zinc-based nanostructures in protecting against toxigenic

fungi. Also included is new research in phytotoxicity, nano-scale fertilizers and nanomaterial applications in nematology and discussions on Botrytis grey mold and nanobiocontrol. This book also explores the potential effects on the environment, ecosystems and consumers and addresses the implications of intellectual property for nanobiopesticides. Further discussed are nanotoxicity effects on the plant ecosystem and nano-applications for the detection, degradation and removal of pesticides.

Engineering Geology and Construction

This book summarizes science and technology of a new generation of high-energy and insensitive explosives. The objective is to provide professionals with comprehensive information on the synthesis and the physicochemical and detonation properties of the explosives. Potential technologies applicable for treatment of contaminated wastestreams from manufacturing facilities and environmental matrices are also included. This book provides the reader an insight into the depth and breadth of theoretical and empirical models and experimental techniques currently being developed in the field of energetic materials. It presents the latest research by DoD engineers and scientists, and some of DoD's academic and industrial researcher partners. The topics explored and the simulations developed or modified for the purposes of energetics may find application in other closely related fields, such as the pharmaceutical industry. One of the key features of the book is the treatment of wastewaters generated during manufacturing of these energetic materials.

Cancer Mortality and Morbidity Patterns in the U.S. Population

This book discusses the implications of new technologies for a secured society. As such, it reflects the main focus of the International Conference on Ethical Hacking, eHaCon 2018, which is essentially in evaluating the security of computer systems using penetration testing techniques. Showcasing the most outstanding research papers presented at the conference, the book shares new findings on computer network attacks and defenses, commercial security solutions, and hands-on, real-world security experience. The respective sections include network security, ethical hacking, cryptography, digital forensics, cloud security, information security, mobile communications security, and cyber security.

Workshop Practice Manual

The purpose of this book is to examine the etiology of cancer in large human populations using mathematical models developed from an inter-disciplinary perspective of the population epidemiological, biodemographic, genetic and physiological basis of the mechanisms of cancer initiation and progression. In addition an investigation of how the basic mechanism of tumor initiation relates to general processes of senescence and to other major chronic diseases (e.g., heart disease and stroke) will be conducted.

Heart Rate Variability, Health and Well-being: A Systems Perspective

Stevioside

This book addresses the potential of the transformation of biomass into a wide range of marketable products, and examines the biological, biochemical, physical and thermal processing of biomass into products such as fuels, power, heat, feeds, chemicals and materials. Respective chapters explore various topics including biomass characterization, biomass pre-conditioning and sustainability analysis, aspects that are supplemented by a global overview of their implementation in current pilot bio-refineries. Providing a valuable resource to energy engineers, chemical engineers, biotechnologists and economists, this book will also be of great interest to students and policymakers.

Killer Fat

The development of a new tool, analytic device, or approach frequently facilitates rapid growth in scientific understanding, although the process is seldom linear. The study of heart rate variability (HRV) defined as the extent to which beat-to-beat variation in heart rate varies, is a rapidly maturing paradigm that integrates health and wellness observations across a wide variety of biomedical and psychosocial phenomena and illustrates this nonlinear path of development. The utility of HRV as an analytic and interventive technique goes far beyond its original application as a robust predictor of sudden cardiac death. This Research Topic aims to provide a conceptual framework to use in exploring the utility of HRV as a robust parameter of health status, using a broad and inclusive definition of 'health' and 'well-being'. From the broadest perspective, current biomedical science emerged from shamanistic and religious healing practices and empirically observed interventions made as humans emerged from other hominins. The exponential growth of physics, chemistry and biology provided scientific support for the model emphasizing pathology and disorders. Even before the momentous discovery of germ theory, sanitation and other preventive strategies brought about great declines in mortality and morbidity. The revolution that is currently expanding the biomedical model is an integrative approach that includes the wide variety of non-physio/chemical factors that contribute to health. In the integrative approach, health is understood to be more than the absence of disease and emphasis is placed on optimal overall functioning, within the ecological niche occupied by the organism. This approach also includes not just interventive techniques and procedures, but also those social and cultural structures that provide access to safe and effective caring for sufferers. Beyond the typical drug and surgical interventions - which many identify with the Western biomedical model that currently enjoys an unstable hegemony - such factors also include cognitive-behavioral, social and cultural practices such as have been shown to be major contributors to the prevention and treatment of disease and the promotion of health and optimal functioning. This Integrative Model of Health and Well-being also derives additional conceptual power by recognizing the role played by evolutionary processes in which conserved, adaptive human traits and response tendencies are not congruent with current industrial and postindustrial global environmental demands and characteristics. This mismatch contributes to an increasing incidence of chronic conditions related to lifestyle and health behavior.

Such a comprehensive model will make possible a truly personalized approach to health and well-being, including and going far beyond the current emphasis on genomic analysis, which has promised more than it has currently delivered. HRV offers an inexpensive and easily obtained measure of neurovisceral functioning which has been found to relate to the occurrence and severity of numerous physical disease states, as well as many cognitive-behavioral health disorders. This use of the term neurovisceral refers to the relationships between the nervous system and the viscera, providing a more focused and specific conceptual alternative to the now nearly archaic “mind-body” distinction. This awareness has led to the recent and growing use of HRV as a health biomarker or health status measure of neurovisceral functioning. It facilitates studying the complex two way interaction between the central nervous system and other key systems such as the cardiac, gastroenterological, pulmonary and immune systems. The utility of HRV as a broad spectrum health indicator with possible application both clinically and to population health has only begun to be explored. Interventions based on HRV have been demonstrated to be effective evidence-based interventions, with HRV biofeedback treatment for PTSD representing an empirically supported modality for this complex and highly visible affliction. As an integral measure of stress, HRV can be used to objectively assess the functioning of the central, enteric and cardiac nervous systems, all of which are largely mediated by the vagal nervous complex. HRV has also been found to be a measure of central neurobiological concepts such as executive functioning and cognitive load. The relatively simple and inexpensive acquisition of HRV data and its ease of network transmission and analysis make possible a promising digital epidemiology which can facilitate objective population health studies, as well as web based clinical applications. An intriguing example is the use of HRV data obtained at motor vehicle crash sites in decision support regarding life flight evacuations to improve triage to critical care facilities. This Research Topic critically addresses the issues of appropriate scientific and analytic methods to capture the concept of the Integrative Health and Well-being Model. The true nature of this approach can be appreciated only by using both traditional linear quantitative statistics and nonlinear systems dynamics metrics, which tend to be qualitative. The Research Topic also provides support for further development of new and robust methods for evaluating the safety and effectiveness of interventions and practices, going beyond the sometimes tepid and misleading “gold standard” randomized controlled clinical trial.

Advances in Communication and Computational Technology

In the past decade, obesity has emerged as a major public health concern in the United States and abroad. At the federal, state, and local level, policy makers have begun drafting a range of policies to fight a war against fat, including body-mass index (BMI) report cards, “snack taxes,” and laws to control how fast food companies market to children. As an epidemic, obesity threatens to weaken the health, economy, and might of the most powerful nation in the world. In *Killer Fat*, Natalie Boero examines how and why obesity emerged as a major public health concern and national obsession in recent years. Using primary sources and in-depth interviews, Boero enters the world of bariatric surgeries, Weight Watchers, and Overeaters Anonymous to show how common expectations of what bodies are supposed to look like help to determine what sorts of interventions and policies are considered urgent in containing this new kind of disease. Boero argues that

obesity, like the traditional epidemics of biological contagion and mass death, now incites panic, a doomsday scenario that must be confronted in a struggle for social stability. The "war" on obesity, she concludes, is a form of social control. Killer Fat ultimately offers an alternate framing of the nation's obesity problem based on the insights of the "Health at Every Size" movement.

Proceedings of the International Conference on Signal, Networks, Computing, and Systems

It is quite an onerous task to edit the proceedings of a two week long institute with learned contributors from many parts of the world. All the same, the editorial team has found the process of refereeing and reviewing the contributions worthwhile and completing the volume has proven to be a satisfying task. In setting up the institute we had considered models and methods taken from a number of different disciplines. As a result the whole institute - preparing for it, attending it and editing the proceedings - proved to be an intense learning experience for us. Here I speak on behalf of the committee and the editorial team. By the time the institute took place, the papers were delivered and the delegates exchanged their views, the structure of the topics covered and their relative positioning appeared in a different light. In editing the volume I felt compelled to introduce a new structure in grouping the papers. The contents of this volume are organised in eight main sections set out below: 1 . Abstracts. 2. Review Paper. 3. Models with Multiple Criteria and Single or Multiple Decision Makers. 4. Use of Optimisation Models as Decision Support Tools. 5. Role of Information Systems in Decision Making: Database and Model Management Issues. 6. Methods of Artificial Intelligence in Decision Making: Intelligent Knowledge Based Systems. 7. Representation of Uncertainty in Mathematical Models and Knowledge Based Systems. 8. Mathematical Basis for Constructing Models and Model Validation.

Genetic Enhancement of Crops for Tolerance to Abiotic Stress: Mechanisms and Approaches

Every three years, worldwide forensics experts gather at the Interpol Forensic Science Symposium to exchange ideas and discuss scientific advances in the field of forensic science and criminal justice. Drawn from contributions made at the latest gathering in Lyon, France, Interpol's Forensic Science Review is a one-source reference providing a comp

Metaheuristics in Water, Geotechnical and Transport Engineering

The book we have at hand is the fourth monograph I wrote for Springer Verlag. The previous one named "Self-Organization and Associative Memory" (Springer Series in Information Sciences, Volume 8) came out in 1984. Since then the self-organizing neural-network algorithms called SOM and LVQ have become very popular, as can be seen from the many works reviewed in Chap. 9. The new results obtained in the past ten years or so have warranted a new monograph. Over these years I have also answered lots of questions; they have influenced the contents of the present book. I hope it would be of some interest and help to the

readers if I now first very briefly describe the various phases that led to my present SOM research, and the reasons underlying each new step. I became interested in neural networks around 1960, but could not interrupt my graduate studies in physics. After I was appointed Professor of Electronics in 1965, it still took some years to organize teaching at the university. In 1968 - 69 I was on leave at the University of Washington, and D. Gabor had just published his convolution-correlation model of autoassociative memory. I noticed immediately that there was something not quite right about it: the capacity was very poor and the inherent noise and crosstalk were intolerable. In 1970 I therefore suggested the autoassociative correlation matrix memory model, at the same time as J.A. Anderson and K. Nakano.

Models, Methods, Concepts & Applications of the Analytic Hierarchy Process

Written by leading experts in the field and designed for dermatologists and residents, this book includes evidence-based medicine that underscores the clinical data, as well as practical tips on how to use both biologic and systemic agents in the field of dermatology. In the past decade, there have been several groundbreaking advances in medical dermatology. Novel biologic and systemic agents have been developed to treat inflammatory disorders, including psoriasis and atopic dermatitis, as well as skin malignancies such as melanoma. Biologic and Systemic Agents in Dermatology encompasses these developments by describing the mechanism of action of these various agents and the clinical efficacy and safety to treating these respective disorders. The utilization of biologic and systemic agents in other dermatologic conditions, pharmacoeconomics, pharmacovigilance, and clinical trials outcomes are discussed as well as topics including tumor necrosis, conventional systemic agents for psoriatic disease, and oral agents for atopic dermatitis.

Interpol's Forensic Science Review

Principles of Biochemistry and Genetic Engineering

This book presents select peer-reviewed papers presented at the International Conference on Numerical Optimization in Engineering and Sciences (NOIEAS) 2019. The book covers a wide variety of numerical optimization techniques across all major engineering disciplines like mechanical, manufacturing, civil, electrical, chemical, computer, and electronics engineering. The major focus is on innovative ideas, current methods and latest results involving advanced optimization techniques. The contents provide a good balance between numerical models and analytical results obtained for different engineering problems and challenges. This book will be useful for students, researchers, and professionals interested in engineering optimization techniques.

Blacks in Medicine

This book acts as a guidepost for the entire DSM process. It reviews recent

scientific advances in our understanding of the inter-relationship between generalized anxiety disorder and major depression, summarizes the body of evidence into a few broad conclusions, and reflects on the implications of these findings for future nosologic efforts.

Plant Membrane Proteomics

Winner of the 2004 Claire P. Holdredge Award of the Association of Engineering Geologists (USA). The only book to concentrate on the relationship between geology and its implications for construction, this book covers the full scope of the subject from site investigation through to the complexities of reservoirs and dam sites. Features include inter

Self-Organizing Maps

Stevioside is one of the naturally occurring sweeteners, belonging to the diterpene glycoside family, which can be widely applied in food, drinks, medicine and consumer chemicals. It is a good dietary supplement, being non-calorific, thermally stable, non-toxic, with a sugar-like taste profile, and suitable for diabetics, phenylketonuria patients and the obese. It is also non-fermentable, and exhibits anti-carcinogenic, antioxidant and anti-hyperglycemic properties. Stevioside tastes about 300 times sweeter than 0.4% sucrose solution. Thus, it offers a reasonably rare combination of health benefits and taste benefits, making the extraction of stevioside an area of active research for the food industry as well as academic food scientists. With the rapid increase in the popularity of stevioside as a sugar substitute, particularly with regard to its associated health benefits, there is a need for more efficient and feasible extraction processes for stevioside in the near future. This book offers an in-depth look at perhaps the major "sugar alternative of the future", up-to-date and inline with the latest global legislation regarding its suitability for consumption and its scope for application.

Pediatric Incontinence

Professional Issues in Forensic Science will introduce students to various topics they will encounter within the field of Forensic Science. Legal implications within the field will focus on expert witness testimony and procedural rules defined by both legislative statute and court decisions. These decisions affect the collection, analysis, and court admissibility of scientific evidence, such as the Frye and Daubert standards and the Federal Rules of Evidence. Existing and pending Forensic Science legislation will be covered, including laws governing state and national DNA databases. Ethical concerns stemming from the day-to-day balancing of competing priorities encountered by the forensic student will be discussed. Such competing priorities may cause conflicts between good scientific practice and the need to expedite work, meet legal requirements, and satisfy client's wishes. The role of individual morality in Forensic Science and competing ethical standards between state and defense experts will be addressed. Examinations of ethical guidelines issued by various professional forensic organizations will be conducted. Students will be presented with examples of ethical dilemmas for comment and resolution. The management of crime laboratories will provide discussion on

quality assurance/quality control practices and the standards required by the accreditation of laboratories and those proposed by Scientific Working Groups in Forensic Science. The national Academy of Sciences report on Strengthening Forensic Science will be examined to determine the impact of the field. Professional Issues in Forensic Science is a core topic taught in forensic science programs. This volume will be an essential advanced text for academics and an excellent reference for the newly practicing forensic scientist. It will also fit strategically and cluster well with our other forensic science titles addressing professional issues. Introduces readers to various topics they will encounter within the field of Forensic Science Covers legal issues, accreditation and certification, proper analysis, education and training, and management issues Includes a section on professional organizations and groups, both in the U.S. and Internationally Incorporates effective pedagogy, key terms, review questions, discussion question and additional reading suggestions

Climate Change and Agriculture in India: Impact and Adaptation

Abiotic stresses such as drought (water deficit), extreme temperatures (cold, frost and heat), salinity (sodicity) and mineral (metal and metalloid) toxicity limit productivity of crop plants worldwide and are big threats to global food security. With worsening climate change scenarios, these stresses will further increase in intensity and frequency. Improving tolerance to abiotic stresses, therefore, has become a major objective in crop breeding programs. A lot of research has been conducted on the regulatory mechanisms, signaling pathways governing these abiotic stresses, and cross talk among them in various model and non-model species. Also, various 'omics' platforms have been utilized to unravel the candidate genes underpinning various abiotic stresses, which have increased our understanding of the tolerance mechanisms at structural, physiological, transcriptional and molecular level. Further, a wealth of information has been generated on the role of chromatin assembly and its remodeling under stress and on the epigenetic dynamics via histones modifications. The book consolidates outlooks, perspectives and updates on the research conducted by scientists in the abovementioned areas. The information covered in this book will therefore interest workers in all areas of plant sciences. The results presented on multiple crops will be useful to scientists in building strategies to counter these stresses in plants. In addition, students who are beginners in the areas of abiotic stress tolerance will find this book handy to clear their concepts and to get an update on the research conducted in various crops at one place

Professional Issues in Forensic Science

Pediatric incontinence: evaluation and clinical management offers urologists practical, 'how-to' clinical guidance to what is a very common problem affecting up to 15% of children aged 6 years old. Introductory chapters cover the neurophysiology, psychological and genetic aspects, as well as the urodynamics of incontinence, before it moves on to its core focus, namely the evaluation and management of the problem. All types of management methods will be covered, including behavioural, psychological, medical and surgical, thus providing the

reader with a solution to every patient's specific problem. The outstanding editor team led by Professor Israel Franco, one of the world's leading gurus of pediatric urology, have recruited a truly stellar team of contributors each of whom have provided first-rate, high-quality contributions on their specific areas of expertise. Clear management algorithms for each form of treatment support the text, topics of controversy are covered openly, and the latest guidelines from the ICCS, AUA and EAU are included throughout. Perfect to refer to prior to seeing patients on the wards and in the clinics, this is the ideal guide to the topic and an essential purchase for all urologists, pediatric urologists and paediatricians managing children suffering from incontinence.

Nanobiotechnology Applications in Plant Protection

Due to an ever-decreasing supply in raw materials and stringent constraints on conventional energy sources, demand for lightweight, efficient and low cost structures has become crucially important in modern engineering design. This requires engineers to search for optimal and robust design options to address design problems that are often large in scale and highly nonlinear, making finding solutions challenging. In the past two decades, metaheuristic algorithms have shown promising power, efficiency and versatility in solving these difficult optimization problems. This book examines the latest developments of metaheuristics and their applications in water, geotechnical and transport engineering offering practical case studies as examples to demonstrate real world applications. Topics cover a range of areas within engineering, including reviews of optimization algorithms, artificial intelligence, cuckoo search, genetic programming, neural networks, multivariate adaptive regression, swarm intelligence, genetic algorithms, ant colony optimization, evolutionary multiobjective optimization with diverse applications in engineering such as behavior of materials, geotechnical design, flood control, water distribution and signal networks. This book can serve as a supplementary text for design courses and computation in engineering as well as a reference for researchers and engineers in metaheuristics, optimization in civil engineering and computational intelligence. Provides detailed descriptions of all major metaheuristic algorithms with a focus on practical implementation Develops new hybrid and advanced methods suitable for civil engineering problems at all levels Appropriate for researchers and advanced students to help to develop their work

Emerging Energetic Materials: Synthesis, Physicochemical, and Detonation Properties

Scientific research on dengue has a long and rich history. The literature has been touched by famous names in medicine- Benjamin Rush, Walter Reed, and Albert Sabin, to name a very few- and has been fertile ground for medical historians . The advances made in those early investigations are all the more remarkable for the limited tools available at the time. The demonstration of a viral etiology for dengue fever, the recognition of mosquitoes as the vector for transmission to humans, and the existence of multiple viral variants (serotypes) with only partial cross-protection were all accomplished prior to the ability to culture and characterize the etiologic agent. Research on dengue in this period was typically driven by

circumstances. Epidemics of dengue created public health crises, although these were relatively short-lived in any one location, as the population of susceptible individuals quickly shrank. Military considerations became as a major driving force for research. With the introduction of large numbers of non-immune individuals into endemic areas, dengue could cripple military readiness, taking more soldiers out of action than hostile fire. Dengue and dengue hemorrhagic fever, which assumed pandemic proportions during the latter half of the last century, have shown no indication of slowing their growth during this first decade of the twenty-first century. Challenges remain in understanding the basic mechanisms of viral replication and disease pathogenesis, in clinical management of patients, and in control of dengue viral transmission. Nevertheless, new tools and insights have led to major recent scientific advances. As the first candidate vaccines enter large-scale efficacy trials, there is reason to hope that we may soon "turn the corner" on this disease.

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